The American University in Cairo
School of Global Affairs and Public Policy

PUBLIC VENTURE CAPITAL IN EGYPT: AN ASSESSMENT

A Thesis Submitted to the
Public Policy and Administration Department
In partial fulfillment of the requirements for the degree of
Master of Public Administration

By

Abdulaziz Turki

May 2015
The American University in Cairo
School of Global Affairs and Public Policy

PUBLIC VENTURE CAPITAL IN EGYPT: AN ASSESSMENT

A Thesis Submitted by

Abdulaziz Rafiq Aly Turki

To the Department of Public Policy and Administration

Spring 2015

In partial fulfillment of the requirements for the
Degree of
Master of Public Administration

Dr. Khaled Amin
Thesis Adviser
Affiliation ________________________________
Date ____________________

Dr. Hamid Ali
Thesis First Reader
Affiliation ________________________________
Date ____________________

Dr. Khaled Abdelhalim
Thesis Second Reader
Affiliation ________________________________
Date ____________________

Dr. Hamid Ali
Public Policy and Administration Department Chair
Date ____________________

Ambassador Nabil Fahmy
Dean of GAPP
Date ____________________
ACKNOWLEDGMENTS

I would like to thank my family, especially my parents, for always encouraging me to reach my cognitive edge and for their continued support and effort. No words can ever express how thankful I am for having such loving and caring parents. All I can say is that I am blessed for having you in my life, and I hope one day I would be half the parents you are to my children. I would also want to thank my siblings Sara and Ahmed for always being there for me and for always cheering me up when I needed them.

A special thanks is reserved for my thesis advisor, Dr. Khaled Amin, for always believing in me, and for his distinguished guidance in completing this thesis. Dr. Khaled you are the reason why I understand the prince of poets Ahmed Shawqi described the teacher as being virtually a messenger. I would also like to thank my committee members Dr. Hamid Ali and Dr. Khaled Abdelhalim for taking the time out of their busy schedules to make this thesis see the light.
PUBLIC VENTURE CAPITAL IN EGYPT: AN ASSESSMENT

Abdulaziz Turki

Supervised by Dr. Khaled Amin

ABSTRACT

The venture capital industry is relatively new in Egypt and needs to be examined by researchers, scholars, investors, entrepreneurs, multinationals and public organizations. This research introduces to the reader the concept of venture capital and it explores some of its characteristics and functionalities. In addition, the study examines the venture capital industry and public venture capital programs in Egypt. After exploring the industry, an assessment of this industry is made in order to identify the challenges and obstacles facing this Industry in Egypt. These challenges are hindering the development and growth of the venture capital industry and public venture programs. Examples of these challenges are the laws and regulations, investor protection, tax laws, data availability, legal expertise, property rights laws, industry standards, and political and social stability. In conclusion, after assessing the public venture capital industry in Egypt and pinpointing the challenges facing this industry, recommendations and suggestions are addressed to the Egyptian government in order to improve the public venture capital industry in Egypt, such as, changing the laws, and setting clear industry standards. Egypt is going through a very difficult economic phase due to its political instability; therefore, hopefully this research will allow the government to realize the importance of public venture
capital programs, and how these programs can benefit the small and medium enterprises and hence the overall economy.
## LIST OF ABBREVIATIONS

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Full Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARD</td>
<td>American Research and Development</td>
</tr>
<tr>
<td>BVI</td>
<td>British Virgin Islands</td>
</tr>
<tr>
<td>CEF</td>
<td>Closed-ended funds</td>
</tr>
<tr>
<td>CIIC</td>
<td>Commercial International Investment Company</td>
</tr>
<tr>
<td>EBRD</td>
<td>European Bank for Reconstruction and Development</td>
</tr>
<tr>
<td>ECF</td>
<td>Enterprise Capital Fund Program</td>
</tr>
<tr>
<td>EIB</td>
<td>European Investment Bank</td>
</tr>
<tr>
<td>GAFI</td>
<td>General Authority for Investment &amp; Free Zones</td>
</tr>
<tr>
<td>GVC</td>
<td>Government Venture Capital</td>
</tr>
<tr>
<td>HBS</td>
<td>Harvard Business School</td>
</tr>
<tr>
<td>ICT</td>
<td>Information and Communication Technology</td>
</tr>
<tr>
<td>IFC</td>
<td>International Financial Corporation</td>
</tr>
<tr>
<td>IPO</td>
<td>Initial Public Offerings</td>
</tr>
<tr>
<td>IPR</td>
<td>Intellectual property rights</td>
</tr>
<tr>
<td>ITIDA</td>
<td>Information Technology Industry Development Agency</td>
</tr>
<tr>
<td>MCIT</td>
<td>Ministry of Communication and Information Technology</td>
</tr>
<tr>
<td>PE</td>
<td>Private Equity</td>
</tr>
<tr>
<td>PSF</td>
<td>Pre-Seed Fund</td>
</tr>
<tr>
<td>PVC</td>
<td>Public Venture Capital</td>
</tr>
<tr>
<td>SBA</td>
<td>Small Business Association</td>
</tr>
<tr>
<td>SBIC</td>
<td>Small Business Investment Companies</td>
</tr>
<tr>
<td>SFD</td>
<td>Social Fund for Development</td>
</tr>
<tr>
<td>SMEs</td>
<td>Small &amp; Medium Enterprises</td>
</tr>
<tr>
<td>TIP</td>
<td>Technology Incubation program</td>
</tr>
<tr>
<td>VC</td>
<td>Venture Capital</td>
</tr>
</tbody>
</table>
Table of Content

I. INTRODUCTION AND BACKGROUND................................................................. 9

II. LITERATURE REVIEW ......................................................................................... 13
   THE EVOLUTION AND THE DEVELOPMENT OF VENTURE CAPITAL ..................... 13
   ECONOMIC TRENDS AND COMPARATIVE TRENDS ........................................ 17

III. CONCEPTUAL FRAMEWORK............................................................................ 23

IV. METHODOLOGY ................................................................................................. 38

V. THE DEVELOPMENT OF VENTURE CAPITAL IN EGYPT .................................. 42

VI. ASSESSING PUBLIC VENTURE CAPITAL IN EGYPT ........................................ 49
   THE POTENTIAL EFFECT OF PUBLIC VENTURE CAPITAL IN EGYPT .................. 59
      Unemployment .................................................................................................. 59
      Economic Diversification .................................................................................. 59
      Sources of Financing ......................................................................................... 60
      Innovation ......................................................................................................... 62
      Entrepreneurship ............................................................................................... 63

VII. CONCLUSION AND RECOMMENDATIONS .................................................. 65

REFERENCES .......................................................................................................... 71
LIST OF FIGURES, CHARTS, and Tables

Figure 1: Capital Under Management, US Venture Funds (Billions $) 1985 to 2010

Table 1: The Differences Between The Private and Public Venture Capital

Figure 2: The Main Three Stages of Venture Capital

Figure 3: The Venture Capital Process

Figure 4: Egypt’s Performance Graph (Venture Capital & Private Equity)

Table 2: Assessing Venture Capital in Egypt using SWOT analysis

Table 3: Venture Capital’s Financial and Non-Financial benefits
I. Introduction and Background

Over the past three years Egypt went through several economic downturns that affected the economy and society negatively. It is time for the government and the people to collaborate their efforts and work together for the benefit of the greater good. Establishing a proper public venture capital program is an example of this collaboration. The mission of this collaboration is to continue to be supported by public-private partnerships, which focuses on reducing the gap for small firms operating on or along four main aspects, which are financing, capital investment, technology-driven innovation, and high-growth entrepreneurship (Moran, Rein, & Goodin, 2006).

In simple words, Venture Capital whether private or public is the capital provided by a group of investors to startup firms and small businesses that have long-term growth potential. This is a vital source of funding for startups that do not have access to capital markets. These types of investments are associated with high risk, but they also have the potential for above-average returns. There are many ways how the government can be involved with VC. There are broadly three types of government programs: 1) the government directly supply's capital to venture capital firms or new startups; 2) the government can provide financial incentives that would encourage investors to invest in venture capital funds or small firms; and 3) the government can affect the regulations controlling types of venture capital investors (OECD, 2006). In other words, the government can either be an investor in the fund, or can give tax incentives to investors who are willing to invest in such PVC programs, or it can change and improve the laws and regulations that affect the venture capital industry.
Over the past several years, several governments realized the importance of venture capital market in boosting the economy (Lerner, 2009). Venture capital markets have the ability to increase production, capital, and employment. This is done through innovations, which can provide new investment opportunities and improve the economy. These types of firms focus at solving problems and moral hazards, which can narrow the gap between financiers and entrepreneurs (Lerner, 2009). History shows us that these firms are very crucial for encouraging innovative firms. Venture capital firms provide a mean of financing that cannot be obtained through conventional channels of financing, which attracted some governments to establish their own venture capital firms in order to give entrepreneurs the chance to establish their innovative ideas that will create jobs and new needed industries.

The purpose of this research is to assess Public Venture Capital institutions in Egypt in an attempt to create a guide that would provide a general picture of some of the issues related to structure, governance, and performance of venture capital from a global perspective. This will be done through learning from the experiences of other nations and other governments. Furthermore, this research will also look into the reasons behind the failures of other public venture capital initiatives, in order to learn from these failures and avoid repeating the same mistakes. This research will show the necessary steps needed to have a successful public venture capital institution.

Another vital point that will be covered in this research is the benefits of public venture capital institutions on the Egyptian economy. For example, public venture capital is associated with job creation, which will decrease the unemployment rate in Egypt. Another benefit is the positive effect of venture
capital on research and development, and its significant effect on innovation. Public venture capital could have several advantages, but the main advantage is that public and private firms can construct an organization that systematically creates networks for new startups and industries, so that they can progress. The main goal of this institution is to help pinpointing and combining pieces of companies, like financial institutions, technical experts, professionals with market know-hows and business models (Zhang, 2007).

Therefore, the main questions for this research will be: “What is the status of public venture capital in Egypt?” “What are the challenges that face public venture capital intuitions in Egypt?”; “How can public venture capital programs benefit Egypt on the macroeconomic level?”

After exploring and investigating the future possible status of the venture capital market in Egypt, this study provides recommendations for the government on how to develop its public venture capital initiative and how to avoid falling in pitfalls by learning from the experiences of other nations and other governments.

Egypt is one of the largest nations in the region in terms of population, with undeniably huge potential. The primary advantage of venture capital financing is the ability for small and medium size companies to expand, which could be very difficult through bank loans or other methods of funding. This is could very beneficial for start-ups with limited operating histories and high upfront costs. Therefore, this Study of the possible impact of public ventures capital programs on the Egyptian economy by exploring the experiences of professionals and public officials involved in the field. In addition, an empirical analysis will be used in order to predict the possible effects of Government
Venture capitals on the economy. This study will also look into the ideologies that support and reject the ideas of having public venture capitals in order to learn from their theories and try to prevent any pitfalls and limit the mistakes that could happen.
II. Literature review

Since this research study is an assessment of the public venture capital industry in Egypt, the literature review goes through the main areas that define VCs and PVCs, explore the experiences of other nations, and explore the benefits of Public and Private Venture capitals. Therefore, the section is divided into the following sections: 1) The evolution and development of venture capital, and 2) Economic and comparative trends.

The Evolution and the Development of Venture Capital

The venture capital industry started to be professionally managed when the Small Business Act of 1958 was declared. The 1958 Act officially allowed the Small Business Administrations (SBA) to license private "Small Business Investment Companies" (SBICs) to help the financing and management of the small entrepreneurial businesses in the United States (Reiner, 1989). This is when actually venture capital initiative started. A dissertation written by Martha Reiner (1989) called “The Transformation of Venture Capital: A History of Venture Capital Organizations in United States”, discusses the evolution of venture capital over the past half a century in the United States. Another article called "The Venture Capital Revolution" (Gompers & Lerner, 2001) also went through the history of venture capital and its evolvement. The authors of this article explored the revolution of both private and public venture capital in the United States since the 1940s. The success and failures that took place over the years can give valuable lessons to the future public venture capital initiatives. Therefore, Knowing the history of Venture capital in the world could give this study and Egypt great insight on how things should be done.
Gompers has been writing about venture capital for over 20 years and possibly covered most if not all of its aspects. Regarding the history of VC, professor Gompers (1994) wrote an article called “The Rise and Fall of Venture Capital”, which talks about the historical mistakes that took place in this industry and how to overcome them. This piece allows the readers to observe some of the lessons learned from success and failures of the VC industry, which would give great insights for this research and learn from the history and experiences of other nations. A more recent study published under the name “Venture Capital Investment in the United States 1995-2002” (Green, 2004), focuses on the history of venture capital and its evolution during the period of 1995 to 2002; during these period the venture capital market in the United States witnessed a sky rocket increase in size due to the development of the capital markets and the evolution of the internet.

The venture capital industry is relatively a new industry. Venture capital firms actually started to emerge in the private sector, and the first firm was called the American Research and Development (ARD) (Hsu & Kenney, 2005). ARD was founded in the mid 40s, for the purpose of investing in high risk but promising start-ups (Gompers & Lerner, 2001). Of course the success of their investments ranged greatly, for example, they invested $70,000 in Digital and Equipment Company 1957, and after 26 years the value of this investment reached $355 Million. However, more than half their profits came from this investment alone (Hsu & Kenney, 2005). This is an indication of how the success of investments can vary greatly.

In the 1950s, other venture capital firms started to emerge, form and structure their entities as closed-ended funds (CEF). Unlike open-end firms, CEF
is founded with a limited number of shares; this means that if an investor wants to own shares in these types of firms, he has to purchase shares from existing or current investors in these firms (Fevurly, 2013). Some venture capital firms were structured as open traded companies, but proved to be unsuccessful. For example, the investment appetite of older investors is different from the appetite of younger investors. Elder investors were looking for investments that will provide them with high current income rather than long-term capital gains (Gompers P. A., 1994). Other companies were founded as limited partnership. This measure was taken in order to benefit from not following securities regulations, which include following the disclosure standards set by the Investment Company Act of 1940.

During the 60s and 70s, the number of venture capital firms that were established as limited partnership increased significantly, however, the size of their investment portfolio was considered a minority compared to rest of the industry. Most of VC organizations raised their funds through closed ended funds (CEF) or through Small Business Investment Companies (SIBCs), which were federal risk capital pool that was established in early 1960s (Gompers & Lerner, 2001) (Noone & Rubel, 1970). This was the first government venture capital program initiative in the United States, and it wasn’t a successful one at first. The program was poorly designed and the regulations were very discouraging, which scared investors away. Therefore, because of this reckless management and senseless regulations, the people who actually benefited from this program were either unworthy or fraud. This caused most of SBICs to collapse. However, Today this is no longer the case; the Small Business Association (SBA), which is a government agency that provides support to entrepreneurs and small
businesses, today is regulating SBIC and ensures its success. In 2010, SBIC witnessed a 50-year record high, and invested 1.59 billion dollars in small potential projects (U.S. Small Business Administration, 2010). The venture capital industry grew dramatically over the past few decades. In figure 1, the size of the venture capital industry in the United States today exceeds 150 Billion dollars. In the 90s and early 2000s, over 60% of the capital distribution went into the information technology sector, which explains the huge jump of investments and industry size (Green, 2004). The rest of the 40% is divided among other sectors, such as science and medical companies.

![Figure 1](image)

**Figure 1**

Capital Under Management, US Venture Funds (Billions $)
1985 to 2010

The past two to three decades was the golden age of venture capital industry in the United States. Some of the well-renowned companies we know today saw the light because of venture capital programs, such as, Apple, eBay, Yahoo, Microsoft, FedEx, Cisco Systems, Genentech, Sun Microsystems, Facebook, Starbucks, Staples, and TCBY. In addition, the development of the stock market
also played a role in the significant increase in the capital managed by VC funds. For example, in 1990s the United Stated witnessed an unprecedented number of Initial Public Offerings (IPOs), which were used as exit plans for venture capitalists. This exit method had a significant positive venture capital return, which led the industry to construct new capital commitments (Green, 2004). Moreover, the Internet explosion encouraged the corporate world and the government to have an interest in the venture capital industry (Dehesa, 2002).

If there is a lesson to be learned from the history of venture capital in the United States, it is the need for an organization, such as SBA, to monitor, control, and set the standards of the industry. Industry standards have proven to be very crucial for the success of the industry. However, having industry standards alone wont get the job done; there is a need for an organization that is responsible for managing the industry and making sure that the standards are being followed.

**Economic trends and Comparative trends**

After reviewing some of the research papers that covers the issue of Public Venture Capital (PVC), some studies can be categorized from an Economical perspective. For example, a study published by Lay James Gibson and Sara G. Blake (1992) explored the effects of venture capital programs on economic development (Gibson & Blake, 1992). The study investigates the economic effects of both public and private venture capital initiatives on several states. The study proved that venture capital programs played a significant role in increasing the number of establishments, which positively affected the economy and growth of each state. Another study that is published under the name “Pre-seed Government Venture Capital Funds” (Cumming & Johan, 2008)
explored the effect of Public venture capital programs on entrepreneurial finance. The study identified that the government venture capital programs in Australia are the main source of funding new startups. The study also showed the effect these types of programs have on certain industries, especially the high-tech industry, in Australia. The study also emphasized on the importance of selecting and appointing qualified fund managers of the PVC programs in order to ensure their success.

Other studies compared the effects of public venture capital programs with the effects of private venture capital firms. For example, a study was published under name of “The value added by government venture capital funds compared with independent venture capital funds” (Luukkanen, Deschryvere, & Bertoni, 2013) focuses on the effects of PVC programs on funding new startups in Europe and filling the gap that private sector in missing. This study is interested in the added value that public venture capital programs provide compared to private venture capital firms.

Exit is an important part of the venture capital cycle, especially since investors will realize their gains in this part of the cycle (Dore, 2012). Exit of the first-stage investors is also crucial for the portfolio company, because it enables the PVC firm to acquire additional funding for future developments. Knowing the value added is very crucial for conducting similar programs. Both SME business owners and the government should realize the values added of such programs and its effects on society and the economy.

Other studies observed public and private venture capital from a different perspective. These studies observed the effect of the market on the venture capital industry. They explored the macroeconomic drivers of venture capital.
For example, an article under the name of “The Driving Forces of Venture Capital Investments” (Ning, Wang, & Yu, 2015) studied the macroeconomic factors and public market signals that affected the venture capital industry over the years. It was clear that global market events, such as the financial crisis in 2008, had an effect on venture capital firms, because their strategy and investment preferences changes during and after the occurrence of global events.

Other studies just focused on the direct impact of the venture capital industry on the economy. For example, a study published called “The Economic Impact of Venture Capital” (Romain & Potterie, 2004) test the similarity between VC firms and business R&D performed by large firms, which contributes to the country’s economic growth through innovation and employment. The study included 16 OECD countries during the period of 1990 to 2001; the results show that VC firms have a significantly higher positive effect on society than large R&D Businesses. When the intensity of VC increases, it makes knowledge generated by universities and firms easier to absorb.

Institutions such as the IHS Global Insight founded a database system that includes over 23,565 venture-backed firms. This database was updated from the 2007 Venture Capital database (containing 2006 statistics), which studied the effect of venture capital firms on job creation and revenue generating across several states and several industries. This database was improved in 2008 using transactions “which included: (a) companies that went public, (b) companies which received venture-backed financing rounds, or (c) companies acquired during the April 1, 2007 to February 11, 2009 period” (EVCA, 2012). The data was carefully checked in order to to avoid double counting. Then, researchers and analysts studied this Impact on the US Economy. An example of these kind of
studies is the “Venture Impact” (EVCA, 2012) which is a study prepared and presented by the National Venture Capital Association.

It is worth mentioning that the sources of funding could be diversified. A firm could be financed by equity, debt or a combination of both (McNally, 1994). The main difference between these sources of financing is that capital risk providers take a higher risk, but they also expect a higher return than the other sources of financing. Capital risk here is defined as “equity financing to companies in their start-up and development phases” (Murray, 1998). This means that financing such projects with capital risk should be very attractive and promising.

Other Studies compared the venture capital market of two nations. One of these studies is called “Institutions and Venture Capital” (Tag & Lerner, 2013). This study compared the venture capital market in the USA and Sweden. The comparison is based on 5 elements; theses elements are the legal system, tax system, the development of the financial market, labor laws and public spending on R&D. The authors explored theses five elements for each country and correlated their effects with the venture capital market. The study reached a conclusion that Sweden has a more active and developed venture capital market than the United State.

Comparative studies could also take other forms, such as the report published by Timothy Bates (2002) focused on the “Government Venture Capital Catalyst experiences, Pitfalls, and Promising Approaches” (Bates, 2002). This article focused on comparing the several experiments that were used in the past and failed, then used again in the future and succeeded. The reasons of failure included unqualified government employees, and the excessive use of debt
Another research (Shepherd, 1999) assessed the reason behind the failure of some of the government venture capital initiatives in Australia. The study realized that there is a need for a better understanding of the criteria set by the VC program. All these studies provide valuable lessons that could prevent future failures.

David L. Barkley, and Ferdinand Di Furio, and John Leatherman (2004), conducted a study that assessed the effect of government venture capital on job creation, but on a smaller scale, which means that they conducted their case study on the state of Kansas only and not nation wide. They believe that The evaluation of venture capital programs is proven to be difficult because public investments may include the money of private investors, benefits of the program may take years to be realized, successes stories generally over shadows the program’s failed investments, and some criteria of success are subjective. So they decided to evaluate according to rate of return on state’s contribution to venture capital fund, fiscal income and its effect on state budget, comparing social benefits with the costs attributable to program, and jobs and businesses created due to public venture capital program (Barkley, DiFurio, & Leatherman, 2004). The idea here is realizing the fiscal and social impact of such programs. The results of the study indicated that venture capital do create jobs and have significant effect on the local economy, however, VC programs have also proved to be sensitive and volatile to the macroeconomic drivers mentioned above. In addition, the social impact of such programs proved to be very valuable.

Most studies regarding Egypt focuses on incubation programs and SME financing, however, this study explores and assesses both incubation programs and public venture capital programs. This study is conducted after Egypt
experiencing two revolutions within the past four years; these revolutions affected the Egyptian economy negatively, which place the government in a very tough spot. The Egyptian government is in need of programs and ideas that will benefit both the economy and society. Therefore, this study provides the government with a new perspective that can be used to achieve the required goals.

This study contributes to the existing literature by adding and complementing the existing literature. The literature review in this study explored similar programs in other nations, which provides valuable lessons learned that could benefit the Egyptian government in the future. These lessons include economic and social benefits, and mistakes that were done in the past by similar programs in other nations. These studies benefited this research by exploring the methods used to assess similar programs in other nations. The literature review also help in identifying the obstacles that face such an industry in Egypt. In addition, it also explored methods that were used by other nations to overcome these obstacles. In brief, this study contributes to the literature by exploring a concept that wasn’t used by the Egyptian government, and explores the current status of the entire industry, both public and private, which hopefully opens the door for other researchers to follow and explore even further.
III. Conceptual Framework

“What is the proper definition of Public Venture Capital?” There are several definitions for Venture Capital; the first definition is how the European commission defines venture capital:

“What is the proper definition of Public Venture Capital?” There are several definitions for Venture Capital; the first definition is how the European commission defines venture capital:

“Strictly defined, venture capital is a subset of private equity. Venture capital is thus professional equity co-invested with the entrepreneur to fund an early-stage (seed and start-up) or expansion venture. Offsetting the high risk the investor takes is the expectation of a higher than average return on the investment”. (European Commission, 2007, p. 8)

The European Commission in the above definition identified venture capital as being under the umbrella of private equity. Private equity is one of the branches of investment banking, and its goal is to transform a firm or a project that is underperforming into an efficient profit generating institution (Heed, 2010). In most cases the private equity firm will exit the newly transformed successful project by selling it for a very high price. Therefore, venture capital is one of the methods used under private equity. It is also worth mentioning that the term “professional equity” in the above definition simply means that the fund used for investments is managed by professionals and not by the owners of the fund.

However, the National Venture Capital Association in the United States of America has a more detailed explanation of venture capital and its process, as follows:

“Venture capital firms are professional institutional managers of risk capital that enables and supports the most innovative and promising companies. This money funds new ideas that could not be financed with
traditional bank financing, that threaten established products and services in a corporation, and that typically require five to eight years to be launched. Venture Capital is quite unique as an institutional investor asset class. When an investment is made in a company whose stock is essentially illiquid and worthless until a company matures five to eight years down the road. Follow on investment provides additional funding as the company grows. These rounds, typically occurring every year or two, are also equity investment, with shares allocated among the inventors and management team based on an agreed “valuation”. But unless a company is acquired or goes public, there is little actual value. Venture Capital is a long term investment.” (National Venture Capital Association, 2014, p. 7).

The National Venture Capital Association’s definition of venture capital focused on defining the concept in specific details by explaining the cycle of venture capital. Apparently The United States has a more developed environment and understanding regarding the venture capital industry than Europe, especially since the industry was originally founded in the United States; while Europe is trying to operate in a manner similar to the United States, however, the differences continue to exist (Dehesa, 2002).

Another definition made by Gavin Reid in his article “Venture Capital Investors” states that:

“Venture Capital involves the provision of equity finance to firms, which are typically small in size and unquoted. They provide an opportunity for gain through growth potential, contingent on acquiring finance to permit new investment. Normally, the investor will expect to earn an adequate investment return within a few years through one of a variety of exist
routes, for example, stock market flotation, sale to trade buyer or sale to management.” (Reid, 1998, p. 6).

In this definition Reid focused on the investment of venture capital firms. He also explained part of the process, which is a bit similar to the definition of the National Venture Capital Association in the United States. One can easily realize the similarities among all definitions, and they only differ regarding the amount of details presented in them.

A dissertation published by Timothy Dore called “Essays on Venture Capital” explained venture capital as equity provided by experienced professionals who invest alongside management in newly established firms with the potential to grow and become significant economic contributors (Dore, 2012). Venture capital is an important source of capital for new start-up companies. Dore tried to explain the meaning of venture capital from the perspective of its contribution to the economy. It is quite obvious that the definition of venture capital might seem slightly different from one author to another, however, the core of all the definitions remain the same and contain the core elements.

Another dissertation published by Radhakrishna Kamath also titled “Essays on Venture Capital” explained venture capital from a finance perspective. Kamath described new firms with the potential to grow as “firms with positive net present value investment opportunities” (Kamath, 2010, p. 1). Since venture capital is a finance instrument to begin with, some authors such as Kamath would look at it and analyze it from a finance perspective as well. These authors would consider VC firms whether private or public as financial institutions such banks. However, it is worth mentioning that there is a significant difference between venture capital firms and other financial institutions. The main difference is that banks and financial institutions
would finance projects through loans, while venture capital firms whether private or public would provide financing through equity. In other words, VC firms would be a partner in the project and not a creditor.

Since Venture Capital is an important source of providing Funds to small and medium size enterprises (SME), Many governments around the world showed great interest in this industry and created (VC) programs in order to play a significant role in the development of entrepreneurship (Gompers & Lerner, 1999). Some Countries, such as Australia and several European nations, have different names for these pragmas, such as, the Pre-seed Fund (PSF) program, the Public Venture Capital (PVC) program, the Government Venture Capital (GVC) program, Enterprise Capital Fund Program (ECF), and State Venture Capital, however, they all have the same meaning (Cumming & Johan, 2008). Some of these programs were quite successful and some were not. The successful programs are found in countries like the United States, Israel, The United Kingdom, and Australia.

However, readers will continue to question what does Public Venture Capital (PVC) or Government Venture Capital (GVC) mean? In Australia, the government defines “venture capital programs such as the Innovation Investment Fund and Early Stage Venture Capital Limited Partnerships work with private venture capital fund managers to provide capital and professional expertise to innovative companies” (Australian Government Initiative, 2014). In the UK they define these programs, such as the Enterprise Capital Fund (ECF) program as “commercial funds, which bring together a combination of private and public money in order to support high growth businesses. The Program operates by providing gearing on private investments in the funds, in effect
offering enhanced profits to private investors when funds are successful” (Capital for Enterprise, 2011). Another example is Yozma Group, which is a venture capital group established by the Israeli government, and it invests in the fields of technology, medicine, information technology and agriculture (Avmimelech, Schwartz, & Bar-EI, 2007). Moreover, The Israeli government defines this program as an organization that “seeks to invest in early-stage companies in which it can create a significant added value. The Group aims at taking a lead or co-lead investor position in its portfolio companies, hold seats on their Boards of Directors, and obtain significant minority equity stakes in order to compensate for the Group’s involvement and contribution. The Group works closely with its portfolio companies, assisting them through all stages of development” (The Yozma Group, 2000) (Avmimelech, Schwartz, & Bar-EI, 2007).

Basically from the above the definitions public venture capital programs are almost exactly like private venture capital firms except for two parts (Carpentier & Suret, 2010); the first part, the government has contributed to the fund with its own money; second, public venture capital programs have social and economical goals in addition to making profit. To elaborate, some governments would use public venture capital programs in order to revive a certain city or area, such as, Silicon Valley in the United States (Zhang, 2007).

The authors of the article “Public Venture Capital, Occupational Choice, and Entrepreneurship” have defined public venture capital programs as a method of financing that would encourage the formation of new startups and fill the gap of financing (Secrieru & Vigneault, 2004). They were interested in the benefits of public venture capital and its effects on society. Public venture capital programs can support many small and medium enterprises, especially since
most of these institutions find it very difficult to access other channels of financing. Therefore, the authors of this article believe that public venture capital programs can fill the gap that the private sector isn’t filling.

However, for this Study, Public Venture Capital is defined as:

"Government Program Funds that are professionally co-invested with entrepreneurs to fund and support early stage projects (seed and start-ups) or expansion ventures that are most innovative and promising, with the intention of the venture capitalist (the Government/Inventors) to exit when it reaches the desired expected return on investment within the expected period." (The Author)

The article “Regulations of Private Equity” examines the existing literature on venture capital and private equity. The article will benefit this research study in identifying the types and steps involved in the venture capital process. In addition, “The Canadian Public Venture Capital Market”, which is an article published by Laval University in Canada, discusses the structure of VC organizations, and corporate governance of VC organizations, which focus on the relationship between investors and venture capitalists and between venture-capital institutions and the ventures in which they invest.

Researchers such as Krist Avots, Rihards Strenga, and Anders Paalzow (2013) like to categorize venture capital firms according to their sources of funds or by their ownership structure. The logic behind this categorization is the effect of the firm’s structure on the decision making of the firm. In simple words, the more you provide funds in the firm, the more power you gain and the more effect you have on the decision making process.
A private Independent venture capital firm is basically a limited partnership, which in the case the firm serves as the general or main partner. This type of structure is by far the most dominant type in this industry, whether it’s in the United States, Europe or Even Egypt. For example, in 2012 almost 60% of all funds that were raised in Europe came from Private Independent Venture Capitalists (EVCA, 2012).

Other venture capital firms are subsidiaries to a mother company or a holding company. For example, Microsoft established a VC firm called Microsoft Ventures, where most of its funding comes from Microsoft (the parent organization). Some researchers identify these types of structures as “Captive Venture Capital Organization” (Jeng & Wells, 2000). In most cases the mother company is usually a financial institution, such as, a bank or an insurance company, but in some cases blue-chip companies establish their own VC firms such as the Microsoft example that was mentioned earlier. Another name for these types of structured VC firms is Corporate Venture Capital Organization (McNally, 1994).

The third type is the public venture capital organizations, which are organizations that are funded and controlled by government institutions. These types of organizations are either completely funded by the government or partially funded by the government. The degree of influence of the government on these organizations depends on the degree or percentage of funds sponsored by the government in these organizations. Public venture capital organizations usually have a slightly different aim than other VC firms; their main goal is usually focused on promoting the growth of Small and Medium Enterprises (SMEs). In other cases, their aim is to invest in certain industries or certain areas.
When both the government and the private sector contribute to the funds of Public venture Capital organizations, they are called hybrid funds (Isaksson, 2006).

The decision making process in VC firms is affected by the fund providers because of their different expectations and interests. Sometimes the presence of foreign or outside investors can create implications for the management of VC firm. For example, these outside fund providers could affect the firm’s strategies and expected return period, which could complicate things the matter for the firm’s management (Sahlman, 1990). Other factors that could affect the decision making process are the need for creating reputation and track record in order for the venture capitalist to attract new investors (Isaksson, 2006). Professor Gompers, a Business Professor at Harvard Business School, stated that this need could push venture capitalists to take their firm public too early (Gompers P., 1995).

The Strategic objectives of captive venture capital/corporate venture capital organizations can be different from private independent companies. The primary goal of private independent is to achieve a certain return on the investments made, while captive ventures usually have a targeted corporate strategic objective. These differences might have an effect on what valuations methods are used. As mentioned earlier, some private independent VC firms prefer to invest in later stages while captive firms prefer to invest in a seed funding stage (Isaksson, 2006).

On the other hand, Public Venture capital organizations are usually limited to statutory constraints. These types of firms usually look at things from a long-term goal perspective. This is basically the major difference that separates
PVC firms from other types of venture capitalists. Sometimes the limitations and constraints could affect the growth of public venture capital organizations if compared with other types of venture capital firms (Cumming & MacIntosh, 2002). Other than that, the differences between private and public venture capitals are minor. Examples of these differences are the lack incentive structures among investment managers, and lower skilled employees compared to the private sector (Ayayi, 2004). These inexperienced employees are not qualified to give proper advice to their investees regarding business matters, which could cause the project to fail in some circumstances.

In order to clarify the main differences between private and public venture capital, six elements are determined for this study. The 6 elements are These elements are 1) deal selection, 2) information collection, 3) management and valuation expertise, 4) incentive contracts, 5) monitoring and value added services, 6) network capacity, and 7) Exit mechanism. Table 1 will clarify the differences regarding the six elements.

“Deal selection” is concerned with determining the industry the venture capital firm is intended to invest in. “Information collection” is concerned with the methods used to evaluate each opportunity presented and deciding which of these opportunities are the best to invest in. Regarding the element “management and valuation expertise” focuses on the experience of the management that will run the new project and evaluating their qualifications. The concept “incentive contracts” focuses on the incentives that could be provided to the newly established company and to the investors who are willing to invest in the VC fund. The term “monitoring and value added” is related to the services that could be provided by the VC firm to the company invested in.
“Network capacity” is basically the network of the VC firm and how can this network benefit the new invested in company. Finally, “exit mechanisms” are the methods available for the VC firm to exit its investment and realize its gains.

Table 1

The Differences Between The Private and Public Venture Capital

<table>
<thead>
<tr>
<th>Elements</th>
<th>Private Venture Capital</th>
<th>Public Venture Capital</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deal selection</td>
<td>• Usually a specific sector is determined to invest in&lt;br&gt;• The main target is to reach the required return on investment</td>
<td>• More industries are involved, and New companies must fulfill Minimal listing requirements&lt;br&gt;• Social and Economical benefits are taken into consideration</td>
</tr>
<tr>
<td>Information collection</td>
<td>• Due diligence is involved to determine the value of the project</td>
<td>• Due diligence is involved to determine the value of the project</td>
</tr>
<tr>
<td>Management and valuation expertise</td>
<td>• Management experienced is being assessed.</td>
<td>• Management experienced is being assessed.</td>
</tr>
<tr>
<td>Incentive contracts</td>
<td>• Generally used. Shareholders agreements adapted to the specific context</td>
<td>Government can provide tax and several other incentives.</td>
</tr>
<tr>
<td>Monitoring and value added services</td>
<td>• Value-added services in several areas of management, including strategy, marketing and finance</td>
<td>• Value-added services in several areas of management, including strategy, marketing and finance&lt;br&gt;• The government could also provide sponsorship programs to new startups</td>
</tr>
<tr>
<td>Network capacity</td>
<td>• Significant, mainly for sector specialized VCs</td>
<td>• Very significant and in all fields and industries</td>
</tr>
<tr>
<td>Exit mechanism</td>
<td>• IPO, merger, acquisition, alliance, and liquidation</td>
<td>• IPO, merger, acquisition, alliance, and liquidation</td>
</tr>
</tbody>
</table>

Source: (Carpentier & Suret, 2010)

Since the idea of public venture capital is relatively new to Egypt and to the Middle East, there is a need to explore and define the different types of venture capital; this point will be covered through exploring the history and the development of venture capital in other nations and in Egypt.
Before talking about the types of venture capital we need to explore the process and stages of venture capital programs. It is crucial to understand the cycle of venture capital in order to understand the industry and how could it be improved and developed. Usually there are three main stages of venture capital:

**Figure 2**
The Main Three Stages of Venture Capital

Fundraising, investing and exiting are the three main stages of the venture capital cycle (Fung, Liu, & Shen, 2004). The first stage (fundraising) is basically determining the purpose and the size of the fund; hereafter, interested investors are being invited to participate in such a program in order to raise the required funds for the program. In the second stage (Investment), the opportunities are being evaluated and a decision is made regarding the best opportunities to invest in. The third stage is the exit plan, in other words, deciding which method to use in order to sell the investment and exit in order to reach the required return on investment. These main stages summarize the both the private and public venture capital process.

An article called “The venture capital cycle” that was published in 2004 will assist in identifying the issues and problems involved throughout the venture capital process and how to overcome these problems. Researchers like Bygrave and Timmons (1992) talking about the four phases that any venture capital goes through. Other authors, such as Tyebjee and Bruno (1984) had a five-phase process for venture capital, which is slightly different from Bygrave
and Timmons (1992). And some authors, such as, Isaksson (2006) combined both types and came with a new set of phases.

In order to understand the process clearly, we need to describe the process in more details. Researchers Bygrave and Timmons explained the process in four steps: 1) the investment decision, 2) constructing contracts, 3) control and value adding, and 4) exist methods (Bygrave & Timmons, 1992). Bygrave and Timmons started the process by deciding in which opportunities to invest. Then, they try negotiating the terms of the deals. After reaching a deal, a business development strategy is being made in order to ensure the success of the project. Finally, the exit method needs to be determined and executed.

Other authors, such as Tyebjee and Bruno, described the process in five phases: 1) organizing the deal, 2) deal screening, 3) evaluating the deal, 4) structuring the deal, and 5) post investment activities (Tyebjee & Bruno, 1984). Tyebjee and Bruno look at the process from a slightly different perspective. They start by focusing on structuring an organization responsible for the deals. To elaborate, they were structuring the fund that would invest in attractive opportunities. The next steps in their process are to screen and evaluate the presented opportunities. Thereafter, they negotiate the terms of the deal and try to reach an agreement. After reaching a deal and investing in the project, they develop a plan that would determine how and when to exit. It is important to realize that each phase in the process does not have to always be developed in a certain logical order (Isaksson, 2006). The venture capital process is dynamic and all phases are connected with each other and relate all stakeholders together (Gompers & Lerner, 2002).
Isaksson established a clearer more sophisticated process by merging the process of Tyebjee and Bruno and the process of Bygrave and Timmons together; this merger of previous literature was done and represented in figure 2 (Isaksson, 2006).

**Figure 3**
The Venture Capital Process

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1)</td>
<td><strong>Establish Funds</strong></td>
</tr>
<tr>
<td></td>
<td>• Determine the investment objective</td>
</tr>
<tr>
<td></td>
<td>• Raise Capital for Investment</td>
</tr>
<tr>
<td>2)</td>
<td><strong>Deal Flow</strong></td>
</tr>
<tr>
<td></td>
<td>• Opportunity creating activities (venture base)</td>
</tr>
<tr>
<td></td>
<td>• Recognize and identify entrepreneurial opportunities</td>
</tr>
<tr>
<td>3)</td>
<td><strong>Investment Decision</strong></td>
</tr>
<tr>
<td></td>
<td>• Screen and Evaluate Deals</td>
</tr>
<tr>
<td></td>
<td>• Select/deselect deals</td>
</tr>
<tr>
<td></td>
<td>• Valuate and negotiate structure deals</td>
</tr>
<tr>
<td>4)</td>
<td><strong>Business Development and value adding</strong></td>
</tr>
<tr>
<td></td>
<td>• Strategy Development</td>
</tr>
<tr>
<td></td>
<td>• Active Board membership</td>
</tr>
<tr>
<td></td>
<td>• Outside Expertise</td>
</tr>
<tr>
<td></td>
<td>• Other Stake Holder, management</td>
</tr>
<tr>
<td></td>
<td>• Contact and access to info, people, institutions</td>
</tr>
<tr>
<td></td>
<td>• Staging and syndicating Investment</td>
</tr>
<tr>
<td>5)</td>
<td><strong>Craft and execute exit strategy</strong></td>
</tr>
<tr>
<td></td>
<td>• Sale</td>
</tr>
<tr>
<td></td>
<td>• IPO</td>
</tr>
<tr>
<td></td>
<td>• Merger</td>
</tr>
<tr>
<td></td>
<td>• Liquidation</td>
</tr>
<tr>
<td></td>
<td>• Alliances</td>
</tr>
</tbody>
</table>

*Figure 2: Source: (Isaksson, 2006)*
Isaksson divided the process into five clear steps. The first step is to determine the investment objective of the fund and raise capital for the investment. The second step is what he called a deal flow, which basically means creating an opportunity base, where interested entrepreneurs can come and apply for such programs. In this step the fund manager will be able to recognize the opportunities worth looking into. The next step is to evaluate the deals available and decide which one to pursue. After negotiating the terms and reaching a deal, a business development strategy is being constructed with the help of experts in the field in order to ensure the success of the project. The final step is the exit strategy, where one of the following methods is being used to exit the investment: 1) Initial public offer, 2) Acquisition, 3) Merger, 4) Alliances, and 5) liquidation in the case of failure.

Regarding the types of venture capital, they differ according to their approaches. The approach factors that affect the decision making of venture capitalists are what segregate one venture capital firm from another; for example:

1. **Business Situation:** some venture capital firms are interested in new innovative ideas, and others would like to invest in established companies that are promising and have the potential to go public or grow.

2. **Industry focus:** some VC firms like to invest in certain industries only, such as, Sawari in Egypt, which is a company that likes to invest in the ICT sector.

3. **Inshore or offshore** (Geographical VCs): some VC firms focuses its investment on certain cities or nationwide, while others like to invest globally.
4. **Expectation and size of investment:** VC firms have different expectations, which affects their decision making process. Some firms like to invest in companies that can go public soon, which means that it could be sold soon and create a fast growth and return. Other firms have a certain amount investment allocated to certain projects, which could vary from one project to another.
IV. Methodology

The purpose of this study is to assess Public Venture Capital in Egypt and provide guidance and recommendations for developing Government Venture Capital /Public Venture Capital Programs in Egypt. However, since this is a relatively a new industry in Egypt, the records concerning venture capital in Egypt is very limited. Therefore, qualitative methods will be used to identify the perspective status of public venture capital in Egypt. The Interviews are conducted with public officials who could be involved with PVC, owners and executives of private venture capitals, and financial & economic experts. The selection process and the sampling for this study is purposive and non-random.

The feedback of the interviews helps in identifying and assessing the problems with the current venture capital programs in the private sector, and the possible newly developed Public Venture Capital programs in Egypt, and hence opening the door for recommendations and suggestions that could help in overcoming these obstacles, which will improve and develop the PVC industry in Egypt. In addition, they will also identify and assess the level of difficulty for applying for such funds.

Assessment criteria

For this study, three methods are used for the assessment:

1) Purposive and non-random interviews conducted with government officials and experts in the field of venture capital.

2) Data and available literature.

3) SWOT analysis, SWOT analysis is a method of assessment, which is basically a structured planning method used to evaluate the strengths,
weaknesses, opportunities and threats/challenges involved in a project or in a business venture (Humphrey, 2005).

The following interviews were conducted:

1. Interview 1: an interview conducted with top senior government in the Ministry of Communication and Information Technology (MCIT).
2. Interview 2: an Interview conducted with a top senior official in the Information Technology Industry Development Agency (ITIDA).
3. Interview 3: an interview conducted with a senior advisor and director of the business development and national strategies of the Information Technology Industry Development Agency (ITIDA) in the North American Region.
4. Interview 4: an interview conducted with an executive manager of one of the private sector venture capital firms in Egypt.
5. Interview 5: an Interview with an Investment banker who is a former employee to one of the multinational VC firms in Egypt.
6. Interview 6: an Interview with an economist who is currently working for one the private VC firms in Egypt
7. Interview 7: an Interview with an Investment banker who works as an employee to one of the multinational VC firms in Egypt.

Since the information technology has the biggest share in the portfolio of the venture capital industry in Egypt, a top senior government official in Egypt's Ministry of Communication and Information Technology (MCIT) is contacted to discuss about the Venture Capital Activities and Incubation projects Associated with ministry and its affiliates.
In addition, two senior officials in the Information Technology Industry Development Agency (ITIDA) are also being interviewed. This Agency is the executive IT-arm of the Ministry of Communication and Technology (MCIT) to spearhead the process of developing the Egyptian IT industry. And one of its objectives is to establish Public Venture Capital Programs and encourage the development of the Venture Capital Industry in Egypt. Moreover, from the same agency (ITIDA) one of the officials is a Senior Advisor & Director of the Business Development and National Strategies of the Information Technology Industry Development Agency (ITIDA) in the North American Region, and will be responsible for conducting and establishing such projects in Egypt.

Another interview is also conducted with an Executive Manager of one of the private sector venture capital firms in Egypt. This firm is a venture capital firm that helps innovative startups become successful big firms. The firm is a subsidiary of one of the large Investment Banking firms in Egypt. The firm manages the Technology Development Fund I, and Technology Development Fund II. The size of the first fund is EGP 50 Million, and the Second Fund is EGP 215 Million. Most of the funds came from public institutions. To date; the firm has invested over $25 million in 18 companies operating inside and outside Egypt. Ministry of Communication and Information Technology (MCIT) is the sponsor of the fund in order to support entrepreneurs in the CIT sector. They also work closely with ITIDA and other government organizations to support their companies. The funds Investors of Ideavelopers are Banque Misr, Telecom Egypt, National Investment Bank, Egypt Post, Misr Insurance, Export Development Bank of Egypt, Misr Iran Development Bank, Commercial International Investment Company (CIIC) and Faisal Islamic Bank. It is quite
obvious that the funds mainly consist of public funds. The reason I choose this firm is because it’s the closest to what I have in mind for a Public Venture Capital Program.

Moreover, interviews were conducted with three other Economic experts who work in the field of Investment banking in Egypt. The three economists used to work for international private venture capital firms that have branches in Egypt. These firms are international venture capital firms that invest in talented people who have the ability to turn exceptional ideas into market-leading companies in the Middle East and North Africa (MENA). These companies are specifically interested in Arabic web content and applications, e-commerce and financial services, mobile applications, service software, and converged services.

**Selection Criteria (sample selection)**

The sample is non-random and purposive, and the selection criteria is based on the following points:

- The subject should have worked in the field of venture capital in Egypt, or was involved in the field of venture capital Egypt.
- The subject should be in a position where he/she can take decisions.
- Some of the subjects should come from the private sector and some should come from the public sector.
V. The development of venture capital in Egypt

Egypt went through a difficult economic period after 2011 revolution. Therefore, the executive authority realized that it is need for financial and socio-economic methods that would jump-start the economy. The government acknowledged the importance of supporting Small and Medium Enterprises (SMEs) in order to improve the concept of social justice in Egypt. This led to an increase in the number of national programs that support the SME industry and the microeconomic finance industry. After 2013 revolution, there a great opportunity to improve the laws and regulations related to SMEs industry in order to encourage entrepreneurs to work and become positive contributors to their society and economy. A Public venture capital program is one way of reaching this goal, and it could help the SME industry to thrive in Egypt.

Over the past few years, Egypt went through and still going through several positive dynamic developments that would encourage and promote the development of Small and Medium Enterprises (SMEs) and Venture Capital (VC). These developments include the diversity of financing instruments, such as, leasing, micro financing, funding, soft loaning, and export credit facilities, which all are all in support of direct equity financing (Roshdy, 2013). In addition, the development of SME banking, and the professional development and the capacity building for improving technical and management skills also support the idea of having a successful VC industry in Egypt. Other encouraging factors include corporate governance, audit training, and incentives for incorporating new startups, which also resulted in the emergence of angel investors and incubators (Roshdy, 2013).
Most of venture capital funds in Egypt focus on Information and Communication Technology Sector (ICT), however, there is growing interest to invest in other industries, such as, energy, agriculture and manufacturing, because of their huge market potential. Unfortunately, there are several factors that are hindering entrepreneurs from going forward, such as, the bureaucratic regulations when it comes to company registration, the lack of a cohesive supportive ecosystem, marketing and technology integration (World Bank, 2009). Laws and regulations in Egypt require several modifications in order to support the growth of VC industry; for example, enforcing intellectual property rights (IPR), constructing VC funds, the rights of shareholders and other deal terms need to be bought consistent with the laws and regulations of major financial centers, such as, the British Virgin Islands (BVI), Luxemburg, Bahrain, Dubai, US and UK (Miller, 2006).

There is also a need to work on human capital requirement for better-trained and experienced teams for portfolio companies at all stages. Experienced Chief Financial Officers seems to be the scarcest management resource (Miller, 2006). The Venture Capital Committee was established in the Ministry of Finance during the era of former Minister Youssef Botrous Ghali in order to set and monitor the industry standards of Venture Capital in Egypt. The Venture Capital Committee also played a role in recommending the needed changes for this industry to grow and flourish. For example, The Venture Capital Committee in the Ministry of Finance suggested that there is a need to improve higher education in Egypt in order to improve human capital resources. However, since 2011 revolution, this committee was canceled since its founder Youssef Botrous Ghali belonged to the outset regime at that time. There is an obvious need for
this committee to be reestablished in order to ensure the future development of this industry.

The Egyptian government needs to overcome several challenges if it wants to improve its venture capital industry. In 2008, Egypt has ranked 67 globally in terms VC ranking index, while in 2012 Egypt has ranked 60 even though the country has been going through several political and economical turbulences (Groh, Liechtenstein, Lieser, & Biesinger, 2014). This index that assesses the ranking is based on several performance factors including: (1) the country’s economic activity; (2) the capital market development level; (3) the tax system of the country; (4) investor protection laws and corporate governance; (5) human and social environment; and (6) the entrepreneurial environment and opportunities available. After the 30th of June revolution Egypt’s ranking was affected negatively to reach 69 globally in 2014 (Groh, Liechtenstein, Lieser, & Biesinger, 2014).

The first public venture capital Initiative took place in Egypt was in 1992-1993 through the United Nations Development Program (UNDP), which resulted in the creation of the Egyptian Incubator Association (EIA) (Interview 1). This project went through a year of limited activities due to administrative obstacles. EIA, the World Bank and Social Fund for Development (SFD) established the Egyptian Incubator Program and included 38 projects throughout Egypt.

Regarding other public venture capital programs in Egypt, the General Authority for Investment and Free Zones (GAFI) has launched in 2012 its first sovereign SMEs fund called Bedaya, which focuses on start-ups and VC investments (Interview 1). This program conducted by GAFI in partnership with some banks and financial institutions with an allocated capital of EGP 200M.
Another government program managed by Smart Village has been established to provide incubation services. The Technology Incubation program (TIP) was founded in 2006 by the Information Technology Industry Development Agency (ITIDA) under the supervision of the Ministry of Communication and Information Technology. The government is intending to establish more VC services in the future as part of its economic program that will support the development of small and medium enterprises, such as Egypt-US Enterprise VC fund.

Regarding the private sector, several players entered the market such as Sawari Ventures, which is an ICT-focused VC fund and incubator, and its famous for conducting a pioneering business cases competition called Flat6 Lab platform. There is also Idevelopers, a technology development fund, which also has several regional and global ICT investments. Another organization is Cairo Angel Network has been established for professional angel investors. Even though most of the VC industry in Egypt revolves around the ICT industry, some companies are also interested in other fields; for example, Innoventures, which a leading company that funds seed stage startups and incubation services, is interested in the fields of clean tech, ICT, electronics, media intelligence and inclusive businesses. Other private firms, such as, Innoventures has 6 month incubation program that offers seed funding, customized business training, mentorship and access to partner networks in return the firm owns a minority share in each of the ventures incubated and established under their support.

Moreover, several NGOs, non-for profit organizations, and academic institution are also developing and expanding entrepreneurial VC activities: such as, Egyptian Junior Business Association, Middle East Council for
Entrepreneurship and SMEs (MAKSABY), German University in Cairo, American University in Cairo, Arab Science and Technology Academy, MIT Business Plan Competition, Nile University, and European and Euro-Mediterranean funded projects. In addition, the emergence of a professional and specialized platform and industry focused community and friendly organization called the Egyptian Private Equity Association (EPEA). The organization has a clear focus to develop VC investments and related capacity building and provide professional development services in Egypt and the MENA region. The establishment of these organizations and activities illustrate the importance of the VC industry and the need to improve the VC conditions in Egypt.

Other organizations that are some how directly or indirectly involved in the development of this industry include Egyptian Banking Institute, GAFI, Ministry of Trade and Industry, Egyptian Credit and Risk Association and many others. Other international organizations provided assistance and advisory services regarding this industry include European Investment Bank (EIB), European Bank for Reconstruction and Development (EBRD), International Financial Corporation (IFC), World Bank and many other financial institutions.

A business school in Spain called IESE developed a performance global index with regards to venture capital and private equity. The performance index is based on six elements; these elements are 1) the country's economic activity, 2) the capital market development level, 3) the tax system of the country, 4) the human and social condition of the country, 5) investor protection laws and the level of corporate governance, and finally 6) the opportunities available for entrepreneurs (Groh, Liechtenstein, Lieser, & Biesinger, 2014)
According to the above graph, Egypt outperforms Africa with regards to economic activity, entrepreneurial opportunities and the development of the capital market. However, Egypt underperforms Africa with regards investor protection laws and the level of corporate governance, especially after the revolution where the government violated the contract of several foreign investors. Another aspect where Egypt underperforms Africa is with regards Human and Social conditions; the reason behind this is the continuous existing of human rights violations in Egypt. With regards to taxation, Egypt and Africa are almost on the same level.

*Source: (Groh, Liechtenstein, Lieser, & Biesinger, 2014)*
There are three main institutions that showed interest and explored PVC programs in Egypt; these institutions are the MENA Private Equity Association, World Bank, and OECD library. These intuitions published several reports that concern the VC industry in Egypt over the past few years. The number of academic papers covering this industry in Egypt is very limited. An example of these studies is an academic paper in 2013 written by Tawfeek talks about how Egypt looks at incubation programs and its implementation. This would help in identifying the trends and existing VC programs in the Egyptian market. Other reports were published by the Egyptian Ministry of Finance and foreign consultants, explores the Venture capital Market in Egypt and identified the status and aspects of this market. An example of these reports is report prepared by Miller (2006) under the title of “Promoting Venture Capital Industry in Egypt” (Miller, 2006). The report identifies the problems facing the development of venture capital in Egypt; for example, Egypt needs to develop its human capacity through its education channels, and the need to change and enforce the property right laws.

Egypt might not have a proper record to conduct comprehensive studies; however, it can learn to overcome this problem from the experiences of other nations. The benefits of PVC programs on the economy can improve Egypt’s socioeconomic status, which confirms the need to establish an entity responsible for the data collection and create a proper database. The Egyptian government should look beyond the fiscal benefits of such programs and realize the social benefits of implementing and improving such programs.
VI. Assessing Public Venture Capital in Egypt

For this study the assessment of public venture capital in Egypt is based on three main areas; the first area is based on the available data and literature, where the industry challenges will be identified, such as, human capacity, laws and regulations that needs to be changed, tax law, investor protection laws, the development of the capital market and exit mechanisms, data availability, innovation and scientific research, and setting industry standards. The second area is based on the in-depth interviews conducted for the purpose of this study. The interviews identify some of the challenges facing the industry, such as, the need of amending the laws and regulations, the problem with having public employees running public venture capital programs, tax laws, investor protection laws, capacity building, the need for legal expertise, setting industry standards, and the need to develop the capital market. Another benefit of the in-depth interviews is identifying the potential benefits of having a public venture capital program, such as, reducing unemployment, economic diversification, a new source of financing, encouraging innovation, and encouraging entrepreneurship. Moreover, the in-depth interviews help identify the private/public venture capital process in Egypt. The third area of assessment is done through a SWOT analysis where the strengths, weakness, opportunities and threats are identified through the researcher’s findings.

Today the level of international competitiveness and interrelated economies is unprecedented in human history. The competitiveness level depends significantly on the presence of an environment that supports innovation and risk taking. In addition, governments nowadays are increasingly
focusing on developing knowledge-based economies as a measure to motivate competitiveness and growth (El Tanany, 2011). Governments have a role to design policies that would support innovation whether in the private sector or the public sector. In addition, the Egyptian economy is an emerging market that needs to focus on developing the Small and Medium Enterprises (SME) in order to develop its economy. Since the main obstacle for these enterprises is the lack of capital to formalize creative ideas into business plans and projects, public venture capital programs bridge this financial gap and play a positive role in developing the economy. These programs will facilitate entrepreneurship, encourage innovation, diversify the economy, create employment opportunities, increase the tax returns, and contribute to the overall economy.

**Challenges in the Industry:**

The Venture Capital Industry is very young in Egypt, and like any new industry, there are several challenges associated with it. There is an obvious need for establishing the concept of corporate governance, compliance systems and agreed upon standards. In addition, there is also a need to improve and adjust several laws that affect the establishment and the management of VC funds in Egypt. After exploring the industry and market, the following needs and challenges were identified:

- Capacity Building and training programs: there is a clear need to develop the management skills of many entrepreneurs in the market. Most people that apply to such programs show an obvious lack of skills regarding management and planning (Interview 4). There is an obvious need even in established firms to learn more about HR management and how to plan correctly for the future.
• Investor Protection: the arbitration laws and other investors’ related laws do exist in Egypt, however, the enforcement of these laws are something else (Interview 6). There is a need to enforce the law in Egypt, in order to encourage investors to have an interest in the Egyptian economy. This industry needs the investors to be protected and feel safe regarding their investments.

• Tax laws: in order for this industry to grow, there should be a more lenient tax laws specifically made for this industry; this industry focuses on encouraging and developing small and medium enterprises, which is within line with the government’s new strategy (Interview 7); therefore, it would be ideal for this industry to have a more relaxed tax laws that would encourage investors and entrepreneurs to participate in such programs or business.

• Exit mechanisms and capital market regulations: as mentioned earlier that most exits are done through acquisitions and not through capital markets, which does not give much options to VC funds/VC investors to exit (Interview 4). The regulations in the capital market are a bit stiff. There is a need to activate and develop the capital market and exit mechanisms for venture capitalists (Interview 7). This will also encourage the industry to grow and flourish. Another problem with the exiting systems is in the case of the failure of the project. Egypt is full of redundant and hectic laws when it comes to closing/shutting down a company (Interview 4). The process could take years and years, and in some cases closing a firm could take more time than the actual lifetime of the firm. To elaborate, if a new firm failed after 2 years of its establishment, the process for closing down such a firm could take over 3 years, and that is how bad the system is regarding this matter. In addition, there
is a need of improvement in the laws that concern preferred stocks in Egypt. Preferred Stocks are basically company stocks with dividends that are paid to shareholders before common stock dividends are paid out (Interview 4). In the event the company goes bankrupt, preferred stock shareholders have a right to be paid first. Another difference between preferred shares and common share is that preferred shared are paid a fixed dividends, whereas common shares are not. And unlike common shareholders, preferred shareholders usually do not have voting rights. Moreover, another law that needs reforming is the employee stock option program. Establishing such a program in Egypt is very difficult.

- Creating Awareness: most people are not aware of such programs because the concept of venture capital is still new in Egypt (Interview 3). Even if the entrepreneur is aware of the existence of such a program, he/she is aware of how to deal with such a system, and what are the conditions associated with it. There is a need to create more awareness for such programs and how to deal with them (Tawfeek 2013). Another problem in the industry is that it is mainly concentrated in Cairo, and just recently the existence of very few cases in Alexandria (Interview 4). There is a need for establishing more seminars and conferences over Egypt (Interview 1). These seminars should include both the private and the public sector.

- Data Availability: there is always the challenge of finding data in Egypt (Interview 1). This challenge is not only associated with industry but with many other industries as well. There is a need for the creation of an institution
in Egypt that monitor’s and provides data regarding the industry (Interview 2). The existing monitoring organizations could be improved to play that role.

- Innovation and Scientific Research: there is a need in Egypt to encourage innovation and scientific research (Interview 2). This could be done through the education systems and other motivating programs, such as the public venture capital programs. There is a need for the venture capital industry to be involved in sectors other than the information technology sector (Miller J. A., 2006).

- Legal expertise: since this is a new industry in Egypt, the legal experts in the Egypt are unware of the regulations and laws that should be associated with VC funds (Interview 4). Most VC funds hire foreign legal experts to solve their problems or to review the term sheet or to even give you advice. There is a need to develop a training program for lawyers to be aware of the rules and regulations for such an industry.

- Property Right Laws: this law needs to be reformed and enforced in Egypt (Interview 4). Most companies would actually register their rights offshore because they have no faith in the Egyptian system. Some even establish Special Purpose Vehicles (SPVs) in other nations that contain better laws than Egypt, and operate in Egypt as foreign companies. There is a clear need for reforming and enforcing the laws in Egypt (Miller J. A., 2006).

- Political and social Stability: Over the past several years Egypt has gone through several political turbulences that affected its social and economic conditions. The Venture Capital Industry is affected by these turbulences like any other Industry (Interview 5). For example, collecting funds would be very
difficult if the country is experiencing political, economical, and social problems. The risk would be great that both investors and entrepreneurs would look for someplace safer to establish their projects.

- Standards: Egypt does not have clear standards regarding this industry. There is no clear term sheet that could be followed (Interview 1). The existing term sheets are borrowed from the Silicon Valley term sheet and adjusted to fit the culture of Egyptians (Interview 4). There are no clear standards for valuation in this industry as well, which is always causing conflicts between the entrepreneur and VC management. The establishment of standards and rules for this industry is very crucial (Tawfeek, 2013).

- Public Employees: in Public Venture Capital, employees need to come from the private sector and hence be paid according to what they can get in the private sector (Interview 7). This is very crucial because normal public servants are unaware how to deal with such programs; additionally, public servants do have the expertise to deal with matters that concern the private sector (Interview 6). The management of the fund is the main reason behind its success; therefore, its caliber should be distinguished. Another problem with public servants is that they are not used to risk taking, which is the core of the VC industry.

    Egypt has a great potential because of its smart and huge population. It has all the requirements for such an industry to succeed and grow. All it needs is to have a collective effort with smart and clear objectives that would reform the regulations and the systems in order to be the most attractive nation in the region. Egypt has the potential of being a regional leader in the VC industry. These efforts

54
will lead to job creation, improvement of quality and attractive financial returns for investors.

The Process of Public Venture Capital programs or Venture Capital firms in Egypt is presented in the following steps:

**Establishment of the fund**: gathering a fund and determining the objective of the fund is basically the first step in the process. This basically depends on the strategy and objective of the firm or the program. Public Venture Capital programs are usually industry specific and in some cases geographically specific (Interview 3). In addition, the size of the investments and the type of startups are also set. Most programs and firms in Egypt invest in established companies, where the minimum investment allocated to this firm is between 250 thousand dollars and three million Egyptian pounds, depending on the size and objective of the fund (Interview 4).

**Deal Sourcing**: the first step is basically the selection process of the best projects to support and invest in. Out of 150 projects presented to government programs only a few projects are actually worth investing in (Interview 2). Usually most of the accepted projects either come from referrals or from incubation programs or angel investors (Interview 4). Referrals usually come from firms that are successfully involved in a similar program or from experts in the market. In addition, firms that were established through an incubation or angel investment programs are also usually the best projects to invest in, because they also went through almost the same process to get accepted; however, nowadays, VC programs in Egypt want to expand and grow. Most of the venture capital programs and firms in Egypt focus on existing firms rather than becoming an angel investor.
or seed funding program (Interview 5). Some angel investors are normal individuals, such as, Mr. Khalid Ismail, a well-known businessman in the industry (Interview 4). Moreover, the size of the ticket/investment is being established, ensuring a minor stake in the company. The venture capitalist never exceeds 49% of the company’s ownership (Interview 7). An interesting point also involved in this step is that even if the Venture Capitalist did not invest in the project, the VC firm could give advice to the project on how to move on to reach the next level of success (Interview 4). Usually the VC firm has a strong network that could support the project and ensure its success.

**Opportunity Evaluation**: this is an in house evaluation exercise done by the experts in the VC firm, which decides whether to invest in a project or not. If the outcome of the evaluation is positive and promising, the management of the VC firm would review the evaluation exercise and decide whether to invest in this project or not (Interview 2). If yes, then the VC firm would offer a term sheet that entails the conditions associated for this deal to be established. For example, the term sheet should include the minority protection right, especially since the VC firm has minority stake in the company. The term sheet is usually extracted from the term sheet of Silicon Valley, but adjusted in order to fit Egyptian market and the Egyptian mentality. Usually in most cases the project should not be in debt to anyone.

**Deal Execution**: in this step the venture capitalist hires an auditing firm in order to conduct a due diligence. This step is usually associated with PVC or VC programs that do not deal with seed funding or angel investment, because this step requires the project to be existing and established (Interview 4). The auditing will
evaluate the project technically and financially. In this step most founders of the project try to exaggerate the value of their project as much as possible. Therefore, the venture capitalist should be very aware of any exaggeration or any window dressing attempts taking place.

Deal Closing: in this step the venture capitalist becomes a stakeholder in the company by investing in it, and becomes part of the board of directors of the project. In this part the venture capitalist provides the company with any support needed, such as, human resource support and recruitment. During the period before existing, no distribution of profits will be realized (Interview 6). The profits will reenter the company’s operation in order to ensure its growth and potential. The expected duration for existing is usually between 3-5 years, however, many cases could last up to 7-10 years.

Exit: the last phase is the exit phase; in Egypt, the execution of this phase is done by an acquisition by strategic buyers (Interview 5). Usually these types of buyers like to have complete control of the acquired firm. Another exit strategy is through an Initial public offering (IPO), however, such case did not take place in Egypt up till now (Interview4). Most Venture capitalists hope that one-day they could exit using the IPO method in Egypt, because the capital gain through such a method proved to be a lot larger than any acquisition.

After exploring the public venture capital industry in Egypt, A SWOT/SWOC analysis is conducted in order to summarize all the findings of this research. SWOT analysis is a method of assessment, which is basically a structured planning method used to evaluate the strengths, weaknesses,
opportunities and threats/challenges involved in a project or in a business venture (Humphrey, 2005).

Table 2
Assessing Venture Capital in Egypt using SWOT analysis

<table>
<thead>
<tr>
<th>Strength</th>
<th>Weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Egypt is an Emerging Market, which means that it has a high growth potential.</td>
<td>• The Venture Capital industry in Egypt mainly constitutes of the Private sector.</td>
</tr>
<tr>
<td>• The size of the population. (Big workforce, big number of innovative ideas)</td>
<td>• The industry in Egypt is only interested in the IT sector.</td>
</tr>
<tr>
<td>• Currently there is a good appetite for foreign and local investors to invest in Egypt, especially After Egypt’s Economic forum, in Sharm Elsheikh in March 2015.</td>
<td>• Angel investors in Egypt are very limited.</td>
</tr>
<tr>
<td>• The Private sector has already entered the Venture Capital industry, which means that the government could learn from theses private organizations before establishing PVC programs.</td>
<td>• VC activities in Egypt are mainly located in Cairo and just a few in Alexandria.</td>
</tr>
<tr>
<td>Opportunities</td>
<td>Threats/Challenges</td>
</tr>
<tr>
<td>• Cheap Labor</td>
<td>• These types of Ventures are usually considered long term, which means that it will take a few years to realize the return.</td>
</tr>
<tr>
<td>• The government’s new appetite for changing policies (legislative reforms)</td>
<td>• Very few people are aware of the concept of PVC in Egypt.</td>
</tr>
<tr>
<td>• A lot of industries could be penetrated</td>
<td>• Lack of data</td>
</tr>
<tr>
<td>• A lot of geographical areas to explore and invest in</td>
<td>• No clear standards regarding this industry in Egypt.</td>
</tr>
<tr>
<td>• The government’s shows the intention to encourages Innovation and scientific research</td>
<td>• Laws and regulations (such as copy rights laws, property rights laws)</td>
</tr>
<tr>
<td>• New Source of Income for the government</td>
<td>• Enforcing the laws.</td>
</tr>
<tr>
<td>• Improves the Government's Image</td>
<td>• Bureaucracy</td>
</tr>
<tr>
<td>• The government is willing to encourage Entrepreneurship</td>
<td>• Acquiring financing</td>
</tr>
<tr>
<td>• The government could use PVC organizations to raise funds.</td>
<td>• Tax laws</td>
</tr>
<tr>
<td>• The government could use PVCs to expand certain industries, or to develop certain regions.</td>
<td>• The political and economic turbulence in Egypt</td>
</tr>
<tr>
<td></td>
<td>• The difficulty of raising funds.</td>
</tr>
<tr>
<td></td>
<td>• Difficulty to raise awareness</td>
</tr>
<tr>
<td></td>
<td>• Legal firms are still unaware and inexperienced regarding the laws associated with VC funds.</td>
</tr>
<tr>
<td></td>
<td>• In PVC organizations, the employees need to be recruited from the private sector.</td>
</tr>
<tr>
<td></td>
<td>• Salaries of the employees need to associated with the private sector</td>
</tr>
<tr>
<td></td>
<td>• Low capacity and lack of training employees</td>
</tr>
</tbody>
</table>
The Potential effect of Public venture Capital in Egypt

Unemployment

Although that there are many reasons behind unemployment, increasing the private sector activities is part of the solution to absorb the unemployment problem (Romain & Potterie, 2004). Therefore, Public Venture Capital Programs can play a vital role in creating jobs in Egypt and improve its growth prospects. Such programs would require new labor entrants to be equipped with necessary business skills and linking them with the source of capital.

Therefore, public policy involvement in fostering a VC industry is crucial (Ayayi, 2004). This has proven to have a positive impact on employment in other regions, such as, Europe and North America (Dehesa, 2002). The European experience is a living example that the Venture Capital industry plays a significant role in encouraging entrepreneurship and reducing unemployment. For example, between in 1991 & 1995, net employment in European countries that supported venture capital firms increased by 15% annually, while the others that did not support this industry increased by 2% only (OECD, 2006). Moreover, in the United States, employment by venture capital backed firms increased by 25% annually for the period 1989 – 1993, while employment by non-venture backed firms (Fortune 500) dropped by 3% annually for the same period (OECD, 2006).

Economic Diversification

Although the entire MENA region, Egypt included, showed a significant economic improvement over the past decade, one key issue still needs to be addressed, which is economic diversification. The entire region lacks a proper
economic diversification and continues to have a high dependency on specific sectors, such as, oil, agriculture, and other primary sectors (Roshdy, 2013). The reason behind this is the fact that governments are inexperienced with regards to establishing policies that would foster the development of strategic knowledge intensive sectors, where world exports are growing quite significantly (OECD, 2006).

Therefore, the development of the Venture Capital Sector seems as a relevant solution for diversifying the Egyptian economy. Venture capital industry encourages innovation, and research and development, which usually concentrate on technology intensive industries (Gibson & Blake, 1992). The risks taken here are often high, but the potential and returns are high as well, which makes it worth taking. Therefore, I believe this could be a great method for the Egyptian Government to use in order to diversify its economic portfolio. In addition, if the government succeeded in developing its technology sector, foreign direct investment (FDI) will definitely increase in Egypt and Improve the Economy. The IT sector is one of the fastest growing sectors and one of the most attractive for its growing potential and for its high return on investment (OECD, 2006).

**Sources of Financing**

Another reason why the government should support and encourage the Venture Capital industry is because financing in Egypt can be very difficult to obtain, especially for start-ups. Although the financing needs in Egypt and region is less compared to Europe and other nations, many entrepreneurs find it very difficult to obtain funds (Interview 1). On a scale of 1-10, 10 indicating that
bankruptcy laws and collateral are well designed to expand access to credit, the MENA region has scored 4.1, slightly better than Latin America and the Caribbean (World Bank, 2005). Domestic credit to private sector (% of GDP) in Egypt was last measured at 29.11% in 2012, according to the World Bank. Domestic credit to private sector refers to “financial resources provided to the private sector, specifically for SMEs, such as through loans, purchases of non-equity securities, and trade credits and other accounts receivable, which establish a claim for repayment. For some countries these claims include credit to public enterprises” (World Bank, 2009). Therefore, it is quite obvious that the private sector in Egypt is facing difficulty for acquiring sources of financing, which will definitely hinder the development of the economy. In Europe this figure is around 105%, which indicates the level of available funds provided to the private sector, which partially explains their highly developed private sector (Dehesa, 2002).

Some Governments reacted to this ratio and worked on it, such as, Morocco, Israel, Jordon, Tunisia, Lebanon and Egypt. However, the rise of the Arab Spring and political turbulence in the region eradicated all the attempts and efforts regarding this matter. In the case of Egypt, the government issued guarantee instruments in cooperation with local banks in order to meet borrowing requirements for new startups (Interview 2). However, because of the political and economical turbulences, both banks and government are being more risk averse and more selective regarding the funding process and requirements. In addition, even if the political and economic conditions are stable, guarantee instruments are not sufficient to meet the entrepreneurship-funding requirement of new firms in the country. Moreover, these types of
firms are not suited with conventional forms of debt because they require funding for a period during which they are not generating revenues to cover the expenses.

**Innovation**

After the success of the fast growing venture capital industry in the United States, governments around the world are eager to duplicate this experience. The Studies that were explored in the literature review show that there is a clear positive relationship between innovation and public or private venture capital (Kortum & Lerner, 2000). The venture capital industry encourages innovation and technological development, which as a result will benefit the overall economy. Research and development is a major aspect that needs the existence of venture capital in order to survive or flourish. The benefits of research and development are really admiring, because without them a lot of technology inventions, medicines and machines wouldn’t have existed today (Kortum & Lerner, 2000). Therefore public venture capital is one way for the Egyptian government to support and encourage innovation and hence improve the overall economy.

Innovation is a major factor in increasing productivity and economic growth. Many OECD nations today are eager to invest in science, technology and R&D. For example, Israel today is one of the highest countries that spend on R&D and Innovations. This was done through the creation of policies by the government to encourage such activities, and one of these efforts is the creation of a strong Public Venture Capital program that enabled a lot of entrepreneurs to full their dreams and at the same time boost the economy (Mayera, Schoorsb, &
Yafeh, 2005). Therefore, that the Egyptian government can learn from the experiences of other nations and provide a similar program that will encourage and support innovation.

**Entrepreneurship**

The relationship between entrepreneurs and the funding sources revolves around the following theories: 1) Agency 2) procedural justice 3) information and 4) Power (Miller J. M., 2003). The first point, the entrepreneur acts as an Agent, where the authority over resources, which is provided by the Venture Capitalist, is delegated and honored according to the contract or term sheet. The second point focuses on parties' to avoid any unfair actions in the process and ensures that the steps are taken to the end fairly. This is usually done through the creation of a neutral board where no party has a major control. The third point revolves around the “intimate knowledge the entrepreneur of the industry and product, but more importantly of the day-to-day operation of the business, including the use and misuse of the funds forwarded by investors” (Miller J. M., 2003). Regarding the fourth point, the high level of uncertainty, asymmetric information, lack of tangible assets and volatile market conditions created practices by venture capitalists to attempt to control the actions of the entrepreneur and protect their investment. Therefore, as mentioned in the previous point a neutral board is created that ensures the division of power among all parties (Gompers & Lerner, 1999).
Table 3

Venture Capital’s Financial and Non-Financial benefits

<table>
<thead>
<tr>
<th>Financial Return</th>
<th>Non-Financial Rewards</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal Rate of Return</td>
<td>Economic Contributions: Employment, Technological Development, market acceptance of new products.</td>
</tr>
<tr>
<td>Number of IPOs</td>
<td>Technological innovations: encourage small business development, improve usages of available knowledge bases that exist, knowledgeable partners</td>
</tr>
<tr>
<td>Amount of funds raised</td>
<td>Overall development: increase liquidity events in public and private markets</td>
</tr>
</tbody>
</table>

*Source*: (Smith, 2010)

Some authors, such as (Smith, 2010), like to categorize the benefits of the venture capital industry. Usually they are categorized into two sections; the first category is the financial rewards of private and public VC programs. The financial rewards include a high internal rate of return, the development of the capital market and the increased number of IPOs, and the amount of funds raised through foreign and local investors. The second category is the non-financial rewards, which includes the economic contributions of private and public VC programs, the effect of PVC programs on technological innovations, and the overall development that is caused by the increased liquidity in the market.
VII. Conclusion and Recommendations

Even though the VC industry in Egypt is very young, the potential of this industry in Egypt is very promising. Egypt is the largest country in the region in terms of population, and needs to take advantage of this point by promoting entrepreneurship and encouraging the Small and Medium Enterprises to grow. All it needs is the collaborative efforts of all related professionals to get things started. Therefore, the government should play a role in promoting and encouraging this potential by establishing a Public Venture Capital program all over Egypt and getting a piece of the cake. The formation of small and medium enterprises is considered a crucial factor of economic development. And the number one problem that faces SMEs is the access to capital. Therefore, public venture capital programs are ideal to fill that gap and promote entrepreneurship, innovation and research and development.

However, we have to bear in mind that there is no easy way to establish this. This is a long-term program that needs time and effort to realize its gains. And like any other industry, it faces several challenges. However, all the challenges are easily identified and could be fixed. All that is needed is the collaborative efforts of all parties involved. The Public Venture Capital program in Egypt should also involve several sectors. Till this vary day, most of the VC funds in Egypt are invested in information technology sector. Therefore, if this program is established, it should include other promising sectors that will benefit society and establish returns.
There are two main areas that need attention; the first concerns the legal aspect of this industry, and second concerns the capacity building and human development.

The enforcement of the law is very crucial for this industry to succeed and grow in Egypt. These laws include the intellectual property rights (IPR), VC fund structure, shareholder rights, and to have an agreed upon standards to follow for this industry. The standards, rules, and regulations should be inline with major financial centers, such as, British Virgin Islands (BVI), Luxemburg, Bahrain, Dubai, UK, and US (Babcock-Lumish, 2005). Capital Market laws should also be reformed inline with financial centers in order for Egypt to be an attractive market for investors. These reforms should be done through collaborative efforts of the VC/PE association, the Arab Private Equity Association, MENA Private equity Association, the Capital Market Authority (CMA), Ministry of Finance, Ministry of Communication and Information Technology, Ministry of Scientific Research and the existing Venture Capital Firms and programs in Egypt. All these entities could represent the VC committee needed in Egypt. The reestablishment of the Venture Capital Committee in Egypt is vital for the success and development of the venture capital industry.

Other recommendations will be based on encouraging and nurturing the role VCs/associations, such as ITIDA, who are seeking to encourage entrepreneurship in Egypt. These types of organization can play a vital role in increasing the deal flow by conducting venture conferences, training programs, and business plan competitions. Since the VC industry in Egypt is relevantly new, there is a need to encourage entrepreneurship in order to ensure the growth of the
industry. For example, in the United States, the National Venture Capital Association and the Angel Capital Association played a significant role in the growth of the venture capital industry (Heard & Sibert, 2000).

In addition, there is also a need for the creation of an effective communication channel among VC companies (Private/Public) and between VC firms and entrepreneurs. The gap can be filled through VC associations and government organizations, such as, ITIDA. These associations can use the web and online applications in order to build this channel and create the awareness needed. In the US, Europe, Japan and Canada nonprofit organizations that focus on angel and early stage investments play a significant role in creating the awareness needed for the industry to grow (Brugmann & Prahalad, 2007). Moreover, these NGO’s provide training programs to both entrepreneurs and VC firms in order to create more awareness and minimize the communication gap.

There is also a need to review and recommend changes in the tax laws in order to provide greater incentives for R&D and venture capital investments. Because of the political and economical turbulences experienced by Egypt over the past three years, the government decided to increase the income taxes to reach 30% rather than 20%, and then reduced to 22%. However, I believe that if the government wants to encourage the small and medium enterprises to grow and flourish, then it has to provide them with incentives. Having a VC program is one of the elements that could be used to help SMEs to grow in Egypt; therefore, it is recommended that the government should review the tax laws concerning such programs. These incentives will encourage both investors and entrepreneurs to participate in such programs.
VC Programs in Egypt are either Incubators or VC funds. The difference between them is that incubators will provide seed funding and angel investments, while VC funds will invest only in Existing and Established firms that have the potential to grow. I believe that Public Venture Capital Programs should provide funding to all SME’s no matter what stage they are at. The idea of having an institution that is both incubator and business accelerator can be very beneficial for the industry. In addition, it doesn’t matter if the fund is private, public, or NGOs, because they are all managed the same way. The difference exists in the strategic objectives. There should be numeric goals for next 5 years in terms the amount of money to be invested in VC deals, number of companies funded, locations of the investments, sectors that need investments and growth, and number of exits. The VC committee mentioned above should be responsible for publishing the data and statistics on an ongoing basis. The VC associations could be members of this needed committee (as mentioned above) and could be responsible for the publications. In the US auditing firms, legal firms, and the news media play a significant role in the publication of needed statistics and data (Gompers & Lerner, 2001).

There is a need to work with Cairo Alexandria Stock Exchange and establish a pilot project/company to be listed on their secondary market (Miller J. A., 2006). This will open the door for the venture capital industry to engage with the stock market. There is strong interest on all sides in having this listing to be successful. As mentioned earlier all exits in Egypt are done through acquisitions; there is no single case that exited using an IPO. However, the choosing of which
company to be piloted should be determent by the VC committee and large Private Equity Firms and CASE.

Limitations

There are several limitations concerning the three methods used in this research to assess public venture capital in Egypt. Regarding the in-depth interviews, the selection of the sample is non-random and purposive, which is based on the judgment of the researcher. In other words, purposive sampling could be bias. In addition, the selection process in such cases can be subjective. Another limitation associated with such a method is the limited number of participants. Usually the number of participants in this method is not big because it is time consuming.

Another method used in this study to assess public venture capital in Egypt is the available literature. Most studies concerning Egypt are focusing on incubation programs and SME financing; public venture capital programs are not thoroughly covered in the available literature. There are two main reasons behind this; first reason is the limited data available, and the second reason is that public venture capital is a new industry in Egypt.

The third method used in assessing public venture capital in Egypt is a SWOT analysis. SWOT analysis is associated with several limitations; for example, the points mentioned in the SWOT analysis are not prioritized. Another limitation with the SOWT analysis method is that it doesn’t offer solutions. SWOT analysis can help in generating a lot of ideas but it wont help the researcher to identify which is the best idea. Finally, not all the information presented in the SWOT analysis is useful.
Areas for future research

There are several areas that could be explored to complement this research. For example, researches could investigate the experiences of people who are involved with incubation and public venture capital programs. Another example that would complement this research is to explore some success and unsuccessful stories that used incubation or public venture capital programs in Egypt. The outcomes of these studies would add value to the literature of public venture capital in Egypt and complement this study.

After two revolutions, Egypt went through a difficult economic and social phase. Therefore, the government is currently open to ideas and new initiatives that could have a positive impact on the economy and society. Public venture capital programs are one of these initiatives that can contribute to the Egyptian economy by reducing unemployment, encouraging innovations, motivating entrepreneurs, developing certain industries, and developing certain locations. Therefore, public venture capital programs are ideal for the Egyptian government to pursue and develop, and hopefully studies such as this one contribute to the development of this industry and to the development of the Egyptian economy.
References


