



NATIONAL AGENCY FOR ENTERPRISE AND CONSTRUCTION



Entrepreneurship Index 2005

Entrepreneurship Conditions in Denmark

October 2005

Entrepreneurship Index 2005

Entrepreneurship Conditions in Denmark

Table of contents

	Foreword	5
	Summary	7
1	Introduction	9
2	Entrepreneurial Activity	13
2.1	Contributions to the Danish Economy from Entrepreneurs	14
2.2	Comparing Entrepreneurial Activity Level	16
2.3	Denmark's Performance vis-à-vis the Top-3	22
2.4	Denmark's Performance vis-à-vis the European Top-3	24
3	Entrepreneurship Framework Conditions	25
3.1	Correlation between Entrepreneurial Activity and Framework Conditions	29
3.2	Denmark's Framework Conditions vis-à-vis the Top-3	31
4	How should Resources be prioritised?	39
Appendix 1	Data Description – Performance Indicators	47
A1.1	Start-up Rates	47
A1.2	New-firm Growth	48
A1.3	Testing Growth Data	49
Appendix 2	Data Description – Framework Condition Indicators	53
A2.1	Technology Transfer	54
A2.2	Entry Barriers	57
A2.3	Access to Foreign Markets	60
A2.4	Loan Capital	62
A2.5	Venture Capital	65
A2.6	Exit Opportunities	67
A2.7	Wealth and Bequest Tax	70
A2.8	Capital Tax	71
A2.9	Restart Possibilities	74
A2.10	Entrepreneurship Education	76
A2.11	Traditional Business Education	78
A2.12	Government Programmes	79

A2.13	Personal Income Tax	80
A2.14	Corporate Tax (including fiscal incentives)	83
A2.15	Bankruptcy Legislation	85
A2.16	Administrative Burdens	88
A2.17	Labour Market Regulation	93
A2.18	Culture/Motivation	97
	References	101

Foreword

Entrepreneurs represent the best of what I like to refer to as “the Danish dream”. Evoking that through ingenuity, luck and hard work you can be a successful entrepreneur and create a better life for yourself and your family.

We know that entrepreneurs make an invaluable contribution to the Danish economy. Entrepreneurs innovate by developing new products, production processes and technologies, and they also strengthen the competitive environment by challenging existing companies. In this manner, entrepreneurs contribute to growth and employment, and help create new jobs balancing out those jobs lost to globalisation.

Therefore, the Danish government has set an ambitious goal in the field of entrepreneurship: Denmark aims to be a part of the European entrepreneurship elite by the year 2010 and, by the year 2015, Denmark aims to be among the countries with the highest start up rates of high-growth firms.

How do we reach this ambitious goal? The 2005 Entrepreneurship Index serves as valuable input in the ongoing debate on entrepreneurship. The report provides a comprehensive picture of Denmark’s current entrepreneurial capacity. Danish entrepreneurship activity and entrepreneurship framework conditions are compared to those of the entrepreneurial elite, and Danish strengths and weaknesses are mapped out.

Furthermore, the Entrepreneurship Index provides a continuous annual assessment of the quality of the Danish framework conditions. This will allow the various stakeholders to track whether the changes in the Danish framework conditions are bringing Denmark closer to meeting the Government’s goal.

The 2005 Entrepreneurship Index is a valuable tool in the ongoing debate on entrepreneurship and can contribute to the strategy on how to propel Denmark into the entrepreneurial elite. The 2005 Entrepreneurship Index will contribute as well to the long-term improvements in the business environment allowing Danish entrepreneurs to fulfil their entrepreneurial ambitions.

Bendt Bendtsen
Minister of Economic and Business Affairs

October 2005

Summary

The Danish framework conditions for entrepreneurship trail behind the best-performing countries in some areas, and are among the best in other areas. For example, when comparing the share of growth-oriented entrepreneurs, Denmark trails behind the best-performing countries considerably regardless of the definitions applied. However, Danish start-up rates rank among the best in the world.

Consequently, the analysis suggests that Denmark should pay close attention to the areas of entrepreneurship policy that have the most impact on entrepreneurial activity. The importance of five areas has been confirmed in various studies: entrepreneurship education, personal income taxes, venture capital, private advisory services, as well as the possibility of restarting following bankruptcy. There are other areas where Denmark could improve the quality of its framework conditions; however, the analysis confirms that the abovementioned areas are the most critical to entrepreneurship performance.

Two other areas have a significant impact as well on entrepreneurial activity: labour market regulation and access to foreign markets. However, in those areas Denmark ranks close to the best-performing countries.

Compared to the 2004 Entrepreneurship Index, this year's report shows that Denmark is outperforming the best-performing countries in terms of improving its entrepreneurship framework conditions. This may be accredited to the continued efforts in strengthening competition across a range of domestic markets, which in turn, has improved entrepreneurs' access to otherwise regulated markets. Furthermore, newly implemented changes in the Danish bankruptcy legislation have lowered the administrative burdens and the time associated with debt restructuring.

If Denmark continues to improve the quality of its entrepreneurship framework conditions at the current pace, and the Top-3 countries follow their current paths as well, it is likely that the Danish framework conditions will match those of the top-performing countries by 2010. It is too early to tell if the framework conditions will have the exact same effects on performance in Denmark as experienced in the top-performing countries. However, it is assumed that future Danish performances will reflect positively the continued improvements in the Danish framework conditions.

1 Introduction

When it comes to start-up activity Denmark is among the leading countries. Denmark performs less well when it comes to creating new high-growth enterprises.

Roughly 5 percent of the adult Danish population are engaged in the start-up of an enterprise or have started an enterprise over the past 31/2 years (Global Entrepreneurship Monitor, 2004). For every 100 Danish enterprises, 10 new enterprises are being started every year. Danish start-up rates match those of the Netherlands and the United States, and Denmark posts higher start-up rates compared to other Nordic countries, including Finland and Sweden.

However, only a few companies enter a healthy growth pattern. Depending on the definition applied the share of growth-oriented entrepreneurs in Denmark shows some variation. A common characteristic across all definitions is that the share of high-growth enterprises is low. According to the calculations that form the basis of the analysis only 5 percent of Danish start-ups become high-growth enterprises.

The United Kingdom and Sweden post shares of 9 and 6 percent, respectively. In the United States, the share of growth-oriented entrepreneurs is close to 15 percent.

In response to the lack of high-growth firms, the Danish Government has set two ambitious goals: in 2010 Denmark should be part of the European entrepreneurial elite, and by 2015 Denmark should have the worlds' highest share of high-growth start-ups. The latter is the most ambitious goal and forms the starting point for most of the analysis carried out in the 2005 Index. The analysis is based on the assumption that there is a time lag in terms of performance improvements, which means that it will take 3 to 5 years before any improvements in the framework conditions will materialise in better country performances. If this indeed is the case, then Denmark should be among the countries with the best framework conditions by 2010.

Framework conditions conducive to entrepreneurship cover a wide range of areas; the presence of efficient markets, unlimited access to capital, the presence of skills required to launch and subsequently grow an enterprise and the presence of a proper incentive structure that provides tangible benefits for enterprising individuals. Finally, the entrepreneur-

ial culture should motivate people to become entrepreneurs, reward entrepreneurial efforts and accept if things do not go according to plan.

What are the practical implications of this? How much capital is needed? What should the incentive structure be like? How are the necessary entrepreneurial skills nurtured? What is the impact of liberalisations on entrepreneurial entry barriers? The questions pertaining to framework conditions are endless.

No optimal method exists in answering these or related questions. However, international comparisons of entrepreneurial activity levels and framework conditions may provide answers to some or all of the questions. By comparing the Danish start-up activity levels and the Danish entrepreneurial framework conditions with those of other OECD countries¹, the 2005 Entrepreneurship Index makes it possible to assess if Denmark is moving in the right direction.

The Index provides a snapshot of Denmark as an entrepreneurial nation by answering three questions:

- Are Denmark's framework conditions and the level of entrepreneurial activity moving in the right direction vis-à-vis the top entrepreneurship countries as well as other European countries?
- Which areas should Denmark address in order to meet the ambitious goals set out by the Danish Government?
- Which practical and tangible efforts should be carried out to meet these goals?

The Index applies a benchmark method developed by the National Agency for Enterprise and Construction, FORA and the OECD. The method goes beyond traditional benchmark analyses in looking at both entrepreneurship conditions and entrepreneurship performances, as well as testing the correlation between the two.

The rationale behind the benchmark approach is that differences in country entrepreneurship performance may be explained by differences

¹ It is our ambition to compare Denmark to all OECD countries. Data on framework conditions are available for the entire OECD. However, data for two or more performance indicators are only available for 20 countries: The United States, Canada, Korea, Denmark, Ireland, Spain, Japan, Italy, The United Kingdom, the Netherlands, Sweden, Belgium, France, Norway, Finland, Greece, Portugal, Germany, Austria and Switzerland.

in the quality of country framework conditions. While the benchmark approach fails to identify any causal connection, it does, however, allow for identifying best-practice policies.

If the top-performing countries have particularly effective framework conditions in specific policy areas it is assumed that those framework conditions are very important to entrepreneurial activity. Thus the Entrepreneurship Index allows for carving out particularly important framework conditions and identifying countries that may serve as role-models for Denmark's entrepreneurial efforts.

At an international level, we have witnessed a dedicated effort in building a multi-faceted knowledge pool of factors believed to have a significant impact on a country's entrepreneurship performance. Working closely with the OECD, Denmark has been one of the key players in this endeavour.

The 2005 Entrepreneurship Index has been compiled by the National Agency for Enterprise and Construction and FORA. An international consortium of internationally renowned entrepreneurship experts and government representatives have made valuable contributions in discussing the overall model, and have provided valuable input into the link between entrepreneurial activity and framework conditions (See www.ebst.dk/ivaerksaetterindeks for a detailed working paper on this subject).

The model builds on the framework applied in the 2004 Growth Report. The extension of the model has allowed for the inclusion of new areas such as market access and the competitive environment, while other areas have been broken down further.

The new model introduces a significantly higher number of indicators compared to the 2004 Growth Report and the 2005 Entrepreneurship Index. Significant effort has been made in conducting a quality assessment of the applied indicators (See www.ebst.dk/ivaerksaetterindeks for a detailed working paper on this issue). The indicators have been assessed by applying a quality manual that draws inspiration from the quality manual compiled by the UN and the OECD. Finally, the model introduces an improved framework for building composite indices, which draws on a manual on composite indices published by the OECD and the European Commission (OECD, 2005).

Despite all of these improvements the method must be complemented by other types of analyses. While the model provides a comprehensive

view of Denmark's entrepreneurial activity and the quality of the Danish framework conditions as well identifying areas that need improvement, it does, however, fail to provide input for drafting specific initiatives that could improve Denmark's entrepreneurial record. The model may point to countries from which Denmark can draw inspiration. However, a simple cut-and-paste approach may be detrimental to Denmark's entrepreneurship efforts.

The 2005 Entrepreneurship Index is structured as follow:

Chapter 2 focuses on entrepreneurial activity, i.e. Denmark's ability to launch and subsequently grow new enterprises. The chapter briefly describes the benefits of having a high entrepreneurial activity, and subsequently selects the Top-3 entrepreneurship countries that serve as points of reference throughout the report. The chapter also highlights Denmark's position vis-à-vis the top-performing countries in terms of start-up activity and new-enterprise growth and also shows Denmark's current ranking vis-à-vis Europe's entrepreneurial elite.

Chapter 3 focuses on framework conditions conducive to entrepreneurial activity. Denmark's framework conditions are compared to those of the top-performing countries. This is followed by an assessment of the extent to which Denmark is moving in the right direction in terms of meeting the goal formulated by the Danish Government. The chapter also discusses whether similar conclusions are reached when plotting Denmark against the European elite or other groups of countries with similar social structures.

Chapter 4 discusses if some framework conditions may be more important than others, and assesses to which extent Denmark should improve specific framework conditions.

2 Entrepreneurial Activity

In 2001, the National Agency for Enterprise and Construction and FORA, the Ministry of Economic and Business Affairs' Division for Research and Analysis embarked on a comprehensive research effort aimed at establishing a framework for measuring entrepreneurial activity. Preliminary analyses unveiled that the area of entrepreneurial activity is plagued by a lack of data and definitions.

Entrepreneurial activity is a process that runs through different phases, from the desire to become an entrepreneur, to registering the enterprise, and subsequent growth or stagnation. Therefore, entrepreneurial activity can be measured in a variety of ways.

The Danish Government maintains a strong focus on sustaining wealth through a higher level of entrepreneurial activity. Activity levels are therefore measured in terms of the two phases of the entrepreneurship process, which are believed to be particularly important to growth; the share of start-ups (and the number of people involved in the start-up process) and the level of high-growth enterprises (OECD, 2005).

In Denmark, some 16 000 enterprises are being started every year. Over a ten-year period the start-up rates have been growing. The rates peaked during the IT-bubble and since the burst of the IT-bubble the growth in start-ups has been moderate. Today, 2 000 more enterprises are started annually than a decade ago (National Agency for Enterprise and Construction, 2005). Danish start-up rates are comparable to the rates of the Netherlands and the United States and higher than those of Finland and Sweden, among others.

On the other hand, the majority of new enterprises fail to enter a healthy growth trajectory. Calculations from the Danish Ministry of Economic and Business Affairs show that in 2002 roughly half of all enterprises launched from 1995 to 2000 were still in business (42 000 enterprises). Between 2000 and 2002, only 1 536 of the 42 000 enterprises surveyed posted growth of more than 60 percent.

The Entrepreneurship Index draws on updated data and a slightly different definition than the one applied by the Ministry of Economic and Business Affairs (2005). The calculations show that roughly 5 percent of all start-ups become high-growth enterprises. This is by no means an impressive figure. The United Kingdom and Sweden post shares of 9 and

7 percent, respectively. In the United States as many as 15 percent of start-ups become high-growth enterprises.

If Denmark is to reach its Government's goal, the number of growth-enterprises must be tripled. If Denmark is to be a part of the European elite the number of growth enterprises must be doubled.

2.1 Contributions of Entrepreneurs to the Danish Economy

Emerging enterprises are vital to sustained growth and productivity improvements. A constant flow of new enterprises sharpens competition, furthers innovation throughout society, and ensures that Danish enterprises are better suited for the challenges of global competition.

Entrepreneurship is particularly important in the age of globalisation and the increased relocation of jobs. Denmark faces a number of challenges; the number of jobs created should match or surpass the number of jobs moving out. Danish wealth depends more on its ability to compete in the global marketplace with new research/knowledge and innovative ideas, as well as its ability to create new jobs, which also significantly contributes to its economic growth.

The latest estimations show that as much as 17 percent of total productivity growth can be accredited to enterprise replacement, and new enterprises create as many as 26 500 new jobs in the start-up year (Ministry of Economic and Business Affairs, 2004; The National Agency for Enterprise and Construction, 2005).

The contributions to productivity growth are identified by decomposing annual growth into four individual factors: productivity growth from existing enterprises, changes in market shares for enterprises with a higher or lower productivity growth as compared to the industry average, changes in market shares for enterprises with rising or falling productivity and, finally, contributions from start-ups and liquidated enterprises. The analysis draws on company accounts from 1997 to 2002 from approximately 5000 Danish enterprises with more than 9 employees (Ministry of Economic and Business Affairs, 2004).

Several studies show that emerging enterprises account for 30 to 50 percent of economic growth and for the majority of the rise in employment in the United States (Birch, 1987).

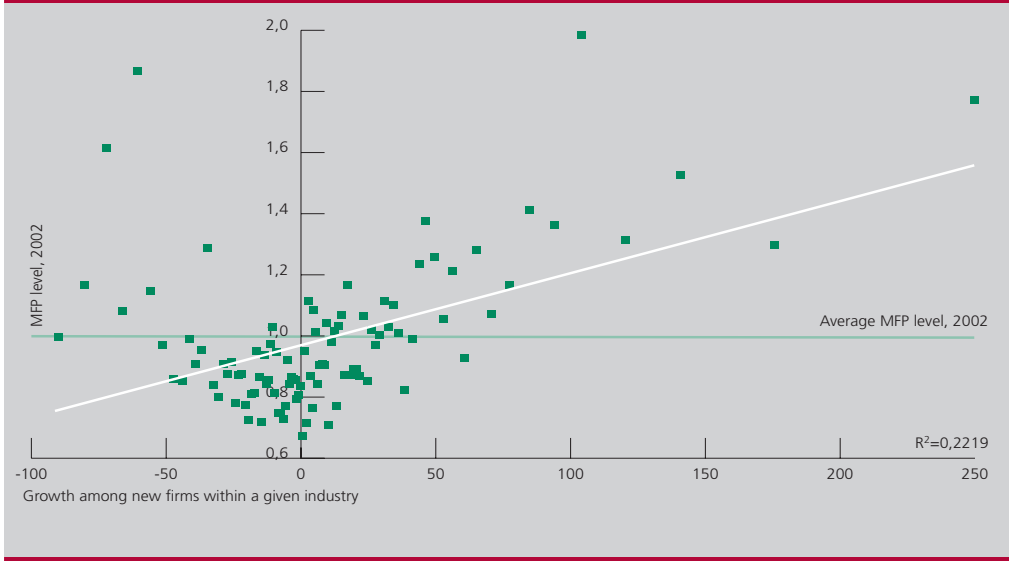
Emerging high-growth enterprises are particularly important. Not only do high growth-oriented entrepreneurs supply new products, services and jobs, their success and growth also forces competing enterprises to generate new ideas, or exit the market, for the collective benefit of Denmark's innovative and competitive capacity. This has widespread implications for Denmark's productivity, wealth and global competitiveness.

While only a few Danish enterprises enter a high-growth trajectory, a significant portion of Danish wealth can be accredited to the emerging high-growth enterprises. Estimates from the Ministry of Economic and Business Affairs show that doubling the number of growth-oriented entrepreneurs would consequently increase output by approximately 10 billion DKK, representing a 0.8 percent increase in GDP (The Ministry of Economic and Business Affairs, 2005).

The importance of growth-oriented entrepreneurs will undoubtedly be even more evident in the coming years. Several international studies show growing contributions to wealth from an increased use of knowledge-intensive workers, innovative behaviour and a keen understanding of the optimal allocation of capital and labour.

Evidence suggests that growth-oriented entrepreneurs are able to exploit capital and labour more effectively. An analysis of all Danish start-ups shows a positive correlation between entrepreneur MFP levels and entrepreneurial growth. Hence, growth-oriented entrepreneurs make the largest contribution to overall MFP-growth (Figure 2.1).

Figure 2.1 Correlation between New Enterprise Growth and MFP Level



Note: Entrepreneurial enterprises are between 0 and 5 years old in 1999 and 2000 and survive for at least 3 years. Companies are broken down in 100 growth classes. Growth and productivity are simple averages within individual classes. Companies with less than three full year's work for one person are omitted from the figure, as are government units.

Source: The Ministry of Economic and Business Affairs' Company Database.

While the figure fails to explain any causal connection between entrepreneurial growth and MFP-levels, it does, however, provide an innate measure of the contributions from growth-oriented entrepreneurs to the overall productivity growth from entrepreneurs.

2.2 Comparing Entrepreneurial Activity Levels

The focal point in Denmark's ambition to become an entrepreneurial nation is the ability to build successful new enterprises. This goal not only necessitates healthy start-up rates, but also, significant growth rates among new enterprises.

Entrepreneurial activity can be measured in a myriad of ways. Depending on the purpose of the analysis, various definitions may be applied. The entrepreneurship index applies a composite measure for entrepreneurial activity that combines data on start-up activity and new-firm growth (See box below) as these are highly correlated with productivity growth. A similar definition was used in the 2004 Index and in OECD's comprehensive entrepreneurship study (OECD, 2005).

Box 2.1 Indicators for Entrepreneurship Activity

The composite index for entrepreneurial activity is comprised of two measures: new firm start-up rates and new firm growth.

New-firm start-up rates is comprised of two separate indicators:

- *Actual start-up rates*, which measures the number of new enterprises as a share of the total enterprises. Start-up rates are compiled by Eurostat, the Statistical Office of the European Union, and are derived from new-firm registrations.
- The so-called *Total Entrepreneurial Activity (TEA) Index*, which measures the share of the population that are involved in the start-up of an enterprise, and the number of people running a start-up enterprise (no more than 31/2 years old). The TEA Index is compiled by the Global Entrepreneurship Monitor (GEM) consortium, a multi-national research programme that supplies annual evaluations of entrepreneurial activity. This is done through phone interviews with a sample of the population aged 15 to 64 years. Thirty four countries participated in the GEM in 2004.

New firm growth is comprised of two separate indicators:

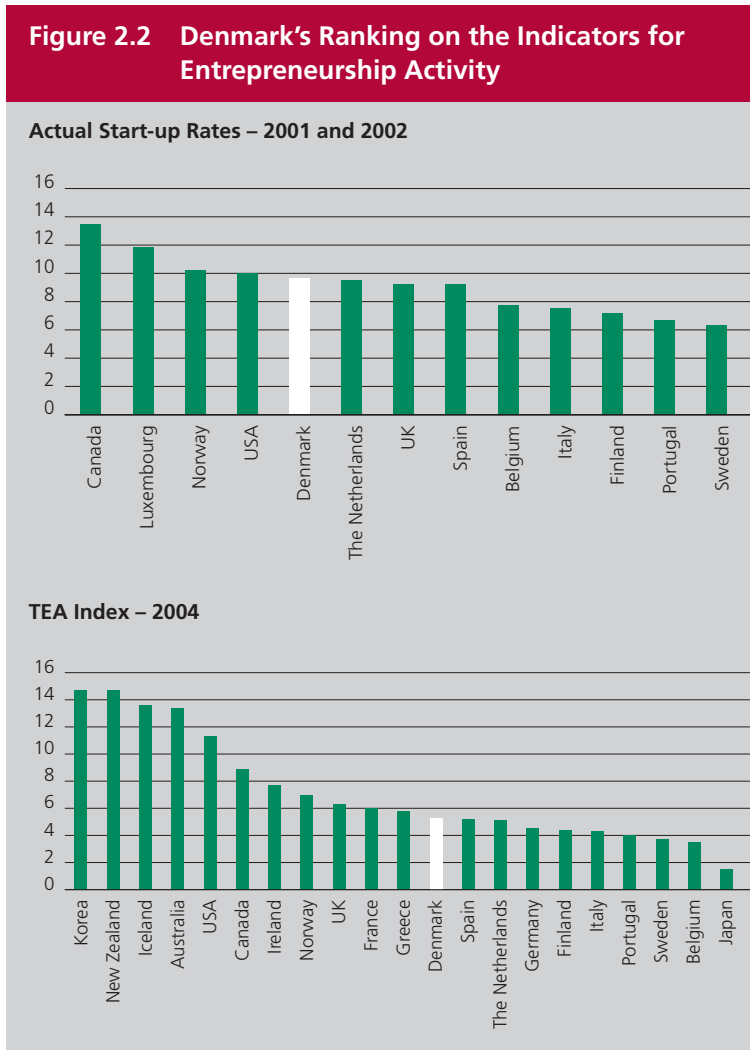
- *Revenue Growth*: The share of new enterprises with revenue growth from 2001 to 2003 that was above 60 percent. The indicator is based on data for new enterprises launched from 1997 through 2001, with at least 15 years' work for one person in 2001 and which were still in business in 2003.
- *Employee Growth*: The share of new enterprises with employee growth from 2001 to 2003 that was above 60 percent from 2001 to 2003. The indicator is based on data for new enterprises created from 1997 through 2001, with at least 15 years' work for one person in 2001 and which were still in business in 2003.

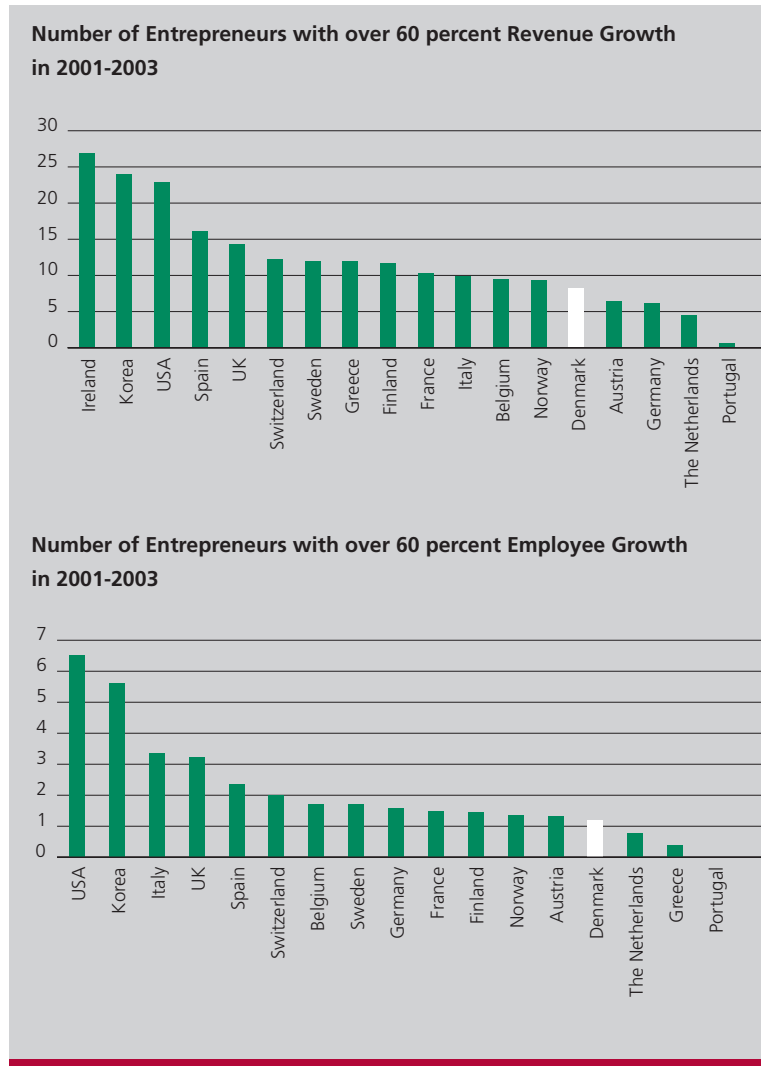
		Composite performance goal	
Activity	Start-up	New-enterprise growth	
Indicators	Actual Start-up rates	Growth in revenue > 60 percent	
	TEA index	Growth in employment > 60 percent	

Please refer to Appendix 1 for an in-depth description of the underlying indicators for entrepreneurial activity.

Start-up rates are solid while new firm growth is lagging

In terms of start-up rates, Denmark performs well, especially when measuring actual start-up rates (the share of newly registered enterprises as a share of total enterprises). However, Denmark has a mediocre ranking on GEM's TEA Index, which measures the share of the adult population engaged in an enterprise start-up and the number of people running a start-up enterprise (no more than 3 1/2 years old). With regard to new-firm growth, Denmark is ranked in the bottom half of the index (Figure 2.2).





Sources: Eurostat, GEM (2004), Schött (2005A), Bureau van Dijk, Statistics Canada, US Census, US Small Business Administration and author's calculations.

Only Canada and Luxembourg post significantly higher start-up rates (Figure 2.2) than Denmark, and Denmark matches the level with the top-performing countries, including the United States. Based on this indicator, it appears that Denmark already meets the goal set out by the Danish Government.

Actual start-up rates do not exist for a number of the countries covered in the Entrepreneurship Index. Consequently, we have added the so-called TEA Index to our calculations. The TEA Index shows Denmark trailing countries such as Korea, the United States and Canada, whereas Denmark

is at a level with most European countries. Ireland and Iceland post distinctively better performances. Thus, Denmark appears to be marginally behind the entrepreneurial elite when measured by this indicator.

The TEA Index and actual start-up rates show similar rankings for countries covered by the two indicators. However, the TEA Index shows a large gap between the United States and Europe; a gap which cannot be explained by actual start-up rates. When interpreting the data, emphasis is placed on actual start-up rates as these are based on actual company registrations, which is the ultimate goal of the Entrepreneurship Index. The TEA Index assesses in a somewhat subjective manner the point at which a person actually becomes involved in a start-up process; such that the TEA Index covers people contemplating starting a business, but who never carry out this desire for whatever reason. The TEA Index shows as well the share of the population involved in the start-up and management of a new enterprise, but does not cover the actual number of start-ups. Furthermore, start-up rates in the United States should be treated with some degree of caution, since the United States does not currently have a central company register.

With regards to new firm growth, the Danish position should give rise to some concern. With regard to this indicator, Denmark is at the same level as Germany, the Netherlands and Austria, but trails behind Sweden and the UK and is lagging considerably vis-à-vis Korea and the United States. A simple average of the share of entrepreneurs with revenue and employee growth of more than 60 percent shows that less than five percent of Danish entrepreneurs can be designated as growth-oriented entrepreneurs. In the United States and Korea, the share is close to 15 percent. Increasing the number of growth-oriented entrepreneurs should remain a top-priority in light of the objectives of the Danish Government.

The results are stable across a variety of growth-oriented entrepreneur definitions (Please refer to Appendix 1).

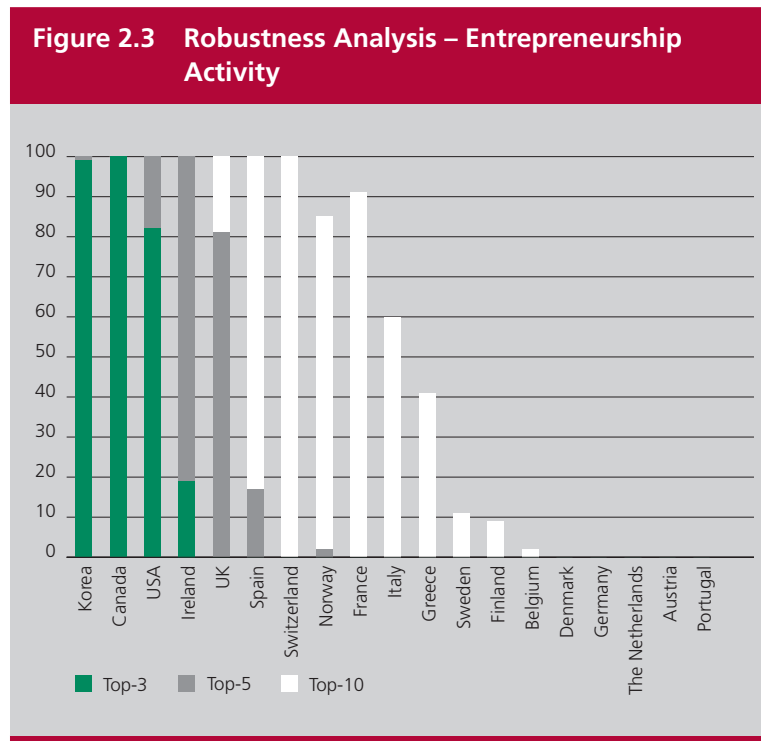
Selecting the Top-performing Countries

Differences found in individual country rankings imply that the selection of top-performing countries in terms of entrepreneurial activity will depend substantially on the choice of weights for each of the four indicators.

Various decompositions of growth show both start-up rates and new firm growth to be vital. This implies that these indicators are important, yet, the contributions of each individual indicator may vary across coun-

tries. When drafting a composite index for entrepreneurial activity, it remains unclear how individual indicators should be weighed. To overcome this obstacle, a robustness analysis is carried out. The robustness analysis shows the frequency with which countries are ranked in the Top-3, Top-5 and Top-10, respectively, regardless of weights applied.

The robustness analysis shows that Korea, Canada and the United States rank in the Top-3 in all but a few of the calculations. Ireland claims Top-3 rankings in approximately 20 percent of the calculations. The UK and Spain claim Top-5 rankings in 80 and 20 percent of the outcomes, respectively. Consequently, we see a significant gap between the Top-3 and the European elite (Figure 2.3).



Note: The robustness analysis shows the frequency with which countries are ranked in the Top-3, Top-5 and Top-10, respectively, using different weights. A total of 100 000 weights have been applied, which resulted in 100 000 different rankings. Iceland has not been included in the calculations since only one indicator is available for Iceland. Therefore, Iceland's ranking is independent of the weights applied.

Source: Author's calculations.

In light of this analysis, Korea, Canada and the United States are selected as the top-performing countries in terms of entrepreneurial activity. Consequently, they are the standards of reference throughout this analysis.

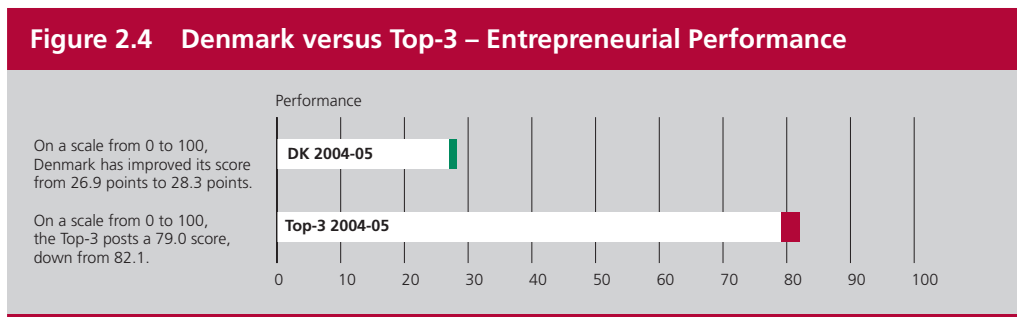
In some sections of the analysis, we go a step further in comparing Denmark with the top-performing European countries. Among the European countries, Ireland, the United Kingdom and Spain are potential candidates for the Top-3 performing countries. Iceland is another possible candidate, but of the four performance measures, Iceland is only covered by the TEA Index, which shows Iceland as the number one European country in terms of entrepreneurial activity. Consequently, Iceland is included in the European Top-3, alongside Ireland and the United Kingdom.

The robustness analysis shows that Denmark ranks in the bottom part of the index alongside Germany, Austria, Portugal and the Netherlands. Denmark claims only a limited number of Top-10 rankings, and no Top-3 or Top-5 rankings.

2.3 Denmark's Performance vis-à-vis the Top-3

The overall purpose of the Entrepreneurship Index is to chart Denmark against the top-performing entrepreneurship countries. As illustrated above, the United States, Korea and Canada make up the Top-3 performing countries in terms of start-up activity and the share of high-growth enterprises.

As compared to the 2004 Index, the gap between Denmark and the Top-3 has narrowed. Danish entrepreneurial activity has improved marginally, while activity levels among the Top-3 has marginally decreased. An update of the figures shows that Denmark trails the Top-3 by 50.7 points as compared to 55.2 in 2004 (Figure 2.4).



Note: Country rankings on the four indicators – actual start-up rates, TEA Index, employee growth and revenue growth – have been normalised on a scale from 0 to 100. The top-performing country has a score of 100, and the worst-performing a score of 0. A country's overall performance is derived by calculating the average for each of the four indicators. Top-3 rankings are derived by doing a simple average of their collective scores.

Source: Author's calculations.

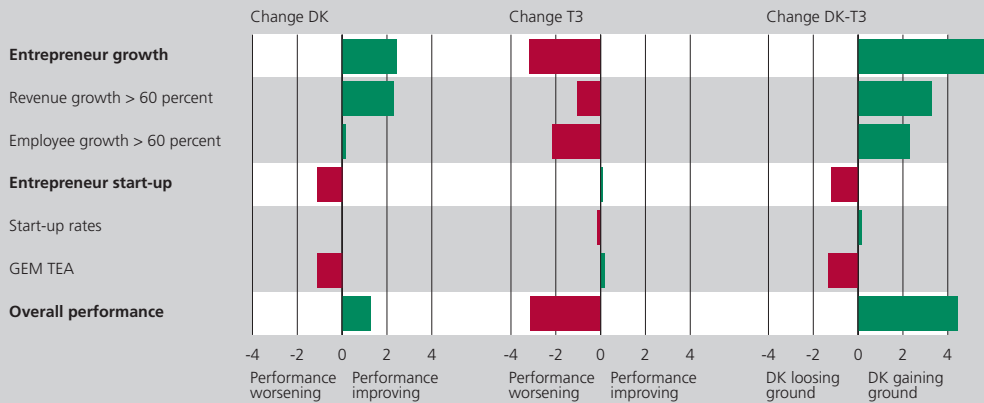
Denmark's progress should be interpreted with some caution. Individual country performances may be subject to cyclical fluctuations, and year-to-year developments may be caused by temporary fluctuations. It will probably take another 2 to 3 years before any general performance trends can be drawn.

Has Denmark's Position changed compared to the 2004 Index?

Denmark's overall progress is primarily accredited to a higher share of growth-oriented enterprises. At the same time, some of the Top-3 countries like Korea have seen a decline in the share of their growth-oriented enterprises.

In terms of start-up rates, Denmark has witnessed a marginal decline, whereas the performance of the Top-3 remains relatively unchanged (Figure 2.5).

Figure 2.5 Developments in Denmark's Entrepreneurial Performance



Note: The figure highlights developments in individual policy areas (green bars = improvements, red bars = deteriorations). Individual indicators are normalised on a scale from 0 to 100. In doing so, differences between Denmark and the Top-3 are comparable across the four indicators. The four indicators are assigned equal weights (1/4). The normalisation approach allows for adding up individual areas thereby providing the reader with a composite view of Denmark's performance vis-à-vis the Top-3 (lower hand bar).

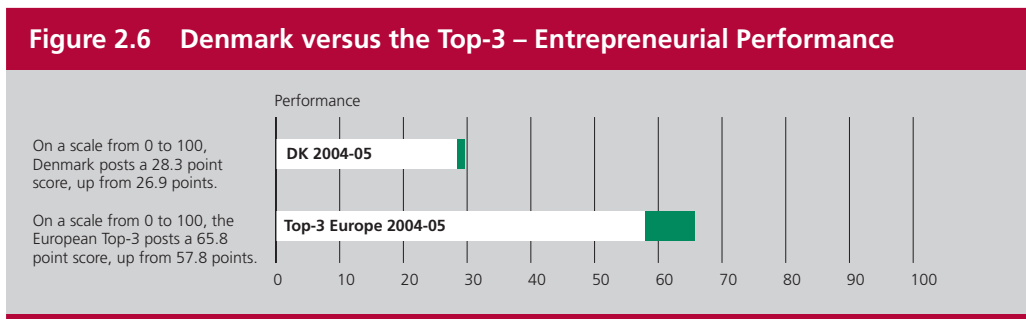
Source: Author's calculations.

In particular, the share of companies with over 60 percent revenue growth has improved, while the Top-3 countries have seen a decline in the share of companies with over 60 percent growth in terms of employees and revenue.

The lower start-up rates in Denmark can be accredited to a drop in Denmark's TEA ranking, while no data on actual start-up rates is available in the 2005 Index. Overall, start-up rates and TEA Index scores remained unchanged in this period.

2.4 Denmark's Performance vis-à-vis the European Top-3

A similar approach can be applied in comparing Denmark's entrepreneurial activity against the European Top-3², Ireland, Iceland and the United Kingdom. Compared to the 2004 Index, the gap between Denmark and the Top-3 has widened (Figure 2.6). However, this should not be over-interpreted, as Iceland's entrepreneurial activity significantly increased in this time frame. Denmark continues to keep pace with Ireland and the United Kingdom.



Note: Country rankings are based on the four indicators – actual start-up rates, TEA Index, employee growth and revenue growth – have been normalised on a scale from 0 to 100. The top-performing country has a score of 100, and the worst-performing a score of 0. Iceland's value is derived solely from the TEA Index, which implies that a high TEA score will have a disproportionate impact on the overall ranking. The value for the European Top-3 is a simple average of Ireland, Iceland, and the United Kingdom's overall score.

Source: Author's calculations.

2 For a detailed comparison between Denmark and the European Top-3 please go to www.ebst.dk/ivaerksaetterindeks

3 Entrepreneurship Framework Conditions

The entrepreneurial performance of a country depends on a myriad of demographic and cultural factors, as well as the skills and ambitions of individuals.

On an international level, much effort has been put into forming a general overview of the factors that are conducive to entrepreneurial activity. Working closely with the OECD, Denmark has been one of the chief architects in building such a comprehensive framework.

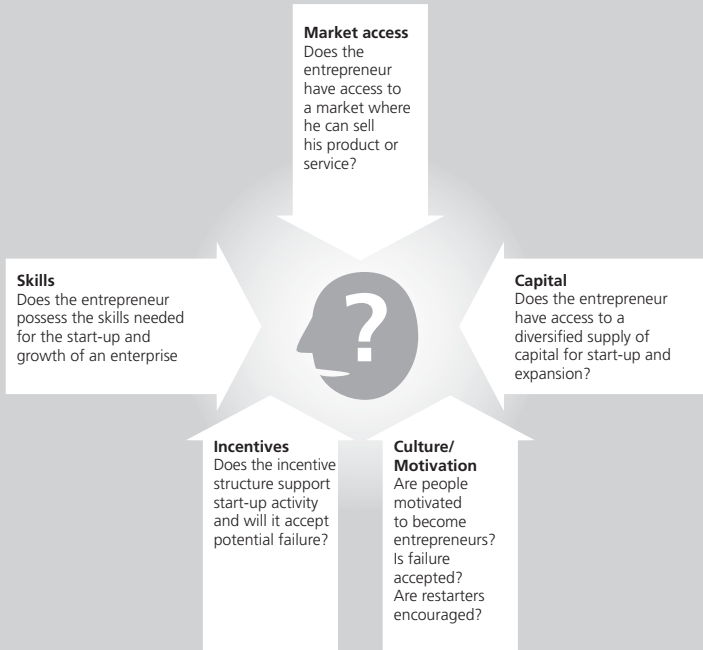
The 2004 Entrepreneurship Index and the 2004 Growth Report introduced a preliminary assessment of the factors conducive to entrepreneurial activity. Drawing on updated research and input from several OECD countries, the model has undergone further development and refinement, but remains in keeping with previously published surveys.

The new approach is built on five factors, which according to both the theoretical and empirical literature, constitute the five pillars of entrepreneurship: 1) entrepreneurial skills, 2) access to capital, 3) access to markets, 4) entrepreneurship incentives; and 5) entrepreneurship culture and motivation (Box 3.1).

Not all factors conducive to country entrepreneurial performances may be altered using policy instruments. However, most factors can be influenced directly or indirectly by government policy.

The number of policy areas that could have a potential affect on the five above-mentioned factors would be exhaustive. A careful examination of concepts and instruments combined with a theoretical run-down of the correlation between policy and entrepreneurship has materialised into 23 policy areas. The list can be considered a work in progress. The emergence of new indicators may allow for a more detailed analysis in the future. Correspondingly, new knowledge will continuously expand our understanding, which in turn may lead to the inclusion of new policy areas (Figure 3.1).

Box 3.1 Factors that Influence Entrepreneurship Performance



Market Access. Market access is a vital element in the successful launch of an enterprise. Limited market access – due to factors such as regulation or technical trade restrictions – is an impediment to entrepreneurial activity.

Skills. The right set of skills – a core understanding of how to run a business and the ability to identify, grasp and develop new business models – is vital to the successful launch of an enterprise.

Capital. Access to capital – such as a large and effective loan or the presence of venture capital markets – is a critical factor in the development and growth of new enterprises. Access to large and efficient capital markets significantly influences the success of a start-up.

Incentive Structures. The presence of an incentive structure that secures a proper cost-benefit balance associated with the launch of a new enterprise has a significant impact on the start-up and expansion of a new enterprise.

Culture/Motivation. Personal motivation, risk awareness and the social status associated with becoming an entrepreneur (culture) has a profound impact on the level of entrepreneurial activity.

Figure 3.1 Policy Areas applied in measuring Entrepreneurship Framework Conditions

Total measure for entrepreneurship framework conditions					
Factors affecting entrepreneurship performance	Market access	Capital	Ability	Incentives	Culture/motivation
Policy areas affecting entrepreneurial performance	Access to foreign markets	Capital taxes	Trad. business education	Income taxes	Entrepreneurial motivation
	Entry-barriers	Wealth and bequest tax	Entrepreneurship infrastructure (private)	Bankruptcy legislation	Initiatives towards specific groups
	Technology-transfer	Loans	Entrepreneurship education	Business tax and fiscal incentives	Communication about heroes
	Procurement regulation	Venture capital	Restart possibilities	Labour market regulation	
		Stock markets	Entrepreneurship infrastructure (public)	Administrative burdens	
		Business Angels		Social security discrimination	

Note: Indicators marked in light green is covered by at least one quality-approved indicator that allows for international comparisons. Red policy areas are not covered by internationally comparable or quality-approved indicators (please refer to www.ebst.dk/ivaerksaetterindeks for an in-depth evaluation of the quality of individual indicators).

Individual policy initiatives may simultaneously affect several policy areas. Bankruptcy legislation reform will have a direct impact on the policy area of bankruptcy legislation, which measures the financial costs associated with a bankruptcy, and restart possibilities, which measures the time associated with restarting a business.

A multi-faceted and comprehensive picture of each of the policy areas requires a large number of indicators. Presently 18 of the 23 policy areas are covered by internationally comparable indicators. Denmark has taken the initiative to continue building and refining these internationally comparable indicators. In the short term, the areas of entrepreneurship education, bankruptcy legislation, restart possibilities and entrepreneurship infrastructure will be further developed.

A total of 57 indicators are applied in measuring country framework conditions (See Appendix 2 for an in-depth description of individual indicators). Country data coverage for indicators related to framework conditions is significantly higher than data coverage for country performance indicators.

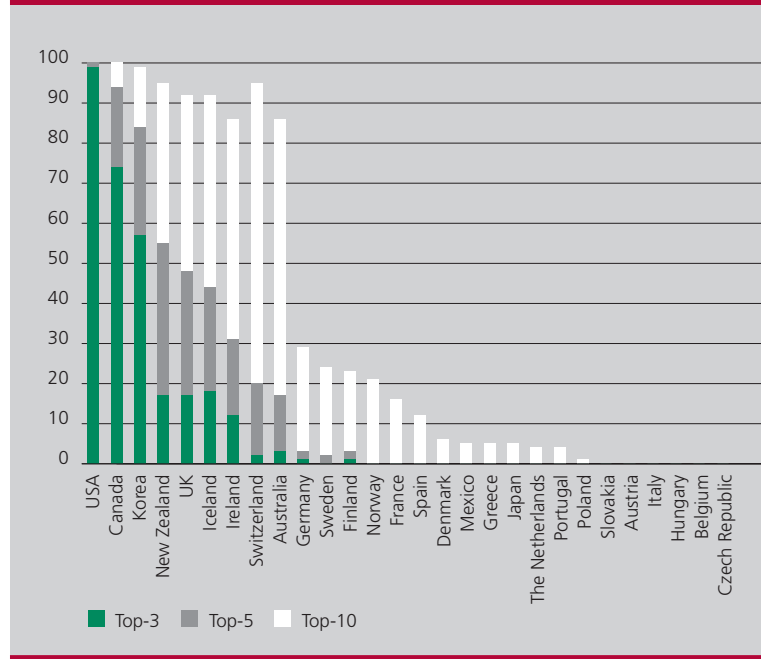
To measure the quality of country framework conditions, individual policy areas must be weighted together. No universal method exists in assigning individual weights. Consequently, a robustness analysis is carried out to determine the frequency with which countries are ranked in the Top-3, Top-5 and Top-10, respectively, regardless of the weights assigned.

The rankings are shown to be robust. Regardless of weights applied, the United States, Canada and Korea claim the majority of Top-3 rankings. A second group of countries, including New Zealand, the United Kingdom, Iceland, Switzerland and Australia make the Top-10 in all but a few of the outcomes and make the Top-5 ranking regularly. A third group covers 13 countries that occasionally post Top-10 rankings, but rarely claim the Top-5 rankings. A fourth group show sporadic Top-10 rankings (Figure 3.2).

Denmark belongs to the third group alongside Finland, Sweden, Norway, Spain, Japan and Poland. Denmark rarely posts Top-10 rankings and only very seldom Top-5 rankings.

The robustness analysis shows results to be robust to changes in weights. Hence, in the following section equal weights are applied in plotting Denmark's framework conditions against those of the Top-3 countries.

Figure 3.2 Robustness Analysis – Entrepreneurial Framework Conditions



Note: The robustness analysis shows the frequency with which countries are ranked in the Top-3, Top-5 and Top-10, respectively, using different weights. A total of 100 000 weights have been applied which results in 100 000 different rankings.

Source: Author's calculations.

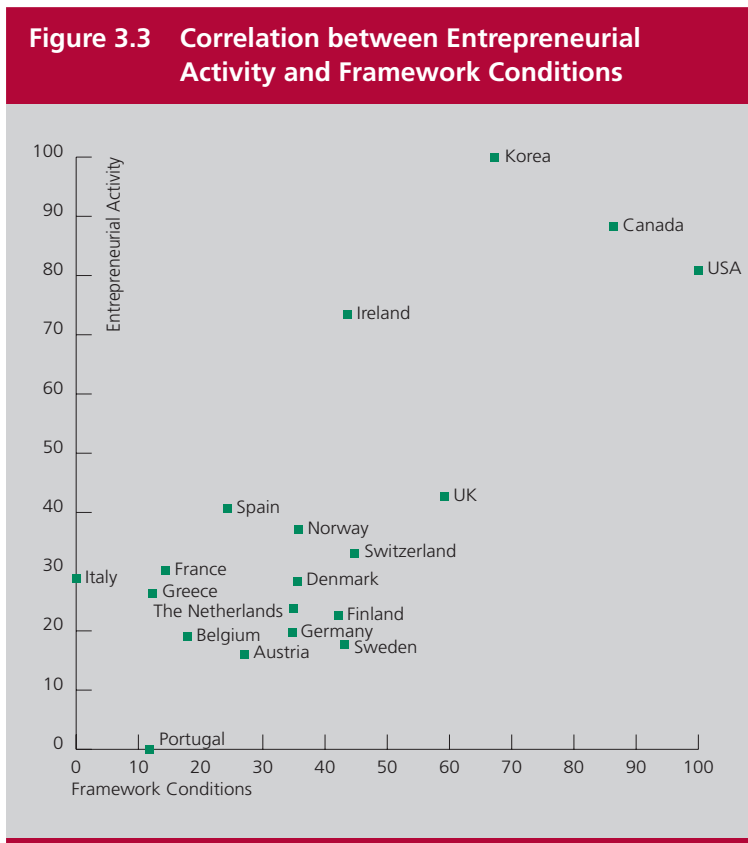
3.1 Correlation between Entrepreneurial Activity and Framework Conditions

The Entrepreneurship Index is built on the assumption that differences in country performances can be explained by differences in the country's framework conditions. Hence, one should be able to detect a positive correlation between entrepreneurial policies and entrepreneurial activity levels. Improved framework conditions will materialise into better performance, but there is a time lag (3 to 5 years) before such improvements can be registered in a country's performance.

The lack of time series for several indicators makes it impossible to show a causal connection between high-quality framework conditions and a high level of entrepreneurial activity. However, the assumption is supported by a range of company-level policy area studies.

The 2004 Index highlighted the correlation between framework conditions and entrepreneurship performance. However, the results were somewhat fragile as the correlation was based on data from 14 countries. Furthermore, the data on new-enterprise growth was based on only few observations for some of the countries. Korea, in particular, scored significantly higher in entrepreneurship performance than the quality of the country's framework conditions would indicate.

This year has seen a significant improvement in the Korean growth data, and more countries have been added to the analysis. The new data reconfirms the positive correlation between framework conditions and performance (Figure 3.3).



Note: The graph shows the correlation between country performance and framework condition rankings. Values have been normalised on a scale from 0 to 100. Y-axis = entrepreneurial activity, X-axis = framework conditions. R2 is .58, which means that the chosen framework condition indicators explain close to 60 percent of the variation in performance among the OECD countries.

Source: Author's calculations.

As shown in the 2004 Index, there appears to be a correlation between high-quality framework conditions and a high level of entrepreneurial activity. However, the correlation is fragile. Compared to the group of European countries, Korea, the United States and Canada have significantly better framework conditions and distinctively higher activity levels. Korea's activity levels are significantly higher than dictated by the quality of the country's framework conditions.

It is difficult to draw any clear-cut conclusions as to the presence of country variations across Europe as such variations are limited and random. Ireland posts the highest level of entrepreneurial activity in Europe and is ranked second in terms of framework conditions. The United Kingdom has the best framework conditions and is ranked second in terms of performance. Among other European countries, variations are insignificant.

Available data show that Korea, the United States and Canada are top-performers with respect to both entrepreneurial activity and entrepreneurial policies. The analysis also shows a significant gap between the entrepreneurial elite and the residual group of countries.

3.2 Denmark's Framework Conditions vis-à-vis the Top-3

No consensus exists in determining the above-mentioned time lag. A qualified guess is 3 to 5 years. If Denmark is to claim a place among the world's entrepreneurial elite by 2015 – in terms of both start-up activity and new-enterprise growth – the quality of the Danish framework conditions should at least be at a level with the entrepreneurial elite by 2010. This requires a prolonged and dedicated effort.

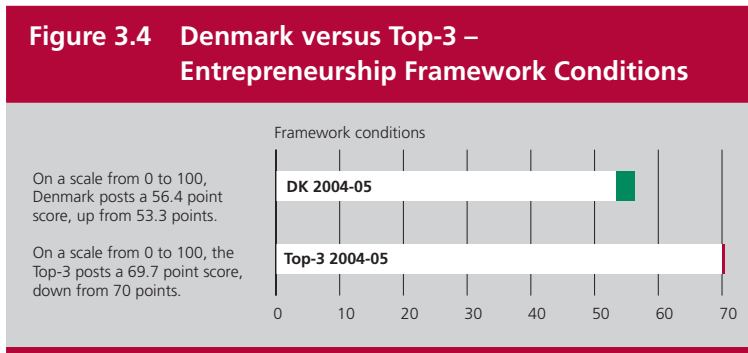
The measurement of Denmark's framework conditions commenced in the 2004 Index, which detects if they are moving in the right direction.

However, the majority of the indicators measure policy developments in 2003 and 2004, which implies that initiatives implemented in 2005 are not covered by the analysis. At the same time, changes from 2003 to 2004 can be difficult to interpret as random fluctuations and may potentially have a significant impact. In 2 to 3 years time, we should be able to detect more consistent trends.

Denmark has worked diligently to improve the framework conditions. Since the 2004 Index, Denmark has narrowed the gap vis-à-vis the Top-

3 by 20 percent, while the framework conditions among the Top-3 have shown a marginal decline. On a scale from 0 to 100, Denmark posts a score of 56.4 (53.3) with the Top-3 posting a score of 69.7 (70.0). Denmark has narrowed the gap by almost 3 points.

At the current pace, Denmark's framework conditions will match those of the Top-3 by 2010 (Figure 3.4).



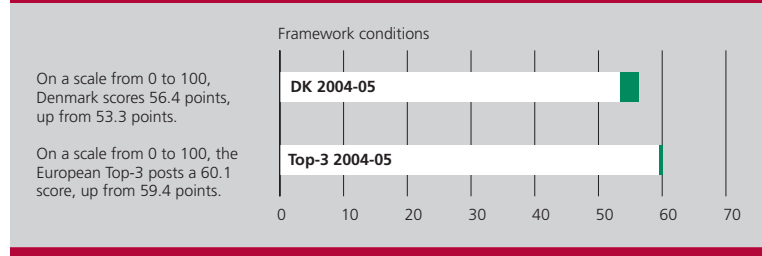
Note: Country scores on the 57 indicators have been normalised on a scale from 0 to 100. For each indicator, the top-performing country is assigned the score 100, and the worst-performing country is assigned the score of 0. The composite country framework condition scores are calculated as the average of country scores for each of the 18 quantifiable indicators. The value for individual policy areas is a simple average of indicators covering a given policy area. The value for the Top-3 countries is a simple average of their overall scores.

Source: Author's calculations.

The projection is subject to some degree of uncertainty. Some framework conditions may not yet be fully covered by data, which implies that future refinements of the underlying indicators may alter the overall picture. Secondly, we lack information on future policy considerations in the top-performing countries. If the top-performing countries intensify their entrepreneurship-oriented initiatives and Denmark continues at its current pace, the 2010 goal may be unachievable. Any attempt at predicting when Denmark will be at the same level as the top-performers requires close monitoring of, as well as close co-operative efforts with, the entrepreneurial elite and candidate countries around the world.

The goal of the Danish Government is to elevate Denmark to the top of the European entrepreneurial elite by 2010. In terms of the quality of the Danish framework conditions vis-à-vis the European elite the goal appears to be reachable. Denmark trails the European elite by only a few points, and improvements in the Danish framework conditions have out-performed most other European countries (Figure 3.5).

Figure 3.5 Denmark versus the European Top-3 – Framework Conditions



Note: Country scores on the 57 indicators have been normalised on a scale from 0 to 100. For each indicator, the top-performing country is assigned the score 100, and the worst-performing country is assigned the score of 0. The composite country framework condition scores are calculated as the average of country scores for each of the 18 quantifiable indicators. The value for individual policy areas is a simple average of indicators covering a given policy area. The value for the Top-3 countries is a simple average of their overall scores.

Source: Author's calculations.

Denmark vis-à-vis the Top-3 – Individual Policy Areas

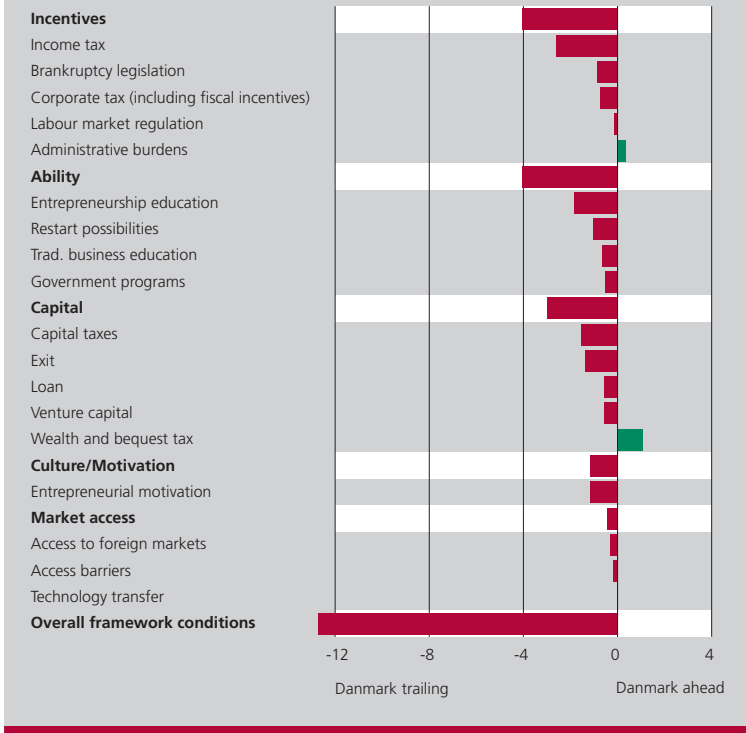
Figure 3.4 shows that Denmark still faces some obstacles to matching the framework conditions of the European Top-3.

The average for all policy areas is 56.4 points for Denmark, while the Top-3 countries post a 69.7 point average (Figure 3.4). The overall distance between Denmark and the Top-3 is determined by the individual gaps detected for each of the 18 quantifiable policy areas. For the majority of the 18 policy areas, Denmark trails the Top-3. This is particularly evident in the areas of personal income tax, entrepreneurship education, bankruptcy legislation (including restart possibilities) and, to some extent, financing (Figure 3.6).

This figure is conceived to illustrate the gaps between Denmark and the Top-3 performing countries. The figure shows the contributions of individual policy areas to the total gap of 13.3 points. For example, income taxes account for 3 of the 13 points.

Denmark performs well in the areas of administrative burdens and wealth and bequest tax. In line with the 2004 Index, this year's Index reconfirms Denmark's strong position in both areas; the administrative burdens associated with starting a business are limited, the wealth tax has been phased out, and bequest taxes are lenient.

Figure 3.6 Distance between Denmark and the Top-3



Note: The light green bars show Denmark ahead of the Top-3, red bars indicate that Denmark is trailing. Individual policy areas are normalised on a scale from 0 to 100. The 18 policy areas are assigned identical weights ($1/18$). The value for individual policy areas is the difference between the Top-3 and Denmark $\times 1/18$. This allows for the combination of individual policy areas, providing a picture of individual policy area contributions to the overall gap. Please refer to www.ebst.dk/ivaerksaetterindeks for a detailed description of how differences between Denmark and the Top-3 are calculated.

Source: Author's calculations.

In the areas of personal income tax, entrepreneurship education, restart possibilities and motivation/culture, Denmark trails considerably behind the top-performing countries. Personal income tax levels in the United States, Canada and Korea are among the lowest in the OECD as opposed to Denmark where both average and top marginal tax rates are high.

In terms of entrepreneurship education, the gap between Denmark and the Top-3 is particularly evident at university level. A comprehensive mapping out of entrepreneurship programmes across the United States and Canada shows that student participation and the supply of entrepreneurship courses are significantly higher than in Denmark. Furthermore, activities related to entrepreneurship are prevalent across

major universities, and across curriculum, in the United States and Canada.

Restart possibilities in the Top-3 countries are superior to those found in Denmark; enterprises are liquidated at a higher pace, and debt discharge is awarded faster.

In the area of capital taxes, the taxation of stock dividends and the short-term taxation of stock profits are higher in Denmark as compared to the Top-3.

In the area of exit opportunities, Denmark's record as compared to the Top-3 is particularly weak in secondary stock markets. This applies both to the turnover and the quotation of new enterprises on the stock market. In terms of primary stock markets, Denmark's position is marginally better.

As mentioned earlier, Denmark's record in the area of culture/motivation is lagging the Top-3. The indicator pertaining to culture/motivation is based on interviews and expert assessments. Denmark's record as compared to the Top-3 countries is particularly weak with regard to issues such as risk awareness, individual success and the status of entrepreneurs in society. The policy area of culture/motivation lacks indicators pertaining to the social and health insurance systems. In general, Danish entrepreneurs are covered by the extensive services offered by the Danish social and health sectors.

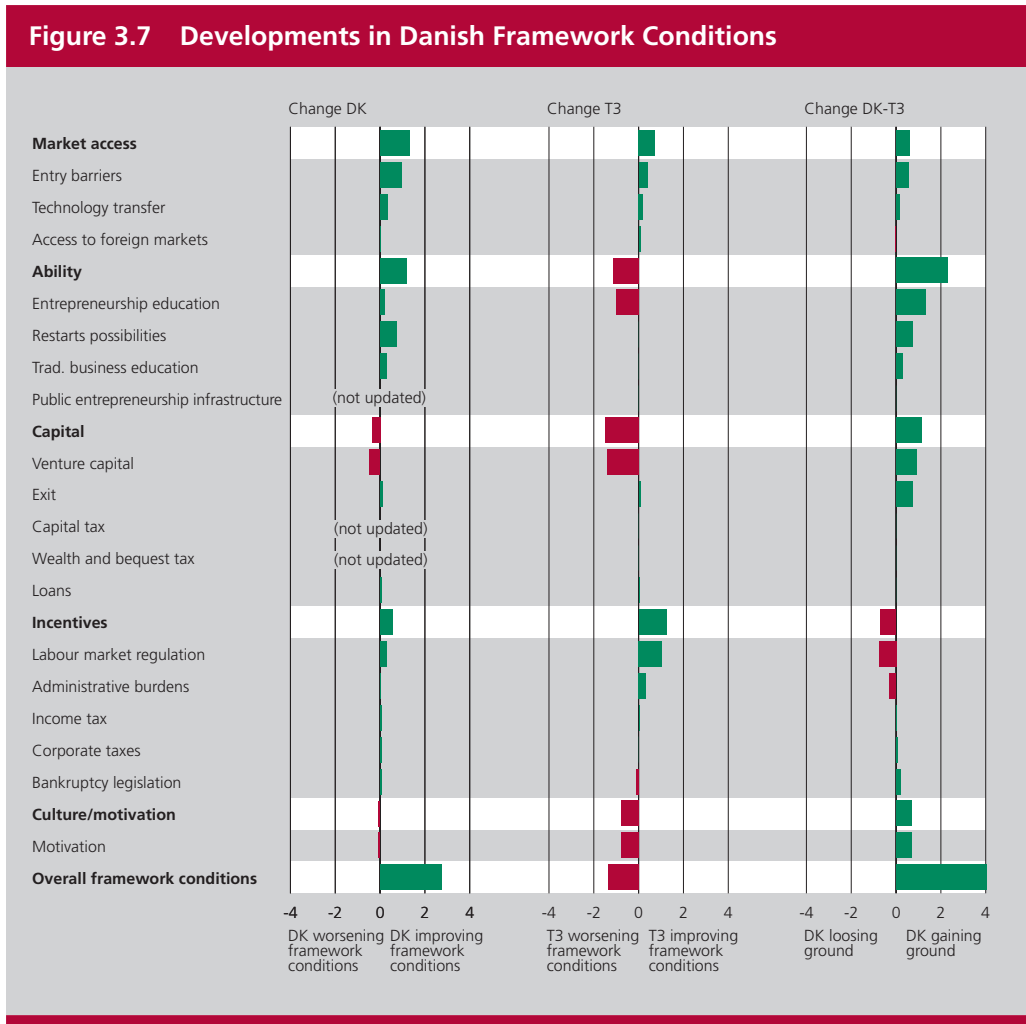
In comparison to the 2004 Index, this year's analysis introduces a slightly different policy area framework and a number of new indicators have been added. However, in general terms the results resemble those presented in the 2004 Index.

In the 2004 Index, the area of exit opportunities was comprised of stock markets and buy-outs. Restart possibilities has been removed from the area of bankruptcy legislation and is now an individual policy area. Previously, income taxes covered both personal and capital taxes. Culture/motivation was previously comprised of risk awareness and entrepreneurship culture (Appendix 2). (Please refer to www.ebst.dk/ivaerksaetterindeks for a discussion on the refinements made in the 2005 Index).

Individual Policy Area Developments

The following section highlights policy areas where Denmark has shown progress compared to the 2004 Index.

The analysis shows that Denmark has made improvements in 13 of the 18 policy areas identified. Two policy areas have deteriorated, while it has not been possible to update the remaining three policy areas (Figure 3.7).



Note: The light green bars show that Denmark is ahead of the Top-3, red bars indicate that Denmark is trailing. Individual policy areas are normalised on a scale from 0 to 100. The 18 policy areas are assigned identical weights ($1/18$). The value for individual policy areas is the difference between the Top-3 and Denmark $\times 1/18$. This allows for the combination of individual policy areas, which provides a picture of individual policy area contributions to the overall gap. Policy areas within the five factors – Opportunities, Capital, Ability, Incentives and Motivation/Culture – are added up to measure individual factor developments.

Source: Author's calculations.

The bar at the far left side shows Denmark's record in each of the 18 policy areas. The middle bar show the collective progress of the Top-3, while the bar at the right hand side highlights Denmark's position vis-à-vis the Top-3.

Denmark's efforts in promoting liberalisation and competition in a wide range of service and product markets have materialised into considerable improvements in indicators related to entry barriers. Entrepreneurs now have access to otherwise regulated and government-controlled markets. In particular, Denmark has reduced the command and control regulation and has moved towards an incentive-based regulation, which provides a great deal of flexibility for entrepreneurs.

Adjustments in the area of bankruptcy legislation have improved restart possibilities for law-abiding, yet bankrupt, entrepreneurs. Recent changes in the Danish bankruptcy legislation imply that law-abiding, bankrupt entrepreneurs may be subject to a debt discharge at a faster pace (from 5 to 3 years).

In the area of venture capital, Denmark has seen deterioration. However, this has been the case throughout most of the OECD countries. The magnitude of venture capital investments have diminished compared to the 2004 Index. The 2004 Index claimed that Denmark had successfully carved out a market for seed investments that was at the level of seed markets found in the top-performing countries, but that Danish initiatives in this area had not materialised into better performance in the area of venture capital. The 2005 Index confirms that the quality of the Danish venture market matches the Top-3. However, we detect some differences with regard to the various venture capital phases. Denmark performs well in the early stages, but still trails behind the top-performers in the later stages.

Denmark has made up considerable ground in the area of entrepreneurship education. The supply of entrepreneurship courses is based on a survey indicator where experts have been asked to offer their assessments of the supply of entrepreneurship programmes (Schøtt, 2005C). The strong Danish record may in part be accredited to the launch of IDEA, the Entrepreneurship Academy, as well as to a general increase in entrepreneurship awareness across the Danish educational system. This could potentially have influenced the assessment of the supply of entrepreneur-related activities. At the same time, the assessment of Canada's entrepreneurship education programmes has shown a significant deterioration. Overall, Denmark has made a giant leap vis-à-vis the Top-3.

Compared to the Top-3, Denmark has lost valuable ground in the area of labour market regulation. This is by no means a result of a decline in the quality of the Danish labour market regulation. In fact, Denmark has improved the framework conditions in this area. However, improvements in the labour market regulation among the Top-3 countries have surpassed those of Denmark. Canada, in particular, was successful in easing employment procedures, including rules pertaining to overtime work.

4 How should Resources be prioritised?

A simple conclusion relating to the prioritisation of resources would be to highlight policy areas where Denmark trails behind the Top-3. However, it is possible to refine further this analysis. Not all of the selected policy areas are equally important to entrepreneurship performances. A range of methods have been developed to show the relative importance of the various policy areas. Methods are still being developed, and any meaningful break down of policy areas should be supplemented by qualitative assessments and the inclusion of various entrepreneurship studies.

The applied method divides policy areas into four separate categories. A high correlation between policy area indicators and entrepreneurial activity implies that the policy in question is highly important to entrepreneurial activity. If the top-performing countries have particularly strong framework conditions in specific policy areas, it is taken as an indication that the policy area(s) in questions are highly important.

A framework that combines the aforementioned methods is presented below. The model uses the colours green, yellow and red to illustrate Denmark's position vis-à-vis the Top-3.

Six areas, *entrepreneurship education, restart possibilities, personal income taxes, venture capital, labour market regulation and access to foreign markets*, are high-priority areas and are highly correlated. This leads us to conclude that the six areas are particularly important to entrepreneurial activity.

Denmark is far behind the Top-3 in the areas of entrepreneurship education, restart possibilities, and income taxes, and is somewhat lagging on venture capital. Denmark is at the same level with the Top-3 in labour market regulation and access to foreign markets (Table 4.1).

Table 4.1 Selecting Important Policy Areas

	Low Correlation with Performance	Significantly Correlated with Performance
High Priority among Top-3	<ul style="list-style-type: none"> • Corporate tax • Bankruptcy legislation • Wealth and bequest tax • Administrative burdens 	<ul style="list-style-type: none"> • Entrepreneurship education • Restart possibilities • Personal income tax • Venture capital • Labour market regulation • Access to foreign markets
Low Priority among Top-3	<ul style="list-style-type: none"> • Exit • Capital taxes • Government programmes • Trad. business education • Loan capital • Technology transfer 	<ul style="list-style-type: none"> • Culture/motivation • Entry barriers

Note: The policy areas are ranked by applying two criteria: i) the boxes on the right hand side are all significantly correlated with performance indicators at a 5 percent level, ii) the top hand boxes are highly prioritised among the Top-3 countries, i.e. the average value for the Top-3 is higher than the average for all framework conditions among the Top-3 countries.

The colours illustrate differences between the Danish framework conditions and the Top-3. A green colour indicates that Denmark's framework conditions are superior, yellow shows Denmark trailing by 10 to 20 percent, while the colour red shows areas where Denmark trails the Top-3 by more than 20 percent.

Source: Author's calculations.

The Top-3 countries have given high priority to corporate tax and bankruptcy legislation, which are other areas where Denmark trails the top-performing countries considerably. However, these policy areas are not highly correlated with entrepreneurial activity. Culture/motivation is highly correlated with entrepreneurial activity, but is considered less important among the Top-3 countries.

This implies that Denmark should pay particular attention to the following areas: entrepreneurship education, restart possibilities, personal income taxes, and, to some extent, venture capital.

It is also possible to detect if the four chosen policy areas are correlated with indicators for start-up and new-firm growth. This approach should be treated with some caution. Only two indicators are available for start-up activity and new-firm growth, respectively, and country data coverage is far from exhaustive.

Entrepreneurship education, personal income taxes and restart possibilities are all significantly correlated with the indicators for start-up activity. Venture capital is somewhat correlated with start-up indicators, but not significantly.

Entrepreneurship education, personal income taxes and venture capital are significantly correlated with indicators for growth. The correlation for restart possibilities is somewhat lower, but is not significant.

The policy areas that are correlated with the composite indicator of performance differ only slightly from the policy areas that are correlated with start-up and new-firm growth indicators. At the same time, there is an element of uncertainty in this latter approach. However, the results do not give rise to any revision of the conclusion that the four areas are important to entrepreneurial activity (a more detailed discussion can be found at www.ebst.dk/ivaerksaetterindeks).

The selection of the four policy areas hinges on three factors that may influence results – the quality of the underlying indicators, the weights applied, and the group of reference countries.

A quality assessment of the chosen indicators highlights restart possibilities, personal income taxes and venture capital as high-quality indicators, while the two indicators covering the area of entrepreneurship education are of somewhat lower quality. However, Denmark's poor ranking in the latter area has been confirmed by several studies (National Agency for Enterprise and Construction, 2004A). An assessment of the quality of the underlying indicators does not give rise to any revision of the selection of policy areas in which Denmark should intensify its efforts.

It should be noted that there are multiple opinions on the quality of indicators for bankruptcy legislation and restart possibilities. Data has been compiled by the World Bank and the OECD. Because of the individual nature of time and costs accrued in closing a business, data is based on a hypothetical case study, developed by the World Bank in joint co-operation with international experts. The case study has undergone continued improvements.

There is only one Danish participant in the survey. The participant is a practicing bankruptcy lawyer employed by a Danish law firm. Responses reflect a broad selection of bankruptcies in which the law firm has been involved. For quality control purposes, these results have been discussed with the World Bank.

Throughout the analysis, indicators are assigned equal weights. A comprehensive sensitivity analysis identifies the areas of entrepreneurship education, restart possibilities and personal income taxes as particularly important in more than 95 percent of the outcomes. Venture capital is more sensitive to weights, but is shown to be very important in 75 percent of the calculations and is a high-priority area among the Top-3 countries regardless of the weights applied. Consequently, weights are not believed to play a significant role in the conclusions reached in this study.

The gap between Denmark and the Top-3 countries is greater than 20 percent in the areas of entrepreneurship education, restart possibilities and personal income taxes for all combinations of weights assigned to the indicators. The venture capital gap is more susceptible to various combinations of weights due to the relative size of the Danish seed capital market as compared to Korea and the United States. Consequently, the area of venture capital is assigned the colour yellow, while the remaining three policy areas are marked in red.

Compared to Denmark, the United States, Korea and Canada have different social, cultural and economic structures. When comparing Denmark to the European elite – the United Kingdom, Ireland and Iceland – Denmark performs well against the European Top-3 in the areas of venture capital and restarting possibilities. Here, Denmark is at the same level with the European elite. For the remaining policy areas, the conclusions are similar to those found when comparing Denmark to the United States, Korea and Canada (Please refer to www.ebst.dk/ivaerksaetterindeks for a comparison between Denmark and the European Top-3).

The Impact of Policy Areas on Entrepreneurship Activity

Entrepreneurship education has a positive effect on entrepreneurial activity, and analyses show that the top-performing countries have made great strides in promoting entrepreneurship across the educational system, especially in higher education. A 2004 report on entrepreneurship education showed that the majority of business school students across universities in the United States and Canada enrolled in entrepreneurship courses. Moreover general student participation in such courses at major universities was between 10 and 20 percent, which is significantly higher compared to Denmark.

In the United States, entrepreneurship activities are often co-ordinated in dedicated entrepreneurship centres that offer and co-ordinate a range of courses and activities related to entrepreneurship. A number of activ-

ities are designed to inspire students to become entrepreneurs, to provide students with an approach to the challenges of starting a business, and to provide access to capital and counselling.

Since only a few studies have addressed the area of entrepreneurship education, the direct impact of entrepreneurship education on entrepreneurial activity is difficult to measure. However, available studies indicate that entrepreneurship courses have a positive effect on student career paths.

The University of Arizona's Business School has conducted one of the most comprehensive studies on entrepreneurship education, covering 2 500 entrepreneurship graduates. The study shows that compared to non-entrepreneurship students, students with an entrepreneurial background are more inclined to start a business. Furthermore, entrepreneurship students tend to perform better in well-established companies as compared to non-entrepreneurial students (Charney and Libecap, 2000).

While it remains difficult to measure the direct impact of entrepreneurship education, other studies have addressed the issue from a qualitative point of view. One such analysis shows that the University of San Diego, through its entrepreneurship programmes, has played a significant role in transforming the San Diego area from a traditional industrial economy to a high-growth knowledge-based economy (Betts and Lee, 2004).

The presence of adequate *restart possibilities* will impact the incentives associated with starting a business. More importantly, however, is the element of time. In the Top-3 countries, entrepreneurs are allowed to restart one year after bankruptcy (OECD, 2005 and the Monitor Group, 2004). The average time after which entrepreneurs are allowed to restart in Denmark is four to five years (World Bank, 2005). Therefore, potential and experienced entrepreneurs are likely to avoid restarting a business given these conditions.

Denmark's poor performance in the area of restart possibilities may be accredited to two factors, debt discharge and the time spent on closing the insolvent estate. Compared to most other European countries, the time spent on debt discharge is limited, while the time spent on closing the insolvent estate is somewhat longer compared to other Nordic countries. A prolonged closing process may be justified if creditors have claims on a larger share of the estate and thus this may merit a thorough consideration of the case. However, this does not appear to be the case.

The World Bank has estimated the Danish recovery rate at 60 percent as compared to 90 percent in Finland, where the time spent on closing a business is approximately 2 1/2 years shorter.

The European Commission, the OECD, the World Bank and the Nordic Council of Ministers all point to the significant role of bankruptcy legislation with regard to entrepreneurial activity (OECD, 2002, 2005, Nordic Council of Ministers, 2002, European Commission, 2002).

A wide range of studies confirm that entrepreneurial restarters and efficient bankruptcy legislation have a profound impact on entrepreneurial activity. A European Commission study shows that enterprises launched by entrepreneurial restarters grow faster than other enterprises (Boston Consulting Group, 2002).

A UK survey of the link between bankruptcy legislation on entrepreneurial activity across 13 European countries, the United States and Canada shows that early discharge has a significant impact on entrepreneurial activity (Armour and Cumming, 2005), which is even stronger than the impact of GDP growth. Consequently, the authors conclude that the *“policy implications are straightforward: bankruptcy laws are the most significant policy instrument for enhancing entrepreneurial activity”*.

A US study shows that there is a higher share of entrepreneurs and a higher propensity to launch a business in states with high bankruptcy exemptions (White and Fan, 2002).

Anecdotal accounts highlight bankruptcies as a quality stamp for US investors. Lee, Miller, Hancock and Rowen (2000) discuss the factors behind the success of Silicon Valley and state that in the *“Silicon Valley there are many examples of entrepreneurs who have failed and successfully started over. These entrepreneurs (and their financiers) usually view failure as a learning experience, and they are rarely punished for it in their subsequent adventures”*. Others have presented similar arguments (Landier, 2004, Lewis et. al., 1984).

There is only a limited number of studies available on the link between restarters and entrepreneurial activity, and it remains unclear as to if there really is a learning curve associated with bankruptcies. However, it is evident that the absence of restart possibilities will negatively affect the launching of new enterprises by experienced entrepreneurs.

Personal income tax levels in Denmark are relatively high compared to the Top-3. A range of studies have highlighted the link between income

taxes and entrepreneurial activity. Carroll, Holtz-Eakin, Rider and Rosen (1998A, 1998B, 2000) found that the US marginal tax rate cut in the 1986 tax reform has led to higher entrepreneur investment levels, higher growth in entrepreneurial enterprises and a significantly higher probability of entrepreneurs hiring additional employees.

Parker and Robson (2000) found a significant correlation between the number of entrepreneurs and the average income tax. In line with this conclusion, Gentry and Hubbard (2004) showed that higher marginal taxes and progressive taxation schemes negatively affected start-up rates.

Large income tax reductions are costly, and should be viewed in more general terms. Countries such as the United Kingdom, Korea and the Netherlands have targeted tax incentives at entrepreneurs through favourable taxation of stock options, new-enterprise investments, etc. In the 2005 government platform, the Danish Government announced that it would introduce legislation aimed at innovative growth-oriented entrepreneurs. The legislation would introduce lower taxes for a 3-year period, starting at the time when the enterprise shows its first profit. 200 million DKK have been earmarked for this initiative.

In the area of *venture capital*, Denmark comes close to matching the top-performing countries. However, this is not tied to significant improvements in the Danish venture capital market; a large drop in US investment explains Denmark's improved ranking.

Evidence from the 1990s shows that the US venture market grows at an explosive rate in times of prosperity. It is likely that the US venture market will show a positive trend if the economic upturn continues. Hence, one should closely monitor the venture market and developments in Denmark vis-à-vis the Top-3 countries. Denmark may have to implement further initiatives if it is to keep pace with the top-performers.

The majority of US studies on venture capital highlights the importance of having well-functioning venture capital markets and shows a strong link between enterprise growth and venture capital financing (Kortum and Lerner (2000), Hellmann and Puri (2000A), Hellmann and Puri (2000B). Danish studies appear to confirm this (The Danish Growth Fund, 2005). A study by the Danish Growth Fund finds annual growth among venture capital-funded companies to be as much as 5 times higher than other companies.

Several US studies show that venture capital-funded companies make significant contributions to wealth. From 1970 to 2000, the US venture

market invested 273 billion USD in 16 278 companies. In the past few years, some 25 000 investments have been made each year. Venture capital-funded companies account for 10 percent of the national revenue and employment, respectively, and show an 8 percent higher employment growth and a 5 percent higher revenue growth compared to the US economy as a whole.

There are no quality-approved internationally comparable indicators for private entrepreneurship infrastructure, i.e. the part of the entrepreneurship infrastructure that covers private advisers, etc. Hence, this area is not a part of the analysis presented above. Previous studies have suggested that the area is important and that Denmark trails the top-performing countries (National Agency for Enterprise and Construction, 2004B and National Agency for Enterprise and Construction, 2004C). Due to the lack of data, an analysis designed to improve our knowledge on entrepreneurship infrastructure was launched. Results are expected at the turn of the year. So far, no evidence has emerged that would revise the current assessment of entrepreneurship infrastructure. On the contrary, a range of analyses have confirmed that early-stage counselling is vital to entrepreneur growth and survival (National Agency for Enterprise and Construction, 2005 and the Danish Growth Fund, 2004).

Data Description of Performance Indicators

This section describes in detail the two indicators applied in measuring entrepreneurial activity: *Start-up activity* and *new firm growth*.

The first performance measure can be split up into two indicators: actual start-up rates, which measures the registration of new enterprises as a share of the total enterprises, and the so-called TEA Index, which measures the share of the population involved in the start-up of an enterprise or running a newly-established enterprise (less than 3 1/2 years old). The second performance measure is also split into two sub-indicators: the share of new enterprise with revenue growth of more than 60 percent and the share of companies with employee growth of more than 60 percent.

A1.1 Start-up Rates

Data for actual start-up rates are collected from Eurostat's company-demography database.

It is difficult to produce internationally comparable records of newly established enterprises. Most countries collect data from different sources (tax statistics, value added tax statistics or corporate accounts). At the same time, there are different approaches to actual company registration. In Denmark, registration is not required for companies with an annual turnover of less than 50 000 DKK. However, Eurostat has harmonised the various statistics and have produced comparable data for selected EU countries. Data has been harmonised and adjusted for sector differences. Thus, the term "actual start-up rates" implies that a company has in fact been started.

Comparable data for the United States and Canada have been collected by the US Census, the US Small Business Administration and Statistics Canada. The lack of a central US company register means that US start-up rates are subject to some degree of uncertainty.

In terms of actual start-up rates, Denmark continues to be at a level with the United States. Recently published data for Canada shows that Canada is slightly ahead of Denmark. Luxembourg also posts slightly higher start-up rates. Danish start-up rates have shown a marginal

decline over the past few years. However, in terms of actual start-up rates, Denmark still belongs to the elite group of countries. Start-up data for 2003 and 2004 are not available.

Start-up rates are available for three Eastern European countries. Eastern European countries have significantly lower GDP per capita rates. Lower GDP rates usually means an abundance of “necessity entrepreneurs”, i.e. people engaged in launching small-sized companies simply because they have no other source of income. Hence, they have not been included in this study. Please refer to the Global Entrepreneurship Monitor (GEM 2004) for more information.

Unfortunately, actual start-up rates are not available for several of the countries included in the index. The OECD has initiated efforts to identify other sources of information on start-up rates. Pending the completion of the OECD’s efforts, this study used a supplementary indicator; the so-called TEA Index. Compiled by the Global Entrepreneurship Monitor (GEM), an international consortium consisting of more than 30 countries, the index is built on a questionnaire from a representative sample of the population and measures the share of the adult population engaged in launching or actually running a business (less than 3 1/2 years old).

The TEA Index ranks Denmark behind Korea, the United States and Canada. Denmark is at a comparable level with most of the European countries included in the 2005 Index.

While it would appear that Denmark ranks marginally lower than the UK and Norway and slightly ahead of Sweden and the Netherlands. Differences in country rankings lie within the statistical uncertainty often found in surveys. However, the Danish gap vis-à-vis the United States and Canada is statistically significant.

The Danish TEA Index has shown a marginal decline over the past three years. However, over a five-year period the decline is not statistically significant. In 2003, the Danish TEA Index was 5.88 as compared to 5.31 in 2004 (GEM, 2004).

A1.2 New Firm Growth

Growth indicators are drawn from a company database containing approximately 3 million company accounts. The ORBIS database is marketed by the Bureau van Dijk. At present, the database is considered

the most reliable source for extracting new firm growth indicators. However, the data is not without flaws. The database is incomplete as far as containing information on all small-sized companies, some companies may be registered on more than one occasion and company updates are fairly irregular. However, the weaknesses are identical for all countries which produce relatively comparable indicators.

In the Entrepreneurship Index, growth-oriented entrepreneurs encompass companies started between 1996 and 2000 that are still in business in 2003 and that have seen 60 percent or more revenue or employee growth from 2001 to 2003. As small company registration is flawed, companies must have between 15 and 2000 employees in 2001.

Approximately 8 percent of the Danish start-ups see revenue growth of more than 60 percent. In the top performing countries (Ireland, the United States and Korea) more than 20 percent of start-ups see more than 60 percent revenue growth.

Less than 2 percent of the Danish growth-oriented entrepreneurs see employee growth of more than 60 percent. In the United States and Korea, the share is approximately 6 percent.

A simple average of the two indicators shows that 5 percent of the Danish start-ups become growth-oriented entrepreneurs, while the share is 15 percent in the United States and Korea.

A1.3 Testing Growth Data

The concept of growth-oriented entrepreneurs is fairly new. There is still much discussion on the definition of growth-oriented entrepreneurs. The choice of definition will have an immediate impact on the shares of individual country growth-oriented entrepreneurs. For example, one could argue that the point of intersection should be 40 percent instead of 60 percent, or that growth was measured over a five-year period. This would likely lead to a change in Denmark's ranking.

To clarify this, a robustness analysis was carried out to test the sensitivity of country shares of growth-oriented entrepreneurs to changes in growth levels (20, 40, 80 or 100 percent).

In general, the calculations show a high level of correlation between the various growth levels. Only the Portuguese and Swiss rankings are affected when applying different growth levels (Table A1.1).

Table A1.1 Correlation between different Definitions of Growth-oriented Entrepreneiers

Alternative growth levels

(20, 40, 60, 80 and 100 percent revenue growth)

	20	40	60	80	100
20	1				
40	0,99	1			
60	0,96	0,98	1		
80	0,89	0,93	0,98	1	
100	0,90	0,94	0,98	1,00	1

Alternative growth levels

(20, 40, 60, 80 and 100 percent employment growth)

	20	40	60	80	100
20	1				
40	0,98	1			
60	0,88	0,83	1		
80	0,87	0,83	0,99	1	
100	0,85	0,81	0,98	0,99	1

Note: The robustness analysis shows the correlation between different growth levels for of growth-oriented entrepreneurs across 20 OECD countries. A correlation of 1 implies that the ranking of countries and their respective share of growth-oriented entrepreneurs are identical regardless of growth level applied, i.e. if a country's share of growth-oriented entrepreneurs increases by 10 percent at a 40 percent level, all other country growth-oriented entrepreneurs shares should show a similar increase.

Source: Author's calculations based on data from Bureau Van Dijk.

Country rankings are not affected when changing growth levels. A 20 percent growth level would leave Denmark with more growth-oriented entrepreneurs, while a 100 percent growth level would lead to fewer growth-oriented entrepreneurs. However, similar changes are detected for the other countries and Denmark consistently underperforms regardless of the growth level applied.

Due to a lack of comparable data, it is impossible to conduct international comparisons across countries longer than 3 years. The database is continuously updated, and in the longer term, it will be possible to show if a 5 or 7 year period significantly changes country rankings.

Similarly, it is possible to detect if the application of alternative definitions of growth-oriented entrepreneurs significantly changes individual country rankings, which would in turn, lead to an alternate ranking of countries.³

Existing literature on enterprise growth applies a wide range of growth measures. The most frequently used measure looks at input growth (employees, investments) input (productivity), output (physical output, sales, revenue, earnings and profits) and value appraisal (assets, book-keeping value, market capitalisation).

The Danish business paper *Børsen* and *Statistics Denmark* have developed a series of definitions for growth-oriented entrepreneurs. *Børsen* defines growth-oriented entrepreneurial companies as ones with a positive growth in revenue, or gross result over a 4-year period. *Statistics Denmark* defines growth-oriented entrepreneurs both in terms of revenue and employees. Growth-oriented entrepreneurial company revenues should be higher than the industry average and the company should see revenue growth of at least 200 percent from 1998 to 2002. Conversely, the number of employees should at least match the industry average and the company should see employee growth at more than 25 percent from 1998 to 2001.

On the international level, David Birch spearheaded efforts that looked closer at the importance of growth-oriented entrepreneurs. Birch applies a growth index where the absolute growth in employees is multiplied by the relative growth in the work force. A company with 10 employees that grows to 100 employees over the period is assigned an index score of 900 [(90, i.e. the number of new employees)* 10 (the number of employees have grown by 1000 percent)].

The aforementioned alternative definitions have been applied in the data that form the basis of the growth measures in this Index. The number of growth-oriented entrepreneurs will fluctuate in line with the chosen growth criteria. However, alternative definitions should show the same relative share of growth-oriented entrepreneurs and the same ranking of countries as stipulated by the definition used in the Index.

This implies that the relative change shown when applying another definition should be identical for all countries. In other words, if the Danish

3 See www.ebst.dk/ivaerksaetterindeks for a more detailed description of the analysis.

share of growth-oriented entrepreneurs grows by 10 percent then all country shares ideally should grow by 10 percent.

We see a relatively high degree of correlation between alternative definitions and the definition applied in the Entrepreneurship Index. Across definitions, it is the same group of countries that post a high share of growth-entrepreneurs. Correspondingly, it is the same group of countries that have a lower share of growth entrepreneurs. In general, Denmark has a relatively low share of growth-oriented entrepreneurs regardless of definition applied. It is unlikely that other conclusions could be reached when applying other definitions of growth-oriented entrepreneurs.

Data Description – Framework Condition Indicators

The following section details each of the indicators applied in benchmarking entrepreneurship framework conditions.⁴

When building the 2005 Index, a quality manual was drafted. The purpose of the manual is to assess the quality of each of the indicators applied when measuring individual country framework conditions. For an indicator to be included in the 2005 Entrepreneurship Index, it has to fulfil four gatekeeper requirements concerning the quality of each indicator (Table A2.1).

Table A2.1 Gatekeeper Requirements

An indicator must be:

<i>Relevant</i> -	An indicator must measure the issue or factor it is supposed to measure and, therefore, at a minimum act as a proxy for the measured concept.
<i>Accurate</i> -	The indicator must originate from a reliable source, i.e. from a well-known, verifiable and well-documented source. The method for collecting data must also be standardised to some extent across countries in order to increase cross-country comparability based on the indicator.
<i>Available</i> -	The indicator must be available for at least 50 percent of countries in the study.
<i>Coherent</i> -	The indicator must be interpretable <i>a priori</i> as to whether a high value is to be preferred over a lower value or the other way around.

⁴ See www.ebst.dk/ivaerksaetterindeks and Hoffmann et.al. (Forthcoming B) for a quality assessment of individual indicators and references.

The preliminary assessment has led to the exclusion of several indicators. A total of 57 indicators were found to be good candidates for a quality assessment. The quality assessment has been conducted in accordance with OECD guidelines in which the quality of an indicator is measured with regard to the relevance, accuracy and availability of each indicator. Each indicator is evaluated by grading it for each dimension and by an overall assessment.

The relevance of an indicator is a qualitative assessment of the value contributed by the indicator. That is, the evaluation depends on the proximity between what the indicator measures and the framework condition it is supposed to measure. It is desirable for the indicator to be as close as possible to the framework condition it is intended to measure.

The accuracy of an indicator is the degree to which the indicator estimates or describes the characteristic or sum it is designed to measure. Accuracy has two dimensions: data collection method and degree of cross-country standardisation.

Availability relates to the accessibility of a given indicator in various countries and for a given time frame.

The section below highlights the 57 identified indicators.

A2.1 Technology Transfer

Effective technology transfers facilitate the commercialisation of public research and pave the way for the successful launch of new enterprises that are built on the know-how and knowledge emerging from Danish universities and research institutions.

Technology transfers promote universities and research institutions' efforts in commercialising knowledge through firm creation and patenting. This may be promoted further by giving universities ownership of spin-off knowledge and patents (e.g. the US *Bayh Dole Act* has been introduced in a Danish translation) through the establishment of technology transfer units that promote strategic co-operation between the business world and universities.

At present, there are no internationally comparable indicators for the area of technology transfer. Instead, the policy area is measured by applying two survey indicators (Box A2.1).

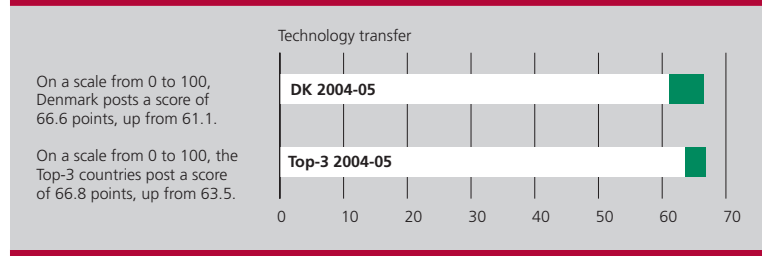
Box A2.1 Indicators – Technology Transfer

University/industry research collaboration measures business executives' perceptions of the scope of R&D collaboration between their firm and local universities. Source: World Economic Forum (WEC), Global Competitiveness Report.⁵

Technological co-operation measures business executives' assessment of the level of technological co-operation between companies. Source: International Institute for Management Development (IMD), World Competitiveness Yearbook.⁶

The indicators indicate that Denmark matches the Top-3 countries in the area of technology transfer. Compared to the 2004 Index, Denmark and the Top-3 have both seen marginal improvements (Figure A2.1).

Figure A2.1 Technology Transfer in Denmark and the Top-3



Note: Country scores for the two indicators are normalised on a scale from 0 to 100. The best-performing country is assigned the value of 100 and the worst-performing country is assigned the value 0. Country performance is the average of country scores on each of the indicators. The value for the Top-3 is a simple average of their respective scores. Additional figures that illustrate the overall gap between Denmark and the Top-3 are calculated in a similar manner.

Source: Author's calculations.

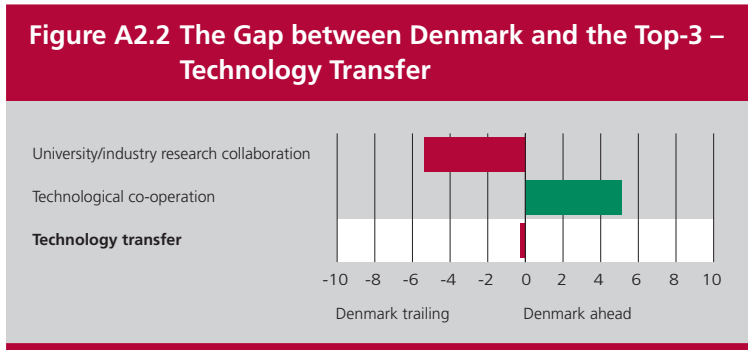
5 The World Economic Forum's Global Competitiveness Report is based on an "Executive Opinion Survey" as well as data collected from other sources. In the Executive Opinion Survey managers from across the business world assess the quality of national framework conditions conducive to competitiveness.

6 The applied indicators IMD's Competitiveness Yearbook is based on an "Executive Opinion Survey", as well as data collected from other sources. In the Executive Opinion Survey managers from across the business world assess the quality of national framework conditions conducive to competitiveness.

Denmark has improved its score from 61.1 to 66.6 points, while the Top-3 countries post an average score of 66.8 points (61.1).

What explains the Gap between Denmark and the Top-3?

Denmark's positive showing in the area of technology transfer can be accredited to strong technological co-operation. However, Denmark trails the Top-3 when it comes to university/industry collaboration (Figure A2.2).



Note: The light green bars show Denmark ahead of the Top-3, red bars indicate that Denmark is trailing. Individual policy areas are normalised on a scale from 0 to 100. The 2 policy areas are assigned identical weights. This allows for adding up individual policy areas, which provides a picture of individual policy area contributions to the overall gap. Additional figures that illustrate the difference between Denmark and the Top-3 are calculated in a similar manner.

Source: Author's calculations.

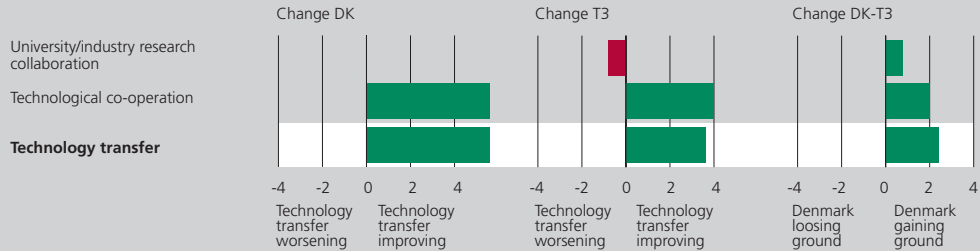
It is difficult to precise the exact rationale behind the business executives' assessments. A number of countries, and the United States in particular, have long-standing traditions for strong university/industry collaboration. As an example, larger knowledge institutions in the United States have dedicated technology transfer units to promote co-operation between researchers and the business world. Denmark has traditionally had a sharper division between the business and research world. It was not until 2003 that the first Danish technology transfer unit was established at the University of Copenhagen. Several studies show that the scope of R&D co-operation is much lower in Denmark as compared to a large portion other OECD countries (FORA and Inside Consulting, 2003).

2004-2005 Developments

Since the 2004 Index, Denmark has gained ground on performance of the Top-3 in the area of technological co-operation, however, university/business collaboration remains unchanged. The Top-3 countries have seen a marginal decline in university/industry collaboration, but some progress has been made in the area of technological co-operation. Importantly,

Denmark outperforms the Top-3 in terms of technological co-operation. Overall, Denmark has moved closer to the Top-3 (Figure A2.3).

Figure A2.3 2004-2005 Developments – Technology Transfer



Note: The figure shows developments in individual policy areas (The light green bars show the country or group countries trailing, red bars indicate that the country or group of countries that are ahead). Individual indicators and policy areas are normalised on a scale from 0 to 100 to allow for the comparison of differences across the policy areas. The normalisation procedure allows for adding up individual policy areas, which provides a picture of the contribution of individual policy areas to the overall gap. Additional figures are calculated in a similar manner.

Source: Author's calculations

Over the past few years, Denmark has initiated a number of national and regional initiatives to promote co-operation between universities and the business world, and the Danish Government has introduced a number of measures in the 2003 Action Plan “From Business Idea to Invoice”. Tangible initiatives include the establishment of a technology transfer unit at the University of Copenhagen, as well as innovation consortiums, technology centres, bridge-building units, portals, etc. Despite all these efforts, the latest data shows that no progress has been made in terms of technology/industry collaboration over the past seven years (GTS, 2005). The opinion-based surveys appear to confirm this conclusion.

Denmark’s progress in technological co-operation is not supported by concrete initiatives.

A2.2 Entry Barriers

The removal of entry barriers through liberalisation, deregulation or reduction of public activities paves the way for new business opportunities for both existing companies and start-ups. The emergence of a myriad of private suppliers of tele-services is directly linked to the liberalisation of the European telecommunication sectors in the 1990s. Moreover, the relaxation of demands for high educational levels in certain sectors

has given rise to a higher degree of flexibility and has lowered access barriers to existing employment. The OECD has compiled a series of indicators related to entrepreneurs' access to existing markets (Box A2.2).

Box A2.2 Indicators – Entry Barriers

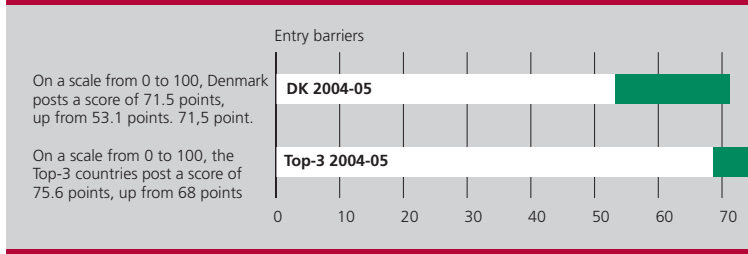
Barriers to competition consists of two indices that measure national, state or provincial laws or other regulations that restrict the number of competitors allowed to operate, and scope of exemptions to competition law for public enterprises or government mandated behaviour. Source: OECD.

Public ownership measures the scope of publicly owned enterprises across multiple product and service sectors, the size of state-owned enterprises, and the existence of government special voting rights in privately-owned enterprises. Source: OECD.

Public involvement in business operation reflects the extent to which governments use coercive or incentive-based regulation in specific sectors. Source: OECD.

Denmark has made remarkable progress in the area of entry barriers. However, the Top-3 countries have made progress as well and therefore still outperform Denmark (Figure A2.4).

Figure A2.4 Entry Barriers in Denmark and the Top-3

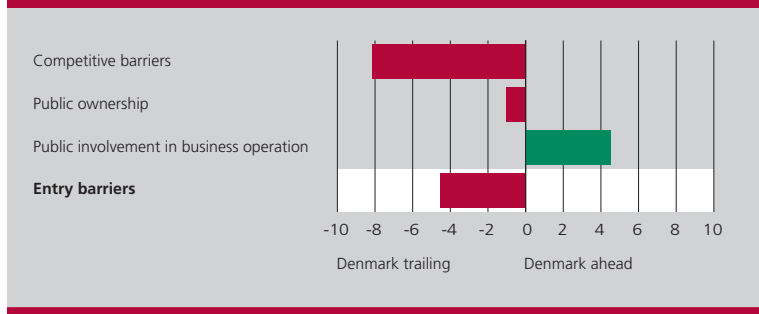


Denmark posts a score of 71.5 points, while the Top-3 scores 75.6 points.

What explains the Gap between Denmark and the Top-3?

Denmark trails the Top-3 by 4.1 points. This is explained by Denmark's ranking in competitive barriers (Figure A2.5).

Figure A2.5 Gap between Denmark and the Top-3



Compared to the Top-3, Denmark performs well in public ownership and public involvement in business operations.

Lower competitive barriers among the Top-3 countries can be accredited to the fact that only a few sectors are subject to strict competitive rules and legislation.

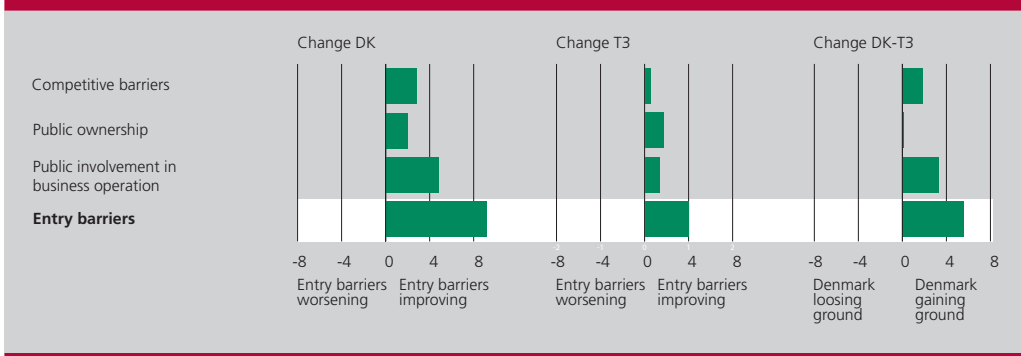
Similarly to the Top-3 countries, Danish public ownership is limited to a few sectors including gas, water, railways, airlines and health.

None of the industry sectors covered by data are subject to price control from Danish public institutions. In Korea and Canada, several sectors (domestic airlines, foods, gasoline, alcohol and pharmaceuticals) are subject to price controls.

2004-2005 Developments

When breaking down Denmark’s record in the area of entry barriers the analysis shows that Denmark is progressing in all three areas (Figure A2.6).

Figure A2.6 2004-2005 Developments – Access Barriers



The reduction of competitive barriers in Denmark is the result of extensive liberalisation in a range of sectors including electricity, gas, water, hotel and restoration.

Correspondingly, public ownership has decreased in companies across several sectors including telecommunications, transportation and steel.

Furthermore, data for the indicator on public involvement in company operations has been significantly improved compared to last year's analysis.

A2.3 Access to Foreign Markets

The removal of trade barriers and the increase in economic trade across countries and regions offer a range of opportunities for entrepreneurs as well for well-established companies.

While trade barriers are lowered through internationally binding agreements, and thus are beyond the powers of national politicians, it is still possible to implement initiatives that will increase the exporting capabilities of newly established companies.

There are no internationally comparable indicators for measuring policy initiatives aimed at promoting access to foreign markets. The policy area is therefore measured by applying three indicators, which measure in an indirect manner access to foreign markets (Box A2.3).

Box A2.3 Indicators – Access to Foreign Markets

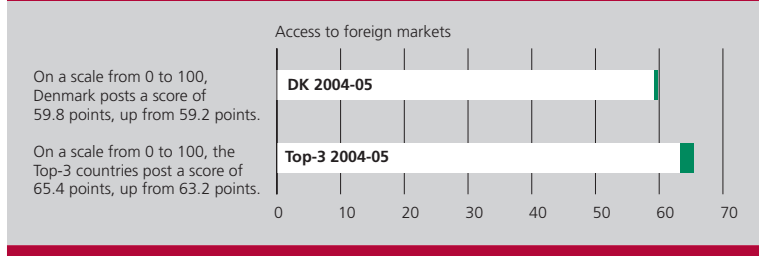
Share of new enterprises with exports measures the share of exporting companies among new enterprises. Source: FORA.

Access to capital markets measures to what extent business executives assess domestic access to capital markets. Source: IMD.

Export credit and insurance measures top managements' perceptions of the availability of export credits and insurance at reasonable prices. Source: IMD.

The Top-3 and Denmark have made marginal progress in this area, and Denmark continues to trail the Top-3 (Figure A2.7).

Figure A2.7 Access to Foreign Markets in Denmark and the Top-3



Denmark posts a score of 59.8 (59.2), while the Top-3 scores 65.4 (63.2). Denmark thus trails the Top-3 by 5.6 points.

What explains the Gap between Denmark and the Top-3?

Denmark trails the Top-3 by almost 20 points in the proportion of exporting companies, which explains succinctly Denmark's position vis-à-vis the Top-3 (Figure A2.8).

Figure A2.8 Gap between Denmark and the Top-3 – Access to Foreign Markets

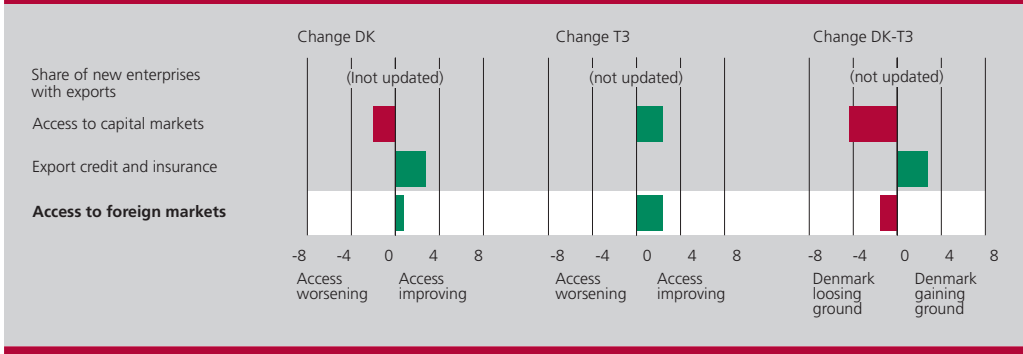


Denmark outperforms the Top-3 in the areas of access to capital markets and export credit and insurance, which helps to explain why Denmark's overall performance is only marginally worse than the top-performers.

2004-2005 Developments

The indicator measuring the proportion of new companies with exports has not been updated in this year's report. Denmark has lost ground in access to capital markets, but has gained momentum in access to export credit and insurance (Figure A2.9).

Figure A2.9 2004-2005 Developments – Access to Foreign Markets



With regard to access to capital markets, the situation remains unchanged among the Top-3 countries. However, the Top-3 countries have seen progress in the area of export credit and insurance. Consequently, the top-performers have overall gained ground on Denmark in the area of access to capital markets, while Denmark has gained momentum in export credit and insurance.

Since the two indicators are built on expert assessments, it remains difficult to define precisely the underlying reasons for this development.

A2.4 Loan Capital

The supply of loan capital is vital to entrepreneurs in their efforts to launch an enterprise. Without the presence of large and effective loan markets, the entrepreneur will face a range of financial barriers in his entrepreneurial endeavours.

Financial barriers may be lowered by increasing the scope of debt capital and competition in the credit markets, making debt capital cheaper and more accessible. The government may draw up bank-guarantees and other schemes to make it more secure for banks to extend loans to entrepreneurs.

A range of available indicators measures the size and efficiency of existing loan capital markets (Box A2.4).

Both the Top-3 and Denmark show marginal progress in this area and Denmark continues to trail the top-performing countries (Figure A2.10).

Box A2.4 Indicators – Loan Capital

The scope of loan guarantees measures the maximum extent of loan guarantees as a percent of a given loan. Sources: EU Commission, OECD, SBA, SMBA, Stevenson et al.

Private credit (average 1997-2001) measure the ratio of credit going to the private sector from deposit-taking financial institutions relative to GDP. Sources: World Bank, Doing Business.

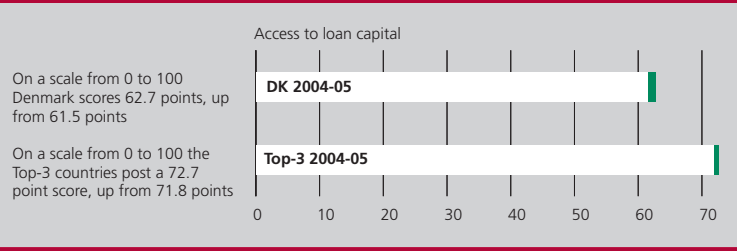
Interest rate spread measures the lending rate minus the deposit rate based on the average annual interest rates for each country. Source: World Bank, Doing Business.

Cost to create collateral measures creditor costs incurred when creating and registering collateral (as a percentage of income per capita). Source: World Bank, Doing Business.

Legal Rights Index measures the extent to which legislation pertaining to collateral and bankruptcies are beneficial to the entrepreneur. Source: World Bank, Doing Business.

Country Credit Rating measures country credit ratings. The rating is based on an assessment by the Institutional Investor Magazine. Source: IMD, World Competitiveness Yearbook.

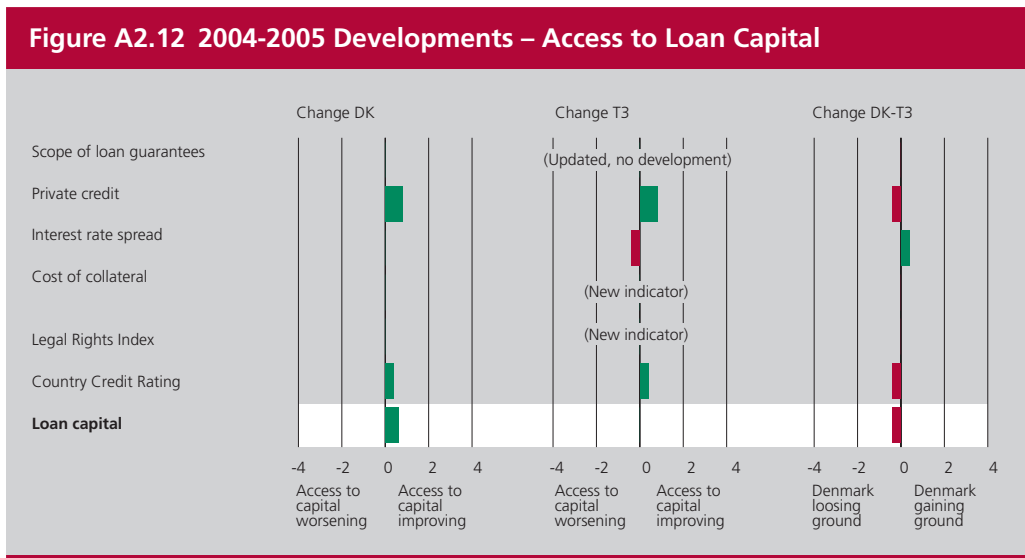
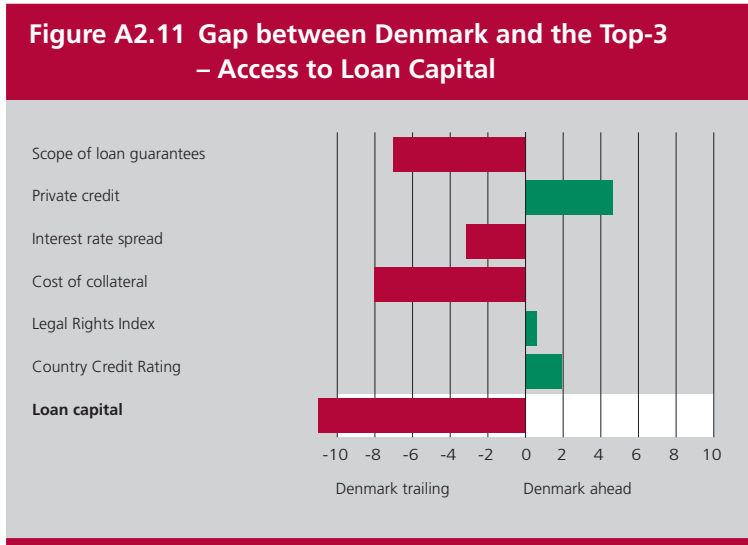
Figure A2.10 Access to Loan Capital in Denmark and the Top-3



The 2005 Index shows only marginal changes. Denmark posts a score of 62.7 (61.5), while the top-performing countries post a score of 72.7 score (71.8). Overall, Denmark trails the Top-3 by 10 points.

What explains the Gap between Denmark and the Top-3?

Further analysis shows that Denmark trails the Top-3 on three of the six indicators, while Denmark outperforms the Top-3 in the other three areas (Figure A2.11).



Denmark trails the Top-3 in the areas of scope of loan guarantees, interest rate spread and cost of collateral. In the area of private credit, Denmark is far ahead of the Top-3. In the areas of Country Credit Ranking and Legal Rights Index, Denmark is marginally better than the Top-3.

Korea and Canada have extensive loan guarantees. In Denmark, loan guarantees are often targeted towards specific groups. Hence, the overall scope of loan guarantee programmes in Denmark appears smaller.

2004-2005 Developments

We detected only marginal changes in the performances of Denmark and the Top-3 in this year's index.

The indicator for scope of loan guarantees has not been updated in this year's report. Two indicators, cost of collateral and Legal Rights Index, have been added to the 2005 Index. In the areas of private credit and Country Credit Ranking, both Denmark and the Top-3 have seen marginal progress, while the interest rate spread has widened marginally across the Top-3.

A2.5 Venture Capital

Venture capital is an important source of financing for potential high-growth companies that often require large sums of capital for development, growth and expansion.

In order to increase the supply of venture capital, countries may opt to develop national venture funds or improve the regulation of the venture capital market so that existing funds can be further developed. This can be facilitated through direct investments in funds, financial guarantees or by the rules pertaining to pension funds or insurance company investments in venture capital funds (Box A2.5).

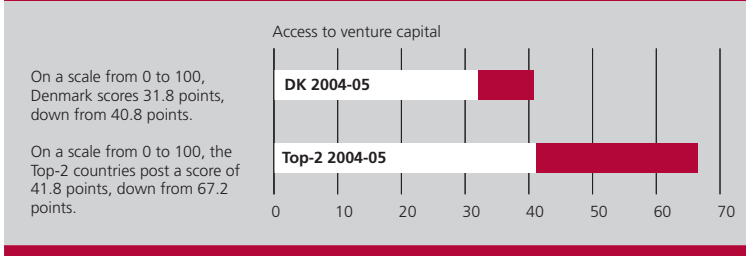
Box A2.5 Indicators – Venture Capital

Venture capital (early stage) measures the average total annual venture capital investment (early stage) as a share of GDP. Source: OECD, OECD Venture Capital Database.

Venture capital (expansion stage) measures the average total annual venture capital investment (expansion stage) as a share of GDP. Source: OECD, OECD Venture Capital Database.

Denmark has witnessed a significant decline in its venture capital markets. However, this is not an isolated case; while Denmark posts a score of 31.8 (40.8), the Top-3 countries have lost an incredible 25 points (no data for Korea) (Figure A2.13).

Figure A2.13 Access to Venture Capital in Denmark and the Top-3

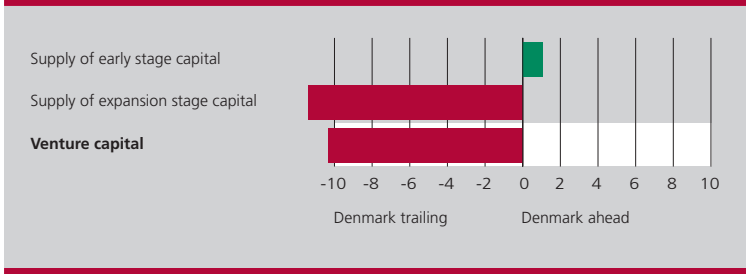


Despite the remarkable decline, Denmark has gained ground on the Top-2. The massive drop in venture capital investments was a direct consequence of the burst of the dot.com bubble in 2000 that continues to have an influence the venture capital markets. The Index shows that Denmark has made an impressive turn-around compared to other countries.

What explains the Gap between Denmark and the Top-3?

Denmark’s ranking can be accredited to the presence of a relatively large early stage venture capital market. However, the expansion venture capital market needs some improvement vis-à-vis the Top-3 (Figure A2.14).

Figure A2.14 Gap between Denmark and the Top-3 – Access to Venture Capital

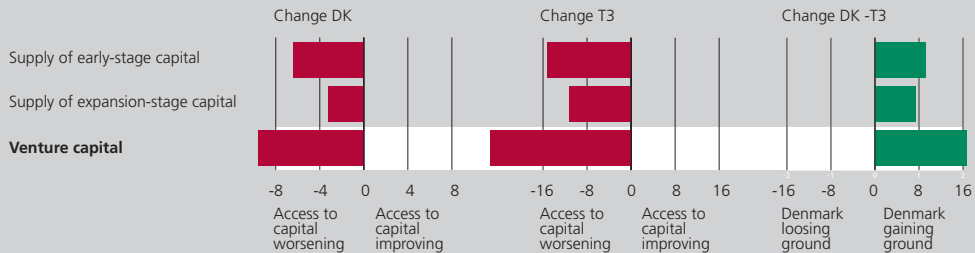


The Danish Growth Fund and the Danish “Innovationsmiljøer” (The Danish equivalent of an incubator) make substantial early stage investments which help explain the size of early-stage venture capital. Despite the overall drop in the number of seed investment, the Growth Fund has maintained its investment levels and today accounts for roughly 20 percent of all direct seed investments. The share of the “innovationsmiljøer” is 11 percent.

2004-2005 Developments

The fall in Denmark's ranking can be accredited to minor setbacks in early stage and expansion venture capital investment. This is also evident among the Top-3 on a larger scale (Figure A2.15).

Figure A2.15 2004-2005 Developments – Venture Capital



The poor showing of the Top-2 in both venture capital phases more than offsets the drop in venture capital investments in Denmark. An increased public involvement is probably the reason for Denmark's progress vis-à-vis the Top-2. While Denmark has made ground in the area of expansion stage capital, there is still a considerable way to go before Denmark is at a par with the top-performing countries.

A2.6 Exit Opportunities

Effective exit opportunities – the stock exchange, secondary stock markets or effective buy-out markets – are vital instruments in order to supply the needed capital for expansion. At the same time, the presence of effective exit opportunities raises the supply of venture capital.

Most of the smaller, yet advanced, industrial countries face the problem of securing critical mass in the secondary stock markets. On the one hand, the regulation of secondary stock markets should encourage companies to use such markets. On the other hand, companies should be forced to supply adequate information to the market in order to attract potential investors. The buy-out market could be a supplement to a secondary stock market (Box A2.6).

Box A2.6 Indicators – Exit Opportunities

Capitalisation of secondary stock market (average 1999-2002) measures the capitalisation (the total value of issued shares) in the secondary stock market in percentage of GDP. Source: OECD.

New companies quoted in secondary stock market (average 1999-2002) measures the number of new companies quoted in the secondary stock market per million inhabitants. Source: OECD.

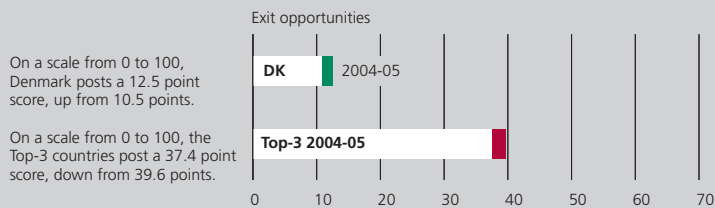
Capitalisation of primary stock market (average 1997-2001) measures the capitalisation (the total value of issued shares) in the primary stock market in percentage of GDP. Source: World Bank.

Turnover in primary stock market (average 1997-2001) measures the value of total shares traded on the stock market exchange in percentage of GDP. Source: World Bank.

Buy outs (average 1999-2002) measures the total annual value of buy-outs as a share of GDP. Source: OECD, OECD Venture Capital Database.

Both Denmark and the Top-3 post remarkably low scores in the area of exit opportunities (Figure A2.16).

Figure A2.16 Exit Opportunities in Denmark and the Top-3

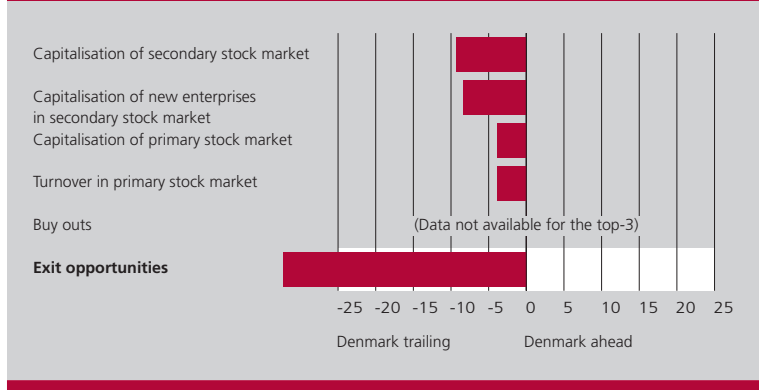


Despite marginal progress, Denmark posts a score of only 12.5 points. There has been a marginal decline for the Top-3 countries, a 37.4 point score (39.6).

What explains the Gap between Denmark and the Top-3?

Overall, Denmark trails by 25 points. The 25 points are distributed across the four updated indicators (Figure A2.17).

Figure A2.17 Gap between Denmark and the Top-3 – Exit opportunities

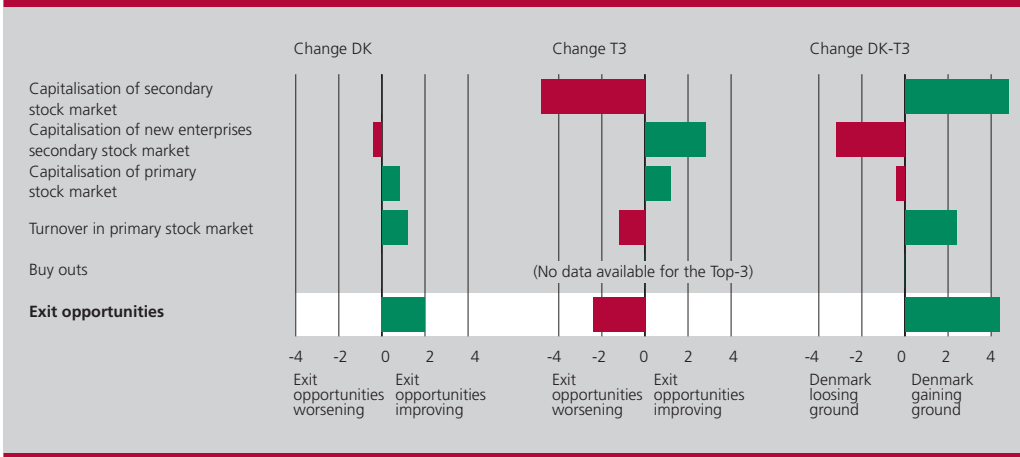


Denmark is furthest behind in areas related to secondary stock market (capitalisation of secondary stock market and capitalisation of new companies). Denmark has never had a large secondary stock market. In December 2004, the Copenhagen Stock Exchange announced plans to build a new secondary stock market in Denmark for companies with a market cap of 400 to 500 million DKK.

2004-2005 Developments

Denmark has seen a marginal improvement in its primary stock market. The Top-3 countries have seen a sizeable decline in the overall capitalisation of their secondary stock markets. On the other hand, the top-performing countries show progress in capitalisation of new enterprises in their secondary stock markets (Figure A2.18).

Figure A2.18 2004-2005 Developments – Exit Opportunities



The repercussions of the burst of the IT bubble continue to affect secondary stock markets across the top-performing countries. Progress in the capitalisation of new enterprises indicates that the markets are moving in the right direction. Denmark's strong showing in capitalisation and turnover in primary stock markets can be explained by healthy market conditions and higher stock prices.

A2.7 Wealth and Bequest Tax

The presence of wealth and bequest taxes has a direct impact on the supply of early stage capital. A heavy burden of taxation will ultimately lower the supply of capital, which in turn will lead to lower investment level. Hence, a reduction of wealth and bequest taxes will have a positive effect on the supply of early stage capital (Box A2.7).

Box A2.7 Indicators – Wealth and Bequest Tax

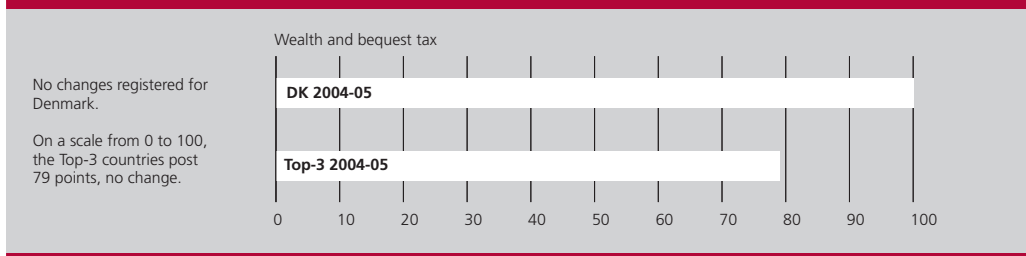
Revenue from bequest tax measures the revenue from bequest tax as percent of GDP – 3-year moving average. Source: OECD.

Revenue from wealth tax measures the revenue from wealth tax as percent of GDP – 3-year moving average. Source: OECD.

Top marginal bequest tax rate measures the top marginal bequest tax rate for spouses or children to the deceased. Source: Chen, Lee and Mintz, OECD.

The Danish wealth tax has been phased out and revenues from bequest taxes are among the lowest in the OECD. The Top-3 countries post a healthy score, but still trail Denmark considerably (Figure A2.19).

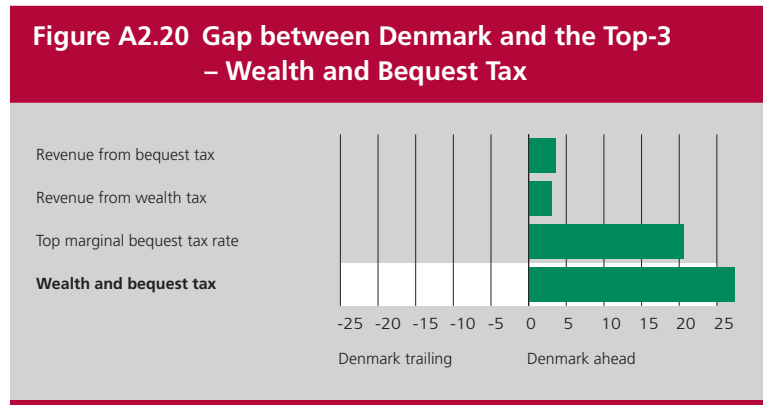
Figure A2.19 Wealth and Bequest Tax in Denmark and the Top-3



Similar to the 2004 Index, Denmark posts a perfect score of 100. The Top-3 countries, who have made no changes to their wealth and bequest tax schemes, post a 79 point score.

What explains the Gap between Denmark and the Top-3?

Denmark is far ahead of the Top-3 countries in the area of bequest tax and highest marginal tax rate (Figure A2.20).



As mentioned above, the indicator measures the highest marginal tax rate for spouses or children of the deceased. In Denmark, there is no taxation for spouses, while children to the deceased are exempt from bequest taxes as long as the inheritance is covered by the basic personal allowance (236 900 DKK in 2005).

A2.8 Capital Tax

High capital taxes lower potential investment profits and have a direct impact on the supply of investment capital for both start-ups and well-established companies.

Policy initiatives that lower the taxation on investments will ultimately lead to a higher supply of capital among investors. Some countries have implemented specific tax incentives to promote investment in new enterprises. The policy area is comprised of 5 indicators (Box A2.8).

Box A2.8 Indicators – Capital Tax

Taxation of dividends – top marginal tax rate measures the top marginal tax rate of dividend income. Source: Chen, Lee and Mintz, OECD.

Taxation of dividends – top marginal tax rate for the self-employed measures the top marginal tax rate of dividend income for the self-employed. Source: Chen, Lee and Mintz, OECD.

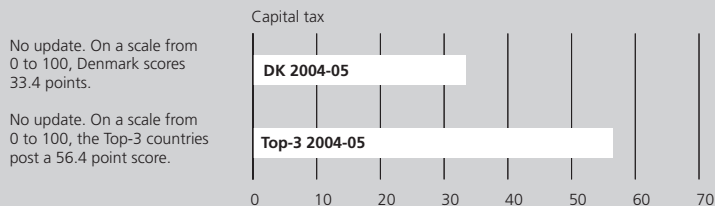
Taxation of stock options measures the effective tax rate of stock options for a hypothetical tax payer with certain assumptions regarding income, family situation and portfolio development. Source: the EU.

Taxation of capital gains on shares – short term measures the level of the tax rate when shares are issued and sold in the short term. The indicator is comprised of two sub-indicators; one tax rate for companies and one tax rate for individuals. Source: Chen, Lee and Mintz, OECD.

Taxation of capital gains on shares – long term measures the level of the tax rate when shares are issued and sold in the long term. The indicators are comprised of two lower-level indicators; one tax rate for companies and one tax rate for individuals. Source: Chen, Lee and Mintz, OECD.

Denmark has significantly higher capital tax rates in comparison to top-performing countries. However, the Top-3 countries are not top-performers in this policy area and score well below 100 (Figure A2.21).

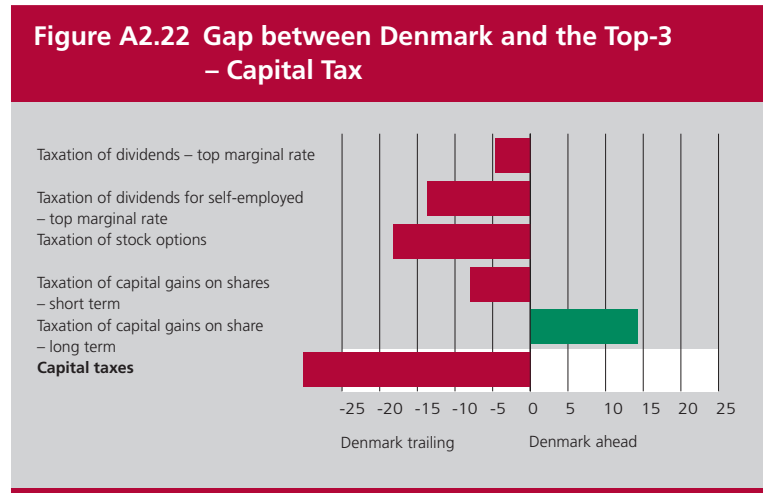
Figure A2.21 Capital Tax in Denmark and in the Top-3



The indicators for capital taxes have not been updated in the 2005 Index. In 2004, Denmark scored 33.4 points, while the Top-3 countries claimed 56.4 points. Denmark trails the Top-3 countries by 23 points.

What explains the Gap between Denmark and the Top-3?

The gap between Denmark and the top-performers is primarily linked to the relatively high Danish marginal taxation of dividends and the taxation of stock options. In terms of taxation of capital gains on shares in the long term, Denmark is far ahead of the Top-3 countries (Figure A2.22).



Unfortunately, it has not been possible to update the data on capital taxes.

In Denmark, dividends are subject to a 28 percent tax for amounts up to 43 500 DKK (2005) and 43 percent for amounts higher than 43 500 DKK. There are no special provisions for the self-employed.

If the individual has owned the shares for less than 3 years, capital gains are taxed as capital income, i.e. personal taxes excluding social contributions. Shares possessed for more than 3 years are tax exempt if the total value of the shares is less than 129 500 DKK (2005 limit). If the value of total shares is more than 129 500 DKK, capital gains are taxed as stock income.

Stock options are subject to various taxation schemes. Previously, stock options, when exercised, were taxed as personal income. As from 2003, stock options are now taxed as stock profits and the employee may postpone taxation from the time of exercise to the time where shares obtained by exercising the stock option are sold. It has not been possible to update data. Hence, it is difficult to assess the impact of the new taxation scheme on stock options.

A2.9 Restart Possibilities

Restarters – entrepreneurs involved in the launch of an enterprise after bankruptcy – are very important to entrepreneurial activity. They are highly motivated to embark on entrepreneurial endeavours and they have gathered valuable experiences that may be used in future endeavours. However, in some countries, entrepreneurs who have previously failed face enormous challenges when restarting a business.

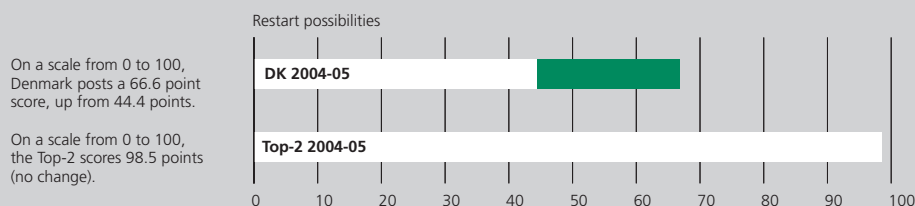
In most countries, the administrative burdens affecting to restarters can be minimized by governments. In this respect, bankruptcy legislation plays an important role as it contains financial or time-related limitations for restarters (Box A2.9).

Box A2.9 Indicators – Restart Possibilities

Time that a creditor has claims on a bankrupt's assets measures the time it takes to settle old debt after bankruptcy. The indicator is measured by the number of years. Source: OECD.

Although Denmark has made great strides in improving restart possibilities, Denmark still trails the top-performing countries, in particular, the United States and Canada (Figure A2.23).

Figure A2.23 Restart Possibilities in Denmark and the Top-3



Generally, entrepreneurs face enormous challenges when trying to raise capital following a bankruptcy. In practical terms, the possibilities of raising new capital through bank loans will necessitate that older debt is repaid or subject to debt discharge. Most bankrupt entrepreneurs are heavily indebted and therefore have no chance of repaying their debts unless a discharge is awarded.

Debt discharge implies that the bankruptcy proceedings are finalised and that a formal application for discharge has been submitted. In addi-

tion, the bankrupt entrepreneur is bound to repay the debt by instalments, often 3 to 5 years. The different phases from when a bankruptcy is declared to the debt discharge make up the time frame that creditors have claims on a bankrupt's assets.

In 2005, Denmark made a series of adjustments to its bankruptcy legislation. Consequently, it is much easier to be awarded a discharge. Previously, the insolvent party could only be awarded a discharge if he or she could uphold a stable income following the liquidation, a demand that most restarters are not able to fulfil. Today, the stable income requirement has been removed from the bankruptcy legislation. On the other hand, the new legislation allows for increasing the debt instalments if the bankrupt entrepreneur is capable of repaying a larger sum than predicted.

The most substantial new piece of legislation is the reduction of the time associated with complete debt discharge. The repaying period has been lowered from 5 to 3 years. In addition, bankruptcy proceedings may be commenced earlier in the process.

This implies that the debtor is disengaged from the majority of his or her liabilities at the time when the discharge is awarded. This will make it easier for restarters to raise new capital.

Furthermore, there are no provisions as to the possibility of restarting following a bankruptcy. In some countries, bankrupt entrepreneurs may be prohibited from holding a managerial position or being a member of the board of another company.

Despite the change of legislation, Denmark continues to trail the top-performing countries. This can be probably be accredited to the absence of a repayment schedule. In Denmark, the debt is rescheduled following the bankruptcy proceedings. The time that creditors have claims on a bankrupt's assets is identical to the time spent on the bankruptcy proceedings.

A large number of countries, including Denmark, have adjusted or are planning to change their bankruptcy legislation to improve restart possibilities. The United States, which has the most lenient restarting possibilities, has tightened its bankruptcy legislation. However, this only applies to individuals and not to companies.

A2.10 Entrepreneurship Education

To improve the scope of entrepreneurial skills, the availability of entrepreneurship degrees and courses in elementary schools and higher education should be addressed. Activities that go beyond traditional learning, such as internships, entrepreneurship centres, entrepreneurial training of teachers and professors, and entrepreneur teachers, are vital to entrepreneurship education. The introduction of entrepreneurship education in life-long learning programmes is also very important.

There are available indicators for entrepreneurship education in primary, secondary and higher education. However, there are no available indicators for short and medium term education. Improved indicators for the supply of entrepreneurship education are currently being developed.

The policy area is measured by applying survey-based indicators (Box A2.10).

Box A2.10 Indicators – Entrepreneurship Education

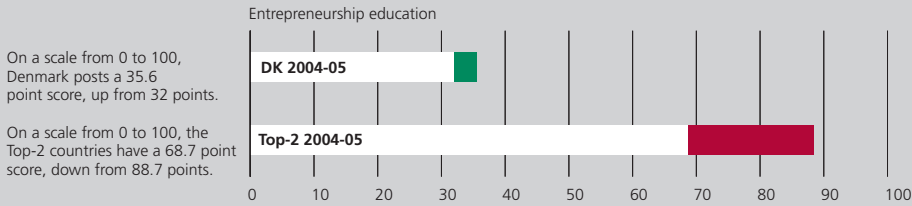
Entrepreneurship education at primary and secondary levels measures the perception of entrepreneurship experts of the quantity and quality of entrepreneurship education in primary and secondary education. Source: GEM and Schøtt (2005C).

Entrepreneurship education at higher levels measures the perception of entrepreneurship experts of the quantity and quality of entrepreneurship education in higher education. Source: GEM and Schøtt (2005C).

Entrepreneurship education is one of the areas where Denmark has seen the largest gap vis-à-vis the Top-3 countries. Denmark has made some progress since last year, while the performances of Top-3 countries have dramatically decreased. Overall, Denmark continues to trail the Top-3 countries (Figure A2.24).

Entrepreneurship education is the one policy area where Denmark has gained the most ground on the Top-3 countries. However, this is primarily a result of a considerable decline of the Top-3's collective performance. Overall, Denmark has closed the gap by almost half when compared to the 2004 Index.

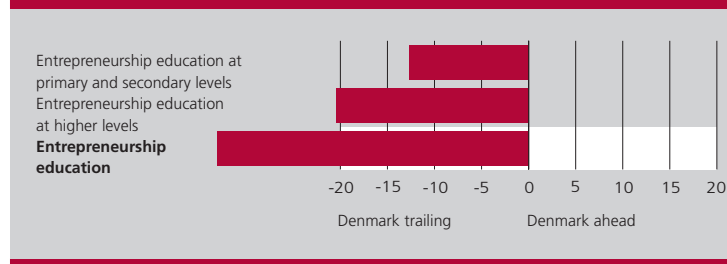
Figure A2.24 Entrepreneurship Education in Denmark and in the Top-3



What explains the Gap between Denmark and the Top-3?

The supply of entrepreneurship education is measured by a survey-based indicator in which experts have been asked to assess the availability of entrepreneurial programmes in Denmark (Schött, 2005C). The indicator is opinion-based which makes it difficult to assess the underlying rationale behind the gap. According to the experts' assessments, there is a significant gap in higher education. The gap is also evident in basic education although to a smaller extent (Figure A2.25).

Figure A2.25 Gap between Denmark and the Top-3 – Entrepreneurship Education

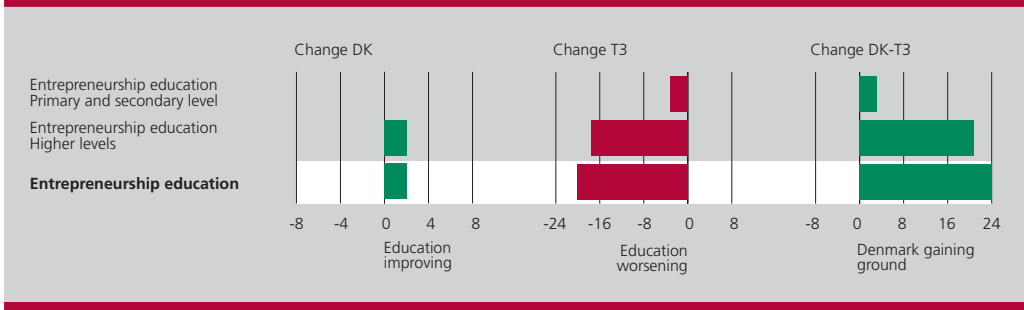


A previous study from the National Agency for Enterprise and Construction (2004a) points to a number of areas where Denmark trails considerably behind the United States and Canada. The 2004 study shows that student participation in entrepreneurial programmes is much higher in the United States and Canada, although to a lesser extent in Canada. Furthermore, the American universities offer a wider range of entrepreneurship courses and activities.

2004-2005 Developments

Denmark's ranking in primary and secondary education remains unchanged. There has been a large shift in the area of entrepreneurship education at university level where Denmark has made marginal progress and where the Top-3 countries have witnessed a massive decline in performance (Figure A2.26).

Figure A2.26 2004-2005 Developments – Entrepreneurship Education



The launch of the Danish Entrepreneurship Academy (IDEA) may help explain Denmark's progress. In addition, the poor showing of the Top-3 countries can be accredited to an increasingly negative assessment of Canada's entrepreneurship programmes.

The decline in Canada's ranking is primarily a result of several published reports which question the quality of its entrepreneurship education and the lack of educational and managerial skills.

A2.11 Traditional Business Education

Traditional business education offered in business schools supply courses in accounting, financing, management, etc. These are important skills when one envisages launching and running an enterprise.

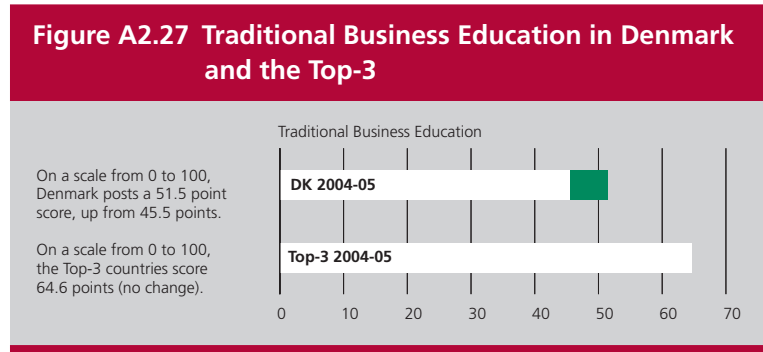
There are significant differences in the scope and quality of traditional business educations across countries. In some countries, basic business courses are part of the curriculum in primary and secondary education, while in other countries, only business schools supply business related courses.

There are no comparable indicators for measuring the scope of traditional business education. Thus, the policy is measured by applying a survey-based indicator (Box A2.11).

Box A2.11 Indicator – Traditional Business Education

Quality of management schools measures business executives' assessment of the quality of management or business schools. Source: WEF, Global Competitiveness Report.

Posting a score of 57.9 points, Denmark trails behind the Top-3 countries (69.3 point average) (Figure A2.27).



In the United States and Canada, the scope and quality of their traditional business education is perceived as being among the world's best, whereas the quality of Korea's traditional business education is lower compared to Denmark. Compared to the 2004 Index, Denmark has seen some progress in this policy area, while the Top-3 average remains unchanged.

A2.12 Government Programmes

A strong entrepreneurship infrastructure requires a tightly-knit private regional network of professional, highly-skilled entrepreneurial advisors that supply knowledge and know-how. Advisors include lawyers, controllers, experienced entrepreneurs, mentors and technical experts.

The entrepreneurship infrastructure contains both public and private elements. Private involvement and co-operation in building successful entrepreneurial enterprises are vital for the success of the entrepreneurship infrastructure.

Unfortunately, no quality-approved data is available for the private part of the entrepreneurship infrastructure.

The public sector can make a valuable contribution to the development of the entrepreneurship infrastructure by supporting or developing the infrastructure until it is self-sustaining.

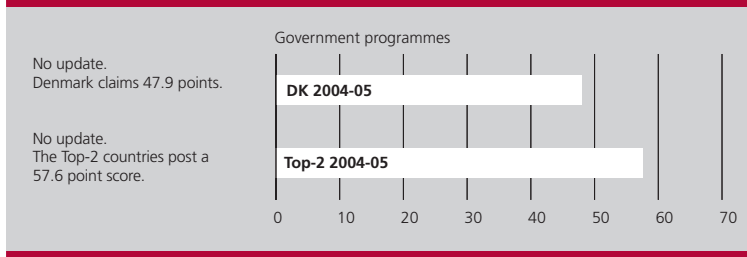
The policy area is measured by applying an indicator in which experts have been asked to assess the quality and the scope of government counselling (Box A2.12).

Box A2.12 Indicators – Government Programmes

Government programmes measures entrepreneurial experts' assessment of government counselling programmes implemented to promote the creation and subsequent growth of new enterprises. Source: GEM.

The indicator for government programmes has not been updated in this year's report.

Figure A2.28 Government Programmes in Denmark and the Top-3



In 2004, the National Agency for Enterprise and Construction published a report on incubators and private advisors (2004B). The study showed that the Danish entrepreneurship infrastructure was underdeveloped compared to a number of high growth regions around the world. However, the lack of quality and reliable data makes it difficult to measure the exact size and quality of these government programmes.

A comprehensive mapping out of entrepreneurship infrastructure and government programmes across a range of regions has therefore been initiated in Denmark. The study is expected to provide policy makers with an in-depth understanding of the regional infrastructures in one or two Danish regions as well as in multiple regions across Europe.

A2.13 Personal Income Tax

High personal income taxes are detrimental to the potential rewards gained from launching a business, and will ultimately reduce the number of potential entrepreneurs. A reduction in personal income taxes will increase the number of potential entrepreneurs. Some countries have implemented tax discounts or lower tax levels for entrepreneurs and small businesses (Box A2.13).

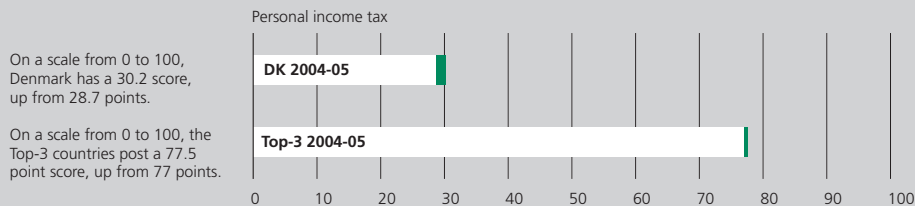
Box A2.13 Indicators – Personal Income Tax

Highest marginal income tax rate plus contributions measures the highest rate of taxation for single, high income person without children in percentage of the gross wage. Source: OECD.

Average income tax plus social contributions measures the average tax rate for a single person without children in percentage of the gross wage. Source: OECD.

Given the high personal income tax in Denmark it is not surprising that Denmark trails the Top-3 countries to a considerable extent (Figure A2.29).

Figure A2.29 Personal Income Tax in Denmark and the Top-3

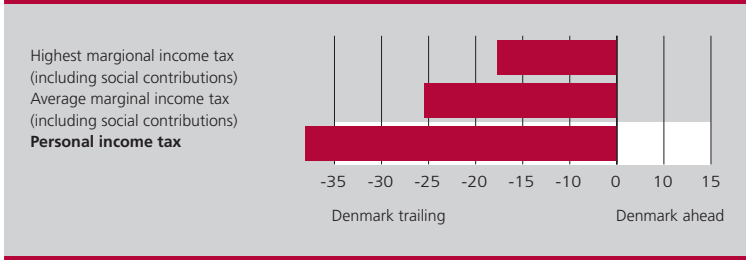


Denmark has lowered personal income taxes marginally over the past year and scores 28.7 points (30.2). The gap vis-à-vis the Top-3 is still sizable; and Denmark trails the top-performing countries by a staggering 47 points.

What explains the Gap between Denmark and the Top-3?

The average personal income tax is significantly higher in Denmark as compared to the Top-3 countries. Denmark also trails the Top-3 countries in highest marginal income tax (Figure A2.30).

**Figure A2.30 Gap between Denmark and the Top-3
– Personal Income Tax**

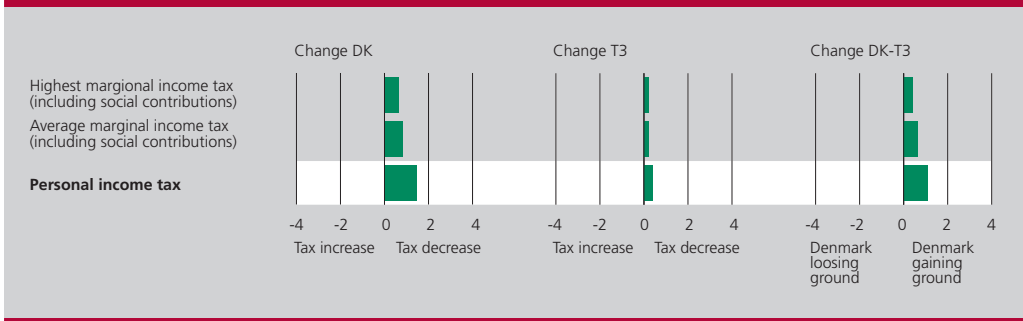


A traditional welfare state, Denmark has a much heavier tax burden compared to the Top-3 countries. Large reductions in income taxes are cost-heavy, and it would be impossible to lower personal income tax levels substantially without cutting back on the social benefits offered by the welfare state. Some countries including the UK, Korea and the Netherlands have opted to offer tax incentives to entrepreneurs through favourable tax treatment of stock options, new-firm investments, etc. The Danish Government has earmarked 200 million DKK for targeted tax reductions for innovative growth-oriented entrepreneurs.

2004-2005 Developments

Reductions in personal income tax levels have a profound impact on overall tax revenues. Consequently, drastic changes in country tax revenues are rare. The analysis shows only marginal changes in personal income tax levels in Denmark and in the Top-3 (Figure A2.31).

Figure A2.31 2004-2005 Developments – Personal Income Tax



The government's latest tax reform in 2004 expires in 2007. The tax reform introduced a job allowance and raised the threshold for paying the medium tax bracket by 36 000 DKK. The tax reform lowers the marginal tax rate by six percentage points for 750 000 taxpayers in the intermediate bracket.

The Government has stated that further improvements in economic conditions may result in further tax cuts. In the spring of 2006, the Danish Government will introduce a long-term plan for the Danish economy which will include considerations for future tax cuts.

A2.14 Corporate Tax (including Fiscal Incentives)

While the corporate tax level does not play a significant role for emerging companies, it does, however, influence future profits in high-growth companies. Increased globalisation will have a profound impact on the physical location of emerging companies. In that respect, the corporate tax level plays a significant role in the long term.

Fiscal incentives such as financial aid, tax discounts or tax exemptions will influence entrepreneurial activity. However, fiscal incentives remain a sensitive issue and the long-term consequences have been the focus of much debate.

Data on tax levels and tax revenues are available, whereas fiscal incentives are not covered by internationally comparable indicators (Box A2.14).

Box A2.14 Indicators – Corporate Tax

SME tax rates measure the corporate tax rate for small and medium-sized businesses. Source: Chen, Lee and Mintz, OECD.

Revenue from corporate taxes measures the revenue from corporate income tax as a percentage of GDP (3-year moving average). Source: OECD.

The corporate tax level for small business is relatively high in Denmark as compared to the Top-3 countries. However, the gap is somewhat smaller compared to the personal income tax gap. Compared to the 2004 Index, Denmark has made limited improvements (Figure A2.32).

Figure A2.32 Corporate Tax in Denmark and the Top-3

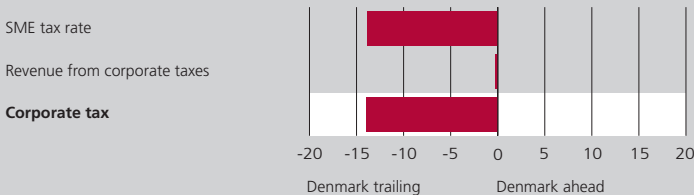


Denmark claims 65.1 points, while the Top-3 countries post an average score of 79.1 points.

What explains the Gap between Denmark and the Top-3?

In terms of total revenue from corporate taxation, Denmark is at the same level with the Top-3. However, the corporate tax rate for SMEs is significantly higher in Denmark (Figure A2.33).

Figure A2.33 Gap between Denmark and the Top-3 – Corporate Tax

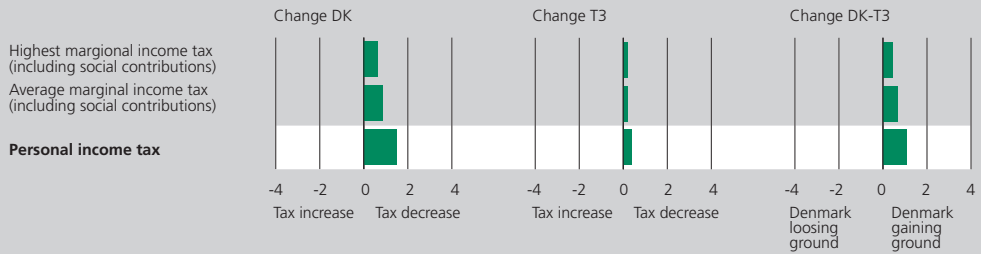


A number of countries have implemented lower tax rates for SMEs. However, this is not the case in Denmark, where the majority of companies are small or medium-sized. The United States, Canada and Korea impose lower taxation levels on SMEs. Still, the total tax revenue is larger in these countries than in Denmark.

2004-2005 Developments

There are rarely any dramatic changes in corporate taxes. The 2005 Index appears to confirm this statement (Figure A2.34).

Figure A2.34 2004-2005 Developments – Corporate Tax



Data on corporate taxes for SMEs is from 2000 where the tax rate was 32 percent. In 2001, the corporate tax rate was lowered to 30 percent, and in 2005 the corporate tax rate will be 28 percent.

A2.15 Bankruptcy Legislation

Bankruptcy legislation is about trade-offs. On the one hand, the creditor’s interests need to be protected. On the other hand, an entrepreneur that finds himself in a financial predicament though no fault of his own should be given a second chance.

Governments have a wide range of options in lowering bankruptcy costs such as debt discharge, debt restructuring, and postponement of debt. Debt discharge regulates the uncertainty and the costs incurred during bankruptcy, which in turn affects both the indirect and direct costs of bankruptcy. Restructuring and debt postponement are often carried out prior to an actual bankruptcy and may save viable, yet insolvent companies, lowering the prospects of default in the process.

Indicators that may shed further light on the differences in bankruptcy legislation across OECD countries are currently being compiled. Today, bankruptcy legislation is measured by applying three World Bank indicators (Box A2.15).

Box A2.15 Indicators – Bankruptcy Legislation

Actual cost to close a business measures the cost of closing a business in percent of the estate, based on a standard business closure. Source: World Bank, Doing Business.

Actual time to close a business measures the actual time to close a business recorded in calendar years. The indicator is based on a standard business closure. Source: World Bank, Doing Business.

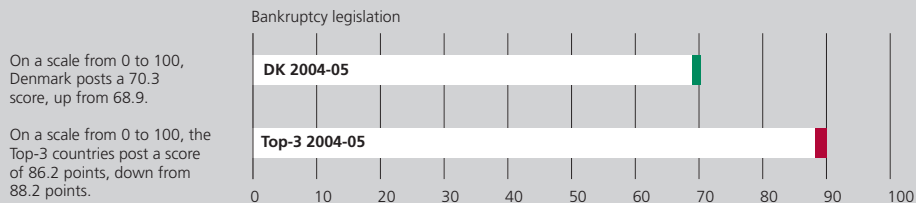
Recovery rate measure the effectiveness of bankruptcy legislation by estimating the pay back rate, i.e. how many cents per dollar that creditors are paid from an insolvent estate. Source: World Bank.

The quality of data on bankruptcy legislation has been the focus of much discussion. Data is compiled by the World Bank. The time and costs associated with closing a business will show some variation on a case-by-case basis. Thus, data is built around a hypothetical case study, developed by the World Bank and international experts.

There was only one Danish participant in the World Bank survey. The participant is a practicing bankruptcy lawyer employed by a Danish law firm. Responses reflect a broad selection of bankruptcies in which the law firm has been involved. For quality control purposes, these results have been discussed with the World Bank.

Compared to the top-performing countries, World Bank calculations show that it is more expensive and time-consuming to close an insolvent estate in Denmark. However, the gap has narrowed since the 2004 Index (Figure A2.35).

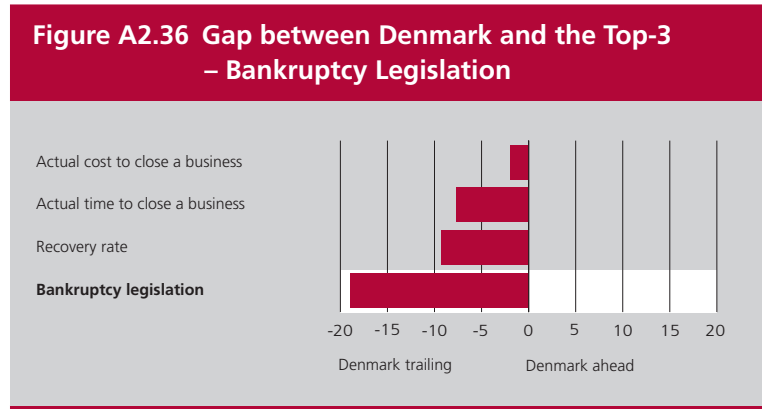
Figure A2.35 Bankruptcy Legislation in Denmark and the Top-3



Denmark has moved from 68.9 points to 70.3 points, while the Top-3 countries have experienced a marginal decline from 88.2 to 86.4. Overall, Denmark has closed the gap by 7 points.

What explains the Gap between Denmark and the Top-3?

Measured in terms of time and the costs associated with the closing of a business, Denmark trails considerably behind the Top-3 countries (Figure A2.36).

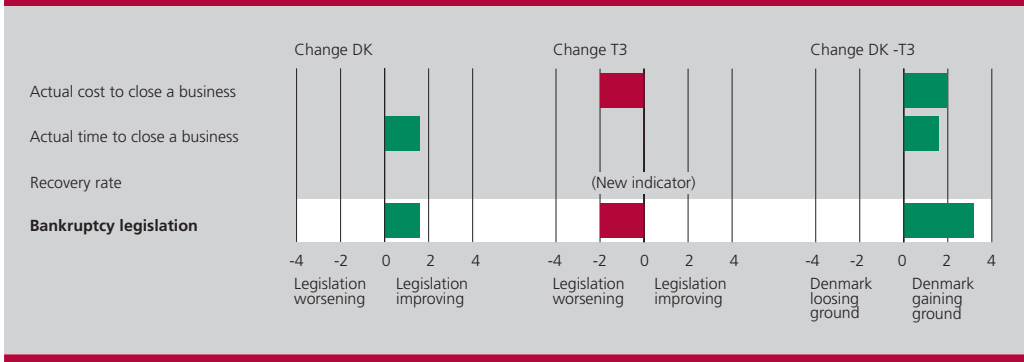


The largest detectable differences are found in two areas: the time associated with closing a business and the recovery rate. In Denmark, the average time spent on closing a business is 3.4 years. In the Top-3 countries, the average time spent is 1.7 years. In Denmark, the cost of closing a business is approximately 8 percent of total assets. In the Top-3 countries, the cost is roughly 5 percent.

2004-2005 Developments

While Denmark has seen a decline in the time associated with closing an insolvent estate, there has been a slight increase in the costs associated with closing of an estate in the Top-3 countries (Figure A2.37).

Figure A2.37 2004-2005 Developments – Bankruptcy Legislation



The World Bank continuously improves its methods and the case study used for measuring bankruptcy legislation. Data for 2003 and 2004 are therefore not fully comparable.

The time associated with closing an insolvent estate has narrowed in Denmark. However, this is not a result of changes to existing legislation. The favourable market conditions in Denmark have led to a sharp decline in the number of bankruptcies among larger companies. Large company bankruptcies are often complicated and time-consuming. Companies that go bankrupt are often smaller and thus less complicated to settle.

A2.16 Administrative Burdens

The term “administrative burdens” covers the time and resources spent on collecting, drafting and reporting information to government institutions. Administrative burdens may be mandatory, but they pose an immediate cost for the individual entrepreneur. A high level of administrative burdens will undoubtedly lead to a lower entrepreneurial activity level. The composite measure for administrative burdens is a simple average of eight indicators (Box A2.16).

Box A2.16 Indicators – Administrative Burdens

Number of procedures for starting a business records the generic procedures that are officially required for an entrepreneur to start an industrial or commercial business. Source: World Bank, Doing Business.

Average number of days for starting a business measures the average time spent during each enterprise start-up procedure in calendar days per start-up procedure. Source: World Bank, Doing Business.

Costs incurred to start a business measures the official costs when starting a business. Source: World Bank, Doing Business.

Regulatory and administrative opacity measures the simplicity in obtaining permits and licenses from the government as well as the regulatory and administrative opacity in business-related rules and administrative practices. The measure is an index of questions covering the process of obtaining permits, license and authorisations, as well as the extent to which authorities make concerted efforts in making business-related regulation intelligible and simple. Source: OECD

Enforcing contracts – number of procedures measures the number of procedures mandated by law or court regulation that require interaction between the concerned parties or between them and the judge, administrator or court officer. Source: World Bank, Doing Business.

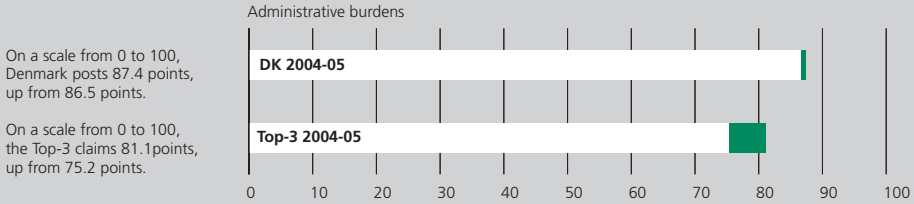
Enforcing contracts – time measures the average number of days from the moment the plaintiff files the lawsuit until the settlement or payment. Source: World Bank, Doing Business.

Enforcing contracts – cost in percentage of debt measures the official costs of going through court procedures in percentage of the debt value. Source: World Bank, Doing Business.

Required capital for starting a business with limited liability measures the required capital in a company with limited liability. Source: World Bank, Doing Business.

Although the gap is closing, Denmark still has fewer administrative burdens (Figure A2.38).

Figure A2.38 Administrative Burdens in Denmark and the Top-3



While Denmark has made marginal reductions in its administrative burdens, the easing of administrative burdens among the Top-3 countries has narrowed the gap vis-à-vis Denmark. Compared to the 2004 Index, Denmark posts an 87.4 point score (86.5), while the Top-3 countries post an 81.1 point score (75.2).

What explains the Gap between Denmark and the Top-3?

Denmark trails behind the Top-3 countries only in one area; *regulatory and administrative opacity*. Denmark's strong showing in the remaining seven areas can be accredited to a low number of start-up procedures, low costs and few procedures in enforcing contracts (Figure A2.39).

Figure A2.39 Gap between Denmark and the Top-3 – Administrative Burdens



In terms of opacity and complexity of rules and administrative practice, Denmark trails the Top-3 countries. This is due to a lack of “one-stop shops”, where individuals embarking on starting a new business can fill out and hand in all relevant forms required to start a new business. In Denmark, the Danish Commerce and Companies Agency handle all company registrations, while VAT registration lies with the central Danish Tax Authority. The local tax authorities handle issues pertaining to estimates of future income. The Top-3 countries have all established “one stop shops”. On the other hand, Denmark has implemented a programme designated to reduce administrative burdens. Among the Top-3, only Korea has implemented such a programme. Another common characteristic of the Top-3 is the “silence is consent” rule, i.e. that licenses are issued automatically if the competent office has not acted by end of the statutory response period.

The average number of days spent on starting a business is lower in Denmark when compared to the Top-3 countries. In Denmark, the average time spent on starting a business is approximately 4 days compared to 3 days in Canada, 5 days in the United States and 22 days in Korea.

In Denmark, there are no immediate costs associated with launching a start-up enterprise. Costs in percentage of GDI per capita amount to 6 percent in the United States, 1 percent in Canada and 17.7 percent in Korea.

The average number of days for enforcing contracts in Denmark is 83 days, while the average for the Top-3 is 220 days. (350 days in Canada, 250 days in the United States and 75 days in Korea).

Denmark outperforms the Top-3 countries in terms of the actual number of procedures for starting a business. A Danish entrepreneur has to go through 4 start-up procedures while entrepreneurs in the Top-3 countries are subject to an average of six generic start-procedures. It should be noted that the number of procedures for the Top-3 countries show some variation; 2 procedures in Canada, 5 in the United States and 12 in Korea.

Danish entrepreneurs face fewer procedures (15) in enforcing contracts as compared to the Top-3 countries (17, 17 and 29 in Canada, the United States and Korea, respectively).

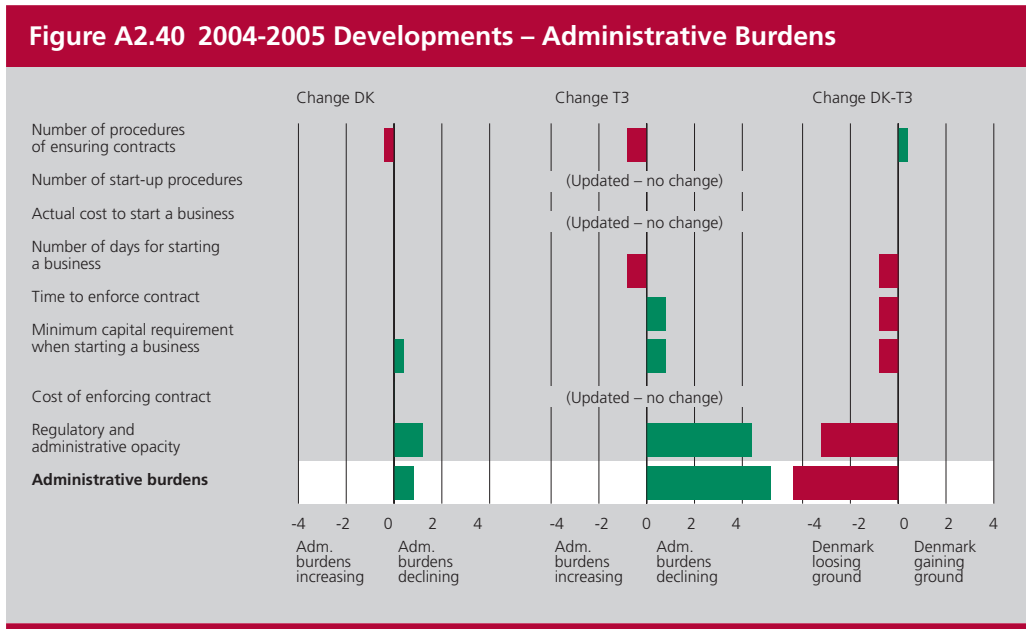
Denmark outperforms the Top-3 countries in terms of the required capital investment in a company with limited liability. The capital invest-

ment in a private limited company amounts to 125 000 DKK in Denmark (48.8 percent of GDI per capita). The average capital demand in the Top-3 countries is 110 percent. The United States and Canada have no capital demands, while Korea alone penalises the overall Top-3 ranking with capital demand that is almost 7 times higher than that in Denmark.

When measuring the costs of enforcing contracts, Denmark is ahead of the Top-3 countries. The average cost is 6.6 percent of the debt value as compared to an average 8.3 in the Top-3 countries (12, 5 and 4 percent in Canada, the United States and Korea, respectively).

2004-2005 Developments

Compared to the 2004 Index, the Top-3 countries have lowered the administrative burdens in 5 of the 8 indicators, while Denmark has improved 3 indicators (Figure A2.40).



Denmark and the Top-3 countries have experienced an increase in the number of procedures required when enforcing contracts. Korea has increased the number of procedures from 23 to 29, while Denmark has added one procedure (from 14 to 15). Canada and the United States have 17 procedures in enforcing contracts. Overall, Denmark has moved further ahead of the Top-3 countries.

The 2005 Index registers no changes as to the number of start-up procedure required when starting a new enterprise.

The Danish start-up costs remain unchanged. An increase in start-up costs in Canada is offset by lower start-up costs in Korea.

The average number of days for starting a business remains unchanged in Denmark. Overall, the Top-3 countries have made significant improvements. This is primarily due to the fact that Korea has lowered the average start-up time by a staggering 132 days (11 days per start-up procedure).

The number of days in enforcing contracts also remains unchanged in Denmark. Both Canada and the United States have lowered the number of days for enforcing a contract (From 425 days to 346 days in Canada and from 365 to 250 days in the United States. The Top-3 average has therefore improved significantly as compared to the 2004 Index.

In Denmark, the minimum capital investment in a private limited company is 125 000 DKK. On the other hand, the Danish gross national income has increased since the 2004 Index. This implies that, all other things being equal, the minimum capital requirement is easier to fulfil for the individual entrepreneur. Among the Top-3 countries, Korea has lowered the capital requirement by 20 percent, while the United States and Canada have no capital requirements. Overall, the Top-3 countries are gaining ground on Denmark.

The figure shows that Denmark has lowered the costs of enforcing a contract. However, the improvement is entirely a result of improved data collection. While Denmark's position has improved, no improvement in the underlying Danish framework conditions has occurred.

Although Denmark has seen a reduction in the complexity of rules and administrative practice, the Top-3 countries have performed even better. The Danish company panels assess the consequences of new rules and regulations and are active in mapping out administrative burdens. Both Korea and the United States have set up "one-stop shops". Korea has introduced a comprehensive review of the country's administrative burdens, while Canada has enforced a "silence is consent" rule.

A2.17 Labour Market Regulation

Entrepreneurial activity may be negatively affected by rigid labour market regulation, including high minimum wages and difficulties in hiring or firing employees. Wage-paying jobs are becoming more and more attractive, limiting the incentives to become an entrepreneur. Secondly,

limitations in the possibilities of hiring or firing employees will have a significant impact on an emerging enterprise.

The policy area of labour market regulation is covered by a simple average of six indicators (Box A2.17).

Box A2.17 Indicators – Labour market regulation

Flexibility of hiring index measures whether legislation or other regulations have implications for the difficulties of hiring a standard worker in a standard company. Source: World Bank, Doing Business.

Flexibility of firing index measures whether legislation or other regulation have implications for the difficulties of firing a standard worker in a standard company. Source: World Bank, Doing Business.

Flexibility of overtime work is an index with five components that measure the rigidity of rules pertaining to overtime work. Source: World Bank, Doing Business.

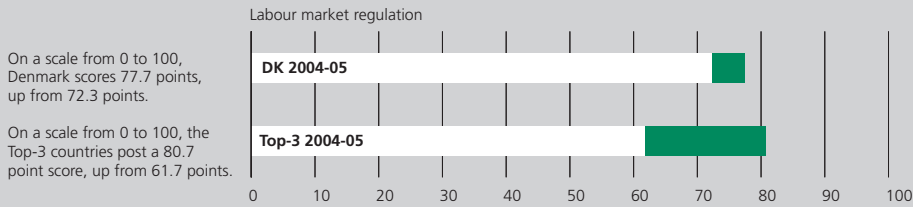
Number of administrative procedures when recruiting the first employee measures all mandatory contacts that employers have to make with administrative units in the recruitment process for the first employee. Source: European Commission.

Number of administrative procedures when recruiting additional employees measures all mandatory contacts that employers have to make with administrative units in the recruitment process of additional employees. Source: European Commission.

Cost of firing measures the costs related to firing employees; advance notice requirements, severance payments and penalties due in terms of weekly wages in a standard company. Source: World Bank, Doing Business.

Both Denmark and the Top-3 countries, in particular, have improved their market regulation (Figure A2.41).

Figure A2.41 Labour Market Regulation in Denmark and in the Top-3 Countries

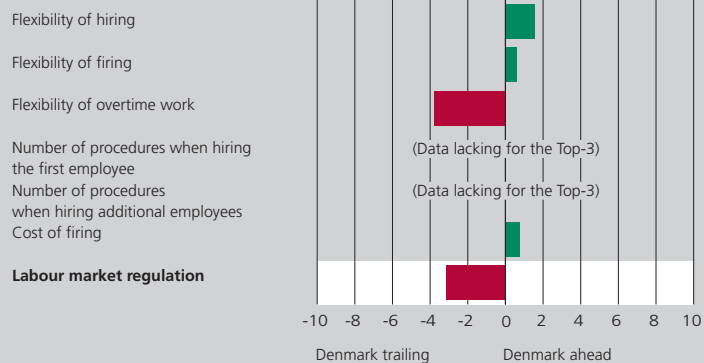


With scores of 77.7 points and 80.7 points, respectively, Denmark and the Top-3 countries belong to the elite group of countries in terms of flexible labour markets.

What explains the Gap between Denmark and the Top-3?

As mentioned above, there is no significant gap between Denmark and the Top-3 countries (Figure A2.42).

Figure A2.42 Gap between Denmark and the Top-3 – Labour Market Regulation



Rules pertaining to the hiring and firing of employees are more flexible in Denmark, and the costs of firing are marginally lower. On the other hand, the rigidity of working overtime is marginally higher in Denmark. Unfortunately, there is lack of indicators for the two remaining areas (number of procedures for hiring first employee and number of procedures for hiring additional employees).

The Danish labour market is subject to very limited regulation. Instead, the market is regulated by voluntary collective agreements involving the relevant labour market parties. The flexibility of hiring covers *inter alia* the use of temporary contracts and minimum wages. There are no limits to the duration of temporary contracts or the number of renewals of temporary contracts in Denmark. However, on more than one occasion Danish courts of law have declared temporary contracts invalid because they have been used to occupy permanent jobs and this is against the law. Minimum wages are not statutory but are regulated by collective agreements.

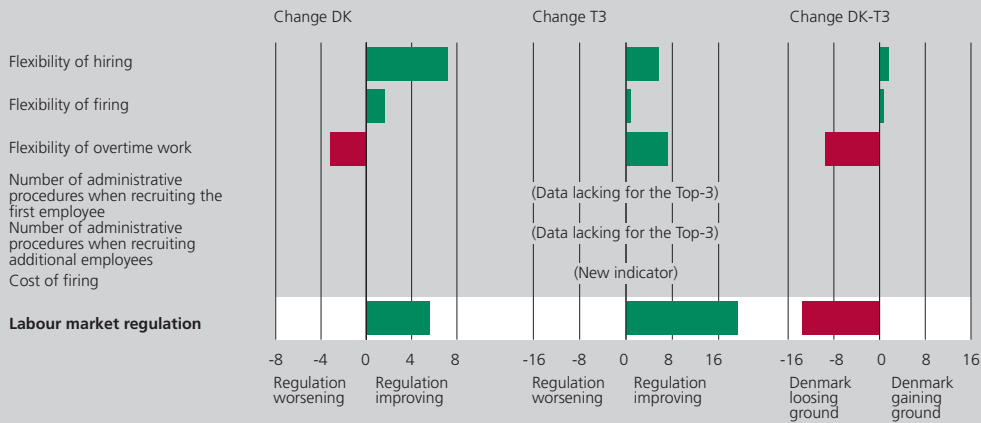
White collar workers are the most common form of employment and the rules on firing are stipulated in the relevant legislation. The precise costs of firing an employee depend *inter alia* on the duration of employment. However, in general it is quite easy and simple to fire a white collar worker. Most Danes have a 37-hour working week. Overtime compensation is 50 or 100 percent. There are no limitations to the number of weekly work days or the maximum number of working hours.

However, there is a rule stating that any employee should be given 11 hours of rest before commencing work again, and over a three-month period the average number of working hours per week should not exceed 48 hours.

2004-2005 Developments

Denmark has made some progress with regard to flexibility of hiring. This applies to the Top-3 countries as well, who have also made progress in overtime work rules (Figure A2.43).

Figure A2.43 2004-2005 Developments – Labour Market Regulation



The World Bank has improved the number of indicators, which may lead to changes in the ranking. The Danish company that submitted answers to the World Bank’s survey has now been replaced by another company. Hence, it has not been possible to precisely map out the underlying rationale behind Denmark’s ranking in the 2005 Index.

A2.18 Culture/Motivation

Motivation is clearly an important factor for a country’s entrepreneurial activity. A lack of motivation renders incentives, opportunities and skills obsolete.

It is difficult, if not impossible, to detect the reason why people become self-employed: a dismissal notice or a new invention? Others are motivated by the idea of making the world a better place, while some are motivated by the thought of being their own boss.

It is a sizable task to create an entrepreneurship culture and to motivate the public to become entrepreneurs. The Danish Government is attempting to increase the general level of motivation by launching entrepreneurship campaigns and awards. In addition, initiatives in the educational system will probably influence positively the culture and motivation to become an entrepreneur.

The area of culture/motivation is covered by six indicators (Box A2.18).

Boks A2.18 Indicators – Culture/Motivation

Cultural and social norms measures entrepreneurial experts' perception of cultural and social norms based on five questions. Sources: GEM and Schøtt (2005B).

Entrepreneurial motivation. The indicator measures entrepreneurial experts' assessment of entrepreneurial motivation. The indicator is based on four questions. Source: GEM and Schøtt (2005B).

Self-employment preferences measures individuals' preferences towards being self-employed or being a regular employee. Source: Eurobarometer.

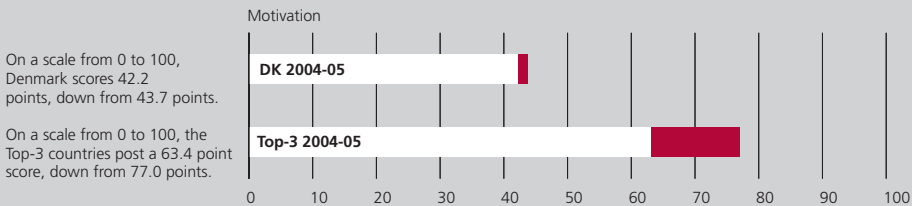
Desirability of becoming self-employed – short term measures people's desire to become self-employed in the short term. Source: Eurobarometer.

Desirability of becoming self-employed – long term measures people's desire to become self-employed within the next five years. Source: Eurobarometer.

Risk of business failure measures people's perception of being willing to start a business if a risk exists that it might fail. Source: Eurobarometer.

Despite a narrowing of the gap between Denmark and the Top-3 countries, entrepreneurial motivation is still much higher in the Top-3 countries (Figure A2.44).

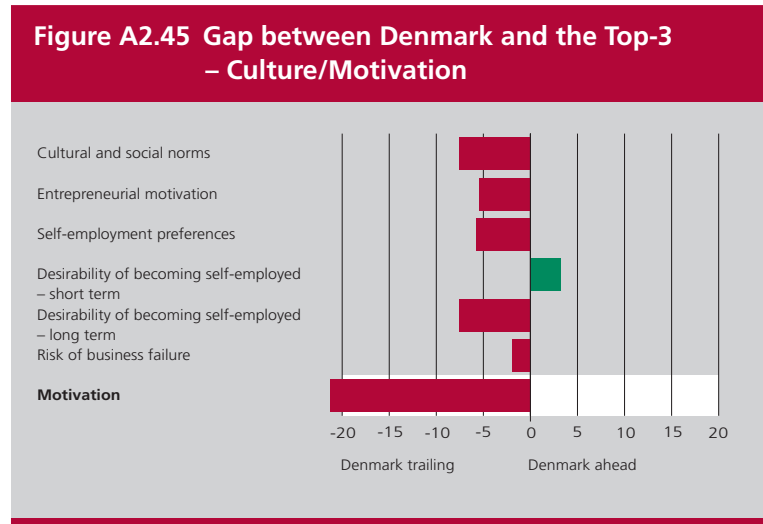
Figure A2.44 Culture/Motivation in Denmark and the Top-3



While Denmark has seen a marginal decline from 43.7 points to 42.2 points, the Top-3 countries have seen a dramatic fall in entrepreneurial motivation (77 in 2004, 63.4 in 2005).

What explain the Gap between Denmark and the Top-3?

In five of the six indicators, Denmark trails the Top-3 countries. Expert assessments suggest that the Danish society shows little appreciation for the risk of business failure or individual success. The indicator for desirability to become self-employed in the short term shows Denmark ahead of the Top-3 countries (Figure A2.45).

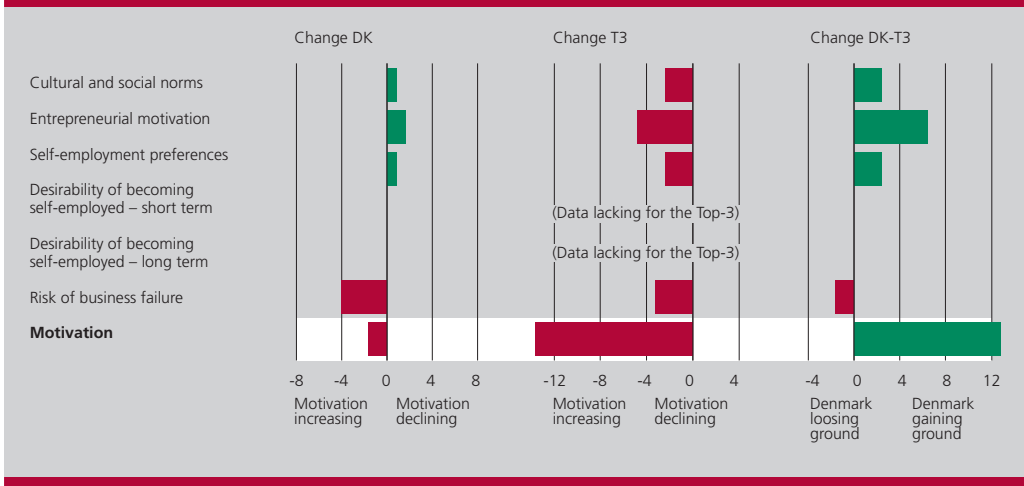


Two indicators, expert assessments of cultural and social norms, and the desirability to become entrepreneurs in the longer term, explain the gap between Denmark and the Top-3 countries. Denmark also trails the Top-3 countries in terms of motivation and the desirability to own one's own business.

2004-2005 Developments

Compared to the 2004 Index, Denmark has made only limited changes in indicator scores, while the Top-3 countries have made significant progress in several indicators (Figure A2.46).

Figure A2.46 2004-2005 Developments – Culture/Motivation



Denmark has seen a significant drop in the score for risk of business failure. Fewer Danes are willing to launch a company if risks exist that it might fail. The same trend exists across the Top-3 countries. While difficult to specify the reason for this phenomenon, the continued debate on recession and economic crisis is a possible explanation.

It is difficult to influence culture and motivation through policy initiatives. Consequently, the government has launched a series of campaigns that aim at changing the overall attitude towards entrepreneurs and to raise the general level of awareness of how entrepreneurs contribute to the Danish economy. Students, schools and educational institutions that have shown a particular interest in entrepreneurship are awarded, and the Danish Government launched in 2005 an entrepreneurship campaign where promising entrepreneurs were celebrated in Copenhagen.

Recent studies suggest that motivation is reflected in a country's framework conditions (Schramm, 2004). If this is true, Denmark will most likely see a higher level of entrepreneurial motivation in line with its improving framework conditions.

References

Armour and Cumming (2005). *Bankruptcy Law and Entrepreneurship*, Berkeley Electronic Press, Berkeley.

Betts and Lee (2004). *Universities as Drivers of Regional Growth and National Innovation: An Assessment of the Linkages from Universities to Innovation and Economic Growth*, University of San Diego, San Diego.

Birch (1987). *Job Creation in America: How our Smallest Companies put Most People to Work*. Free Press, New York.

Boston Consulting Group (2002). *A Report on the Entrepreneurial Restarters: Setting the Phoenix Free*, the Boston Consulting Group, Germany.

Carroll, Holtz-Eakin, Rider and Rosen (2000). *Personal Income Tax and the Growth of Small Firms*, NBER, Massachusetts.

Carroll, Holtz-Eakin, Rider and Rosen (1998A). *Income Taxes and Entrepreneurs' Use of Labour*, NBER, Massachusetts.

Carroll, Holtz-Eakin, Rider and Rosen (1998B). *Entrepreneurs, Income Taxes, and Investment*, NBER, Massachusetts.

Charney and Libecap. (2000). *Impact of Entrepreneurship Education*, Kauffman Foundation, Kansas City.

National Agency for Enterprise and Construction (2005). *Growth and Dynamics in New Enterprises – 5th Statistical Portrait*, National Agency for Enterprise and Construction.

National Agency for Enterprise and Construction (2004A). *Entrepreneurial Education at Universities – A Benchmark Study*, National Agency for Enterprise and Construction, Copenhagen.

National Agency for Enterprise and Construction (2004B). *Benchmarking Incubators*, National Agency for Enterprise and Construction, Copenhagen.

National Agency for Enterprise and Construction (2004C). *Entrepreneurship Index 2004*. National Agency for Enterprise and Construction, Copenhagen.

European Commission (2002). *Bankruptcy and a Fresh Start: Stigma on Failure and Legal Consequences of Bankruptcy*, EU Commission, Brussels.

FORA and Inside Consulting (2003). *A Benchmark Study of Innovation and Innovation Policy – What can Denmark Learn?*, FORA, Copenhagen.

Gentry and Hubbard (2004). *Success Taxes, Entrepreneurial Entry and Innovation*, NBER, Massachusetts.

Global Entrepreneurship Monitor (2004). *Danish Entrepreneurs in the Global Economy*, Børsen, Copenhagen.

Global Insight (2004). *Venture Impact 2004. Venture Capital Benefits to the U.S. Economy*, http://www.nvca.org/pdf/Venture_Impact_2004.pdf.

GTS (2005). *Innovation and Knowledge Transfer in the Manufacturing Industry*. <http://www.teknologiportalen.dk/NR/rdonlyres/C6F24422-D8BE-40BE-85EE-51A90098F0EB/1417/Innovationogvidensamspilrapporttiludsendelsefinal.pdf>.

Hellmann and Puri (2000A). *The Interaction between Product Market and Financing Strategy: The Role of Venture Capital*, Review of Financial Studies.

Hellmann and Puri (2000B). *Venture Capital and the Professionalization of Start-up Firms: Empirical Evidence*, Stanford University, Stanford.

Hoffmann, Anders et al. (forthcoming A). *Policy Framework for Entrepreneurship*, FORA, Copenhagen.

Hoffmann, Anders et al. (forthcoming B). *Quality Assessment of Indicators used to Benchmark the General Policy Framework for Entrepreneurship*, FORA, Copenhagen.

Kortum and Lerner (2000). *Assessing the Contribution of Venture Capital to Innovation*, RAND Journal of Economics.

Landier (2004). *Entrepreneurship and the Stigma of Failure*, New York University, New York.

Lee, Miller, Hancock and Rowen (2000). *The Silicon Valley Edge. A Habitat for Innovation and Entrepreneurship*, Stanford University Press, Stanford.

Lewis et al. (1984). *Success and Failure in Small Business*, Gower, Hampshire.

Monitor Group (2004). *Dynamic Benchmarking of Entrepreneurship Performance and Policy in Selected Countries*, the Monitor Group, Boston.

Nordic Minister Council (2002). *Nordic Charter for Small Innovative Companies, Entrepreneurs, and Investors*, Nordic Minister Council, Copenhagen.

Parker and Robson (2000). *Explaining International Variations in Entrepreneurship: Evidence from a Panel Study of OECD Countries*, University of Durham, Durham.

Schramm (2004). *Building Entrepreneurial Economies*, Foreign Affairs, Florida.

Schøtt, Thomas (2005A). *Intreneurial Activity in a Country: Index Constructions*, <http://www.sam.sdu.dk/~tsc/TEAnotat.doc>.

Schøtt, Thomas (2005B). *Entrepreneurship Culture in Denmark and other Countries*. <http://www.sam.sdu.dk/~tsc/CESFOkultur1.doc>.

Schøtt, Thomas (2005C). *Entrepreneurship Education in Denmark and other Countries based on GEM*, <http://www.sam.sdu.dk/~tsc/CESFOundervisning1.doc>.

Søgaard, Villy (ed.) (2005). *Annual Report 2004/2005 – Center for Small Business Research. Theme: Teaching Entrepreneurship*, University of Southern Denmark.

OECD (2005). *Micro-policies for Growth and Productivity*, Directorate for Science, Technology and Industry, Paris.

OECD (2002). *Policy Benchmarks for Fostering Firm Creation and Entrepreneurship*, Directorate for Science, Technology and Industry, Paris.

The Danish Growth Fund (2005). *The Significance of Venture Capital for Firm Growth*, The Danish Growth Fund, Copenhagen.

The Danish Growth Fund (2004). *What makes a Success? – A Profile of High-tech Entrepreneurs*, The Danish Growth Fund, Copenhagen.

White and Fan (2000). *Personal Bankruptcy and the Level of Entrepreneurial Activity*, <http://fic.wharton.upenn.edu/fic/papers/01/0111.pdf>.

Ministry of Economic and Business Affairs (2005). *Growth Report 2005*, Ministry of Economic and Business Affairs, Copenhagen.

Ministry of Economic and Business Affairs (2004). *Growth Report 2004*, Ministry of Economic and Business Affairs, Copenhagen.

World Bank (2005). *Doing Business in 2005*. Washington, D.C. Available at: www.doingbusiness.org.

Data Acknowledgement

Data from our study was partly supplied by the University of Southern Denmark and provided by the Global Entrepreneurship Monitor (GEM), which is a consortium that in 2004 comprised the following countries: Argentina, Australia, Belgium, Brazil, Canada, Chile, China, Croatia, Denmark, Ecuador, Finland, France, Germany, Greece, Hong Kong, Hungary, Iceland, Ireland, India, Italy, Japan, Korea, Mexico, Netherlands, New Zealand, Norway, Peru, Poland, Portugal, Russia, Singapore, Slovenia, South Africa, Spain, Sweden, Switzerland, Taiwan, Thailand, Turkey, Uganda, United Kingdom (which includes separate reports for Scotland and Wales), United States, Uruguay and Venezuela. The names of the members of national teams, the global co-ordination team, and the financial sponsors are published in the Global Entrepreneurship Monitor 2004 Report, which can be downloaded at www.gemconsortium.org.