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The link between Bankruptcy Law and Entrepreneurship

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Abstract

Entrepreneurship and innovation are often characterized as two of the most vital contributors to long term prosperity in the world today. As a result we have seen increased interest in this topic both from researchers and managers of government policy. This thesis try to uncover how society can better facilitate entrepreneurship through the legal regulation of bankruptcy. The analysis is based on a cross-country comparison of indicators measuring the strictness of the legal regime and to what extent this affect start-up rates across countries. The data set collected for this thesis enable investigation on this relationship for thirteen counties in the OECD, in the time period from 1995 to 2007. The hypothesis being that if bankrupt entrepreneurs are excessively punished for failure, they may let high-risk but potentially high-return business opportunities pass by. Based on the data material at hand this thesis finds no conclusive results to support the hypothesis. Key variables suddenly shift direction and are often not statistically significant. It is clear that numerous factors play important roles when making a productive environment for entrepreneurs and many intricate interactions are difficult to map. However, the empirical evidence of this thesis provide unconvincing proof related to the effects of bankruptcy law on entrepreneurship.

Preface

This report presents the final work of the Master of Science in Economics and Business Administration at NHH. The thesis was initiated on the basis of a sincere interest in the drivers of entrepreneurship, and I hope others will find the topic as intriguing as I did.

The process of writing this thesis has been very interesting and educational as well as frustrating at times. Collection of observations to complete a comparable data set proved to be a challenging and time consuming process. However, the work has been extremely insightful and has provided inspiration for further research projects.

A number of experts from Innovation Norway, national statistical offices, universities and embassies around the world have contributed to making the data material of this thesis as accurate as possible. I would especially like to thank Brønnøysundregistrene in Norway, Statistics Canada, Statistisches Bundesamt Deutschland and Statistiska Centralbyrån in Sweden for their help in attaining data.

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1. Introduction

Why is innovation and entrepreneurship important in a society? Explanations for economic growth have traditionally been related to macroeconomic instruments and the overall functioning of the economy. Good macroeconomic and structural policies have indeed had a great impact on the growth in most OECD-countries the last decades by creating stable economies and thereby enabling increased productivity in the enterprise sector. However, there is also a recognized empirical connection between economic growth performance and the degree of entrepreneurial activity. Experience shows that interactions between innovation and entrepreneurship stimulate gains in productivity (Mittelstädt and Cerri 2009).

The Global Entrepreneurship Monitor (GEM), a series of studies concerned with improving our understanding of the relationships between entrepreneurship and national development, made this connection explicit in the late 90ies. GEM-researchers found that "There are no countries with high levels of start-up rates and low levels of economic growth. High start-up rates and high levels of economic growth are always associated" (GEM 2009).

The transition from an international industrial economy to a global knowledge based economy is something many Western countries have had to endure the last decades as a consequence of rising competition on industrial wages worldwide. The ability to operationalize that knowledge and create comparative advantages within new fields has become key to economic survival. New firm formation is the driving force behind structural changes in the knowledge based economy. Start up businesses may be carriers of new products, new technology and new methods of production. They might be devising new business models or even creating new markets. Entrepreneurship fosters national economic growth because innovation allows firms to seize market opportunities they earlier did not recognize.

The concept of multi-factor productivity (MFP) has brought attention to several OECD-countries which have had remarkable GDP growth-rates over the last two decades. The growth in the 90ies exceeded the catching-up effect of the 60ies and 70ies. The OECD Growth Study in 2001 found that the concept of increased MFP explained more than 50% of GDP growth in the last part of the 1990s in eight of the 14 countries with comparable data. MFP is based on better utilization of existing resources, and reflects efficiency improvements such as improved managerial practices, organizational changes and innovative

ways of producing goods and services (Scarpetta et al. 2000). Researchers found that the strong contribution of MFP to overall GDP-growth was often not linked to the overall functioning of the economy at all. Instead, this new growth pattern was strongly attributed to the functioning of the micro level of the economy. The study further identified 4 drivers needed for further MFP-growth in the knowledge-based economy; among these drivers was the *Fostering of firm creation and entrepreneurship*.[1]

The making of new jobs is an important macroeconomic issue which also is related to entrepreneurial activities. It has often been shown that new firms make substantial contributions to the labor market by generating significant amounts of employment (Metzger 2006). The GEM-researchers also stated that "Entrepreneurship makes a major contribution to economic well being, both in terms of economic growth and job creation" ... "Nearly 1/3 of the differential in national economic growth rates is due to the impact of entrepreneurial activity" (GEM 1999). The OECD-report *Linking Entrepreneurship to Growth (2001)* describes its results in the following manner; "Increases in entrepreneurial activity tends to result in higher subsequent growth rates and a reduction of unemployment".

Being the nation which have the highest rates of entrepreneurship, it is clear that the US also agree with these statements; The American White Paper states, "(there is) clear evidence of the power of entrepreneurship in the economy" and "America's booming entrepreneurial sector is responsible for much of today's economic prosperity". But not only the Americans have realized the potential of entrepreneurship. The European Union, in its Lisbon Agenda (held on March 23rd and 24th 2000), set the strategic goal of becoming the world's leading knowledge-based economy by 2010. Part of its strategy for renewed economic growth was based on increasing the levels of entrepreneurial spirit in its EU-citizens. As the Presidency Conclusions stated; "The competitiveness and dynamism of businesses are directly dependent on a regulatory climate conducive to investment, innovation, and entrepreneurship."

Among the many factors that may affect both policy initiatives by governments, as well as directly influence the level of start-ups is the country specific bankruptcy regulation. In this thesis I will look at how different bankruptcy regimes may contribute to entrepreneurship.

[1] The 3 other drivers included; (I) Seizing the benefits of information and communication technology (ICT), (II) Fostering innovation and technology diffusion, and (III) Enhancing human capital and realizing its potential.

The thesis is structured as follows; in section 2 I review the background of the concept of entrepreneurship and look at empirical evidences linked to its role in promoting growth. Chapter 3 presents the problem focused on in this thesis. The fourth section will look at bankruptcy legislation across countries, while chapter 5 documents how the bankruptcy law and other factors may affect entrepreneurship. In part 6, I describe my data material and chapter 7 is devoted to presenting the methodology utilized in this thesis as well as my model specification. Chapter 8 outlines the empirical results and in chapter 9 I present the conclusion based on these results.

2. Background and empirical evidence

2.1 Definition of entrepreneurship

So what is entrepreneurship – really? From a Schumpeterian perspective[2], entrepreneurs are primarily innovators, creators of new ideas, and the pursuing of these ideas may bring about breakthroughs in the process of creative destruction. Entrepreneurs might also be described as catalysts for change in the economy through their capacity for innovation and risk-taking (Armour and Cumming 2008). Some perceive entrepreneurs having a knowledge filter-role, as they are essential in the process of converting knowledge into economic and social benefits. GEM recognizes entrepreneurship as any attempt by individuals to start a new firm, including any attempt for self-employment. Entrepreneurship may also be defined as a distinct attitude (US White Paper 2003). Such definitions as those above may capture the many aspects of entrepreneurship, but are hard to measure and compare across countries.

No single definition exists of entrepreneurship simply because entrepreneurship cannot be seen as a single event. Rather it's a process of multiple actions taken in several steps. This study defines entrepreneurship as the entry of new firms in the economy measured as the number of businesses starting up annually. These variables are easier to measure than the vaguer notion of an attitude towards entrepreneurship. Furthermore, earlier analyses link this step of the entrepreneurship process directly to productivity growth, thereby providing a link to the aggregated level of the economy (Audretsch and Thurik 2001).

2.2 The role of SMEs in the economy

Business start ups can be used as a proxy for entrepreneurship because a high rate of new business starts is beneficial as it contributes to economic growth through its innovative entrepreneurs. The emphasis a country place on entrepreneurship can be seen through the economy's share of small and medium-sized enterprises (SMEs)[3]. Common to all countries

[2] In his 1911 classic essay, "Theorie der wirtschaftlichen Entwicklungen" (Theory of Economic Development), Schumpeter proposed a theory of creative destruction, where new firms with entrepreneurial spirit displace less innovative enterprises, ultimately leading to a higher degree of economic growth (Audretsch 2002).

[3] The Commision of the European Community (6th of May 2003) recommends a definition on SMEs as follows:
-Small enterprises: Up to 49 emplyees and up to 10 mn in turnover annually
-Medium-sized enterprises: Up to 249 employees and up to 50 mn in turnover annually

with high growth rates is a high degree of SME-predominance. The productivity effects are particularly strong in high-tech industries, where start ups are frequent. In many of the countries investigated in this thesis SMEs accounted for more than 99% of the total business population. SMEs in Norway constitute 99.5% of the total economy (SSB 2009). In the US small businesses make up nearly 97% of all exporting firms (US White Paper 2003). Small businesses are one of the primary sources of new jobs in the US economy (Berkowitz and White 2000). Furthermore, the SME's importance worldwide seems to be continuously growing.

The OECD has identified a change in the determinants essential to industry structure. There seems to be a global shift away from the trend of greater concentration and centralization of companies which was seen in the last decade, towards less concentration, decentralization and an increased role of small enterprises and entrepreneurship (Audretsch and Thurik 2001). The study also finds that the extent to which countries have shifted towards the greater impact of SMEs is not similar across all countries. Consequently, the potential effects of innovation and entrepreneurship will not benefit all nations simultaneously. From the empirical evidence the researchers conclude that countries which have shifted towards a greater role for entrepreneurship enjoy higher growth, whilst countries without high start-up rates are risking economic stagnation (GEM 1999).

2.3 How can a country boost its entrepreneurial rates?

Which framework policies will contribute to higher innovation and entrepreneurship rates and thereby higher economic growth? Several important policy areas can be identified and interest in entrepreneurship policy has flourished as a consequence of the above mentioned conclusions. Many countries are currently taking new initiatives to test the policy potential.

Because innovative performance will lag without entrepreneurial capacity, entrepreneurship policy is typically focused on creating an environment and support system to foster the emergence of new entrepreneurs as well as the start-up and early stage growth of new firms. There seems to be a trend that survival rates of newly created firms have increased over the past few years. This could be a consequence of the more intensive use of business incubators and technological clusters as means to support entrepreneurs in many OECD-countries, or legal modifications may have played an important role. FORA have found that

entrepreneurship policy can generate both jobs and higher productivity especially if it is targeted towards high-growth (Hoffmann 2005).

As the American White Paper stated in 2003 "Fostering entrepreneurship must be a cornerstone of our economic policy". "Failure to foster entrepreneurship in under-performing sectors is simply an unacceptable policy choice". And that "if policymakers do not understand the importance of entrepreneurship in the economy and the policy infrastructure under which it thrives, we could easily cripple the powerful engine that is now driving American economic growth".

2.4 The idea of an entrepreneurial culture and the importance of stigma

Many aspects, such as legal structure, access to finance, education and economic cycles may impact the policies' potential. Among the many factors that contribute to entrepreneurship, a key measure is the culture underlying the social interactions, which either legitimize and encourage the pursuit of entrepreneurial opportunity, or do not.
The entrepreneur is perceived as a risk-taking person, and as one must assume that the rational entrepreneur considers both costs and benefits of going into business – entrepreneurship will not flourish unless the social value of independence and self-employment is recognized, entrepreneurs are respected, and their success – or failure, is socially accepted. "Successful entrepreneurial cultures encourage people to attempt to create new ventures and don't seek to punish failure" (Golden 2003).

For those countries where entrepreneurial activity is an integral and accepted feature of economic and personal life, start-up rates are high. "US is among the most entrepreneurial nations because Americans believe they have opportunities to start businesses and live in a culture that respects entrepreneurship as an occupation" (GEM 1999). "(In Silicon Valley) failure is not welcome, but tolerated. In fact, venture capitalists seem more willing to invest in someone who already have failed than in a first time entrepreneur" (US White Paper 2003). There is more early-stage entrepreneurial activity in the U.S. than in any of the EU-countries.

Though some European countries have increased their levels of start-up activity, there is no substantial evidence of major cultural or structural changes in favor of a culture for

entrepreneurship, yet. Some European countries, included Germany and France, consistently have the lowest rates of entrepreneurial activity levels (GEM 2008). However, in terms of entrepreneurial opportunity there seems not to be any significant differences – the difference seems rather to be in the degree to which opportunities are perceived to exist. GEM-researchers attribute this feature to the possibility that the relative uncertainty avoidance or risk-aversion is higher in European inhabitants than in their American counterparts, and that the Europeans seem to prefer employment over self-employment (GEM 2008).

Business creation is inherently risky and requires both self-confidence and autonomy. Entrepreneurs take significant, personal risk in building their companies. As the managers of young start ups usually are the entrepreneurs themselves, business distress or even failure can become a very personal affaire. In addition to reputational and financial losses, entrepreneurs and managers incur huge psychological costs, often referred to as stigma, when filing for bankruptcy (Shepherd 2003).

In countries where lack of social appreciation and understanding of entrepreneurship prevail, business bankruptcy is not sufficiently understood and recognized as a natural part of the economic development, and the opportunity for a new start is thus notably reduced. This *stigma on failure* will in turn be reflected in the rates of business births and consequently job creation every year as it is likely that this stigma deter would-be entrepreneurs from pursuing their visions. Indeed, fear of failure is listed as one of the European country's top reasons for not establishing a business in the Global GEM-report of 2008.

2.5 Linking entrepreneurship to bankruptcy regulation

As mentioned, the OECD Growth Study of 2001 identified fostering firm creation and entrepreneurship to be one of the main drivers of MFP-growth in a society. A follow-up OECD study of 2005 further recognized several framework conditions affecting firm creation and entrepreneurship. Bankruptcy-regulation and entrepreneurial education proved to be two of the three most important aspects of this framework. Especially changes in bankruptcy regulation were found to affect the perceived business opportunities available in a society and the public's interest for establishing new firms. This view is supported by the world's largest foundation dedicated to entrepreneurship, *The Ewing Marion Kaufmann*

Foundation in the US, which highlights the area of bankruptcy legislation as important in promoting a country's entrepreneurship culture (FORA 2009).

There is a two-dimensional effect of bankruptcy-regulation on entrepreneurship development that seems to be particular important. Initially, the legislation will influence incentives for risk taking. A recently published ECGI working paper by Armour & Cumming (2008) found that changes that make bankruptcy laws more forgiving towards debtors are associated with increases in the self-employment rate[4]. The severity of bankruptcy law have an impact on entrepreneurial activity as strict legislation affect the willingness of marginal entrepreneurs afraid of the damaging consequences of a possible bankruptcy, to enter the marketplace and start their own enterprise.

An entrepreneurial-friendly bankruptcy law, on the other hand, can encourage more active and vibrant entrepreneurship development through the offering of a partial insurance against the consequences of failure (Lee 2007). Thereby lowering the threshold of risk tolerance needed for the entrepreneur to start his own business. Armour & Cumming (2008) find these effects to be consistently statistically significant and economically large. By changing the regulation, policy-makers might affect an individual's fear of failure and risk-aversion or risk-tolerance, thereby reducing or increasing the propensity of new business establishments.

If a startup company were to go bankrupt, the experience and challenges faced by the entrepreneur might make him better suited to succeed with a second start up. Studies have shown that re-starters often do better than first-time starters although they have to overcome additional obstacles, as obtaining credit (The European Commission 2009). The harshness and severity with which insolvency law deals with persons who have become unable to pay their debts affect the possibility of restarting following bankruptcy. Particularly, the degree of punishment or forgiveness that a debtor receives under the bankruptcy law will shape the consequences of business failure. If bankrupt entrepreneurs are excessively punished for failure, they may let high-risk but potentially high-return opportunities pass. OECD states, "Limited chances of financial rehabilitation will affect the ability of entrepreneurs to return to the marketplace" (Larsen 2006). Therefore, it is crucial to minimize the social stigma related to bankruptcy as well as the judicial restrictions imposed on the debtor's ownership.

[4] That is, the proportion of the population who is self-employed.

Also, the duration creditors have claims on the honest bankrupt's asset – preventing him from starting over again – is an important influence on the number of new firms established.

Secondly, simplifications within procedural regulation regarding insolvencies may also contribute to increased levels of startups as lengthy bankruptcy proceedings will make the possibilities for a new start more costly and complicated for the entrepreneur. The cost of bankruptcy is positively correlated with the length of time spent on the legal procedure. Less time spent in the process of insolvency will encourage entrepreneurship development by decreasing the downside risk of entrepreneurs. "A fast procedure leads to quick reallocation of assets of failed firms to better users. At the same time, a fast procedure can free an entrepreneur from a failing business and provide an opportunity to start a new one" (Bebchuk 2000). The average time to complete a bankruptcy in the EU varies between 4 months[5] to 9 years.[6] In comparison, the bankruptcy procedure in the United States is on average more efficient. The number of days spent in the U.S. on Chapter 11 reorganization bankruptcies during 2000 to 2002 was 296 (Doing Business indicators 2003). A speedy and cost efficient bankruptcy procedure, which maximizes the value of the assets in a bankruptcy estate when reallocating resources, is crucial for fostering firm creation and entrepreneurship.

[5] Ireland
[6] Chezh Republic

3. Objective of the thesis and the problem at hand

The empirical evidence cited above shows that a policy of promoting a second chance for entrepreneurs who are at risk or have failed is essential to building a healthy innovative culture. This report will mainly focus on bankruptcy-regulation and its influence on entrepreneurship, as profound understanding of the drivers of entrepreneurship and thereby MFP-growth is the key to further increasing GDP across nations.

Prior research on the understanding of how entrepreneurship can create value in a society has mainly been based on how barriers to the entry of new firms into the economy can be lowered. However, there seems to be relatively little work on how to lower barriers to exit a business and to help the entrepreneurs restart again, such as bankruptcy legislation. And very little research is done on the exact relationship between elements of bankruptcy regulation and entrepreneurial activity. National insolvency laws reveal insufficient recognition of overlaps and linkages between bankruptcy regulation and entrepreneurship development. There is little knowledge of the effect of bankruptcy legislation and not much evaluation and research on this subject is conducted in most countries. According to the OECD "It is likely that bankruptcy legislation is not efficient in all countries" (Larsen 2006).

This thesis' objection is to identify and examine the critical areas of bankruptcy regulation which are believed to affect the levels of entrepreneurship, and especially serial-entrepreneurship. Particularly, what role the law's forgiveness plays in the entrepreneurial process and how the regime's characteristics influence the innovative culture and fear of failure. The question is to what extent bankruptcy regulation can affect the level of entrepreneurship at a societal level, measured by the number of new business start ups annually. The problem can formally be stated as:

How do the characteristics of national bankruptcy-regulation affect the level of entrepreneurship in a society?

My analytical objective is to review bankruptcy laws including business rights in the insolvency procedure, repayment periods and exemption levels. In addition, to be able to develop a better understanding of the drivers of entrepreneurship, I will also explore how several other well selected framework conditions affect the levels of new start-ups and stimulate entrepreneurship performance. Amongst these are higher educational levels as a

proxy for entrepreneurial knowledge, unemployment rate as a possible explanation for high levels of self employment, GDP growth to account for favorable or unfavorable economic cycles and legal origin as a proxy for the effect of bankruptcy changes.

This research may uncover how society can better facilitate entrepreneurship, including through the legal system. The analysis is based on a cross-country comparison of indicators measuring both performance and the underlying business environment for entrepreneurship.

Before we go any further on the methodological aspects of this thesis I wish to dig a bit deeper into the idea of bankruptcy; starting with its main purpose, as I have yet to justify the need for a bankruptcy code.

4. Bankruptcy legislation across countries

4.1 Definition of bankruptcy

The purpose of bankruptcy regulation is to balance the two contradictory interests of the parties involved in a business financing. The creditors' interests need to be protected to ensure a functioning credit market for enterprises so firms can raise external finance. Still, the entrepreneur's willingness to take risks needs to be encouraged to ensure further growth in the society. There needs to be a balance between the public interest in protecting the financial security of creditors on one hand and the public interest in allowing an insolvent individual to make a fresh start.

Insolvency occurs when the debtor is unable to pay his debts and other liabilities as they fall due. Bankruptcy is a general macroeconomic policy that applies to everyone in the society, and it provides a mandatory and orderly mechanism for the realization of the insolvent's assets. When applied, the process of bankruptcy is generally a collective enforcement procedure whereby the debtor's assets are liquidated and the money raised is used to pay his creditors.

The purpose of the bankruptcy process is to introduce a legislative mechanism that provides a fair and peaceful resolution of financial conflict between debtors and creditors. When a debtor becomes insolvent, creditors have incentives to enforce their individual claims as quickly as possible. Even if this result in an inefficient liquidation and a reduced overall value being obtained for the debtor's assets, it is shown that creditors will compete among themselves for recovery of their claims (Armour and Cumming 2008). To prevent the creditors from racing to realize their claims and to secure the debtor from excessive pressure from the creditor's attempts to collect their debts first, the legal principle of equal partition is introduced – under which all creditors are treated equally[7]. Bankruptcy provides a way to make the diverse group of creditors act as one by imposing a collective and compulsory proceeding on them.

[7] Exceptions of course occur if some creditors have preferential claims, such as mortgage.

4.2 Creative distuction and business churn

Empirical studies on bankruptcies show that this is a very common phenomenon. Indeed, hundreds of thousands of firms and sole proprietors around the world declare themselves bankrupt every year. Bankruptcies account for some 15% of all company closures in the EU. On average 700,000 European SMEs and nearly 2.8 million jobs are involved in insolvency proceedings throughout Europe on an annual basis (The European Commission 2008). About 10% of U.S. jobs cease to exist every year due to bankruptcies and other business closures (US White Paper 2003).

There is reason to believe that increased global competition requires entrepreneurs and enterprises to react more rapidly and flexibly, but not all enterprises have the necessary resources or opportunities needed to adapt to the continuous change and restructuring attached to the development of new products, innovation and new technologies. SME-entrepreneurs are three times as likely to petition a personal bankruptcy as their counterparts in the general population (Sullivan et al. 1989).The EU Commission stated in 2009; "Global competition and new paths imply hidden obstacles and unexpected sources of mistakes. These can easily be fatal for vulnerable businesses, especially smaller ones".

Continuous firm creation and firm death is a normal economic phenomenon, often referred to as "*creative destruction*". This business churning within the entrepreneurship sector, where innovations both creates and destroys economic activity and employment is an integral part of a strong and healthy economy. There is a high correlation between entry and exit rates in both the EU and the US, suggesting a continuous process of creative destruction (The European Commission 2007).

A low survival rate is thus not necessarily a cause for concern, new firm entry is part of the process whereby entrepreneurs react to market reality – changing tastes and preferences, new technologies, and changes in demography and geography. Low productivity firms exit the market and are replaced by new ones; there is a permanent flow of resources from inefficient users to more efficient users. In any economy, letting some failing firms seize to exist is essential to a society's economic health. Any optimal social strategy would not be to reduce insolvencies to zero, but to support viable companies and lower the exit barriers to be able to improve economic efficiency and growth.

However, as mentioned, bankruptcy regulation can generate ex post barriers to exit. When these barriers are very strict on the entrepreneur, such as not allowing them to walk away from a heavy debt load, they may try to avoid business exit altogether (Ahlstrom and Bruton 2004). Thus these firms continue to consume resources that could have otherwise been put to more productive use (Lee et al. 2007). The role of business failure in economic life is not well understood in the European society. As mentioned, stigma is present in the business environment and also in cultural and social aspects of the community. Studies have shown that 47% of Europeans would be reluctant to order from a previously failed business and 51% would never invest in businesses in financial difficulties (The European Commission 2007). Of course, even entrepreneurs in the more risk-willing U.S. will find it difficult to obtain credit their second time around; but as in Silicon Valley, one can see proof of a favorable entrepreneurial culture and climate.

4.3 Differences in bankruptcy legislation across countries

Bankruptcy legislation across countries differs significantly along many dimensions. Most jurisdictions have several insolvency options – meaning, different bankruptcy procedures available for corporate and individual debtors. The variety of regulations established often reflects the country's focus on and promotion of either creditor or debtor rights. The possibilities for out-of-court settlements, reorganization and automatic stay on assets; liquidation, exemptions and the discharge or duration of creditor's claims are all external conditions of high relevance for an entrepreneur. The range of insolvency procedures available in different countries demonstrates several contrasting approaches to bankruptcy. Thus the support for saving financially distressed companies, the possibilities for efficiently reorganizing a firm, and thereby the chances of getting a fresh start for the debtor vary significantly from country to country.

For insolvent or economically distressed firms there are three possible ways to approach bankruptcy:

(I) ***Out-of-court settlement***

Insolvent entrepreneurs attempt to negotiate an arrangement with creditors to secure the continuation of their business. The arrangement often includes a restructured payment scheme, postponement and reduction of claims and

payment terms, and/or the deletion of debt all together. Firms typically resort to this solution first as it is considerable less expensive than the alternatives.

(II) ***Reorganization bankruptcy***

Basically involves the same procedures as the out-of-court composition above. In addition, reorganization arrangements may involve court supervision, a possibility for the majority of claimant's votes to be binding for the minority, and a temporary automatic stay on the debtor's assets to prevent aggressive actions from creditors. Examples of this type of regulation are "Chapter 11" in the American Bankruptcy Code, the rules regarding "Tvangsakkord" in the Norwegian bankruptcy-law, Konkursloven; and the French Code of "Redressement Judiciare" (juridical arrangement).

(III) ***Liquidation bankruptcy***

Involves court intervention and liquidation of all company assets which are then distributed to the firm's creditors. Corporations cease to exist, whilst bankrupt entrepreneurs who have provided personal guarantees may struggle with repayment to creditors for a longer time period. Examples of national regulation in this regard are "Chapter 7" in the US, and the "Konkursordnung" in Germany (pre-1999).

4.3.1 Exemptions

In the case of personal bankruptcy many of the debtor's possessions will be exposed to claims from the creditors. However, exemptions do exist. A failed non-corporate entrepreneur will be able to exempt from the bankrupt estate certain personal assets necessary to obtain a decent way of life. Exemption levels vary from jurisdiction to jurisdiction, ranging from very strict regulations, such as France where also spousal property can be pulled into the debtor's estate to highly generous exemption levels as in certain states of the U.S. (Armour and Cumming 2008).

As an example, the U.S. Bankruptcy Code is regulated on a federal level, while directives regarding homestead exemptions are regulated by state law. One implication of this split legislation is considerable variation across the American states. One way to measure the

severity of debtors treatment by bankruptcy legislation is to investigate the extent to and which assets can be exempt from the process of seizure. This has been done by White (2007) which find that "in (American) states with higher exemption levels, individuals are more likely to own businesses because generous exemptions cushion them against the consequences of business failure". Armour & Cumming (2008) also find support for that in line with intuition; larger exemptions are positively associated with levels of entrepreneurship in the U.S.

Nevertheless, it is clear that higher personal property exemption levels also can contribute to creditors denying applicants or strengthening their credit demands, as a result of entrepreneurs located in high exemption states being more likely to file for bankruptcy and less likely to repay their debts. The final effect of exemptions on entrepreneurship is vague and will be explored closer in this thesis.

4.3.2 Automatic stay on assets

Even though financial distress and insolvency are tough on the honest entrepreneur, bankruptcy law may provide regulations favorable for the debtor as well – such as automatic stay on assets upon the initiating of bankruptcy proceedings. This means that in the event of insolvency a moratorium arise, meaning that the creditors must all cease efforts of debt collection and instead direct their claims to the court.

North American and most European countries allow failed companies to be reorganized through court insolvency proceedings. Under this legal system, a stay on assets will be favorable for the entrepreneur who then keeps control of the company and its assets through the restructuring process. As a main rule, any firm involved in a reorganization bankruptcy will remain in operation, giving creditors and management time to negotiate before deciding whether the firm needs to be liquidated (Franks et al. 1996).

In the U.S., bankruptcy legislation instructs automatic stay on assets in the case of reorganization. The U.S.' Bankruptcy code is characterized as particularly pro-debtor because it allows managers and entrepreneurs to continue to run the firm while negotiations with creditors are in progress. In Norway and the UK, an insolvency practitioner (usually an attorney) would be appointed to administer the estate. This insolvency practitioner would

then have the exclusive right to propose a reorganization plan. The recent German change in bankruptcy legislation introduced an automatic stay on assets for up to three months. Earlier this directive of moratorium did not extend to secured creditors, which led to the vast majority of firms in financially distress in Germany being liquidated as the secured creditors had strong incentives to opt for this type of bankruptcy (Kaiser 1996). Very few enterprises, in fact only 0.3 % of firms in the German economy, previously utilized the option of reorganization because of the absence of automatic stay of assets (Franks et al. 1996).

4.3.3 Repayment period

A bankrupt debtor may be permitted to obtain a fresh start through discharge of his outstanding debt. That is, after a certain period of time repaying his debts the debtor is permitted to dismiss his outstanding credit obligations and emerge from the bankruptcy composition. By discharging bankrupt entrepreneurs, creditors can claim residual assets but cannot pursue any remaining claims that have not been met. Thus the debtor obtains a fresh start. The number of years a bankrupt must wait until he may be discharged (if at all) from pre-bankruptcy indebtedness may affect repeat entrepreneurship.

Rules regarding the duration of the creditor's claims on the possessions of the debtor are in most countries specifically stated in the law. Legislation in the U.S. and Canada specify this period to be less than one year. United Kingdom also reduced its creditor claims-period from three to one year in 2004. These three nations are at the Top 5 when it comes to discharge of debt and thereby enabling a fresh start for the entrepreneur. Repeat entrepreneurship is common in jurisdictions in which a fresh start is permitted (Baird and Morrison 2005). For example, about 50% of American entrepreneurs who had filed Chapter 7 liquidation bankruptcy for their start-ups in the years from 1989 to 1993 restarted a new firm by 1993 (Landier 2004).

The Nordic countries on the other hand, are known for their restrictive bankruptcy regulations and long discharge-periods. In the absence of a legally protected fresh start, creditors can pursue any remaining claims for several years. A bankrupt entrepreneur in Finland often experience to struggle with creditor repayment-plans for up to ten years after a bankruptcy, no matter if he is to blame or not. Ireland grants automatic discharge to honest entrepreneurs who have tried but failed with their ventures. However, in Ireland the debtor

has to pay his debts for 12 years before he may be granted a discharge. Such unforgiving bankruptcy laws, with no real discharge from pre-bankruptcy debts, will consign the entrepreneur to the "economic dustbin", as he must pay the majority of his future income to past creditors for years to come.

According to the OECD Survey "*Policy Questionnaire on Bankruptcy*" (2005) the possibilities for reorganizing a company in financial distress and chances of getting a fresh start in case of insolvency appear to be lower in Norway than in other OECD countries where fast track mechanisms for reorganization and efficient discharge proceedings for legitimate bankruptcies are available. When an entrepreneur has to personally repay the debt for past failure in business, there is less incentive to take the risk of starting up a new firm. Still, indicators show that because of efficient business closure and smooth exit for not viable businesses, the investor's potential loss is limited in Norway (Mittelstädt and Cerri 2009).

In Germany, legislation permitting discharge from personal indebtedness after seven years was introduced for the first time during 1999, and then reduced to six years in 2001. Previously the German legislation allowed for a lengthy pursuit of bankrupt entrepreneurs as the creditors could go beyond claiming residual assets and the debtor often remained liable for unpaid debt for up to 30 years (Lee et al. 2007). Spain and Italy also introduced similar entrepreneurial-friendly measures in their bankruptcy laws recently (The European Commission 2007)[8].

4.4 Incentives for a fresh start

The average level of entrepreneurship is lower within the European bankruptcy system, than in the American. Studies have found that the level of entrepreneurship in the U.S. is over three times that in Germany and France, and twice that of the UK (GEM 1999). The U.S. has an extremely forgiving bankruptcy regime for small business debtors. Such different rules of the game have lead to a huge difference in risk-taking propensity between American and for example German entrepreneurs. However, as mentioned above, recent initiatives at EU level have attempted a so called *Americanization* of the bankruptcy code in many of the European

[8] However, these countries are not part of the data set in this thesis.

nations (Elul et al. 2002). These schemes seek to promote entrepreneurship by reducing the harshness of consequences related to personal bankruptcy, particularly affecting entrepreneurs. There seems to be a change towards a policy commitment in EU at both national and regional levels to address the issue of stigma concerning business failure and to promote fresh starts. This in turn points towards a significantly more prominent role of law in stimulating entrepreneurial activity in the EU.

Nevertheless, there is yet work to do; the EU-Commission stated in 2007, "Indeed, there is still room to go further to foster a more positive attitude towards entrepreneurship, to encourage more people to start up and to reduce risks and the stigma of failure" (The European Commission 2007).

Many countries are currently in the process of making their bankruptcy legislation more entrepreneurship friendly. Although there have been varying degrees of real legislative change, half of the EU's member states have taken measures to reduce repayment periods, remove restrictions or streamline bankruptcy proceedings to make them more efficient and predictable for all parts involved.

See Appendix B for a comprehensive run through of cross-country bankruptcy regulations including recent changes.

4.5 The second time around

A fresh start can ease the negative impact of bankruptcy on jobs, consumers and creditors by contributing to further growth in the society. Re-starters learn from their mistakes and are generally more successful second time around. Also their businesses grow faster in terms of performance, turnover and employment. Research done at EU level concerning successful entrepreneurs show that 18% had already run one enterprise and 6% of them had run two or more (The European Commission 2007).

The knowledge and understanding determined entrepreneurs acquire are often referred to as entrepreneurial experience. Entrepreneurial experience is a special type of business ownership know-how. The human capital theory states that individuals with high levels of within-industry experience or academic education are more successful than others due to higher levels of human capital. Entrepreneurial experience can be defined as a kind of

human capital as it involves understanding and building of knowledge within very many different areas of the economic and technological sectors. Managers of the many SMEs and the majority of all new start ups are typically the entrepreneurs themselves, and they tend to play a dominant role regarding the firm's financial structure and its development. The experience an entrepreneur gathers while working as a manager can be seen as a kind of education. Thus, previous entrepreneurial experience should be relevant for firm performance and may provide growth benefits for the society at an aggregated level.

Experienced entrepreneurs may already have business contacts and extended networks that help them to discover opportunities without actively searching. They might have increased industrial experience making them better suited to evaluate business risk, and they might already have a good reputation amongst financers and suppliers. These are all key factors behind business success which will benefit society through increased growth and job creation.

Unfortunately, re-starters are still a minority in the European society. Only a small fraction of failed entrepreneurs make another attempt to start up in the EU. The majority of them would still prefer to be self-employed, but the consequences of insolvency are severe and discouraging in Europe. Around 1/3 of ex-entrepreneurs end up selling their home after a bankruptcy, negative repercussions reach other family members in 25% of cases and 15% ends in broken relationships (The European Commission 2007).

4.6 Legal company structure

Some might argue that the personal indebtedness of an entrepreneur easily can be removed by simply establishing a limited liability company (ltd). Indeed, this is correct as limited companies, or corporations as they are called in the US, are legal entities separate from the finances of the person(s) establishing it. In the event of insolvency, the entrepreneur might lose his investment in the company but a limited company relieve its investors of all personal liability and secure that they are not personally responsible for the corporation's debts.

Still, sole proprietorships were the most common legal form of start-ups in the majority of the EU member states in 2005 (Eurostat 2003). This may be due to the cost of incorporating a business, in particular minimum capital requirements, which is quite substantial in some jurisdictions. Indeed, the Norwegian legislation demand a capital stock of 100,000 NOK

which undeniably provide a restriction on the access to limited liability and thereby self-employment. The cost of establishing a limited company in the UK however, is nearly non-existing.

This has led to the development of businesses all over Europe which specialize in helping entrepreneurs establish a limited company with origin typically in either the United Kingdom or on the Seychelles because of their favorable capital requirements. The Norwegian business register call these limited companies by the abbreviation NUF (Norwegian registered foreign company), and there have been a substantial growth in the number of NUF-establishments annually since the EU-ruling in 1999[9] which opened for business registration in countries other than where the intended headquarters of the company's trade will be.

But even with easy access to limited liability registration, bankruptcy law may still be expected to affect entrepreneurship. Norwegian banks confirm that they consistently demand personal guarantees as mortgage from starting entrepreneurs who have yet to build value within the company. This personal guarantee is in essence a wiping out the limited liability-protection incorporation otherwise provides. Because creditors frequently demand these guarantees from entrepreneurs, the ltd-concept loses its purpose, and in the case of bankruptcy, bank creditors will be free to recover the remaining debts in the debtor's personal assets.

Armour & Cumming (2008) investigated the links between minimum capital requirements and personal bankruptcy laws and found that the impact of severe bankruptcy laws is particularly strong when coupled with a high minimum capital requirement for incorporation. On the contrary, "Forgiving personal bankruptcy laws and ready access to limited liability offer significant policy instruments for enhancing entrepreneurial activity" (Armour and Cumming 2008).

[9] The EU Court of Justice, Centros-verdict 1999

4.7 The trade off

However, there exists a trade-off between the access to limited liability, company credit and the severity of bankruptcy law. In other words, bankruptcy law may affect small firms' access to credit. This takes the form of a balancing act between the risk taking of the debtor and his creditors. As mentioned, the creditors' interests need to be protected by law to ensure a functioning credit market for enterprises so firms can raise external finance. The EU's Green Paper found that "If creditors' interests are not well protected they will be reluctant to invest in new ventures". In other words, if banks cannot protect their credit they will tend to lend less to potentially high growth and high risk enterprises, and at a higher interest rate.

Insolvency systems are a key element of creditor rights. This is supported in the work La Porta et al. (1998). This article finds that countries which better protect creditors and their rights have more developed credit markets and financial systems.

Other research has shown that in the federal states of the US with high bankruptcy exemption levels – meaning, in the case of bankruptcy the debtor may keep a larger share of his assets – the supply of credit decrease. Small firms are 25% more likely to be denied credit if they are located in states with unlimited bankruptcy exemption levels than in states where fewer assets are exempt (Berkowitz and White 2000).

However, the entrepreneur's incentives and willingness to take risks and seek credit is proportionate to his ability to protect his personal belongings and avoid heavy and long term debt repayment in the case of bankruptcy. If the law requires a high capital base for incorporation and provides creditors with the right to push a company in early financial distress into liquidation, which was indeed the case in pre-1999 Germany, entrepreneurs will be more hesitant to establish a start up venture. Demand for credit increase when firms are located in states with higher bankruptcy exemptions. This is because higher exemption levels provide a so called "partial wealth insurance" for the debtor, making would-be, but risk averse entrepreneurs more likely to start a business (Berkowitz and White 2000).

4.8 The credit crisis

Nevertheless, the ongoing financial crisis in 2009 has diversified the undivided appraisal of the North American entrepreneurial-friendly bankruptcy code. The number of insolvencies reached an all time high in many European countries after the financial crisis was a fact in September 2008. During 2008 there were 1.1 million filings for bankruptcy by both businesses and individuals in the US. Norway saw an increase of 28% in numbers of bankruptcies from 2007 to 2008. Many of these bankruptcies worldwide are filed by entrepreneurial firms having difficulties funding ongoing operations. This is a direct consequence of the credit crunch and its reduced access to finance even for high-quality entrepreneurial firms that would otherwise not have problems acquiring credit.
Bankruptcy statistics is a trailing indicator, meaning there is a time delay between financial difficulties and bankruptcy. Because of this lag in the number of filings for bankruptcy the insolvency numbers are expected to stabilize at a higher level as financial problems turn into bankruptcy proceedings.

British policymakers, who in 2004[10] introduced a bankruptcy reform reducing the debtor's time to discharge from three to one year to help reduce the stigma of honest failure, have recently had to handle strong criticism from UK's leading economics institute, the National Institute of Economic and Social Research. They believe "Britain's bankruptcy rules have exacerbated the effect of the credit crunch across the country" (The Times 2009). Going on to say that "this fostered an environment in which people were happy to take on debt that they could not repay, inflating the losses of banks and other lenders".

This might be true, but there are empirical evidence that creditors in environments with fewer creditor rights adjust to the fact that their security is low by screening possible debtors and projects more carefully in addition to demanding higher levels of security (Franks and Davydenko, 2006). In contrast, studies show that laws which provide strong protection for creditors in bankruptcy proceedings may in fact make banks too "lazy" in screening projects (Manove et al., 1999). Therefore, it would be easier for businesses to obtain credit and financial support for their start ups in a country with strict bankruptcy regulation (Erhvervs og Byggestyrelsen Denmark 2006). A legislative change towards a more debtor-friendly

[10] The Enterprise Act, 2004.

bankruptcy code should hold incentives for creditors to be harder on their initial analysis of potential credit applicants; as mentioned because the debtor has higher incentives to initiate bankruptcy.

There is however, a strong case for believing that the recent peak in business cycles and the incredible growth we have seen the last couple of years previous to the Lehman Brother's bankruptcy and the credit crunch ended in a partial "blinding" of the creditors. An implication of this is that the creditor's themselves and their internal procedures for screening applicants and risk taking needs to take part of the blame for today's financial situation globally.

It is found that American borrowers have amplified the scale of the global credit crisis because the many individuals who default on their mortgage can leave the property and write off any unpaid mortgage bills – thus leaving creditors to take the penalty. This being said, it is important to emphasize the fact that it is the U.S. with its debtor-friendly bankruptcy regulation that have been the global economic growth engine for the last decades, driving growth rates internationally through its extensive demand for goods and high multi factor productivity through increasing levels of entrepreneurship.

The reason for Britain's legislative changes concerning discharge for debtors was a belief that "It will open up markets, increasing competitive pressures. It will improve consumer protection. It will give those entrepreneurs who have failed honestly a second chance and help ensure that companies in difficulty do not go under unnecessarily. Together, these measures will help promote an enterprise culture and drive up productivity" (The Times 2009).[11]

The cost of pro-debtor bankruptcy procedures is less credit supply for small firms and at a higher rate. Still, the cost of a pro-creditor system may be characterized as even more severe, reducing the overall entrepreneurial activity at an aggregated level. There is a high probability that the recent increase in bankrupt entrepreneurs due to the credit crunch may result in a holding up of valuable innovative individuals in time consuming and inefficient

[11] Quote by Trade and Industry Secretary at the time, Patricia Hewitt.

legal proceedings, instead of allowing them to start over fresh. This may in turn contribute to a prolonging of the current financial crisis by dampening further development and growth of the economy.

A good insolvency regime must prevent entrepreneurs from taking irresponsible loans and lenders from giving loans with a too high probability of default. Clear distinction between honest and dishonest bankruptcies in any bankruptcy legislation is of vital importance. Severe legal treatment is justified in the case of fraud or dishonesty, whilst it may be claimed that honest entrepreneurs should be able to protect their personal belongings during insolvency procedures.

Modification of bankruptcy law to lower the stigma of failure may help entrepreneurs who have failed to try again, but it is important to recognize that such an action is not costless. Both private and state-creditors are expected to carry the costs of such redistribution. Still, shouldering the costs of establishing an entrepreneur-friendly bankruptcy code might be in society's best interest. An economy unwilling to carry these costs of honest entrepreneurial failures is not likely to reap the benefits of a vibrant entrepreneurial sector and the growth it may bring.

This thesis is not an assessment of whether the different national bankruptcy regulation can be characterized as qualitative good or bad. Rather, I wish to assess how the two parties' interests are balanced and appropriately protected in the legislation, and if the insolvency legislation permit an honest, but unfortunate debtor, to obtain a discharge of his debts and to make a fresh start thereafter.

5. Factors affecting entrepreneurship rates

Various determinants of entrepreneurship may be identified in a society. Based on the *OECD Growth Study* of 2001 this thesis will build its explanations of business entry, and thereby aggregated growth, primarily on bankruptcy regulation. In this section I will initially present vital aspects of the legally binding insolvency regulation that are of high importance to an entrepreneur. Further, the section will go in dept and explain several other factors that might affect entrepreneurship rates[12].

5.1 Variables linked to bankruptcy law

The thesis concentrates for the most part on the severity of bankruptcy legislation, focusing on whether a bankrupt debtor is being punished or forgiven in bankruptcy proceedings. The most important aspects in this regard are the legislative regulation concerning repayment period, exemption levels and automatic stay. In addition, the level of bankruptcies each year will affect the economies' business churn, and thereby its efficiency. Also, the cost of bankruptcy proceedings is an essential aspect of the efficiency of bankruptcy law and will accordingly receive attention in this thesis. The extent of fear individuals experience when it comes to the potential downsides of bankruptcy is important due to its inherent ability to characterize the national culture as either pro-entrepreneurial or the opposite; and also because it may act as a proxy for the stigma in a society.

5.1.1 Repayment period, exemption levels and automatic stay

The debtor's possibility to obtain discharge of outstanding debts following a liquidation bankruptcy is thought necessary to support an entrepreneurial culture, and acts as a proxy for the harshness of bankruptcy law imposed on the insolvent. The variable reflects the opportunity for the entrepreneur to have a fresh start if he for some reason, usually financial, chose to establish a company without ensuring limited liability.

[12] Entrepreneurship rates is in this thesis measured as the level of startups relative to the total number of active businesses in a country.

Other legal frame conditions vital in this regard are exemption levels as well as companies' opportunity to obtain an automatic stay on creditor's claims in the case of reorganization bankruptcy. The opportunity to obtain an automatic stay of assets is also a determinant of how entrepreneurial-friendly the legislation is. The option of reorganization bankruptcy in national law illustrates policy makers' will to support its aspiring entrepreneurs meanwhile saving valuable jobs. However, an automatic stay on creditor's actions is often a prerequisite for a firm to be able to undergo reorganization bankruptcy and not end up liquidated.

Exemption levels acts as insurance for entrepreneurs as it provides a "cushion" against deep personal consequences in the event of bankruptcy (White 2007). As mentioned, previous research has shown that states having high exemption levels, i.e. focus on protecting the insolvent entrepreneur, produce higher levels of self-employed workers in the population.

The total effects of a more lenient bankruptcy law may affect entrepreneurship along at least two dimensions. First, through the lowering of ex-post costs for the honest entrepreneur by allowing him to make a fresh start by walking out on firm debt, as described above. However, it is likely that a more forgiving bankruptcy regulation will not only stimulate entry by marginal entrepreneurs, but also encourage creditors to tighten credit access for small start-ups as a direct result of poorer creditor rights supported in the law. Accordingly, the trade off between access to company credit and the severity of bankruptcy law comes into play and the net effect is not conclusive. Nevertheless, this thesis expect that the net effect of a change in national bankruptcy regulation to allow for either automatic stay or discharge, or both, as well as higher exemption levels have a positive impact on entrepreneurship rates.

5.1.2 Bankruptcy rates

Bankruptcy rates act as a proxy for the level of business churn in a country. Meaning, one could expect a positive relationship between increasing bankruptcy rates and entry of new companies in the economy. The churning effect displays the efficiency of a given economy and the role of bankruptcy rates are not to be underestimated in this respect. The "Getting up is in our nature"-paper from the EU states; "It is impossible to rescue every enterprise, but today's failure frequently holds the germ of tomorrow's success" (European Commission 2009). However, higher bankruptcy rates is often also a indication of a weakening economy

as has been a common feature world wide in the face of the recent credit crunch. There is a natural correlation between business cycles and the number of insolvencies, and increasing bankruptcy rates are often seen as a sign of an economy where financing for small startups is hard to generate. In other words, bankruptcy rates provide both incentives and disincentives for increased entrepreneurship. I believe the latter effect to be the strongest.

5.1.3 Fear of failure

A variable concerning the stigma from failure indicate whether the national culture is forgiving towards its failed entrepreneurs or if even the honest bankrupts are prevented from starting over. Even though the concept of stigma is undeniably connected to current bankruptcy law, it is often referred to as more of an attitude towards business failure, and is thus very hard to measure across countries. However, an individual's fear of failure concerned with starting a business may act as a proxy for how the person perceives the social stigma in the case of closure and whether or not he observes that bankrupt entrepreneurs get a second chance in society. Information on the public attitude towards bankruptcy can be used to analyze the legal and social consequences of insolvency. OECD-researchers puts it this way; "Significant differences in entrepreneurial attitudes can exist among countries, and there is evidence that cultural characteristics have an impact on entrepreneurial activity" (OECD 2004). A higher degree of fear of failure on a national level is expected to have a negative effect on entrepreneurship rates.

5.1.4 The cost of bankruptcy

The costs associated with bankruptcy proceedings is a measure of how effective the insolvency institutions perform, both according to the aspects of speed and efficiency, and the recovery rates of the bankrupt estate. National regulations vary significantly in both time consumption and cost efficiency, which in turn is a vital aspect concerning unsecured creditor's recovery rates. An inefficient bankruptcy law may have serious spillover effects to the financial market, making it harder for entrepreneurs to attain credit due to perceived higher risks on the shoulders of the unsecured creditors. A more cost effective bankruptcy law has an estimated positive effect on enterprise start up rates.

This thesis will separately consider the variables mentioned above in the statistical analysis described in the following chapters.

5.2 Other factors affecting entrepreneurship

We have in the chapters above looked thoroughly at the intuitive link between how bankruptcy regulation might affect entrepreneurship. However, national levels of entrepreneurship might be influenced by a wide range of additional factors as well. To be able to develop a better understanding of all the drivers of entrepreneurship, we need to control for a range of other well selected legal and economic factors. The thesis wants to look at how they may affect the national levels of new start-ups and stimulate entrepreneurship performance. The variables included in the model are explained in the following.

5.2.1 GDP growth

The level of economic development, as measured by GDP growth, gives an indication of the level of opportunities available in a country at a particular time. GDP growth has been known to display a positive relationship with enterprise creation as it accurately reflects the capital conditions for new start ups. Eurostat (2003) found a close relationship between the level of economic growth and enterprise birth rates, as high levels of GDP were often found in connection with high start up rates. This relationship indicate that high GDP levels contribute to increasingly beneficial conditions for entrepreneurs, such as improved ease of capital access, high human capital and developed technological and geographic infrastructure. Hence, GDP growth as an explanation variable might account for the effect of favorable or unfavorable economic cycles on start up rates.

The link between GDP growth and bankruptcy legislation has become apparent in the recent economic boom where rising income on national levels spurred the desire to grow faster by favoring a more lenient bankruptcy law and thereby encourage entrepreneurship. A supporting example of this is the, as mentioned, UK bankruptcy law-revision in the Enterprise Act of 2004, where Britain reduced its time to discharge for exactly the reasons

stated above. The total effect of GDP growth is therefore expected to positively affect entrepreneurship rates.

5.2.2 Unemployment

There might be numerous factors driving individuals to become self-employed. Determinants often mentioned as the most decisive motivations for becoming an entrepreneur include expectations of increased profits, a sense of independence and achievement, status and responsibility (Eurostat, 2003). It is also argued that high levels of unemployment might act as an incentive for firm creation, because self-employment may be seen as an alternative to unemployment. The foundation of this deduction is that an individual's unfruitful struggle to find a job might push him into self-employment and start his own firm, potentially with the help of support schemes and training programs.

OECD analyses find that the self-employment rate across countries is related to a range of explanatory variables, including unemployment rates. However, the Eurostat-study of 2003 finds a negative relationship between unemployment rates and business birth rates across the EU. Meaning, higher levels of unemployment did not seem to push or attract jobless individuals to taking the risk of starting their own company. Still, it is worth mentioning that this conclusion is based upon a limited set of data, and thus it is very interesting to see if our thesis reaches the same conclusion.

High unemployment might be a sign of a weak economy with limited access to financial funding for aspiring entrepreneurs, and thus it may be a contributor of lower levels of entrepreneurship. However, unemployment might as mentioned also push out of work-individuals to start a new enterprise, thus contributing to increased national start up rates. In this thesis I assume the latter effect to be the strongest.

5.2.3 Education

The productivity-enhancing role of human capital has received renewed attention over the last years due to the vital correlation between technological innovations and business labor's know-how and expertise. The interaction of human and physical capital in innovative

ventures is perhaps the most essential cause of MFP growth in recent years. As stated by the OECD Growth Study of 2002, "For ICT to be developed and used effectively, and network externalities of new technology to materialize, the right skills and competency must be in place". In this regard tertiary educational attainment in a given country may reflect the quality of labor. In addition, higher educational levels may act as a proxy for entrepreneurial education due to the fact that more entrepreneurship classes are performed at this level as opposed to lower educational stages.

Ideally, I would have liked to directly measure the level of entrepreneurship education which may better capture the complete effect of entrepreneurial policy on start up rates. However, due to less accessible data for all countries in the sample and a shorter time horizon, a measure of the population with higher educational achievements is used instead. As mentioned, there is increasing levels of entrepreneurship programs at higher levels of education. The "Survey on entrepreneurship in higher education in the EU" found that circa 47% of students at the higher-education institutions in Europe have access to entrepreneurship education (FORA 2008); meaning that half of the European students with tertiary education attainment have or had the opportunity to engage in entrepreneurship programs during their studies. Accordingly, the degree of tertiary educational attainment in a country may serve as an appropriate measure for the quality of labor skills, and thereby the probability that the population have the knowledge to produce technological innovations of importance on a national level. This thesis expects a positive net effect of higher educational attainment on enterprise start up rates.

5.2.4 Patent applications

Numbers on patent applications are included to account for the idea generation in a society. Patent applications can be seen as an early investment in new technologies and more efficient processes of utilizing existing resources. Therefore, the effect of increased patent applications in a given country is expected to have a positive effect on entry rates of new companies with new inventions. However, patent applications filed at the EPO may also have a negative effect on entrepreneurship rates in a given country as an approved patent application petitioned at EPO makes it binding in the entire EU area as well as in Norway for the same cost. Previously patent applicants had to separately apply for patent protection in each country, often resulting in many countries being left out, and consequently many partly

patent protected inventions were utilized by other than their inventors. The ethics of this may be debatable and the EPO-procedure has undoubtedly simplified the process of ensuring patent protection across the EU area, but may not have ensured exclusively positive stimulus on the idea generation process.

5.2.5 Legal origin

In a famous study from 1998, La Porta et al. showed that the origin of corporate law is of importance to the financial development, as a result of legal traditions affecting the efficiency with which economies adjust to legal revisions and evolving economic conditions. National differences within legal systems may be used as a proxy for the effect of introducing a new bankruptcy regulation.

As a country's institutional features, including its creditor rights, legal heritage and judicial system may affect the efficiency of the bankruptcy regulation; it may consequently influence aggregate business start up rates. This thesis wish to explore in more detail how the origin of corporate law influences bankruptcy legislation. Four different legal origins are identified, the English common law and the French civil law, as well as the German and Scandinavian civil law.

5.2.6 GEM variables

The GEM-variables include indexes on *future entrepreneur* and *know entrepreneur* as well as the *potential entrepreneur index*. The future entrepreneur index is defined as the share of people of the adult population[13] who expects to start a business within three years. The potential entrepreneur variable indicates the share of the adult population who believe they have the required skills and knowledge for setting up a business, but who have not yet done so. This index may in this regard act as a proxy for the level of informal entrepreneurial education. Know entrepreneur index is defined as the share of population that personally knows someone who started a business in the past two years. This index may indicate the possible effects of mentors or of being part of a cluster or innovative networks. The expected

[13] Adult population is characterized as individuals between 18 and 64 years of age.

effect of an increase in the know entrepreneur index is expected to increase entry rates as aspiring entrepreneurs then have a potential mentor to guide them on their way. In addition, a higher percentage of future and potential entrepreneurs in a society clearly should contribute to higher start up rates.

5.2.7 Omitted variables

Other variables, such as campaigns to promote entrepreneurship, broadband subscribers, incorporation costs, as well as the presence and growth of industrial clusters and incubators were also considered. However, due to lack of suitable and measurable data, I cannot analyze the effect of these variables as promoters of entrepreneurship.

6. Data

In this section I first reintroduce the hypothesis and explain the reasons for choosing the present country sample. I then provide a description of the thesis' unique dataset, its sources and the collection process. Further, I present the data in more detail using descriptive statistics. For the latter see Table 1 of Appendix A.

6.1 Hypothesis

This thesis use pooled ordinary least squares (OLS) as well as fixed and random effects estimation to explore how a forgiving bankruptcy law can encourage and stimulate entrepreneurship in a society. Initial work has led to the question to be addressed, also mentioned in chapter 3:

How do the characteristics of national bankruptcy-regulation affect the level of entrepreneurship in a society?

The hypothesis is that, all other things being equal, the stricter the bankruptcy-regulation the less entrepreneurship there will be in a society. More forgiving bankruptcy legislation will allow the debtor to make a fresh start, the downside risk of self-employment will be reduced, thus encouraging business start ups and increasing levels of entrepreneurship on a national level.

6.2 Country sample

I investigate the relationship between bankruptcy laws and entrepreneurship using data on the annual start-up rates over 13 years from 1995 to 2007, focusing on the following countries: Belgium, Canada, Denmark, Finland, France, Germany, Ireland, Italy, the Netherlands, Norway, Sweden, United Kingdom and the United States.

I have selected my primary focus to be on OECD-countries as a result of the similarities between these countries. GEM research has shown that the relationship between entrepreneurship and economic development differs along the phases of economic development (GEM 2008). For high-income countries, obstacles to entrepreneurial and innovative activities are less decisive. Income levels have a large influence on

entrepreneurial and innovative activities (Mittelstädt and Cerri 2009). There is a capital shortage in low-income countries reflected in both higher real interest rates and stricter demand for security. This hits newly started SMEs more than just, resulting in a stifling of truly innovative initiatives. Also, the economic systems, education levels and policy objectives in countries outside OECD differ widely and make comparisons with European and North American-countries difficult.

The country sample of this study counts thirteen nationalities and displays a rich diversity. We find differences concerning start up rates, bankruptcy levels, unemployment, cultural aspects, resources, population size and GDP per capita, to name a few. As an example, France and Germany are large countries which today have some of Europe's lowest entrepreneurial levels, both struggle with high unemployment and slow growth in productivity. At the other end is the US with the world's highest levels of business start-ups and multi factor productivity (MFP), as well as substantially lower unemployment rates[14]. In spite of this diversity in the underlying framework, entrepreneurship is an important policy concern for all of the countries studied. The results of this study allow for a comparison of the entrepreneurial situation in Europe and North America useful for policymakers when shaping tomorrow's insolvency proceedings.

6.3 Data description

To be able to explain the central relationship investigated in this thesis, I make use of a substantial and unique dataset where several variables are included over a relatively long time horizon. The main sources for the various explanation variables are all described below. A more detailed overview of the sources and description of data can be found in Table1. Outline of the bankruptcy characteristics across countries can be found in Appendix B. Table 2 presents the summary statistics with mean and standard deviations of each variable in each country. In addition, figures showing the development of entry rates, bankruptcy rates and unemployment rates across countries are presented in Appendix C.

[14] That is, at least before the recent financial crisis. Nearly all data material in this thesis is from the period before the recent crisis hit the global economy.

6.3.1 Business demography

Collection of data has been a very challenging process. Countless hours have been spent searching national statistical agencies and other sources for reliable information on business demography as well as bankruptcy law characteristics. I am very grateful for all the help I have gotten, especially from the German, Canadian, Swedish and Norwegian statistical agencies. However, systematic measurement of national data needed to perform accurate cross-country comparisons is imperfect due to the lack concerning harmonization of concepts and registration requirements. This is mainly due to changes in the underlying national measurement systems and/or differences in the country's categorization of the measures.

Even though this paper utilizes possibly the most concrete concept of entrepreneurship available – the number of new businesses registered annually as a share of total active companies in an economy, instead of the vaguer notion of an attitude towards entrepreneurship; national data has been difficult to compare across countries. As an example, the U.S. only measures start-ups from April to April and do not produce any yearly data. As a result, these numbers cannot be compared to the other countries in my sample. The harmonization problem is also recognized by Audretsch and Thurik (OECD 2000b); "It is widely acknowledged that measuring entrepreneurship is a difficult task, given the limitations of measurement instruments" (Golden et al. 2003).

The EU has also identified the lack of harmonized data collection methods nationally and is now through Eurostat working with OECD to produce guidelines to ensure "a common methodological framework for business demography statistics that maximizes their international comparability and relevance" (Bosma et al. 2005).

As a result of the lack of harmonization across countries when it comes to methods of collection, I have unfortunately not been able to collect complete and comparable datasets from national statistical agencies for the entire period of interest. In consequence I have had to rely on international statistical agencies, such as the statistical bureau of Enterprise Information Management's Business & Policy Research (EIM BR). This thesis' business demography data is therefore primarily compiled from EIM in respect to the relatively long time horizon chosen as foundation in this thesis. Nearly all of the countries in my data sample were included in the EIM data material, with the exception of Canada, Norway and

Sweden. For the latter three countries I supplement with reliable entry and bankruptcy data from national statistical agencies.
The disadvantage of using EIM as data provider is that one loses detailed information related to where in a particular country the company is starting up and what type of business it is conducting. Thereby, analysis investigating these aspects will be impossible.

Despite the challenges when it came to data collection, the business demography data obtained in this thesis seem to give a precise picture of the entrepreneurial new starters in each country surveyed as it clearly follows the economic cycles and underlying framework conditions such as changing legal requirements.

For the formal description of business demography variables; an enterprise birth, i.e. the formation of a new company, is in this study specified as the establishment of a set of production factors where no other companies are directly or indirectly included in the foundation. The amount of enterprise births do not involve business entries due to such events as mergers, firm break-ups, change of activity or restructuring of a set of companies. To be able to compare the entrepreneurial new starters across countries I have made use of the number of new start ups as a percentage of the total active business population in each country. The start up rate represent a way to compare and evaluate the entrepreneurial rates between countries, which is presented in figures in Appendix C.
The bankruptcy rate is classified as the number of unincorporated and corporate business bankruptcies divided by the number of active companies in a country's economy. The development of country bankruptcy levels is also graphically presented in Appendix C.

6.3.2 Repayment period, automatic stay and exemption levels

Data on legal rights to receive an automatic stay on assets in reorganization bankruptcy as well as exemption levels and the possibility of discharge of outstanding debt after liquidation is compiled from various sources on national level as well as EU level. The Doing Business project of the World Bank provided valuable information on the legal basis concerned with bankruptcy regulation. The European Judicial Network of the European Commission, found at EUROPA - the portal site of the European Union, has provided much information on bankruptcy regulation within the member states. In addition, the Norwegian institution for information on bankruptcies, *Konkursrådet*, and the law division at the Justice Department

has been of great help regarding information on the Scandinavian bankruptcy regulation. Articles of special importance include Armour and Cumming (2008) and White (2007). National bankruptcy regulation for each country in my sample receives extended review in Appendix B of this paper.

6.3.3 Education

Data on tertiary education attainment across countries are from the Statline databank at the Central Bureau for Statistics in the Netherlands. An international comparison of investment climate, human capital and labor supply provide a complete database consisting of the number of people in the 25 to 65 age bracket who has graduated higher educational levels in all countries surveyed in this thesis. Tertiary education is in the U.S. characterized as the educational level following high school or any education of equal status. For European countries this typically involves education at bachelor, masters or PhD-levels.[15]

6.3.4 GDP growth

Statistics regarding growth in gross domestic product for all countries is compiled from the World Economic Outlook Database, April 2008 Edition, as presented by the International Monetary Fund (IMF). The yearly growth is measured as an annual percent change in GDP in constant prices of the national currency, thereby accounting for the effect of inflation.

6.3.5 Unemployment

The source of standardized unemployment rates is the OECD Main Economic Indicators as presented in the Economic Outlook of December No. 84. - Volume 2008. Unemployment rates represent unemployed persons as a percentage of the labor force. The labor force is the total number of people employed and unemployed. Unemployed persons comprise persons aged 15 to 74 who were: i) without work during the reference week, ii) currently available

[15] According to the ISCED97 classification, ISCED standing for International Standard Classification of Education, some other forms of education also count as higher education.

for work, iii) actively seeking work. OECD states that the data has, as far as possible, been adjusted to ensure comparability over time and to conform to the guidelines of the International Labor Office. In countries with annual surveys, monthly estimates are obtained by extrapolation and by incorporating trends in administrative data, where available. The annual figures are then calculated by averaging the monthly estimates. For countries with monthly or quarterly surveys, the annual estimates are obtained by averaging the monthly or quarterly estimates, respectively.

6.3.6 Patent applications

The variable on patent applications received at the European Patent Office (EPO) is collected by Eurostat for the Innovation and Research program. The variable covers patent applications from all sectors of industry, and represents patent applications per million of the working population.

6.3.7 Legal origin

The classification of the sample countries' legal origin is collected from the work done by La Porta et al. (1998). Their results show that common law countries generally have the strongest creditor protection and hence stricter bankruptcy regulation on the debtor, whilst French civil law has the weakest legal protection of creditors. The German and Scandinavian civil law countries are found to be located in the middle. Within this data material, the common law is found in the United Kingdom, United States, Ireland and Canada. The French civil code is found in the Netherlands, Italy, France and Belgium. The German civil law is in this data sample only found for Germany itself. The Scandinavian civil code is on the other hand very well represented in four of the sample countries; Sweden, Norway, Finland and Denmark.

6.3.8 Attitudes toward entrepreneurship and fear of failure

All variables are compiled from the Global Entrepreneurship Monitor (GEM) database, covering Total early-stage entrepreneurial activity (TEA), Future entrepreneur index, Know entrepreneur index, Potential entrepreneur index and Fear of failure index. As mentioned in the introduction, GEM is a series of annual studies concerned with improving our understanding of the relationships between entrepreneurship and national development.
The GEM Adult Population Survey provides micro level data of the participating countries. Representative samples of at least 2,000 individuals in the adult population are annually drawn for every country. Questionnaires are completed by key-informants in the field of entrepreneurship within all countries, and aggregates are derived from the individual data.

Unfortunately, the GEM-project did not publish its current range of variables until 2002. In other words, data on the share of a country's population who is currently setting up a business, or expects to start a business within three years; who knows an entrepreneur, or who see themselves as potential entrepreneurs; as well as the share of population who indicate that fear of failure prevent them from starting a business; is only available for the time period between 2002 and 2008. However, some countries in the sample were not involved in the projects of 2007 and 2008. Consequently, I only have data for Canada until 2006, for Germany data from 2007 is excluded, and Sweden lack data for 2008. This is of course a disadvantage, and is the reason why these variables only take part in the extended model in Table 4.

6.3.9 The cost of bankruptcy

The World Bank's Doing Business project measures international differences in business regulations and their enforcement across 181 economies. The topic of "Closing a Business" identifies weaknesses in existing bankruptcy law and the main procedural and administrative bottlenecks in the bankruptcy process. The cost associated with bankruptcy proceedings is measured as part of this index. The cost is calculated as a percentage of the total assets in the bankruptcy estate.

7. Methodology and model specification

In this section I present the methodology and model specification employed to solve the problem at hand. I go through different types of methods to estimate panel data and explain why the methodology chosen will gain the best result. Further, in the model specification I include variables linked to a nation's bankruptcy law as well as other selected variables capable of affecting start up conditions. The thesis will also focus on the contribution recent economic crisis has made and explore whether bankruptcy regulation's legal origin has significant effect on the level of new businesses within a nation. Additional analysis linked to the data material gathered by GEM will also be performed to broaden the perspective of the thesis. GEM started gathering data quite recently and the earliest observation registered is for the year 2002. As mentioned, this indicate a considerable cut down from the time horizon present in the data material originally gathered for this thesis; GEM-data is thus not utilized in the main model.

7.1 The econometric technique of panel data analysis

The dataset applied in this thesis is in the form of panel data, also named longtitudal data as a result of it containing observations on multiple variables over several time periods. This type of data has both a cross-sectional dimension represented by the differences between countries, and a time-series dimension reflected in changes within countries over time. Panel data therefore allows us to follow the same group of countries over a chosen time period, enabling us to study the dynamics of the group's development. Thus, panel data sets are often used in the analysis of government policy changes, such as modifications of bankruptcy regulation.

The main advantage of cross-country panel data for the analysis of business entry rates is that the country-specific effects can be controlled for by using either a fixed or random effects estimator. This is especially useful when working with this type of data as observations are often not independently distributed over time (Wooldridge 2006). For a country, unobserved (and often immeasurable) variables, such as culture, may affect business start up rates over time. It is also possible to use regular multiple regression techniques on panel data. This technique however has some drawbacks which will be

described below.

7.1.1 Multipple regression technique

Even though multiple regressions, such as pooled OLS, are possible to use when working with panel data, this technique may not produce fully optimal results. Coefficient estimates obtained from multiple regressions may be subject to omitted variable bias and as a result lead to inconsistent estimates. This type of bias occurs when the dependent variable is correlated with some unknown variable that cannot be controlled for (Princeton University 2009). Of course it may be possible to try to control for more explanatory variables in the regression analysis to reduce the probability of omitted variable bias. But as mentioned, many such unobserved factors may be hard to measure.

To get unbiased results when estimating a panel data model using pooled OLS, we have to make an assumption that the explanatory variables are not correlated with the unobserved effect captured in the error term. Often we cannot be sure if this is the case or not. However, instead of multiple regression technique one might chose to use panel data techniques which allow for control of some types of omitted variables even without observing them. As mentioned, country-specific effects affecting our analysis can be controlled for by using either a fixed or random effects estimator. Both methods are included in this thesis.

7.1.2 Fixed effects

In general, there exists two types of unobserved factors affecting the explained variable; these are constant variables and time-varying factors. The fixed effects model will be presented in the following (all equations are based on Wooldridge 2006):

$$(1)\ y_{it} = \beta_1 x_{it1} + \beta_2 x_{it2} + \ldots + \beta_k x_{itk} + \alpha_i + u_{it},\ t = 1, 2, \ldots T.$$

In the notation, *i* denote the countries in the sample, while *t* denotes year. The unobserved effect is represented by the variable α_i which captures all unobserved factors affecting the dependent variable that do not change over time. α_i is also referred to as the fixed effect as it is constant over time. The idiosyncratic error term u_{it} captures all unobserved factors that change over time and affect the dependent variable y_{it}.

The fixed effects regression lets us control for omitted variables that might differ between countries but which are fixed over time. In this analysis, omitted variables would be country unobserved effects that for some reason differ between countries, but at the same time are constant over time for the different countries. Examples include a country's culture for entrepreneurship as well as the population's risk aversion concerned with potential bankruptcy and its consequences.

The fixed effects model allow for correlation between the unobserved fixed effects α_i and the explanatory variables in any time period. To obtain this it is necessary to time demean each explanatory variable. For each country i_t we therefore average equation (1) over time:

$$(2)\ \bar{y} = \beta_1\bar{x}_{i1} + \beta_2\bar{x}_{i2} + \ldots + \beta_k\bar{x}_{ik} + \alpha_i + \bar{u}_i$$

As a consequence of α_i being constant over time, it appears in both equation (1) and (2). Further procedure includes subtracting equation (2) from (1):

$$(3)\ y_{it} - \bar{y}_i = \beta_1(x_{it} - \bar{x}_i) + \beta_2(x_{it} - \bar{x}_i) + \ldots + \beta_k(x_{it} - \bar{x}_i) + (\alpha_i - \alpha_i) + (u_{it} - \bar{u}_i)$$

As a result of $\ddot{y}_i = y_{it} - y_i$, the time-demeaned equation can for each country i be written as:

$$(4)\ \ddot{y}_i = \beta_1\ddot{x}_{it1} + \beta_2\ddot{x}_{it2} + \ldots + \beta_k\ddot{x}_{ik} + \ddot{u}_{it}$$

As we can see from (4) the fixed effect α_i has disappeared. In other words, the fixed effects transformation has eliminated the unobserved constant effect. This allows for α_i to be correlated with the explanatory variables in any time period (Wooldridge 2006). As a consequence, any explanatory variable that is fixed over time will be dropped from the model. Thus we cannot utilize the fixed effects model in the presence of amongst other legal origin dummies which naturally will stay constant from year to year.

7.1.3 Random effects

While the fixed effects estimation allow for omitted variables to vary between countries they need to be constant over time for the model to produce efficient estimates. However, what if the analysis is subject to unobserved effects which are not fixed over the time horizon, but

vary between countries? In cases where it is reasonable to assume that α_i is uncorrelated with the explanatory variables, it will be possible to use the random effects model. This model will as mentioned account for both types of omitted variables, while the fixed effects model only account for one type of omitted variables. Stata's random effects estimator is a weighted average of within and between effects; meaning that while the fixed effect estimator only utilizes time variation within each cross-sectional observation, the random effects estimator also utilizes variation between observations (Princeton University 2009).

We may start to derive the random effects model with basis in the unobserved effects model presented in equation (1):

$$(5)\ y_{it} = \beta_0 + \beta_1 x_{it1} + \ldots + \beta_k x_{itk} + \alpha_i + u_{it},\ t = 1, 2, \ldots T.$$

Note that an intercept β_0 is added to the equation. This is to allow for the assumption that α_i has a zero mean. Thus we can assume that the unobserved variable α_i is uncorrelated with and independent of all explanatory variables over the entire time period.

Accordingly, equation (5) above becomes the random effects model when we assume no correlation between α_i and x_{it}.

$$(6)\ y_{it} = \beta_0 + \beta_1 x_{it1} + \ldots + \beta_k x_{itk} + v_{it},$$

Where we define the composite error term as $v_{it} = \alpha_i + u_{it}$. If the unobserved effects vary between countries and over time, the composite error term v_{it} will be serially correlated across the time horizon (Wooldridge 2006). The use of regular multiple regression techniques on such a data set would lead to incorrect results. The random effects model on the other hand, utilizes a GLS (generalized least squares) transformation which eliminates serial correlation in the error term. Wooldridge (2006) explains, "Random effects are preferred to pooled OLS because random effects are generally more efficient."

7.1.4 Fixed versus random effects

Fixed effects is often characterized as the main model for analysis on panel data (Princeton University 2009). This is because it allows for correlation between α_i and x_{it}, while the random effects model does not. Fixed effects estimation is always a wise thing to perform whilst working with panel data. However, if we believe that the unobserved effects are not correlated with the explanatory variables in our analysis, then the random effects model will be able to produce more efficient estimates than the fixed effects model. The fixed effects estimator subtract the entire time average from the variables, while the random effects estimator utilizes the between differences as well. In other words, the random effects estimator also utilizes the information on the distance between the groups, making it a more efficient estimator.

To help us chose between these two models, it is possible to run a Hausman test which has been constructed to formally test for statistically significant differences in the coefficients of the explanatory variables in the two different models. The null hypothesis of the test is that the coefficients estimated by the random effects estimator are the same as those estimated by the fixed effects estimator. A failure to reject the null hypothesis implies that both the fixed and random effects estimates are sufficiently similar, consequently it does not matter which model is used. A significant p-value on the other hand, means that only the fixed effects model will be able to produce efficient coefficients. The Hausman test will be performed in this thesis where it is appropriate.

7.2 Model spesification

Based on the above framework I estimate the contribution of bankruptcy law on entrepreneurship rates and thereby aggregated growth. Entry rates are measured as the level of startups relative to the total number of active businesses in a country. I distinguish between the effects of repayment period, automatic stay and exemption levels to illustrate the broadness of bankruptcy regulation and thereby its potentially wide-ranging implications on start ups. Bankruptcy rates as an indicator of economies efficiency and business churn is also measured. In addition, I consider the effect of key variables as business cycle effects, employment, education levels and registration of inventions.

This arrangement of variables gives the following main model:

$$ENTRYRATE_{it} = \beta_0 + \beta_1 DISHARGEYEARS + \beta_2 AUTOMATICSTAY + \beta 3 EXEMPTIONS + \beta_4 BANKRUPTCYRATES + \beta_5 GDPGROWTH + \beta_6 UNEMPLOYMENT + \beta_7 EDUCATION + \beta_8 PATENTAPPLICATIONS + \nu_{it}$$

The specified model above is also the basis for an extended model including several dummy variables which explore the effects of recent global economic crisis and whether the legal origin of bankruptcy law affects start up rates across countries. As some of these variables are constant over time I am not able to utilize the fixed effects estimator in the extended model. Further analysis will be performed on data material gathered by GEM to be able to broaden the perspective of the thesis. This model also serves as a robustness check for the most recent years of the sample, in which we may investigate the effect of an extended amount of variables linked to bankruptcy law.

All independent variables are presented in Table 3 of cross-country correlations. This is done to investigate if the data material suffers from multicollinearity as a result of either two or more highly correlated explanatory variables. Multicollinearity may lead to substantially larger standard errors, thereby distorting the regression results.

The multiple regression results are summarized in Table 4, where nine model-estimations are specified. Results are presented and interpreted in closer detail in the next chapter.

8. Results and interpretation

The purpose of this paper is to explore the relative importance of cross-country bankruptcy regulation of assumed importance to the aspiring entrepreneur, to see if these legal characteristics affect the level of businesses starting up across countries. By conducting an empirical study on this subject I may identify if bankruptcy need to be a focus area of future policy changes in the OECD.

In this chapter I will present results from the thesis' empirical research. Initially I will report the findings from the various models; the main and extended variable model as well as the model utilizing GEM data. Estimation of these models is done by using the techniques of ordinary least squares, fixed effects and random effects estimation. I discuss the interpretation of the various coefficients and then provide an overview of the result's implication and its economical significance. Finally, directions for further research are presented. Detailed results concerning this empirical research are found in Table 4. In addition, Table 2 shows summary statistics including mean and standard deviation for all countries in the sample, whilst Table 1 provides an overview of variable descriptions. Cross-country correlation are presented in Table 3.

8.1 Presentation of results

Every model in this analysis is estimated with some form of entry rate as dependent variable. The main model as well as the extended dummy variable model both uses the EIM entry rate as dependent variable, while the GEM-model bases its analysis on a similar variable named *total early-stage entrepreneurial activity* (TEA). Specifications of the main model always include the following variables; bankruptcy rates, repayment years, automatic stay, exemptions, GDP growth, unemployment rates, tertiary education levels, patent applications. Dummies on legal origin and year dummies will be added in the extended model. The GEM-model will base its analysis primarily on GEM variables such as the fear of failure index. In addition, the variables linked to bankruptcy regimes are included to be able to perform a robustness check.

8.1.1 Results from the main model

Results from the pooled OLS presented in Table 4, column (1) of the main model, show that the bankruptcy related variables; bankruptcy rate, repayment years, automatic stay and exemption levels all have the pre-estimated negative effect. In addition, bankruptcy rate and exemption levels are statistically significant at the 5% and 0.1% level, respectively. Indicating that lower exemption levels as well as higher bankruptcy rates contribute to less start-ups. As expected, GDP-growth show a highly significant positive effect on entry rates at the 0.1% level, holding all other independent variables constant. Unemployment rate on the other hand, displays a negative effect on entry rates, implying that the effect of shifting business cycles on employment is stronger than the tendency to become self-employed if a member of the work force were to lose his job. However, this estimate is not statistically significant.

Surprisingly, higher education levels in the population turn out to have a negative effect on start up rates. This is contrary to what was expected since common belief implies that more education will foster more entrepreneurship. Although this effect is not significant at any accepted level, reasons for this surprising effect will be presented in section 8.2. Patent applications also show a negative effect on entry rates. This effect is statistically significant at the 1% level, implying that more patent applications in a country have a negative effect on start up rates. This is a puzzling result and possible reasons for this will also be described later in this chapter. As mentioned in chapter 7, pooled OLS does not account for unobserved effects in the same way as the fixed and random effects estimations, and the estimated coefficients in column (1) may be inefficient as a result of being subject to omitted variable bias as previously described.

The fixed effects estimation of the model is presented in column (2) of Table 4. As we can see, the effect of the bankruptcy rate has now become positive and gained more significance; meaning that the churning effect of an efficient bankruptcy regime has a positive impact on entrepreneurship rates. Holding all other variables constant, the variable on repayment years is still negative indicating that the longer an entrepreneur has to wait to be discharged from pre-bankruptcy debt, the fewer new establishments will be started in a given country. However, as this coefficient is not statistically significant we cannot deduct any conclusive assumptions. Automatic stay has become positive in the fixed effects estimation contrary to what was believed to happen. This effect indicates that a policy change making automatic

stay possible in reorganization bankruptcy will contribute negatively to the start up of new businesses in a country. This effect is not at all logical and I will try to put forward some reasons for this later in section 8.2 as well. The exemption levels-variable is of course dropped from the fixed effects model as it is characterized as a constant variable. The effect of GDP growth is still positive and the coefficient has not lost any of its statistical significance of 0.1%. Unemployment rates estimated in the fixed effects model also keep its negative effect and increase some in size. In addition, the variable has become statistically significant at the 1% level. Coefficients on tertiary education and patent applications still keep their unexpected negative values.

The outcome of the random effects model is nearly identical to the fixed effects model when it comes to negative and positive effects as well as statistical significance. This is also shown by the Hausman test which fail to reject the null hypothesis of the coefficients estimated by the random effects estimator being the same as those estimated by the fixed effects estimator; thereby allowing both methods to be used. As the coefficient estimates in the random effects model are generally more efficient, this model will be the preferred specification. In the random effects model the coefficient on exemptions are once more included since the random effects model allow for constant variables. The variable is barely significant at a 10% level. In addition, the surprising effect of patent applications has increased its significance to the 0.1% level.

8.1.2 Results from the dummy variable model

The main model is in column (4) extended to include dummies on legal origin to see if the foundation of the bankruptcy regime provides any effect on cross-country start up rates. The coefficients are estimated using the random effects technique. As can be seen from Panel B of Table 4, the coefficient on bankruptcy rate is still positive at a 1% significance level. Automatic stay does not regain its negative effects and also exemption levels become positive in this random effects model. However none of the coefficients are statistically significant at any level. The change regarding the effect of exemption levels is not unexpected since exemptions may have both positive and negative impact on start up rates. This is a result of the trade off between the probability for an entrepreneur to go bankrupt and the creditor's conditions when providing finances to entrepreneurs. The variable on GDP

growth still contributes positively to the entry rate of new businesses. Coefficients regarding education, patent applications and unemployment rate still display negative effects on entrepreneurship.

Inclusion of the legal origin variables for French, German and Scandinavian civil law lets us control for their effect as opposed to the English common law system. The effect of both French and Scandinavian civil law displays a negative contribution to entry rates where these legal systems are implemented, as opposed to the common law system which I use as base. Both variables on legal origin are significant at a 5% level. The negative effect of French and Scandinavian legal origin implies that English common law provides the most favorable legal basis for entrepreneurship of the three, amongst other through its favorable bankruptcy regulation. The effect of German civil law on the other hand, displays an unexpected positive effect whilst holding all independent variables constant, indicating that German law ensures more entrepreneurs than the common law system. When looking at the data it is nevertheless clear that Germany is the only country in this thesis' data sample which has this origin and I therefore suspect estimation problems making the effect of the coefficient non conclusive. The estimate is not very large or significant and its standard deviation is of course high.

The analysis of Panel B, column (5) is extended from the main model to include the effect of the dot.com bust the global economy experienced around 1999 – 2000. To control for this effect I create a dummy for these two years and run a random effects estimation. The results show a negative effect of the bust on entry rates, but the coefficient is not significant at any level and it is not possible to draw any decisive conclusion in this regard. Nearly all other variables in the random effects model keep their positive or negative values, except exemptions, which again turn positive.

To be able to investigate the time effect on entrepreneurship rates I generate year dummies for all years except the recently investigated bust years of 1999 and 2000. The results are reported in column (6) of Table 4. The general development can be seen as a highly positive effect from 1994 to 1998 and again from 2002 until 2005 where many new establishments entered the market. The effects are seen in contrast to the entry rate of 1999/2000 which I accordingly use as base. The positive coefficients of years 1995 and 1996 are the largest in the entire period as well as being highly significant at the 1% level. This trend corresponds closely to the literature on the business development characterizing the years before the millennium as a stock market boom. The business world's acceptance of and high valuation

of many so called dot.com-companies gave aspiring entrepreneurs future prospects for making a potentially large profit on their entrepreneurial ventures. Year 2002 saw a small setback in amount of ventures starting up probably related to the then recent bust. The total effect is still positive, meaning that while holding all other effects constant, more companies started in 2002 relative to the 1999/2000 level. However, the effect is not significant.

The years after 2002 until 2005 are all positive, showing the optimistic effect of the coming boom on entry rates. However, in 2006 we see a sharp decline in start-ups entering the markets. The coefficient is large and within in the 1% significance level. Intuitively this effect seems to be too soon to capture the consequences of the financial crisis, which did not become apparent until the Lehman Bros bankruptcy in September 2008. An alternative explanation may be the falling unemployment rates in the recent boom years, indicating that the population generally possesses a preference for employment and higher wages in good times rather than self-employment and a riskier job future. Unfortunately, I do not have enough data material to directly test the effect of the recent economic boom and the following downturn in the fall of 2008.

Further, the extended year dummy model (6) shows that all bankruptcy related variables regain their negative values. Automatic stay is significant at a 5% level, while exemptions and bankruptcy rates proves statistical significance of 0.1%. Unemployment and patent applications both keep their negative values. Tertiary education finally becomes positive implying that higher educational levels within the population contribute to additional start-ups. However, the effect is not significant and from the results of this analysis we cannot ascribe this variable any real value when it comes to entrepreneurship. GDP growth however, keeps its positive and highly significant effect on entry rates.

8.1.3 Results from the GEM-model

The GEM-model utilizes a different dependent variable than the above analysis. Total early-stage entrepreneurial activity (TEA) is a measure collected by the organization Global Entrepreneurship Monitor (GEM) and contains data on the number of people currently setting up a business or owning/managing a business existing up to 3.5 years; relative to the adult population 18-64 years. By using this dependent variable the concept of entry rate is

broadened by some degree, now also including those who are in the process of establishing a business and those who have been self-employed or managers of their own business for a couple of years. As such the inclusion of this analysis represents a robustness check in which we in addition to analyzing whether the cultural aspects of a community promote entrepreneurship, may investigate the most recent effects of the different bankruptcy variables. The time horizon of this model spans the years from 2002 until 2006.

Results from the pooled OLS estimation is presented in column (7) of Table 4. The Future entrepreneur index shows an exceptionally large, positive and significant effect on entry rates. This effect is as expected since the variable is characterized as the share of people expecting to start a business within three years. The same outcome is also true for potential entrepreneur, which show a large and positive effect on entry rates, significant at the 1% level, holding all independent variables constant. The effect of this variable on entry rates was also expected as the potential entrepreneur coefficient indicates to what degree the adult population believes they have the abilities needed to become an entrepreneur. Meaning, a higher share of people believing they have the suited knowledge to start a company – the more people become self-employed. As such this variable may act as a proxy for the educational effect on entrepreneurship. As we saw in the main model the tertiary education level did not provide any sufficient evidence for this effect, however the population's bare belief of having the right know-how does matter.

The know entrepreneur index is a measure of how many in the adult population who know an entrepreneur personally. This variable has also attained the expected positive effect on start up rates; however the coefficient is not significant at any level. The positive effect is somewhat smaller compared to the future and potential entrepreneur indexes, but the effect is still large in an isolated sense. This result strongly indicates that the influence of just knowing an entrepreneur and perhaps using this person as your mentor, is not as large as actually believing you have the skills for starting your own company and expecting to do so in just a few years.

The coefficient on fear of failure provide as expected a highly negative effect, significant at the 5% level. The variable measures how many of the adult population who would avoid setting up their own business for fear of failure. Aspects concerned with the fear of failure-variable may be linked to country specific cultural conditions, either supporting or preventing individuals from starting their own enterprise. This paper thereby shows that the

effect of an inhibiting culture is absolutely affecting the start up rates, within the OLS framework. Cost of estate also contribute negatively to the entry rates, implying that a less efficient bankruptcy regime contribute to reduced entrepreneurship overall. This is an important lesson for policy makers to be aware of. The effect is highly significant at the 0.1% level. Most of the bankruptcy related variables; bankruptcy rate, automatic stay and exemption levels all have the pre-estimated negative effect. Automatic stay additionally provides a large and highly significant effect. Repayment years on the other hand, show a surprising positive effect significant at the 5% level. This may be due to the fact that many of the sample countries have for this period of time reduced their repayment periods to ensure a more entrepreneurial friendly business climate. However, the estimate should also capture the countries in this sample, which do not allow for automatic discharge and impose nearly life long repayment plans on their entrepreneurs. As such this effect is highly puzzling and discussions around possible reasons for this effect will be presented in the next section.

The fixed effects estimation of the GEM-model is presented in column (8) showing that all variables have lost their significance. The indexes of future entrepreneur, as well as potential and know entrepreneur still show large and positive effects on the start up rate. In fact, the effect of potential entrepreneur has now surpassed the effect of future entrepreneur. The variables of automatic stay and exemption levels are both dropped from the fixed effects model due to their constant features in the period under display. Repayment years keep its surprising positive effect and in the fixed effects model also the coefficient on fear of failure unexpectedly become positive. Cost of estate and bankruptcy rates still keep their negative coefficients, indicating that an inefficient bankruptcy regime as well as more bankruptcies, often linked to a weakening economy, contribute negatively to start up rates. But as none of the coefficients are statistical significant we cannot deduct any real conclusion from this model.

The results of the random effects model (9) show that some of the coefficients have become statistically significant again. This goes for the future entrepreneur and potential entrepreneur indexes, which effects are both large and significant at the 5% and 1% level respectively. Also the coefficient on automatic stay, which is yet again included in the model as a result of the random effects estimation allowing for constant variables, is significant at the 1% level. In addition, all bankruptcy related variables confirm their negative effects on entry rates in the random effects estimation. Meaning, all except repayment years, which is still strangely positive. Cost of estate and fear of failure both show strong negative effects on

entry rates, but neither is statistically significant. When conducting a Hausman test, and examining the similarities of the fixed and random effects estimations for the GEM-model, we fail to reject the null hypothesis as the p-value is very high; and thereby we allow both fixed and random methods to be used. As the random estimation in general produce more efficient estimates, and as the coefficients of column (9) show more significant coefficients than column (8), the conclusion needs to be that the random effects estimation is a better model for the GEM-analysis in this regard.

8.2 Closer interpretation of the analysis

In the above section all results from the analysis is described and explained. The different methods of estimation, namely the pooled OLS, fixed effects and random effects estimation, produce quite different results. For the pooled OLS estimates to be able to account for concerns of failure to meet assumptions, such as heteroscedasticity, all multiple regressions are performed with a command making them robust. With the robust option, the point estimates of the coefficients are exactly the same as in ordinary OLS, but the standard errors are estimated using the Huber-White estimators thereby dealing with this concern (Princeton University 2009). However, as mentioned in chapter 7, there is a high possibility that the models estimated by pooled OLS are subject to omitted variable bias, leaving the estimates inconsistent. This type of bias occurs when the dependent variable is correlated with some unknown factor that cannot be controlled for. The question of importance thus read; is our dependent variable, entry rate, correlated with any unknown variable impossible to control for?

This question is very hard to answer, and many times we simply do not know. Nevertheless, one solution might be to try to uncover any unobserved effect that may or may not be correlated with the level of entrepreneurship in a society.

As mentioned previously in this thesis the idea of an entrepreneurial culture may constitute a great influence on the population's general willingness to take risks and establish a company. The culture underlying social interactions is one of the key foundations when it comes to entrepreneurship, and a factor that is very hard to measure. In effect, I have found an unobserved effect directly linked to the culture of a society. Of course, there may exist many

other unobserved effects, such as risk willingness, the quality of entrepreneurial projects and efficiency, but in the following we will focus on culture.

As a result of the existence of these unobserved effects, which are possibly closely linked to the entry rate, we need to assume that the pooled OLS is subject to omitted variable bias and consequently provides inconsistent estimates. However, by utilizing panel data estimation techniques this bias may be accounted for. The next question therefore relates to whether or not the unobserved effects are fixed in time or not. As mentioned, the fixed effects transformation allows for omitted variables to vary between countries, but they need to be constant over time for the model to produce efficient estimates. On the other hand, through random effects estimation we may be able to control for both variation over time and across countries. So, what type of unobserved effects characterizes the entrepreneurial culture and the stigma effect?

As a country's culture may indeed be very hard to alter, it is not implausible that the unobserved variable is fixed in time. However, as the time period of investigation in this thesis spans nearly half a generation, including several recent national changes in bankruptcy regime, it would be very surprising if the underlying culture had not changed somewhat in the process. Thus, it seems the random effects estimation will be able to produce the most efficient estimates.

However, an important condition for using the random effects model is that there is no correlation between the unobserved effect and the explanatory variables in the model. Again, we cannot know for sure if this is the case or not. Through the Hausman-test we nevertheless found that both estimation techniques may be used for the main model as well as for the GEM-model, indicating that the random effects model is able to produce the best estimates in this regard. Even though the R^2 should not be relied on exclusively, this goodness of fit-estimate also indicate that the random effects estimations generate the most efficient variables as the overall R^2-value is largest for both of the random effects-models when compared to the fixed effects estimations.

In the models estimated above I have previously discovered some puzzling results. In this section I will try to discuss different reasons for why this might be. In the main model as well as in the extended dummy model, patent applications consistently contribute negatively to the entry rate. This is very surprising as more patents logically would mean more

inventions, and thereby more entrepreneurship. There may however be a rational explanation for this. Patent applications filed for through the European Patent Office may be enforced in any country member of the European Patent Organization. Conclusively a patent filed in Norway by a foreign individual may prevent Norwegian researchers from doing R&D within that particular field, thus inhibiting innovation. Other explanations include the fact that the quality of the data on patent applications is not good enough, or that there is no real link between the actual filing for patents and entrepreneurial work. Since many new inventions today are within the software area or within process development, which are both very hard inventions to patent, this latter explanation may reflect the real world in some sense. None the less, the true effect of the patent applications is impossible to interpret within the current data set.

Tertiary education also showed a surprisingly negative effect in most of the models estimates. The reason for using this variable at all was because of its expected impact as a proxy for entrepreneurship education, which has only just recently begun to be measured. Most entrepreneurship classes are taught at higher levels of education indicating that the overall level of higher education in a population would reflect this. However, looking at the coefficient's direction it is clear that at best we have found no link between education and entrepreneurship within this data set.

In the fixed and random effects estimation of the main model as well as in two of the estimates in the extended model, the coefficient on automatic stay unexpectedly turns positive. The effect is not significant for any positive values, but regains significance when it again turns negative as in model (6), (7) and (9). Still, this is not a reasonable effect as a unit increase in this regard provides no possibility for automatic stay in a reorganization bankruptcy. Explanations might be that on the one hand, entrepreneurs do not calculate that far ahead as to what their preferences would be if they ended in up in a reorganizational bankruptcy. Another explanation is that in countries that allow automatic stay, and thus impose fewer restrictions on the debtor, creditors need to make adjustments to be able to protect their own interests. As a result they prove debtors with stricter loan terms as well as higher interest rates, and as such prevent entrepreneurship. This may also be the case for the surprising effect of the repayment years in the above GEM-model. The trade off between creditors and debtors is highly affected by bankruptcy regimes – an effect not to take lightly.

8.3 Implications and economic significance

Implications regarding this analysis include that it is not possible to make an unambiguous conclusion on the effect of national bankruptcy regulation on entrepreneurship rates. This thesis does not produce enough evidence to be able to do so. Consequently, it does not look as if bankruptcy law needs to be a focus area for future policy changes trying to promote entrepreneurship. The effects of in particular the variable concerning repayment years has in every model, with the expectance of the GEM-model, showed a negative effect on entry rates; implying that a longer payback period for entrepreneurs provide less startups in a society. However, this effect has not been statistically significant at any accepted level. The estimated coefficients on automatic stay have varied from positive to negative and back, thus providing little substantial evidence for its true effect. Its significant negative value in the GEM-model however might serve as a point of reference for further research concerning the implications of different reorganization bankruptcy regimes on entry rates.

The coefficient on cost of bankruptcy in the GEM-model has consistently been negative in the analysis. However, as shown above, it lost its significance when panel data techniques were utilized. Fear of failure has been one of the most interesting variables in this thesis as it may act as a proxy for the degree of stigma in a society. The coefficient estimate on fear of failure proved its expected negative effect in column (9), which I previously characterized as the best method of estimation for this model; but the estimated coefficient was not significant at any level. The exemption level has in every random and fixed effects model attained a negative value and also became highly significant in model (6), indicating that reduced exemption levels provide less entrepreneurship. Still, this is not enough to be able to statistically draw any final conclusion on the effect of these variables.

The effect of bankruptcy rates have like automatic stay varied a lot in direction. However, both directions are defendable as bankruptcy rates may act as a proxy for business churn and thus the efficiency of an economy, as well as for the present strength of the economy. The only estimated variable that has proved its significant and undoubtedly positive effect on entry rates is GDP growth. This is natural since boom-years contribute both to wealthier and more risk willing investors, suppliers, partners and customers.

Even though the estimation results above show no conclusive results regarding the real effect of bankruptcy law on entrepreneurship, one should not underestimate the economic

significance of any country specific bankruptcy law. It is clear that numerous factors play important parts in making a productive environment for entrepreneurs. Many aspects of the trade off between the creditor's requirement for economic safety and predictability, and the entrepreneur's need for finances as well as personal safety cannot be properly examined purely in a statistical analysis. A more lenient bankruptcy regime may limit the entrepreneur's ability to borrow capital; however, as argued previously in this thesis, the implications of a harsh bankruptcy regulation may pose serious restrictions on the would-be serial entrepreneur, hindering him from starting another venture. If the bankruptcy regulation were to have no effect on the cross-country start up rates I believe we would have seen an entirely different distribution of where to find the most new ventures globally. Today, most new ventures are situated in the debtor-friendly U.S. All in all, the effects from this analysis may provide some hints of where the direction is going even if the total effect needs to be characterized as inconclusive. Lacking empirical results backing the hypothesis may be due to measurement error and further research within this field is highly recommended.

8.4 Directions for further research

Many aspects of national bankruptcy regulations are not possible to catch within the limited research frames of a master thesis, however, various features of the bankruptcy regime outlined in appendix B may be of vital importance to start up rates. As the entrepreneurial effects of the bankruptcy regime's strictness cannot be properly concluded on in this thesis, further research is needed to either establish a link between the two or discard it altogether. The need to investigate this relationship is important, as this thesis has shown that entrepreneurship is one of the most vital forces of economic growth today.
Further research on this topic is however not feasible until comparable and harmonized data on business demography becomes available. As mentioned, this is a massive work in progress already established by Eurostat and OECD called "Entrepreneurship Indicators Project".

Until comparable data become available for cross-country business demography, several other aspects may be of interest for future research projects. Legal features, such as required minimum capital to form a corporation, could prove to have central impact on entrepreneurship. Also, the effects of learning by doing and entrepreneurial experience are

interesting topics concerning serial entrepreneurship. Another interesting extension is to look at entrepreneurship in different industries. Because different industries are inherently different in their riskiness, bankruptcy policy may prove to have shifting effects depending on the business' primary activities.

9. Conclusion

This paper explores if and how bankruptcy law can encourage and stimulate entrepreneurship in a society. The thesis concentrates for the most part on the severity of bankruptcy legislation, focusing on whether a bankrupt debtor is being punished or forgiven in bankruptcy proceedings. Especially important in this regard are the length of the repayment period after personal bankruptcy, the possibility for automatic stay (moratorium) in reorganization bankruptcy and personal exemption levels. The analysis is based on a unique data set showing entry rates spanning the period of 1995 – 2007 from the following countries: Belgium, Canada, Denmark, Finland, France, Germany, Ireland, Italy, the Netherlands, Norway, Sweden, United Kingdom and the U.S.

The main finding of this paper is that variations in bankruptcy regimes across countries cannot provide us with any conclusive effect on the rate of start ups annually. The relationship between repayment years and entry rates is negative in most models, indicating that a longer repayment period contribute to less entrepreneurship, but the effect never become statistical significant. The various model coefficients on automatic stay have attained values which point in both directions, thus providing little substantial evidence for the true effect of moratorium in reorganizational bankruptcy. The exemption level has in most models attained a negative value and became highly significant in the extended time dummy model, indicating that reduced exemption levels provide less entrepreneurship. Still, this is not enough to be able to statistically draw any final conclusion on the effect of these variables on entry rates. In short, the thesis does not find evidence to support the hypothesis that bankruptcy regime directly and significantly affect the level of entrepreneurship in a country.

However, it is clear that numerous factors play parts of vital importance for making a productive environment for entrepreneurs. As a high variety of determinants for entrepreneurship may be identified in a society, this thesis may not have been able to pick up all interactions between the different factors. However, one should be careful not to underestimate the economic significance of any country specific bankruptcy law. The thought of a strict bankruptcy regime having no effect on the amount of people wanting to take the risk of becoming self-employed is implausible, especially for the countries this thesis look at, where self-employment out of necessity is rare.

A good insolvency regime must prevent entrepreneurs from taking irresponsible loans and lenders from giving loans with too high probability of default. The cost of pro-debtor bankruptcy procedures is less credit supply for small firms and at a higher rate. And even though no certain evidence exists within this thesis, the cost of a pro-creditor system may reduce the overall entrepreneurial activity at an aggregated level. The trade off between the small business owner and his creditors is of high importance and an area the government policy makers need to be aware of. All in all, the effects from this analysis may provide some hints of where the link between bankruptcy law and entrepreneurship is going even if the empirical evidence needs to be characterized as inconclusive.

References

Acharya , Viral V. et al. (2008): Cross-Country Variations in Capital Structures: The Role of Bankruptcy Codes.

Ahlstrom et al. (2004): Understanding venture capital in East Asia: the impact of institutions on the industry today and tomorrow, Journal of World Business, Vol. 39 No.1.

Armour, John, & Douglas Cumming (2008): Bankruptcy Law and Entrepreneurship. Law Working Paper N°.105/2008, European Corporate Governance Institute (ECGI).

Audretsch, D. and R. Thurik (2001): Linking Entrepreneurship to Growth. Working Paper, 2001/2, OECD Publishing.

Audretsch, David. (2002): Entrepreneurship: A Survey of the Literature. Prepared for the European Commission, Enterprise Directorate General. Institute for Development Strategies, Indiana University & Centre for Economic Policy. Research (CEPR), London

Baird, Douglas G. and Edward R. Morrison (2005): Serial Entrepreneurs and Small Business Bankruptcies. Columbia Law School, Center for Law and Economics Studies, Working Paper No. 265; and University of Chicago Law & Economics, Olin Working Paper No. 236

Bankruptcy Canada: http://www.bankruptcycanada.com/question1.htm, (Retrieved January 2009):

Bankruptcy Ireland: http://bankruptcy.ie/, (January 2009).

Bassanini and Scarpetta (2001): Growth , Technological Change, and ICT Diffusion: Recent Evidence from OECD Countries. OECD, Economics Department and OECD, Directorate for Employment, Labour and Social Affairs. Oxford University Press.

Bebchuk, L. (2000): Using options to divide value in corporate bankruptcy. European Economic Review 44.

Berkowitz, Jeremy and Michelle J. White (2000): Bankruptcy and small firms' access to credit. Paper #00-005. University of Michigan.

Beye, Mema and Joanna Nasr (2008): Repaying creditors without imprisoning debtors. World Bank Doing Business in Italy.

Bosma, Niels et al. (2008): Global Entrepreneurship Monitor: Executive Report. The GEM Consortium.

Bosma, Niels et al. (2005): Early-stage entrepreneurial activity in the European Union: some issues and challenges. SCALES-paper N200502.

Commision of the European Communities (2007): Overcoming the stigma of business failure – for a second chance policy, Implementing the Lisbon Partnership for Growth and Jobs. Brussels.

Commision of the European Communities (2003): Green Paper: Entrepreneurship in Europe, Brussels.

Crosio, Stefano and Gherardo Grippo (2008): Focus Abroad: Latest Developments in Italian Bankruptcy Law. (Monaq Business Briefing, June 26 2008)

Djankov, S. et al. (2008): Debt Enforcement around the World. The University of Chicago. (Journal of Political Economy, 2008. vol. 116, no. 6.)

Elul, Ronel and Piero Gottardi. (2002): Personal Bankruptcy and Incentives in Dynamic Model of Entrepreneurship. Brown University, Department of Economics.

The European Commission, Directorate-General for Enterprise and Industry. (2009): Getting Up is in Our Nature.

The European Judicial Network: http://ec.europa.eu/civiljustice/bankruptcy/bankruptcy_gen_en.htm (Retrieved May 2009).

Eurostat Statistical Books. (2007): European business: Facts and figures. Eurostat and The European Commision.

Eurostat. (2003): Business Demography in Europe: Results for 10 Member States and Norway.

Fan and White (2001): Personal Bankruptcy and the Level of Entrepreneurial Activity. Financial Institutions Center.

FORA (2009): Nordic Innovation Monitor. Nordic Council of Ministers, Copenhagen.

FORA (2008): Survey on entrepreneurship in higher education in the EU. NIRAS Consultants, FORA, ECON Pöyry.

FORA (2006): Iværksætterindeks 2006 – Vilkår for iværksættere i Danmark. (Erhvervs og Byggestyrelsen Danmark, Copenhagen.)

Franks, Julian & Sergei A. Davydenko. (2006): Do Bankruptcy Codes Matter? A study of defaults in France, Germany and the UK. London Business School, London.

Franks et al. (1996): A Comparison of US, UK and German Insolvency Codes. Financial Management, Vol. 25, No. 3, Autumn 1996.

Fried et al. (2005): Reform of French Bankruptcy Law Adoption of the Business Safeguard Act, Memorandum.

German law journal (January 2009)
http://www.germanlawjournal.com/article.php?id=737)

Golden, Willie et al. (2003): National Innovation Systems and Entrepreneurship. (CISC Working Paper No.8 October 03)

Hoffmann, Anders (2005): A General Policy Framework for Entrepreneurship. FORA – Centre for Economic and Business Research.

The International Association of Insolvency Regulators (March 2009):
http://www.insolvencyreg.org/index_main.php

Justis og Politidepartementet , Ot.prp. nr. 55 (2005-2006): Om lov om endringer i aksjelovgivningen mv. Vurdering av endring av konkurslovgivningen etter mønster av den amerikanske konkursloven kapittel 7. Chapter 18.1 Stortingets anmodningsvedtak

Kaiser, Kevin M.J. (1996): European Bankruptcy Laws: Implications for Corporations Facing Financial Distress. (Financial Management, Vol. 25, No. 3, Autumn 1996, pages 67-85)

Karlsson-Tuula, Marie (2003): The American and the Swedish Bankruptcy Laws – a comparative study.

Lafont, Hubert (1994): The French Bankruptcy System. Corporate Bankruptcy and Reorganization Procedures in OECD and Central and Eastern European Countries (OECD 1994)

Landier, A. (2004): Entrepreneurship and the Stigma of Failure. Working paper, NYU Stern School of Business, USA.

La Porta, Raphael et al.(1998): Law and Finance, Journal of Political Economy 106 (6), University of California, USA.

Larsen, Morten (2006): Entrepreneurship Consortium Workshop: Entrepreneurship Policy Indicator Questionnaire Project. OECD

Larsen, Morten (2006): Entrepreneurship Policy Indicators for Bankruptcy Legislation: Draft Final Report. CFE/SME(2006)3. OECD

Larsen, Morten (2005): Entrepreneurship Consortium Workshop: Entrepreneurship Policy Indicator Questionnaire Project (OECD 2005)

Lee, S. et al. (2007): Bankruptcy Law and Entrepreneurship Development: A Real Options Perspective. 32nd Academy of Management Review.

Manove et al. (1999): Banking (Conservatively) with Optimists. (RAND Journal of Economics, The RAND Corporation, Vol. 30 (2))

Metzger, George (2006): Once Bitten, Twice Shy? – The Performance of Entrepreneurial Restarts. Discussion Paper No. 06-083, Centre for European Economic Research.

Mittelstädt, Axel and Fabienne Cerri (2009): Fostering Entrepreneurship for Innovation – Synthesis Report of four Country Case Studies (Korea, Mexico, Norway and Turkey). STI Working Paper 2008/5, Structural Policy Division, Directorate for Science, Technology and Industry, OECD.

National Commision on Entrepreneurship, White Paper. (2003): Embracing Innovation: Entrepreneurship & American Economic Growth. Kauffman Center for Entrepreneurial Leadership.

Nordic Council of Ministers (2009): Nordic Innovation Monitor. (Compiled by FORA, Copenhagen 2009).

OECD (2009): Measuring Entrepreneurship: A digest of indicators. The Eurostat Entrepreneurship Indicators Program. (OECD 2009)

OECD (2005): Micro-Policies for Growth and Productivity: Final Report. Paris.

OECD (2004): Promoting Entrepreneurship and Innovative SMEs in a Global Economy: Towards a more Responsible and Inclusive Globalisation. 2nd Conference of Ministers Responsible for Small and Medium-sized Enterprises (SMEs).

OECD (2004): Fostering entrepreneurship and firm creation as a driver of growth in a global economy. Istanbul.

OECD (2003): The Sources of Economic Growth in OECD Countries. Paris.

OECD (2001a): The New Economy: Beyond the Hype - The OECD Growth Project". Paris.

OECD (2001b): Science, Technology and Industry Outlook - Drivers of Growth: Information Technology, Innovation and Entrepreneurship. Paris.

Ravid and Sundgren (1998): The Comparative Efficiency of Small-Firm Bankruptcies: A Study of the US and Finnish Bankruptcy Codes. (NYU Stern)

Reynolds, P. et al. (1999): Global Entrepreneurship Monitor: Executive Report. The GEM Consortium and the Kaufmann Center for Entrepreneurial Leadership. (Kansas City)

Scarpetta *et al.* (2000): Economic Growth in the OECD Area: Recent Trends at the Aggregate and Sectoral Level. OECD Economics Department Working Papers 248.

Shepherd, D. 2003. "Learning from business failure: Propositions of grief recovery for the self-employed". Academy of Management Review, 28th edition.

Statistisk Sentralbyrå, SSB (January 2009): http://www.ssb.no/naeringsliv/

Stevenson, Lois (2006): Integrating Entrepreneurship and Innovation Policy – the Research Perspective. FSF, ITPS & NUTEK Seminar, Brussels.

Stock and Watson (2003): *Introduction to Econometrics:* Panel Data (Princeton University, Data and Statistical Services.)

Sullivan et al. (1989): *As We Forgive Our Debtors: Bankruptcy and Consumer Credit in America*. Oxford University Press, New York.

Swain, Harry (2003): Canadian corporate bankruptcy: law and public policy**.** A contribution to the program; Bankruptcy in Russia: formation of the institution of bankruptcy and its regional specifics**.** Institute for the Economy in Transition, Moscow.

The Times. (09.05.2009): Lax British bankruptcy rules worsen credit crunch. http://business.timesonline.co.uk/tol/business/industry_sectors/banking_and_finance/article3858044.ece

The World Bank (2009): Doing Business 2009, Comparing Regulation in 181 Economies. A publication of the World Bank and the International Finance Corporation, Washington.

WebBRD (2003). World Bank Doing Business Indicators.

White, Michelle J. (2007): Bankruptcy Reform and Credit Cards. Journal of Economic Perspectives, Vol. 21, No. 4, Fall 2007, Pages 175–199.

White, Michelle J. (2000): What's Wrong with U.S. Personal Bankruptcy Law and How to Fix It. Banking and Credit.

Wooldridge, Jeffrey M. (2006): Introductory Economics – A Modern Approach. 4th edition, South Western, pages 443-496.

Appendix A

Table 1: Variable Description

Variables and nationality	Description	Source
Entry rate Nationalities: *Belgium, Denmark, Finland, France, Germany, Ireland, Italy, the Netherlands, United Kingdom, the U.S.*	*New firm entries* are characterized as new entrepreneurs who start a new company or existing companies/entrepreneurs who start a new company. *Entry rate* is thus defined as the number of new firm entries divided by the total number of companies in a certain country (%).	EIM Business & Policy Research (EIM BV) http://data.ondernemerschap.nl/WebIntegraal/userif.aspx?SelectDataset=22&SelectSubset=66&Country=UK
Entry rate Nationality: *Canada*	Business birth rate is identified as the real births of new firms that reflect actual entry into the Canadian economy (%).	National Statistics Agency, Statistics Canada. www.statcan.gc.ca
Entry rate Nationality: *Norway*	Number of registered businesses which include sole entrepreneurs, unincorporated companies as well as corporations divided on the total amount of active companies (%).	Business Registration Agency (Brønnsøysundsregisteret) http://www.brreg.no/statistikk
Entry rate Nationality: *Sweden*	Number of registered businesses which include sole entrepreneurs, unincorporated companies as well as corporations divided on the total amount of active companies (%).	National Statistics Agency (Statistisca Centralbyrån) http://www.scb.se/
Bankruptcy rate Nationalities: *Belgium, Denmark, Finland, France, Germany, Ireland, Italy, the Netherlands,*	*Bankruptcy rate* is defined as the number of bankruptcies, divided by the total number of companies in a certain country (%).	EIM Business & Policy Research (EIM BV) http://data.ondernemerschap.nl/WebIntegraal/userif.aspx?SelectDataset=22&SelectSubset=66&Country=UK

United Kingdom, the U.S.		
Bankruptcy rate Nationality: *Canada*	Annual number of corporate and unincorporated business bankruptcies divided by the total amount of active businesses in Canada (%).	Office of the Superintendent of Bankruptcy Canada, http://www.ic.gc.ca/eic/site/bsf-osb.nsf/eng/home
Bankruptcy rate Nationality: *Norway*	All business bankruptcies divided by number of active companies in the Norwegian economy (%).	Business Registration Agency (Brønnsøysundsregisteret) http://www.brreg.no/statistikk
Bankruptcy rate Nationality: *Sweden*	Bankruptcy rate is defined as number of businesses bankrupt divided by total number of businesses in Sweden (%).	National Statistics Agency (Statistisca Centralbyrån) http://www.scb.se/
GDP growth	Gross domestic product, annual percentage change in constant prices (%).	International Monetary Fund, World Economic Outlook Database, April 2008. http://www.imf.org/external/pubs/ft/weo/2008/01/weodata/index.aspx
Unemployment rate	Standardized unemployment rates in percent of civilian labor force (%).	OECD Economic Outlook: December No. 84 - Volume 2008 Issue 2, OECD Main Economic Indicators. http://oberon.sourceoecd.org/vl=2960667/cl=18/nw=1/rpsv/ij/oecdstat/16081234/v195n1/s2/p1
Tertiary education	Tertiary education attainment of the population aged 25 – 64 (%).	CBS Statline Databank http://www.cbs.nl/en-GB/menu/home/default.htm
Patent applications	Number of patent applications filed to the EPO all sectors of industry, per million of the working population.	Eurostat http://epp.eurostat.ec.europa.eu/portal/page/portal/structural_indicators/indicators/innovation_and_research

Legal origin	Identifies the legal origin of the Commercial Code of each country. In this thesis legal origin takes the form of four dummy variables. Country values equal 1 if the origin is English Common Law and 2 if it descends from French Commercial Code; 3 if it is founded in German Commercial Code and 4 if the country's legal origin is Scandinavian Civil Law.	La Porta et al. (1998)
Cost of bankruptcy proceedings	The cost of bankruptcy proceedings is calculated as how percentage of the total assets claimants (creditors, tax authorities, and employees) recover from an the bankruptcy estate (%).	The World Bank Group, Doing Business project. http://www.doingbusiness.org/
Total early-stage Entrepreneurial Activity Index (TEA)	Number of people (in the adult population of 18 – 64 years) currently setting up a business or owning/managing a business existing up to 3.5 years (%).	Global Entrepreneurship Monitor (GEM). http://www.gemconsortium.org/
Future Entrepreneur Index	Share of people (in the adult population of 18 – 64 years) expecting to start a business within three years.	GEM
Know Entrepreneur Index	Share of people (in the adult population of 18 – 64 years) who personally know someone who started a business in the past two years.	GEM
Potential Entrepreneur Index	Share of people (in the adult population of 18 – 64 years) indicating to have the required skills and knowledge for setting up a business themselves.	GEM
Fear of Failure Index	Share of people (in the adult population of 18 – 64 years) that would abstain from setting up a business when they would sense	GEM

	a fear of failure.	
Repayment period	The period of time a bankrupt entrepreneur is obligated to use future earnings to pay outstanding pre-bankruptcy debt. In other words, number of years until discharge is available. If discharge unavailable, value is set to be 30 years.	Armour and Cumming (2008) White (2007) The European Judicial Network: http://ec.europa.eu/civiljustice/bankruptcy/bankruptcy_gen_en.htm Country specific sources are outlined in the text of Appendix B.
Automatic stay on assets	Dummy variable indicating the possibility to obtain automatic stay on assets (moratorium) in reorganization bankruptcy. The dummy receives a value of 0 if automatic stay is available, and 1 if this is not available for the business management.	La Porta et al. (1998). Armour and Cumming (2008) White (2007) The European Judicial Network: http://ec.europa.eu/civiljustice/bankruptcy/bankruptcy_gen_en.htm Country specific sources are outlined in the text of Appendix B.
Exemption level	Indicates the amount and value of the bankrupt individual's assets which may be exempt from the bankrupt estate. The dummy receives the value of 0 if exemption levels are generous, 1 if the exemption levels only include certain personal assets necessary to obtain a decent way of life, and 2 if the bankrupt estate may also include the spouse's assets.	Armour and Cumming (2008) White (2007) The European Judicial Network: http://ec.europa.eu/civiljustice/bankruptcy/bankruptcy_gen_en.htm Country specific sources are outlined in the text of Appendix B.

Table 2: Summary statistics

This table gives means and standard deviations of all variables in the dataset. 13 countries are included in the data over a period of thirteen years from 1995 to 2007. Entry rate is measured as number of new firm entries divided by the total number of companies in a certain country. Bankruptcy rate is defined as the number of bankruptcies, divided by total active companies. Both variables on business demography are given as percentage. GDP growth is given as annual percentage change in constant prices. The standardized unemployment rates are provided in percent of civilian labor force. Education is characterized as tertiary attainment of the population aged 25 – 64, in percentage. Patent applications measure the number of patents filed to the EPO, per million of the working population. TEA indicates how many of the adult population who is currently setting up a business or owning/managing a business existing up to 3.5 years, measured as a percentage. Future entrepreneur index represents the share of the adult population expecting to start a business within three years, know entrepreneur index measure the share of people who personally know someone who started a business in the past two years, whilst potential entrepreneur index give an overview of the adults indicating to have the required skills and knowledge for setting up a business themselves. The fear of failure index represents how many of the total population who would abstain from setting up a business if they sense a fear of failure. The cost of bankruptcy proceedings is calculated as a percentage of the total assets in the bankruptcy estate, while legal origin identifies each country's basis for the national commercial code.

An overview of the summary statistics for the variables directly linked to bankruptcy regime; length of repayment period, the possibility for automatic stay in reorganization bankruptcy and exemption levels will be presented in a separate table in Appendix B. This appendix gives an extensive outline of the bankruptcy regulation for the countries included in our data sample.

	Belgium		Canada		Denmark	
Variable	***Mean***	***Std. Dev.***	***Mean***	***Std. Dev.***	***Mean***	***Std. Dev.***
Entry rate	7.225000	0.619567	14.230770	0.819821	11.030770	1.546709
Bankruptcy rate	1.266667	0.077849	1.043846	0.260017	0.853846	0.139136
GDP growth	2.406133	1.138375	3.185133	1.323812	2.405333	1.393430
Unemployment rate	8.335714	1.014212	7.864286	1.332209	5.080000	1.157090
Tertiary education	26.758330	2.636961	39.850000	3.976864	26.845450	4.985051
Patent Applications	266.708300	44.939020	92.216670	25.7300600	279.100000	64.282730
TEA	3.291429	0.488174	8.432000	0.884347	5.371429	0.691096
Future Entrepreneur	0.071428	0.006900	0.116000	0.023021	0.082857	0.011127
Know Entrepreneur	0.305714	0.031014	0.340000	0.018708	0.461428	0.031320
Potential Entrepreneur	0.372857	0.033022	0.538000	0.019235	0.365714	0.024397
Fear of Failure	0.285714	0.035523	0.264000	0.027928	0.352857	0.063433
Cost of bankruptcy	4	0	4	0	4	0
Legal Origin	French Civil Code		English Common Code		Scandinavian Civil Code	

	Finland		France		Germany	
Variable	***Mean***	***Std. Dev.***	***Mean***	***Std. Dev.***	***Mean***	***Std. Dev.***
Entry rate	9.892308	1.310510	6.869231	0.464371	9.961539	1.708576
Bankruptcy rate	1.115385	0.199357	1.853846	0.320456	0.915384	0.128102
GDP growth	3.711667	1.281350	2.118933	0.878887	1.586000	0.993771
Unemployment rate	10.413330	3.140943	9.713333	1.306504	8.686667	0.950839
Tertiary education	31.066670	2.563142	21.550000	2.310254	23.041670	1.228790
Patent Applications	450.566700	100.257400	260.758300	33.088490	485.766700	88.499870
TEA	5.717143	1.255823	4.202857	1.595877	4.805000	0.656742
Future Entrepreneur	0.071428	0.013451	0.118571	0.051777	0.071666	0.009831
Know Entrepreneur	0.477142	0.057940	0.388571	0.087641	0.363333	0.032041
Potential Entrepreneur	0.380000	0.016329	0.3	0.0483046	0.373333	0.024221
Fear of Failure	0.351428	0.046700	0.4742857	0.0547288	0.486666	0.016329
Cost of bankruptcy	4	0	9	0	5.2	3.834058
Legal Origin	Scandinavian Civil Code		French Civil Code		German Civil Code	

	Ireland		Italy		Netherlands	
Variable	***Mean***	***Std. Dev.***	***Mean***	***Std. Dev.***	***Mean***	***Std. Dev.***
Entry rate	13.192310	1.672554	7.661538	0.539349	9.930769	1.070346
Bankruptcy rate	0.466666	0.098473	0.307692	0.049354	0.584615	0.121423
GDP growth	6.880400	2.665333	1.494933	0.983197	2.721667	1.356783
Unemployment rate	6.864286	3.726125	9.650000	1.982908	4.378571	1.547792
Tertiary education	22.966670	3.490333	9.590909	1.518193	24.672730	3.028891
Patent Applications	105.875000	27.013370	153.491700	28.330630	349.533300	79.087460
TEA	8.280000	0.891422	4.492857	0.928596	4.782857	0.636912
Future Entrepreneur	0.113342	0.012472	0.107142	0.017994	0.057142	0.004879
Know Entrepreneur	0.412214	0.033181	0.348571	0.032366	0.312857	0.025634
Potential Entrepreneur	0.488500	0.016904	0.391428	0.067188	0.375714	0.029920
Fear of Failure	0.375171	0.020507	0.378571	0.079462	0.270000	0.036514
Cost of bankruptcy	9	0	20.4	2.19089	4	0
Legal Origin	English Common Code		French Civil Code		French Civil Code	

	Norway		Sweden		United Kingdom	
Variable	***Mean***	***Std. Dev.***	***Mean***	***Std. Dev.***	***Mean***	***Std. Dev.***
Entry rate	7.727333	1.6074	5.031429	0.802494	12.900000	0.404145
Bankruptcy rate	1.220000	0.273077	0.254666	0.116916	0.892307	0.149786
GDP growth	3.197133	1.331045	3.074933	1.152798	2.886467	0.708594
Unemployment rate	3.986667	0.986962	7.106667	1.687969	6.085714	1.479531
Tertiary education	28.176640	2.835721	29.891670	2.553948	25.183330	2.865416
Patent Applications	78.926670	12.609280	427.041700	64.216020	171.983300	24.321920
TEA	8.100000	1.096221	3.926667	0.269715	5.922857	0.391863
Future Entrepreneur	0.108571	0.015735	0.128000	0.023874	0.078571	0.013451
Know Entrepreneur	0.408571	0.026726	0.475000	0.024289	0.262857	0.019760
Potential Entrepreneur	0.402857	0.022146	0.426666	0.012110	0.492857	0.022886
Fear of Failure	0.238571	0.033380	0.336666	0.039327	0.364285	0.043915
Cost of bankruptcy	1	0	9	0	6	0
Legal Origin	Scandinavian Civil Code		Scandinavian Civil Code		English Common Code	

	USA		All	
Variable	***Mean***	***Std. Dev.***	***Mean***	***Std. Dev.***
Entry rate	10.200000	0.875595	9.645322	2.856674
Bankruptcy rate	1.130769	0.259437	0.912222	0.463636
GDP growth	2.943400	1.264976	2.970164	1.832085
Unemployment rate	5.120000	0.674219	7.175132	2.718762
Tertiary education	36.050000	2.368160	26.728860	7.502542
Patent Applications	195.925000	24.228760	269.913900	139.884200
TEA	10.935710	1.022739	6.002644	2.329766
Future Entrepreneur	0.141428	0.013451	0.096551	0.031596
Know Entrepreneur	0.367142	0.027516	0.378683	0.074655
Potential Entrepreneur	0.53	0.032145	0.415971	0.074961
Fear of Failure	0.2285714	0.0247848	0.3390368	0.0881728
Cost of bankruptcy	7	0	6.661538	4.767327
Legal Origin	English Common Code			

Table 3: Cross-country correlations

This table provides an overview of correlations for all variables in the dataset. 13 countries are included in the data over a period of thirteen years from 1995 to 2007. Entry rate is measured as number of new firm entries divided by the total number of companies in a certain country. Bankruptcy rate is defined as the number of bankruptcies relative to total active companies. Both variables on business demography are given as percentage. GDP growth is given as annual percentage change in constant prices. The standardized unemployment rates are provided in percent of civilian labor force. Education is characterized as tertiary attainment of the population aged 25 – 64, in percentage. Patent applications measure the number of patents filed to the EPO, per million of the working population. TEA indicates how many of the adult population is currently setting up a business or owning/managing a business existing up to 3.5 years, in percentage. Future entrepreneur index presents the share of the adult population expecting to start a business within three years, know entrepreneur index measure the share of people who personally know someone who started a business in the past two years, whilst potential entrepreneur index give an overview of the share of adults indicating to have the required skills and knowledge for setting up a business themselves. The fear of failure index represents how many of the total number of inhabitants that would abstain from setting up a business when they would sense a fear of failure. The cost of bankruptcy proceedings is calculated as a percentage of the total assets in the bankruptcy estate, while legal origin identifies each country's basis for the national commercial code.

Cross-country Correlations

	Entry	Bank	Repay	Autom	Exemp	GDP	Unem	Educat	Patent	TEA	Future	Know	Poten	Fear	Cost	Eng	French	Ger	Scan
Entry rate	1,0000																		
Bankruptcy rate	-0,2685	1,0000																	
Repayment years	-0,4440	-0,5824	1,0000																
Automatic stay	-0,4158	-0,3477	0,5039	1,0000															
Exemptions	-0,3949	-0,0078	0,1991	0,0284	1,0000														
GDP growth	0,4594	-0,1613	-0,1553	0,1294	-0,0886	1,0000													
Unemployment	-0,5306	0,3245	0,1753	0,0466	-0,1168	-0,4677	1,0000												
Education	0,5315	0,2743	-0,7044	-0,0133	-0,4132	0,4782	-0,2921	1,0000											
Patent application	-0,3460	0,2388	-0,1069	0,0865	0,0545	-0,3528	0,5285	-0,0897	1,0000										
TEA	0,5023	0,1317	-0,3111	-0,1936	-0,5272	0,5188	-0,4138	0,5282	-0,5246	1,0000									
Future entrepren.	-0,0401	-0,0178	0,3102	0,3606	-0,2250	0,3250	-0,1598	0,1367	-0,6481	0,6143	1,0000								
Know entrepren.	-0,0935	0,1132	0,2273	0,3344	0,0114	0,2208	0,1186	0,1140	0,2456	0,0282	0,2759	1,0000							
Potential entrep.	0,6001	-0,0664	-0,4461	0,0629	-0,5174	0,5303	-0,5278	0,6812	-0,5679	0,7348	0,4288	-0,1676	1,0000						
Fear of failure	-0,2531	0,0757	0,2317	0,1067	0,2549	-0,1780	0,5460	-0,4154	0,4057	-0,4010	-0,1241	0,2997	-0,4580	1,0000					
Cost of estate	-0,3117	-0,3882	0,7946	0,1259	0,2329	-0,0407	-0,0482	-0,6387	-0,5206	0,0136	0,4704	-0,0649	-0,2379	-0,0634	1,0000				
English origin	0,6955	-0,1312	-0,3396	-0,1557	-0,4615	0,5786	-0,5633	0,4976	-0,6945	0,8348	0,4761	-0,2351	0,8961	-0,3909	0,0037	1,0000			
French origin	-0,6330	0,1775	0,2291	-0,1557	0,6558	-0,4535	0,2368	-0,5386	-0,0414	-0,4684	-0,1473	-0,3214	-0,5622	0,0502	0,3884	-0,5333	1,0000		
German origin	-0,0537	0,0922	-0,0593	-0,0658	-0,4311	-0,4358	0,5190	-0,2059	0,5769	-0,1265	-0,3028	0,0222	-0,1759	0,4917	-0,3958	-0,2254	-0,2254	1,0000	
Scandinavian orig.	-0,0355	-0,1165	0,1681	0,4045	0,0701	0,1533	0,0224	0,1880	0,4557	-0,3365	-0,1728	0,6273	-0,2654	0,0575	-0,1824	-0,3849	-0,3849	-0,1627	1,0000

Table 4: Regression results

Panel A presents robust OLS estimates (1), as well as fixed effects (2) and random effects estimates (3) for the data set consisting of observations of thirteen countries over the period of time from 1995 - 2007. Entry rate is the dependent variable in the main model of panel A, indicating how many new ventures are starting up relative to the total number of active companies in a country. Explanatory variables are as defined in tables 1-3. Panel B gives an overview of the legal origin model (4). This is a random effects model measuring the effect of how three of the legal origins; French, German and Scandinavian civil law, position themselves against the English common law origin which I use as base . Model (5) and (6) shows the results for the random effects estimations with year dummy variables. Entry rate is the dependent variable in the extended dummy model of panel B. All explanatory variables are as defined in tables 1-3. T-statistics are for all results shown in parenthesis. *, **, *** indicate significance at the 10%, 5% and 1% levels, respectively.

Panel A. Main Model			
	(1)	**(2)**	**(3)**
Bankruptcy Rate	-1.2809413 (0.5427281)*	1.577148 (0.5322168)**	1.387658 (0.5111006)**
Repayment Years	-0.07848844 (0.0483505)	-0.00768074 (0.0232334)	-0.00711684 (0.0230808)
Automatic Stay	-1.6415825 (1.231648)	1.1367648 (0.7121098)	0.96669946 (0.7027152)
Exceptions	-1.5612864 (0.3812248)***	(dropped)	-1.7584197 (0.962579)
GDP Growth	0.40038638 (0.0907547)***	0.24281377 (0.0662188)***	0.24857955 (0.0644712)***
Unemployment Rate	0.06513253 (0.0854871)	-0.19347177 (0.0736457)**	-0.18094846 (0.070074)**
Tertiary Education	-0.00999413 (0.0442798)	-0.02678073 (0.0370086)	-0.02714535 (0.034456)
Patent Applications	-0.00378093 (0.0013542)**	-0.0069222 (0.0023587)**	-0.0068559 (0.0019917)***
Constant	12.912127 (1.785595)***	11.289583 (1.452405)***	13.040749 (1.799624)***
R^2 Within		0.3171	0.3158
Between		0.0866	0.2552
Overall	0.4929	0.1037	0.2648
P-value of Hausman Test			0.2727
Number of observations	142	142	142
Country Fixed Effects	No	Yes	No
Random Effects	No	No	Yes

Panel B. Extended Model			
	(4)	**(5)**	**(6)**
Bankruptcy Rate	1.3004627 (0.5028159)**	1.4216093 (0.5136461)**	-1.5782836 (0.5898303)**
Repayment Years	-0.00221751 (0.0232505)	-0.00750257 (0.023015)	-0.0675636 (0.0405525)
Automatic Stay	0.89682297 (0.7013893)	1.0021373 (0.7004353)	-2.740806 (1.079983)*
Exceptions	0.67028362 (1.263648)	-1.7677915 (1.087051)	-1.5105669 (0.3539001)***
GDP Growth	0.22808358 (0.0659597)***	0.25390726 (0.073087)***	0.38460428 (0.1217345)**
Unemployment Rate	-0.15416916* (0.070149)*	-0.18746848 (0.0726626)**	-0.05835356 (0.0943705)
Tertiary Education	-0.03199631 (0.0355511)	-0.02897 (0.0358009)	0.01365787 (0.0414345)
Patent Applications	-0.00593985 (0.0021645)**	-0.00678066 (0.0020935)**	-0.00203922 (0.0016038)
French	-4.5856993 (1.842718)*		
German	0.56146323 (2.357289)		
Scandinavian	-3.7069819 (1.460414)*		
Bust 1999-2000		-0.04880331 (0.2456272)	
Year94			1.8244302 (1.582999)
Year95			2.2860846 (0.7948379)**
Year96			2.0300725 (0.7744217)**
Year97			1.4772829 (0.8166836)
Year98			0.84450399 (0.706151)
Year01			0.36696392 (0.7457521)
Year02			0.23819926 (0.7608973)
Year03			0.56934246 (0.7838514)
Year04			0.31974307 (0.7296829)
Year05			0.52489742 (0.7533845)
Year06			-6.1015509 (2.121481)**
Constant	13.103977 (1.815727)***	13.086831 (1.911879)***	12.29018 (1.655879)***
R^2 Within	0.3148	0.3162	0.0876
Between	0.5521	0.2532	0.7295
Overall	0.5249	0.2628	0.5717
P-value of Hausman Test			
Number of observations	142	142	142
Country Fixed Effects	No	No	No
Random Effects	Yes	Yes	Yes

Table 4: Regression results (continued)

Panel C shows the robust OLS estimates (7), in addition to fixed effects model with country fixed effects (8) and random effects estimates (9) for the data set of thirteen countries with observations in the time period from 2002 till 2006. Country fixed effects are employed in model (8). Total early-stage entrepreneurial activity (TEA) is the index used as dependent variable in the GEM-model of panel C, indicating how many people are currently in the process of establishing a business or have been self-employed, owners or managers of their own business for up to 3.5 years. TEA is measured in percentage. All explanatory variables are as defined in tables 1-3. The inclusion of this analysis represents a robustness check in which we may investigate the most recent effect of the bankruptcy variables. T-statistics are for all results shown in parenthesis. *, **, *** indicate significance at the 10%, 5% and 1% levels, respectively.

Panel C. GEM Model			
	(7)	**(8)**	**(9)**
Future Entrepreneur	33.109442 (11.30009)**	8.7997511 (12.33634)	19.464221 (9.803131)*
Know Entrepreneur	4.7927493 (3.038091)	6.6791004 (5.815211)	3.213079 (3.962761)
Potential Entrepreneur	15.216421** (4.490309)**	10.26665 (7.840491)	14.940323 (5.263123)**
Fear of Failure	-6.5759366 (2.43189)*	(0.86975976 (3.514265)	-2.6126041 (2.681146)
Cost of Estate	-0.17737001 (0.0467528)***	-0.11094125 (0.1556142)	-0.14728252 (0.0752185)
Repayment Years	0.06054169 (0.027534)*	0.0613375 (0.0512349)	0.06570888 (0.0372115)
Automatic Stay	-5.1883394 (0.8032304)***	(dropped)	-4.5394856 (1.726836)**
Exceptions	-0.44509705 (0.2638061)	(dropped)	-0.669548 (0.6591647)
Bankruptcy Rate	-0.6144201 (0.8692008)	-0.07504437 (0.8536098)	-0.25576852 (0.6672291)
Constant	-1.2558714 (2.366455)	-1.6068307 (3.431977)	-0.94408099 (2.722615)
R^2 Within		0.3177	0.2895
Between		0.1596	0.8334
Overall	0.7986	0.2053	0.7622
P-value of Hausman Test			0.6915
Number of observations	49	49	49
Country Fixed Effects	No	Yes	No
Random Effects	No	No	Yes

Appendix B

The United States

Legal basis and creditor protection

Bankruptcy in the U.S. is regulated through federal law found in Title 11 of the United States Code, commonly referred to as the *Bankruptcy Code*. Current law in the U.S. derives in large from the enactment of the Bankruptcy Reform Act of 1978 and of 1994[16]. The legal areas of bankruptcy of which federal law does not speak, state legislation provide regulation. The latter typically regulate aspects of the debtor-creditor relationship. This way homestead exemptions, property rights and the validity of claims are dependent upon territory law and may vary substantially across the American states.

The U.S. has a long history of debtor-friendly bankruptcy legislation. The creditors' rights scores of La Porta et al. (1998) reveal that the U.S.' creditor protection-value of 1 is close to the lowest possible score of zero. One of the underpinnings of the American bankruptcy system is the idea of a fresh start for entrepreneurs. Bankruptcy legislation and practices emphasize the reorganizing of debtors in financial distress with less emphasis on punishing the bankrupt. Bankruptcy proceedings can either be entered into voluntarily by a debtor or initiated by creditors, because of the U.S. debtor-friendly regulation; most bankruptcies in the U.S. sare voluntary initiated.

Insolvency proceedings

Individual and corporate insolvency proceedings will in the following receive a joint examination due to overlap in the proceedings possible for the two distinct types of debtors. Corporations and other business forms file under Chapters 7 or 11, whilst bankruptcy

[16] Public Law 103-394, October 22nd 1994.

proceedings for individuals include Chapter 7 and 13. The Bankruptcy Code does not impose any restrictions on individual's or companies' access to informal negotiations with their creditors regarding debt restructuring or cancellation. In fact, in recent years there has been an increased use of reorganizations outside the formal bankruptcy process as compared to the more costly court proceedings. However, in situations where creditors become aggressive and there is no hope for a resolution in out-of-court negotiation, court proceedings will be necessary. There are six types of bankruptcy under the US Bankruptcy Code, below are a run through of the three most used bankruptcy proceedings in the US Code – Chapter 7, 11 and 13.

Reorganization Bankruptcy, Chapter 11

For firms in financial distress a filing under Chapter 11 allows the enterprise to suspend interest and principal payments on debt for at least 120 days during which the firm has exclusive right to propose a plan of reorganization (this period is also known as automatic stay on assets). Insolvency is not a requirement for filing under Chapter 11 as the Bankruptcy Code allows even solvent firms to undergo this type of reorganization proceedings. The Chapter 11 model of Bankruptcy introduces the concept of Debtor in Possession (DIP) in which management retains control of the firm while creditors and the debtor negotiate with the Bankruptcy Court in order to agree on a repayment plan. If a majority of creditors vote against the confirmation of a specific plan, additional requirements may be imposed by the court in order to confirm the plan. If a plan is confirmed the debtor will continue to operate and pay its debts under the terms of the confirmed plan.

A reorganization bankruptcy may take only a few months, but could last several years. The process might be long and complex and the reorganization could fail leaving the company liquidated instead. The justification of a Chapter 11 bankruptcy is based on a belief that the value of a business as a reorganized going concern is substantially higher than the value of its assets if sold separate. Restructuring may enable some firms, in temporary financial distress, to eventually become successful. Filing reorganization bankruptcy is considered one of the main strategic options for many firms in financial distress (Lee 2007). If the company is reorganized, rather than liquidated, jobs will be saved, assets retained, and the remaining creditors and equity participants may have smaller losses than if the company were

dismantled. Chapter 11 represents the most debtor-friendly insolvency regime in the world, encouraging business management to preserve the going concern and to file for reorganization bankruptcy in time and not only when it's too late.

Repayment Plan, Chapter 13

One of the most common bankruptcy filings for individuals is through Chapter 13. Bankruptcy proceedings under this Chapter involve the rehabilitation of a debtor, with regular source of income, to allow him to allocate a measure of his future income to pay off creditors. This repayment plan varies in both length and amount of payment depending amongst other on the value of the debtor's assets and his income and expenses. However, a plan typically lasts for a period of three to five years, upon which time the debtor receives a discharge of all his pre-bankruptcy indebtedness. Such a broad based discharge upon completion of all payments under the court-approved plan, indicate that secured creditors may be entitled to greater payment than unsecured creditors. Generally, a Chapter 13 plan often does not require repayment to unsecured debts, such as credit cards or medical bills. Creditors are allowed to object to confirmation of the repayment plan, but cannot protest to the discharge if the debtor has completed his payments over the plan's horizon. Under the repayment plan, the debtor keeps control and ownership of all of his assets, but a trustee is appointed to supervise the assets disposal. A bankruptcy under Chapter 13 will be preferable for debtors who wish to retain assets beyond the exemptions under Chapter 7 liquidation. If the debtor were to fail on the plan of repayment under Chapter 13 he might apply for liquidation proceedings under Chapter 7.

Liquidation, Chapter 7

Chapter 7 governs the process of basic liquidation of individuals and businesses. A filing under this Chapter is the most common form of bankruptcy. When firms are non-corporate, debts of the firm are personal liabilities of the entrepreneur. If the firm fails, entrepreneurs have an incentive to file for personal bankruptcy under Chapter 7 as both business and personal debts will be discharged. State law allows for debtors to keep essential property known as exemptions. Typically, this includes household goods, clothes, a less valuable car,

etc. As mentioned the amount of property that a debtor may exempt varies from state to state, ranging from the bare basics to nearly unlimited value. The higher the exemption level, the more the debtor get to keep if he ends up facing bankruptcy, and the more attractive it is for potential entrepreneurs to go into business (White 2007).

The Chapter 7 proceeding involves the appointment of a trustee who collects all of the non-exempt property of the debtor, sells it and distributes the proceeds to the creditors. This model of bankruptcy allows the debtor to free himself, meaning he is discharged of personal liability for most of his pre-bankruptcy debt obligations, even if his debts have not been paid in full after the liquidation of his assets. Future earnings are completely exempt from the obligation to repay the creditors. There is no requirement to the liquidation process that the debtor needs to be insolvent, but one can only file for Chapter 7 relief once every eight year[17].

A corporation will not be able to receive a bankruptcy discharge; instead the legal entity will be dissolved. Consequently, a liquidation bankruptcy as the Chapter 7 model will not be a good strategic option for entrepreneurs wishing to continue their business operation within the same legal entity.

The Bankruptcy Abuse Prevention and Consumer Protection Act of 2005 (BAPCPA)

This legal reform primarily affected consumers, making it more difficult for a person to file for liquidation under Chapter 7. Among its many changes is the implementation of a "means test" to determine whether a debtor is eligible for a Chapter 7 or Chapter 13 bankruptcy, implying that in cases where the debtor is categorized to be above a certain income limit, a filing under Chapter 7 will be prohibited. In addition, the consumer needs to undergo credit counseling prior to filing for bankruptcy.

[17] Before the legislative change of 2005 (BAPCPA), a debtor could file for bankruptcy under Chapter 7 again after only six years of the previous liquidation.

Canada

Legal basis and creditor protection

Commercial and personal bankruptcies in Canada are regulated through federal legislation. The Bankruptcy and Insolvency Act (BIA) was originally passed in 1919; then amended in 1949, 1992 and 2002. The modification of the Bankruptcy law in the 1990s included an expansion of debtor rights through the option of petitioning a reorganization proposal. Until 1992 BIA focused mainly on asset liquidation rather than reorganizations (Swain, 2003). The amendment of BIA in 1992 introduced a more lenient bankruptcy regime on the debtor. Canada is consequently given a debtor-friendly ranging of 1 in the Creditor Protection Index of La Porta et al. (1998). Baird and Morrison argue that, "One of the main purposes of bankruptcy legislation is to afford the opportunity to a person, who is hopelessly burdened with debt, to free himself of the debt and start fresh" (Bankruptcy Canada, 2009). Being close to its neighboring country, the U.S., Canada also displays a highly debtor-friendly bankruptcy regulation.

The new Bankruptcy laws were enforced by the Canadian government on the 18th of September 2009 (Bankruptcy Canada 2009). The Companies' Creditors Arrangement Act (CCAA) provides a legislative framework for the reorganization of insolvent corporations. The statute enables an insolvent firm to seek a court order for an automatic stay on creditors, preventing the creditors from taking action against the company while negotiations for the rescheduling or compromise of the business' debts are undertaken. The Winding-up and Restructuring Act (WURA) supply an alternative framework to BIA concerning liquidation and distribution of an insolvent corporation's assets among its creditors.

Business Insolvency proceedings

Under Canadian law there are two insolvency procedures for companies, liquidation bankruptcy and reorganization proposals. Canadian legislation does not hinder insolvent businesses or individual debtors to negotiate compromise arrangements and/or reorganization of their financial affairs with creditors outside the court.

Reorganization proposals

A company in or approaching insolvency might be reorganized or sold as a going concern as an alternative to liquidation. In the case of a reorganization proposal, the debtor remains in control of company assets under the supervision of a trustee. The court's assistance is the principal difference between a proposal under the Canadian BIA and a Chapter 11 reorganization under the U.S. Code. The trustee and business management work together in drafting a plan which will basically propose to the creditors to accept less than what they are owed in order for the company to survive and keep repaying the creditors for a given period of time.

Under the BIA reorganization the debtor is granted an automatic 30-day stay on assets and temporary cessation of legal proceedings. Thereafter, if the court is satisfied that the debtor is working in good faith toward a viable proposal that will not materially prejudice the rights of secured lenders, three further stays of 45 days each may be granted (Swain, 2003). This way, the filing of a reorganization proposal under BIA will grant the firm breathing space against the claims of creditors to ensure the management puts all efforts into proposing a plan to relieve the enterprise of its pressing financial distress.

Liquidation

In a corporate liquidation bankruptcy the trustee takes possession of all the assets of the insolvent company, whereby he liquidates the assets to repay the creditors' claims. Company management is relieved of all dealings with creditors. Under BIA a firm may file for bankruptcy itself, or its creditors may petition the court to have it declared bankrupt.

Individual Insolvency proceedings

Canadian law provide two procedures in which an individual might resolve its personal insolvency – through bankruptcy or in filing a consumer proposal, or alternatively by making independent arrangements with creditors.

Consumer proposal

The Canadian consumer proposal is a negotiated agreement between an individual debtor and his creditors. The proposal includes a plan by which the debtor makes monthly payments to the creditors for a maximum of five years. Filing for a consumer proposal under BIA might still be seen as a final resort for the individual in financial distress as an insolvent person may be deemed personal bankrupt if he defaults the on consumer proposal, or if the proposal is rejected by the creditors. However, generally the creditors accept the majority of consumer proposals. The basic requirement is that the creditors are better off under a consumer proposal than if the debtor were to go bankrupt.

Personal bankruptcy

A person might voluntarily file for bankruptcy, or his creditors may petition the court to make an order that a person is bankrupt. The latter is seldom used in practice in Canada. Either way, a trustee will be appointed to administer the liquidation. To file for bankruptcy in Canada, it is necessary for a person to be insolvent. The debtor's assets that are exempt from seizure by his creditors are regulated by territorial law. For debtors who have not been bankrupt before, an automatic discharge will take place after nine months if neither the creditors, the Superintendent of Bankruptcy or the trustee have opposed this. Another condition is that the debtor has received financial counseling**.** At this time most of the debtor's financial obligations are erased and he is given the ability to make a fresh start (Bankruptcy Canada 2009). However, if the debtor has been bankrupt before, the discharge will not be automatic and must be heard before a Judge or a Registrar (Swain 2003).

France

Legal basis and creditor protection

The French bankruptcy code is known as Book VI of the French Commercial Code, entitled "Businesses in Difficulty". The bankruptcy code was enacted in 1985[18], and received substantial revisions in both 1994 and 2005. The 1994 amendments made access to the rehabilitation function contingent on a court determination that a debtor's emergence from financial distress is feasible. The 2005[19] amendment is named the Safeguarding of Businesses ("la sauvegarde de l'entreprise"), also known as the *Reform of 2005*.

Article 1of the Bankruptcy Act sets the tone of the bankruptcy laws, listing the objectives of French insolvency as (1) Saving the enterprise, (2) Securing the preservation of jobs, and (3) Securing the payment of creditors' claims. Court interpretations of article 1 dictate that the objectives shall be taken into account in descending order of importance. Meaning, the principal and explicit objective of the French bankruptcy institute is to preserve the firm as a going concern and maintain employment, second comes the objective of satisfying creditors' claims. In accordance, all bankruptcy proceedings are court-administered and there is no mandate requiring the administrator to sell to the highest bidder. Franks elaborates on the French bankruptcy system, "The role of creditors is reduced to an advisory function, and their approval is not required by the court in selecting a reorganization plan."

The court controlled bankruptcy procedure in France provides few economic incentives to reorganize the company in an efficient manner. Fried et al. noted in 2005 that "[The French] system was widely criticized as overly rigid and time-consuming. Nine out of ten bankruptcies in France resulted in the liquidation of the debtor" (Fried et al., 2005).

In short, French bankruptcy law is known as being very creditor-unfriendly (Franks 2006). This is reflected in La porta et al's ranking of 1998 which gives France the minimum index-value of 0 when it comes to creditor protection. Even secured creditors in France have little confidence in recovering their debts. They usually cannot seize the security even when the enterprise is insolvent. In bankruptcy, they do not control either the timing or the method of collateral realization.

[18] Law No. 84-148 of March 1, 1984, effective March 1, 1985.
[19] Decree No. 2005-845 of 26 July 2005 and Law No. 2005-845 of 26 July 2005 for the Protection of Enterprises (1).

Franks (2005) find that "French banks respond to a creditor-unfriendly code by requiring more collateral than lenders elsewhere and by relying on particular collateral forms that minimize the statutory dilution of their claims in bankruptcy". Real estate collateral is the most important source of banks' recovery in most Western countries. However, in France this collateral group is far less valuable as sales proceeds are diluted by preferential creditors and because French bankruptcy courts tend to sell assets below their potential market prices in order to preserve employment. "By contrast, accounts receivable and personal guarantees can be realized by French banks directly, and the proceeds are not subject to dilution by preferential creditors. As a result, these collateral types are used more often than real estate at loan origination in France" (Franks 2006). In other words, the extensive use of personal guarantees may lead to increased levels of bankrupt entrepreneurs in France.

Business Insolvency proceedings

The traditional idea of insolvency as debts being greater than assets does not exist in French law. Instead the law operates with a more restrictive concept of *cessation of payments*. Meaning, it is impossible for the debtor to meet current liabilities with the available assets (LaFont 1994). It is a requirement for the initiation of all bankruptcy proceedings that the debtor is in a situation of cessation of payments, meaning the company cannot meet its financial obligations with available assets such as cash and cash equivalents. In France, debtor-initiated filings are mandatory within 15 days of a debtor's inability to pay its debts as they fall due. Managers will be subject to sanctions for failure to file. France has incorporated an early warning system to prevent insolvency-procedures and dilution of assets in estates. This includes the demand for a company's auditor and management to alert the Banque de France if he discovers facts likely to compromise the continuity of the business. This warning system is designed to help companies reorganize early if facing financial distress.

There are two different systems under French law for dealing with insolvency situations; any business may file for bankruptcy under French law through either (1) Liquidation procedures or (2) a court-ordered Arrangement for Restructuring the continuation or sale of a company through either the Amicable Settlement model or Judicial Arrangement. All proceedings require court supervision. The proceedings immediately described below are not eligible for

natural persons engaged in an independent profession, such as a sole entrepreneur. However, SMEs will be able to utilize these bankruptcy arrangements.

Amicable Settlement (*R´eglement Amiable*)

Unique to France is the possibility to restructure liabilities in an amicable settlement which is an unofficial proceeding performed under the court's supervision. In other words, this is a confidential undertaking and not all of the debtor's creditors will be invited to participate. This procedure's main objective is to protect employment by promoting continuation of the company. However, the procedure to seek an agreement with the creditors does not provide automatic stay and may only last for three months. If the company defaults during the settlement, creditors can petition the court to move the firm into official bankruptcy procedure, such as judicial arrangement or liquidation.

Judicial Arrangement (*Redressement Judiciare*)

This is the formal insolvency proceeding for reorganization of a company. The settlement's main purpose is to rescue companies and maintain the firm while saving jobs and restructure debt liabilities. Under this bankruptcy procedure the company's management is supervised by a court-appointed judicial administrator. The administrator's duty is to assess the viability of the company and propose a reorganization plan (European Judicial Network 2009). An important aspect of the Judicial Arrangement contrary to the Amicable Settlement is the introduction of automatic stay of claims. In addition, the debtor keeps the right to dispose and manage his assets under supervision of the court. However, from the time the rehabilitation proceeding start, the court together with the administrator are firmly controlling the company, promoting not necessarily efficient business policy goals related to the continuation of employment.

The Judicial Arrangement-reorganization either involves a continuation plan, which may include a payment scheme (*plan de redressement*) to creditors lasting longer than ten years; or a sale of the business as a whole or some of its branches of activity. In evaluating offers on the company the administrator's only instruction is to choose the offer that ensures best prospects for continuing employment and repayment of credit. No assessment of the

financial gain of the sale is necessary. If the administrator finds proof that the company cannot be turned around, the company's assets are liquidated immediately in judicial liquidation. Sadly, in practice the vast majority (between 90 and 95 percent) of French firms which file for bankruptcy protection end up as liquidated assets. The result is that business management has very few incentives to file for judicial arrangement protection or to otherwise make value-maximizing decisions when a firm enters financial distress.

Judicial Liquidation (*Liquidation Judiciaire*)

A liquidation of a company in financial distress is announced if the court finds that reorganization through judicial settlement is manifestly impossible. A court-appointed administrator will oversee the winding up of the company. The administrator's top priority concern for the sale is the consideration for continued employment. Still, under a judicial liquidation the company's assets are sold to a third party through more flexible arrangements than under the reorganization procedure.

Individual Insolvency proceedings

Personal Recovery Procedure

Natural persons with debts stemming from a company guarantee may open bankruptcy proceedings if the outlook of paying all the debt is unattainable and the debtor can prove that his situation is impossible to resolve without a reorganization of outstanding debt. An administrative board will be managing the procedure, proposing a plan for further postponement, re-scheduling or remission of creditor claims. If the administrative board discovers there is lack of assets to repay the debts, it will recommend a suspension of creditor's claims and provide the debtor with a fresh start.

Personal bankruptcy (*fallite personnelle*)

Personal bankruptcy may be due to entrepreneurial failure, or it may also be imposed on the management of a corporate debtor, at the court's discretion, where it is shown that management failed to declare *cessation de paiements* within the required 15-day period. Personal bankruptcy in France will lead to liquidation of the individual's estate, and a liquidator will be appointed by the court to distribute the profits from the assets' sale among the creditors according to their preference. "If it is not possible to meet the debts of all the creditors, he declares the proceedings closed due to insufficient assets, which results in the erasing of the debtor's non-professional debts, with the exception of those paid by means of a guarantee" (European Judicial Network 2009). In principle, a debtor who is a natural person is given full capacity and can start a new business following the judgment closing the winding-up. As a main rule creditors must seize the pursuit of claims towards the debtor after the closure of the liquidation (European Judicial Network 2009).

The reform of 2005

Discussions concerning reform of the French bankruptcy system, moving it closer to a debtor-focused model, started early in our decade and in 2005 the Business Safeguard Act (la sauvegarde de l'entreprise) was enacted. This new bankruptcy code introduced a number of changes to the existing bankruptcy procedures. The new Safeguard procedure is designed to facilitate going-concern reorganizations and resembles Chapter 11 bankruptcy in the US.

Like Chapter 11, the Safeguard Act seeks to promote voluntary filings before the actual *cessation de paiements* stage. A court order includes a stay on assets and the firm is able to focus on negotiations with its creditors. Most notably, the Safeguard laws allow management to retain control of the company's assets and provide for a more limited charge for the administrator. *Le sauvegarde* is meant to be a simplified *redressement judiciaire*, aiming to secure more successful rehabilitations – and fewer liquidations.

United Kingdom

Legal basis and creditor protection

In British jurisdiction[20] bankruptcy proceedings are governed by the Insolvency Act 1986. Following the introduction of the Enterprise Act, which came into force in 2004, the period of repayment of pre-bankruptcy debt for personal debtors have been reduced from three years to a maximum of one year. Meaning, following the Enterprise Act the British have reduced the time to discharge and enabled entrepreneurs with the possibility to obtain a fresh start after only a year of payback to creditors.

The legal regime in the United Kingdom is generally regarded as highly creditor-friendly (Franks, 2006) This is reflected in the creditors' rights scores of La Porta et al. (1998) which range from a minimum of 0 for low creditor protection to a maximum of 4 for the UK. Contrary to intuition Franks (2006) found that the proportion of going-concern reorganizations is actually higher in the UK than in France, where the primary stated objective of insolvency is to ensure the survival of the troubled company and thereby secure employment. This might be due to the fact that collateral, and thereby liquidation rights, are highly concentrated in the hands of the main British bank. The French creditor system on the other hand, is characterized by more competition in the banking sector and thus several smaller creditors have fewer incentives to keep the company as a going-concern.

Business Insolvency proceedings

In a legal sense the term "bankruptcy" in the UK only relates to individuals[21]. For insolvent companies the concepts of *Administration*, *Administrative Receivership* or *Liquidation* apply. Insolvency is in Britain defined as having insufficient assets to meet all debts, or being unable to pay debts when they are due (European Judicial Network, 2009).

[20] The UK does not have a singular law concerning bankruptcy. The system is divided geographically including one legislative structure for England and Wales, one for Scotland and another for Northern Ireland. In this text I will mainly refer to the bankruptcy regulation in England and Wales.
[21] Bankruptcy in Scotland is referred to as sequestration.

British regulation does not impose any restrictions on company's and individual's access on entering into informal negotiations and arrangements with their creditors regarding debt restructuring or cancellation. These are often referred to as pre-insolvency proceedings.

Administration

The Insolvency Act 1986 introduced two so called rescue mechanisms to allow insolvent companies to carry on running their business. The procedures, Administration and Company Voluntary Arrangement (CVA), are both court-administered and like Chapter 11 of the US Code they provide the company with temporary protection from creditors' claims. This time restricted protection is also known as automatic stay on assets. At least 75% of the creditors have to approve the proposal put forward by the management in order for a company to enter into administration or obtain CVA. During the reorganization period the administrator usually runs the business, not the management. When approved, the arrangement is binding for all creditors who receive notice of the proposal. However, until the enforcement of the Enterprise Act 2004 the holder of a secured claim had the power to veto both procedures and appoint a receiver instead of the neutral administrator. The Enterprise Act has also made changes to the administration process to make it faster, fairer and more focused on the rescue of companies (European Judicial Network, 2009).

Administrative Receivership

In administrative receiverships, prior to the Enterprise Act of 2002, the insolvency practitioner's duty was principally to act in the interest of the appointing holder of security. Thus, a secured creditor in the UK could liquidate the company and realize the collateral without regard to the interests of other claimants, and his actions could not be challenged in the courts (Franks 2006). The Enterprise Act 2002 abolished administrative receivership for loans made after 15 September 2003, and substituted it with Administration. Under current law the Administrator is still appointed by the holder of the secured claim, but the administrator's duty now extends to all creditors.

Liquidation

This legal process involves the realization and distribution of a company's assets and usually the closing down of the business (European Judicial Network, 2009). In essence, the court makes a winding-up order on the application of typically a creditor. The ownership of the assets remains with the company after it enters the insolvency procedure and no action can be continued against the company unless the court allows it.

Individual Insolvency proceedings

For individuals in financial distress the Insolvency Act 1986 differentiates between Individual Voluntary Arrangements (IVA) and bankruptcy. The voluntary arrangements are similar to the US Chapter 7 model and the Norwegian "Gjeldsordningsloven".

Individual Voluntary Arrangements

An IVA is a proposal to the creditors for the debtor to pay some or all of the debtor's liabilities over a period of time by selling assets or making payment out of income or a combination of the two. Approval requires a majority vote in value in excess of 75% of the creditors. If the proposal is approved it binds all the debtor's creditors whether or not they have voted in favor of it (European Judicial Network, 2009).

Personal Bankruptcy

An insolvent individual may be declared bankrupt only by court order following a bankruptcy petition, either made by the debtor himself or his creditor(s). Bankruptcy involves the realization and distribution of an individual's assets and usually the closing down of any business. In personal insolvency the ownership of the bankrupt's assets is automatically transferred to the trustee. After one year of following a strict payback-plan to creditors the debtor may be released of his pre-bankruptcy debt. Previously this repayment

period was three years. The Enterprise Act of 2004 reduced this period of time to ensure failed but still aspiring entrepreneurs a fresh start over again.

Trough this reform the British government wanted to reduce the stigma of failure and encourage rescue of honest and cooperative debtors. The Act's aim is to encourage more viable companies which get into financial difficulties to seek help at an earlier point when they are more likely to be rescued rather than liquidated. The European Judicial Network (2009) states that the British Government "recognizes that financial failure is not automatically the fault of the debtor. The aim of the Act is to ensure that each bankrupt is looked at on his/her own merits and to get away from a 'one size fits all' approach".

Germany

Legal basis and creditor protection

The insolvency code of Germany is governed by the Insolvency Statute of 1994[22], which came into force in 1999, and was amended by statutes of 2001 and 2004. The previous German Bankruptcy Act in effect before 1999 (*Konkursordnung*) received criticism as it implicit encouraged premature liquidations. This was the result of a secured creditor's ability to repossess assets in the event of the initiation of a reorganization procedure of companies in financial distress. Consequently, the lack of stay on the debtor's assets resulted in comparatively few successful reorganizations being completed.

The 1999 code (*Insolvenzordnung*) limited the powers of the secured creditors to repossess their assets in reorganization by introducing an automatic stay on their claims for three months. The new legislation also introduced the concept of discharge in German law (*Restschuldbefreiung)*, as individual debtors could be excused of their residual debt after following a payment plan for 7 years. This repayment period was reduced to six years in 2001. Previously, this possibility to obtain a fresh start had not been available for German debtors.

[22] Bundesgesetzblatt of 5 October 1994 I S.2866

Regarding creditor protection, strong control rights were previously given to secured creditors, thereby contributing to the effect of favoring liquidation of an enterprise rather than its continuation as a going concern. The 1999 code reduced the creditor's influence, making it somewhat less creditor-friendly. Still, considerable control is given to the creditor in the insolvency proceedings. La Porta et al attributes an index-value of 3 to the German pre-1999 code.

Grounds for opening insolvency proceedings in Germany are inability to meet payment obligations when they are due and/or over-indebtedness. Imminent inability to make payment is also sufficient for an insolvency application by a debtor. Both a legal entity and natural person may be the subject of insolvency proceedings under German law.

Business Insolvency proceedings

Two formal insolvency procedures existed under the old German bankruptcy code, (1) composition by court (*Vergleichsordnung*) and (2) compulsory liquidation (*Konkursordnung*). The new German code simplified the legislation and consists of only one system of regulation (Insolvenzordnung). In the following I will first introduce the previous legislative arrangements and then move on to the current law in effect.

Composition (*Vergleichsordnung*)

The previous court composition was a reorganizing procedure set up to release the company from its financial distress by restructuring its unsecured debt. In German compositions the court appoints a receiver whose responsibility it is to act on behalf of all creditors[23], supervise the firm's operations and assess the feasibility of the proposed plan of arrangement. The claimants' votes in favor of the plan are binding for all creditors by simple majority[24]. However, due to limited automatic stay only affecting unsecured claims and which did not prevent the claims or legal actions by secured and preferred creditors, the initial attempt on restructuring a company in distress often ended in liquidation. For many

[23] The receiver does not represent any one group of creditors, but is bound by the resolutions of the creditors' meeting, which he must implement.
[24] The rule is three-quarters majority by value.

companies the only alternative to entire or piece-meal liquidation was an out-of-court workout with creditors.

Liquidation Bankruptcy (*Konkursordnung*)

German regulation on compulsory liquidation dating from the years previous to 1999, stated that a court appointed insolvency administrator would be responsible for conducting the sale of the debtor's assets. Still, this was often a long process if the proceedings from a sale were deemed unfavorable. Consistent with the court composition mentioned above, an automatic stay on unsecured claims was in force under compulsory liquidation. In practice, many petitions for the latter type of bankruptcy were closed as a result of insufficient assets to be distributed to unsecure claims after secured creditors' collateral was seized.

The 1999 code (Insolvenzordnung)

Reorganization Procedure

The amendments in the 1999 code removed the advantages of the secured creditors and introduced automatic stay affecting this group of preferred claims as well as the unsecured claims. This reform seemingly increased the probability of the survival of enterprises by limiting the ability of the secured creditors to strip the company of its essential assets (Franks, 2006). Still, the acceptance of the creditors' meeting is required to pass the plan proposed by the court-appointed receiver. Half of the creditor's votes in number are required to accept the plan. Thus, a creditor holding more than 50% of secured claims can veto the reorganization plan that impedes the rights of the secured creditors (German Law Journal 2009).

Liquidation Procedure

A court-appointed insolvency administrator will decide on the method of the asset's realization and distribute the means in order of the claims preferences. The company might be sold as a whole or broken up and sold piece-meal. After the final distribution of assets and the following closure of insolvency proceedings, creditors with remaining claims can

continue pursuit of their claims against the debtor without restriction. However, if the debtor is a natural person he may according to the 1999 code apply to be granted a discharge of his remaining debts.

Individual Insolvency proceedings

The new German Insolvency Act of 1999 opens for a personal debtor to achieve a discharge of residual debts *(Restschuldbefreiung*). The code introduced a discharge of residual debts after seven years, which was reduced to six years in 2001. If a natural debtor is granted discharge his creditors may no longer try to enforce claims against the debtor and he is allowed a financially fresh start.

Italy

Legal basis and creditor protection

The over 60 year old Italian bankruptcy law of 1942[25] was recently the subject of an organic reform. The new rules in effect from 2006[26], and further amended in 2007[27] and 2009, are aimed at introducing more effective and efficient regulation of pre-bankruptcy schemes and are intended to favor going-concern transfers over piecemeal sales, as well as giving larger powers to the bankruptcy trustee (Doing Business 2009).

Italy's previous bankruptcy regulation was often characterized as inefficient and inflexible. Although the law received amendments over time it still embraced society's contemporary view in the 40ies, as insolvency was considered an offense to the economy, bankruptcy proceedings as a punishment for the entrepreneur, and liquidation of assets as the only remedy available for creditors (Crosio and Origoni 2008). The law contained substantial barriers to effective company reorganization and debt restructuring, and involved high costs relating to the insolvency procedures which ended up consuming a large part of the estate's asset value. Unsecured creditors seldom recovered their claims, resulting in a negative reallocation of resources in the Italian economy. In addition, the bankruptcy process was time-consuming, often lasting as much as 7 – 8 years (Beye and Nasr 2008).

As the new law is aimed at creating a process similar to Chapter 11 in the US Code, the reform has shifted the focus away from liquidation as the primary legitimate bankruptcy procedure and towards more cases of company debt restructuring and reorganization. However, as this thesis' focus is on a relatively large time span it will not be able to capture all aspects of the post-reform bankruptcy regulation in Italy.

The main objective of the Italian bankruptcy law has traditionally been to protect the interests of the creditors. Accordingly, the pre-reform bankruptcy proceedings were mainly aimed at liquidation of insolvent enterprises and elimination from the market of firms in financial distress. In addition, the legislation was particularly harsh on failed entrepreneurs. Debtors were by law treated nearly as criminals, deprived of the right to vote and prohibited from reentering the market as restarting entrepreneurs. La Porta et al's Creditor Protection

[25] The 1942 Bankruptcy Act, Regio Decrento 16 marzo 1942, n.267
[26] The new bankruptcy reform consisted of several steps which adopted various laws and decrees piece meal.
[27] The Corrective Decree of September 12, 2007 (Legislative Decree No. 169), effective January 1, 2008

index probably does not reflect this debtor-unfriendliness in a sufficient way, as Italy only gets a score of 2 in their evaluation of Italian insolvency law.

The regulation and procedures governing creditor arrangements were significantly modified by the reform. Still, one might say that the new legal framework support, and perhaps also strengthen Italian creditor's rights, as it provides a more efficient system and seemingly stimulates the flow of credit to SMEs enabling post-bankruptcy growth both for the creditor and debtor.

Italian law defines insolvency as the situation where commercial operators are no longer able to meet their obligations (European Judicial Network 2009). In the following I will first present the previous bankruptcy proceedings under Italian law, and then look closer at the recent changes in Italian bankruptcy legislation.

Business Insolvency proceedings

There were two types of bankruptcy proceedings in Italy before the reform – liquidation and minor bankruptcy procedures such as (1) The Controlled Administration and (2) Preventive Creditors' Settlement Procedure[28]. Liquidation is naturally still an operative alternative within bankruptcy proceedings. However, the procedure for liquidating a debtor's assets and distributing the proceeds among its creditors has received substantial simplification to reduce cost and time spent.

Liquidation

Previously the principal bankruptcy proceeding in Italy was the liquidation procedure – the *fallimento*. The purpose of this bankruptcy procedure is to satisfy the creditors' rights and to remove the insolvent enterprise from the market. Commercial businesses are the only firms that can be subject to a compulsory liquidation process. Meaning, subject to these

[28] Concordato preventivo

proceedings is any company or individual whose main activity consists of the production or trade of goods and services.

Where the liabilities are greater than the assets, the creditors retain the right to receive payment of the sums owed to them even after the proceedings have been brought to an end, unless the debtor has collaborated fully during the bankruptcy proceedings and is allowed by the court to waive the outstanding debts under a new mechanism introduced in the recent reform known as *esdebitazione* – meaning discharge. Previously there existed no such legal mechanism.

Minor bankruptcy procedures

The so-called minor bankruptcy procedures were designed to avoid a debtor's bankruptcy. Only the filing of a petition by the debtor may initiate these procedures. The purpose of the minor bankruptcy procedure called Controlled Administration was to re-establish the financial health of a firm by allowing a postponement of creditor claims for a limited period of time. During this period of time, the firm continued to do business under the debtor's management supervised by a commissioner or a judge, while it was granted a temporary stay of collection actions. This Controlled Administration was initiated on the specific supposition that the firm's difficulties with fulfilling its obligations were temporary. Often there was required evidence in the form of a preparation of a plan that the enterprise could be saved. However, the debtor was allowed to suspend payments on claims to creditors for up to two years. Often, the debtor at the end of the period still was not able to pay all of his previous financial obligations, and in many cases liquidation was the only real solution.

To be able to reach an agreement with the creditors to reduce the total amount of claims and postpone payments on enterprise debt, the Preventive Creditors' Settlement Procedure was often used in addition to the Controlled Administration. This is not a direct re-organization of the firm, but it may be considered to indirectly permit reorganization of an enterprise because it can result in maintaining, even if partially, an enterprise in the market.

Post-reform insolvency proceedings

As mentioned Italy has enacted a comprehensive reform of the Bankruptcy Act which amongst other has introduced several pre-bankruptcy schemes of arrangements to help companies in financial difficulties recover through more flexible arrangements with their creditors, as well as the possibility for a natural debtor to achieve discharge from unpaid debt after bankruptcy procedures.

Out-of-court debt restructuring plan

Informal, out-of-court debt restructuring agreements with creditors are now possible for Italian debtors who find themselves in financial distress but not yet insolvent. Debtors continue management of the enterprise but might need to surrender certain company assets to their creditors or obtain extensions for payment plans.

Debt restructuring agreement

As mentioned, there were previously no procedure in Italian bankruptcy law for proposing a modified repayment plan to the creditors as compared for example to Chapter 11 of the US Code. Recent amendments resulted in a legislation that formally allow for debt restructuring plans in arrangements with creditors. To a certain extent the reform of 2005 reflects features of the US Chapter 11 regime. A distressed firm may seek court authority to implement a debt-restructuring agreement, provided it has been approved by creditors holding at least 60 percent of the company's liabilities (Beye and Nasr, 2008). The plan must contain a debt restructuring forecast and proposals to pay the debts in some form. While payment of all secured claims is still required, no threshold applies to the payment of unsecured claims (Crosio and Origoni 2008).

Where the arrangement procedure is accepted, the debtor retains control of the company’s assets and activities under the supervision of a receiver. Once a debt-restructuring agreement has been filed with the insolvency court and published in the Register of Companies, the debtor company may benefit from an automatic stay of any enforcement proceedings against its assets for a period of 60 days (Beye and Nasr 2008).

The amendments of Italy's bankruptcy laws has provided a more effective and efficient procedures governing the liquidation and reorganization of distressed companies, giving the firms greater flexibility in attempting to address their financial problems. The reform has also removed the previous restrictions preventing a bankrupt from restarting another business after bankruptcy proceedings (European Judicial Network 2009), the concept of discharge from indebtedness for individual debtors is as mentioned also introduced in the new legislation.

Norway

Legal basis and creditor protection

Norwegian bankruptcy proceedings are primarily regulated by the Bankruptcy Act of 1984[29] (*Konkursloven*) and *Dekningsloven* of the same year. Under this legislative basis both individual and company bankruptcy is regulated.

Norway was ranked first of the Nordic countries in bankruptcy legislation by the Nordic Innovation Monitor in 2009. "Among other things, this can be explained by very low costs associated with closing of an insolvent business" But Norway also received some criticism from the same source; "Although top-performing in terms of bankruptcy legislation, Norway lags significantly in the area of restarting possibilities. The problem of having strong bankruptcy legislation is that it might be difficult for an entrepreneur to restart." Thus, Norway provides swift bankruptcy procedures but does not currently focus enough on the needed incentives for an aspiring but once failed entrepreneur to restart the creative process of building a company.

As most other Scandinavian countries, the bankruptcy law in Norway is regarded as more creditor-friendly than not. Consideration for the creditors is of high importance to ensure a well functioning credit supply to SMEs. La Porta et al attributes a ranking of 2 to the Norwegian protection of creditors in its Creditor Rights Index, the lowest creditor rights value being zero.

Norwegian law necessitate that the debtor is insolvent as a requirement to be deemed bankrupt. The debtor might petition himself bankrupt, but more frequently approach in this respect is a petition from the debtor's creditors.
The main rule in the bankruptcy law is no discharge of outstanding debt, even after a liquidation of the estate and distribution of the bankrupts' assets to his creditors. The stated objective of the Norwegian bankruptcy institute is not to delete the debtor's obligations to his creditors, but to ensure an orderly and fair distribution of the assets in a failed enterprise. For corporations this main rule will still not be made effective as a result of the owners having limited liability of the company's financial obligations. However, this rule might

[29] Law of the 8th of June 1984 n.58 (*Konkursloven*) and Law of the 8th of June 1984 n.59 (*Dekningsloven*)

come to be of grave importance to aspiring entrepreneurs not having enough equity to be able to form a limited company; or for entrepreneurial firms where the owners have had to give personal guarantees to be able to attain financing. For consumers there exists an exception to this main rule through the Debt Negotiation Law (*Gjeldsforhandlingsloven*).

Business Insolvency proceedings

The Norwegian Bankruptcy Act includes three procedures primarily for insolvent companies; (1) Liquidation bankruptcy, and reorganization through the processes of (2) Voluntary Debt-Restructuring (*Frivillig Gjeldsordning*) or (3) Compulsory Composition (*Tvangsakkord*). For the two latter procedures it is not a requirement that the debtor is insolvent or that it is a company.

Voluntary Debt-Restructuring (*Frivillig Gjeldsordning*)

This is a negotiated agreement between the debtor and his creditors that might include delay of payment, partly cancelation of debt owed to the creditor and/or a liquidation of some part of the debtor's assets. All claimants are required to agree before a voluntary debt restructuring is made effective.

Compulsory Composition (*Tvangsakkord*)

This arrangement includes a full reconstruction of corporate debt, partly through the company's payment to its creditors, but also due to the creditor's cancelation of some part of their claims towards the debtor. The formal requirement for a debtor to be able to attain this arrangement is that no less than 25% of the secured claims may be realized, if so the majority of claimants may bind the opposing creditors. The requirement of 25% realization of secured claims may only be subsided if all creditors agree on the negotiated arrangement.

As opposed to the objective of liquidation the main purpose of the Norwegian reorganization bankruptcy procedures are to preserve employment and the continuation of businesses as this for the most part is desirable out of broad social considerations.

Liquidation bankruptcy

Under the Norwegian Bankruptcy Act the debtor's assets will be sold by the court-official administrating the liquidation, and the financial means attained will be distributed to the creditors based on the nature of their claims. One of the requirements in this process is that the assets must be sold in a way that gives the highest profit for the estate. As mentioned, the discharge of debt is as a main rule not possible under Norwegian law. Bankrupt natural debtors will after formal procedures are over and the company is dissolved; still be liable for the remaining pre-bankruptcy debt.

Individual Insolvency proceedings

Consumer Proposal (*Gjeldsordningsloven*)

Due to the Norwegian bank-crisis in the 1980s and the increase in personal bankruptcies in the wake of the crisis, the government decided to reform the legal basis to include a consumer proposal in effect 1993[30]. This enables individuals in deep financial distress to propose a reorganization plan for their creditors, thus enabling them to attain a fresh start. And an individual debtor such as an entrepreneur may only make a petition through the Consumer Proposal (*Gjeldsordningsloven*) once in his lifetime.

The main rule in the Norwegian Consumer Proposal is that it only applies to natural persons, not enterprises. Sole entrepreneurs conducting business activity may only as an exception fall under the law's regulation. One of the requirements for this exception is that the business has ceased to exist and that the business organization can be characterized as not complex. After a liquidation bankruptcy the company will be dissolved and the individual entrepreneur might then petition for a consumer proposal after all.

The proposal usually involves the debtor paying the creditors all of his excess income after his expenses are covered, for the duration of typically a five year period. As a consequence, this arrangement demands high sobriety of the debtor over a relatively long period. However, at the end of the period most of the debtors' outstanding debt is discharged.

[30] Law of the 17th of July 1992, no.99 (*Gjeldsordningsloven*)

Liquidation bankruptcy

As mentioned, the remaining claims from the creditors will not be discharged after cessation of the bankruptcy procedure under the Norwegian Bankruptcy Act. Above a certain exemption level, all of the debtor's future income will have to be distributed to his creditors, until all debt is repaid.

Denmark

Legal basis and creditor protection

Bankruptcy in Denmark is governed by the Danish Bankruptcy Act of 1997 (*Konkursloven*). In the past years, minor amendments have been made to the bankruptcy legislation on several occasions[31]. Both individual and company bankruptcy is regulated under the Bankruptcy Act.

Denmark has recently made significant progress in making its bankruptcy law more entrepreneurial-friendly. A legislative modification of 2005 made it easier for debtors to gain debt restructuring. Upon an evaluation of the insolvency system the Danish High Court found that many procedural delays were caused by the trustee. A law amendment in 2006 provided measures for creditor and judicial monitoring of trustees' work, and institutes financial incentives for trustees to conduct proceedings more efficiently. The amendment in 2007 made the processing of an insolvent estate more efficient, by reducing the time spent on closing a bankrupt business (Doing Business, 2009). According to the Nordic innovation Monitor of 2009 Denmark is now ranked 6th in the area of bankruptcy legislation. But in terms of business restarting possibilities, which covers access to aid and debt rescheduling for financially distressed companies, Denmark performs less well according to the Innovation Monitor.

As the other Scandinavian countries Danish bankruptcy law is characterized by a restrictive approach towards debtor's rights. The main concern of the law is towards protection and uphold of the creditor's claims. La Porta et. al attributes a creditor protection value of 3 to the Danish bankruptcy law, the highest value of all the Scandinavian countries.

Under the Bankruptcy Act a debtor is regarded as insolvent if he cannot meet his obligations as they fall due unless the inability to pay must be assumed to be merely temporary. Insolvency in Denmark is sometimes used to describe the situation where a person's liabilities are greater than his assets. Both the debtor and a creditor may petition for bankruptcy proceedings when the debtor is insolvent.

[31] Most recently Act no. 118 of 4 February 1997 was amended by Act no. 402 of 26 June 1998. In January 2001 the Ministry of Justice set up a bankruptcy board with its intention to submit recommendations for further amendments and reforms to the act.

Business Insolvency proceedings

Automatic stay on the debtor's assets through out the suspension of payments is under Danish bankruptcy law not meant to solve a debtor's financial problems through estate administration, but will only act as a forerunner of either compulsory or voluntary composition, debt rescheduling or a winding-up procedure. Any debtor who believes that he will not be able to fulfill his obligations may file for suspension of payments. There are two forms of suspension of payments within Danish insolvency practice, (1) suspension of payments filed with the bankruptcy court, and (2) unannounced (non-filed) suspension of payments.

Reorganization

The Danish reorganization rules provides an alternative to bankruptcy where the company is liquidated. There are two procedures possible; Composition (*Akkord*) and Compulsory Composition (*Tvangsakkord*).

Voluntary Composition (Akkord)

A composition under the Danish Bankruptcy Act involves an agreement between the debtor and his creditors regulating payment of the outstanding balance (European Judicial Network 2009). Usually, creditors forgive or postpone required payments for part of the debt. In return the firms' continued existence will over time generate more means to the creditors than if it were to be liquidated. All claimants need to agree on the negotiated composition before it is binding.

Compulsory composition (Tvangsakkord)

Another reconstructive alternative to liquidation bankruptcy is compulsory composition. This proceeding is available both for natural persons and for companies. The composition involves a situation where a qualified majority of a debtor's creditors force the rest of his claimants to accept an arrangement under which the debtor is granted a percentage reduction

of the non-preferential debt, an extension of payment, or both, so that liquidation may be avoided. The composition may alternatively include a distribution of the debtor's assets among his creditors in exchange for which the debtor is released from the part of the debt that is not settled, or moratorium. The composition must be accepted by at least 60% of the creditors according to preference of claims and size of the debts in order for the arrangement to take effect.

Liquidation Bankruptcy (*Konkursdekret*)

If a company is insolvent, the company can be dissolved through a winding-up of its assets. The debtor's property and other assets are sold and any proceeds are distributed among his creditors according to the ranking stated in the bankruptcy law. Initial and immediate effects of liquidation include that the debtor looses the right to dispose of the estate, and an estate management consisting of a trustee is established. There are no possibilities for discharge for company debtors as the Danish expect it be of no practical relevance since the corporation is dissolved at the completion of liquidation. Implied in this is that bankrupt entrepreneurs may petition for a discharge under the Bankruptcy Act regulating the insolvency of natural persons.

Individual Insolvency proceedings

Liquidation

For debt obtained within non-corporate companies the entrepreneur will be personally liable for any obligations. The liquidation procedure for individuals is corresponding to that of corporations. However, after bankruptcy proceedings are completed an individual debtor will still be liable for the debt not paid through the bankruptcy proceedings. Under many circumstances the creditor may uphold his claims on the debtor until which time the claim becomes statute-barred. This might last for up to 20 years depending on the type of debt and the claim's security.

Debt rescheduling (*Gældssanering*)

Two years after a liquidation bankruptcy a natural person may apply for debt rescheduling. This scheme involves a reduction or cancellation, of the natural debtor's entire debt or parts thereof. The Danish debt rescheduling system is intended for hopelessly indebted personal debtors. The debtor must prove that he is not able to and is not expected to be able to fulfill his debt obligations in the next few years and that his situation and circumstances otherwise speak in favor of a debt rescheduling (European Judicial Network 2009). Only about one third of debtor-applicants are granted debt rescheduling and the typical time horizon in the payback-plan is a period of five years before the remaining debt is discharged. Accordingly, it takes up to seven years before an entrepreneur may be discharged in Denmark, given that he is granted the debt rescheduling procedure.

Sweden

Legal basis and creditor protection

Swedish bankruptcy procedure is regulated under the Bankruptcy Act of 1987[32], which was amended through the Company Reorganization Act of 1996[33]. The latter reform included aims to turn the main purpose of bankruptcy proceedings towards reorganization instead of liquidation (Tuula 2003).

Compared to the other Scandinavian countries examined in this thesis, Sweden lags behind in the area of promoting entrepreneurship through bankruptcy legislation. The Nordic Innovation Monitor registers a substantially poorer ranking for Sweden than for its neighboring countries. "The poor ranking is explained by the higher costs incurred when closing a bankrupt enterprise, the time spent on closing a company, and the fact that the creditors on average are granted a lower share of their claims". Sweden holds the worst framework conditions on restart possibilities for previous bankrupt entrepreneurs.

In accordance to the other Scandinavian countries Sweden is characterized as having a creditor-friendly bankruptcy law. Sweden receives an index-value of 2 from the Creditor Protection ranking of La Porta et al, the same as Norway.

Insolvency is defined in the Swedish Bankruptcy Act as being unable to pay one's debts in a proper manner where such inability is not temporary (European Judicial Network 2009). Both enterprises and individual debtors may enter into out-of-court voluntary arrangements negotiated with the creditors, in order to reduce debt or restructure the payment plan. Such arrangements are not specifically regulated by the Swedish bankruptcy law. Remarkable few disputes are in Sweden settled in the public courts (Tuula 2003). Both debtors themselves and their creditors may petition for bankruptcy.

[32] The Bankruptcy Act, 1987:672
[33] Business Reorganization Act of 1996 (no. 764).

Business Insolvency proceedings

Reorganization (*Rekonstruktion*)

Firms can apply for reorganization bankruptcy under the Company Reorganization Act of 1996. Swedish bankruptcy law allows both voluntary agreements between the parties and compositions imposed by a court, in which case it is binding on all creditors (compulsory composition). A compulsory composition proposition that grants the creditors less than 50% of their initial claim's value is approved and binding for all claimants if it is accepted by creditors representing 75% of the amount of the total claim.

For a debtor to be eligible of reorganization procedures he must show likelihood of insolvency, meaning that if the company is unable to pay its overdue debts or will be unable to do so in the near future (European Judicial Network 2009), but the debtor also needs to show that survival is possible. An administrator is appointed to supervise the reorganization of the company and examine whether the conditions needed to continue operating exists. The debtor must have the administrator's approval before presenting a financial arrangement to its creditors. The debtors together with the administrator have the right to formulate a plan about a week from the filing. But Swedish law does not allow for any automatic stay on creditor's claims in this period. The reorganization procedure lasts three months and may be extended by three months at a time. If composition proceedings are not successfully concluded however, the reorganization procedure may not last for more than one year (Tuula 2003).

Under the entire reorganization procedure the management keeps the right of disposition over company assets, but they have to get permission from the administrator before they are entitled to act on behalf of the company (European Judicial Network 2009). As a result the Business Reorganization Act is seldom used in Swedish economy (Tuula 2003).

Liquidation

As mentioned there are some obstacles to the Business Reorganization Act 1996 ability to efficiently reorganize an insolvent company. Instead a partly reorganization may be attained through the Bankruptcy Act 1987. This typically occurs when the debtor has passed the time border for reorganization. Both a debtor and his creditors may file a petition initiating a liquidation bankruptcy.

Under the Swedish legal system a trustee is appointed in order to administrate the liquidation. Once the liquidation has taken place, the means are to be distributed amongst the claimants following further regulation on the preference of claims.

Debts owed to unsecured creditors are eliminated through the Bankruptcy Act 1987 and the legal entity (the company) is dissolved at the end of the process. After the bankruptcy proceeding is finished, the business can continue its operations with the old owners in a new entity. Thus, it is quite common for Swedish companies to reduce their debts through bankruptcy, whilst the owners start a new company buying the bankrupt entity's important assets, often also the name of the company. The process of liquidation is more commonly used in Sweden than reorganization (Tuula 2003).

Individual Insolvency proceedings

The formal bankruptcy process is rarely done for individuals as personal bankruptcy in Sweden in principle equals lifelong payback to pre-bankruptcy creditors. However, for the natural debtors hopelessly indebted the Swedish Government introduced the concept of individual debt restructuring in 2006.

Debt restructuring

Individuals may apply for debt restructuring (*Skuldsanering*) under the Debt Restructuring Act of 2006[34]. It is however required that the individual is so deeply in debt that he cannot be able to pay his debts in the foreseeable future. 36% of all Swedes that asks for debt restructuring are failed entrepreneurs.

Armour and Cumming (2008) indicate that the Swedish repayment period is five years. However, according to professor Johan Wiklund this is not a correct observation. Nearly no debtors obtain discharge under Swedish law, accordingly life long repayment of pre-bankruptcy debt is the main rule for Sweden's failed entrepreneurs.

[34] Debt Restructuring Act (2006:548)

Finland

Legal basis and creditor protection

Current law regulating bankruptcy proceedings in Finland is the Bankruptcy Act of 2004[35]. Legislation on the adjustment of debts of a private individual[36] and the restructuring of enterprises is regulated under law of 1993[37]. An amendment to the latter law was implemented as recent as in 2007[38] when Finnish government's revisions made it easier for companies in financial distress to reorganize.

With an index-value of 1, La Porta et al ranges the Finnish Bankruptcy Act as not primarily creditor-friendly. Still, an article comparing US and Finnish bankruptcy regulation (Ravid and Sundgren, 1998) reveals a substantial gap between the two legislative views, indicating that the Finnish bankruptcy law to some degree is characterized by Northern Europe's typically strong creditor protection.

Finnish law defines insolvency as a situation where the debtor is unable to pay his debts when they fall due. The Bankruptcy Law opens for three types of insolvency proceedings in Finland: (1) bankruptcy, (2) reorganization of a company and (3) adjustments of the liabilities of a natural person. The debtor is required to be insolvent for all types of proceedings to take effect. There are however, no legal limitations in Finnish law to out-of-court negotiations or agreements between the debtor and his creditors. The law does not govern such voluntary arrangements between the parties.

Business Insolvency proceedings

Reorganization

The purpose of Finland's reorganization procedure is to restore the financial health of a company and allow debtors to overcome their financial difficulties (European Judicial Network 2009). A company must be insolvent or in danger of insolvency by being unable to

[35] Bankruptcy Act 120/2004 (*Konkurssilaki*)
[36] Act on the Adjustment of the Debts of a Private Individual (57/1993) entered into force on 8 February 1993.
[37] Restructuring of Enterprises Act, Law 47/1993
[38] Law of 247/2007

meet current obligations of payment, to be able to file for reorganization. The latter scenario of not yet established insolvency may only in special cases result in the opening of the proceeding. The reorganization plan is confirmed by court, this authority also appoints an administrator of the estate which draws up a proposal for a reorganization of the firm. The debtor and creditors are entitled to submit their own suggestions for the reorganization plan, but cannot influence the final outcome. Creditors receive payment in accordance with the reorganization program confirmed by the court (European Judicial Network 2009).

During reorganization proceedings an automatic stay on creditor's claims is in force to ensure a fair distribution of payments to said creditors. The debtor keeps control of the company throughout the reorganization procedure under supervision by the administrator. The administrator will need to be consulted before management may implement certain economic activities. Where a debtor fulfils his payment obligations under the confirmed reorganization program, he is discharged from paying the amount of a debt which exceeds the amount confirmed in the plan (European Judicial Network 2009).

Bankruptcy (liquidation)

The concept of bankruptcy is under Finnish law related to a liquidation procedure aimed at realizing a debtor's assets and distributing the proceeds to the creditors. The debtor is required to be insolvent for the declaration of bankruptcy to become effective. Both the debtor and his creditors may file the court for a liquidation of the company. A court-appointed receiver draws up the distribution scheme of the estate, distributes the assets and resolves disputes over claims. The assets are liquidated in the most profitable way, to ensure high proceeds from the realization. The method of sale is to be determined by the creditors of the estate (European Judicial Network 2009). The Finnish bankruptcy procedure generally results in the winding-up of a legal entity; as such no discharge is in practice available.

Individual Insolvency proceedings

Liquidation bankruptcy

Both legal and natural persons may be declared bankrupt according to Finnish law. Liquidation bankruptcy in Finland does not discharge a debtor from his debts at the closure

of bankruptcy proceedings. And the debtor will remain liable for debt not satisfied during the proceedings. However, bankrupt individuals may be discharged from the debts exceeding his ability to pay under the bankruptcy proceedings under Finland's regulation of Debt Adjustments for private individuals.

Debt adjustment of a private individual

Only an insolvent natural person may petition the court to have his debts adjusted. However, as the purpose of this legal rehabilitation procedure is to allow debtors to overcome their financial difficulties and start over, the proceeding can also adjust individual liability linked to an enterprise which has ceased trading; typically do to a recent liquidation. The debtor has to prove he is unable to improve his insolvency within the foreseeable future.

The court is responsible for confirming the payback plan which normally runs for a period of five years. A stay on the debtor's assets is in force during the debt adjustment proceedings. Fulfillment of the payment obligations within the debt adjustment-plan, involves a discharge of the debtor from the rest of his debts.

The Netherlands

Legal basis and creditor protection

In the Netherlands the original Bankruptcy Act is the *Faillissementswet* of 1893 as amended by later reforms. Legislative regulation on the debt restructuring of natural debtors is generated by the *Wet Schuldsanering Natuurlijke Personen* of 1998. The Netherlands introduced the latter regulation as a final exit for deeply indebted individuals.

Creditor protection in the Dutch economy is by La Porta et al ranked as medium, attributing the Netherland with an index-value of 2.

Bankruptcies in the Netherlands are governed by the Dutch Bankruptcy Code (*Faillissementswet*). The code covers three separate legal proceedings; reorganization bankruptcy (*Surseance*) which only applies to companies, liquidation bankruptcy (*Faillissement*) which applies to both legal entities and natural persons, and debt restructuring (*Schuldsanering*) which is designed to apply for individuals only.

Business Insolvency proceedings

Reorganization Bankruptcy (*Surseance*)

In the Netherlands moratorium proceedings in reorganization bankruptcy are reserved for entrepreneurs and independent businesses (European Judicial Network 2009). The automatic stay is focused on retention of assets in the insolvent company, and in principle it is intended to bridge the enterprise's temporary payment problems. A debtor must be at risk of insolvency for this procedure to enter into effect. The stated purpose of this regulation is to promote restructuring of firms in financial distress and prevent unnecessary liquidation. The procedure is supervised by a court-appointed receiver, who manages the estate together with the debtor. Reorganization proceedings require a payment plan being approved by the court. There are no legal obstacles to restarting an enterprise for a failed entrepreneur in the Netherlands (European Judicial Network 2009).

Liquidation Bankruptcy (*Faillissement*)

This type of bankruptcy proceeding is applicable to both natural and legal debtors. Insolvency is a requirement for the initiation of liquidation. Typically, liquidation will be petitioned by a creditor, but a debtor may also petition himself bankrupt. An administrator will be appointed by court to liquidate the debtor's estate and distribute the means accumulated from the sale among the creditors.

The Dutch Insolvency Act provides no time limit within which a bankruptcy must be completed. Usually, the settlement will take no longer than a year. Still, longer completion periods are not exceptional. Simplified proceedings exist for Dutch bankruptcies. It is however required that there is insufficient assets in the estate to satisfy the competing claims. After a bankruptcy is completed and where limited liability is non-existent the remaining claims not met by the distribution will survive. In the case of not incorporated firms creditors may therefore still be able to pursuit their claims towards a bankrupt entrepreneur.

Individual Insolvency proceedings

Debt restructuring

As mentioned, legislative regulation on the debt restructuring of natural debtors is regulated by the *Wet Schuldsanering Natuurlijke Personen* of 1998. This law introduced the concept of discharge to Dutch debtors. Previously this arrangement had not existed. Primarily, this procedure is only applicable to private individuals. However, those enterprises that are not operated in the form of a corporate body, such as sole entrepreneurs, may also apply for debt restructuring under the law.

The proceeding is initiated by a petition to the court, which oversees the liquidation of the available equity in the personal estate and the restructuring of debt obligations. Requirements for the initiating of this procedure are proven insolvency[39] or a reasonable assumption that the person will not be able to continue paying his debts. In other words, there must be no prospect of repayment.

[39] Meaning, the person is in the situation of having ceased to make payments

If the court finds that debt restructuring is an applicable procedure, an automatic stay on claims from creditors is enforced until the parties have agreed upon an arrangement. Normally this arrangement will consist of a distribution of existing assets and a payment plan spanning three years, for which the debtor pays all his income above an existence minimum to his respective creditors.

If a debtor upholds his debt restructuring obligations over the plan's horizon, the Court will grant him a fresh start in the form of a discharge of all outstanding debt. However, if a private debtor were not to uphold his obligations according to the payment plan, debt restructuring may be terminated (European Judicial Network 2009). The debtor will then be in a state of bankruptcy having no possibility to obtain a fresh start before all his debts are repaid.

Belgium

Legal basis and creditor protection

Bankruptcy procedures in Belgium are governed by two different insolvency acts of 1997[40], including (1) liquidation bankruptcy, and the governing of (2) judicial administration as a preliminary to bankruptcy. Before the reformation of 1997, the procedure of judicial composition was governed by a law of 1946[41]. In Belgium, as for all other countries in this sample, distinction is made between insolvency procedures for traders (companies or individuals) and non-traders (individuals or consumers). Traders who are temporarily unable to pay their debts but for whom economical recovery is possible, a legal rescue mechanism such as the judicial composition can be initiated. For others a formal liquidation bankruptcy is the only way out of financial distress.

Meaning, judicial composition was intended for companies with prospects of continuation, whilst bankruptcy is aimed at irrevocable liquidation of companies without chance of survival.

Belgian creditor protection in the Belgian economy is by La Porta et al. given an index-value of 2, meaning it provides a medium level of protection for creditors. The Belgian commercial court systematically collects data concerning traders facing financial difficulties. However, creditors and third parties do not have access to this sensitive data. Instead, this system of data collection is intended to urge traders in financial distress to take precautionary measurements in time. The court may, based on the collected data, start an inquiry into a specific company and the entrepreneur (trader) will in such a situation be heard before a competent neutral third party, such as a judge. The purpose of this regulation is to have a positive effect on entrepreneur's ability to make changes within their company before it may be too late.

Insolvency implies that a debtor is unable to repay his debts to his creditors (European Judicial Network, 2009). Belgian legislation defines the most important insolvency procedures to be (1) judicial administration, (2) liquidation bankruptcy and (3) composition

[40] The bankruptcy procedure is governed by the Act of 8 August 1997
[41] Regentbesluit 25 september 1946.

with creditors. The first two procedures are only applicable for companies[42]. A composition with the creditors is open for all types of debtors.

Business Insolvency proceedings

Judicial Administration

The requirements for opening a judicial administration in Belgium are that the debtor has not shown signs of bad faith and that the company's debt difficulties threaten the continued survival of the business. However, it is also required that it is reasonable to believe that that the company may survive as a going concern, thus restoring its financial health and profitability. Reorganization through judicial administration is in Belgium a court supervised procedure. The court-appointed receiver works out a payment plan together with the firm's management.

During judicial administration the debtor enjoys an automatic stay on claims from creditors for up to six months. The debtor's estate may not be liquidated within this procedure. At the end of the negotiation period, the receiver will present the court with a restructuring proposition. Usually this includes the suspension of creditor's claims as well as transfer of all or part of the undertaking, whereby the creditors will be partly repaid so that business activity and employment are preserved and the firm can continue operating. If the commercial court does not approve the restructuring, it can declare the debtor bankrupt.

Liquidation Bankruptcy

A company that is insolvent, meaning it is un-creditworthy and has ceased paying creditors, can be declared bankrupt. This is petitioned either by the debtor or by the firm's creditors. Belgian law regulating bankruptcy proceedings states that "the sole purpose of the bankruptcy procedure is to wind up the assets in the bankrupt's estate for the benefit of his creditors. The bankrupt enterprise disappears from the economic and legal landscape"

[42] A tradesman is a person who performs commercial acts as his principal or secondary occupational activity. The main point about commercial acts is that they are done for profit.

(European Judicial Network 2009). However, the court may grant the debtor in mention a suspension for up to fifteen days to give the entrepreneur or management time to apply for judicial administration.

A court-appointed liquidator will in the event of bankruptcy proceedings assume control of the estate with the task of winding it up. A firm which is declared bankrupt is not eligible for composition procedure with creditors, as will be described below. However, an individual debtor may submit an application for rehabilitation if he has paid all the sums he has been ordered to pay (European Judicial Network 2009).

Individual Insolvency proceedings

Any natural debtor is eligible for composition proceedings under the Bankruptcy Act. A natural person in financial distress may apply for protection against creditors under the Belgian Bankruptcy Act as composition with creditors. However, for the procedure to take effect the debtor is required to be permanently unable to pay his debts and he cannot have applied for insolvency. According to EU's "Green Paper", "Belgium has adapted its insolvency legislation with a view to allowing entrepreneurs to attempt to rescue businesses when facing temporary problems and to liquidate non-viable firms as quickly as possible. Courts can declare honest bankrupt entrepreneurs to be excused, allowing them to make a fresh start in business." After the composition is final, all remaining debts of an individual debtor will be discharged and the individual is rehabilitated.

Ireland

Legal basis and creditor protection

The primary legislation governing the law of corporate insolvency is contained in the Companies Acts of 1963[43], as amended by Acts until 2006. The Company Law Enforcement Act 2001 concerns the winding-up and insolvency provisions of firms. Insolvency in respect to individual debtors in Ireland is governed by the Bankruptcy Act of 1988[44].

As opposed to British legislation La Portaet al. (1998) ranks the Irish Insolvency regulation as substantially less creditor-friendly. Ireland receives an index-value of 1. Personal bankruptcy law in Ireland unfortunately lags behind many other countries in the Western world. The organization named Irish Insolvency Information says, "In the UK for example over 67,000 individuals went bankrupt in 2008 with another 39,000 entering into the formal alternative to bankruptcy the Individual Voluntary Arrangement or IVA. In Ireland in the same year number of people entering bankruptcy was below 100" (Bankruptcy Ireland, 2009). While it is relatively cheap to go into bankruptcy through legal arrangements such as the IVA in UK, it is very expensive for both debtors and creditors to petition an individual bankruptcy in Ireland.

Business Insolvency proceedings

The principal formal procedures for dealing with insolvent companies in Ireland are the following; (1) liquidation and (2) examination[45].

Examination

Examination is a reorganization procedure where the purpose is to avoid liquidation of the company, even if the company is insolvent. Through petitioning the court a firm may be granted examination. The requirements for this procedure to become effective are that the company is unable to pay its debts and that no order has been made for the winding up of the company, as well as the fact that no resolution subsides for the winding-up of the company.

[43] Companies Act, 1963. Named the "Principal Act".
[44] Bankruptcy Act, 1988
[45] The process of examination was introduced into Irish Law by the Companies Amendment Act 1990 (CAA).

In addition, the court must be convinced that it is reasonable to believe that the company will survive as a going concern.

If the court is satisfied the requirements are met, an examiner will be appointed and the firm is granted an automatic stay of seventy days, which may be extended to a hundred days. The examiner will in addition to supervision of management, formulate a plan of arrangements to ensure the company's survival. A confirmation of the proposal by the court is binding for all claimants.

Liquidation

The concept of liquidation in Ireland applies only to companies. A winding up of an individual debtor's assets is, as in the UK named *bankruptcy*. Both the debtor and its creditors may petition the liquidation of a company. This is a terminal process in which a court-appointed liquidator sees to the payment of creditors by realization of the estate. Ultimately the company is dissolved.

Individual Insolvency proceedings

As mentioned the concept of bankruptcy in Ireland applies only to debtors who are individuals. To be judged bankrupt the natural debtor must have committed an "act of bankruptcy" as stated in The Irish Bankruptcy Act of 1963.

Arrangement

An individual pending for bankruptcy may petition for arrangement, which involves a protection from bankruptcy proceedings in the form of an automatic stay on assets. Within this period the debtor must present to his creditors an offer of composition. The acceptance

of the composition by three-fifths[46] of the claimants will be binding for all creditors. If the arrangement is not accepted by the creditors, the court will judge the debtor bankrupt.

Bankruptcy

Under the Irish Bankruptcy Act a court-appointed liquidator will sell the individual bankrupt's assets and distribute the proceeds to the creditors, except for certain assets necessary for the debtor's work or existence minimum. A bankrupt suffers certain statutory disabilities such as not being entitled to operate a bank account, being prohibited from company management and being prohibited from being a Member of Parliament or of a local authority.

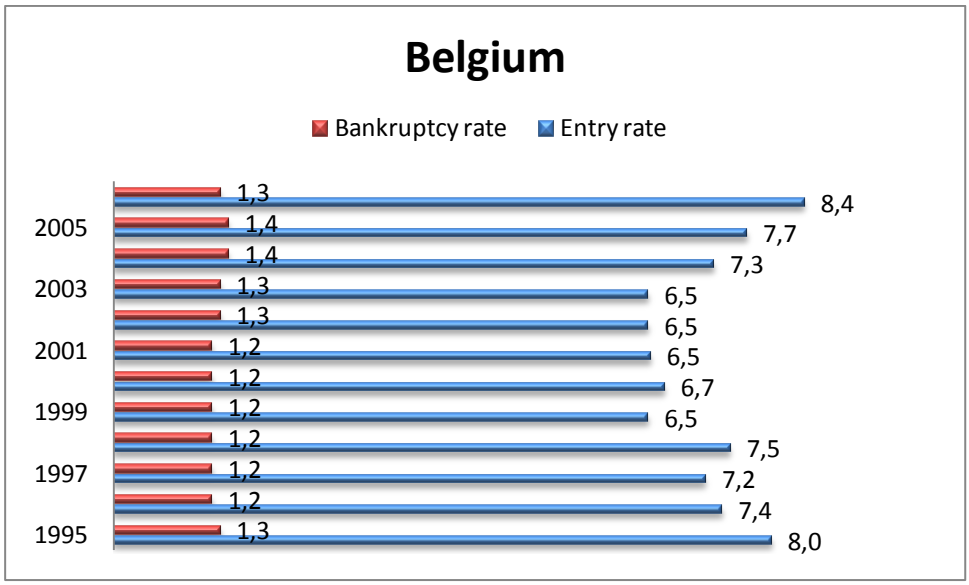
There exists a possibility for a natural debtor to obtain discharge under Irish law. However, it is required that the bankruptcy has subsisted for 12 years and the court must be persuaded that it is reasonable and proper to grant a discharge from Bankruptcy[47]. The OECD observes that "firm exit appears to be a disincentive (to entrepreneurship) in Ireland. Creditors have claims on bankrupt firm's assets for up to twelve years" (OECD 2001b). In principle, a discharged debtor in Ireland may start a business on equal terms as previously non-bankrupt entrepreneurs. Still, the Irish government recognize the fact that at "a commercial level a discharged Bankrupt will presumably have difficulty getting any kind of credit" (European Judicial Network 2009).

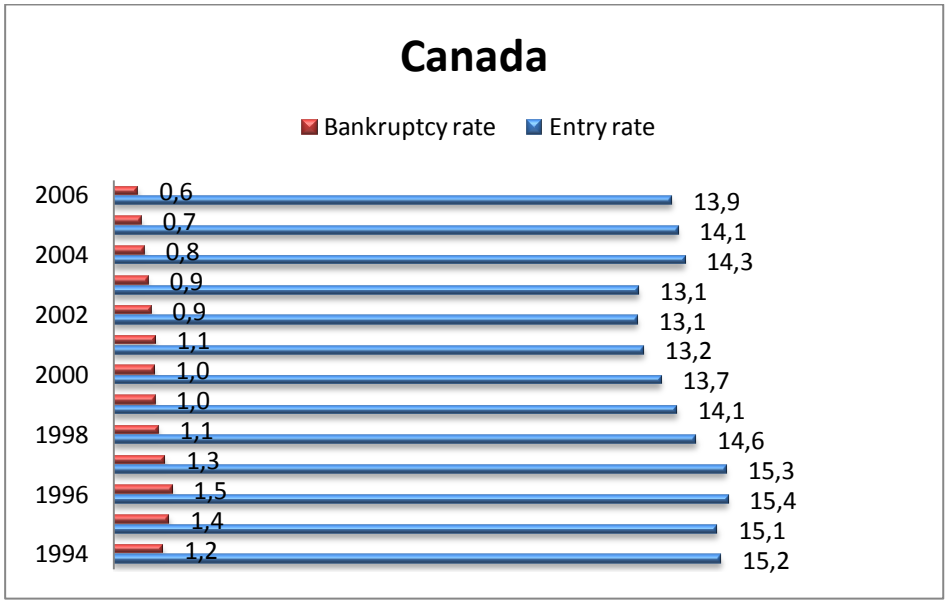
[46] In both number and value
[47] Legal basis: Section 85 (4) (c) of the Irish Bankruptcy Act.

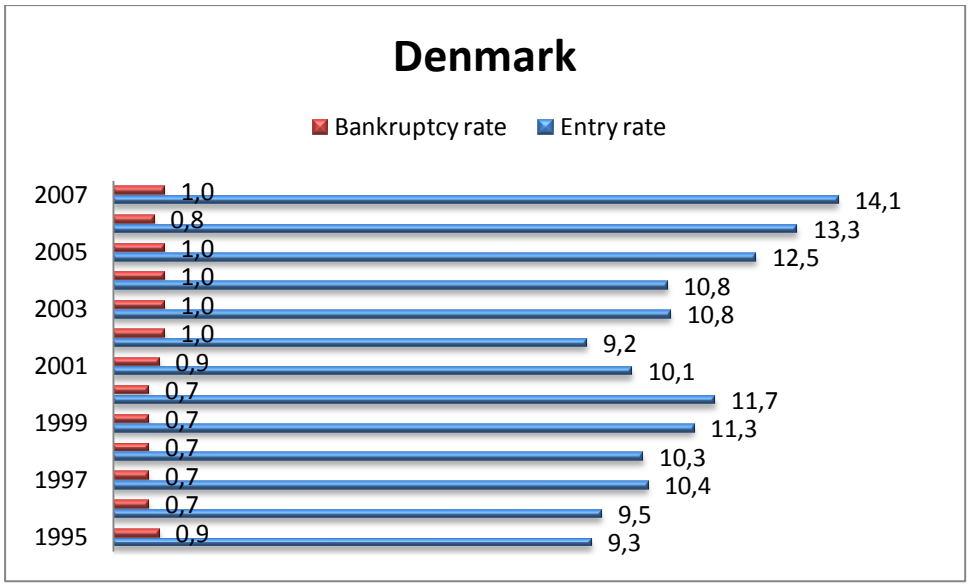
Appendix C

Figures

Below are graphical representations of each country's bankruptcy and entry rate, to be able to show the diversity within key variables for the sample countries.






Denmark
Bankruptcy rate
Entry rate
2007
2005
2003
2001
1999
1997
1995
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0,8
13,3
1,0
12,5
1,0
10,8
1,0
10,8
1,0
9,2
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10,1
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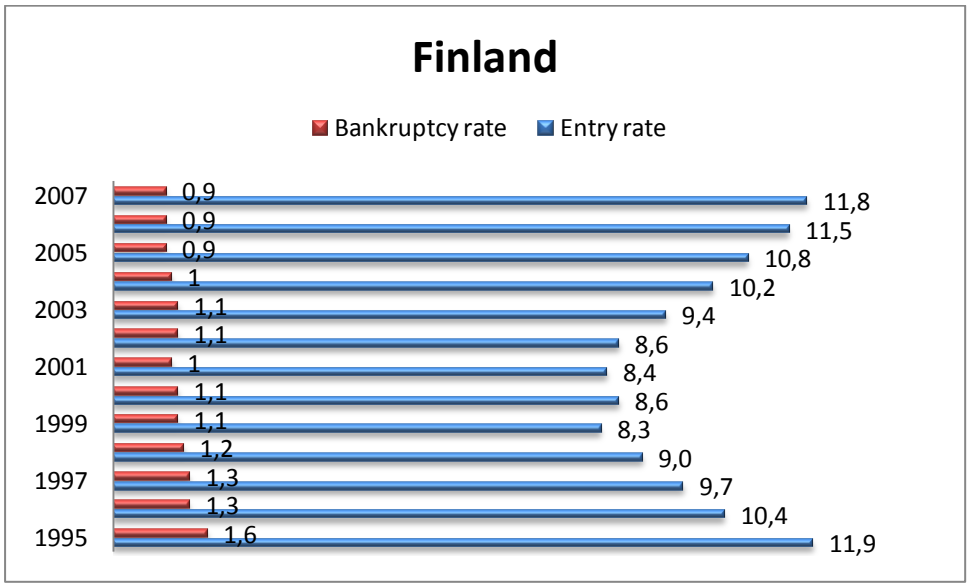
0,7
10,4
0,7
9,5
0,9
9,3


Finland
Bankruptcy rate
Entry rate
2007
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0,9
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10,8
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10,2
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9,4
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8,6
1
8,4
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1,3
9,7
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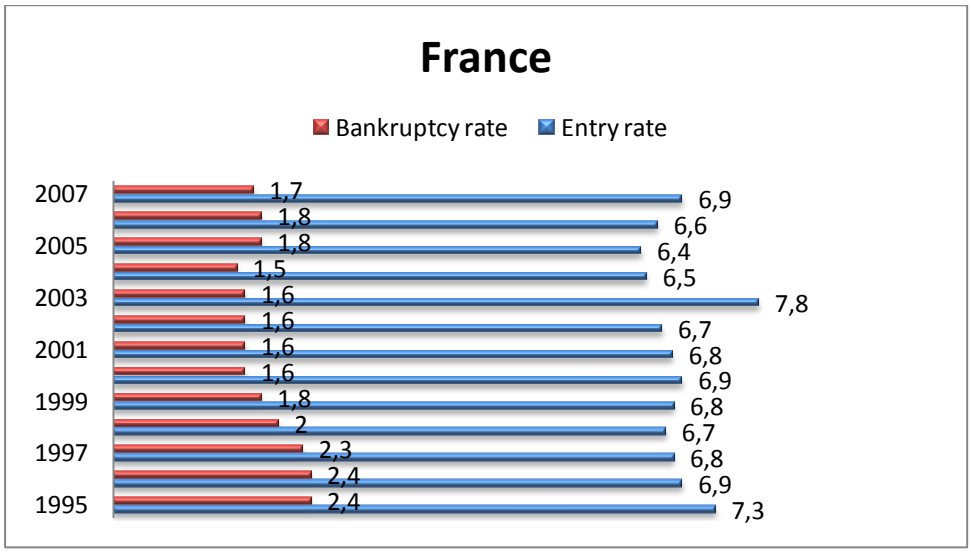
10,4
1,6
11,9


France
Bankruptcy rate
Entry rate
2007
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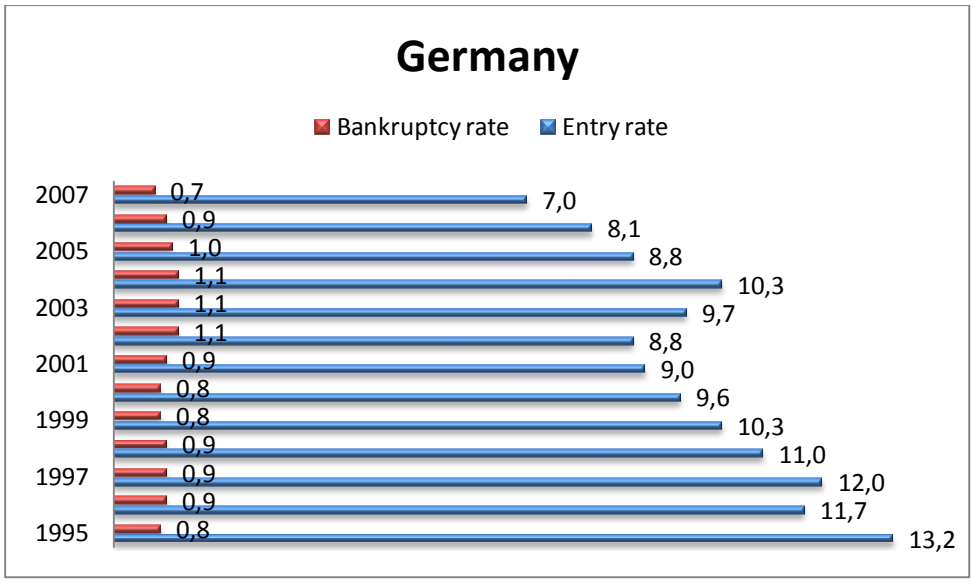
7,3


Germany
Bankruptcy rate
Entry rate
2007
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2003
2001
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1997
1995
0,7
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0,9
8,1
1,0
8,8
1,1
10,3
1,1
9,7
1,1
8,8
0,9
9,0
0,8
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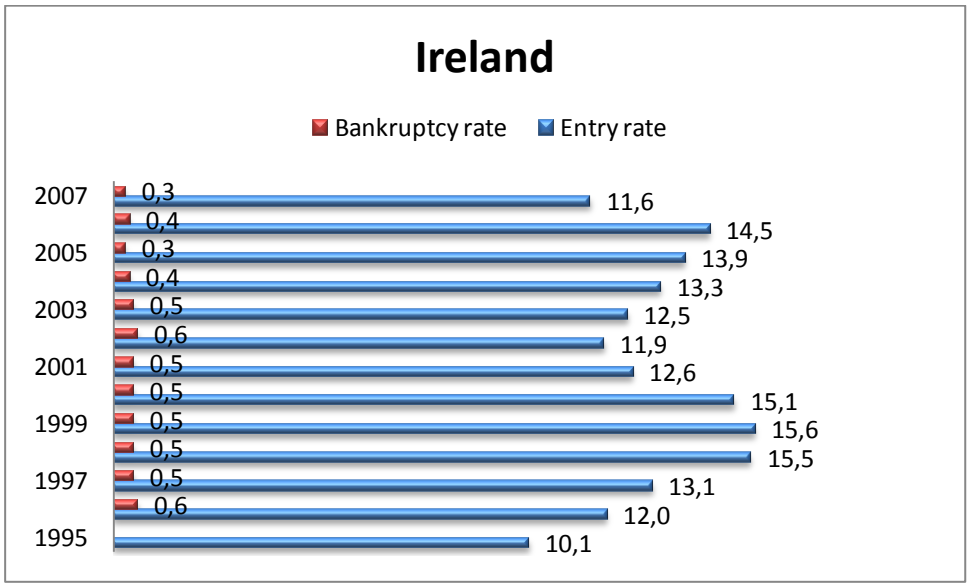
10,3
0,9
11,0
0,9
12,0
0,9
11,7
0,8
13,2


Ireland
Bankruptcy rate
Entry rate
2007
2005
2003
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0,3
11,6
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13,3
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0,6
11,9
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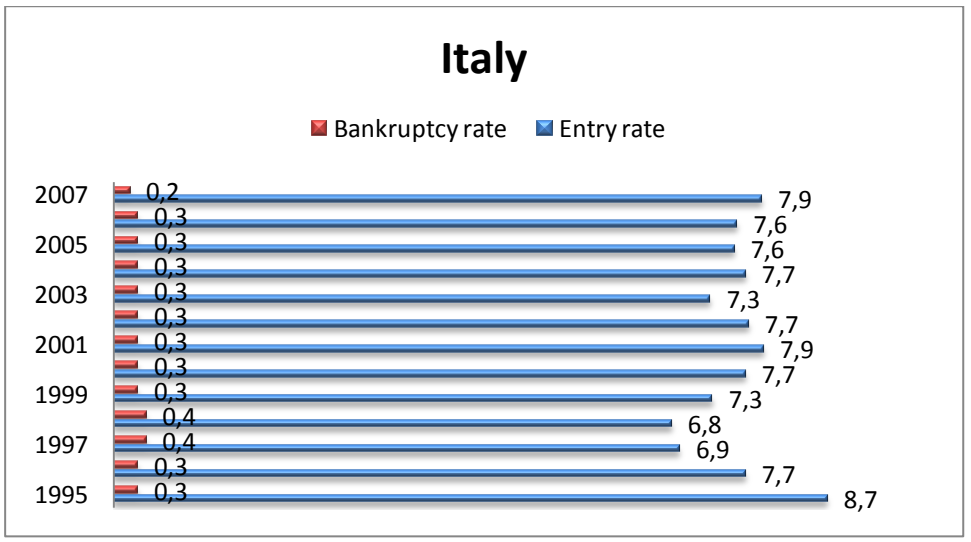
Italy
Bankruptcy rate
Entry rate
2007
2005
2003
2001
1999
1997
1995
0,2
7,9
0,3
7,6
0,3
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0,3
7,7
0,3
7,3
0,3
7,7
0,3
7,9
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7,3
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6,8
0,4
6,9
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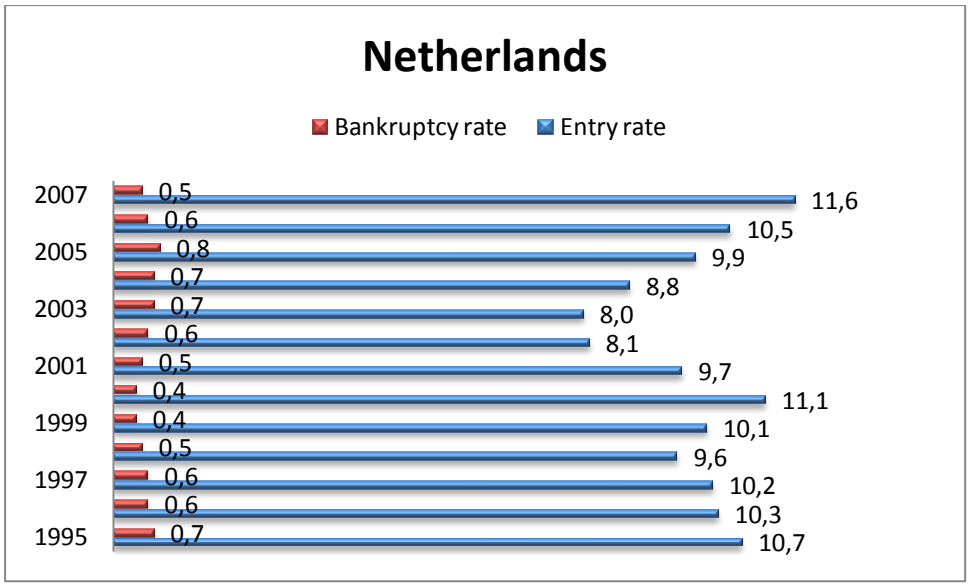
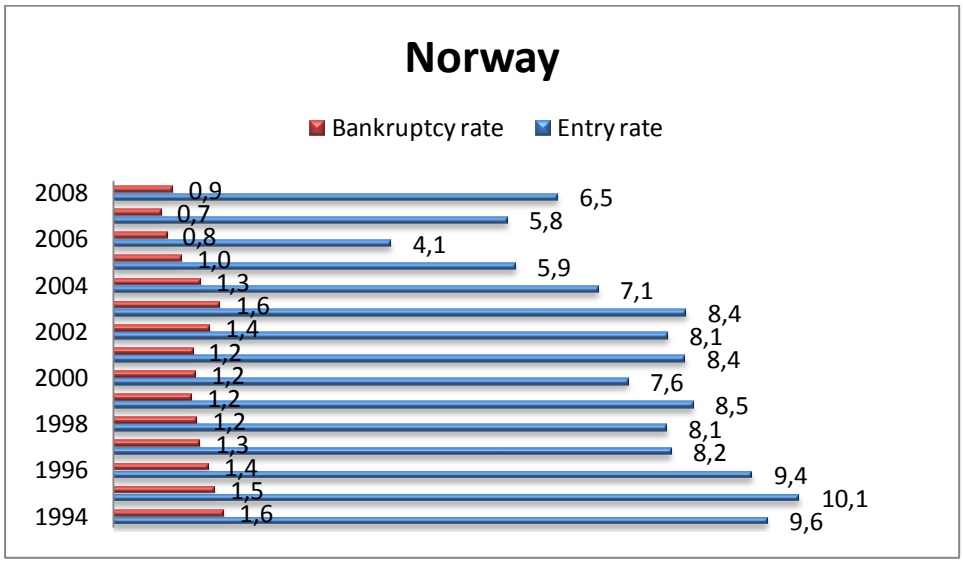
0,3
8,7


Netherlands
Bankruptcy rate
Entry rate
2007
0,5
11,6
0,6
10,5
2005
0,8
9,9
0,7
8,8
2003
0,7
8,0
0,6
8,1
2001
0,5
9,7
0,4
11,1
1999
0,4
10,1
0,5
9,6
1997
0,6
10,2
0,6
10,3
1995
0,7
10,7


Norway
Bankruptcy rate
Entry rate
2008
0,9
6,5
0,7
5,8
2006
0,8
4,1
1,0
5,9
2004
1,3
7,1
1,6
8,4
2002
1,4
8,1
1,2
8,4
2000
1,2
7,6
1,2
8,5
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1,3
8,2
1996
1,4
9,4
1,5
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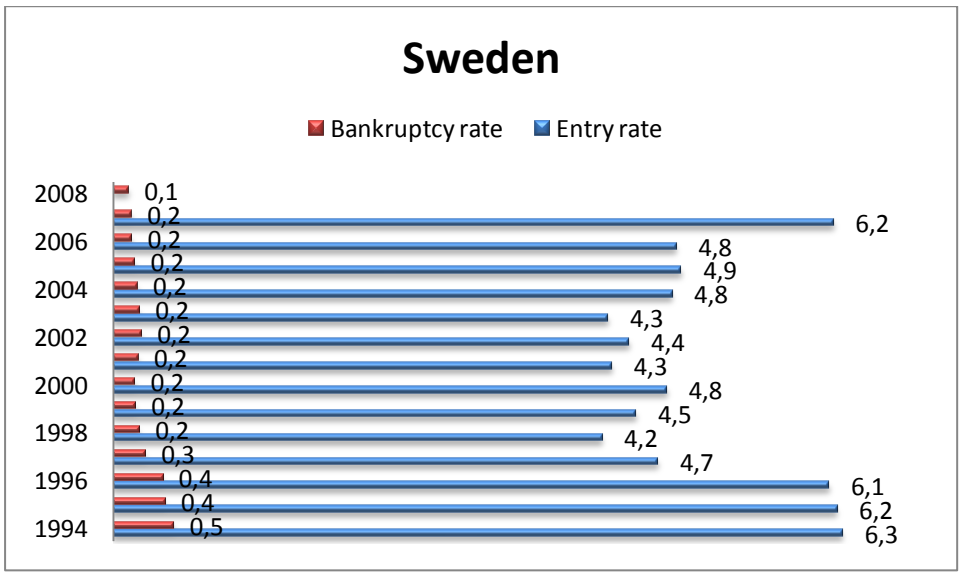
1994
1,6
9,6


Sweden
Bankruptcy rate
Entry rate
2008
0,1
6,2
0,2
4,8
2006
0,2
4,9
0,2
4,8
2004
0,2
4,3
0,2
4,4
2002
0,2
4,3
0,2
4,8
2000
0,2
4,5
0,2
4,2
1998
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4,7
0,3
6,1
1996
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6,2
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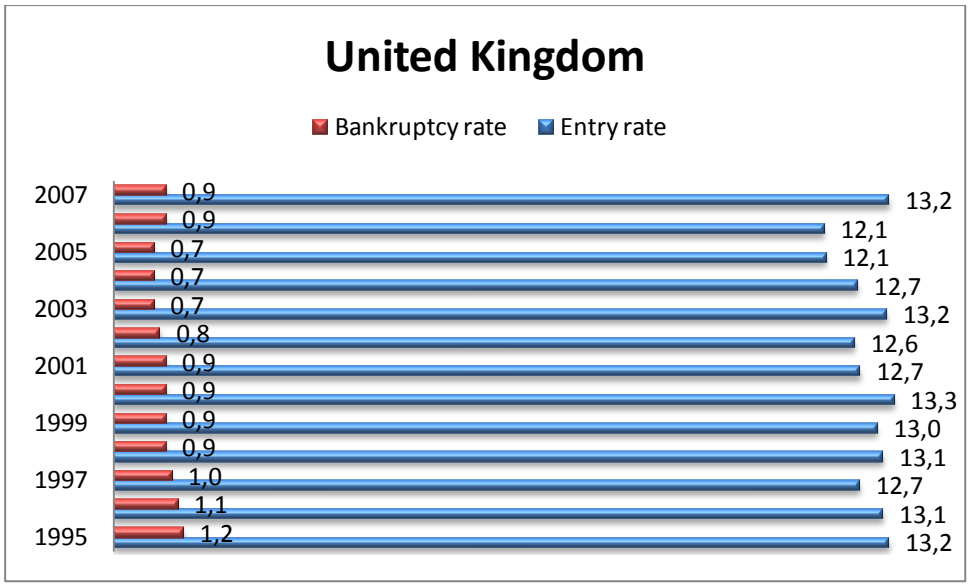
6,3
1994
0,5


United Kingdom
Bankruptcy rate
Entry rate
2007
2005
2003
2001
1999
1997
1995
0,9
13,2
0,9
12,1
0,7
12,1
0,7
12,7
0,7
13,2
0,8
12,6
0,9
12,7
0,9
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0,9
13,1
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12,7
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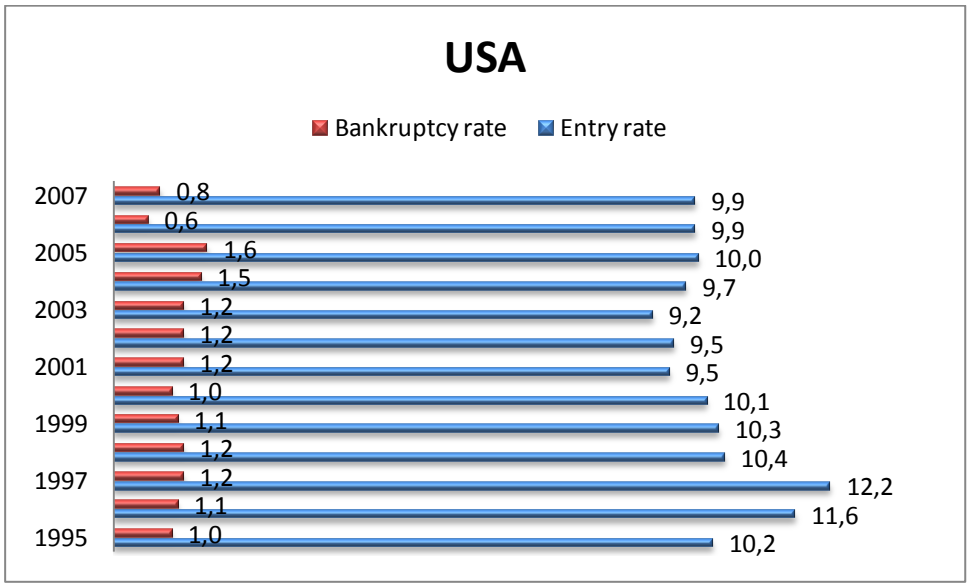
1,2
13,2


USA
Bankruptcy rate
Entry rate
2007
2005
2003
2001
1999
1997
1995
0,8
9,9
0,6
9,9
1,6
10,0
1,5
9,7
1,2
9,2
1,2
9,5
1,2
9,5
1,0
10,1
1,1
10,3
1,2
10,4
1,2
12,2
1,1
11,6
1,0
10,2