



Exploring strategic venture capital financing with Silicon Valley style



Jarunee Wonglimpiyarat

College of Innovation, Thammasat University, Anekprasong 3 Bldg., Prachan Rd., Bangkok 10200, Thailand

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ABSTRACT

The study explores Israel's Silicon Valley style of entrepreneurial financing and venture capital (VC) management. Israel is known as the most successful Silicon Valley-style economy, similar to the US Silicon Valley. The high-tech economy of Israel presents an interesting case of effective institutional setting and policies that transform the country into the innovation nation. The analyses were carried out based on the competitive Diamond model. The results have shown that the thriving Israeli high-tech clusters are the result of Triple Helix interactions and government-led policies in creating VC industry with the financial support of Yozma program as well as foreign funding. Importantly, the government financing did not crowd out but crowd in private investments. The paper provides lessons on Silicon Valley-style management and the proactive role of Israeli government in promoting high-tech clusters which would be useful for other countries to learn from the Israeli experience.

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1. Introduction

"Israel is the Innovation Nation. The future belongs to those who innovate."

[Israeli Prime Minister Benjamin Netanyahu]

The above statements by Prime Minister Netanyahu at the World Economic Forum in 2014 highlight the importance of innovation and the technological leadership of the Israeli high-tech industry. Israel represents the most successful country after the United States in creating high-tech industries with rapid economic growth attributable to its high-skilled labor force and outstanding academic resources (Trajtenberg, 2001; Avnimelech and Teubal, 2004, 2006). The purpose of this study is to understand how Israel could make a successful transition from an underdeveloped economy to a high-tech powerhouse.

To date, the role of government in the process of entrepreneurial development has been understudied. Even less is in the area of innovation financing. Therefore, this research attempts fill a gap in the body of knowledge by exploring the case of Israeli government – how Israel could climb the technological ladder to become a high-tech powerhouse. The objective of this paper is to understand Israel's Silicon Valley style of entrepreneurial financing and venture capital (VC) management. The analyses and discussions of Israel's Silicon Valley style of VC

management are based on the competitive Diamond model by Porter (1990, 1998, 2001). The lessons on the role of Israeli government in promoting high-tech clusters via VC financing programs would be useful for other countries to learn from the Israeli experience.

Table 1 provides an overview of Israel's economy in recent years. It shows the competitiveness of Israel in various dimensions. The country was ranked 24th in the 2014 International Institute for Management Development (IMD) World competitiveness ranking and 27th according to 2014 World Economic Forum (WEF) global competitiveness index. Israel was also ranked 19th in the category of very high human development according to the United Nations Development Program's Human Development Report Index in 2014. Israel was invited as a full member in the Organization for Economic Co-operation and Development (OECD), an economic group of developed countries since 2010. The percentage of research and development (R&D) contribution to gross domestic product (GDP) is 3.93 in 2013 and 4.2 in 2014. The percentage of R&D investments to GDP of Israel is highest in the world, compared with 2.4% in the Organization for Economic Co-operation and Development (OECD) countries. The highest percentage of contribution to GDP among the OECD nations has shown that Israel is a leading country in industrial R&D.

The structure of this paper is as follows. Following the introductory section, Section 2 provides a literature review on the cluster model, Triple Helix model and venture capital financing. Section 3 discusses the research methodology and provides the background of the Israeli innovation system. Section 4 provides analyses of findings with emphasis on mechanisms that help transform Israel into a high-tech powerhouse. Section 5 concludes the paper by drawing lessons and insights on the

E-mail address: jarunee@tu.ac.th.

Table 1
Overview of Israel's economy.

	Year			
	2011	2012	2013	2014
Competitiveness ranking by IMD	17	19	19	24
Competitiveness ranking by WEF	22	26	27	27
Human development index by UNDP	17	16	19	19
% of R&D to GDP	4.39	4.2	3.93	4.2
GDP growth rate (%)	4.8	3.4	2.87	3.21
Unemployment rate (%)	7.1	6.9	5.6	5.6
Inflation rate (%)	3.5	1.7	1.55	0.54

Source: The author's design, based on The World Competitiveness Scoreboard (various years) by International Institute for Management Development (IMD), World Bank, International Monetary Fund (IMF), Bloomberg, United Nations Development Program (UNDP) Human Development Reports, Israel Central Bureau of Statistics.

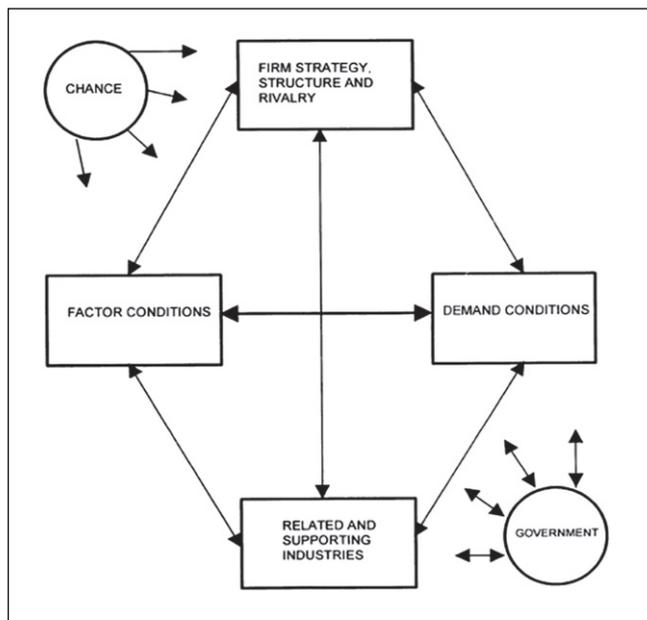
country case of Israel. The lessons learned on the Silicon Valley-style management can be applied to other countries.

2. Literature review

2.1. Cluster model

Porter (1990, 1998, 2001)'s Diamond model provides a framework of the industrial competitiveness in the form of clusters (Fig. 1). Porter (1998) argued that the nation's innovative capacity is built on the combined strength of common innovation infrastructure and vitality of the environment for innovation in particular clusters. According to Porter (1990, 1998, 2001), clusters are a source of strategic competitive advantage. The cluster approach provides an understanding of economic development processes. Clusters lead to increased levels of productivity, growth and employment. Within an industrial cluster, the social community and the economic agents work together to drive product/process innovations to the marketplace (Porter, 1990, 1998, 2001; Feldman, 2000; Steiner, 1998).

The cluster is a geographically proximate group of interconnected companies and associated institutions in a particular field, linked by commonalities and complementarities (Porter, 1990, 1998, 2001). The



Source: Porter (1990, 1998, 2001)

Fig. 1. Porter's Diamond model.
Source: Porter (1990, 1998, 2001).

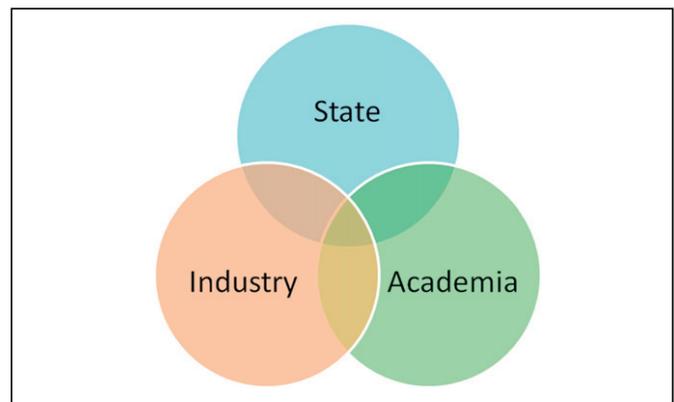
cluster model focuses upon the conditions that support firm competitiveness at the national scale. It is an economic development model that promotes collaboration among institutions to facilitate the exchange of information and technology. According to Porter (1990, 1998, 2001), there are four attributes: (1) factor conditions, (2) demand conditions, (3) context for firm strategy and rivalry, and (4) related and supporting industries.

The cluster can help reduce uncertainty in innovation and support technological development to increase the competitiveness of a region or a country (Saxenian, 1994; Beckeman and Skjöldebrand, 2007; Gnyawali and Srivastava, 2013). Concerning the cluster performance and the effects of clusters on societies, the economist – Joseph Schumpeter (1934, 1939) argued that the technological innovations pioneered by entrepreneurs have strong band-wagon effects. Geographic proximity (geographic concentration among firms, research institutions, suppliers and other organizations) can support information transfer within the clusters/networks which thereby help drive the innovation process (Arranz and de Arroyabe, 2012). The knowledge spillovers from universities and research institutes can engender technology transfer among firms which help create jobs and economic growth. This condition reflects the highly successful model of Silicon Valley clusters where high-tech firms have been created (Wonglimpiyarat, 2005).

2.2. Triple Helix model

Given that innovation is increasingly regarded as an important factor in driving economic growth, the nation needs policy coordination among various agents participating in the innovation system to promote sustainable economic growth and long-term competitiveness (Lundvall, 1998; Freeman, 1987). The governments in developing countries are considered the national agents playing a crucial role in strengthening technological capability to support the national system of innovation. Promoting S&T specialization would influence a nation's future economic performance since countries with technological strengths in rising areas are likely to benefit from increasing returns, which in turn allow them to expand technological and production capabilities (Archibugi and Michie, 1997).

Fig. 2 illustrates the Triple Helix model emphasizing the integration of three institutional spheres (university–industry–government relations). The networks connecting the productive sector and the government aim to enhance economic development and competitiveness. The Triple Helix model postulates an interaction among the institutional spheres to foster the conditions for innovation in both advanced industrial



Source: Etzkowitz (2002), Etzkowitz and Leydesdorff (1998, 2000)

Fig. 2. Triple Helix model.
Source: Etzkowitz (2002), Etzkowitz and Leydesdorff (1998, 2000).

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