How to Select, Prioritize and Evaluate Entrepreneurship Policies:

*An Evidence-Based Approach*

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*This thesis is presented as part of the Degree of*
*Master in Innovation, Entrepreneurship and Business Development*

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Abstract
Investigating the literature on entrepreneurship policy, two major streams can be distinguished. In the first stream, some specific policies are selected and discussed. These policies can come from the author’s experiences, researches or from analyzing the related experience of some other countries. Many papers and books have been devoted to this stream, particularly to different types of SME policies. In the second stream the researches are mainly about entrepreneurship frameworks, i.e. describing the explanatory factors which influence the level of entrepreneurship within a society as a framework such as Eclectic, OECD, or GEM Framework. However the theoretical literature on first stream has been expanded very fast and many different policies have been suggested and evaluated, but the policy frameworks have been addressed by only a few authors.

In addition to these two major streams directly devoted to entrepreneurship policies, there are other researches which their results can be used in designing entrepreneurship policies such as the researches investigate the role of social capital and human capital in stimulating entrepreneurship, or investigate entrepreneurship from a political economy perspective.

Despite all these researches, there is still one simple important question which has not been explicitly addressed: “How entrepreneurship policies should be designed and implemented?” In other words if a policy maker in a developed or developing society wants to stimulate entrepreneurship, then among all the entrepreneurship polices developed and suggested so far, and based on the results of all the researches in this field; which entrepreneurship policies will be the most influential for that specific society? What are the criteria which based on them entrepreneurship polices should be designed or selected? Considering the limited available resources, which polices will have the highest priorities for that specific society to allocate the resources? When and how entrepreneurship policies should be evaluated?

To answer these questions, this research provides a generic road map for considering the main issues and criteria when designing entrepreneurship policies in the real world. To develop such a road map, this research not only uses the results of the researches in entrepreneurship but also in public policy. One of the main points neglected in most of the related researches is that entrepreneurship policy actually is an interdisciplinary field, and is not just confined to entrepreneurship, but also can be investigated within the public policy discipline. Therefore while most of the researches have looked at entrepreneurship policy just from the entrepreneurship perspective, this research tries to use the results of the researches in policy making and public policy.

Among all the approaches developed and used for policy making, this research has found evidence-based policy the most appropriate and update one. Although evidence-based policy making is not an absolute, and there are some pitfalls, but comparing the other alternatives, it summons to mind Winston Churchill’s famous description of democracy as “the worst form of government except all others”. Evidence-base policy making is simply the best we’ve got (Dunworth T. et al., 2008).
Preface
This thesis is done as the final work of Master program in Entrepreneurship, Innovation and Business Development. The project was performed internally at the Management School of BTH University in Sweden, Karlskrona. The thesis has been supervised by Professor Lars Bengtsson.

The aim of this thesis is providing a road map for designing, selecting and prioritizing entrepreneurship policies based on the evidences from the target society which the policies are going to be implemented in. The model proposed in this thesis integrates the result of researches from the fields of entrepreneurship and public policy.

Along with discussing the theoretical aspects, this project tries to provide a practical road map which can be used by policy makers in the real world.

Habib M. Kachlami
30th June 2011
Acknowledgments

I would like to express my special gratitude for the advice and direction provided by Professor Lars Bengtsson. His course was an exciting introduction to my studies and also inspired my thesis topic, and as my supervisor, his discussion and suggestions contributed substantially to this thesis.

I also want to express my appreciation to all of the faculty and staff members of Management School for all their support throughout my two years of study. I was given many opportunities and I have learned a lot. I am grateful to each of them.
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“There is an oft-quoted line that the two things you should never watch being made are sausages and public policy.”

Lomas J. (2000)
Chapter 1: Introduction
1.1 Why this topic is important?
Each year around £8 billion is spent on entrepreneurship and SME policy in UK, approximately the same as the amount spent on the Police and is more than the spent on Universities (Storey D. J., 2008). Acquiring data from other countries is more difficult because UK is the only government in the world that has fully identified the scale of taxpayer funds devoted to supporting small firms and entrepreneurship (Storey D. J., 2008), however the “best guess” on a per capita basis is 10,000 USDs in the United States (Greene and Storey, 2008).

The above statistics are two samples representing the large amount of money spent on entrepreneurship and SME policy by governments around the world. Despite this huge amount of money spent, what we describe as entrepreneurship and SME policy probably does not work with great waste of money (O’Neill k., 2010). Although very few polices are carefully evaluated, and hence there is little knowledge about their cost efficacy and if they actually work (Braunerhjelm P., 2010), but where there have been meaningful evaluations, there is little evidence in support of policy efficacy (O’Neill k., 2010). For example in the case of UK the results of some evaluations done are as follow:

- In a study by Greene et al (2008), they looked at entrepreneurship over a 30 year period in an area of low enterprise in North East of England. Based on their study they concluded that “whilst it has been a laboratory for enterprise culture experiments for 30 years, it has not resulted in any clear acceleration of entrepreneurial activity” and “along with every other UK region remains in the same relative position as it did 10, 20 and probably 30 years ago”.

- In a review of the UK government intervention during 1997-2007 by Huggins and Williams (2007), they state that steps were taken “to tackle barriers to enterprise and entrepreneurship by addressing economic, political, legal and cultural issues” but they conclude that “there has been little improvement in start-up rates or other entrepreneurship indicators”.

- Reviewing the performance of the UK government on Small Business Service, the National Audit Office (2006) reported that “government spends over £2.6 billion (in 2003-4) in providing support to small business...[but]...SBS is not able to establish the overall impact of either its or wider Government activity on small business”.

- The Richard Review on Small Business and Government (2007) report that “There is a general lack of hard evidence about the impact of different types of programme and intervention” and “Genuine economic evidence of the impact (or otherwise) of assistance to small businesses is hard to find. The Government has been reluctant (or unable) to publish
any and has restricted itself to anecdotal or survey-based data. These clearly do
demonstrate that Government support does and can assist individual companies. But, given
the scale of expenditure, does this add up to a real impact on regional economies?"

From an international perspective on small business economics, Bannock G. (2005) states
that:

- “Our review of business policy instruments indicates that, with few exceptions, results are
  unimpressive”.
- He continues that “even for the exceptions, they are fairly marginal in their effects. There is
  no reason to suppose that if most subsidies and assistance programmes were abolished
  altogether, it would make a significant difference to the shape and prosperity of the SME
  sector anywhere”.
- He further reported that “All governments recognise the importance of SMEs and wish to
  promote them” but “most instruments used by governments to promote SMEs fail to
  achieve their objectives, or have only a very minor impact”.

Despite of not being many such findings that cast doubt on the effectiveness of
interventions, they provide significantly more reliable evidence in support of such a
conclusion than for the opposite view that intervention has worked (O’Neill k., 2010). In
the next section a summary of the main problems led to this situation, i.e. inefficacy of
many SME and entrepreneurship policies will be presented.

1.2 Problem statement

1.2.1 Lack of Evidences for Intervention/New E-Policy

Governments tend to rationalize their interventions (need for new policy) on the grounds of
“market failure”, i.e. barriers to entry/exit, unfair competition, information imperfections,
externalities, etc. It is impossible to ignore the other sources of interventions such as the self-
interest of politicians and government officials, political lobbying, societal power structures and
ideological considerations which all play a role in making and shaping SME policies while the
best interests of the business owners gets lost.

Therefore other than “market failure” there are other explanations for the origins and nature of
interventions sometimes called the “political economy” approach (O’Neill k., 2010). Table 1.2
summarizes the most common sources of governments’ interventions, and in the following parts
the “political economy” source of interventions is further explained.
### Intervention Models

<table>
<thead>
<tr>
<th>Market failure</th>
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<tbody>
<tr>
<td>Political economy</td>
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<tr>
<td>- public choice</td>
</tr>
<tr>
<td>- economic theory of bureaucracy</td>
</tr>
<tr>
<td>- power relations, pressure groups and ideology</td>
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### Table 1.1: Intervention Models


- **Public choice**: In essence, politicians maximize their own welfare by promoting those policies which maximize their chances of re-election. This type of intervention does not guarantee correction of market failure or increased economic welfare.

- **The economic theory of bureaucracy**: This theory is about the government officials and their motivations. State bureaucrats like being associated with outstanding and apparently successful initiatives. This can lead to the types of programs which are ‘supply-led’ rather than being based on the real needs of business (O’Neill k., 2010). It also leads to programs which are more resource-intensive, bureaucratic management and control structures, reluctance to undertake robust evaluations or curtail ineffective programmes (O’Neill k., 2010).

- **Power relations, pressure groups and ideology**: This model is about the power relations exist within society and the outcome of conflict between powerful groups is a source of public policy. For example SME representative organizations have only influenced the UK policy in the past 10/15 years, although SME policy has been prominent since the early 80s – indicating that business groups can only be a small part of the continuing popularity of SME policies across Europe and the world (O’Neill k., 2010).

### 1.2.2 Lack of Evidence-Based Approaches to E-Policy Making

Despite the fact the source of interventions (need for new policy) can be political economy rather than robust evidences, the other reason behind the inefficacy of entrepreneurship and SME policies can be attributed to the approaches taken to policy making. It means that even there are enough robust evidences for intervention, policy approaches can be ineffective. Table 1.3 summarizes the most common approaches to entrepreneurship policy.
**Most Common Approaches to E-policy**

<table>
<thead>
<tr>
<th>Approach</th>
</tr>
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<tbody>
<tr>
<td>'me too' aka 'best practice'</td>
</tr>
<tr>
<td>scattergun ('see what sticks')</td>
</tr>
<tr>
<td>assumptions-based experimentation</td>
</tr>
<tr>
<td>evidence-based</td>
</tr>
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</table>

Table 1.2: The most common approaches to entrepreneurship policy

*Source: O’Neill k. (2010)*

The aim of “best-practice” is promoting international benchmarking, but in practice primarily it has been used to profile interesting programs in different countries (Lundström A. and Stevenson L., 2001). Despite all the researches have been done, little effective attention has really been given to designing programs that will actually achieve the declared policy objective because most of the programs simply repeat what was done before, however sometimes they are repackaged to suggest that they are new (O’Neill k., 2010). This has led to the implementation of similar programs within the societies despite many contextual differences they have. As about SME policies, a country by country analysis of government interventions shows that they all appeared to be picked from the same menu, hence reveal a considerable similarity (Bridge S., 2010). Table 1.4 shows an example of such menu.

**The Menu for a Common Set of Policy Components**

<table>
<thead>
<tr>
<th>Component</th>
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<tbody>
<tr>
<td>Finance programmes (including loans and grants).</td>
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<tr>
<td>Premises programmes (including incubators and nurseries).</td>
</tr>
<tr>
<td>Advice and mentoring programmes.</td>
</tr>
<tr>
<td>Business training programmes (often teaching the business plan).</td>
</tr>
<tr>
<td>Marketing programmes, including exporting assistance.</td>
</tr>
<tr>
<td>Management development programmes.</td>
</tr>
<tr>
<td>R&amp;D and innovation promotion programmes.</td>
</tr>
<tr>
<td>Start-up programmes.</td>
</tr>
<tr>
<td>Awareness raising programmes (including TV advertising and road shows).</td>
</tr>
<tr>
<td>Targeted approaches (e.g. for specific industry sectors or promoting exporting).</td>
</tr>
</tbody>
</table>

Table 1.3: The menu for a common set of policy components

*Source: Bridge S. (2010)*
At best, if the indications show that much enterprise policy is not working, then instead of evidence-based policy, what many people are following is assumption-based policy (O’Neill k., 2010). However this also will lead to selecting similar policies by different societies because many of these policies are perceived as legitimate and socially accepted approaches within the professional society of entrepreneurship policy experts. A comparative study between Australia and Denmark shows that however the quantitative and qualitative nature of entrepreneurship is very different in these two countries, but there is similarity between experts regarding to anecdotes and narratives and suggested entrepreneurship policies (Klyver K., 2006).

1.2.3 Fuzziness and Ambiguity associated with Entrepreneurship Policies

Nowadays many countries are trying to implement entrepreneurship policies, but what we see now is fuzziness, ambiguity, experimenting different policy measures and institutional structures, an eagerness to learn from other countries’ experiences, and a lot of talk (Stevenson L. and Lundström A., 2001). Several reasons can be mentioned for this ambiguity and fuzziness such as:

- **The ambiguity associated with the definition of entrepreneurship itself.** In fact there is no accepted definition of "entrepreneur" and entrepreneurship (Hornaday W. R., 1992). Entrepreneurship is a multidimensional concept which does not exactly correspond with any established academic discipline such as economics, but it has been the topic of scholarship and research in a variety of academic fields (Audretsch D.B., 2004). Scholars usually try to skillfully tact the point through using different ways to look at entrepreneurship (Vesper K. H., 1990), but in fact every empirical or theoretical research effort entangles the lack of consensus on what can be considered entrepreneurial activity (Hornaday W. R., 1992).

Even Schumpeter (1934) who has defined entrepreneurial change as innovation which creatively destroy the current economic pattern, but in an article praising the roll of innovation in 1949, Schumpeter (1965) considered the activities of the U.S. Department of Agriculture (USDA) in the 1930s as entrepreneurial activities, although the innovations which were urged by the USDA were actually carried out by U.S. farmers. Hence, to follow a functional definition, Schumpeter adopted a widely inclusive definition of entrepreneurship and considered the advice offered by career bureaucrats as entrepreneurship.

In an attempt to organize this confusion, Gartner (1990) undertook an elaborate Delphi study. In this study 44 definitions of entrepreneurship from 44 respondents and 90 entrepreneurial attributes have been identified. However after two Delphi rounds with 34 of the respondents, and after clustering his 90 attributes by using factor analysis, Garner identified eight entrepreneurial themes, but at the end he announced that his data
confirmed that there is no agreement on a definition of entrepreneurship. Gartner concluded that scholars should explicitly explain what they mean when they talk about entrepreneurship (Gartner, 1990).

- **Different impacts are expected from implementing entrepreneurship policies:** One of the reasons behind providing different definitions of entrepreneurship can be attributed to expecting different impacts from implementing entrepreneurship policies. In fact different countries may have different objectives for entrepreneurship policy such as encouraging self-employment, the development of the formal economy, or development of new corporations, so use different definition of entrepreneurship (Nadim A. and Seymour G. R., 2008).

In some countries like Spain and Finland the desired impact from implementing entrepreneurship policies is employment growth, in some governments like Ireland and Australia the desired impacts are wealth creation and economic prosperity, and for some governments it is a solution for domestic issues like labor market integration of ethnic groups and economically disadvantaged regions (Stevenson L. and Lundström A., 2001). Hence a definition of entrepreneurship is correct if it also determines that to which society it refers or for which society it is defined (Audretsch, 2007; Lundström et al., 2007; & Morris, 1996).

- **The ambiguity associated with the likely influence of entrepreneurial determinants:**
  A broad range of determinants including economical, political, psychological and socio-cultural has been identified to influence the level of entrepreneurship within a society, but an absolute function cannot be attributed to these determinants. In fact in different countries and in different times, different affects have been recorded. This is especially true for environmental determinants. For example different studies have found different results regarding to the influence of education on entrepreneurship. Some of them found a positive relation, some negative and some others negative and positive (Grilo I. and Thurik R., 2005).

Another example can be Hofstede dimensions. In particular, Hofstede's (1980) shows meaningful differences among countries on cultural dimensions such as power distance, uncertainty avoidance, individualism/collectivism, and masculinity/femininity. Although many researchers have shown that low uncertainty avoidance, low power distance and high individualism is positively related to entrepreneurship (Wildeman et al., 1999), but the opposite relationship has also been reported as countries with large power distance and strong uncertainty avoidance have more self-employed (Wennekers, Uhlner and Thurik A.R., 2002), or as individualism is negatively correlated (not significantly) with self-employment (Wennekers, Uhlner and Thurik A.R., 2002).

Studies regarding to population density also has a conflicting results. Brüderl, J. and P. Preisendörfer (1998) concluded that urban areas with high population density can support
the growth of entrepreneurial activity because of market proximity and a business infrastructure. Storey (1994) also concluded that an important reason that small business and startup of new businesses exist in urban areas might be attributed to the high population density in these regions. On the other hand, some other researchers concluded that population density can have a negative effect on the level of business ownership (Bais, Van der Hoeven and Verhoeven, 1995). Findings regarding the effects of demography factors are also contradictory (Wennekers, Uhlaner and Thurik A.R., 2002).

One of the reasons behind these different effects of determinants can be attributed to the context, i.e. a determinant may exert different influences in different contexts. For example individualism may be positively related to entrepreneurship in USA, but it will not show the same influence in China which its entrepreneurship is mainly shaped by family business. Another reason, as discussed before, can be attributed to different definitions of entrepreneurship, i.e. the same determinants are investigated based on different definitions of entrepreneurship. For example determinants of opportunity and necessity entrepreneurship are different (Block and Wagner, 2007; Wagner, 2005). Encouraging unemployed individuals to start a business might benefit necessity entrepreneurs but not opportunity entrepreneurs (Bergmann and Sternberg, 2007).

- **Different stages of economic development**: GCI (Global Competitiveness Index) divides countries based on their stage of development into three categories: factor-driven, efficiency-driven, and innovation-driven. At the first stage the country is factor-driven and its competitiveness is its factor endowments such as primarily unskilled labor and natural resources. At this stage companies produce and sell basic products, compete based on price, and their productivity is low and also wages are low. When the development advances and wages increase the countries enter the efficiency-driven stage of development and they must improve the efficiency of their production process and increase the quality of products. Continuous development will shift the country form efficiency-driven stage to the innovation-driven stage. At these stage companies compete based on innovation and countries are able to keep the wages and the standard of living higher. In figure 1.1, “12” pillars of competitiveness and in table 1.5 weights of the three main groups of pillars at each stage of development are shown. Entrepreneurship has different roles in different countries based on the stage of economic development of those countries (Wennekers et al, 2005; van Stel et al, 2005). Earlier studies have shown that the determinants of self-employment in developed economies might be completely different from the determinants of self-employment in developing countries (Acs, Audretsch and Evans, 1994).
1.2.4 The absence of a tradition of evaluation

SME/Entrepreneurship policy (E-policy) suffers from the absence of a tradition of evaluation (Storey D. J., 2008). However, there are many policies in operation, little evidence is available about their effectiveness (Storey D. J., 2008). This is primarily because the governments are reluctance to ensure that policies are carefully evaluated (Storey D. J., 2008). Some policies are never evaluated and, where they are evaluated, it is too frequently undertaken using only the most primitive tools. It is uncommon to find evaluation studies that follow the principles of evaluation fully (O’Neill k., 2010). According to O’Neill k. (2010), there are a number of reasons for the reluctance of governments to undertaking evaluation such as:

- **Cost**: Many governments do not evaluate policies because it is costly. However, not willing to pay for the evaluation, most of the times leads to implementing much more costly polices with little or no efficacy.

- **Designed to Prove**: Studies may be deliberately designed to ‘prove’ the desired outcome—especially when the evaluators are funded by policy-makers or deliverers.

- **Too many variables**: Too many variables at work sometimes make it impossible to isolate the effects of one or two.
• **Timescales**: Determining the timescales over which the results should be monitored is not easy.

• **Correlation/Causation**: Correlation between inputs and outputs may not imply causation or its direction.

• **Intangibles**: Many effects can be intangible and difficult to measure.

Table 1.1 summarizes the above mentioned reasons.

<table>
<thead>
<tr>
<th>Evaluation Difficulties</th>
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<tbody>
<tr>
<td>Cost</td>
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<tr>
<td>Designed to prove</td>
</tr>
<tr>
<td>Too many variables</td>
</tr>
<tr>
<td>Timescales</td>
</tr>
<tr>
<td>Correlation/causation</td>
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<tr>
<td>Intangibles</td>
</tr>
</tbody>
</table>

**Table 1.5: Evaluation Difficulties**

*Source: O’Neill k. (2010)*

### 1.2.5 Lack of a Model to Provide a Road Map for E-Policy Makers

Despite all the above mentioned problems associated with the design and implementation of entrepreneurship policies, there is not a generic road map to inform policy makers about those problems and help them to avoid those problems when designing E-policies.

Researches on entrepreneurship policy are devoted mainly to two major streams. In the first stream, some specific policies are selected and discussed. Many papers and books have been devoted to this stream, particularly to different types of SME policies. In the second stream the researches are mainly about entrepreneurship frameworks, i.e. describing the explanatory factors which influence the level of entrepreneurship within a society as a framework such as Eclectic, OECD, or GEM Framework. However the theoretical literature on first stream has been expanded very fast and many different policies have been suggested and evaluated, but the policy frameworks have been addressed by only a few authors.

In addition to these two major streams directly devoted to entrepreneurship policies, there are other researches which their results can be used in designing entrepreneurship policies. Like the researches investigate the role of social capital and human capital in stimulating entrepreneurship, or investigate entrepreneurship from a political economy perspective.
Despite all these researches, there is still one simple important question which has not been explicitly addressed yet: “How entrepreneurship policies should be designed?” In other words if a policy maker in a developed or developing society wants to stimulate entrepreneurship, then among all the entrepreneurship polices developed and suggested so far, and based on the results of all the researches in this field:

- Which problems and criteria s/he should be aware of when designing E-policies? , and
- Which policy process s/he should adapt to avoid those problems and to develop the most influential entrepreneurship policies for that specific society?

The above discussed issues are the most important motivations of doing this research.

1.3 Key research questions and objectives

Considering the issues discussed in section 1.1 and 1.2, this thesis is structured to provide a model for E-policy making which:

1- Is aware of all those problems (section 1.2), and is designed to avoid those problems,
2- Results in different E-polices in different societies depending on the contextual factors of each society and the desired impacts expected from E-polices.
3- Can be used for different societies/contexts, i.e. is generic,
4- Is aware of constrains associated with the resources available in the real world, i.e. prioritizes policies for resource allocation.

Based on those objectives the key research questions are as follow:

1- What are the practical implications of the research results done so far in “entrepreneurship” for an entrepreneurship policy maker?
2- What are the practical implications of the research results done so far in “public policy” for an entrepreneurship policy maker?
3- What are the main criteria for evaluating the cost-effectiveness of E-polices?
4- At which stages of the policy process evaluation should be done?
5- Considering the resource constrains of the real world, which criteria should a policy maker use for prioritizing entrepreneurship policies and resource allocation?
6- When designing an E-policy, which quality issues should be considered to ensure the design quality?
7- Can the answers of all above questions be used for developing a practical model to be used by entrepreneurship policy makers in the real world?
8- Can such a model be generic, i.e. can be used by policy makers of different societies with different stages of economic development?
9- Are there any empirical evidences from the real world to validate the result of this research?

1.4 Research Method
This thesis will be conducted in a way to provide answers for the research questions, described in section 1.3, and then uses those answers for developing a model of E-policy making.

Therefore at first an extensive review of the related works from both fields of entrepreneurship and public policy will be conducted in order to find the practical implications of all those works for making E-policies. Then the results of the researches related to the evaluation of E-policies will be particularly investigated. The result of these researches will identify how and when entrepreneurship policies should be evaluated?

One of the important issues in any design activity, is the quality of design, i.e. reducing the variations in design process, so that the outcome will largely represents the defined target. Hence this research will also investigate the different types of errors might happen when designing an E-policy, and how these errors can be minimized to increase the quality of design.

Based on the results of all the above mentioned researches, a model of E-policy making will be developed. Each step of this model will be supported by the results of previous researches.

After the model is theoretically developed, empirical evidences will be provided to validate the applicability of the model in the real world.

1.5 Restrictions
The main restrictions for this thesis have been 1) accessing to the real data and information regarding to the methods, assumptions, and evidences used for making entrepreneurship policies in different countries. It is not easy to acquire information and data regarding to the process of policy making and different steps led to a policy. 2) the time constrain associated with doing this master thesis did not let for more empirical researches. However the first plan of this thesis also included conducting a survey regarding to the efficiency and applicability of this model, but due to time constrain, the empirical research has been confined to a comparative study.
1.6 Audience
The audiences of this research are the scholars of both entrepreneurship and public policy disciplines. Moreover it can also be used by the policy makers and governmental departments involved in designing entrepreneurship polices in different countries.

1.7 Thesis Structure
The thesis continues in Chapter 2 with a review of literature and related works in Entrepreneurship, Entrepreneurship Policy, Policy Making, and Evidence-Based Policy. Based on the criteria comes from the results of those research, chapter 3 builds a generic model for designing and selecting entrepreneurship policies. In chapter 3, also the different types of errors associated with designing an E-policy will be investigated. It will also discuss about the ways these errors can be minimized to increase the design quality.

Empirical evidences for validating the model in the real world will be provided in chapter 4 with a comparative study of entrepreneurship policies in Sweden and Denmark. Finally chapter 5 provides a summary and conclusion of the whole works done for this thesis. Figure 1.1 illustrates a schematic view of the thesis structure.

![Figure 1.1: The schematic view of the thesis structure](image)

![Figure 1.2: The overall structure of this thesis](image)
Chapter 2: Background and Related Works
2.1 Entrepreneurship Policy

2.1.1 Emergence of Entrepreneurial Economy

During the last half century the role of entrepreneurship in the economy has significantly changed. Moving from managerial capitalism towards entrepreneurial capitalism has been one of the most important changes in the global economic structures during the last decades (Acs, 1984), and entrepreneurship has became the engine of economical and social development throughout the world (Audretsch and Thurik, 2004). During the first three quarters of the last century managed economy was the dominant shape of many economies throughout the world. The model of managed economy is based on relative certainty in outputs mainly manufactured products and inputs,

According to the neoclassical growth model provided by Robert Solow (1956), the factors of capital and labor were identified as the source of growth. Since capital could be used more efficiently by large firms, thus the first three quarter of the last century was dominated by large enterprises. Statistical evidence also confirms the significant role of large firms in the economy in this period (Caves, 1982; Teece, 1993; Brock and Evans, 1989). At the same period it seemed that entrepreneurship and small business was fading out. As a result of this environment the aim of public policies regarding to small firms was either discouraging the small enterprises sector such as Sweden and France, or to save the small business only to keep the economic efficiency such as USA (Audretsch, 2004).

While careful documentations and statistics showed that entrepreneurship and small business was fading out by large scale enterprises, surprisingly the predicted inevitable demise of small business started to reveres since 1970s onwards. Between 1947 and 1989 the average real GDP per firm increased by nearly two-thirds from $150,000 to $245,000 in the United States which showed the increasing importance of large firms for the economy and the decreasing role of small business, but in the next seven years by 14 percent decrease it reached to $210,000 which indicated the re-emergence of small business (Brock and Evans, 1989). Also according to Acs and Audretsch (1993), in 1976 one-fifth of manufacturing sales of United Sates was produced by small firms, but in 1986 this amount raised to over one-quarter.

Similar trends were recorded within European countries. The small firm employment share in manufacturing increased from 68.3 percent in 1978 to 71.8 percent in 1986 in the Netherlands (Audretsch, 2004), from 30.1 percent in 1979 to 39.9 percent in 1986 in the UK, from 44.3 percent in 1981 to 55.2 percent in 1987 in the North of Italy, from 61.4 percent in 1981 to 68.4 percent in 1987 in the South of Italy, from 68.3 percent in 1982 to
71.8 percent in 1986 in Portugal, and from 54.8 percent in 1970 to 57.9 percent in 1987 in West Germany (Acs and Audretsch, 1993).

Audretsch and Thurik (2001) explained this re-emergence of small businesses in Europe and North America based on the globalization. Globalization has reduced the ability of the managed economy to create growth and jobs within the Western European and North American countries mainly due to two main reasons; one was the emergence of new competitors from some Central and Eastern European and Asian countries which are characterized as low cost and highly educated and skill-intensive countries and the other one was the telecommunications and computer revolutions which not only decreased the cost of shifting capital but also information from high-cost location such as European and North American countries to lower-cost locations (Audretsch D. and Thurik R., 2004). The twin forces of globalization changed the comparative advantages of high cost locations such as Europe and North America from routine tasks to knowledge-based economic activities.

Romer (1986), Lucas (1988 and 1993) and Krugman (1991) indicated that the factors of capital and labor of the neoclassical growth model of Robert Solow (1956) cannot explain the source of growth, but instead knowledge is the key source of economic growth. Romer (1986) first developed the endogenous growth theory and shifted the focus from labor and capital towards knowledge, and Lucas (1993) indicated that according to the new growth theory government policies should focus on human capital and R&D as the source of knowledge which will lead to economic growth.

Since knowledge is characterized by high uncertainty, high asymmetries across people and high transaction costs, many scholars had predicted that increasing role of knowledge as the key source of growth and competitiveness will reduce the importance of small businesses for the economic growth even more than before. Caves (1982) concluded that due to the additional cost of knowledge activity, foreign investments mainly will be done by large firms, and Chandler (1990) mentioned that “to compete globally you have to be big”.

Audretsch and Thurik (2001) mentioned two reasons for why globalization changed the role of SMEs. First, as the globalization increased, large firms which were dominant in the traditional manufacturing industries lost their competitive advantage in the high-cost domestic markets. Secondly, in knowledge-based economy the importance and value of SMEs increased. The speed of technological and scientific changes increased which resulted in a more dynamic and competitive business environment (Huber, 2004).
Increased instability and turbulence across industries made the economic growth more favorable for new firms and new markets entrants who could offer new products and services, and smaller firms which benefited from flatter and more responsive hierarchical structures, and entrepreneurial firms were more suitable for radical innovations (Acs and Szerb, 2007).

However the endogenous theory of growth identified the knowledge as a key source of growth, but actually the spillover of knowledge and its commercialization is not automatic and this is the entrepreneurship that plays an important role in facilitating the spillover of knowledge (Audretsch, 2004). Hence entrepreneurship capital has emerged as a key source of growth and competitiveness. Entrepreneurial capital has a positive effect on competitiveness and growth not only through facilitating the spillover of knowledge but also in some other ways. Entrepreneurship capital increases the number of firms and so increases competition. Competition facilitates knowledge externalities than is local monopoly (Porter, 1990), and also facilitates the entry of new firms (Audretsch D. and Thurik R., 2004). Empirical evidences also support this argument. Glaeser et al. (1992) measured competition as the number of enterprises in a city and found that an increase in competition in a city will increase the growth performance in that city. Entrepreneurship capital also provides diversity among firms (Cohen and Klepper, 1992) which will exert influence the potentiality of location for growth (Audretsch D. and Thurik R., 2004).

Empirical evidences which have used different measures of entrepreneurship have provided empirical evidence for the link between the level of entrepreneurship and economic development within societies. According to GEM differences in the level of entrepreneurial activity can account for 30% of differences in GDP growth (Stevenson L. and Lundström A., 2001). According to Audretsch et al. (2002), those OECD countries which have experienced higher increase in entrepreneurship also have showed higher rates of economic growth and lower level of unemployment. Technological entrepreneurship accounts for over 50% of all innovations, 67% of inventions, and 95% of all radical innovations in US since 1945 (Timmons, 1998).

This link between entrepreneurship and economic growth has implications for governments, and they try to have a constant supply of entrepreneurs to create jobs and maintain economic growth. All these shifted countries from managed economy towards entrepreneurial economy, and entrepreneurship policy has become one of the important areas of economic policy development.
In the following parts, at first entrepreneurship policy and its different roles in managed economy and entrepreneurial economy will be explained. Moreover differences and similarities between entrepreneurship policy and SME policy will be discussed. The discussion will continue with a review of different types of SME and entrepreneurship policies. Finally some of the most well-known entrepreneurship frameworks developed so far will be presented and the role of governments in each of these frameworks will be described.

2.1.2 Entrepreneurship Policy and its roles in different economies

While the model of managed economy was based on the links between stability, specialization, homogeneity, scale, certainty and predictability and economic growth, but the model of entrepreneurial economy is based on the links between flexibility, turbulence, diversity, novelty, innovation, linkages and clustering and economic growth (Audretsch D. and Thurik R., 2004). Audretsch and Thurik (2004) distinguished four contracting dimensions between government policies under the managed economy and entrepreneurial economy; the goals of the policy, the target of policy, the locus of policy and financing policy.

The goal of the policy under the managed economy is constraining which restrict the firm’s freedom to contract, while the goal of the policy under the entrepreneurial economy is enabling which facilitate and stimulate the firm’s development and performance. According to Audretsch and Thurik (2004) the policy question under the model of managed economy is: “How can the government withhold firms from abusing their market power?” while under the model of entrepreneurial economy the policy question is: “How can governments create an environment fostering the success and viability of firms?”

Under the model of managed economy there is a relative certainty about the markets and products while under the model of entrepreneurial economy there is uncertainty about the products to be produced, the way they should produced and about the producers or who should produce. These contracting dimensions made the target of policies under these two economic models also different. The target of policy under the managed economy is output by promoting specific industries and firms, but under the model of entrepreneurial economy the target of policy is input because uncertainty makes it difficult to target appropriate outcome and the likelihood of targeting the wrong firms. Moreover while land, labor and capital are the input of the managed model, in the entrepreneurial economy the main input is knowledge.
Since under the model of entrepreneurial economy the competitive source of economic activity which is knowledge is mainly localized in regional clusters, then the public policy tends to be at the regional level, while under the model of managed economy the locus of policy is the national or federal level.

Another difference between these two models is financing policy. Since under the model of managed economy there is certainty in outputs and inputs, the firms have a close and strong connection with banks which provide them liquidity for investment. Uncertainty is an inherent part of each entrepreneurial activity, hence under the model of entrepreneurial economy the banks are replaced with venture and informal capital markets which provide the required finance for high-risk and innovative new firms.

Today many countries try to find out and prepare the necessary conditions for creating a more competitive and dynamic entrepreneurial economy, but there are several impediments on the way such as lacking a definition of entrepreneurship as a concept, lacking a clear distinction between entrepreneurship policy and SME policy, and not having enough knowledge to respond the emergence of an entrepreneurial society properly (Stevenson L. and Lundström A., 2001).

2.1.3 Entrepreneurship Policy and SME Policy
Most of the times entrepreneurship policy is considered the same as SMEs policy or even the numbers of self employed (Hoffmann, 2007), but actually entrepreneurship policy is much broader. Lundström and Stevenson (2002) defined entrepreneurship policy as policy measures which:

- is concerned with all the phases of the entrepreneurial process including pre-start, the start-up and post-start-up phases,
- addresses the areas of Motivation, Opportunity and Skill,
- its primary goal is to encourage more people to consider entrepreneurship as an option, and to get involved in entrepreneurial activities from nascent stage to infancy and early stages.

This can be a satisfactory definition of entrepreneurship if the area of resource is also added to the definition so an entrepreneurial policy “addresses the areas of Motivation, Opportunity, Skill and Resource”.

While the emergence of SME policy was triggered by the result of David Birch’s study in 1979 which showed the important role of SMEs in job creation and innovation activity, but entrepreneurship policy is relatively a new phenomenon. Hence understanding the main
differences between entrepreneurship policy and the more established SME policy will help governments to move towards a more integrated economic development approach.

Lundstrom and Stevenson (2002) mentioned two important factors for distinguishing entrepreneurship policy from SME policy; the breadth of policy orientation and instruments and the responsible agencies for promoting theses policies. The breadth of entrepreneurship policy is much broader than the SMEs policy. While the concern of SMEs is the existing stock of SMEs, entrepreneurial policy includes existing stock of SMEs as well as potential entrepreneurs. Moreover entrepreneurial policy also encompasses the environmental conditions which influence the process of decision making by entrepreneurs, while SMEs policy mainly focuses on the enterprise. In fact entrepreneurial policy is concerned more about the process of change not only the organizational unit, while SME policy focuses on enterprise level (Audretsch D., 2004). Hence entrepreneurial policy is more systematic than SME policy, but it should be emphasized that still SME policy is the core of entrepreneurship policy (Audretsch D., 2004).

Another distinguishing factor between entrepreneurship policy and traditional SME policy is related to the responsible agencies for promoting each of these policies. In most of the countries there are well-established and developed ministries or government agencies to promote SME sector, but there are not such kind of agencies for promoting entrepreneurship (Audretsch D., 2004). In fact entrepreneurship is much broader than to be restricted to only one department or agency. As Audretsch and Beckmann (2007) mentioned, entrepreneurship policy is distributed among a wide range of ministries from education to trade and immigration.

2.1.4 Diversity of Entrepreneurship Policies

Today in many countries public policy is shifting from SME policy towards entrepreneurship policy. Lundström and Stevenson (2007) distinguished four types of entrepreneurship policies been adopted by different governments: Add-on Policy or SME Policy Extension, Niche Entrepreneurship Policy, New Firm Creation Policy, Holistic or Generic Entrepreneurship Policy. In table 2.1 these four entrepreneurship policies are shown and their objectives, measures and limitations are compared.

Lundström and Stevenson (2002) distinguished that governments use three different organizational structures to implement the entrepreneurial policies: Umbrella, Vertical, or Horizontal structure. In umbrella structure an umbrella government agency which is officially authorized by Government such as Congress, Parliament or its equivalent is responsible for promoting SME/Entrepreneurship policy. This is the case in countries like
US and Taiwan. Some countries like Australia and Canada use a vertical structure to implement SME/Entrepreneurial policies.

<table>
<thead>
<tr>
<th>Feature</th>
<th>E-extension policies</th>
<th>New firm creation policies</th>
<th>‘Niche’ target group policies</th>
<th>‘Holistic’ Ep</th>
</tr>
</thead>
<tbody>
<tr>
<td>Objectives</td>
<td>Improve access to start-up supports through existing SME structures; better service to start-ups</td>
<td>Reduce barriers to business-entry and exit; simplify start-up procedures and requirements; increase the start-up rate.</td>
<td>Increase the start-up rate among groups underrepresented as business owners or potential start-ups of innovative firms.</td>
<td>Strengthen entrepreneurial culture, enhance entrepreneurship as a career option, create dynamic start-up markets/better growth conditions.</td>
</tr>
<tr>
<td>Measures</td>
<td>Micro-loans; business advisory services; web portals; self-employment training programmes; local services</td>
<td>Flexible labour markets; open competition; less stringent bankruptcy laws; fewer business registration steps; lower cost, faster approvals; simplified incorporation processes; one-stop shops; reduced tax burden.</td>
<td>Tailored supports for each identified target group-entrepreneurship centres; promotion and award programmes, start-up loan funds; web portals; networks and mentoring programmes; incubation units; role models</td>
<td>Promotion and award programmes; role models; entrepreneurship in schools; one-stop shops; enterprise centres; incubators; mentoring and peer-networking programmes; start-up advice and web portals; seed capital and micro-loans.</td>
</tr>
<tr>
<td>Limitations</td>
<td>Start-up initiatives are ‘added-on’ to existing local SME support structures on a piecemeal basis; limited focus on entrepreneurship in the education systems; and removing barriers to entry</td>
<td>Primary focus on changes to ‘business environment’; simplifying the business start-up phase; less emphasis on longer term strategy of promoting enterprise culture and integrating entrepreneurship in schools</td>
<td>Focus on target groups may lead to overlooking the growth potential of non-targeted groups or low-tech sectors; may have limited focus on regulatory changes or fail to address overall weaknesses in the culture of entrepreneurship.</td>
<td>Difficulty in managing policy interdependencies across departments and levels of government.</td>
</tr>
</tbody>
</table>

Table 2.1: Four different types of entrepreneurship policies


In vertical structure one department of government, most of the times industry or economic affairs department, has the primary responsibility for implementing SME/Entrepreneurship policies, but other departments may also be engaged with SME/Entrepreneurship policies. Some government, such as Netherlands, Finland and Spain may use a more horizontal structure which one department will lead the SME/Entrepreneurship policies but in cooperation with other departments and may also with major business or industry associations. Horizontal structure is mainly used by governments which adopt holistic entrepreneurship policy (Lundström and Stevenson, 2002). From a regulatory perspective, the government can influence entrepreneurship both directly through support policies or establishment legislation and indirectly through policies not directly aimed at influencing the level of entrepreneurship.

Whilst the different types of entrepreneurship policies being implemented in the EU and USA are too numerous to be identified and listed here, David Storey (2003) has identified...
examples of different types of entrepreneurship policies being undertaken in the EU and the USA. In addition, he provides an assessment of the efficacy of the various types of policies undertaken. Illustrations of these policies are provided in Table 2.2.

<table>
<thead>
<tr>
<th>Problem</th>
<th>Program</th>
<th>Description</th>
<th>Country</th>
<th>Success</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access to loan finance</td>
<td>Loan Guarantee Scheme</td>
<td>SMEs without access to own collateral obtain access to bank loans by state acting as guarantor</td>
<td>UK, USA, Canada, France, Netherlands</td>
<td>Yes, generally viewed as helpful, but small-scale impact on the overall financing of SMEs in most countries</td>
</tr>
<tr>
<td>Access to equity capital</td>
<td>Enterprise Investment Scheme</td>
<td>Tax breaks for wealthy individuals to become business angels</td>
<td>UK</td>
<td>Unknown</td>
</tr>
<tr>
<td>Access to markets</td>
<td>Europartnariat</td>
<td>Organization of trade fairs to encourage cross-border trade between SMEs</td>
<td>EU</td>
<td>General satisfaction amongst firms that participated</td>
</tr>
<tr>
<td>Administrative burdens</td>
<td>Units established within government to seek to minimize administrative burdens on smaller firms</td>
<td>Sunsetting legislation deregulation units</td>
<td>Netherlands, Portugal, UK</td>
<td>The view of small firms themselves is that bureaucratic burdens have increased markedly in recent years</td>
</tr>
<tr>
<td>Science parks</td>
<td>Property-based developments adjacent to universities</td>
<td>Seek to promote clusters of new technology-based firms</td>
<td>UK, France, Italy, Sweden</td>
<td>Conflicting findings on impact of science parks on performance of firms</td>
</tr>
<tr>
<td>Managed workspace</td>
<td>Property provision to assist new and very small firms</td>
<td>Often called business incubators, these provide premises for new and small firms on “easy terms”</td>
<td>Worldwide</td>
<td>General recognition that such initiatives are of value</td>
</tr>
<tr>
<td>Stimulating innovation and R&amp;D in small firms</td>
<td>Small Business Innovation Research Program (SBIR)</td>
<td>$1 billion per year is allocated via competition to small firms to stimulate additional R&amp;D activity</td>
<td>USA</td>
<td>Lerner implies SBIR enhances small firm performance, but Walsten is unable to show it leads to additional R&amp;D</td>
</tr>
<tr>
<td>Stimulating training in small firms</td>
<td>Japan Small Business Corporation (JSBC)</td>
<td>JSBC and local governments provide training for owners and managers of small firms. The training program began in 1965</td>
<td>Japan</td>
<td>Unknown</td>
</tr>
<tr>
<td>Entrepreneurial skills</td>
<td>Small Business Development Corporations (SBDCs)</td>
<td>Counseling is provided by SBDC mentors to small business clients who may be starting a business or be already trading</td>
<td>USA</td>
<td>This study finds SBDC clients have higher rates of survival and growth than might be expected. Reservations over these findings are found in the text</td>
</tr>
<tr>
<td>Entrepreneurial awareness</td>
<td>Entrepreneurship Education</td>
<td>To develop an awareness of enterprise and/or an entrepreneurial spirit in society by incorporating enterprise into the school and college curriculum</td>
<td>Australia, Netherlands, but leading area was Atlantic Canada</td>
<td>Conventional assessments are particularly difficult here because of the long “lead times”</td>
</tr>
</tbody>
</table>
2.1.5 Entrepreneurship Frameworks

However the theoretical literature on entrepreneurship policy is expanding very fast and many different policies have been suggested and evaluated for stimulating entrepreneurship, but the policy frameworks have been addressed by only a few authors. The three most well known of these models will be briefly explained in the following parts: Eclectic framework, The OECD/EUROSTAT framework, and The Global Entrepreneurship Monitor (GEM) framework.

**Eclectic Framework**

David B. Audretsch, Isabel Grilo and A. Roy Thurik (2007) based on the works of Verheul et al. (2002) and Wennekers et al. (2002) presented the eclectic framework, figure 2.1, which determines the level of entrepreneurship by distinguishing the explanatory factors into two categories: the supply side of entrepreneurship and the demand side of entrepreneurship. The supply side considers the structure of the population, i.e., demographic composition, which influence the likelihood of becoming entrepreneur. The demand side of entrepreneurship can be influenced by cultural and institutional environment.

The demand side looks into the opportunities for entrepreneurship such as factors which can influence the industrial structure and the diversity of consumers’ tastes. Technological developments and government regulation influences the demand side and amount of opportunities to a very much extend.

In addition to looking into the supply and demand sides from macro level, the framework also look into the micro level and integrate the decision-making process of individuals or their risk-reward profile of entrepreneurship opposed to other job opportunities i.e., wage employment or unemployment. These occupational choices which are made by individuals show the entry and exit rates of entrepreneurship at the aggregate level.

<table>
<thead>
<tr>
<th>Special groups</th>
<th>Law 44</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provides finance and mentoring advice to young people in Southern Italy, where enterprise creation rates were very low</td>
<td>This is an expensive program, but most studies show the survival rates of assisted firms to be well above those of &quot;spontaneous&quot; firms</td>
</tr>
</tbody>
</table>
The framework also distinguishes between the actual rate of entrepreneurship and long-term equilibrium rate. The actual level of entrepreneurship (E) is determined by both static and dynamic occupational decisions, and the long-term equilibrium rate (E*) is determined by the demand-side forces, i.e. technological developments and changes in the market structure (Audretsch D., Grilo I. and A. Thurik R., 2007). The difference between the actual rate of entrepreneurship and equilibrium rate (E-E*) can be adjusted through market forces or government intervention. Hence the framework also looks into the role of government policy and the channels which government can intervene to shift the demand or the supply side. In figure 2.1 these channels are shown as G1 to G7.

According to Audretsch et al. (2002) the goal of Eclectic framework is to integrate various perspectives of the determinants of entrepreneurship, to describe the role of government in influencing the entrepreneurship, and to explain the different cross-sectional rate of entrepreneurship.

**The OECD/EUROSTAT framework for Entrepreneurship indicators**

The OECD framework developed by Ahmad N. and Hoffman A. (2007) distinguishes three separate but inter-connected flows in the field of entrepreneurial policy: determinants, entrepreneurial performance, and impact, figure 2.2. Determinants are the key factors which influence the entrepreneurial performance, and entrepreneurial performance are those target indicators which policy makers believe will influence some or many objectives (impacts). Hence Impacts are the values created by entrepreneurs and entrepreneurship and can be materialized in a different ways such as GDP growth, Employment, or Gini.
The OECD framework has identified three major social and economic objectives as the impact of entrepreneurial performance: job creation, economic growth and poverty reduction.

![Figure 2.2: The OECD/EUROSTAT framework](image)

**Source:** Ahmad N. and Hoffman A. (2007)

Like considering multitude of possible impacts, the framework also consider different indicators of performance which depends on the different policy objectives which different countries choose. The framework distinguishes three types of performance indicators: indicators related to firms, indicators in terms of employment, and indicators in terms of wealth. Performance indicators related to each of these categories have been further explained and listed by Ahmad N. and Hoffman A. (2007).

In the field of determinants, the framework distinguishes three main categories of determinant: opportunities, skilled people and resources. Resources are materialized as access to capital, R&D and technology, skilled people as capabilities of entrepreneurs, and opportunities as the market conditions in the country. Moreover since all of these factors are influenced by environmental context, the framework also considers surrounding regulatory framework and culture as the key determinants.

To be able to compare entrepreneurship across the countries, the OECD framework uses multiple measures and a range of indicators to cover all different types of entrepreneurship and its different impacts as much as possible and based on the viewer’s perspective. Moreover the model also considers other relationships between the main components not only from left to right but also from right to left. For example how the impacts such as economic development will influence the determinants such as availability of finance.

The OECD model is a simple framework for understanding the different determinants of entrepreneurship among countries and their interactions and also for adopting the most appropriate policies.
**GEM Framework**

The Global Entrepreneurship Monitor (GEM) is a research program, started from 1998, which focuses on entrepreneurship as a main driver of economic growth. It is the world’s leading research program which its aim is to understand the relationship between entrepreneurship and national economic development.

Investigating deference in national levels and types of entrepreneurship and linking these to job creation and economic growth has been the primary objective of the GEM program (Sternberg and Wennekers, 2005). To measure the national level of entrepreneurial activity, GEM focuses on individuals. According to GEM’s perspective the national level of entrepreneurial activity is the net result of individual decisions to follow entrepreneurial initiatives, and then every person who is involved in any activity which is related to firm formation is related to the national level of entrepreneurial activity. In fact GEM is not interested in monitoring people who create business over several years and evaluating the factors which result in a successful firm formation, but its primary objective is estimating the proportion of people who are involved in entrepreneurial activities at a single point in time.

Moreover GEM view entrepreneurship as a process, and so it monitors the entrepreneur’s activity at different stages of this process, figure 2.3. GEM distinguishes four phases and three transition points within the process of entrepreneurship. At the first phase people are thinking about starting a business, and they can have different motives such as opportunity recognition or unemployment. Once they do some activities regarding to starting a business, they complete the first transition and move from conception into gestation and they are considered as nascent entrepreneurs. According to GEM (2009) if for three months any wages is paid to anybody, including the owner, it will be considered as the “birth event” of actual businesses. Those individuals who are trying and allocating resources to start a business but have not reached to this point, “birth event”, are considered as nascent entrepreneurs.

![Figure 2.3: Entrepreneurial Process defined by GEM](source: GEM Report, 2009)
The required fundamental knowledge for this program is provided through gathering and assembling data annually. The data are assembled to measure differences in the level of entrepreneurship among the nations, find out the role of entrepreneurship in national economic growth, determine the main factors which cause the differences of entrepreneurship at the national level, identify policies which enhance the national level of entrepreneurial activity. The GEM report also considers social entrepreneurship and it is defined as individuals who are engaged in entrepreneurial activities with a social goal (GEM Report, 2009).

The GEM model, figure 2.4, shows how entrepreneurship is affected by national conditions, and also considers attitudes, activity and aspirations as the three major components of entrepreneurship. It uses the harmonized surveys from the experts in the field of entrepreneurship to monitor the framework conditions of entrepreneurship in each country.

Adult population surveys (APS) is a method which GEM uses to measure the level of national entrepreneurial activity, and directly estimate the participation of the adult population in new firm creation. These surveys use a representative sample of the adult population to create national measures of entrepreneurship. Moreover to this survey, GEM uses the information acquired through personal interviews with national experts in entrepreneurship for each country. 'Total Early-stage Entrepreneurial Activity' known as TEA is one of the principal measures which GEM uses. TEA represents the proportion of people who are (1) involved in creating a business or (2) the owner and managers of a young firm.

![Figure 2.4: The GEM Model](image)

**Source:** GEM Report 2009
2.2 Evidence-Based Policy

2.2.1 What does 'policy-making' mean?

According to the definition of New Oxford Dictionary, policy is "a course or principle of action adopted or proposed by a government, party, business or individual." Based on the definition of UK government (Cabinet Office, 1999), Policy-making is the process by which the governments' political vision is translated into programs and actions in order to deliver outcomes, i.e. desired change in the real world. Table 2.3 shows some other related definitions of policy found within the literature.

Despite all these definitions of policy, in the real world policy can be made in different forms, such as non-intervention; regulation for example through licensing; encouragement of voluntary change, for instance by grant aid; and also direct public service provision (Office of the first Minister and Deputy First Minister of Northern Ireland, 2003).

Table 2.3: Some of the definitions of policy

<table>
<thead>
<tr>
<th>Definition</th>
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<tr>
<td>Public policy is concerned with “the public and its problems” (Dewey, 1927).</td>
</tr>
<tr>
<td>The study of public policy considers “what governments do, why they do it, and what difference it makes” (Dye, 1976, p 1).</td>
</tr>
<tr>
<td>The policy process refers to “all aspects of what is involved in providing policy direction for the work of the public sector. These include the ideas which inform policy conception, the talk and work which goes into providing the formulation of policy directions, and all the talk, work and collaboration which goes into translating these directions into practice” (Yeatman, 1998, p 9).</td>
</tr>
<tr>
<td>Policymaking is defined as “the process by which governments translate their political vision into programmes and actions to deliver ‘outcomes’ – desired changes in the real world” (Cabinet Office – Strategic Policy Making Team, 1999, para 2.4)</td>
</tr>
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</table>

The process which a policy is made is not a high science, but doing well in this process is difficult (Office of the first Minister and Deputy First Minister of Northern Ireland, 2003). Like many other processes, there are some tools and techniques which can be used to do the policy-making process more effectively. Policies operate in an environment with a wide range of competing interests, and the governments have the obligation of answering to every part of the civic society. Hence policy-making should be done in a way that makes balance among the competing interests without losing the desired policy outcome.

The phrase policy making usually does not refer to a certain event or a clearly defined set of decisions (Davies T. H. et al., 2000). According to Weiss (1980) policy is not the outcome of conscious deliberation, but it emerges and grown by accumulation. The process of
policy-making is complex and there is not a definite beginning or end, or as Lindblom (1980, p.5) mentioned “somehow a complex set of forces together produces effects called policies”. Within this complex process, government ministers, senior civil servants and co-opted policy advisors are not the only policy makers, but politicians and officials at local governments and other activists such as pressure groups, professional associations, journalist and other commentators also have influence on the final form which a policy will take. In addition to policy formation, at implementation level also practitioners, who operationalise the policies have important role in shaping the policies base on the experiences they have regarding to dealing with clients and service users.

Although it should be noticed that policy and practice cannot be completely distinct from each other, and practitioners do not only implement the policies which are decided elsewhere. Policies are also influenced from the bottom up (Lipsky, 1976, 1979), and also practice is influenced from the top down. The types of policy decisions are different to very much extent, from decisions regarding to the day-to-day activities to strategic large scale decisions, but many of them are somewhere in between.

One of the most discussed issues in relation to the policy-making process has been the influenced of research on policy, or to what extent polices are informed by research. From the research perspective, there has been a turn within the last decade to do useful researches, i.e. researches which not only improve our understanding of the society but also help us to make it better. Moreover, there has been a commitment to not only make the researches useful but also usable (Solesbury, W., 2001). Competition arises from the commercial research and consultancy sector has made the academic researchers aware of the importance of undertaking the researches in a way which users find them useful.

There is also a movement in order to exploit the existing data or existing research findings (Solesbury W., 2001). Most of research effort is dedicated to new primary research, while today for any topic, there is lots of past research available. Not using the past research sometimes is due to some reasons like not being valid anymore, different today’s context, perspective, agenda, etc., but most of the times there is a matter of ignorance or fashion (Solesbury W., 2001).

The two above mentioned issues regarding to the researches, i.e. being useful and usable and using the past research findings, are the foundation of this research. This research tries to use the past research results within the fields of entrepreneurship and policy-making, and provide a practical model which can be used by policy makers in the real world.
In the nest section the development of different models of research-policy relations which has led to today's evidence-based policy making will be explained.

2.2.2 Competing models of research-policy relations

Ideas, knowledge and research have always been used and will be used within the policy process (Stoker, 1999), and a considerable literature has discussed the possible relationship between the research and policy (Parsons, 1995). This section is structured to present some key models of policy-making, and describe in each model the research evidences fed into the policy-making process.

Six key models can be distinguished regarding to the way researches are fed into policy process; knowledge-driven model, the problem-solving model, the interactive model, the political model, tactical model, and the enlightenment model.

In the knowledge-driven model, research leads policy. This model is based on this old belief that ‘if it can be done it will be done’. This belief is well suited with high-technology projects. A good example is the Anglo-French Concord(e). In this model scientific research is inevitable and the experts are on the top. In contrary to the knowledge-driven model, in problem-solving model research follows policy, and these are the policy issues which shape the research priorities.

In both models, knowledge-driven and problem-solving, there is a linear relationship between research and policy, but in opposite directions. Only recently the limitations of these models has been more revealed due to the uncertainty of scientific evidence or the lack of correspondence with lay knowledge such as genetically modified crops (Young K. et al., 2002). Failed polices not only has damaged the reputation of politicians and civil servants but also the producers of knowledge/evidence.

The interactive model in contrast to both knowledge-driven and problem-solving model considers more complex relationships between decision makers and researches. In this model research and policy are mutually influential, and decisions are made within the policy communities which consist of a range of actors from central policy makers to laboratory and research teams. In this model the boundaries are blurred and it is hard to find out where academic duties end and public services begin. More important is that in this model it is impossible to distinguish who really influence whom (Young K. et al., 2002).

In political and tactical model, policy is the outcome of a political process (Young K. et al., 2002). In this model researches are commissioned or used to support the decisions of the government of the day, the ministers, or civil servants. Researchers set up on the
effectiveness of industrial development, the extent of burdens upon SMEs, sensitivity of location decisions and profitability to local tax rates can be some examples of such kinds of researches which are commissioned to establish a point rather than a disinterest research. In extreme cases, research and the researches can become under political attack and criticism regarding to the basic value premise underpin the research. The researches in this model should have political awareness in order to navigate around the obstacles which arise. Many of them have it, and do not feel discomfort in their roles (Young K. et al., 2002).

Within the enlightenment model research provides a context for policy making. In this model rather than directly serving the policy agenda, the research benefits are indirect. Research in this model usually does not address the decision problem, but provide a context or framework for thinking about that. For example researches about organizational processes or intergovernmental relations may not indicate any specific actions to be taken, but provide a deeper understanding of the conditions which different interventions might be influential or not. It is equivalent to what might be called ‘evidence-informed’ policy making rather than ‘evidence-based’ policy making (Young K. et al., 2002).

Table 2.4 includes the six models with a short description of each. In the first five models, research is directly, although diversely, used in policy making while in enlightenment model it is indirectly used in conceptual thinking.

Table 2.4: Six models of policy making

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
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<tbody>
<tr>
<td>Knowledge-driven model</td>
<td>Derives from the natural sciences. The fact that knowledge exists sets up pressures for its development and use.</td>
</tr>
<tr>
<td>Problem-solving model</td>
<td>Involves the direct application of the results of a specific study to a pending decision.</td>
</tr>
<tr>
<td>Interactive model</td>
<td>Researchers are just one set of participants among many. The use of research is only one part of a complicated process that also uses experience, political insight, pressure, social technologies and judgement.</td>
</tr>
<tr>
<td>Political model</td>
<td>Research as political ammunition; using research to support a predetermined position.</td>
</tr>
<tr>
<td>Tactical model</td>
<td>Research as a delaying tactic in order to avoid responsibility for unpopular policy outcomes.</td>
</tr>
<tr>
<td>Enlightenment model</td>
<td>The indirect influence of research rather than the direct impact of particular findings in the policy process. Thus the concepts and theoretical perspectives that social science research engenders pervade the policy making process.</td>
</tr>
</tbody>
</table>

The debate around the role of policy-related research usually is shaped in terms of engineering versus enlightenment (Davies T. H., et al., 2000). However the usage of enlightenment model has found more support, but there are also some criticisms. For
instance Blume (1979) discussed that enlightenment model is too pessimistic regarding to what can be achieved in the shorter term. Debate about the usage of research often assumes that the research utilization necessarily improves policy making, and an increase in research utilization is always desirable (Finch, 1986) while when research is used through indirect and unguided channels, it can result in valid as well as invalid generalization (Weiss, 1980).

To what extent research finding can be influential and the nature of influence, greatly depend on the settings within which evidence emerges and policies are shaped (Davies T. H., et al., 2000).

2.2.3 Emergence of Evidence-Based Policy
The notion of using evidence to inform policy is not new. Since the ancient Greek, Aristotle suggested the notion that rulemaking should be informed by different types of knowledge (Sutcliffe S. and Court J., 2005). This knowledge can be a combination of scientific, pragmatic, and value-led knowledge (Flyvbjerg, 2001; Ehrenberg, 1999). What is new, is that within the last two decades there has been an increasing emphasize on this concept.

At the start of 20th century there has been a general assumption that doctors, teachers, police, and other professionals were the experts and their judgment was trusted, and they were left relatively unchallenged to do their duties. At the end of the century, this culture of public trust was severely reduced due to an increased number of educated, informed and questioning public that wanted to make sure that its taxes were spent well. As a consequence, in contrast to the preceding culture of mainly judgment-based professional practice, the notion of evidence-based practice arose to ensure that what is being done is worthwhile and is the best possible way.

The term evidence-based policy has evolved from evidence-based practice, which both was preceded by evidence-based medicine. Hence it is worth to have a look at this evolution to have better understanding of the definitions of evidence-based policy.

Evidence-based medicine (EBM) is the process which systematically finds, appraise, and use the research findings as the basis for clinical decisions (Marston G. and Watts R., 2003). In medicine the ‘golden standard’ for gathering evidence is the randomized controlled trial (RCT) to compare treatments with placebos for determining the most defective intervention (The Cochrane Collaboration, 2003).

Policy makers and clinicians in United Kingdom and United States use the principles of EBM in order to determine the most appropriate and effective way of promoting health
and also for treating illnesses; hence EBM has both educative and clinical functions (Solesbury, 2001). The logic of EBM has diffused from medicine to health profession and the related area of social work and human service practice.

In United Kingdom, researchers and policy activists have started evidence-based policy movement to systematically mobilize and use social science research (Sutcliffe S. and Court J., 2005). The US Coalition for Evidence Based Policy in US aims to “promote government policy-making based on rigorous evidence of program effectiveness” (2002, p.1). The Coalition discusses that in contrast to human health, government’s social and economic programs are often implemented with little regard to evidence and waste billion of dollars and fail to address the critical need of the society (US Coalition for Evidence Based Policy, 2002, p.1). In this sense, the term ‘evidence’ has new meaning as a resource-rationing tool, which is beyond the educative and clinical aims that Solesbury (2001) identifies (Sutcliffe S. and Court J., 2005).

Other than the governmental programs, increased targeting of social policy programs by non-government human services and their shift towards ‘outcome based funding’ has also flourished the evidence-based discourse. Non-government welfare agencies have to quantify what they do, what works, and why. In human services, it is not possible to separate evidence-based policy from the broader political context which efficiency has became the primary political value, and discussions of justices and interest is replacing with possibility and practicality, means rather than ends, and methods rather than truth (Smith S. and Kulynych J., 2002).

Evidence-based policy has found public attention since the Blair Government in UK, 1997. He was elected based on the platform of “what matters is what works”. Blair talked about the ending era of ideologically-based decision-making and ‘questioning inherited ways of doing things’ (Banks G., 2009). Without evidence, policy makers must refer to intuition, ideology, conventional wisdom, or at best theory alone, and in fact many polices have been made in those ways (Banks G., 2009).

This increasing emphasize on the role of evidence is due to a number of factors including: the growth of a well-educated and well-informed public; the explosion in the data availability of all types, information technology (IT) development, an increase in the size and capability of research community, putting more emphasize on productivity and international competitiveness, and putting more emphasize on scrutiny and accountability in government (Davies T. H. et al., 2000).
Discussion of EBP tends to cluster around three key issues. First, we focus on the kinds of evidences which are used and their credibility. Second, issues surrounding the way in which evidences are incorporated into the policymaking process. Finally, we highlight this issue that many factors other than evidence affect the way a policy is made.

2.2.4 Evidence-Based Policy; its theory and practice
EBP is a discourse of a set of methods for informing the policy process rather than directly influencing the policy goals (Sutcliffe S. and Court J., 2005). It is based on this assumption that policy decisions should be better informed by available evidence and should include rational analysis (Sutcliffe S. and Court J., 2005). Phil Davies (2004) of the UK Cabinet Office calls EBP as "the integration of experience, judgment and expertise with the best available external evidence from systematic research." He discuss that EBP is a shift away from decisions based on opinion towards decisions which are based on those opinions and judgments of experts which consist of high quality and valid evidence. Figure 2.5 shows this shift from opinion-based policy towards evidence-based policy making. According to Davies (2004) "(EBP) helps people make well-informed decisions about policies, programs and projects by putting the best available evidence from research at the heart of policy development and implementation."

![Figure 2.5: Dynamics of Evidence-Based Policy](https://example.com/dynamics.png)

Shaxson (2005) argues that evidence is required for:

- Understanding the policy environment and its changes,
- Evaluating the likely effects of policy changes to choose between different policy options and subsequently assess their influences,
- Demonstrating the links between strategic direction, desired outcomes and policy goals, in order to show that there are clear evidences between what we are aiming for and what we are doing now,
- Determining what we should do to meet our strategic or intermediate objectives,
- Influencing others to help us to achieve our policy goals,
• Communicating the quality (breadth and depth) of evidences to meet the open government agenda.

This research will continue in the next section with a number of tools which can be used to make the process of designing entrepreneurship polices more evidence based. The underlying assumption for presenting such tools and model is that the reader is a progressive policy maker who is interested in developing more evidence-based policies.
Chapter 3: Evidence-Based Entrepreneurship Policy: A Generic Model

“There is nothing a government hates more than to be well informed; for it makes the process of arriving at decisions much more complicated and difficult”

(Lord Keynes, quoted in Salisbury, 2001: 7).
3.1 Introduction
Very few scholars have paid attention to the process of developing and implementing entrepreneurship policy (Hart M. D., 2003). This gap within the field of entrepreneurship policy is very important since the policy process always influences the content of policy (Hart M. D., 2003). No matter how good are the participants’ intentions in the policy process, inevitably they have limited resources, i.e. time, budget, information, etc, so prioritization is an inevitable stage in decision making. Therefore for allocating the limited resources, policy makers should have some criteria to prioritize policies.

The two above mentioned issues which have been paid less attentions by scholars are going to be investigated in this chapter. First; analyzing the process of developing entrepreneurship policies, and second; providing some suggestions to make this process more evidence-based, especially the main focus will be on two less investigated steps of this process, i.e. providing some criteria for prioritizing the policies and evaluating the entrepreneurship policies.

3.2 Quality Matters
The process which a policy is made is not a high science, but doing well in this process is difficult (Office of the first Minister and Deputy First Minister of Northern Ireland, 2003), or in a simple term “quality matters”. In the following parts we will show that for doing well in this process we need evidence to ensure the quality.

In designing and implementing any policy at least four types of errors can be distinguished. These errors shown as $e_1$, $e_2$, $e_3$, and $e_4$ in figure 3.7 are as bellow:

![Figure 3.1: Four types of errors associated with designing and implementing a policy](image)

$e_1$: the difference between the “real problem” and “what the policy makers think is the real problem or the “target” of the policy. There is always difference between what we think and what actually is, and nobody can claim that s/he see the real problem exactly as it is.
$e_2$: This error is associated with the process designed by the original developer. The errors in designing a model can emerge from many sources such as the assumptions used, the references used, etc., but here we represent all of them as a single error as $e_2$.

$e_3$: This error is associated with the different between the process designed in the real world (the real world’s arrangements) for implementing the policy and the process designed by developers. There is the likelihood of being differences between the process designed by developers and the arrangements in the real world.

$e_4$: This error is associated with the real world actions, i.e. the final actions done by practitioners in the society for implementing the policy. The errors associated with actions can emerges from many sources, but here all of them are shown as $e_4$.

Two types of the above mentioned errors are associated with the design process and two are associated with implementation in the real world. Therefore due to the existence of these errors, what will be hit through designing and implementing a policy, as shown in figure 3.7, is neither the real problem nor even what was targeted. What many politicians do is representing “what is hit” as “what was targeted” as the sign of success of their policies.

Even many evaluations actually evaluate “what is hit” not “what was targeted”. This failure in evaluation is not done always intentionally; most of the times is because the evaluation is done by those who have been also involved in designing or implementing the policies. Those who are involved in designing or implementing a policy usually are not aware of the errors might have happened during the process, and they think “what is hit” is the same as “what was targeted”. Thus there is need for evaluation to be done by a third party who was not involved in the process policy making and implementation. This third party can better distinguish between “what was targeted” and “what is hit”, providing more non-bias evaluation.

The art of designing and using a policy is minimizing the sum of these errors ($e_1+e_2+e_3+e_4$). As smaller is the sum of these errors, the closer will be “what is hit” to “what was targeted”. This is the important role of high quality evidences, i.e. minimizing the sum of the errors. As more there are the high quality evidences indicating that “what is targeted” is the “real problem”, the smaller will be $e_1$, as more high quality evidences used during the design process, the smaller will be $e_2$, as more high quality evidences used during the institutional and functional set up, the smaller will be $e_3$, and as more high quality evidences used in implementation, the smaller will be $e_4$. 
If we consider the variations in errors as a function of “quality of evidences” (QE), *ceteris paribus*, thus the relation between error and the “quality of evidences” can be represented as equation 3.1. According to equation 3.1, as the quality of evidence increases, the error decreases.

$$e_i = f(QE_i) = \frac{1}{q e_i} \quad \text{Equation 3.1}$$

In the case of using the “best practice” approach the situation can get much worse depending on to what extent the policy is borrowed (copied). The most common justifications presented by politicians for employing policies implemented in other societies are; first, since they were successful polices in the another society, so they are more likely to be successful in this society as well, and second; since those polices have been implemented before, so pitfalls and problems associated with them are now revealed and can be avoided. However they seems to be rational reasoning, but actually they suffer from the lack of awareness of the source of errors might occurred in using the “best practice” approach or “borrow policy”.

Figure 3.8 Shows the errors associated with the “best practice” approach when it leads to “borrow policy” from another context, i.e. copying the design and implantation of a policy from another context. When a policy is borrowed from another context, the first error emerges from the differences between the “The real problem in the original context” and “The real problem in the new context”. The “real problem in the new context” will never be the same as the “real problem in the original context” which inspired the need for new policy in the original context. This type of error is shown as $e_{c_1}$ with ”$c_1$” representing the error associated with the contextual differences.

The same as the original context, what will be targeted in the new society will differ from the real problem, so there is the likelihood of occurring error type 1 in new context as well, shown as $e'_1$ in figure 3.8. Borrowing a policy implemented in another context, also means borrowing two types of errors ($e_2, e_3$) inherited in that policy. These two types of errors ($e_2, e_3$) occure during the design process and the real world arrangements in the original context and are inherited in the policy when it is borrowed.
In addition to the above mentioned errors, there is another type of error \( (e_5) \) associated with the borrowed policy. To implement the borrowed policy in the new context, some arrangements and design should be done in the real world. Thus there is the likelihood of occurring some errors from these arrangements in the new context, so that the designed model in “the real world of the new context” will not be the same as the “real world’s design of the original context”. This type of error is shown as \( e_5 \) in figure 3.8. Also, the same as original context, there is the likelihood of being different between “what is hit through action” in the new context and what was arranged. This error shown as \( e'_4 \).

Therefore the number of errors when the policy is fully borrowed directly from the original context will be “6”. As can be inferred from figure 3.8, even if the policy makers in the new context exactly copy the arrangements and the actions of the original context \( [(e_5&e'_4) \rightarrow 0] \), at most they will target what was hit in the original context which is different from the target and the real problem of the new society.

It is important to note that the original context in figure 3.8 means the context which the policy was developed for the first time, and the errors shown in figure 3.8 are for the case when the policy is borrowed directly from the original context. For example if a successful policy is developed and implemented in USA and after that the implemented policy is borrowed by Sweden, then there is the likelihood of occurring those six types of errors shown in figure 3.8.

If the policy is not borrowed directly from the original context, then the number of errors will increase more, depending on the number of times the policy is borrowed by different contexts before it is borrowed by the new context. For example suppose a policy developed originally in US and borrowed by Sweden, is borrowed again by another context but from Sweden not US. In this case, based on the types of errors discussed before, we will have the same types of errors, but error type “5” \( (e_5) \) will happen one more time \( (e'_5) \). This is
Because of the difference might emerge from the “design process in the real world of Sweden” (real world arrangements in Sweden) and “the design process in the real world of the new context”. Figure ... shows all types of errors.

**Figure 3.3**: Errors associated with the policy not borrowed directly from the original context

**Note**: The total types of errors for all the policies borrowed not directly from the original context will be always “6”, but in each copy there is the likelihood of occurring error type “5”.

If “n” represents “the number of errors associated with a “borrowed policy” and “i” represents the “number of times the policy was borrowed”. Hence we can calculate the number of errors associated with the policy borrowed for “i” times \( n_i \) as below:

\[
\begin{align*}
n_1 (\text{The number of errors associated with the policy borrowed from the original context}) &= 6 \\
n_2 (\text{The number of errors associated with the borrowed policy in the second context}) &= 7 = 6 + 1 \\
n_i (\text{The number of errors associated with the borrowed policy in the } n \text{ th context}) &= n_{i-1} + 1
\end{align*}
\]

Thus we have **Equation 3.2** as: \( n_i = n_{i-1} + 1 \)

Equation 3.2 calculates the number of errors associated with the policy borrowed by \( n \) th context. If we replace \( n_{i-1} \) in equation 3.2 with its equivalent, then we will have:

\[
n_i = (n_{i-2} + 1) + 1 = n_{i-2} + 2
\]
If we continue, then we will have:

\[ n_i = (n_{i-3} + 1) + 2 = n_{i-3} + 3 \]

\[ n_i = n_1 + (i - 1) = 6 + (i - 1) = 5 + i \]

Then we will have Equation 3.3 as:

\[ n_i = 5 + i \quad \text{for } i \geq 1 \]

It is important to note that, as mentioned before, this equation is true when except the first contexts, the other contexts do not borrow the policy from the original context. For example if a policy is borrowed from the 4th context, then the number of errors will be as bellow:

\[ n_4 = 5 + 4 = 9 \]

In fact number “5” in equation 3.3 represents errors \( e_c, e_1, e_2, e_3, \) and \( e_4 \) which are always present in each copy plus that in each copy one error of type 5 will be added to the policy. Large number of errors in a borrowed policy sometimes will lead to the results very different from or opposite to the target of the original policy. This can happen after first, second or third copy or after 10th copy depending on how big are the errors in each copy, and, as discussed before, this is the role of evidence to minimize the the errors.

The above discussion is also true when a policy is implemented within the same society in different times, so that many contextual factors has changed and are not the same as before. We can see examples of this case not only within the field of policy making but also other fields of social science. For example the purposes of many today's traditions and customs are very different from or even opposite to the original purpose they were developed for in centuries or thousand years ago. This is because at each time or each generation some errors have been added to them, so that now they are completely different from or even the opposite to the original concept.

The above discussion has some important implications for policy maker which they should always be aware of when designing and implementing policies:

- **Policy making needs high quality evidences**: when designing and implementing policies, there is the likelihood of occurring errors. This errors can occur both when a policy is being designed and implemented for the first time in the original context \( (e_1, e_2, e_3, e_4) \), or when the "best practice" approach is used. To ensure the effectiveness and quality of a policy, these errors should be minimized, and the best way for minimizing these errors is providing high quality evidences indicating that:
• The target of the policy represents “the real problem” of the society,
• Each step of the policy is designed based on high quality evidences, so that the outcome of this process will hit the defined target,
• The real world arrangements or set up of different organizations, departments, organizations, and etc. for implementing the policy is according to what was designed,
• The final actions or what is done by practitioners and the way these actions are done is in accordance with the real world arrangements.

Obviously errors can never be zero; we can never find out “the real problem”, and the “target” of the policy is just an estimate of the real problem, or the practitioners’ own experience, habit, feelings, psychology, etc. will influence their actions. But high quality evidences will help us to minimize these errors. Without evidence everybody will have different understanding of the real problem, or every practitioner will do what s/he think is true based on his own experiences, habits, and understanding.

Integration of policy-making and policy implementation: in order to minimize the sum of errors, it is important to integrate the designing process with implementation, so that practitioners and policy makers can easily communicate and share the information and knowledge. While in the late 1980s and early 1990s organizational and management changes emphasized the separation of policy-making and policy implementation, more recent good practice in policy-making emphasizes on reintegrating them into a single, seamless, flexible process (Northern Ireland’s Office of the first Minister and Deputy First Minister, 2003).

It is important to involve practitioners in designing phase, and consider them as source of evidence. This is because to have the same understanding of policy goals, how and based on which evidences it has been designed, and how it should be implemented to achieve its target. Moreover the practitioners’ experience will provide evidences from the real world. In fact a “concurrent engineering” should be adapted during the whole process.

“Best practice” should be based on the practice of the original context: this is because when the best practice is done from a context other than the original context where the policy was developed, as discussed above; there is the likelihood of increasing the number of errors.

“Best practice” needs careful understanding of both the original context and the new context: this is due to errors which will emerge from contextual differences. Lack of this knowledge will lead to adapting best practices from contexts which their real problem and their influential factors are very different from the context which the policy is going to be implemented, and increase the contextual error ($e_c$).
“Best practice” needs careful understanding and re-designing the “design processes” and the “real world arrangements” of the original context: this is due to errors \( e_2 \) and \( e_3 \) which are inherited in the original policy. Policy makers should investigate the design process of the original policy to make sure it was designed based on the true assumptions, and evidences, and also the original “real world arrangements” were based on high quality evidences so that they represent what was designed.

This understanding is also required for re-designing the policy and the “real world arrangements” in the new context. Even if the design and the real world arrangements of the original policy are based on high quality evidences, it does not guarantee the efficiency and quality of the policy in the new context due to contextual differences. Thus the policy makers of the new society should go through each step of the original policy and provide evidences from the new context for each step.

The above discussion is much important for developing countries. First due to the higher impacts which developed countries have on creation of scripts and the world models. In fact many of these policies and concepts comes from developed countries with structures and way of life very different from developing countries. Therefore world models are more likely to be compatible with the local structures of developed countries than developing countries. According to Meyer et al. (1997) in developing countries lack of economic growth is not due to lack of entrepreneurship policies, but because the entrepreneurship polices in developing countries are less compatible with the local contexts of these countries. Second is that in developing countries there is a looser coupling between policy and action than in developed countries (Drori, 2003).

Thus for developing countries it is much more important to consider the five above mentioned points when making E-policies or using the “best practice” approach. They should try to find the “best practice” from the contexts more similar to their context. As stated by GEM (2010) report "learn from your economic peers and your geographic neighbors".

The above mentioned issues are also some of the reasons behind providing a generic model in this research which do not suggest any specific policies, and is not confined to any specific context or policy target (impacts or definition of entrepreneurship), and there is an emphasize in this model on re-investigating the factors and also re-designing the polices even if the "best practice" approach is used.

Before describing the evidence-based model of this research for making entrepreneurship policies, there is a need for clarifying “what is meant by entrepreneurship policy?” and
“what is meant by evidence?” in this research. These two concepts will be described in the following parts.

3.3 What is meant by entrepreneurship policy?
Before discussing the process of entrepreneurship policy, to have a better understanding of the factors which can affect the process of entrepreneurship policy making, it is useful to have a look at the typical policy analysis framework, figure 3.1, which summarizes the approaches to business development.

![Policy Analysis Framework](image)

*Figure 3.4: Policy Analysis Framework*
*Source: Bridge S., O’Neill K. and Martin F. (2009)*

The outer rectangle represents the macro-economic policies. These policies are about the economic conditions or environment in which the business operates. These policies are very crucial for having a healthy business environment. The inner rectangular represents the area of micro-policy intervention which targets specific individuals and businesses. This framework is also useful for distinguishing between SME policy and entrepreneurship policy. While SME policies are mainly attributed to the inner rectangular, i.e. established businesses, entrepreneurship policy is more holistic and is attributed towards environment, individuals and business. Thus for the purpose of this research we use the same definition as Lundström A. and Stevenson L. (2001) for entrepreneurship policy: “those measures intended to directly influence the level of entrepreneurial vitality in a country or a region.”

3.4 What counts as Evidence?
A striking change in governments in the 20th century was the increasing number of organizations and interest groups willing advice or influence governments' decisions. Different types of pressure groups, university researches, independent think-tanks, professional bodies and statutory organizations are some examples of these interest groups. One of the most important ways which these interest groups use to influence the government’s decisions is the assembly and presentation of different types of evidences
Therefore one of the important criteria for a successful evidence-based policy making is to have an agreement on what counts as evidence?

First criterion which there should be an agreement on it is the source of evidence. According to the definition of UK Cabinet Office in its 1999 “White Paper Modernising Government”, evidence can come from “expert knowledge; published research; existing research; stakeholder consultations; previous policy evaluations; the Internet; outcomes from consultations; costings of policy options; output from economic and statistical modeling” (Cabinet Office, 1999: 33). Then the breadth of what is called evidence is wide and dynamic (Shaxson, 2005), but there are two other criteria, method and weighting, which confine this wide breadth.

The method of acquiring evidence is the second criterion which there should be an agreement over. According to Chambers Dictionary, evidence is the results of “systematic investigation towards increasing the sum of knowledge”. Therefore all kinds of evidences are included as long as they have been collected using a systematic process. Hence these evidences can come from any systematic process of critical investigation and evaluation, theory building, data collection, analysis and codification, and also from action research, i.e. by practitioners.

The third criterion is the weighting of evidence. Despite the wide definition of evidence, all the evidences do not have the same importance, relevancy, or weighting (Sutcliffe S. and Court J., 2005). Shaxson (2005: 102) identifies some of the key characteristics which can be used for weighting evidences and for determining which evidences can be more useful? These key characteristics which evidences should be tested against them are accuracy, credibility, relevance, and practicality. These key characteristics, referred as “ACRP Test” in the later parts of this thesis, are further described as below:

1. **Accuracy / objectivity:** This criterion refers to the accuracy of the evidence, i.e. does the evidence correctly describe what it intends to do? For the relevancy of an evidence there are arithmetical (have the numbers been added up correctly?), statistical (have the cause and effect been specified correctly?), and representative (do the quotes really represent what the body of people felt?) issues which should be considered (Sutcliffe S. and Court J., 2005). There are also other issues regarding to the objectivity of evidence and its sources. The bias in the evidence based should also be questioned in order to give us a better understanding of how it conditions our interpretation of the evidence for policy (Shaxson, 2005: 107).

2. **Credibility:** Credible evidence is based on a strong and clear line of argument; tried and tested analytical methods; rigorous process of data collection and analysis; and clearly
presented conclusions (Shaxson, 2005: 106). This criterion is related to the reliability of an
evidence, and whether the evidence can be used for mentoring, evaluation or impact
assessment. Since it is difficult for policy makers to investigate the evidences, hence usually
they rely on the reputation of the source as a proxy. For instance, research findings from
academic institutions and reputable think tanks are more likely to be viewed credible than,
for example, opinions from civil society groups or community leaders. However reputation
is also subjective and depends on decision maker.

3. **Relevance**: The key issue regarding to the relevancy of evidence is that it is timely, topical
and has policy implications. The type of evidence that one refers greatly depends on the
audience it is being presented and the possible impact it will have (Sutcliffe S. and Court J.,
2005). For instance, in public sector policy makers are more interested in evidence of
action (what has already happened) rather than opinion (Moseley and Tierney, 2004: 114).
Relevancy of evidence implicitly refers to the need for the evidence to be generalisable, i.e.
whether there is extensive information or just some selective case studies. Relevancy also
relates to the way of inferences. Generalisability for some types of information refers
mainly to the sampling procedure, but for others it refers to our understanding of the
context.

4. **Practicalities**: Practicality of evidence refers to its accessibility to policy makers and the
cost of the policy implications of the research. Policy makers should easily access to the
evidence in a useful way, and it should easily be translated into policy. The cost of acquiring
evidence should be feasible and affordable for policy makers.

### 3.5 Pre-requisites of E-policy making

In this section some other important issues and pre-requests which policy makers should
be aware of for doing well in E-policy making (and for most of the other types of policy
making) are presented. However most of them have been partly discussed in the previous
sections of this document, but due to their importance, in this section a summary of them is
presented as bellow:

- **Evidences indicating the need for new policy**: Before the process of policy making is
  started, there should be enough robust evidences indicating the need for new polices.
  Market failure as properly defined is neither a necessary nor a sufficient condition for
government action (Auerswald E. P., 2007). The first reason is that a perfectly competitive
market achieves an efficient outcome but not necessarily an equitable one. In the other
word even in the absence of market failure, concerns over equity rather than efficiency may
propose an important and legitimate role for government intervention. Hence market
failure is not a necessary condition for a government intervention.

  Second; nearly everywhere conditions for rigorously defined market failure are present, i.e.
  the same essential factors that cause market failure can also frustrate the implementation
Thus the concept of market failure provides little evidence on the appropriate scale of any intervention (Storey J. D., 2008). Hence before starting any policy process there should be more robust evidences indicating the need for new policy.

- **Exploiting the existing data:** As discussed in section 2.2.1, Most of research efforts is dedicated to new primary research, while today for any topic, there is lots of past research available. Not using the past research sometimes is due to some reasons like not being valid anymore, different today's context, perspective, agenda, etc., but most of the times there is a matter of ignorance or fashion (Solesbury W., 2001).

Therefore in order to provide evidence in different phase of policy process, first of all the existing data and research findings should be investigated.

- **Effective entrepreneurship polices takes time:** Entrepreneurship strategies do not quickly lead to new jobs and business to a region, effective programs need a commitment of at least four years and even longer time frames are the norm (Hart M. D., 2003). The long term characteristic of entrepreneurship polices creates political dilemmas for communities considering new entrepreneurship polices because political leaders may look for quick victories letting them take the credit of creating new jobs. Thus, the short-term benefits of entrepreneurship programs may not be very attractive to political leaders with a shortsighted focus on the next election.

- **Understanding the broad context:** For an effective policy, not only policy makers should know all the traditional attributes (knowledge of relevant law and practice, understanding of key stakeholders' views, ability to design implementation systems), but they also should understand the broad context they have to work (UK Cabinet Office, 1999). This means not only understanding culture, process and organizational structure can affect policy making, but also knowing the Ministers' priorities (e.g. the importance of constituency concerns or impending elections or re-shuffles), and how polices will be implemented in the real world and where they will make an impact (UK Cabinet Office, 1999). This understanding of the broad context should be present when policy makers are thinking about possible approaches and also when they are going to put a particular solution into effect (UK Cabinet Office, 1999).

Moreover the policy makers should understand the relationship between their policies and the economic policies at the macro-level, to ensure that they are compatible and in the same direction. A variance between macro-level and micro level policies can result in a suboptimal growth path (Braunerhjelm P., 2010).
Agreement over what counts as evidence: There should be an agreement over what counts as evidence and which evidences have higher weights. This agreement is important since for different contexts and also for different departments, different evidences have different weights. In a study by Bullock et al. (2001) he found that government departments use a more limited range of evidence: domestic and international research and statistics, policy evaluation, economic modeling and expert knowledge. This also differs for different parts of public sector. For example, health care has a hierarchy of evidence for assessing what works. Based on this hierarchy, randomized experiments are at the top, and observational studies and professional consensus are at lower levels of credibility (Hadorn et al. 1996; Davies and Nutley 1999).

In contrary to this hierarchical approach in health care, in other sectors such as education, criminal justice and social care there are disputes regarding to what counts as appropriate evidence with relatively little experimentation, and deep divisions between qualitative and quantitative paradigms (Davies et al. 2000).

It is easy, especially for researchers, to integrate the concepts of evidence with research, and also for academic researches to count only academic research as evidence. In practice however evidence has more variety than research.

ACRP test for all evidences: Before using evidence as a basis for a decision and at each stage of the policymaking process, its quality should be tested through ACRP criteria. This will ensure that all the evidences used as the basis for the policy were of high quality.

Evidence of improvement (Policy evaluation before implementation): Even where there are enough evidences indicating the need for new policy, there may be different views about whether government intervention would lead to an improvement. Thus there should also be enough evidence indicating that the government intervention will lead to improvement. These evidences should mainly come from evaluating the effectiveness of designed polices before implementing them. However as discussed in section 1.1.1, governments are reluctant to ensure that policies are carefully evaluated.

Bargaining skills: Many participants in the policy process pursue specific interests, instead of the public interest. Usually there is a need for bargaining to get the support from these interests (Hart M. D., 2003).

The model proposed in this research can be used as a proxy: The evidence-based model proposed in the following sections can be considered as a prime approach to entrepreneurship policy making, but in the real world it might not be easy or sometimes impossible to follow the exact steps suggested by this model or to provide the exact evidences. Hence in the real world it can be used also as a proxy, i.e. as much as the process of making an entrepreneurship policy is closer to this model, it will be more effective. As
we can see in chapter 4, in the case of entrepreneurship policy in Denmark, its proxy to this model has made it a more effective policy than the case of Sweden.

3.6 A Generic Evidence-Based Model for Making Entrepreneurship Policies

Among the approaches developed and used for policy making, this research has found evidence-based policy the most appropriate and update one. Although evidence-based policy making is not an absolute, and there are some pitfalls, but comparing the other alternatives, it summons to mind Winston Churchill’s famous description of democracy as “the worst form of government except all others”. Evidence-base policy making is simply the best we’ve got (Dunworth T. et al., 2008).

Despite the dramatic impacts which the research-based policies can have on peoples’ lives, but it often play a minor role in policy process (Young J., 2008). Vincent Cable, a senior member of the UK parliament, in a talk on evidence-based policymaking at Overseas Development Institute (ODI) in 2003, said that practically politicians are not able to use evidence-based practice because, among other things, few of them are scientists, and they don’t understand the concept of testing a hypothesis (Young J., 2008). In another meeting by ODI, Phil Davies, deputy director of the governmental and social research unit in the UK Cabinet Office, explained that policymakers are more heavily influenced by their own values, experience, expertise and judgment, the influence of lobbyists and pressure groups and pragmatism based on the amount of resources they have available rather than by research-based evidence (Young J., 2008).

In this section a model for developing entrepreneurship policy will be proposed which is mainly informed by evidence. This model does not prescribe specific policies, since this will vary according to the circumstances and traditions of that country. However it does argue that it is in the interest of businesses, taxpayers and society that policies to be clearly formulated, articulated and evaluated based on high quality and contextual evidences.

For policy choices to be made based on evidence, a rational decision-making model of policy process should be developed. According to (Davies T. H. et al., 2000), in this rational model five main stages can be identified with research evidence mainly feeding in during stages 2 and 3:

1. Identifying the problem which needs action. The related goals, values and objectives should be set out.

2. Providing a list of all the important possible ways of solving the problem or achieving the goals or objectives.
3. Predicting the important consequences of each alternative and estimating the probability of occurring those consequences.

4. Comparing those consequences with the goals and objectives identified under (2).

5. Selecting a policy or strategy which its consequences are in most close match with goals and objectives, or the problem is most nearly solved.

These five steps are for selecting the policies or strategies, but after that there are implementation step and evaluation step. A rational policy process is often characterized as a cycle of activities, where the final stage of one stage is the starting point of the next stage (Davies T. H. et al., 2000).

According to Lasswell (1977), the most common approach of studying public policy disaggregates the policy process into some functional components, figure 3.2. It should be noted that the policy process is never as linear or cyclical as shown in figure 3.2, but showing the policy process in terms of these functional stages helps us to understand how policy process works.

The key point in illustrating the policy process as a cycle is that policy-makers rarely, if ever, start from a clean sheet (Northern Ireland’s Office of the first Minister and Deputy First Minister, 2003). The need for a new policy should be identified through monitoring and evaluation of existing policy (Northern Ireland’s Office of the first Minister and Deputy First Minister, 2003).

![Figure 3.5: The Policy Cycle](source: Young and Quinn (2002))

According to figure 3.2, in each stage research has the potential to influence the policy process, thus this illustration of policy process also helps to break down the policy cycle in order to identify different types of research or evidences which might be required. For example influencing an agenda needs different approach and evidence than is needed for
influencing the policy implementation. Table 3.1 shows the description of each stage of policy process shown in figure 3.2, and also the different types of evidences which are needed at each stage.

Another factor which influences the types of evidence is the time constrains between evidence needs for answering the policy question, i.e. different types of evidences are required at different stages of process and time considerations are likely to influence the available mechanisms to mobilize evidence. Figure 3.3 shows the flow of evidence in the process of policy.

Figure 3.4 shows the proposed cycle of this research for evidence-based entrepreneurship policy making. However it is designed based on the policy cycle depicted in figure 3.2, but there are also some differences. In the following parts different steps of this model and the required evidences will be explained.

<table>
<thead>
<tr>
<th>Stage of the policy process</th>
<th>Description</th>
<th>Different evidence issues</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agenda setting</td>
<td>Awareness and priority given to an issue</td>
<td>The evidence needs here are in terms of identifying new problems or the build up of evidence regarding the magnitude of a problem so that relevant policy actors are aware that the problem is indeed important. A key factor here is the credibility of evidence but also the way evidence is communicated.</td>
</tr>
<tr>
<td>Formulation</td>
<td>There are two key stages to the policy formulation process: determining the policy options and then selecting the preferred option (see Young and Quinn, 2002: 13-14).</td>
<td>For both stages, policymakers should ideally ensure that their understanding of the specific situation and the different options is as detailed and comprehensive as possible – only then can they make informed decisions about which policy to go ahead and implement. This includes the instrumental links between an activity and an outcome as well as the expected cost and impact of an intervention. The quantity and credibility of the evidence is important.</td>
</tr>
<tr>
<td>Implementation</td>
<td>Actual practical activities</td>
<td>Here the focus is on operational evidence to improve the effectiveness of initiatives. This can include analytic work as well as systematic learning around technical skills, expert knowledge and practical experience. Action research and pilot projects are often important. The key is that the evidence is practically relevant across different contexts.</td>
</tr>
<tr>
<td>Evaluation</td>
<td>Monitoring and assessing the process and impact or an intervention</td>
<td>The first goal here is to develop monitoring mechanisms. Thereafter, according to Young and Quinn (2002), “a comprehensive evaluation procedure is essential in determining the effectiveness of the implemented policy and in providing the basis for future decision-making. In the processes of monitoring and evaluation, it is important to ensure not only that the evidence is objective, thorough and relevant, but also that it is then communicated successfully into the continuing policy process.</td>
</tr>
</tbody>
</table>

Table 3.1: Components of policy process and different evidence issues

Source: Pollard and Court (2005)
Figure 3.6: The flow of evidence in the policy process  
**Source**: Shasson (2005)

*Note:* as described in section 3.2 the policy cycle starts when there are enough evidences for intervention/new policy.

*Note:* as can be inferred from the topic of this thesis and also as described in introduction section, the center of interest in this research is prioritizing, selecting and evaluating entrepreneurship polices based on evidences. Thus the implementation step is out of the scope of this research.
Figure 3.7: The Cycle of Entrepreneurship Policy Making
3.6.1 Agenda setting/Problem Definition
In order to develop an agenda that is informed by evidence, at first some agreements should be develop on what constitutes evidence, in what context, for addressing different types of policy/practice questions (Nutley S. et al., 2003). This agreement includes the role of research and other sources of information, and also a greater clarity about the relative strengths and weaknesses of different methodological stances (Nutley S. et al, 2003). Such methodological developments should identify the policy questions which can be analyzed and the kinds of specific research techniques which can be used. Moreover, in this methodological development, there should be an emphasis on methodological pluralism, i.e. seeking complementary contributions from different research designs (Nutley S. et al, 2003). The stakeholders (e.g. policy makers, research commissioners, research contractors, and service practitioners) should reach a broad agreement over these issues if they want to have wider impact of evidence on their policy process.

According to (Nutley S. et al, 2003), there are four key requirements to be met before an agenda is developed:

1- Agreement about what is counted as evidence in what circumstances
2- A strategic approach for creating evidence in priority areas, along with systematic efforts for accumulating evidence in the form of robust bodies of knowledge
3- Effective distribution of evidence to where it is most needed and developing effective tools to ensure wide access to knowledge
4- Providing initiatives to ensure the integration of evidence into policy and encouraging the usage of evidence in practice.

3.6.2 Policy Formulation
This section can be considered as the heart of this research. It is at these stages of policy process where the approach provided in this research differentiates from most of the existing methods. Two main outcomes after passing through this section are:

1- A prioritized list of policy areas based on robust evidences (factors) representing the society's current entrepreneurship conditions, tested and weighted against 5 quality measures (ACRP),
2- A list of evidence-based policies selected based on their likely effectiveness while implemented and within the resource constrains.

Prioritization of policy areas is a crucial step for a policy maker because of the resource constrains existed in the real world. According to Lundström A. and Stevenson L. (2001), “entrepreneurship policy is more about systematic thinking in priority areas than about
adding programs or projects”. In the following parts the different steps which lead to the final list of polices will be described.

- **Determining the desired impacts:** as discussed in section 1.1.4, different countries expect different impacts from implementing entrepreneurship polices. Hence at this step the desired impacts of entrepreneurship should be defined. Expecting different impacts from entrepreneurship is quite common in real world. Some governments like Spain and Finland promote entrepreneurship for employment growth; some governments like Ireland and Australia look to it more as a source of wealth creation and economic prosperity; and some look at it as a solution for domestic social issues such as labor market integration of ethnic groups and economically disadvantaged regions (Stevenson L. and Lundström A., 2001).

Although there should be enough evidences indicating that these desired impacts will adjust the problem defined in the previous step. Defining the desired impacts has a critical influence on prioritizing the policies because an entrepreneurial policy does not have the same importance for achieving different impacts. For instance, entrepreneurial polices which are important for job creation may not have the same importance for stimulating technical innovation.

- **Desired definition of entrepreneurship:** as also discussed in section 1.1.4, there is not a single accepted definition of entrepreneurship. Thus at this step, after the desired impacts are determined, and based on that desired impacts, the desired definition of entrepreneurship will be provided. There should be enough high quality evidences indicating that this type of entrepreneurship will lead to desired impacts defined at the previous step. Providing the desired definition will have an influence in later stages when the determinants are re-investigated for the specific society.

- **Desired performance indicators:** After defining the desired impact, the next step will be providing the desired entrepreneurial performance indicators. According to Ahmad N. and Hoffman A. (2007), “Entrepreneurial performance measures the entrepreneurial actions that are instrumental in delivering the impacts”. Since several impacts can be expected from implementing entrepreneurship policies, so several performance indicators can also be defined. Thus different societies will choose different indicators, depending on their desired impacts. Figure 3.4 shows some different performance indicators used by different countries based on the objectives.

Obviously there also should be enough high quality evidences indicating that these indicators correctly measure the desired impacts expected from implementing entrepreneurship policies.
Initial list of likely influential factors (policy areas): After performance indicators are defined, then it is time to design or select appropriate polices for adjusting the performance indicators. One of the best indicators for determining the likely policy areas are determinants. Determinants reflect the key factors which influence the entrepreneurial performance (Ahmad N. and Hoffman A., 2007).

There are many environmental and sociological factors associated with personal attributes of entrepreneurs that influence the outcomes of entrepreneurial process, and these factors and attributes are represented in entrepreneurial determinants (Ahmad N. and Hoffman A., 2007). Hence one of the best sources of evidence for designing appropriate policies to influence and adjust the performance indicators is entrepreneurial determinants.

An initial list of main determinants which may stimulate the desired type of entrepreneurship can be built using long lists of main determinants available in related literature. As discussed in section 3.1.2, there is a breed source for providing evidences. The important issue, as discussed before, is acquiring evidence (determinants) from the sources and methods which there is an agreement over them.

Note: this model does not provide any specific source, classification, themes, area or list of determinants. This is because the purpose of this model is to be a generic model and provide a road map for all types of societies at different stage of economic developments with different socio-cultural, economical, and psychological attributes. For instance the list of determinants provided by OECD framework is mainly applicable to entrepreneurship actions more appropriate for OECD countries that are largely at innovation-driven stage, but for a developing society at the factor-driven stage, basic requirements such as “Health and Primary Education” provided by GEM framework might be more important. Therefore
to have an initial list of determinants likely to influence the desired impact and in accordance with the specific characteristics of the society, an extensive review of the previous researches has to be done.

Another important point, as mentioned at the pre-requisites part, is the practitioners’ involvement. Since practitioners are directly engaged in implementing entrepreneurship polices in the real world, their knowledge and experiences can substantially contribute in building the initial list of determinants.

- **Prioritization**: After building the initial list, the next step will be prioritizing the determinants. This will help policy makers to allocate their available resources to policy areas with the highest priority for their society. Prioritization will be done based on the “ACRP test”, described before, and another test which investigate the intensity of determinant. Intensity is a new criterion introduced first time in this section or maybe in this research. It investigates the extent to which the determinant exists within the society.

The reason for using a fifth criteria for weighting the evidence (determinant) is that prioritizing the determinants only based on the first four criteria will not solve the problem of resource allocation faced by policy makers. For example consider after weighting the determinants based on the first four criteria, it has been revealed that 20 determinants have the highest priorities, i.e. of high quality and accessible with low cost to policy makers. Due to resource constrain, policy makers cannot allocate resources for adjusting all the 20 factors, so they should choose some of them. Now the question is that which determinants should be chosen? Here is the place where the intensity criteria can help. For example if 5 of these factors exist stronger within the society than the others (supposing they all of them have positive effects), hence resource allocation should start from other determinants which have the same quality but do not exist strongly within the society.

The critical step for reaching to a judgment over the weight of a determinant, especially its accuracy, credibility and relevance, is re-investigating the influence of the determinant on desired performance indicators, although their likely influence might be tested by previous researches. As discussed before for different societies and different desired impacts or even at the same society in different times, entrepreneurial determinants might show different influences. Thus there is a need for re-investigating the determinants for that specific society.

- **List of potential polices**: After determinants are weighted and prioritized, policy makers can start (from the determinant with the highest priority) suggesting appropriate policy options for adjusting them. It is important to note that at this stage still the final polices are not determined, and for each determinants several policy options might be suggested. The
required evidences for selecting the final list of policies will come from the policies' evaluation estimates in the next step.

**Note:** In contrary to many other models, frameworks or policy cycles, this model does not provide any suggestion of policy options or areas because of two main reasons. First; as discussed before, this model is a generic model not confined to any specific types of entrepreneurship impacts or performance indicators. Second and the most important, to reduce the likelihood of falling into the hole of "borrow policy" or "best practice imitation".

The author believes that the best polices for each society are the unique ones, i.e. designed based on the specific situation of that society and cannot be exactly implemented in another society. In fact entrepreneurship policies are society-specific and time-specific, i.e. for different societies different entrepreneurship polices should be implemented and even in the same society appropriate policies are different in different times.

One of the pitfalls associated with policy making is falling into the hole of “borrow policy” or "best practice imitation". Policies largely follow best practice, often because it is cheaper and quicker to copy best practice than actually engaging in the innovative exploration of potential new methods (O’Neill k., 2010). In this model there is a place for policy makers’ innovation and creativity to design new polices specific to their own societies. Best practice and other source of policies provided by previous researches and other models such as OECD can be used as a source of possible policies. But this model does not confine the policy makers to specific policy areas and do not suggest any specific policy.

- **Evaluation:** After the policy options have been made, the next step will be selecting the policies. The selection criteria will be based on the evidences come from evaluating the effectiveness of the policies. As described in section 1.1.1, despite the important role of evaluation, governments are reluctant to undertake evaluation.

  Evaluation has an integral role in the policy process. Evaluation cannot be left to be done once the policy has been in operation for many years, but it has to be a key element of initial policy formulation (Storey D. J., 2008). When policy is being formulated, its objectives and targets have to be defined in a way to make it amenable to evaluation (Storey D. J., 2008). Hence in the model proposed in this research, evaluation will be done at two stages; before selecting the final list of polices and after the policies are implemented.

### 3.6.3 Evaluation
One of the important factors which influences the extent to which governments can enable SMEs and entrepreneurs to deliver the desired impacts, is the extent to which governments deliver their policy in a cost effective way (Storey D. J., 2008). Providing
evidences for new policy is not a sufficient condition for government intervention, but it is justified only when the effect of that intervention leads to a net welfare improvement. In other word government intervention is more likely to be justifiable when it is delivered cost effectively (Storey D. J., 2008). The effectiveness of a policy, however, is not determined only by the policy choices discussed above, but also by policy delivery. In the following parts of this section it will be discussed how the effectiveness of policies can be evaluated.

According to Storey D. J. (2008), evaluation is the process of determining the relevance, efficiency and effect of an activity in terms of its objectives in a systematic and objective manner, including the analysis, implementation and administrative management of such activity. Evaluation will be most effective when its result enter the public domain (Storey D. J., 2008). This emphasizes that not only undertaking evaluations is important, but also that their findings should be disseminated. Therefore evaluation provides the required information for debate on policy impact.

However there are a number of criteria used for evaluation, but at its core is the concept of Additionality, i.e. the true impact of the scheme/program (Storey D. J., 2008). Although it is not always easy to quantify the impact of a program, it is likely to be represented in a measure such as additional output, employment, sales or export activity attributed to the existence of the program. Figure 3.5 diagrammatically shows the concept of additionality. According to figure 3.5, for any given outcome, the difference between the observed outcome with the intervention, and what would have happened without the intervention can be considered as that policy impact. Figure 3.5 shows the two outcomes diverging when the policy is implemented.

![Figure 3.9: The Impact of an Intervention](image)

*Source: Oldsman (2002)*

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1 The OECD SME Working Party identified seven criteria under which policies can be assessed: Rationale, Additionality, Appropriateness, Superiority, Systemic Efficiency, Own Efficiency and Adaptive Efficiency [OECD, 2000].
Although additionality is, in principle, a simple concept, identifying the program impact in a systematic and objective manner can be difficult because program’s impact cannot be observed easily for a number of reasons. First, the changes which might have occurred as a result of participation are not always clear, i.e. the outcome measures are unclear. For some programs the expected result might be a greater likelihood of firm formation or survival, others growth in sales, profits or employment, others a greater likelihood of innovating or selling into overseas markets, and some programs might include all these characteristics. Thus evaluation requires a decision on appropriate outcome measures (Storey D. J., 2008).

Second, the point at which the lines diverge, figure 3.5, will not necessarily be immediately after the program is delivered. Some programs may precede others and have their impact years before others. For example, while a program of funding R&D in SMEs would be expected to have little impact for several years, a program of developing enterprise education might have no impact for two decades (Storey D. J., 2008).

Third, only when the “exogenous” factors are isolated, the impact of a program can be estimated. This is because there are a myriad of influences from different factors, other than that of the program participation such as skill of the entrepreneur, the sector and location of the business, macro-economic conditions and the role of chance.

Many approaches to evaluation have been adopted, but it is possible to summarize them within the “Six Steps to Heaven” framework ([Storey, 2000]). Table 3.2 shows the six steps of this framework. However this framework has been developed mainly for evaluating SME polices, but it can also be adapted for evaluating entrepreneurship polices as well.

<table>
<thead>
<tr>
<th>Monitoring</th>
<th>Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>STEP I</td>
<td>* Take up of schemes</td>
</tr>
<tr>
<td>STEP II</td>
<td>* Recipients Opinions</td>
</tr>
<tr>
<td>STEP III</td>
<td>* Recipients’ views of the difference made by the Assistance</td>
</tr>
<tr>
<td>STEP IV</td>
<td>* Comparison of the Performance of ‘Assisted’ with ‘Typical’ firms</td>
</tr>
<tr>
<td>STEP V</td>
<td>* Comparison with ‘Match’ firms</td>
</tr>
<tr>
<td>STEP VI</td>
<td>* Taking account of selection bias</td>
</tr>
</tbody>
</table>

Table 3.2: Six Steps to Heaven Framework  
Source: Storey D. J. (2008)

In this framework there is a gradation of sophistication in assessment procedures with Step I being the least sophisticated procedure and Step VI being the most sophisticated. Here sophistication means the confidence the policy maker can have in being able to
attribute changes in the group supported by the program, called “treatment group”, to participation in the program (Storey D. J., 2008). In other word, it may be viewed as the confidence the policy maker has that all other influences are held constant.

As shown in Table 3.2 a distinction is made between Monitoring and Evaluation. While Monitoring relies exclusively upon the views of the recipients of the policy, Evaluation compares these views or actions with those of non-recipients in order to present the “counter factual” (Storey D. J., 2008). Impact of the policy or its “additionality” is the difference between actual changes and the “counter factual” (Storey D. J., 2008). Referring to figure 3.5, the continuous line represents monitoring, and only when the control group is included the dotted line will be identifies and hence the impact of policy can be evaluated. Therefore steps I to III are referred to as Monitoring, not Evaluation.

It is important to note that, despite the frequency with which Steps I to III are used, these approaches either do not provide a comparison with a “control group”, or do it in a very inadequate way. It is until Step V that a comparison is made between “treatment” and “non-treatment” group.

A full review of Steps I to IV are provided by Storey (2000), and Storey D. J. (2008). For our purposes it is sufficient to emphasize the role of evaluating the effectiveness of policies both before and after implementing the policies. As described before evaluating the effectiveness of policies is a criteria for selecting the final list of polices to implement.

**Note:** In designing or selecting the policies, it should be noted that one policy might affect more than one determinant, but finally there should be an agreement over the policy making committee that all the policy areas with highest priority are targeted.

### 3.7 Evidence is one of many factors

Although the idea of informing the policy process by evidence is not new, but the current emphasis on EBP is (Sutcliffe S. and Court J., 2005). It is important to know that evidence is one of many influencing factors in policy process. Policy making inherently is a political process (Nutley, 2003). The process of policy making is characterized by rivalry over agenda setting, over jurisdictions, and over interpretations (Young et al, 2002). Policy decisions are less about planned consequences and more about process and legitimating (Sutcliffe S. and Court J., 2005). Despite all these challenges, there is a general agreement that a more evidence-based approach towards policy making would be a positive development (Sutcliffe S. and Court J., 2005).

The process of policy making has many different stages, and at each stage different evidence is needed. Hence evidence does not only enter the policy making process at one
point. The main challenge is analyzing the conditions which facilitate evidence-based policy making (Nutley, 2003). Other than just informing the policy process by evidence, there are many other factors which should be considered when forming policies especially if it is based on evidences. According to Banks G. (2009) some of the most important factors other than evidence are as follow.

➢ **Methodology matters:** Whatever methodology is chosen, it should allow for an appropriate understanding of the nature of the issue or problem, and also different possible policy actions (Banks G., 2009). Understanding the problem is half of the battle. Failure to understand the problem is one of the most common reasons for policies to fail and poor regulation (Banks G., 2009). Moreover an appropriate methodology should consider all the possible options. This is important, since in reality, most of the public policy and regulations are based on “policy-based evidences” rather than “evidence-based policy”, i.e. informed with evidences aimed to support one already preferred way forward (Banks G., 2009). Even when broad options of policies are available, a particular instrument which has already been adapted can make a significant difference in implementing or choosing a policy.

Therefore an appropriate methodology should be used for evaluating the impacts of different policy options. Measuring the impacts of different polices depends on the topic and the task, and whether it is an ex-ante or ex-post assessment (Banks G., 2009). There are a wide range of methodologies and each of them have some merits, but there are some common features for all good methodologies such as:

- They test a theory or proposition that why a specific policy action will be effective. It should also show that the impacts of implementing the policy will be observed if the policy is successful,
- They have a serious solution of the counterfactual; specially, what would happen if there is no action?
- Wherever possible, they quantify the impacts such as estimating the different effects of different policy doses and for different groups.
- They consider both direct and indirect effect. Most of the times it is the indirect effect which can be most important.
- They consider uncertainties and control the other effects which may impact the observed outcomes
- They are designed in a way to avoid errors which can occur through self-selection or other sources of bias
- They can bear sensivity tests, and
- Importantly, they can be tested and, ideally, replicated by third parties.

➢ **Good data is a pre-requisite:** Data deficiencies obviously inhibit evidence-based analysis. The absence of reliable data can lead to two other risks of reliance on ‘quick and dirty’ surveys or substituting the results of overseas studies with domestic studies. Translating
foreign studies can have precarious result, depending on the circumstances and the scope of misinterpretation.

- **Transparency**: Transparency ideally means ‘opening the books’ of data, assumptions and methodologies, in a way that the analysis can be replicated (Banks G., 2009). As wider will be the impacts of policy proposal, the consultation should also be wider, not only with experts, but also with the people who are likely to be influenced by the policy. These feedbacks themselves can be useful form of evidence.

Most of the policy analyses, as anyone in public service knows, are done behind closed doors (Banks G., 2009). Political reasons such as need for speed, or defense against opportunistic competitors are usually behind that. But if an evidence cannot be tested, or contested it cannot be called evidence (Banks G., 2009).

Transparency can also help governments to see the community reactions to the ideas before they are fully formed, and enable the government to better predict the politics of pursuing different courses of actions.

- **Evidence-building takes time**: Transparency however is necessary but has its own downsides, it complicates and slows down the decision making process, transparency needs times and effort (Banks G., 2009). Obviously there will be a clash between the government’s acceptance of the need for good evidence and the political need for speed, but this is the fact that robust evidence coming from systematic research cannot be done overnight. Sometimes the required data might be revealed from pilot studies or trials with a program itself, but sometimes it might needs a special survey.

- **Good evidence requires good people**: It is very important to have skilled people who can conduct quantitative methods and other analysis. Good evidence and good research need good people who can provide it.

- **Independence can be crucial**: Good research is not provided just by skilled people, but with those who do not face incentives by delivering a result according to public interest. Evidence is never absolute or revealed truth (Banks G., 2009). There are many other factors such as choice of methodologies, data, assumptions, etc. which influence the outcome. Since judgment is unavoidable in evaluation, so robust evidence is more likely to be achieved, if it is not influenced by those involved.

Independence has a higher importance when dealing with technical research than with opinions (Banks G., 2009). People can make a judgment over opinions for themselves, but an average person naturally is confused by technical research. In order to find out whether the research is believable, they look for proxies, and the status of the researches, or who is paying for the research.

- **A ‘receptive’ policy-making environment is fundamental**: The best evidences are of little value if they are ignored or not available when required (Banks G., 2009). Evidence-based approach needs a process which is receptive to evidence; a process which starts with
a question not answer, and has the required tools to support such inquiry. Ideally there is a need for a system which is open to evidence at each stage of policy process: from the outset when the problem is identified to the development of responses, and to the evaluation for its effectiveness.
Chapter 4: Empirical Evidences from Sweden and Denmark
4.1 Introduction
The policy process is never as linear or cyclical as shown in figure 3.7, but showing the policy process in terms of these functional stages helps us to understand how policy process works. As discussed in section 3.2, the evidence-based model for E-policy making presented in this research can be used as proxy for policy making, i.e. the more a process of E-policy making is similar to this model, the more effective will be the entrepreneurship policies. This is also what the result of the comparative study in this chapter show, i.e. the Danish Entrepreneurship Policy which is more similar to the Generic Model than the Swedish, has resulted in a better conditions regarding to entrepreneurship for Denmark.

If we consider the number of reports dedicated to analyzing the entrepreneurship condition of a country and its entrepreneurship policies as an indicator of the importance and robustness of its entrepreneurship policies, then with a quick search we can have an understanding of the importance and robustness of entrepreneurship policies in Sweden and Denmark. While for Denmark, “GEM National Reports” are available for each year since 1999, and “Entrepreneurship Index” reports are available for each year since 2004, but for Sweden this types of report are rare, only GEM National Reports for 2000 and 2011.2

Since 2003, Denmark has taken an evidence-based approach to entrepreneurship policy. On the other hand, although Swedish politicians have realized the important role of entrepreneurship in employment and productivity growth, but there is a lack of a specific and holistic entrepreneurship policy. It is interesting and can serve as an evidence in support of the effectiveness of the Generic Model proposed in this research that the Danish approach which is evidence-based and have some similarities with the Generic Model has led to striking improvements in the framework condition for entrepreneurship in Denmark. In fact, as we will discuss later, Denmark has experienced the biggest improvement in its framework condition among all the OECD countries.

In the following parts at first the Lisbon Agenda which has been a motive for many European countries to undertake E-policies will be discussed and then entrepreneurship policies in Sweden and Denmark will be investigated. Finally the results of these two different approaches will be compared.

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2 Since 2011 “Entreprenörskapsforum” is going to publish the Sweden GEM National Reports for each year.
4.2 The European Commission and Entrepreneurship

The special meeting held by European Council on 23-24 March 2000 in Lisbon resulted in an agreement known as Lisbon Strategy or Lisbon Agenda. An important motive for the decision was narrowing the gap between EU and the United States. In contrary the development trends during the last decade in many regions, especially the US and parts of Asia, most European countries were suffering from the lack of dynamism and the absence of deep structural transformation (Braunerhjelm P., 2008).

The Lisbon Agenda was an action and development plan for strengthening employment, economic reform and social cohesion as part of a knowledge-based economy between 2000 and 2010. Clause “5” of this agreement states its goal as below:

“The Union has today set itself a new strategic goal for the next decade: to become the most competitive and dynamic knowledge-based economy in the world capable of sustainable economic growth with more and better jobs and greater social cohesion.”

To achieve this goal, there was an agreement over an overall strategy to be applied in three main areas:

- Preparing the transition to a knowledge-based economy and society by better policies for the information society and R&D, as well as by stepping up the process of structural reform for competitiveness and innovation and by completing the internal market;
- Modernizing the European social model, investing in people and combating social exclusion;
- Sustaining the healthy economic outlook and favorable growth prospects by applying an appropriate macro-economic policy mix.

Clauses “14” and “15” of this agreement was dedicated to transition to knowledge-based economy through “Creating a friendly environment for starting up and developing innovative businesses, especially SMEs.”

Within the framework of Lisbon Agenda, the EU Member States and the European Commission, in June 2000, endorsed the “European Charter for Small Enterprises”. Based on this charter the Member States were committed to take action in supporting of small enterprises in ten key policy areas:

- Education and training for entrepreneurship;
- Cheaper and faster start-up;

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Better legislation and regulation;
Availability of skills;
Improving online access;
Getting more out of the Single Market;
Taxation and financial matters;
Strengthening the technological capacity of small enterprises;
Making use of successful e-business models and developing top-class small business support;
Developing stronger, more effective representation of small enterprises’ interests at Union and national level.

Despite the actions had taken, EU was not successful in narrowing the gap in GDP per capita with the US. According to European Competitiveness Report (2003), forward looking studies showed that, continuing that trend, the EU’s percentage share of world production would declined, even as absolute production increased, specially as the emerging Asian economies would caught up. Moreover this report also showed that still 44% of Europeans agreed that “one should not start a business when there is a risk of failure” against 29% in the US.

According to Eurobarometer survey (2003), although 47% of European declared preferring self-employment, but only 17% realized their ambitions, and only 4% of Europeans had been engaging in creating a business within the last three years, comparing to 11% in US.

In addition to the fact that EU citizens were less interested to become entrepreneurs, and more risk-averse than Americans, several other studies showed that the European’s new business also grew at a slower rate than in the US. According to Scarpetta S. et. al. (2002), unlike the US, Europe was suffering from low expansion rate after start-up. While 29% of SMEs in Europe had stated growth as their main ambition, but very few actually substantially grew. All the large firms in Europe at the end of 90s were already large in 1960.

The two above mentioned gaps were more likely to be aggravated by two other factors: ageing population in Europe, and less business transfer within the families. The Eurostat
projections (2004)\(^9\) showed that the Europe's demographic situation would change dramatically. Instead of one person of 65 and older for each four in the group 18-64, the proportion will change to roughly one to two in 2040, and the age group 18-35 will shrink from more than 25% to less than 20%. This is while the age group between 25-34 has the highest likelihood of starting a business. \(^{10}\)

Moreover another European Commission's estimation\(^{11}\) showed that till 2012 one third of EU entrepreneurs, mainly from family enterprises, will withdraw, affecting around 610,000 firms and 2.4 million jobs each year. Also it showed that less and less businesses were being transferred within the family, and more family enterprise would need to be transferred to employees or third parties. Many Europeans preferred to start their own business rather than taking over one already existed.

All the above mentioned issues inspired the need of more entrepreneurs for Europe to strengthen its economic position. In 2003 the Commission published the Green Paper “Entrepreneurship in Europe”\(^{12}\). The purpose of this Green paper was to use the consultation of the largest possible audience of stakeholders for setting the future policy agenda. The Green Paper included ten questions in two fundamental areas for Europe: “How to produce more entrepreneurs” and “How to get more firms to grow”? This Green Paper led to an "Entrepreneurship Action Plan"\(^{13}\) by European Council in spring 2004.

The aim of Entrepreneurship Action Plan was to build a strategic framework for boosting entrepreneurship in Europe. To further the entrepreneurship agenda the commission proposed actions in five strategic policy areas identified as crucial for boosting the current situation of entrepreneurship in EU:

- Fuelling entrepreneurial mindsets
- Encouraging more people to become entrepreneurs
- Gearing entrepreneurs for growth and competitiveness
- Improving the flow of finance
- Creating a more SME-friendly regulatory and administrative framework

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\(^{10}\) "Global Entrepreneurship Monitor (GEM) 2002 Summary Report", Reynolds, Bygrave, Autio and Hay.
\(^{11}\) “Final report of the expert group on the transfer of SMEs”, European Commission, May 2002.
The mid-term review of the EU’s SME policy from 2005-2007 showed progress in building an SME-friendlier business environment, both by the member states and the EU. However the 2007 Flash Eurobarometer on entrepreneurial mindsets showed the same results as before, 45% of Europe citizens preferred self-employment, against 61% in the US.

In June 2008, European Commission adopted the Small Business Act for Europe which for the first time provided a comprehensive SME policy framework for the EU and its Member States. It is applicable for all independent companies with less than 250 employees, i.e. 99% of all European Business. It aims to “improve the overall approach to entrepreneurship, permanently anchor the 'Think Small First’ principle in policy making from regulation to public service, and to promote SMEs’ growth by helping them tackle the remaining problems which hamper their development.” A set of ten principles were introduced to turn the policy into action both at EU and Member State:

- Create an environment in which entrepreneurs and family businesses can thrive and entrepreneurship is rewarded
- Ensure that honest entrepreneurs who have faced bankruptcy quickly get a second chance
- Design rules according to the “Think Small First” principle
- Make public administrations responsive to SMEs’ needs
- Adapt public policy tools to SME needs: facilitate SMEs’ participation in public procurement and better use State Aid possibilities for SMEs
- Facilitate SMEs’ access to finance and develop a legal and business environment supportive to timely payments in commercial transactions
- Help SMEs to benefit more from the opportunities offered by the Single Market
- Promote the upgrading of skills in SMEs and all forms of innovation
- Enable SMEs to turn environmental challenges into opportunities
- Encourage and support SMEs to benefit from the growth of markets

The principles suffer from the lack of enough robust evidences themselves, and it is not clear to what extent the suggestions are based on researches or other types of evaluations. For example why SMEs have to be encouraged to invest in research? Moreover the two fundamental question, i.e. “How to produce more entrepreneurs” and “How to get more firms to grow”, confirm the research problem of this thesis, i.e. the lack of a insight in EU regarding to the role of policy makers and the appropriate approach towards making entrepreneurship policies. Due to the lack of a generic model or road map, different

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14 Commission of the European Communities (2007).

governments have chosen different approaches to E-policy making to meet the requirements of Lisbon Agenda.

The following two sections describe the two different approaches to E-policy making undertaken by two of the EU Members, Denmark and Sweden. Comparing these two neighbor countries with many contextual similarities (socio-cultural, economical and political structures) with Denmark choosing a more evidence-based approach, can provided good empirical evidences for judgment over the applicability of the Generic Model of E-Policy making proposed in this research.

4.3 Denmark
Entrepreneurship policy has had a high priority for Danish government in recent years. In 2003, a national action plan for entrepreneurship was introduced, emphasizing the importance of new firms and also setting goals for high-growth start-up. Research and analysis unit under the Danish Enterprise and Construction Authority (FORA) in collaboration with the OECD developed the internationally-comparable data for entrepreneurship performance, and in 2003 presented the first policy report on entrepreneurship in Denmark. According to its mission statement “FORA ensures a fact-based platform for effective business policy development.”

Since 2004, the development in entrepreneurship performance and framework conditions (the Entrepreneurship Index) has been measured and monitored by Danish government to ensure that the country is on track.

In April 2005, the Danish Government set up a Globalisation Council including representatives from many parts of society to advise the Government on a strategy for Denmark in the global economy. The goal was to make Denmark among the most attractive countries in the world to live and work in within the next 10 and 20 years. The explicit target was stated as “Denmark should be the world’s most competitive society by 2015.”

The Globalisation Council concluded that in order to achieve this goal and to maintain Denmark’s position as one of the world’s wealthiest countries, it essential to ensure strong competitiveness, and strong cohesion, i.e. an inclusive society without major divisions. A large part of the proposals aimed at strengthening the quality and governance of education and research, promoting entrepreneurship and innovation and increasing the number of

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17 Progress, innovation and Cohesion, strategy for Denmark in the global Economy Summary, The Danish Government, MAY 2006
young people completed a higher education program. Figure 4.1 summarizes the Danish Globalisation Strategy.

**Figure 4.1:** Danish Globalisation Strategy

*Source:* The Danish Government, 2006

Within the framework of Globalisation Strategy and following the spirit of the Lisbon Agenda, the Danish Government defined an ambitious goal for its entrepreneurship policy as; “Denmark is to be a part of the European entrepreneurship elite by the year 2010 and among the countries with the highest share of high-growth start-ups by the year 2015” (Gabr M. H., and Hoffmann A., 2006).

In this section the framework originally developed by FORA in 2003 to support the Danish entrepreneurship policy reforms will be briefly described. This framework serves as the basis for annual Entrepreneurship Index reports and is aimed at identifying the main weaknesses in Danish business environment relating to entrepreneurship in comparison to those of the entrepreneurial elite. The method and framework presented in the following parts is mainly based on the Entrepreneurship Index 2005. The National Agency for Enterprise and Construction provides the annual reports of Entrepreneurship Index.

To build the model, the first step was having a better understanding of the drivers behind entrepreneurship. An extensive analytical work started to collect information of all kinds in order to build a data set for comparing over time and with other OECD countries. Data analysis was based on a cross-country comparison through using indicators measured both performance and the entrepreneurship framework condition. In comparisons, the emphasis was on the countries with the highest entrepreneurial activity. This analysis raised some main questions as below:

- What is the status of entrepreneurial activity in Denmark compared to other OECD countries?
- What is the status of framework conditions in Denmark compared to other OECD countries?
- Which framework conditions in Denmark do not match the framework conditions in the countries with the highest entrepreneurial activity?
Which framework conditions seem to be the most important? Where should we prioritize our resources?

A 7-steps method was adapted for answering those questions:

1. Defining entrepreneurship and selecting performance indicators related to the desired definition of entrepreneurship
2. Examining the performance
3. Defining relevant policy areas and selecting indicators
4. Testing for correlation between performance and policies
5. Weak points in national framework conditions are identified
6. Identifying the critical framework conditions
7. Improving weak points using peer review in order to learn from policies in best performers

4.3.1 Defining entrepreneurship and selecting performance indicators

For the desired definition of entrepreneurship, instead of providing more holistic definition which is more common within literature such as an attitude or as the pursuit of opportunities, a simple, and precise definition was selected as:

- entry and exit of firms and
- creation of high growth firms (Gabr M. H., and Hoffmann A., 2006)

There are two main reasons for choosing this definition. First, there are enough robust evidences linking these two stages in the entrepreneurship process directly to productivity growth. Second, a holistic definition for entrepreneurship cannot be measured nor compared across countries.

Based on the desired definition, four performance indicators were chosen; two measuring the new firm start-up rates, and two measuring new high growth firms. New firm start-up rate is comprised of two separate indicators:

- **Actual start-up rates**: this indicator represents 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.18
- **Total Entrepreneurial Activity (TEA) Index**: this indicator represents the share of the population 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.18

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18 Entrepreneurship Index 2005, Entrepreneurship Conditions in Denmark, National Agency for Enterprise and Construction
New high-growth firms is also comprised of two separate indicators:

- **Revenue Growth**: The share of new enterprises from 2001 to 2003 which their revenue growth was above 60 percent.
- **Employee Growth**: The share of new enterprises from 2001 to 2003 which their employee growth was above 60 percent.

Figure 4.2 summarized the four above mentioned indicators.

![Figure 4.2: Performance Indicators](image)

**Source**: Entrepreneurship Index 2005

### 4.3.2 Performance Examination

The examination of performance was done based on a composite indicator containing the four indicators. Since the Danish target was to be among the entrepreneurial elites of the world, so their approach to entrepreneurship policy also had to include comparing Denmark with the top performing countries. Thus based on the four performance indicators, Denmark’s ranking comparing to other OECD countries was calculated. Figure 4.3 shows Denmark’s ranking for the four indicators of entrepreneurship activity.

These examinations showed that in term of start-up rates Denmark was performing well, with good ranking on actual start-up rates, and mediocre ranking on GEM’s TEA index. But in term of new high growth firms, Denmark is ranked in bottom half of the index.
Finding the top performing countries was not an easy job because different countries had different rankings for the four indicators. Hence it largely depended on the choice of weights for each of the four indicators, but it was unclear how individual indicators should be weighted. To overcome this obstacle, "Robustness Analysis" was used. Robustness analysis uses different weights to show the frequency of countries ranking in Top-3, Top-5 and Top-10, respectively. For this purpose 100,000 weights were used, which resulted in 100,000 different weights. Figure 4.4 shows the result of this robust analysis.

**Figure 4.3:** Denmark’s ranking based on the four performance indicators

**Source:** Entrepreneurship Index 2005

**Figure 4.4:** Robustness Analysis

**Source:** Entrepreneurship Index 2005
According to the result of robust analysis, except in a few of calculation, Korea, Canada and the United States ranked in the Top-3 in all the calculations, and as shown in figure 4.4, there was significant gap between the Top-3 and the European elite. Based on this robustness analysis Korea, Canada and the United States were selected as the top-performing countries and standard references in terms of entrepreneurial activity. According to this analysis also Denmark ranked in the bottom part of the index, being among Top-10 only in a few calculations and no Top-3 or Top-5 rankings.

4.3.3 Defining Relevant Policy areas
In order to define the policy areas, at first a general policy framework for entrepreneurship was developed based on previous research. In this framework, the general entrepreneurship environment is divided based on supply and demand for entrepreneurship into five pillars 1) entrepreneurial skills, 2) access to capital, 3) access to markets, 4) entrepreneurship incentives; and 5) entrepreneurship culture and motivation (figure 4.5).

Based on the classification of general entrepreneurship conditions, the policy areas were defined. The number of policy areas was defined using a top-down and a bottom-up analysis using the theoretical literature related to each of the five drivers of entrepreneurship (Gabr M. H., and Hoffmann A., 2006). The result of this analysis determined 23 policy areas having a significant influence on the five drivers. This list is in progress, and the emergence of new indicators may lead to new policy areas.

![Figure 4.5: Five pillars of entrepreneurship and related policy areas](source: Entrepreneurship Index 2005)
For each of the above mentioned policy areas many indicators were selected and tested. To measure the country framework condition, 57 indicators were defined and applied. These indicators were defined largely based on data from Eurostat, OECD and the World Bank. The “2004 Entrepreneurship Index” and the “2004 Growth Report” provided a preliminary assessment of entrepreneurship factors.

For an indicator to be selected it has to fulfill four minimum requirements (Hoffmann A., Larsen M., Oxholm S. A., 2006):

- It should be from a reliable source, i.e. from a well-known, verifiable and well-documented source,
- It must be from standardized data collecting methods to increase the cross-country comparison,
- It must be available for at least 50 percent of countries in the study, and
- It must be possible to determine whether a high value is to be preferred over a lower value or the other way around.

Then for the selected indicators for each policy areas, a quality assessment was done. The aims of this quality assessment is to provide indicators suitable for user's (Denmark) need and are internationally comparable (for comparing the entrepreneurship framework conditions in Denmark with other countries).

According to OECD (2003) the quality is defined as “fitness for use” in terms of user needs. Based on the experience of OECD, Eurostat and the US Key Indicator Project, three quality dimensions as relevance, accuracy and availability were defined for assessing the quality of indicators (Hoffmann A., Larsen M., Oxholm S. A., 2006). The overall grade of each indicator is based on its grade for each dimension.

Based on the quality assessment of indicators, the overall quality of each policy area is determined. The overall quality assessment of each policy area is divided into three categories: good, acceptable and questionable (Table 4.2) as below:

- Good (A): at least 5 A’s and no C’s
- Acceptable (B): at least 3 A’s and no C’s
- Questionable (C): less than 3 A’s or one or more C’s.

For instance in figure 4.5, for policy areas showed in light green there is at least one quality-approved indicator that allows for international comparisons. For policy areas showed in red, there are not internationally comparable or quality-approved indicators. This quality assessment was done for both performance and entrepreneurship indicators.
Table 4.1: quality assessment of performance indicators


The same as performance indicators, the entrepreneurship factors were used to benchmark top performing countries. In order to measure the quality of Denmark’s framework conditions, individual policy areas had to be weighted together. Since there is no universal method for assigning individual weights, a robustness analysis was done to determine the frequency with which countries were ranked in the Top-3, Top-5 and Top-10, respectively, regardless of the weights assigned. Applying 100,000 weights, 100,000 different rankings were resulted, Figure 4.6.

According to the result, the rankings are robust. Regardless of weights applied, the United States, Canada and Korea were of Top-3 in most of the rankings. New Zealand, the United Kingdom, Iceland, Switzerland and Australia were of Top-10 in all except in a few of the outcomes which were the Top-5 or Top-3. Third groups including 13 countries occasionally were of Top-10 rankings, and rarely were of Top-5 rankings. Denmark belonged to the third group with countries like Finland, Sweden, Norway, Spain, Japan and
Poland. Denmark rarely was of Top-10 rankings and only very seldom was of Top-5 rankings.

Figure 4.6: Robustness Analysis of Entrepreneurial Framework Conditions

Source: Entrepreneurship Index 2005

4.3.4 Correlation Test between Performance and Policy areas
The assumption behind building Entrepreneurship Index was that differences in country performances can be explained by differences in the country’s framework conditions. Thus there should be a positive correlation between entrepreneurial policies and entrepreneurial activity levels. Figure 4.7 shows the result of the correlation test. The correlation coefficient was 0.58 ($R^2 = 0.58$), meaning that close to 60 percent of the variation in performance among the OECD countries, could be explained by the chosen framework condition.

Figure 4.7: Correlation between Entrepreneurial Activity and Framework Conditions

Source: Entrepreneurship Index 2005

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The result of correlation test also showed that Korea, the United States and Canada were top-performers regarding to both entrepreneurial activity and entrepreneurial policies. It also shows a significant gap between the entrepreneurial elite and the residual group of countries.

4.3.5 Identifying Weak Points in Denmark’s framework conditions

In order to identify the critical policy areas for Denmark, the gap between Denmark and the Top-3 were identified. For this purpose, Individual policy areas were normalized on a scale from 0 to 100, identical weights (1/18) were assigned to the 18 policy areas, and the value for individual policy areas was calculated as (the difference between the Top-3 and Denmark) x (1/18). Using this method a combination of individual policy areas could be calculated, providing a picture of individual policy area contributions to the overall gap. Figure 4.8 shows the result of these calculations. The green bars shows where Denmark was ahead of the Top-3, while the red bars shows where Denmark was trailing.

![Figure 4.8: The Gap between Denmark and the Top-3](image)

*Source: Entrepreneurship Index 2005*

The average of all policy areas for Denmark was 56.4, while for the Top-3 was 69.7. In most of the areas Denmark was trailing the Top-3 especially in the areas of personal income tax, entrepreneurship education, restart possibilities and motivation/culture.
4.3.6 Prioritization

All the selected policy areas do not have the same importance, so those areas which had the higher importance for improving the entrepreneurship framework condition in Denmark had to be determined. For this purpose the correlation between the policy area indicators and entrepreneurial activity were used. Using this method, the policy areas were divided into four categories. A high correlation indicated that the policy in question was highly important to entrepreneurial activity.

Moreover if the top-performing countries were particularly strong in specific policy areas, that area was taken as to be highly important. Thus two criteria were used in prioritization of policy areas: 1) policy areas significantly correlated to performance indicators at 5 percent level, 2) policy areas were the Top-3 countries are strong on them. In table 4.3, green colors indicates where Denmark was superior to Top-3, yellow indicates where Denmark trailed the Top-3 by 10 to 20 percent, and the red color indicates where Denmark trailed the Top-3 by more than 20 percent.

![Table 4.3: Important Policy Areas](image)

Source: Entrepreneurship Index 2005

According to the result of this analysis, Denmark had to pay particular attention to the areas of entrepreneurship education, restart possibilities, personal income taxes, and, to some extent, venture capital.

In this section the basic calculations and approach for Denmark were shown, however during the years there have been many modifications.
4.4 Sweden

Sweden has taken a less ambitious approach than Denmark towards entrepreneurship policy. According to IPREG (2008)\(^{19}\) “there is no such thing as a well-defined Entrepreneurship Policy in Sweden. Activities in this policy area have instead been added to a more traditional SME policy.”

Before election 2006, the moderated party, the largest opposition party, formulated a program to make starting and running a business more attractive in Sweden. The final aim of this program was to increase job creation. Based on the OECD and other researches, the program concluded that the business environment in Sweden was good, particularly for large and well-established companies, but the entrepreneurship condition was not good. Moreover the program stated that high-growth firms have a small share of value added in Sweden, few people live on income from their own firms, and the entry rate in Sweden is lower than other countries. After winning the campaign, these ideas were represented in the first bill of the new government as follows:

“The fact that there are few entrepreneurs in Sweden and few rapidly growing firms indicates that the entrepreneurship climate in Sweden is not as favorable as it could be. The number of persons choosing to become entrepreneurs depends on several factors, among those the society’s attitudes to entrepreneurship, the rate of return and the risks involved in running an enterprise, and the possibilities to get access to resources needed for a rapidly growing firm. In several of these areas the preconditions are poorer in Sweden than in other countries” (Bornefalk A., and Du Rietz A., 2009).

However they had found out the problem of low number of entrepreneurs and high-growth firms, but they presented “more new and growing enterprises” as the only target for entrepreneurship polices (Bornefalk A., and Du Rietz A., 2009). In fact they had not changed the target formulated by the former government. Although this target was different from the program had presented before the election and also from the first bill of the government, but no argument or analysis was presented to show why and based on what reasons they made this decision (Bornefalk A., and Du Rietz A., 2009). In the later government documents, even the idea that Sweden would benefit from more entrepreneurs and more rapidly growing firms was absent (Bornefalk A., and Du Rietz A., 2009).

Relatively soon after the change of the government the number of people running a 
business started to decline. One of the main reasons was the increase in employment, 
resulting in less number of people looking for necessity-entrepreneurship (Bornefalk A., 
that the opportunity-entrepreneurship also did not increase, but the number of start-up 
increased (Bornefalk A., and Du Rietz A., 2009). This increase in the number of entries in 
2007, around 22 percent, was used as evidence for the success of the government’s 
entrepreneurship policy as bellow:

“It is satisfying that the number of entries increases and that we see a 
favorable development in many parts of the country. This shows that the 
policy measures undertaken by the government to improve the business climate have been fruitful. It should be easy, fun and rewarding to run a 

As discussed before, sometimes what the governments do is either presenting “what is hit” 
as “what was targeted” or presenting “policy-based evidences” for the success of their 
policies instead of making “evidence-based policies”. Swedish government did the second 
choice, i.e. providing “policy-based evidence”, but they did not do it professionally. There 
were some serious pitfalls associated with this evidence. First, as we discussed before, 
normally it takes 3-4 years until an entrepreneurship policy can provide some influences 
in the real world. Second; while in 2007 the number of companies employed at least one 
person increased only by one percent, and the share of people ran their own business fell 
(Bornefalk A., and Du Rietz A., 2009), representing such a magnitude increase in entry rate 
as an evidence for the success of entrepreneurship policy can hardly be accepted as high 
quality evidence.

The 22 percent increase in the number of entries presented by the government was the 
result of changing the method used to produce the data in several ways, and changing a 
number of definitions (Bornefalk A., and Du Rietz A., 2009). In fact, judging by the 
development of other variables, the real increased was estimated to be within the range 5- 
10 percent (Bornefalk A., and Du Rietz A., 2009). Although 5-10 percent is a sizeable 
increase, but it was a similar increase as the previous years. The number of entries has 
been increasing in Sweden during the last 20 years.

As shown in figure 4.9, the number of entries nearly doubled between 1987 and 2007. 
Thus although the number of entries in 2007 had increased, but it was not a larger increase 
than the previous years.
Currently in Sweden there is a general shift from traditional SME policy towards formulating a more entrepreneurship-oriented policy. The ambition is running a business easier and more rewarding in Sweden through creating a world-class business environment. This ambition has not been translated into specific targets of start-up and growth, so that can be measured and determined whether the overall entrepreneurship policy has been successful or not.

Ministry of Enterprise, Energy and Communications is the main responsible for Entrepreneurship in Sweden (IPREG, 2008). Most of the public agencies and organizations for business development, such as NUTEK, ALMI Business Partner, VINNOVA, the Swedish Industrial Development Fund, the Swedish Competition Authority, the Court of Patent Appeals and the Swedish Patent and Registration Office operate under the supervision of this Ministry and should answer to it. Two of these public agencies, NUTEK and ALMI Business Partner are the main players of implementing entrepreneurship policies.

The most important document at the national and regional level is the “National Strategy for Regional Competitiveness, Entrepreneurship and Employment” (IPREG, 2008). This document, revised at the end of 2006, provides some guidelines on entrepreneurship including improvement of initiatives to make the start-ups easier, development of strategic cooperation between enterprises and providing a more positive culture and attitude towards entrepreneurship. (IPREG, 2008)

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20 Nordic Entrepreneurship Monitor 2010
National Entrepreneurship Policy is carried out mainly by the Agency for Economic and Regional Growth, NUTEK. It also operates as the economic coordinator for the EU structural Fund programs in Sweden (IPREG, 2008). Table 4.4 represents the three main entrepreneurship documents, their targets and their source of financing.

<table>
<thead>
<tr>
<th>National policy documents</th>
<th>Target groups</th>
<th>Financing</th>
</tr>
</thead>
<tbody>
<tr>
<td>National Policy for Regional Competitiveness, Entrepreneurship and Employment 2007-2013</td>
<td>Municipalities and county municipalities in cooperation with trade and Industry and other relevant stakeholders in the local environment</td>
<td>Annual budget of the involved ministries, municipalities, EU funding</td>
</tr>
<tr>
<td>The Swedish Reform Programme for Growth and Employment</td>
<td>Industry, research institutions, actors within national and regional systems</td>
<td>Annual budget of the ministries concerned, municipalities, EU funding</td>
</tr>
<tr>
<td>Guidelines for the National Entrepreneurship Programme, NUTEK</td>
<td>The general population, young people, women, immigrants, educational institutions</td>
<td>Budget from the Ministry of Enterprise, Energy and Communication</td>
</tr>
</tbody>
</table>

Table 4.4: Documents, target groups and financing of Entrepreneurship Policy

Source: IPREG, 2008

A number of new initiatives were introduced in 2009 to strengthen the incentives for starting and running a business thorough increasing social security for entrepreneurs. In 2010, 172 new initiatives were introduced by the government for improving the business climate.

This agencies and programs also impose huge amount of money to the Swedish government. According to IPREG (2008), 185 million Euros was allocated to NUTEK’s and ALMI’s which around 50 percent of it was allocated to Entrepreneurship Policy in its widest definition. Moreover, a large amount of the money spent through the EU system is also allocated to Entrepreneurship Policy. It is difficult to determine the exact amount of money spent on entrepreneurship policy each year in Sweden, mainly because the actors who are asked, cannot clearly define the policy area (IPREG, 2008). A report from the Swedish Institute for Growth Policy Studies, ITPS, shows the amount of state aid given to Swedish industry in 2006 around “3” billion Euros including all incentives such as, grants, loans, tax reductions and guarantees.

Despite all these programs and money, what we see now is fuzziness and ambiguity associated with these polices, i.e. what are the desired impacts of implementing these polices?, what is desired definition of entrepreneurship by Swedish government?, how their effectiveness are evaluated?, and the most important issue for this research, how and based on which evidences and methods these polices have been made?

21 ITPS, State Aid to Swedish industry 2006, 2007
Almerud M. et al. (2008) within the framework of IPREG project analyzed the Swedish entrepreneurship policy, and the results of their study shows that there are some major problems associated with the design and implementation of entrepreneurship policies in Sweden as below:

- **There is no agreement over an accepted definition of Entrepreneurship and Entrepreneurship Policy:** The result of interviews shows that policy makers in Sweden have different definitions and understanding of entrepreneurship policy. Some respondents see it mainly as a more general concern related to the overall economic context. Hence the measures of importance for them are regulations, tax systems and a solid general macroeconomic situation. On the other hand some of the respondents see it as a more social scientific issue. Thus the measures of importance for them are entrepreneurship education and promotion.

- **Lack of an overall policy document:** there is neither a concrete policy document for entrepreneurship, nor a comprehensive annual ‘White Paper’ for that. But entrepreneurship is included in more general government documents as part of strategies for economic growth, regional development, SME policy and strategies for the improvement of R&D. Therefore the policy guidelines for entrepreneurship should be searched in several different documents.

- **Lack of systematic evaluation:** evaluations now are being done at the project or program level, not for the overall polices. One of the main reasons, as discussed above, is the lack of consensus about the important measures and indicators should be included in the policy areas. The other problem is that evaluations are mainly done by those actors responsible for implementation.

### 4.5 Comparison

Undertaking a fully comparative study between Sweden and Denmark regarding to their entrepreneurship polices is not within the scope of this thesis, and can be even the subject of a separate study. On the other hand, it is not also easy to undertake a short comparative study in a way which meets the purpose of this study. This is because the center of interest in this thesis is investigating the methods and evidences used for designing and evaluating entrepreneurship polices. Although for Denmark these information are easily available, but for Sweden it is not easy to acquire such kind of information. This is because, as discussed before, unlike Denmark, there is not a well-defined entrepreneurship policy in Sweden, activities have been added mainly to traditional SME policies, and these policies should be traced in several general governmental documents. Moreover, in contrary to Denmark, the Swedish government ambition for entrepreneurship has not been translated into specific
targets of start-up and growth, so that can be measured and determined if the overall entrepreneurship policy has been successful.

In addition to all above mentioned problems, even for some policies known as Entrepreneurship policy or are related to Entrepreneurship policy in Sweden, it is difficult to find documents providing secondary data explaining the methods, evidences, frameworks, indicators, etc. served as the basis for these polices. Or if there are, the author of this thesis could not find such kind of information similar to Danish entrepreneurship policy.

Thus for the purpose of this study, and to compare the effectiveness of the two approaches, we will have a look at the current entrepreneurship conditions of these two countries. This can also be satisfactory because we do not want go through details and compare every single indicator between the two country, but the aim is to provide some evidences for comparing the effectiveness of the two approaches.

There are also some considerations for undertaking this comparison. First it should be clarified that the comparison is based on which framework. The data are mainly available for two frameworks, the framework developed for the Danish approach, described in section4.3, and the GEM framework. However there is not any study comparing exactly the two countries based on each of those frameworks, but there are three studies based on the Danish framework which can be used for comparison; the “Danish Entrepreneurship Index 2009 & 2010”, and the “Nordic Entrepreneurship Monitor 2010”.

As about the GEM framework, no comparison has been made based on the GEM framework between these two countries. Moreover the national GEM studies of these two countries cannot also be used for this purpose because, as discussed before, for Sweden the National GEM Reports are available only for 2000 and 2011 while for Denmark it is available until 2010. Moreover since 2007, the National GEM Reports for Denmark do not provide information regarding to the overall entrepreneurship conditions in Denmark, but are devoted to specific topics such as Education, Social and Commercial Entrepreneurship, training and network organizations, and etc. Therefore the result of the Danish Entrepreneurship Index 2009 & 2010, and the Nordic Entrepreneurship Monitor 2010, will be used for comparison.

Second, in order to show the effectiveness of each of the two approaches, only the 2010 ranking of these two countries cannot be used as robust evidence. This is because the current position of a country is the accumulated result of many factors and polices in long term, hence we cannot say that the 2010 ranking of a country is attributed to the specific
types of policies implemented in last 4-5 years. The more useful criteria for the purpose of this study can be the improvement occurred in the framework condition of each of these two countries within the last 4-5 years. Hence, however we will also investigate the current entrepreneurship position and ranking of this two countries, but we mainly will use the amount of improvement has been made in the framework conditions of these two countries within the last 4-5 as an evidence for making a judgment over the effectiveness of their entrepreneurship policies.

Third, it is important to note that however the Danish model has been chosen as a proxy to the Generic Model, but it is not exactly the same, and there are many differences. Explaining all these differences is out of the scope of this study, but briefly, some of the main differences are:

- The absent of evaluation step. As discussed before in sections 1.2.4 and 3.6.3, most of the governments are reluctant to evaluation, and it is the same for the Danish model. The cost-effectiveness of polices especially “additionality” is not evaluated.
- The Danish model is formulated based on the best practice approach. This will provide some problems especially regarding to the generalization of this model. First, it increases the likelihood of occurrence of the 6 types of errors explained in section 3.2, particularly if it is not used by caution, it can lead to “borrow policy”. Second, the Danish model do not provides robust evidences, such as market failure, for intervention/new policy. The evidence for intervention is just based on comparison between Denmark and the top performing countries. In fact instead of providing evidence for intervention, it is based on ambition. This will raise some questions regarding to the applicability of this model for other countries. For example, for a country like US, Korea, or etc., if it is identified that it is the top performing country, then which country should be used to compare with? Does it mean that there is no need for a new policy or reform? Or is it appropriate to compare a country like Denmark with a country like Korea, with many different socio-cultural, economical or political structures? Or for a country like Japan which is high on collectivism is it appropriate to use the US which is high on individualism as a model of best practice? This problem will be more serious if the Danish model is going to be used by developing countries outside the OECD, due to the large socio-cultural, economical, political and psychological differences.
- The Danish Model suggests the opposite direction for selecting the policies comparing to the Generic Model. In Generic Model these are the indicators which are re-investigated and prioritized based on ACRPI test and then the appropriate polices are designed for adjusting them. In Danish Model, however, at first the policy areas are determined. In fact it is confined to some specific policy areas. This will lead to what we discussed in section 1.1 as
most of the entrepreneurship polices are selected from a common menu of polices. Moreover it will restrict the creativity (for sure based on evidence) of policy makers.

Despite all those differences, due to some similarities, the Danish model can be used as a proxy to the Generic Model and be compared with Swedish approach. Some of the main similarities are:

- It is an evidence-based model, i.e. uses robust evidence in different steps for decision making,
- It provides a single accepted definition of entrepreneurship and identifies the desired impacts,
- It introduces performance indicators for measuring the desired impacts,
- It uses quality tests for evidences (indicators),
- It prioritizes the policy areas for resource allocation.

4.5.1 Nordic Entrepreneurship Monitor 2010

In 2009, the Nordic Council of Ministers realized the need for investigating the entrepreneurship performance and policies across Nordic countries. The outcome of this study was the Nordic Entrepreneurship Monitor 2010. The report was built on international model for entrepreneurship performance and framework conditions developed by Eurostat, OECD and FORA.

According to this report, based on a composite index of entrepreneurial performance, entry rate and firm growth, Denmark ranks first among Nordic countries with clear and measurable policy targets for entrepreneurship. Sweden lags behind Denmark and Finland, and ranks 3 in terms of both start-up and growing of enterprises. According to this report, during the last 5 years preceding 2010, the start-up rate measured by new entries was stagnating around a level of 6 to 7 percent in Sweden.

![Figure 4.10: Entrepreneurial performance in the Nordic countries,](image)

**Source:** Nordic Entrepreneurship Monitor 2010
This report also shows that those countries that perform well on entrepreneurship performance also tend to do well on entrepreneurship framework conditions, table 4.5 & 4.6.

### Table 4.5: Number of top-3 rankings among the Nordic countries on entrepreneurship framework conditions

<table>
<thead>
<tr>
<th>Country</th>
<th>Nordic Rank</th>
<th>OECD Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Finland</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Denmark</td>
<td>4</td>
<td>11th</td>
</tr>
<tr>
<td>Iceland</td>
<td>4</td>
<td>9th</td>
</tr>
<tr>
<td>Sweden</td>
<td>3</td>
<td>4th</td>
</tr>
<tr>
<td>Norway</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

**Source:** FORA, 2010

**Note:** The higher is the number of top-3 rankings the better is the coverage of entrepreneurship framework conditions in a given country.

### Table 4.6: Ranking among the Nordic countries in terms of entrepreneurship framework conditions

<table>
<thead>
<tr>
<th>Framework Conditions</th>
<th>Denmark</th>
<th>Finland</th>
<th>Iceland</th>
<th>Norway</th>
<th>Sweden</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regulatory framework</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Market conditions</td>
<td>1</td>
<td>2</td>
<td>5</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Access to finance</td>
<td>2</td>
<td>4</td>
<td>2</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Knowledge creation and diffusion</td>
<td>4</td>
<td>3</td>
<td>5</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Entrepreneurship capabilities</td>
<td>5</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Entrepreneurship culture</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

**Source:** FORA, 2010

In terms of framework condition, Sweden has lost ground in the last five years preceding 2010. Sweden is ranked 11th among the OECD and 4th in the Nordic region while Denmark ranks 9th among all OECD countries (corresponds to be among top-5 in Europe) and ranks 3rd among Nordic countries.

### 4.5.2 Entrepreneurship Index 2009 & 2010

As discussed before, in order to compare the effectiveness of entrepreneurship polices undertaken by the two countries, we cannot only compare their current positions, and we should also compare the amount of improvement occurred in their overall framework conditions within the last 4-5 years. A country can still rank higher than another country, although its overall framework condition has improved less.

Since the first Entrepreneurship Index in 2004, Denmark has had a considerable improvement in its framework conditions for entrepreneurship. In fact Denmark's entrepreneurship framework condition has improved more than any other OECD country since 2004.\textsuperscript{22} While in the first Entrepreneurship Index, Denmark was lagging behind

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\textsuperscript{22} Entrepreneurship Index 2009
Norway, Sweden, Finland and the UK, in 2009 Denmark was ahead of Sweden and Norway, and narrowed the gap with Finland and the UK to very much extent.

Comparing the result of robustness analysis of 2009 with 2005, figure 4.11, shows that while in 2005 Denmark ranked in the bottom part of the index with a limited number of Top-10 rankings and no Top-3 or Top-5 rankings, in 2009 Denmark was ranked in the middle group with 90% of times within Top-10 or better, 50% of times within Top-5 or better, and 30% of times within the Top-3.

Based on a ten-year period comparison, Denmark also has had the most improvement among OECD countries, figure 4.12. From a position equal to 40 points out of 100 in 2000, Denmark reached to more than 60 points out of 100 in 2010.

**Figure 4.11:** Comparing the result of Robustness analysis for 2005 and 2009

**Source:** Entrepreneurship Index 2005 & 2009

**Figure 4.12:** Development of framework conditions for selected countries, 2000–2010

**Source:** Entrepreneurship Index 2010
Comparing Denmark with the ten countries experiencing the biggest improvement from 2000 to 2010, figure 4.13, shows that Denmark’s 25-point improvement between 2000-2010 in overall framework condition is impressive, the highest improvement among all the other OECD countries.

![Figure 4.13: The ten countries experiencing the biggest improvement from 2000 to 2010](image)

**Figure 4.13:** The ten countries experiencing the biggest improvement from 2000 to 2010

**Source:** Entrepreneurship Index 2010

Therefore based on both “ranking” and “improvement in framework condition”, Danish entrepreneurship policy shows a better result than the Swedish Entrepreneurship policy particularly after 2003 and 2004, figure 4.12, when the Denmark started its new evidence-based entrepreneurship policy.

Although Sweden has had less improvement comparing to Denmark, but it is still among the top-10 countries experiencing the biggest improvement between 2000-2010, figure 4.13. Sweden especially is strong in all sub-policy areas related to the “creation and diffusion of knowledge” such as collaboration between university and industry, research financed by the business sector, and R&D activity. In particular, Sweden is very strong regarding to the expenditure in R&D by large enterprises. According to Eurostat (2007), Sweden ranked first among 16 OECD countries on expenditure in R&D as a percentage of GDP, by large enterprises (500+ employees).  

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“Market conditions” and “access to finance” especially venture capital are Sweden’s two other areas of strength. Sweden GEM National Report 2011 also shows a significant improvement regarding to “informal investors”. As shown in figure 4.14, from a position lower that Nordic countries, Sweden now has the best informal venture market among all the countries. Particularly there was a sharp increase since 2006.

![Figure 4.14: Informal investors in Sweden](image)

**Source:** Sweden GEM National Report 2011

The Swedish government is undertaking some steps towards improving the framework conditions for entrepreneurship particularly about bankruptcy regulation, encouraging self-employment, women entrepreneurship, immigrant entrepreneurship, reducing administrative burdens, tax, entrepreneurship education, and enhancing the entrepreneurial culture among Swedes. The result of Sweden National GEM Report 2011 also shows improvement in entrepreneurship culture among Swedes. As shown in figure 4.15 the percentage of population aged 18-64 years who personally know someone who started a business during the past two years, has considerably increased since 2007, much higher than any other country and approaching to china. Figure 4.16 also shows that the percentage of population aged 18-64 who agree with the assertion that successful entrepreneurship provides high status in the country, has improved considerably. According to figure 4.17 also the percentage of population aged 18-64 years who feel that there are good opportunities to start a business in the area where they live, has had a significant improvement resulted in Sweden to be ranked the first.
Figure 4.15: Percentage of population aged 18-64 years who personally know someone who started a business during the past two years

Source: Sweden GEM National Report 2011

Figure 4.16: Percentage of population aged 18-64 who agree with the assertion that successful entrepreneurship provides high status in the country

Source: Sweden GEM National Report 2011

Figure 4.17: Percentage of population aged 18-64 years who feel that there are good opportunities to start a business in the area where they live

Source: Sweden GEM National Report 2011
With many distinguished scholars of entrepreneurship and innovation, and several globally reputed institutions active within this field, now there is an awareness of the need for a more specific and holistic entrepreneurship policy in Sweden. Thus it is more likely that the Swedish Government will take steps towards providing such a policy in near future. Hopefully a more evidence-based one!
Chapter 5: Conclusions
5.1 Answers to the Research Questions
This study has provided answers for the nine research questions presented in section 1.3 as bellow:

1- The results of researches on entrepreneurship provides some practical implications should be considered when making E-policies such as:
   - There is not a single accepted definition of entrepreneurship, so for making an entrepreneurship policy at first the desired impacts expected from E-policies and the desired definition of entrepreneurship should be determined.
   - Entrepreneurial determinants can exert different influences depending on the contexts and desired impacts, so for making entrepreneurship policy the likely influence of an entrepreneurial determinant should be re-investigated within the new context and based on the desired impact.
   - One of the most important contextual factors is a society’s stage of economic development, i.e. factor-driven, efficiency-driven, and innovation-driven. The importance of entrepreneurship for the economic growth, the desired type of entrepreneurship and the importance of entrepreneurship factors, differs in different societies based on the stage of their economic development. Hence entrepreneurship policies should be designed considering the society’s stage of economic development.

2- The results of researches and practice in public policy show that the effectiveness of policies increases if they are informed by high quality evidences. Hence in order to have more effective entrepreneurship policies, high quality evidences should be used in different steps of the process of entrepreneurship policy making.

3- The main criterion for evaluating entrepreneurship policies is additionality, i.e. the true impact of the scheme/program. There are some other criteria such as the seven criteria defined by the OECD, but at the heart of the evaluation is the concept of additionality.

4- Evaluation should be presented at every steps of the process of E-policy making. This study emphasizes on the important role of evaluation particularly at two stages: 1) before selecting the final list of polices for implementation, 2) when the policies are being implemented in the real world.

5- This study has identified six criteria for prioritizing E-policies. Four criteria for testing the quality of evidences (entrepreneurial factors) as Accuracy, Credibility, Reliability, and Practicality known as “ACRP Test” in this study. One criterion for
investigating the Intensity of a factor, i.e. the extent to which the determinant exists within the society. These five criteria are for prioritizing the policy areas. When the policy areas are prioritized based on the five criteria and the potential policies for each area are identified, then the cost-effectiveness evaluation will be used as the sixth criterion for selecting the final policies and for resource allocation.

6- This study has identified the likelihood of occurrence of six types of errors when designing E-policies. These errors can emerge when designing an original policy or using the “best-practice” approach. The results of this study show if the best-practice approach is not used with caution, it can significantly increase the likelihood of occurrence of different types of errors. To minimize the sum of the errors it is recommended that:

- High quality evidences to be used in different steps of design process,
- If using the best-practice approach; to be done from the original context which the policy was designed and implemented for the first time, and do not include only the final policy implemented, but also its design process.

7- Based on the above six answers, this study has developed a model of E-policy making, figure 3.7, which can be used by policy makers as a road map in the real world.

8- Since this model, figure 3.7, is not confined to any specific definition or impacts of entrepreneurship, and is not based on specific frameworks, determinants or policy areas; hence it can be used for different societies at different stages of economic developments and with different contextual factors. In fact it provides a generic road map for entrepreneurship policy making.

9- Comparing the two different approaches taken towards entrepreneurship policy by two neighbor countries with many contextual similarities; Sweden and Denmark, shows that the Danish approach which is more based on evidences and has some similarities with the Generic Model of this research, has led to more effective entrepreneurship policies. This effectiveness is represented largely through the big improvement happened in Denmark’s entrepreneurship framework condition.
5.2 Summary of contributions
The main contributions of new knowledge that this thesis makes can be summarized as bellow:

1- Based on the results of the researches done so far in two disciplines, entrepreneurship and public policy, determined the practical implications and problem areas should be considered when making entrepreneurship policies.

2- Demonstrated different types of errors might occur when designing entrepreneurship policies, and the ways these errors can be minimized.

3- Identified four criteria, ACRP, which can be used for investigating the quality of evidences.

4- Developed a fifth criterion which can be used along with the ACRP Test for prioritizing the policy areas.

5- Demonstrated the importance of evaluating of E-polices particularly the concept of “additionality”, and introduced cost-effectiveness evaluation as the sixth criterion for selecting the final policies and allocating resources.

6- Integrated the results of researches in both disciplines, entrepreneurship and public policy, into a Generic Evidence-Based Model of making entrepreneurship policy which can be used by different societies with different contextual factors and at different stages of economic developments.

7- Undertook a comparative study between Swedish and Danish entrepreneurship policies to provide empirical evidences for certifying the real world’s applicability and efficacy of the Generic Model.

5.3 Further research
The results of this study provide some areas of further researches such as:

1- An empirical study can be devoted to investigating and recoding the six types of errors associated with design process of E-polices in different countries.

2- Evaluation of entrepreneurship policies can be the topic of a separate study. However evaluation of SME policies has been investigated by some scholars, but evaluation of entrepreneurship policies has been less investigated. This is because SME policies are mainly targeted towards established business, so it is easier to evaluate their effectiveness. But entrepreneurship policies are more holistic and are targeted towards socio-cultural, economical, political and psychological factors. Hence it is much more difficult to measure and evaluate entrepreneurship policies.
Moreover there are other measures than the additionality for evaluating the effectiveness of a policy, which also can be further investigated.

3- However this research introduced Intensity of a factor as a criterion for prioritization, but has not suggested any method for measuring the intensity. Thus a separate study can be devoted to developing a method for measuring the intensity of factors. The methods used by Global Leadership and Organizational Effectiveness (GLOBE) Research Program or method used by Hofstede study can be used as guideline for developing such kind of method.

4- In this research the evidence-based approach and its requirements has been introduced and used for developing an evidence-based approach to entrepreneurship policy making. Another study can be devoted to determine the types of evidences, their hierarchy and importance, the appropriate methods for collecting evidences, and the possible sources of evidence within the field of entrepreneurship policy.

5- As mentioned in chapter 3, implementation of entrepreneurship policies was not discussed in this research. In another study, the appropriate methods of implementing entrepreneurship policies which are more evidence-based and can minimize the errors (difference between what is hit and what was targeted) can be discussed.

6- The Generic Model can be further improved through gathering more empirical evidence from different countries, and also receiving the opinions and comments from policy makers and experts around the world.

7- In a long term study, the Generic Model can be used for designing appropriate entrepreneurship polices for a society (country or region), and the results can be monitored and evaluated within 4-5 years.
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