

# Entrepreneurism and E-Government in Finland: Barriers to Entry

Fatemeh Ahmadi Zeleti  
Tampere University of Technology  
PO Box 527  
33101 Tampere, Finland  
+358 40 364 8000  
Fatemeh.AhmadiZeleti@tut.fi

Adegboyega Ojo  
Digital Enterprise Research Institute  
IDA Business Park, Lower Dangan  
Galway, Ireland  
+353 91 495 113  
Adegboyega.Ojo@deri.org

Olavi Uusitalo  
Tampere University of Technology  
PO Box 527  
33101 Tampere, Finland  
+358 40 067 2380  
Olavi.Uusitalo@tut.fi

## ABSTRACT

Entrepreneurship is generally considered as central to economic development. Therefore, decisions by government to directly support entrepreneurs with Electronic Government (e-Gov) services can have significant impact on economic development. Given the current downward trend in new entrepreneur numbers in many countries, e-Gov services may arguably be best targeted at promotion and lowering of barriers in establishing new businesses. However, delivering effective e-Gov services to entrepreneurs in starting new businesses will require concrete knowledge of entrepreneurial needs on one hand and the barriers to entry and challenges on the other hand. Unfortunately, research dedicated to the real needs of entrepreneurs with respect to e-Gov services is limited. This work fills this knowledge gap through a study of the e-Gov related factors that could contribute to lowering the barriers to entry for new entrepreneurs. Based on the analysis of the information gathered from a series of structured and semi-structured interviews involving 36 fresh entrepreneurs in Finland, we identified four factors related to e-Gov services which could lower the barrier to entrepreneurship.

## Categories and Subject Descriptors

K.4.3. [Organizational Impacts]; K.5.2. [Governmental Issues]: Regulation

## General Terms

Economics, Management

## Keywords

E-Government; Entrepreneurship Promotion; Economy Development; Starting a New Business; Doing Business; Barriers to Entry

## 1. INTRODUCTION

Entrepreneurship is an opportunity-oriented behavioral process involving both individuals and teams. This process takes place in a given national, cultural, and industry context, and ideally results in a successful growth firm [1], [2], [3]. Entrepreneurship is a key focus in industrial policy; albeit not a magic bullet for economic development [1], [3], [4].

Recent studies show the significance of new business establishments in creating jobs [5], building a dynamic

Permission to make digital or hard copies of all or part of this work for personal or classroom use is granted without fee provided that copies are not made or distributed for profit or commercial advantage and that copies bear this notice and the full citation on the first page. Copyrights for components of this work owned by others than ACM must be honored. Abstracting with credit is permitted. To copy otherwise, or republish, to post on servers or to redistribute to lists, requires prior specific permission and/or a fee. Request permissions from [Permissions@acm.org](mailto:Permissions@acm.org)

ICEGOV'13, October 22-25, 2013, Seoul, Korea  
Copyright 2013 ACM 978-1-4503-2456-4  
<http://dx.doi.org/10.1145/2591888.2591909>

entrepreneurial economy [6], [7] and strengthening the backbone of Europe's economy [4], [8]. But, if economies are to be developed through entrepreneurship, then the challenge to governments lies in how to encourage more entrepreneurs in terms of providing the right policy and e-Gov services to ease the entrepreneurship process [9].

In supporting the growth of businesses, entrepreneurship and innovation [2], [5], [10], Cunningham [5] argues that entrepreneurship motivation, reduction of barriers, and simplification of a new business registration process constitute the three engines for growth of entrepreneurship. This is the reason why entrepreneurship study is essential.

E-Gov in general can play a major role in enabling these growth factors by enhancing administrative processes, facilitating government communications and interactions with businesses and entrepreneurs [1], [11], [12], [13]. Without adequate e-Gov services and support provided by government, entrepreneurs maybe channelled into unproductive and destructive directions [14] such as losing control over their new business establishment and therefore losing interest and motivation to pursue their entrepreneurship career [9]. Since e-Gov can significantly impact on shaping entrepreneurial actions and behaviours, government can use e-Gov services to reduce constraints on entrepreneurship [9], [15], [16], [17], [18]. Successful implementation of the e-Gov business services in entrepreneurship is more often aimed at reducing the cost, procedures and improving the services and achieving user's satisfaction [19]. Therefore, it is important to understand the needs of the entrepreneurs [20] and their expected benefits [13] as a group of potential e-Gov users in to lower or remove entrepreneurship barriers to entry [20].

Despite the continued research on how to improve e-Gov services for entrepreneurs in registering a new business, majority of past and current studies on entrepreneurship in the e-Gov domain have focused on the context of policy making, tax rates, entrepreneurship culture, risk management [9], business process improvement [12], [13], [21], service adoption by businesses [22], reducing opportunity costs for firms complying with government [15] and organizational change process [23] for the already established businesses of any size. These studies have also overlooked the fact that government need to design, implement and enhance e-Gov entrepreneurship services to enable effective and efficient online interactions with potential entrepreneurs and businesses in such areas as, obtaining and filling out forms and submitting required information to different agencies [9], [15], [16], [19].

In spite of reasonably high research interest on how e-Gov facilitates entrepreneurship, previous researchers largely focused on entrepreneurship needs and constraints regarding starting a new business. There is limited research dedicated to entrepreneurs and their expectations towards e-Gov. In particular, there is paucity of robust research examining what

are the challenges being faced by entrepreneurs and the barriers to entry amenable to e-Gov solutions. Thus, listening to entrepreneurs to better understand their needs and barriers they face is important [14].

Our goal in this work is to shed some light on the challenges and problems facing entrepreneurs. We specifically investigate the entrepreneur’s challenges and barriers relating to starting a new business and what kind of Government-to-Business (G2B) service could support entrepreneurs when starting a new business.

Results shows that the following e-Gov related factors are critical to entrepreneurs starting a new business: access to information, network infrastructure and forms, saving resources (time, cost and procedures), maturity level of e-Gov services and two-way communication with department authorities.

Our contributions are two-fold: (1) grounded on earlier work and interview results, we articulate the real needs and barriers of fresh entrepreneurs when starting a new business; and (2) our results helps the Finnish government authorities to gain insight to entrepreneurs’ needs, requirements and constraints in order to design and implement effective G2B services for entrepreneurs.

The reminder of this study is organized as follows: Section two reviews the relevant literatures. Section three presents the research problems and questions. Section four describes the research methods and model. Section five presents the result. Section six presents the discussion. Section seven presents the future research direction, section eight concludes the study and section nine is dedicated for acknowledgments.

## 2. BACKGROUND

### 2.1. Registering a New Business

During the 2002 and 2007 period, the number of Small to Medium Size Enterprises (SMEs) has increased by over 2 million. However, by 2010, the decline in the number of SMEs was halted [8]. Performance of SMEs in Europe is affected mainly by “lack of skills and labor market flexibility, market failures in research, training and innovation, as well as a general lack of entrepreneurial spirit” due to number of obstacles when registering and formulating a new business. Self-employment for entrepreneurs clearly is better than unemployment [1], [3], [24].

Hence, entrepreneurs and their willingness to pursue new ventures is one of the fundamental when determining economic cycles [3], [24], [4], as entrepreneurs bring innovation [10], [24], create new companies and drive non-competitive ones aside in a process of “creative destruction” [2], [3], [7].

However, regulatory and administrative burdens can impose adversely on entrepreneurial activity when starting a new business [3], [25]. Entrepreneurs not only need assistance in reducing tax rates, but also assistance in reducing entry barriers and a mean to maximize their upside gains. In Europe, countries which have reduced entry barriers for new businesses have been rewarded with higher growth rates [9]. Regarding the barriers to entry, numbers of barriers are common in many countries. Barriers such as several legal forms, number of procedures, requirements and complexity of registering a business. In regard to registering a new business some countries require one or two days like New Zealand, Singapore and Canada to register a business, in others, they need 1 to 30 weeks [26], [27]. Table 1 presents the procedures and time require for registering a new business in some EU countries. Information of the table is sorted by the time (the number of days) it takes for a new business to be registered.

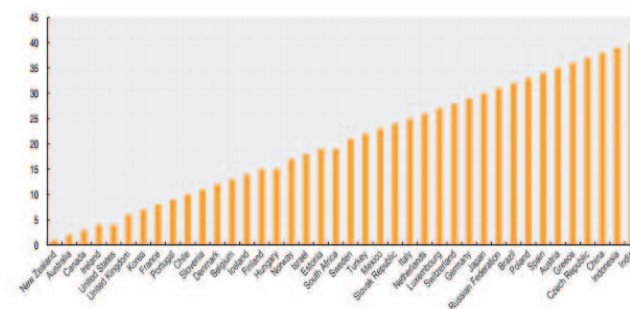
**Table1. Starting a new business in number of countries [28]**

Country	Procedures (number)	Time (days)
New Zealand	1	1
Singapore	1	1
Canada	1	2
Australia	2	2
Belgium	3	4
Hungary	4	4
Iceland	5	5
Denmark	4	6
Italy	6	6
France	5	7
Norway	5	7
Finland	3	14
Germany	9	15

Table 1 shows that countries with fast speed Internet connection and expected level of use of Information and Communication Technologies do not guarantee to receive higher rank in regard to start a new business. For example, Denmark and Finland are the two countries in the table with extremely fast Internet connection and they are the two leading countries in application of Information and Communication Technologies [29], [30]. But, they are ranked below other EU countries. In addition, figure 1 shows the level of sophistication of registering a new business in 27 OECD countries. As it is shown in the figure, some of EU countries (including Finland) are yet below the average level.



**Figure 1. Sophistication of starting a new business in EU27+ [31]**



**Figure 2. Starting a business [32]**

Figure 2 presents the ranking of countries in starting a new business. In Europe, the variance in the number of days an entrepreneur has to wait before he can operate is very significant, with a range of 46 days. Regardless of overall good sophistication scores for businesses, room for improvement remains and further steps are required to better serve entrepreneur starting a new business [31].

Lau [33] argues that businesses in ten OECD countries spent about 27,500 USA dollars each year which is nearly 4 percent of the annual turnover to comply with the administrative requirements such as company registration, tax, employment and environmental regulations [31].

Despite the fact that authorities continuously exercise ways to decrease the administrative costs, one of the biggest direct costs is related to dealing with administrators in terms of the collecting the required information and completing forms [31]. Entrepreneurs are required to spend much time and handle big costs when collecting information, going on and off of the official's offices, and dealing with number of processes when completing various forms [5], [24].

According to Autio [1], majority of new businesses have a very limited impact on economic because they will neither innovate nor grow, nor will they even intend to do so. The majority of new businesses will never actually employ anyone other than the founder. In Finland in 2006, the median size of new businesses is one even after three years of their establishment [5], [24].

Hence, to support growth of entrepreneurship and businesses, specific government support is required right from the birth of the business idea. Supports of government by offering government services, as this will result in overall economic growth [5]. Reducing entry barriers not only benefit new businesses, but also forces incumbents to become more innovative and competitive. Low entry barriers may contribute to more business establishment in the already dominating agriculture, tourism and energy industries [9]. Hence, one of the main and first tangible e-Gov services to entrepreneurs as Cunningham [5] discusses in his study is to focus on government and government services to motivate entrepreneurs and reducing the barriers by simplification of company registration and formation.

## 2.2. E-Gov and Entrepreneurship

At least two categories of e-Gov initiatives have been documented in literature to support entrepreneurship – optimizing of resources and development of infrastructural, systems and services. These are reviewed below.

**Resources - time, cost and procedures:** One of the main 20 basic citizen's e-Gov services is to register a new business [31]. Opening a new business requires submitting many forms and data associated with them to different agencies. In most cases, such process is very complicated, costly and time consuming [16], [17], [15]. Table 2 presents a simple categorization of the universe of e-Gov benefits [33].

**Table 2. E-Gov Benefits [33]**

Target Group/ Type of Benefit	Business	Government	Citizens
<b>Financial</b> (Tangible/ Direct)	<b>Reducing burden</b> (Business Simplification, Administrative burden)	<b>Efficiency savings to government</b> (Freeing resources for public and private innovation)	<b>Reducing burden</b> (Business Simplification, Administrative)
<b>Public</b> (Tangible/ Direct, Intangible/ Indirect)	<b>Improving Trust in government</b> (stakeholder's satisfaction and equity, achieving overall policy and program outcomes, security and privacy)		
<b>Economic</b> (Tangible/ Direct, Intangible/ Indirect)	<b>Supporting growth</b> (Promoting the information economy, creating business opportunities)		

The type of benefits; financial, public and economic; depends on number of factors such as time, resources, purpose, and the level of decision-making. However, decision-making varies significantly in different nations. Considering the focus of this study, e-Gov is expected to benefit businesses by reducing administrative burden such as administrative processes, time and costs associated with registering a new business [19], [33].

As shown in table 2, business simplification is increasingly essential to entrepreneurs when registering their business [33]. A 2001 survey conducted by the OECD revealed that 26 of the 28 countries responding had included e-Gov initiatives as one of the main element of their strategy to reduce administrative burden [34].

For example, to reduce administrative burden, Greece reduced the time and cost required for a new business to be registered. The Netherlands reduced the administrative burden by simplifying new business procedures. The Netherlands did this particularly by abolishing minimum capital requirements so that a new business can be registered within one week. Turkey has also reduced company registration procedures from 19 to 3 processes within one day. In Malaysia, an example of a reform outcome, reduction of registration fees in 2008 led to an increase in new businesses to establish by 16% in 2009 which can potentially enhance the economy of the country [28].

**Developed systems and services:** In relation to decreasing the administrative burden, Mexico has established a "Federal Register of Formalities and Services" which is an online service. This includes the "principal procedural requirements imposed by all federal departments and agencies on private citizens and businesses" [33]. All business forms are available online and businesses can also carry out number of regulatory transactions electronically with the Ministry of the Economy. Besides, the system includes an advisory service to assist the users [33].

In September 2009, European Union approved the Baltic Sea Region Programme framework which aim to use e-Gov to turn the public administration to more business oriented service suppliers, reducing administrative burden and improve access to the required information [20].

In addition, high-growth entrepreneurship is currently high on the policy agenda. For instance, Denmark does not use direct financial support system or agency for entrepreneurs as a means to promote entrepreneurship but does focus on improving the framework for entrepreneurship by improving the public and private entrepreneurship infrastructure, promoting entrepreneurship education, easing access to a fresh start, reducing administrative burdens and access to relevant information using e-Gov [5], [6], [8], [19]. For instance, government is supposed to pay attention to these issues and aim to look for ways to simplify the business processes and support entrepreneurs to invest and start a business [5]. One of the great uses of e-Gov service to simplify the business registration process is the "Electronic Data Interchange" (EDI) to facilitate e-Transfer of new business data to governmental authorities and to transfer e-Gov service information and forms back to the entrepreneurs and business holders. This process can then be facilitated by the development of a unique business identification code in order for a business to make fast and efficient contacts for all deals with government officials by only a single identifier [35]. This can also enhance the electronic registration and search for business identifier [2], [33]. Lau [33] defines this as "Single Enterprise Register".

In 2013, Minister for Jobs, Enterprise and Innovation Richard Bruton launched the Global Entrepreneurship Monitor (GEM) Report for Republic of Ireland. Bruton believes that it is

entrepreneurs and new businesses that create jobs and are the magic for economic recovery and development [36]. Therefore, Republic of Ireland has placed entrepreneurship at the heart of the plans as two thirds of all new jobs are coming from new established businesses. Further, it is important to create e-Gov Action Plans to support entrepreneurs and offer them relevant services to overcome with the obstacles [37]. Bruton further includes the importance of receiving advises from world experts and public to improve the Action Plans to support entrepreneurs and reduce the administrative burden. There are still many areas where the challenges remain but, it is very significant for government to determine ways to support entrepreneurs as there are many positives around entrepreneurship [36].

In New Zealand [38], [39], [27] government provides global e-Gov services in four main areas: Assurance, Tax, Transactions and Advisory. Through these e-Gov services, helping to retain the confidence of entrepreneurs, managing risks, budgeting, access to information and forms, communication with authorities, strengthening controls and achieving potential are possible. All these services are put together that can give the seamless service to entrepreneurs wherever in the world. In regard to consulting entrepreneurs, for example, through the advisory e-Gov system, New Zealand government help entrepreneurs to make and sustain the right decision, budget accordingly, improvements, while responding more quickly to change.

September 2009, European Union approved the Baltic Sea Region Programme framework of the INTERREG IVB project named "EGOPRISE". The project partners are Belarus, Denmark, Estonia, Finland, Germany, Latvia, Lithuania and Sweden. The project addresses the importance of turning public administration to more business oriented service suppliers, reducing administrative burden and improve access to the required information using e-Gov [20].

Singapore, the second country in the world after New Zealand in regard to starting a new business has realized the potential impact of e-Gov services on businesses. Hence, Singapore's e-Citizen portal was launched which allows both businesses and citizens to access all government information and services from a single worldwide web site. Few years before 2005, starting a new business and doing business in Singapore required applicants to fill 21 different forms and took 15-20 days from 23 different agencies to process the request. Today, forms are submitted online in one process and are processed in one day [15].

In Switzerland, an entrepreneur has to go through a complicated administrative process which includes interaction with multiple government agencies. All the agencies are present on the Internet but they do not yet offer their full range of services. Most of them are limited to provide information. Every agency develops its own approach. Therefore, Schubert and Hausler [17] proposed portal that could be the single point of entry to multiple services from multiple agencies. According to them, this is how a modern e-Gov should look like. Government of Dubai is also pushed toward the seamless integration stage through the single portal which signifies total amalgamation between government agencies [40].

Moreover, in Finland, during the preparation of a new national innovation strategy, one of eleven expert workshops specifically focused on "SMEs and young innovative enterprises - growth entrepreneurship". In the workshops, one essential problem areas identified was the availability of pre-conditions for the growth of entrepreneurship and new businesses. Furthermore, the workshops underlined that [5]: "High-growth entrepreneurialism must be made acceptable, desirable and attractive". This concern about high-

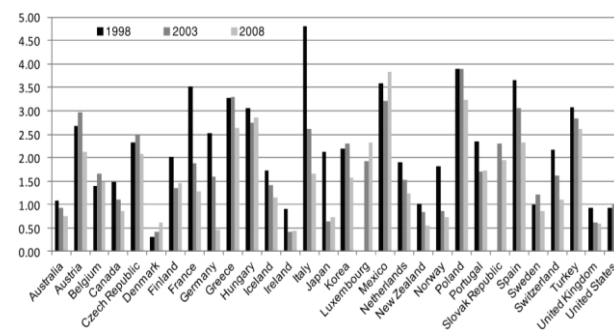
growth entrepreneurship resulted in a final proposal for a national innovation strategy, submitted to the Minister of Economic Affairs in June 2008. The strategy proposes that there is going to be a renewal in the e-Gov service delivery to entrepreneurs to increase motivation and promotion to growth of entrepreneurship in Finland [2], [5]. For this, the Finnish Trade Register was designed. The system is a public register that contains information on traders and businesses. For an entrepreneur to be able to register a business, the Trade Register advisory service provides advice on how to notify the Trade Register. The system allows entrepreneurs to know the answers to the following questions: which form of business to choose, how to test the business concept, how to arrange for insurance and accounting and the information on taxation. In parallel to such system, Finnish Business Information System was designed to provide the following services: trade register, register of foundations, VAT register, prepayment register, employer register or the client register of the tax administration [41], [42].

Entrepreneur's financial obstacle is of challenge to increase the entrepreneurship in Finland. Currently, there are few e-Gov service instruments available exclusively targeting entrepreneurs. The most obvious examples include the new financing instruments of Tekes, the Finnish Funding Agency for Technology and Innovation, and the Finnish Growth Company Service of Enterprise Finland. This aims to provide an opportunity for the most promising young people to develop their business idea and environment in a comprehensive way, as well as grow and internationalize their activities faster than in general [5].

A 2001 survey conducted by the OECD revealed that 26 of the 28 countries responding had included e-Gov initiatives as one of the main element of their strategy to reduce administrative burden [8], [34]. For example, Electronic Front-Office Interface include electronic one-stop shops, web-based portals, and Internet-based registers (registration of a new company) are to reducing burden by simplification of business processes [8], [33].

In the Netherlands, The Electronic Business Counter as one of e-Gov services is being expanded to give entrepreneurs access to government information and services on a 24/7 basis.

**Facts and figures:** Figure 3 presents the OECD indicator of degree of administrative burden in regard to starting a new business between 1998 and 2008 [43].



**Figure 3. Administrative burden [43]**

Also, the number of new businesses increased in France in 2009 and 2010 while Spain rate remain below pre-crisis level. The increase in France was the result of new legislation supporting entrepreneurs. For example, there are no administrative restrictions on foreigners willing to start a new business in France [44]. In year 2010, new business rate in Denmark, Finland, Germany, Italy, Spain and the United States began to stabilize. Figure 4 shows a clear continues upward trends in

Australia, Norway and the United Kingdom. However, over the past two years, the new business rate declined in most Euro zone countries.

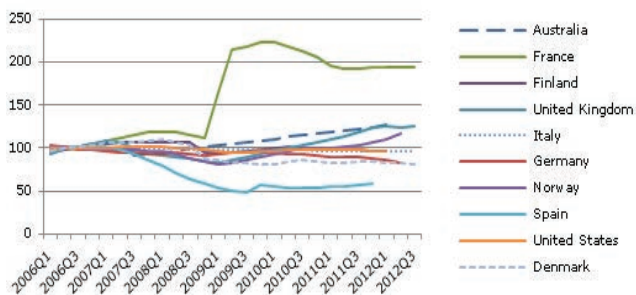


Figure 4. Business rate [45]

Many countries stress the need to improve the business environment, facilitating the establishment of a new business, increase entrepreneurship careers by cutting the red tape (i.e. simplify and reduce administrative obligations and regulatory burdens to start a new business, and to improve and simplify administrative and legislative texts). E-Gov services are not the only bullet but are the most significant and efficient ways to enhance the business processes and entrepreneurial activities. e-Gov offering the simplified business registration process to entrepreneurs can on one hand standardizes the data submitted by the entrepreneurs to the government and on the other hand makes the interchangeability of data between entrepreneurs and administrations faster, effective, and efficient that requires lower cost and effort [33], [35].

### 2.3. Theoretical Framework

The framework outlined in Figure 5 depicts the vital factors defined from the literature. These factors have a direct effect on entrepreneurship growth.

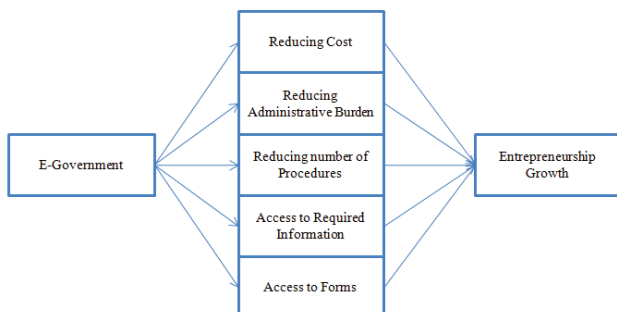


Figure 5. Theoretical Framework

Sections 1, 2.1, and 2.2 of this study highlighted the relevant literature regarding access to forms, reducing cost, time and number of procedures of starting a new business. Sections 2.1 and 2.2 covered the literature regarding reducing administrative burden and access to required information.

### 3. PROBLEM STATEMENT

When entrepreneurs are faced with difficulties especially at the early stage of their activities when dealing with all the administrative jobs, they are reluctant to seek assistance at an early stage due to the fear of losing control over their will to open a new business. Most of the times, at an early stage, due to a non-simplified business registration processes entrepreneurs are discourage to pursue [8], [43], [46].

Figure 6 presents the result of a survey on the early stage entrepreneurship challenges [8].

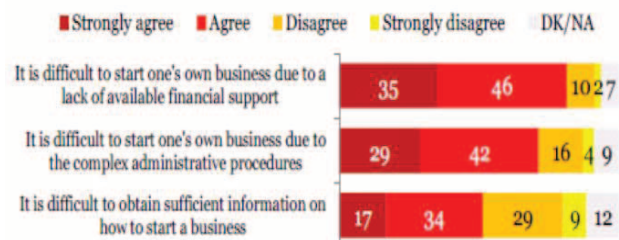


Figure 6. Early stage challenges of entrepreneurs - EU 27 [8]

As it is shown in figure 6, large numbers of participants are either “strongly agree” or “agree” in regard to the difficulties to start a new business. Hence, this may result to a decline in the rate of entrepreneurs and new business establishment. Figure 7 shows a clear continues downward trends in the rate of business in 27 OECD countries. Complicity to start a new business may not be the only factor but, is considered as the one of the factors affecting the downward trends [8].

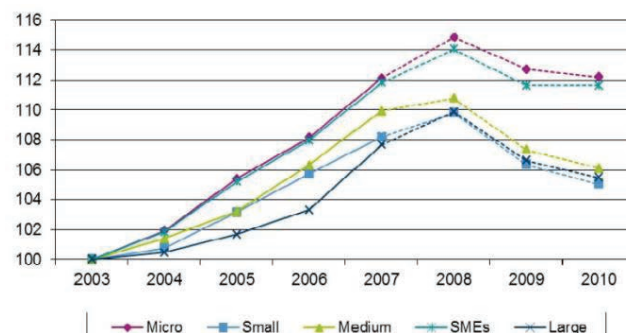


Figure 7. Number of businesses by size, EU-27, 2003-2010 [8]

Recent research on e-Gov and entrepreneurship has paid less attention to the exact need of entrepreneurs in regard to starting and registering a new business. Therefore, there are a few research dedicated to entrepreneurs and their expectations towards e-Gov. This is very critical to hear entrepreneur’s voice to recognize their exact need and challenges before designing and implementing e-Gov business services specifically for opening and registering a new business.

Therefore, this study aims to answer to the following research questions:

Question 1: What are the major entrepreneurship barriers when starting a new business? What challenges do they face?

Question 2: What should government authorities focus on before designing e-Gov services to support entrepreneurship?

Next section describes the methods used to answer to the above research questions.

### 4. RESEARCH METHODOLOGY

#### 4.1. Research Method and Model

The data collection and information gathering phase of the study included a number of elements:

- Structured and semi-structured interview with 36 young and fresh entrepreneurs in Finland were conducted during the Dec 2012 – Feb 2013 period. A number of questions were formulated prior to visiting the entrepreneurs. Interviews were of a semi-formal nature. The primary goal of the interview was to collect information on a wide variety of issues. Answers were collected from entrepreneurs who have started their business no more than

one year. The aim was to collect as up-to-date data as possible. The researcher collected the answers from interview entrepreneurs for the following important questions:

1. What has motivated you to pursue entrepreneurship as your career?
2. What challenges have you encountered when starting your new business?
3. If you have been given a chance to enhance the process, what would you do and what would you want to offer to people intend to become an entrepreneur?

- A compilation of the available OECD statistics on the rate of entrepreneurship in OECD countries;
- A review of OECD and World Bank reports plus EU Commission records;
- A review of the related literatures in the subject area to better understand the entrepreneurship barriers and challenges and positives around entrepreneurs. Study of the relevant literature has involved a review of synthesis of results from scientific publications. To get the theoretic connection other closely related literature were studied too.

Figure 8 presents the research model of the study.

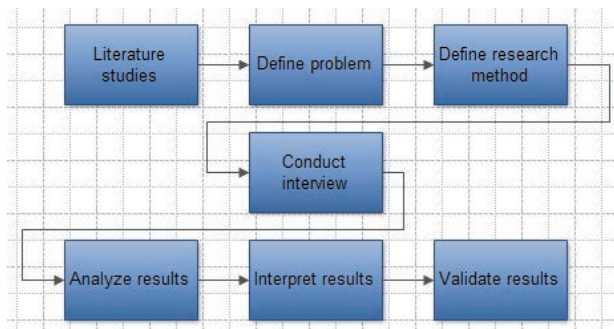


Figure 8. Research model

#### 4.2. Profile of Interviewee

Of the 36 entrepreneurs interviewed, 63% were female and 37% were male. The age range of interviewee was from 24 to 32, of which most were from 24 to 28 years old. Almost 80% of the interviewees are single and Finnish. The fact that nearly all of the interviewees are Fins means that the exact and default country regulation applies to Finnish citizens but, different regulation may apply to foreign citizens. Almost 53% of interviewees are of Software and Game industry and the remaining are of various types of industries. Table 2 presents the interviewees industries.

Table 3. Profile of Interviewees

Number of	Industry	Percent (%)
19	Software and Game	52.7
7	Food and Beverage	19.4
4	Consulting	11.1
2	Cosmetics	5.5
2	Sport	5.5
1	Transportation	2.7
1	Music	2.7

### 5. RESULTS

This section presents the analysis of the information obtained from the interview sessions. From the interviews, we learned that the following factors discussed in Sections 5.1 through 5.4

have a significant impact on the entrepreneurial activities. These factors considered to be the barriers to the entrepreneurial when opening a new business in Finland.

#### 5.1. Access to Information

The authorities should be able to facilitate entrepreneurs with an efficient access to the government, business and entrepreneurship information and forms. Putting public and government data online means more transparency in government. It gives a new rich resource back to the public who paid for it plus it can help public administrations themselves, by giving them a sound evidence base for policy-making. Also, this is how the culture toward ‘open data’ changes.

Entrepreneurs include the importance of making the online forms and information more appealing than the offline. They were disappointed and dissatisfied that the amount of information is not enough for them to decide and errors in information found online is undeniable hence, they have to visit the office to receive precise and necessary information and forms. Besides, entrepreneurs don’t have enough information about the role, services and mission of the institutions that give support to business creation [25]. Moreover, entrepreneurs highlighted the significance of promoting local language content and accessibility to forms in the local language. They further claim the availability of information and forms in number of languages in which this can vastly influence the immigration rate and stimulate and encourage already-in foreign citizens to pursue entrepreneurship as a career. What is needed is the high speed internet connection so that everyone can connect to the network. However, because of higher speed broadband in many countries, other countries are left out. Therefore, the richer nations should assist the developing nations.

#### 5.2. Saving Resources and Fear of Failure

Financing the business is important for all firms in achieving their business objectives; particularly for entrepreneurs. Hence, fear of failure due to financial barriers is one of the entry barriers. Entrepreneurs believe that saving resources such as saving the time, cost and the number of procedures to open a new business play a vital role when making decision to start a new business. Worth to mention that the required costs when starting a new business mean the official costs only, no bribes and no professional fees unless services required by law. Any other costs out of the two categories are recognized as non-official or illegal cost to the registration process. Procedures to start and operate a new business mean the pre-registration (name verification or reservation and notarization), registration, and post-registration (social security registration and company seal). Required time to complete each process is the working day/s which mean the time that does not spent on gathering the information, each process starts on a separate day, process starts and completes once all final documents are received, and no prior contact to the officials (with final documents in a first contact). Considering the above time, the time element increases in size. Number of procedures, cost and time differ in different countries.

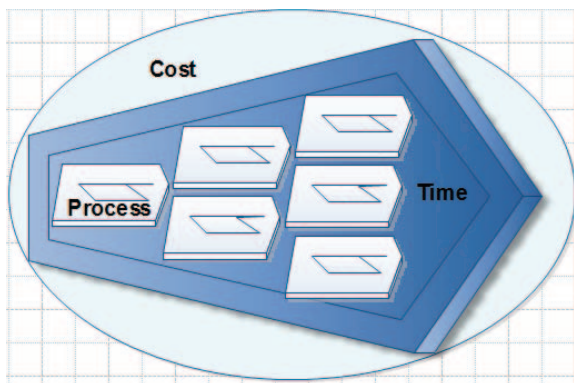
Larger numbers of entrepreneurs believe that economies with higher costs are likely associated with a larger informal government sectors and a smaller number of legally registered firms. Entrepreneurs indicate that it is very important to finance new businesses. This is however is often quoted as potential barrier to entrepreneurs when starting a new business because of the long administrative time and procedures which result to increase the costs of becoming an entrepreneur. One has highlighted that:

*“This is very difficult to receive financial aid from agencies to support and meet the financial need of the business. Therefore,*

*we are obliged to save money in order to start and save the business and keep hoping for some changes that can reduce the costs of opening a new business.”*

Entrepreneurs may have a positive attitude toward entrepreneurship but still choose not to pursue the career since they are responsible to pay the costs and wait to officially start their business. Entrepreneurs include the direct connection between the cost, time and number of procedures. They claimed, cost increases if number of processes increase and relatively this will affect on the time required.

Figure 9 presents a holistic view of the direct link between costs, time, and procedures associated with starting a new business and the entrepreneurial decision whether or not to pursue the entrepreneurial career.



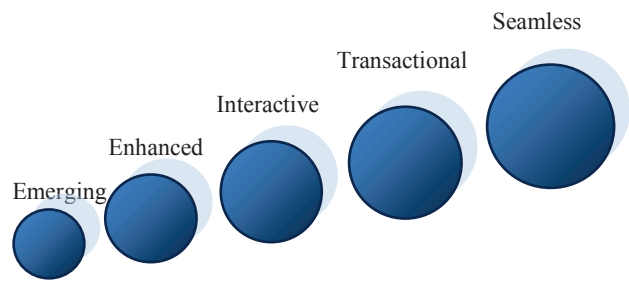
**Figure 9. Direct link between costs, time, and procedures associated with starting a new business**

As widely explained in the related literature section, an administrative cost is a significant issue and quoted as one of the main entrepreneurial obstacles. An entrepreneur is highly involved with the responsibilities of the new business, its administrative and legal procedures when thinking to pursue entrepreneurial career. Reducing early stage costs and plan to finance the business is very essential to obtain this decision. Hence, entrepreneur tries and is willing to cut down the early costs in order to invest the money in the business. As can be seen from figure 6, costs and time are both highly influenced by the number of procedures. The bigger the number of procedures to begin the business, the bigger costs and time. Therefore, they believe that it is very indispensable for government to reform e-Gov services that can overcome these barriers. E-Gov reform is required to cut the cost and minimize the number of procedures associated with starting a new business.

Furthermore, entrepreneurs claim that e-Gov can also increase competition between entrepreneurs and businesses. Business to business e-Gov service and network potentially drain resources and can effectively reinforce entrepreneurs and other business men to connect to the business network and obtain critical business information. E-Gov can make the communication and business process faster; reduce transaction and administrative costs and increase the speed and reliability of business processes and transaction.

### 5.3. Maturity Level of E-GOV Services

The terms “maturity” and “immaturity” are often used to characterize the state of a given level in a continuous process. When it comes to e-Gov, it is the level of sophistication in which countries are using the Internet to deliver quality information, varies considerably. Emerging, enhanced, interactive, transactional, and seamless are the five e-Gov maturity levels proposed by United Nation. Figure 10 presents the maturity stage of e-Gov.



**Figure 10. E-Gov maturity stages**

E-Gov is said to be in the emerging stage when only few services are up and running in an independent official government sites. Therefore, in this stage information is limited, basic, and static. In enhanced stage government increases the number of government official sites, therefore, information are now becoming more dynamic and content and information is updated with greater regularity. In interactive stage, service users can then download forms, contact with authorities and officials, and make request for an appointments all through these government sites. Therefore, users can have greater communication with the government authorities. E-Gov moves from interactive stage to transactional when the service users can deal with payment issues. Therefore, they can pay for services, and perform and benefit from online or digital transactions. The last stage is when e-Gov is considered to be in the seamless stage. This is when a total and complete integration of e-Gov functions and services are fully available to the users. In this matter, government authorities has fully implemented e-Gov services and reached to the point where maximum level of citizens, businesses, and other government organizations satisfaction is made [47].

Maturity level shows how sophisticated the services are. The more sophisticated services, the more satisfaction entrepreneurs receive when opening a new business. However, this factor is closely tied with the ‘Access to information and forms’. Both factors focus on the availability and accessibility of services online. The higher the maturity level of e-Gov services, the more availability and accessibility of information and forms. Entrepreneurs claim the importance of the maturity level of e-Gov services to promote entrepreneurship as receiving information, forms and guidelines online and digital transaction reduces the time, effort and cost associated with face to face meeting.

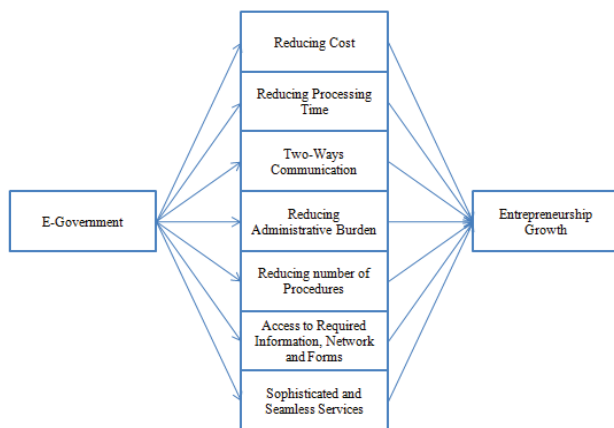
### 5.4. Two-Way Communication

Interview entrepreneurs believe that one of the primary goals of tools and services designed is for exchange of information and enrichment of relationship between public and authorities. It can connect those who govern and those who governed. Access at this level can also improve public administration itself. Public authorities can fulfill their tasks more effectively and efficiently and serve the users better. They further claim that it can build trust and confidence. Entrepreneurs can on one hand connect to authorities and request for information and assistance and on the other hand help to enhance the service by sending their feedbacks and drawbacks. Besides, numbers of entrepreneurs with technical expertise include the possibility of availability of services as open source so that knowledgeable and skilled people with expertise in software systems and related field can enhance the system by probably adding a new feature to the system. They find connecting to authorities very vital as this is a way to underpin democracy; the right to self-expression. This is the right we treasure in Europe. Unlike many other countries, democracy exists in Europe therefore, online world and tools can promote and support it.

Furthermore, during the interview, numbers of other country-specific factors were pointed out affecting the entrepreneurship rate including history, culture, social, political, and economic dimensions. Study of these factors is beyond the scope of this study.

## 6. DISCUSSION

Today, the issue is not whether the government is online or not, but the question is in what form and with what consequences. Focus of many governments around the world is the e-Gov reform. Figure 11, presents the final research theoretical framework.



**Figure 11. Final research theoretical framework**

Our results confirm previous findings in the e-Gov literature about the importance of simplifying opening a new business and removing barriers. Scholl [18] and our study also suggest that one of the motives to launch and enhance e-Gov business services is to speed up processes associated with starting a new business, business processes and improve services. Many research [20], [48], [24], [44], [28], [32], [11] and our research support that to increase the rate of entrepreneurship and new business establishment, opening a new business process should be simplified. Number of processes, time and cost associated with opening a new business should decrease. Moreover, Schubert and Hausler [17] confirm that it is very essential for government to provide quick processing of business registration and wider access to information and advisers. Moreover, Badri and Alshare [40] also suggest a direct relationship between new businesses generation and the use of e-Gov services which can effectively reduce time and cost of establishing a new business. Hence, authorities should continuously exercise ways to decline the administrative costs, time and burden. Lorincz et al. [31] and our study support that there are a lot of information and forms available but not always online and in the two-way communication. Therefore, the possibility to complete the procedures online and at once is not possible. However, the transition to e-Gov is not happening with the same speed in different countries. For example, as shown in this study, New Zealand is the first country in the world providing the best e-Gov service to register a new business. Entrepreneurs can open a new business in one day and one process. This mean that all the relevant information and forms are easily found online and the two-way online communication is well governed.

Furthermore, studies in New Zealand [38], [39], [27] and our study support that government must provide e-Gov services and increase the accessibility to those services in order to help to retain the confidence of entrepreneurs opening a new business, managing resources, budgeting, access to information and forms, communication with authorities and strengthening controls.

In regard to access to information and forms, studies in the Netherlands [28], Ancarani [19] and the result of our study clearly highlight the significance of ease of online access to information and forms. For this, the Netherlands's government has expanded 'The Electronic Business Counter' as one of e-Gov services to give entrepreneurs access to government information, forms and services on a 24/7 basis. Thompson and Rust [15], Schubert and Hausler [17] also confirm the importance of available data and information on city and state web sites as entrepreneurs and businesses need to access to data and information at anytime.

In regard to access to e-Gov services, studies in Finland and Russia [49] and our study support the significance of wider access to services by entrepreneurs. For this, Finland and Russia concentrated on developing and implementing an e-Service- 'IMU-Integrated Multilingual E-Services for Business Communication' - to entrepreneurs. As known to us, Finland-Russia business relations are peaceful and this relation has a considerable impact on the country's immigration rate, country's economy and technology transfer. As our result shows in section 5.1, it is important to attract foreign entrepreneurs in the country. Therefore, this e-Service aims at introducing unique innovative user friendly multilingual business e-Services based on existing patterns of elaborated technologies and ICT knowhow to Finnish and Russian entrepreneurs. This e-Service helps the entrepreneurs of the two countries to exchange information and communicate and receive updates of the available services.

Moreover, this study revealed that government should move forward to have as seamless e-Gov services as possible. This means that e-Gov should meet the highest maturity level of sophistication of e-Gov services.

Beyond the scope of the study, all the aforementioned factors through e-Gov influence and support the growth of the number of SMEs both in European countries and beyond. In regard to such growth, a European project named Linked2Media -in e-Gov domain- is an open linked data platform aiming at connecting user-generated contents from social media and networks to European SMEs in order for European Commercial and industrial SMEs to improve their overall marketing strategy and return of investment.

Finally, another important issue we want to highlight here is that even highly developed e-Gov countries such as Finland and Denmark are offering larger numbers of sophisticated services, but the services are distributed among different web-sites, and they are often not offered and constructed according to the needs of the entrepreneurs. This study shows that even entrepreneurs in countries with high speed Internet connection and high level of ICT application and expected level of sophistication of e-Gov are experiencing barriers to start a new business. Therefore, government authorities should understand this issue and concentrate on improving the services.

## 7. CONCLUSION

Starting a new business conducive to entrepreneurs requires a broad range of reinforcing and supportive policies. Barriers to entry such as administrative burden, lack of access to relevant information, lack of financial support and costly and time consuming procedures lock the opportunity for entrepreneurs to pursue. Therefore, providing a potential business processes and efficient services for entrepreneurs to start a new business is a well-established approach to strength and promote the rate of entrepreneurship which also boosts the economy of the country. Therefore, many economies should undertake reforms to smooth the starting a new business by reducing administrative burden, time and cost.



The following four major factors or barriers to entry affect decision obtain by entrepreneurs whether or not to pursue entrepreneurship as their career:

1. Access to information, network infrastructure and forms;
2. Saving resources and fear of failure (time, cost and performance);
3. Maturity level of government online services (e-Gov);
4. Two-way communication with department authorities.

The consideration of the mentioned factors when designing e-Gov services for entrepreneurs can effectively simplify the business registration process. Furthermore, this transformation-information and data exchange between the government and entrepreneurs- can on one hand increase the standardization of data submitted to the government and on the other hand makes the interchangeability of data between entrepreneurs and authorities faster, effective, and efficient that requires lower cost and effort [33]. Therefore, that it is very vital that e-Gov business services designed for entrepreneurs for starting a new business address the above needs.

Moreover, after interpreting the interviews, the interpretation also suggest that in order to be successful, before a major e-Gov project is being designed and implemented, a thorough understanding and details of the business process and entrepreneurship need is necessary [18]. Government authorities should study and understand entrepreneurs as they are the users of the service and systems. Without receiving feedback and drawbacks from entrepreneurs, improvement of e-Gov entrepreneurship services is almost impossible as they authorities are not fully aware of what the exact area of interest and needs of entrepreneurs are. Therefore, in the very near future, more attention should be paid to hear entrepreneur's needs and challenges as they are the service users of the e-Gov. More research needs to focus on entrepreneurship toward e-Gov. Services should be designed based on the real need of service users. Entrepreneur-centred e-Gov service design and implementation can provide a healthy, well-built, smart, effective and efficient business environment providing the entrepreneurs with the most user friendly business processes and services and encourage entrepreneurs to pursue entrepreneurship.

There are positives around the availability of services based on the real expectations of entrepreneurs. One of the positives around this is that by using such services by entrepreneurs can help public administrations themselves, by giving them a sound evidence base for policy-making. Therefore, we recommend the followings to policy makers: Maximum effort on reusing available resources and removing risks by sharing risks and removing barriers to reduce cost, number of processes and time require to perform the process. Keeping the service designs and performance inside the budget of the government. Service users' communication with responsible office should be well monitored in order to guarantee users get a response back from the contacted office in a very short period of time. My own experience shows that the real time chat has been very helpful. It is critical to provide updated information and relevant access to information. Hence, a team should be assigned to work on this issue. Access to information should be available in any off-line and on-line medium such as mobile phones, information kiosks and web. Services should be offered completely online and seamless.

Lastly, we recommend further studies on the entrepreneur-centred design for developing and implementing e-Gov business services to support starting a new business. More research should be dedicated to study the impact of such service development on economic and customer value.

## 8. ACKNOWLEDGMENTS

Our thanks to Linked2Media project leader for funding this study. We would like to thank the reviewers to the previous version of this study for their constructive comments.

## 9. REFERENCES

- [1] E. Autio, M. Kronlund, and A. Kovalainen, "High-Growth SME Support Initiatives in Nine Countries: Analysis, Categorization, and Recommendations," Helsinki, 2007.
- [2] M. Lopriore, "Supporting Enterprise Development and SME in Europe," 2013.
- [3] S. Wennekers and R. Thurik, "Linking Entrepreneurship and Economic Growth," *Small Business Economics*, vol. 13, no. 1, pp. 27–55, 1999.
- [4] Z. Acs, "How Is Entrepreneurship Good for Economic Growth?," *Innovations: Technology, Governance, Globalization*, vol. 1, no. 1, pp. 97–107, Jan. 2006.
- [5] P. Cunningham, "Policies in support of high-growth SMEs Thematic Report Policies in support of high-growth SMEs," Manchester, 2008.
- [6] W. Bartlett, M. Bateman, and M. Vehovec, *Small Enterprise Development in South-East Europe: Policies for Sustainable Growth*, 1st ed. Boston, MA: Springer US, 2002.
- [7] T. K. Filter, Z. J. Acs, D. B. Audretsch, P. Braunerhjelm, B. Carlsson, and G. Entrepreneurship, "The Knowledge Filter and Entrepreneurship in Endogenous Growth. CERP discussion paper." 2004.
- [8] P. Wymenga, V. Spanikova, J. Derbyshire, and A. Barker, "Are EU SMEs recovering from the crisis?," Rotterdam, 2011.
- [9] S.-H. Lee, M. W. Peng, and S. Song, "Governments, entrepreneurs, and positive externalities: A real options perspective," *European Management Journal*, vol. 31, no. 4, pp. 333–347, Aug. 2013.
- [10] L. Carter and F. Bélanger, "The utilization of e-government services: citizen trust, innovation and acceptance factors," *Information Systems Journal*, vol. 15, no. 1, pp. 5–25, Jan. 2005.
- [11] Department of Public Expenditure and Reform, "Supporting Public Service Reform: eGovernment 2012 – 2015," 2012.
- [12] C. G. Reddick and J. Roy, "Business perceptions and satisfaction with e-government: Findings from a Canadian survey," *Government Information Quarterly*, vol. 30, no. 1, pp. 1–9, Jan. 2013.
- [13] M. D. Hossain, J. Moon, J. K. Kim, and Y. C. Choe, "Impacts of organizational assimilation of e-government systems on business value creation: A structuration theory approach," *Electronic Commerce Research and Applications*, vol. 10, no. 5, pp. 576–594, Sep. 2011.
- [14] W. J. Baumol, "Entrepreneurship: Productive, Unproductive, and Destructive," *Journal of Political Economy*, vol. 98, no. 5, pp. 893–921, 1990.
- [15] D. V. Thompson, R. T. Rust, and J. Rhoda, "The business value of e-government for small firms," *International Journal of Service Industry Management*, vol. 16, no. 4, pp. 385–407, 2005.
- [16] N. R. Adam, F. Artigas, V. Atluri, S. A. Chun, S. Colbert, M. Degeratu, A. Ebeid, V. Hatzivassiloglou, R. Holowczak, O. Marcopolus, P. Mazzoleni, W.

- Rayner, and Y. Yesha, "E-Government : Human-Centered Systems for Business." 2001.
- [17] P. Schubert and U. Häusler, "E-Government meets E-Business : A Portal Site for Startup Companies in Switzerland," in *34th Hawaii International Conference on System Sciences*, 2001, vol. 00, no. c, pp. 1–9.
- [18] H. J. J. Scholl, "E-government : A Special Case of ICT-enabled Business Process Change," in *36th Hawaii International Conference on System Sciences*, 2002.
- [19] A. Ancarani, "Towards quality e-service in the public sector:: The evolution of web sites in the local public service sector," *Managing Service Quality*, vol. 15, no. 1, pp. 6–23, 2005.
- [20] G. Prause and M. Reidolf, "E-governmental Services for Entrepreneurs in the Baltic Sea Region — An Empirical Study," *China-USA Business Review*, vol. 10, no. 11, pp. 1168–1178, 2011.
- [21] M. Indihar Stemberger and J. Jaklic, "Towards E-government by business process change—A methodology for public sector," *International Journal of Information Management*, vol. 27, no. 4, pp. 221–232, Aug. 2007.
- [22] J. Lee, H. J. Kim, and M. J. Ahn, "The willingness of e-Government service adoption by business users: The role of offline service quality and trust in technology," *Government Information Quarterly*, vol. 28, no. 2, pp. 222–230, Apr. 2011.
- [23] J. Burn and G. Robins, "Moving towards e-government: a case study of organisational change processes," *Logistics Information Management*, vol. 16, no. 1, pp. 25–35, 2003.
- [24] U. Hytti, "Project title : Making Progress enhancement a Reality for SMEs Public report of and Economic SMEs and stakeholders needs , requirements and feedback to overcome barriers for innovation activities in Finland," 2011.
- [25] S. Martins, C. Couchi, L. Parat, C. Federico, R. Doneddu, and M. Salmon, "Barriers to entrepreneurship and business creation," 2004.
- [26] A. C. Awogbenle and K. C. Iwuamadi, "Youth unemployment : Entrepreneurship development programme as an intervention mechanism," *African Journal of Business Management*, vol. 4, no. 6, pp. 831–835, 2010.
- [27] The World Bank, *Doing Business 2012*. World Bank, 2012.
- [28] The International Bank for Reconstruction and Development, "Doing Business 2011," World Bank, Nov. 2010.
- [29] J. C. Bertot, P. T. Jaeger, and J. M. Grimes, "Using ICTs to create a culture of transparency: E-government and social media as openness and anti-corruption tools for societies," *Government Information Quarterly*, vol. 27, no. 3, pp. 264–271, Jul. 2010.
- [30] P. Entrepreneurship, "ICT, E-Business and SMEs," in *2nd OECD Conference of Ministers Responsible for Small and Medium-Sized Enterprises*, 2004, no. June.
- [31] B. Lorincz, G. Colclough, D. Tinholt, C. van Oranje, G. Cattaneo, and L. Jacquet, "Smarter , Faster , Better eGovernment: 8th eGovernment Benchmark Measurement," 2009.
- [32] OECD, "Regulatory framework : Starting a business," 2012.
- [33] E. Lau, "E-Government and the Drive for Growth and Equity Organization for Economic Cooperation and Development." 2010.
- [34] OECD, "From Red Tape to Smart Tape : Administrative Simplification in OECD," 2003.
- [35] Ö. F. Aydinli, S. Brinkkemper, and P. Ravesteyn, "Business Process Improvement in Organizational Design of e-Government Services," *Electronic Journal of e-Government*, vol. 7, no. 2, pp. 123–134, 2009.
- [36] P. Fitzsimons and C. O’Gorman, "Entrepreneurship in Ireland," 2012.
- [37] P. Fitzsimons and C. O’Goeman, "Entrepreneurship in Ireland," 2011.
- [38] R. Melville, "Doing business in New Zealand."
- [39] S. Grierson, "Doing Business in New Zealand," 2001.
- [40] M. A. Badri and K. Alshare, "A path analytic model and measurement of the business value of e-government: An international perspective," *International Journal of Information Management*, vol. 28, no. 6, pp. 524–535, Dec. 2008.
- [41] Finnish Enterprise Agencies, "Becoming an Entrepreneur in Finland," 2011.
- [42] Finpro, "Setting up a business in Finland."
- [43] OECD, "OECD Economic Surveys : Euro Area , December 2010," 2010.
- [44] Invest in France Agency, "Doing Business in France Doing Business in France," 2012.
- [45] OECD, "Business start-up rates diverging across OECD economies," 2012. [Online]. Available: [www.oecd.org/std/business-stats/businessstart-upratesdivergingacrossoececonomies.htm](http://www.oecd.org/std/business-stats/businessstart-upratesdivergingacrossoececonomies.htm). [Accessed: 19-Jul-2013].
- [46] European Commission, "A second chance for entrepreneurs: Prevention of Bankruptcy, Simplification of Bankruptcy Procedures and Support for a Fresh Start," 2011.
- [47] F. Ahmadi Zeleti, *E-Government of Iran: From visoin to implementation and development and Benchmarking*. LAP Lambert Academic Publishing, 2010, p. 108.
- [48] "Smarter , Faster , Better eGovernment 8th Benchmark Measurement | November 2009," 2009.
- [49] K. Ruutu, "Benchmark report about E-government and E-services in Finland," 2012.
- [50] J. Millard, "eGovernment measurement for policy makers," *European Journal of ePractice*, vol. 4, 2008.