

**PUBLIC POLICY AND ENTREPRENEURSHIP:
VENTURE CAPITALISM IN BRITISH COLUMBIA**

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Abstract

This study explores policy options to address the reasons of why there is too little venture capitalism in British Columbia. Venture capitalism is the process of investing in potential high-growth entrepreneurs and small businesses. The unique contribution of this study to the literature is use of the policy analysis approach. That is, combining empirical evidence, case studies, and interviews with market experts to showcase the policy problem, identify policy alternatives, objectively measure those alternatives and ultimately, put forward some recommendations to government. A number of policy implications of this study serve to coordinate an arena for angel investors and entrepreneurs, use a fund of funds to raise venture capital, and provide a method for institutional investors to participate in the market.

Executive Summary

Venture capital is the money and resources raised with the purpose of investing in potential high-growth entrepreneurs and small businesses. In the investment market it is often referred to as “high-risk, high-return” capital. As such, Venture Capitalism is not the stock of money available to finance entrepreneurs per se; rather, it is the entire process from raising capital, to investing in a new idea, to funding expansion.

The significance and importance of venture capitalism cannot be understated. Academic research from around the world concludes that innovative, high-growth small businesses financed by venture capital are one of the most significant creators of jobs, investment, productivity, and growth. Small businesses that grow big are a key catalyst for economic progress and ultimately, improved living standards. Put differently, venture capitalism can be thought of as “fuelling the engine” that is capitalist activity, innovation, and economic prosperity.

What is gripping about venture capitalism in British Columbia is the fact that there is too little activity in the province, yet the potential for success is high. This study explores ways in which public policy may have a role to increase venture capitalism in British Columbia.

Policy Problem

Key stakeholders in the market contend that there is just not enough venture capitalism in the province to create a well-functioning and dynamic arena for new entrepreneurs and small businesses to acquire capital. Empirical evidence supports this view. There are six central aspects of the policy problem:

- British Columbia has less venture capital overall than Canada’s largest markets, Ontario and Quebec; one consequence of this is a trend of reliance on follow-on financing rather than new financing.
- A disproportionately small amount of venture capital in British Columbia is being invested in the “seed” and “start-up” stages of new small businesses relative to later stages.

- There is a significant reliance on Labour Sponsored Venture Capital Corporations (LSVCCs), which in part, facilitates the under-utilization of British Columbia's venture capital because of the restrictions placed on their investment activity.
- There is increasing participation from American venture capital funds, which are "draining" ideas and larger deals from British Columbia to the United States.
- There is very little involvement from institutional investors in British Columbia.
- The deal sizes in British Columbia are small relative to other jurisdictions.

Method and Policy Alternatives

This study takes a policy analysis approach to venture capitalism in British Columbia. It employs an analytical method to objectively examine aspects of the problem, identify potential policy alternatives, and measure the potential success of each policy option relative to criteria. Empirical evidence, case studies, and interviews with market experts provide the rationale for the study and identification of the policy problem. The examination of policy alternatives incorporates economic, political, and social factors with the objective of making efficient, yet appropriate policy responses. The outcome of this approach is recommendations to the provincial government.

The policy alternatives developed from the research are as follows. The first is an Angel Investor Network. The government's role would be to coordinate a large arena where wealthy individuals seeking to finance ideas in exchange for return could meet a large number of entrepreneurs seeking financing. The second is a modified version of the state of Iowa's venture capital program called the Iowa Investment Capital Board (ICIB). Essentially, it creates a fund of funds whereby individual investors in the state pool their money into a large venture capital fund that has as its primary objective investing in small businesses within the home jurisdiction. The third is the policy proposal put forward by the Canadian Venture Capital Association. The proposal (previously made to the Ontario government) would entail leveraging institutional investment and introducing government and a bank as limited partners to create a private venture capital fund. The fourth is an Angel Investor Tax Credit with Rollover. This is similar to the new federal government's plan for capital gains rollover but is specific to venture capital investments and has a longer turnaround time. Evaluation and comparison of the four policy alternatives is based on a set of objective criteria and measures for these criteria.

Policy Implications

The overall evaluation of the policy alternatives and supplementary analysis of trade-offs reveal a set of policy implications for the government of British Columbia.

- Investing in a combination of regional Angel Investor Networks with the emphasis on coordination not operation;
- Introduce the CVCA concept to key stakeholders in the province, conduct consultation to determine the optimal fund and loan size to generate the greatest benefit to British Columbians;
- Push the Iowa program, and possibly the Oklahoma program onto the public policy agenda. Launch a research agenda to understand more in depth the potential risks and costs of the policy. Aim for medium-term implementation;
- Place the Angel Tax Credit Rollover option on hold – wait for the new federal government to implement their capital gains rollover plan; assess, and then amend if necessary;
- Launch consultation with institutional investors with the purpose of discovering why they do not invest in British Columbia’s venture capital market.

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1 Introduction

The essence of capitalism is creative destruction.¹ The creation of new ideas that build off old ones is the nature of progress and is how capitalist economies create and grow wealth. The innovation that results from creative destruction is essentially a function of two things: ideas from entrepreneurs and resources to bring those ideas to market. Put differently, innovation that makes its way into our lives is the product of the demand and supply of ideas.

This study is focused on the supply side of entrepreneurial activity. Specifically, it is focused on the supply of capital to finance new, innovative ideas. The supply of money and other resources that finance innovative entrepreneurs and small businesses is called venture capital. As such, Venture Capitalism is not the stock of money available to finance entrepreneurs per se; rather, it is the entire process from raising capital, to investing in a new idea, to funding expansion. If creative destruction is considered the essence of capitalism, then venture capitalism can be thought of as “fuelling the engine” that is capitalist activity, innovation, and economic prosperity.

The significance and importance of venture capitalism cannot be understated. Academic research from around the world concludes that innovative, high-growth small businesses that are financed by venture capital are one of the most significant creators of jobs, investment, productivity, and growth. It is those small businesses that grow big that are a key catalyst for economic progress and ultimately, improved living standards.

The wealth of information associated with venture capitalism is immense. The large amount of academic literature on the subject is only second to the vast amount of publication from entrepreneurs, venture capitalists, governments, and other key stakeholders. As a result, the breadth of study is narrowed to one jurisdiction: the province of British Columbia. There are several reasons for this. First, it is the author’s location of study and thus, data and market experts are more easily accessible. Second, British Columbia is an emerging economy – located strategically on the Pacific Rim and possessing a growing high-technology and life sciences

¹ From Joseph Schumpeter’s (1942) *Capitalism, Socialism and Democracy*. Creative Destruction is what Schumpeter calls the entrepreneurial process, in effect destroying ideas of the status quo and creating new ideas that move the economy to the next frontier of growth.

sector – that, because of its small venture capital market, has a valuable opportunity to learn from other jurisdictions across Canada and the United States. Third, it is in the opinion of several academics and market experts that venture capitalism in British Columbia ought to be a high priority for government, particularly since a campaign promise was made to create a policy environment that facilitates entrepreneurship.

This study takes a policy analysis approach to venture capitalism in British Columbia. That is, it employs an analytical method to objectively examine aspects of the problem, identify potential policy alternatives, and measure the potential success of each policy option relative to criteria. The examination of policy alternatives incorporates economic, political, and social factors with the objective of making efficient, yet appropriate policy responses. The outcome of this approach is recommendations to the provincial government.

To preface the conclusions of this study, it is important to conceptually understand the policy problem. It is shown that British Columbia has too little venture capitalism and as a result, policy alternatives are explored that may help address this concern. The recommendations for government include policies that not only increase the stock of venture capital in the province, but also manage to increase the amount of entrepreneurial ideas that receive financing.

1.1 Organization of Study

This study will explore why there is too little venture capitalism in British Columbia and provide potential policy responses. Following this introduction, section 2 delineates the methodology and data used in this study. Section 3 defines the policy problem. Section 4 provides background information on venture capital, tax incentives, and prosperity; this includes a review of the literature on the impact of venture capital and historical public policy approaches to the market. Section 5 explains the policy problem in detail with empirical evidence buttressed by interview responses from key stakeholders. Section 6 moves away from description to analysis by exploring case studies of the venture capital market. Specifically, this sections looks at experiences with different policy approaches from other Canadian provinces and US states. Building upon description of the venture capital market in British Columbia and case studies, section 7 outlines the objectives of policy with which policy alternatives are considered. Section 8 describes the policy alternatives to the policy problem. Section 9 defines the criteria and measurement used to evaluate the policy alternatives. Section 10 presents the evaluation of the policy alternatives including a discussion of the impacts of each alternative. Section 11 discusses

the policy implications including an analysis of important trade-offs. Finally, section 12 provides a summary and conclusion to the study.

2 Methodology

The techniques used in this study to analyze venture capitalism in British Columbia are comprised of quantitative and qualitative methods. The purpose of using both methods is to provide a distinctive contribution to venture capital literature, characterized by a multi-disciplinary approach to data collection and analysis. The quantitative methods used are primarily economic models sourced from academic literature. There are two purposes for using this method. The first is to extract theory and empirical evidence to analyze different policy instruments and more broadly, to showcase the important link between a well-functioning venture capital market and prosperity. The second purpose is to draw out lessons learned regarding key elements of government incentives that impact venture capital. Economic models show how tax and other incentive programs work in the venture capital market. For the most part the theory is presented as text, but in nearly all cases is buttressed by empirical evidence. The empirical evidence comes from a survey of the academic literature and other relevant research from government and other organizations. A secondary quantitative method used is case studies. In addition to an historical and functional description of venture capitalism in British Columbia, the study includes comparisons with venture capital programs in other jurisdictions; namely, other Canadian provinces and American states. Particular attention is paid to those jurisdictions that currently run a program similar to one of the possible policy alternatives.

The qualitative method used in the study is elite interviews. The author consulted stakeholders: government officials, venture capitalists, and academics. The objectives of the interview are to: (1) showcase the importance of the policy issue and feasibility of different policy alternatives; (2) “fill the holes” where academic literature or data does not reveal sufficient answers to pertinent questions, and; (3) understand how and to what extent venture capitalism in British Columbia is characterized by the challenges to venture capital in Canada as a whole as identified by Industry Canada (2004).² The unique contribution of the study is the synthesis of

² In its latest report on Canada’s venture capital activity, Industry Canada (2004) outlines the current “gaps” in the venture capital market and identifies the four most important issues facing a well-functioning market. They include: (1) the shortage of investor-ready firms; (2) the low participation of institutional investors, and the related lack of funding and participation of private independent firms; (3) the shortage of VC fund management expertise and experience, and; (4) the lower returns of Canadian VC funds, compared to U.S. VC funds and other investment vehicles.

quantitative and qualitative method to reveal the policy gap, define policy objectives, discover policy alternatives, and objectively examine those alternatives based on measurement to provide a policy recommendation.

2.1 Analytical Method

The academic literature survey, coupled with the elite interviews, provides a list of possible policy alternatives that help fulfil the policy objectives. Evaluation of the policy alternatives is via a list of objective criteria. The criteria and corresponding measurements provide an indication of the differences and relative strengths and weaknesses among the alternatives.

The criteria used in the study are economic, social and procedural, and political and security. Each criterion is weighted equally. Evaluation follows from measures for the criteria and a ranking of each policy alternative. The highest ranked policy alternative or combination of alternatives gives rise to the policy recommendation.

2.2 Data

Data for this project come from a variety of sources including secondary time series from Statistics Canada, annual reports of Labour Sponsored Venture Capital Corporations, Industry Canada's compendium of venture capital activity in Canada, other authors' empirical evidence, OECD data on SMEs, and elite interviews. In addition, the Venture Capital Association of Canada, MacDonald and Associates, as well as Leading Edge, a non-profit organization that promotes technological investment in British Columbia, provide additional sources of relevant data.

Statistics Canada and Industry Canada data are collected almost exclusively through CANSIM, and through Industry Canada publications such as *Canadian Venture Capital Activity: An Analysis of Trends and Gaps (1996-2002)*. Data from this publication are either drawn directly from published "pdf" files or from the website.

Both the Government of British Columbia and the Government of Canada record tax returns for venture capital funds and thus, maintain records of current and past venture capital funds.³ By law, annual reports of these funds are public, so data access is free and available on

³ A list can also be obtained from most financial brokers.

the internet in most cases. The purpose of looking at these annual reports is to report their portfolio and record of return.

The academic research on venture capitalism is rich with data; articles published in peer review journals must generally provide the raw data. However, much of the data needed for this analysis comes directly from the text.

The OECD has just recently released the *OECD SME and Entrepreneurship Outlook*, a comprehensive look at SME and venture capital activity in the 28 member countries. This data source will provide further comparative analysis and show where Canadian provinces are in terms of venture capital relative to other regions in the world.

The elite interviews are a collection of high-profile stakeholders and market experts (table 1). The interviews were completed on a one-on-one basis with the author and in some cases were recorded. The purpose of the interviews is to capture: (1) factual answers to questions where objective data could not be acquired; (2) forecasting type questions regarding the potential success of different policy alternatives, and; (3) their perception of venture capitalism in British Columbia and to what extent it creates a policy problem. See the Appendix for an example of questions asked during the interviews.

Table 1: *List of Elite Interviews*

Name	Title	Firm
Elite Interviewee A	Senior Vice President	Venture Capital Firm, Confidential
Jock Finlayson	Vice President - Policy	Business Council of BC
Murray Munro	Senior Vice President	GrowthWorks
Richard Remillard	Executive Director	Canadian Venture Capital Association
Andy Robinson	Assistant Deputy Minister	Government of British Columbia

3 Defining the Policy Problem

The policy problem which is the focus of this study is that *there is too little venture capitalism in British Columbia*. Specifically, the current mix of policies coupled with region-specific factors such as industry mix and geographic location create barriers to the supply-side of a well functioning venture capital market. A well-functioning and dynamic venture capital market is critical to capital allocation and more broadly to one of the key engines of economic growth in British Columbia: high-growth and innovative small businesses. This section aims to define key aspects of the policy problem and explain briefly the central aspects of why a policy problem exists.

3.1 What is Venture Capital?

Venture capital is the money and resources raised with the purpose of investing in potential high-growth small businesses. In the investment market it is often referred to as “high-risk, high-return” capital. While the primary, and more well-known role of investors in the venture capital market is investing in the early stages of business development (called “seed” and “start-up” financing), they also play an active and important role in the later stages of business development such as expansion and acquisitions.

Venture capital takes many forms. There is informal venture capital, or “love” capital, which derives from friends and family. Formal venture capital, which is the focus of this study, is derived from individual and institutional investors participating in the venture capital market through direct financing of entrepreneurs and small businesses (called “Angel” capital), and indirectly through experts who manage a portfolio of small businesses (called venture capital funds).

3.2 Why there is too little venture capitalism in British Columbia

Numerous aspects of British Columbia’s venture capital market suggest why there is too little venture capitalism. Listed below is a summary of those reasons.

- British Columbia has less venture capital overall than Canada's largest markets, Ontario and Quebec; a consequence of this is a trend of reliance on follow-on financing rather than new financing in British Columbian small businesses.
- A disproportionately small amount of venture capital in British Columbia is being invested in the "seed" and "start-up" stages of new small businesses relative to later stages.
- There is a significant reliance on Labour Sponsored Venture Capital Corporations (LSVCCs) which in part, facilitates the under-utilization of British Columbia's venture capital because of the restrictions placed on their investment activity.
- There is increasing participation from American venture capital funds that are "draining" ideas from British Columbia to the United States.
- There is very little involvement from institutional investors in British Columbia; a key source of capital for US venture capital funds.
- The deal sizes in British Columbia are small relative to other jurisdictions.

In addition to these supply-side aspects there are also demand-side problems which contribute to too little venture capitalism in British Columbia such as too little investor-ready firms (Industry Canada, 2004). The demand-side aspects are left to future research. Following an explanation of venture capital, tax incentives and prosperity in section 4, each point above is explained in detail in section 5.

4 Venture Capital, Tax Incentives and Prosperity

The purpose of this section is to provide background information to understand conceptually the significance of venture capital in public policy and more broadly in the economy. To do this, several areas are covered. Section 4.1 presents a review of the current academic literature discussing the link between entrepreneurship and economic growth, including a brief summary of small and medium enterprise activity in British Columbia. Section 4.2 explains in general how venture capital plays a role in that link. Finally, section 4.3 provides a review of the general approaches and roles government has taken in the venture capital market. Overall, this background section serves to provide a general overview of the venture capital market and thereby sets the stage for a more thorough discussion of why there is a lack of venture capitalism in British Columbia in section 5.

4.1 Entrepreneurship and economic growth

Entrepreneurship has been touted as one of the most important factors contributing to economic growth (Lazear, 2003). For instance, Glenn Hubbard, former Chairman of the Council of Economic Advisers explains that the 40 million new jobs created in the United States in the last 25 years reveals the secret of an entrepreneurial economy: successfully seizing business opportunities can raise living standards and employment.⁴ He explains that increasing productivity and job growth has not come from people switching from paid employment to self-employment *per se*. Rather, it has been derived from the creation of innovation by small firms, which has served to increase the demand for new jobs and fostered improvements in productivity, a key driver of improving living standards.⁵

The numbers certainly support this view. Small and Medium [Sized] Enterprises (SMEs), which “account for over 99.7 percent of all employers, are responsible for over half of the research and development in both Canada and the United States, and account for most of the job growth in the past few decades” (Sandler, 2004, p. 2). However, not all SMEs are the same. Most

⁴ Undestructive Creation. (2005, September 7). *Wall Street Journal*, p. A16.

⁵ An important aspect of this, as Sobel et al. (2004) explain, is that more politicized economies tend to erect both more internal and external barriers, and that the result is less entrepreneurship and economic growth.

small businesses do not contribute significantly to innovation, nor do they contribute significantly to job creation. It is that small number of SMEs which grow large, that have the most impact on the economy. Sandler (2004) explains that these *rapid growth* SMEs, “represent only 4 to 8 percent of small business in the United States, yet since 1979 they have accounted for 70 to 75 percent of new jobs” (p. 3). Essentially, the assertion that SMEs in general are the cause of economic growth is not true. As Hubbard (2005) explained, more SMEs could merely be a substitution effect where paid employees are becoming self employed.⁶ This shift does not necessarily heighten productivity nor create jobs. What is really driving the improvement in economic growth is that small number of firms that explosively create jobs and innovation.

The recent attention given to SMEs and their contributing role in economic growth is but a mere fraction of the literature associated with entrepreneurship. At least since Knight (1921) entrepreneurship has been a thoroughly investigated topic.⁷ Knight (1921) argued that entrepreneurs bear much of the risk and uncertainty within markets but have a positive impact on economic growth because in their quest for profits, they make markets more efficient. Later, Schumpeter (1942) explained that entrepreneurs move the market away from equilibrium towards a new, more productive market characterized by some new combination of resources – either process or physical capital – and thus, yielding higher productivity. Authors since then such as Leibenstein (1989), Kirzner (1973; 1997),⁸ Gartner (1990), and Kreft & Sobel (2003) have explained that in one way or another, entrepreneurial activity is viewed as the exploitation of opportunities within a market.⁹ This exploitation process is innovative and the ideas generated often increase productivity and create employment.¹⁰

⁶ The central point made by Hubbard (2005) is that there is a net benefit to the creative destruction process. That is, in the process of creating new jobs many old jobs are destroyed but in the long-run, the argument is that more new jobs are created than destroyed in the process

⁷ Some authors point to Cantillon’s (1959) *Essai Sur la Nature du Commerce en Général, 1755* (Essay on the Nature of Trade in General) as a starting point about entrepreneurship. Cantillon (1959) explains that an entrepreneur is a person who engages in risk and business without the assurance of profits. Knight’s (1921) work largely buttresses this point, although he separates the activities of bearing risk and bearing uncertainty; two characteristics of entrepreneurs’ behaviour.

⁸ Kirzner (1997) offers the following: that the entrepreneurial discovery approach is developed from Ludwig Von Mises’ (1949) views that the market is an entrepreneurially driven process and from Fredrich Von Hayek’s (1945; 1978) view that knowledge and its enhancement through market interaction serves an important role for the equilibrative process.

⁹ Kreft and Sobel (2003) argue that entrepreneurship is the missing link between economic freedom and economic growth.

¹⁰ See Schramm (2004) for a non-economic review of the role new firms play in the economy: (1) engines of innovation, and (2) help to smooth exigencies of the business cycle.

4.1.1 Small Business activity in British Columbia

In regions such as British Columbia, where the businesses services and information technology sectors are growing, it is expected that entrepreneurial activity will have a positive impact on per capital income (Acs et al., 2005).¹¹ As a result, small business development has been a priority in the province. A joint study released by Western Economic Diversification showcases the impact of small businesses on the economy.¹² Table 2 below provides a summary of the study's findings.

Approximately 98.0 percent of all businesses in British Columbia are defined as small businesses, employing less than 50 employees. Of those small businesses, 83.0 percent were micro-businesses, defined as those firms employing 5 or less workers. Moreover, small businesses account for 57.0 percent of all private sector jobs in the province. Overall, small businesses account for 26.0 percent of provincial GDP. To provide some context to these findings, economist Jock Finlayson points out that British Columbia has a healthy small business sector and a solid record of entrepreneurial activity relative to other jurisdictions (Finlayson, 2006, Interview).

¹¹ For a review of British Columbia's high technology sector see Schrier et al. (2004).

¹² The study is produced in co-operation with BC STATS in the British Columbia Ministry of Labour and Citizens' Services with assistance from Western Economic Diversification Canada, the British Columbia Ministry of Small Business and Revenue and Small Business BC.

Table 2: *Small Business Activity in British Columbia*

Feature	Description
Number	Of all businesses in BC, 98 per cent are small businesses. Micro-businesses (those with fewer than five employees) comprised 83 per cent of small businesses.
Growth	For the third consecutive year, the number of small businesses operating in the province increased, up 0.5 per cent compared to 2003.
Employment	Small businesses in British Columbia employed approximately 971,000 people in 2004, accounting for 57 per cent of private sector jobs in the province. Almost 40 per cent of this small business employment was in the form of self-employed individuals working alone.
Self-Employed	On average, the self-employed tend to be older, are more often men and work longer hours compared to those who work as paid employees. In British Columbia, 35 per cent of the self-employed are women, which is higher than the national average of just under 34 per cent.
GDP	Approximately 26 per cent of British Columbia's GDP was generated by small business in 2004.
High-Technology Sector	Approximately 95 per cent of employers in high technology were small businesses in 2004.
Exports	British Columbia small businesses shipped almost \$8.9 billion worth of merchandise to international destinations in 2003, or almost a third of the total value of goods exported from the province.

Source: *Small Business Profile 2005: A Profile of Small Business in British Columbia*

4.2 Venture Capital's role in the entrepreneurship process

The importance of SME development and growth for the economy is well documented, particularly in the high-technology and business services sectors (Acs et al., 2005; OECD, 2005). Recent research has examined thoroughly what factors are necessary to “fuel the engine” that is entrepreneurial activity. Venture capital is considered critical in the development process. Venture capitalists supply the funds necessary for entrepreneurs to innovate, hire workers, and create wealth in the economy (Lerner, 2003; Kortum & Lerner, 1998; Sandler, 2004). A caveat, however, is that venture capitalists, like most entrepreneurs are profit maximizers and considered to be seeking the highest rate of return for their investment. As a result, venture capitalists are not involved in the financing of most small businesses. They only become involved in small firms that they think have the potential to grow large and thus, provide a high return. For this reason, venture capital tends to be concentrated in the life sciences, high-tech, and business services sectors. There is little venture capital associated with small businesses such as family businesses or firms not in the high growth sectors. Accordingly, venture capital is not financing

entrepreneurship *per se*; rather, it is financing that small percentage of small businesses that have the potential to grow large quickly.

In practice, the venture capital marketplace functions as a triangular relationship between entrepreneurs, high-risk investors, and venture capitalists.¹³ The entrepreneur is the individual who possesses a new idea that requires financing. While traditional debt is the most common type of financing used by entrepreneurs, it is often not appropriate for, or accessible to, rapid-growth and start-up small businesses (Industry Canada, 2004). This is the case because venture capital is more flexible and patient financing instrument than traditional debt.¹⁴ Specifically, Industry Canada (2004) explains that there are three reasons traditional debt is not an ideal choice for venture capital firms: (1) venture capital firms are usually technology-driven and as a result, their assets are intangible; (2) products of venture capital firms tend to have long pre-revenue and pre-profit stages so paying off the debt may be difficult, and; (3) they are very risky during their pre-revenue and pre-profit stages.

The high-risk investor on the other hand, has the capital to finance projects and is looking for the high return. They hedge risk by appropriately diversifying their portfolio, not only across venture projects but across different investments as well. The venture capitalist acts as an active intermediary, bringing the entrepreneur and the high-risk investor together and having a role in the firm. That is, most venture capitalists not only work to supply the funds for entrepreneurs, they also take an active role in the management and development of the small business. This is the case because the venture capitalist and usually the high-risk investor have a high level of business expertise which the entrepreneur may be lacking.

In Canada, there are seven categories of venture capital investors. Industry Canada (2004) defines them as the following:¹⁵

- Labour Sponsored Venture Capital Funds (LSVCCs): capitalized by individuals who receive federal and provincial tax incentives in exchange for long-term capital commitments. They are structured as corporations.
- Private independent funds: structured as limited partnerships.

¹³ While these roles are distinct, multiple roles are often performed by one individual. For example, the high-risk investor could also be a venture capitalist.

¹⁴ Patient in this context means that venture capitalists are more familiar with the ups and downs of new business development and are more willing to persevere through more risky situations. It also means venture capitalists are typically willing to wait longer for returns than banks.

¹⁵ Sourced from p. 116-117. Industry Canada (2004) adopted this categorization from MacDonald & Associates Limited in their annual review of the Canadian venture capital industry.

- Institutional funds include pension funds, insurance companies, and endowments.
- Corporate funds include subsidiaries of industrial or financial corporations.
- Government funds include the Business Development Bank of Canada (BDC), Farm Credit Canada (FCC) Ventures and Export Development Canada (EDC) venture capital funds, as well as provincial government funds.
- Foreign investors and non-resident private venture capital funds or corporations active in Canada.
- Other investors include mutual funds and other institutional investors with interests in specific private equity deals but without a permanent market presence.

Another primary avenue for entrepreneurs to secure venture capital is through is Angel Investors and Love Capital (Sandler, 2004).

4.2.1 The Impact of Venture Capital

The role of venture capital is to finance innovative high-growth companies that have the potential to make significant contributions to economic growth and new wealth creation. Industry Canada (2004) in their review of Canada's venture capital market has argued that the impact of these contributions is significant. Sourcing a venture capital survey completed by the Business Development Bank of Canada (BDC), the Industry Canada report explains that "the growth of venture capital financed companies (particularly information technology and life sciences firms) outstripped the growth of the economy as a whole" (p. 22). Specifically, the BDC report found that on average between 1995 and 1999, venture capital financed firms increased employment by 39 percent annually, sales by 31 percent annually, exports by 38 percent annually, and research and development (R&D) expenditures by 52 percent. In addition, the jobs created by venture capital financed firms tend to be high-skilled and high-paying.

Evidence from the United States robustly supports the claim venture capital has positive impacts. At the industry level, it was found in a DRI-WEFA (2002) study that venture capital financed firms outperformed other firms in terms of sales, taxes paid, exports, and investments in R&D. As summarized by Industry Canada (2004), "[the] study also concluded that venture capital reinforces the U.S.'s entrepreneurial spirit, lubricates the wheels of innovation by financing projects that are far too risky for more traditional financial suppliers, and also plays an important role in creating industry clusters" (p. 22). Moreover, venture capital financed firms generate ideas and contribute to innovation more than other firms. For instance, Lerner (2001), in

his review of the link between venture capital and economic growth, found that venture capital stimulates patenting at three times the rate of traditional corporate R&D.

At the firm level, Hellman & Puri (2002) found that venture capitalists provide value-added services, help professionalize the companies they finance and help firms establish themselves in the marketplace. Furthermore, venture capitalists assure firms grow more quickly and uniformly, as well as help bring products to the market faster. Lerner (2003) explains that venture capital financed firms are more innovative because they utilize an efficient screening process for ideas based on the experience and advice from venture capitalists.

4.3 Policy approaches to the venture capital market

Historically, the role government has taken in the venture capital market is not just to increase the amount of venture capital available in the economy.¹⁶ As Sandler (2004) explains:

[The] creation of pools of venture capital, in and of itself, is not the goal of government venture capital programs. Rather, their ultimate goal is to foster innovation and economic growth through the creation and development of high-growth SMEs. As a result, many government venture capital programs target SMEs specifically in the high-tech sector. (p. 3)

At the broadest level, government's role in the venture capital market is to address information problems. Productive activities may not occur because players in the market do not have enough information to take action. For example, the buyers and sellers of venture capital may not be able to identify each other. Or, one party may have more information than another, and thus the party with less information will be reluctant to engage the other. To address information difficulties in the venture capital market – with the rationale to increase the number of investments being made – government can take two general approaches. The first is to compensate those that lose if an action results in a negative outcome. This has the effect of mitigating the risk in the interaction and may take the form of policies that provide incentives (that would otherwise not exist) to invest. An example of this is the state of Iowa's capital investment board which provides incentives to buy shares in venture capital funds. The second approach is to initiate policies that help to improve information and reduce asymmetries. These policies might include providing information to entrepreneurs about capital sources or to investors about potential investments, or

¹⁶ See Holtz-Eakin (2000) for a review of public policy towards entrepreneurship.

both. An example of this type of policy is an Angel Investor Network which coordinates and networks Angel investors and entrepreneurs.¹⁷

In this regard, Lerner (2004) explains that one of the key rationales for government involvement in the venture capital market is based on encouraging technological spillovers. Governments, then, in their design of venture capital programs select sectors that will specifically benefit from venture capital and that will contribute to economic growth. This “targeting” of firms with high-growth potential has historically been pursued by government through tax incentives (Sandler, 2004). However, tax incentives are only one aspect of public policy that impacts SMEs. Sandler (2004) points out that government also utilizes expenditure on infrastructure, R&D, and higher education, as well as regulation that protects intellectual property and creditors from bankruptcy, which ultimately creates a financial system that facilitates both venture capital funds and a small-capitalization equity market.

When using tax incentives, government is targeting the supply side of venture capital. There are a variety of policy instruments at its disposal including tax credits, tax rates, tax thresholds or even regulation to change the relative prices of different alternatives to financing (Soufani, 2003; Keuschnigg & Nielson, 2002). It should be noted, however, that “[most] government venture capital programs are second best solutions: they compensate for market failures by increasing the supply of venture capital, rather than correct failures by reducing information asymmetries” (Sandler, 2004, p. 20). As will be shown in the next section, this is a key characteristic of one of the most prevalent tax incentive based venture capital programs in British Columbia (and Canada): Labour Sponsored Venture Capital Corporations (LSVCCs). The prominence of LSVCCs as a policy tool is emphasized by the wealth of academic literature and the importance it played in the interviews with market experts for this study. As a result, in the section that follows, delineating why there is too little venture capitalism in British Columbia, significant attention is paid to LSVCC’s role in venture capital activity.

¹⁷ For further information, see section 8, which presents policy alternatives.

5 Why there is too little venture capitalism in British Columbia

The purpose of this section is to explain in detail the six aspects of the policy problem. Each aspect is discussed using data from interviews with key stakeholders and complementary empirical evidence. Coupled with the previous section on venture capital, tax incentives, and prosperity, this section is designed to provide sufficient background to the problem in order to begin exploring policy alternatives.

5.1 British Columbia's small venture capital market

Differences in measurement and definition make international comparisons of venture capital activity difficult. However, a new report by Riverin et al., (2005) for the *Global Entrepreneurship Monitor* reconciled the differences between OECD nations and found Canada fares relatively well overall in terms of venture capital raised. Canada has the second highest level of venture capital investment relative to Gross Domestic Product (GDP) out of the G7 nations after the United States. In 2004, the total amount invested in venture capital in Canada was \$1.7 billion. The current stock of venture capital under management is \$20.7 billion. In contrast, for the same year in the United States, the total amount invested in venture capital was \$22.0 billion with total capital under management of over \$400.0 billion.¹⁸ Despite the substantial difference in the amount of investment, Industry Canada (2004) reports that the Canadian market has been less volatile than the US market while comparing closely when venture capital is measured as a percent of GDP.¹⁹

While Canada is considered to have a satisfactory *level* of venture capital, there are still reasons why the world does not find the Canadian market as attractive as other nations. Riverin et al., (2005) explains that “[one] of the most discouraging domestic trends of classic venture capital investment for entrepreneurs in 2003 was the sharp decline in the amount of money invested per company and the number of companies that received investment” (p. 27). The study reports that

¹⁸ The US market is perceived as more volatile in the last 10 years because the technology boom in the Silicon Valley in 1999-2000.

¹⁹ The Canadian and American national average of venture capital invested are both approximately 0.20 percent of GDP.

the average investment per firm dropped from \$3.0 million in 2002, to \$2.0 million in 2003. The combination of less and smaller investments “[has] had a negative effect on new economy sectors such as technology-related industries” (p. 27). In fact, in 2003 Canada placed 6th out of the G7 nations in terms of the number of companies receiving venture capital. Essentially, the Canadian market is raising a pool of venture capital but is only investing a small portion. One positive factor in this trend, however, has been the increased investment from foreign investors who are increasingly picking up the slack from declining domestic activity. Foreign venture capital investment increased from \$257.3 million in 2003 to \$478.8 million in 2004 (table 3). Also of note is the significant decrease (and small size overall) of institutional investors. Retail investors are almost exclusively LSVCCs.

Table 3: Total Venture Capital Activity in Canada, by Investor Type 2003-2004

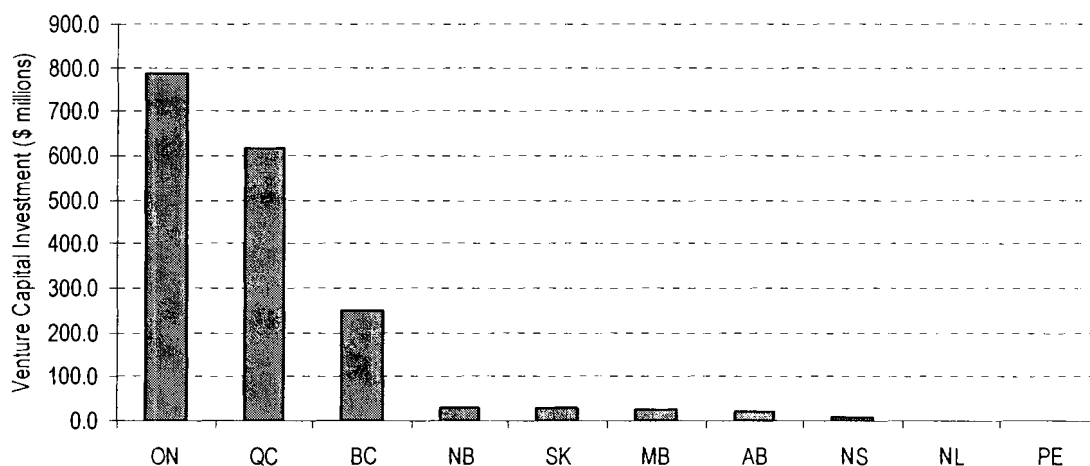
	2003 (\$ millions)	2004 (\$ millions)
Investor Type (All)	\$ 1,485,935	\$ 1,762,523
Corporate	\$ 137,811	\$ 112,623
Government	\$ 170,902	\$ 163,282
Institutional	\$ 121,050	\$ 41,979
Retail	\$ 457,596	\$ 582,156
Private Independent	\$ 218,411	\$ 266,992
Foreign	\$ 257,345	\$ 478,761
Other	\$ 122,820	\$ 116,730

Source: MacDonald & Associates, 2005

Across Canada, there exists a substantial difference in venture capital activity. Venture capital tends to be associated with industry clusters and as a result, tends to be highly concentrated in larger economies. On average, Ontario and Quebec capture approximately 80 percent of the venture capital market while British Columbia typically accounts for 11 percent (Industry Canada, 2004). On a percentage of GDP basis, the 5-year average (2000 to 2004) of venture capital as a percentage of provincial GDP was 0.24 percent in British Columbia, 0.34 percent in Ontario, and 0.36 percent in Quebec.²⁰ The latest data available also reveals that Ontario and Quebec continue to raise considerable more venture capital than other regions across Canada. In 2004, total venture capital raised in Ontario was \$758.8 million, in Quebec \$618.1 million, and in British Columbia \$248.1 million (figure 1).

²⁰ GDP data sourced from Statistics Canada, CANSIM, table (for fee) 384-0002 and Catalogue no. 13-213-PPB. Venture capital data sourced from MacDonald & Associates Limited (2005); calculations by author.

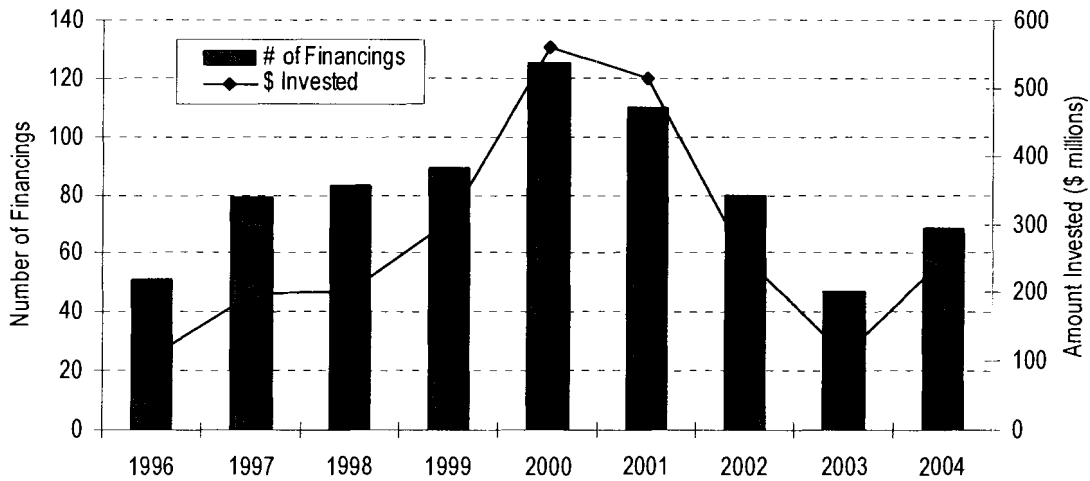
Figure 1: Venture Capital levels in Canadian Provinces, 2004



Source: MacDonald & Associates, 2005; calculations by author

In British Columbia, venture capital activity in the last decade has been relatively volatile. Figure 2 below illustrates that venture capital investment in 1996 was \$107.0 million and increased to \$559.0 million in 2000 while subsequently declining to \$248.1 million in 2004. There are several explanations put forward for why there is such volatility. The first and perhaps most important explanation is exogenous market factors. That is, because British Columbia is a small player in the venture capital market, it swings up and down with changes in larger markets. This may explain in large part why there was a peak of activity in 1999 to 2000 and subsequent decline; this coincides with the flurry of venture activity in the United States and to a lesser extent Ontario and Quebec. The second explanation is factors specific to British Columbia. The opportunity cost of other investments in the province may have also had a factor in where investors invest their money. For example, lower interest rates after 2000 decreased the relative price of real estate, thereby engaging some people to invest in homes rather than ventures. To provide context, Murray Munro, Senior Vice President of GrowthWorks, explains that overall however, British Columbia's venture capital market continues to be small compared to the Ontario and Quebec markets and is dwarfed by the largest US markets even when compared as a percentage of GDP (Munro, 2006, Interview). For policy makers, this means that British Columbia can (and has the potential to) continue to aim towards increasing venture capital activity in order to catch-up to Canada's largest markets and perhaps even the United State's largest markets.

Figure 2: British Columbia Venture Capital Activity, 1996-2004



Source: Industry Canada, 2004; MacDonald & Associates, 2003; calculations by author

A spin-off effect of having a small venture capital market is the tendency to rely more on follow-on financing rather than new financing. The definition of “follow-on” financing is an investment which is made any time after an initial investment has been made. That is, a venture capitalist would be considered to make a “follow-on” deal when after the new small business produces some output, there is a new contribution of funds sunk into the businesses to take advantage of another business opportunity, or to just grow the business. The definition of “new” financing is just any initial deal between a business and an investor. Whether an investment is new or follow-on does not relate to stage of business development. Both new and follow-on investments can come at the early or later stages of a business’ growth.

The key difference between new financing and follow-on financing is the level of risk. New financing requires the investor to take on significantly more risk and thus, requires more effort into the business. Investors often prefer follow-on financing to reduce the risk of their portfolio. However, reduced risk comes at the cost of investing in new businesses which may very well be highly prosperous. Ideally, there ought to be a combination of both types of financing. Unfortunately, in British Columbia there is a disproportionately low level of new financing, indicating there are too little new investments being made and too much hedging of risk in companies that are already known in the market.

In 2003, only 14.9 percent of venture capital in British Columbia was “new” financing, on a percent of total venture capital basis (table 4). This is under half of the national weighted

average of 30.1 percent.²¹ As a percentage of total deals made in the province, British Columbia's new financing comprised of 23.4 percent. This is 13.5 percent less than the national weighted average of 36.9 percent. Overall, in 2003 the overwhelming majority of venture capital investments in British Columbia were follow-on financing rather than new financing. In 2004, British Columbia improved its balance of new and follow-on financing. New financing totalled 48.8 percent of total venture capital in the province. The national weighted average in 2004 was 39.8 percent.

Table 4: *New versus follow-on financing in Canadian Provinces*

Province	2003				2004			
	Venture Capital (000s)	# of Deals	% of Venture Capital	% of Deals	Venture Capital (000s)	# of Deals	% of Venture Capital	% of Deals
BC	\$ 107,996	47			\$ 248,079	68		
New	\$ 16,072	11	14.9%	23.4%	\$ 121,124	27	48.8%	39.7%
Follow-on	\$ 91,924	36	85.1%	76.6%	\$ 126,955	41	51.2%	60.3%
AB	\$ 46,130	25			\$ 21,652	15		
New	\$ 14,535	12	31.5%	48.0%	\$ 9,917	7	45.8%	46.7%
Follow-on	\$ 31,595	13	68.5%	52.0%	\$ 11,735	8	54.2%	53.3%
SK	\$ 21,701	20			\$ 27,628	17		
New	\$ 16,896	13	77.9%	65.0%	\$ 21,883	11	79.2%	64.7%
Follow-on	\$ 4,805	7	22.1%	35.0%	\$ 5,745	6	20.8%	35.3%
MB	\$ 18,220	26			\$ 24,517	29		
New	\$ 1,000	1	5.5%	3.8%	\$ 7,965	8	32.5%	27.6%
Follow-on	\$ 17,220	25	94.5%	96.2%	\$ 16,552	21	67.5%	72.4%
ON	\$ 661,517	190			\$ 785,771	180		
New	\$ 217,376	69	32.9%	36.3%	\$ 167,708	72	21.3%	40.0%
Follow-on	\$ 444,141	121	67.1%	63.7%	\$ 618,063	108	78.7%	60.0%
QC	\$ 574,832	359			\$ 618,087	278		
New	\$ 165,432	141	28.8%	39.3%	\$ 232,295	110	37.6%	39.6%
Follow-on	\$ 409,400	218	71.2%	60.7%	\$ 385,792	168	62.4%	60.4%
NB	\$ 26,867	6			\$ 27,842	15		
New	\$ 3,540	3	13.2%	50.0%	\$ 4,052	9	14.6%	60.0%
Follow-on	\$ 23,327	3	86.8%	50.0%	\$ 23,790	6	85.4%	40.0%
NS	\$ 18,284	6			\$ 7,023	8		
New	\$ 6,000	1	32.8%	16.7%	\$ 3,225	5	45.9%	62.5%
Follow-on	\$ 12,284	5	67.2%	83.3%	\$ 3,798	3	54.1%	37.5%
PEI	\$ 0	0			\$ 400	1		
New	\$ 0	0	0.0%	0.0%	\$ 400	1	100.0%	100.0%

²¹ The national weighted average is calculated by multiplying the percentage of venture capital used for new and follow-on financing in each province by the total venture capital in each province as a percentage of total venture capital in Canada. The purpose of this calculation is to give larger economies (i.e. Ontario and Quebec) more "weight" in the calculation of the national average. If a simple national average was used instead, small economies such as Atlantic provinces would skew the average to their size of market and not accurately reflect the nature of new and follow-on financing in over 80 percent of the Canadian market. The same calculation is made for percentage of deals.

		2003				2004			
Province		Venture Capital (000s)	# of Deals	% of Venture Capital	% of Deals	Venture Capital (000s)	# of Deals	% of Venture Capital	% of Deals
	Follow-on	\$ 0	0	0.0%	0.0%	\$ 0	0	0.0%	0.0%
NL		\$ 10,388	4			\$ 1,524	1		
	New	\$ 6,500	1	62.6%	25.0%	\$ 0	0	0.0%	0.0%
	Follow-on	\$ 3,888	3	37.4%	75.0%	\$ 1,524	1	100.0%	100.0%
<i>Weighted Average (New):</i>				30.1%	36.9%				
<i>Weighted Average (Follow-on):</i>				69.9%	63.1%				
								39.8%	40.8%
								60.2%	59.2%

Source: MacDonald & Associates, 2005; calculations by author

On a deal basis, new financing totalled 39.7 percent of all deals in the province. The national weighted average was 40.8 percent. Overall, in 2004 there was still more follow-on financing than new financing, although its record since the previous year has improved. While the extent to which British Columbia relies on follow-on financing more than new financing for venture capital investments is reason for concern, it should be noted that British Columbia still makes up only around 11 percent of the total venture capital market. Hence, comparisons with the national weighted average should be used with caution; since the venture capital market is much smaller in British Columbia there ought to be relatively more focus on new financings than follow-on financings to build up the number of small businesses in the province. That is, the venture capital market in British Columbia can only mature and grow if relatively more new businesses are created than financing existing businesses.

5.2 Disproportionately small “seed” and “start-up” deals

Similar to the breakdown between new and follow-on financing, the nature of venture capital investments made in the province illustrate the maturity of the market and ultimately, whether or not venture capital is being used in a way that finances new and innovative small businesses. One indicator of this process is whether venture capitalists are investing in the early stages of business development or later stages such as expansion or acquisition. An emphasis on the early stages of business development indicates that venture capitalists are creating new businesses in the province and taking the necessary risks to do so. Early stage investments are usually referred to as “seed” and “start-up” deals. “Seed” investments are designed to finance the research and design phases of idea development. An example of a seed deal is a venture capitalist investing in an entrepreneur’s research in exchange for rights to market the product later. Start-up investments are the next step after seed deals. They finance all of the requirements needed to get the new product to market. Both stages are critical to the creation of new businesses as they are

the main source of capital for new technological innovations. On the other hand, an emphasis on the later stages of business development indicates that investors are more concerned with reducing their risk and as a result, not investing in new, emerging businesses.

To clarify, there are two distinct aspects of new business creation: new versus follow-on financing (as explained in the previous sub-section) *and* early stage versus later stage investing. The two investment aspects are often confused. New versus follow-on financing refers to the relationship between the investor and the entrepreneur. That is, whether or not they have a record of making previous deals. Alternatively, early stage versus later stage investment refers to the period of development of the business in which investments are made. Whether early or later stage deals are made are independent of the relationship between the investor and the entrepreneur. Figure 3 below shows the matrix of possibilities between new versus follow-on financing and stage of business development.

Figure 3: *Investor Relationship and Stage of Development Matrix*

		Relationship Between Investor and Entrepreneur	
		New	Follow-on
Stage of Business Development	Early Stage (Seed and Startup)	New and Early Stage	Follow-on and Early Stage
	Later Stage	New and Later Stage	Follow-on and Later Stage

Of the 163 investment deals made in 2003 only 20 were for start-up deals (table 5). These 20 deals summed to approximately 12 percent of the deals made, equalling 12.0 percent of total venture capital invested in the province. In contrast, other early stages and later stages which largely constitute expansion deals totalled 88 percent of deals and 88.0 percent of venture capital invested that year.

In 2004, of the total 220 deals made in the province, 16 were seed deals and 33 were start-up deals (table 5). Taken together, this totalled 22 percent of investment deals made and 44.4

percent of funds invested. Other early stage and later stages totalled 78 percent of deals and 55.6 percent of funds invested. For comparison, in 2004 Ontario and Quebec had a similar pattern of emphasis on later-stage financing, having recorded 18 and 22 percent of seed and start-up investment deals respectively. British Columbia is similar to other provinces in that it is just not financing a lot of new small businesses (Munro, 2006, Interview). Although in 2004 it financed a record high 49 seed and start-up businesses this is far short of the trend, and far short of the 73 investments in Ontario and the 152 investments in Quebec.

Table 5: *British Columbia venture capital by stage of development, 2003-2004*

2003				
	Dollars Invested (000s)	Number of Investments	Percentage of Venture Capital	Percentage of Investments
Stage (All)	\$ 107,996	163		
Early Stages	\$ 55,501	97	51.4%	59.5%
a. N/A				
b. Startup	\$ 13,013	20	12.0%	12.3%
c. Other Early Stage	\$ 42,488	77	39.3%	47.2%
Later Stages	\$ 52,495	66	48.6%	40.5%
2004				
	Dollars Invested (000s)	Number of Investments	Percentage of Venture Capital	Percentage of Investments
Stage (All)	\$ 248,079	220		
Early Stages	\$ 185,698	154	74.9%	70.0%
a. Seed	\$ 21,000	16	8.5%	7.3%
b. Startup	\$ 89,198	33	36.0%	15.0%
c. Other Early Stage	\$ 75,500	105	30.4%	47.7%
Later Stages	\$ 62,381	66	25.1%	30.0%

Source: MacDonal & Associates, 2005; calculations by author.

5.3 Reliance on Labour Sponsored Venture Capital Corporations

The purpose of this sub-section is to explain how and why British Columbia's venture capital market relies significantly on one of the most important government venture capital programs in British Columbia, Labour Sponsored Venture Capital Corporations (LSVCCs). LSVCCs garnered most of the attention from key stakeholders during the interview portion of data collection, and is the most contentious and widely discussed issue in the venture capital market. As a result, it is an objective of this study to examine in depth the reasons for such a contentious debate and to approach the concerns with LSVCCs with an objective, public policy lense.

Section 5.3.1 provides a brief historical review of inception and evolution of LSVCCs including a technical description of how the tax incentive works. Section 5.3.2 presents the empirical evidence examining the performance of LSVCCs versus other venture capital funds including a more detailed review of British Columbia’s two LSVCCs. Section 5.3.3 presents a summary of the current state of knowledge regarding why LSVCCs have a different record of performance than other funds and why there exists a policy gap that calls for the consideration of policy alternatives. This review of LSVCCs in British Columbia will show that overall, there is a significant reliance on LSVCCs which in part, facilitates the under-utilization of British Columbia’s venture capital because of the restrictions placed on their investment activity.

5.3.1 The Creation and Evolution of LSVCCs

In the wake of recession in the early 1980s, there was much focus from public policy makers, employers, and employees on reinvigorating the economy. One popular idea headed by the *Fédération des travailleurs du Québec* (FTQ), Quebec’s federation of labour, was to develop a venture capital investment fund from individual investors to invest in SMEs within the province of Quebec. To encourage individual Quebecers to invest, the subsequent legislation included a 35.0 percent tax credit on the first \$3,500 invested in shares of the newly created *Fonds de solidarité des travailleurs du Québec* (FSTQ). Another reason for the popularity of the concept was that it was thought at the time that LSVCCs could fill the void left by the retrenchment of pension plans and other institutional investors as sources of venture capital financing (Industry Canada, 2004).

British Columbia introduced its own legislation in 1989 regulating LSVCCs, called the *Employee Investment Act*. The salient features of the legislation are listed below in table 6.

Table 6: *Characteristics of LSVCC Regulation in British Columbia*

Governing Legislation:	Employee Investment Act
<i>Number of LSVCCs permitted:</i>	Unlimited. Currently, two are registered: Working Opportunity Fund (WOF) and the BC Medical Innovations Fund (BCMIF).
<i>Sponsoring Organization:</i>	Union, group, or federation of unions headquartered in the province
<i>Organizational Form of LSVCC:</i>	Corporation
<i>Board of Directors of LSVCC:</i>	No provisions
<i>Minimum/Maximum Capitalization:</i>	Minimum \$25,000; maximum \$5 million if not a reporting issuer.
<i>Eligible Investors:</i>	Individuals (including RRSPs)
<i>Nature of Incentive:</i>	15% tax credit; maximum annual credit of \$2,000 (corresponding to an investment of \$13,333)

Governing Legislation:	Employee Investment Act
<i>Holding Period:</i>	8 years
<i>Government Expenditure Limits:</i>	\$16 million annually in tax credits. Allocated \$8.25 million for corporations with assets greater than \$200 million (WOF) and \$7.75 million for corporations with less than \$200 million in assets.
<i>Eligible Investments:</i>	An SME that pays at least 50% of salaries to employees who are regularly in the province, and that has less than \$50 million in assets. An eligible business cannot receive more than \$5 million from an LSVCC within a 2-year period, unless the LSVCC already meets minimum investment levels. Also, some secondary-market purchases are permitted if the purchase will result in job preservation, assist the business in dealing with the departure of an employee investor or venture capital investor, facilitate orderly succession, or achieve some other substantial economic benefit.
<i>Pacing Requirements:</i>	Funds raised in calendar year must be invested with the following schedule: at least 20% by the end of the following calendar year; at least 40% by the end of the second following calendar year; at least 60% by the end of the third following calendar year, and; at least 80% by the end of the fourth following calendar year.
<i>Consequences of Failure to Meet Investment Requirements:</i>	Registration may be suspended or revoked.

Source: Appendix 6C of Sandler (2004); p. 313-320

Overall, the objective of LSVCCs is to create a pool of venture capital to invest in SMEs. The Ministry of Economic Development of British Columbia states on their website that “the objectives of these LSIFs [LSVCCs] are to earn a competitive return for shareholders, through long-term equity investments in small to medium sized businesses in B.C.’s emerging markets.”²² British Columbia’s two LSVCCs under this objective are the Working Opportunity Fund (WOF) and the BC Medical Innovations Fund (BCMIF). Regarding the objectives of the fund, the WOF website states, “[the] Fund’s purpose is to provide a competitive long-term return for its shareholders by making equity investment in small to medium sized innovative, high-growth British Columbia companies. It also provides tax savings to residents of BC through tax credits. WOF seeks long-term appreciation on investments.”²³ Similarly, the BCMIF website states that the, “BC Medical Innovations Fund (BCMIF) is an employee venture capital corporation fund that focuses exclusively on investing in British Columbia’s fast-growing life sciences sector.”²⁴

²² Available online at: http://www.cse.gov.bc.ca/ProgramsAndServices/BusinessServices/Investment_Capital/Labour_Sponsored_Funds/default.htm.

²³ Available online at: <http://www.growthworks.ca/funds/wof/publications.aspx>.

²⁴ Available online at: http://www.bcmif.com/our_publications/downloads/index.asp.

The stated objectives by the government of British Columbia and the funds themselves reveal that in contrast to the LSVCC program in Quebec, the LSVCC program in British Columbia does not use LSVCCs to fulfill a social mandate. The overarching goal of the program and the funds is to provide an incentive for individuals to invest in venture capital funds and to use those funds to finance new and growing SMEs. This aspect of LSVCCs in British Columbia is important, given that the policy objectives of LSVCCs have changed over time, with changing political parties in power. While this has created confusion in the past, and perhaps made it difficult to assess LSVCCs, at this present time it is clear that LSVCCs are an economic policy tool only and should be measured as such.²⁵

5.3.2 How the tax credit works

The combined provincial and federal tax credit of 30.0 percent (15.0 percent each) for individual investors is available on LSVCC investment up to \$5,000. In addition, LSVCC investments are available for Registered Retirement Savings Plan (RRSP) deductions. As a result, the net cost of investing in LSVCCs is much lower than the “sticker price” of the investment. For example, suppose an individual in the highest marginal income tax bracket (combined federal and provincial) makes a \$5,000 contribution to an RRSP that is used to purchase shares of an LSVCC. In British Columbia, the RRSP deduction has an after-tax value of \$2,185, reducing the cost of the LSVCC investment to \$2,815. The combined federal and provincial tax credits of 30.0 percent reduce the cost of the investment even further by \$1,500, reducing the overall net cost to \$1,315. In effect, the investor saved \$3,685, or 73.7 percent, on a \$5,000 investment. The combined net costs and tax savings for each income tax bracket in British Columbia is detailed below in table 7.

Table 7: LSVCC Tax Savings Chart

Taxable Income (2004)	first \$32,476	over \$32,476 up to \$35,000	over \$35,000 up to \$64,954	over \$64,954 up to \$70,000	over \$70,000 up to \$74,575	over \$74,575 up to \$90,555	over \$90,555 up to \$113,804	Over \$113,804
Registered Retirement Savings Plan (RRSP) Investment	\$5,000.00	\$5,000.00	\$5,000.00	\$5,000.00	\$5,000.00	\$5,000.00	\$5,000.00	\$5,000.00

²⁵ This point was buttressed by Andy Robinson, Assistant Deputy Minister of Finance for British Columbia.

Taxable Income (2004)	first \$32,476	over \$32,476 up to \$35,000	over \$35,000 up to \$64,954	over \$64,954 up to \$70,000	over \$70,000 up to \$74,575	over \$74,575 up to \$90,555	over \$90,555 up to \$113,804	Over \$113,804
Federal Tax Credit (15.0%)	\$750.00	\$750.00	\$750.00	\$750.00	\$750.00	\$750.00	\$750.00	\$750.00
Provincial Tax Credit (15.0%)	\$750.00	\$750.00	\$750.00	\$750.00	\$750.00	\$750.00	\$750.00	\$750.00
Combined Federal and Provincial Tax Credit	\$1,500.00	\$1,500.00	\$1,500.00	\$1,500.00	\$1,500.00	\$1,500.00	\$1,500.00	\$1,500.00
RRSP Tax Savings	\$1,102.50	\$1,257.50	\$1,557.50	\$1,685.00	\$1,885.00	\$1,985.00	\$2,035.00	\$2,185.00
Combined Federal and Provincial Tax Rates	22.05%	25.15%	31.15%	33.70%	37.70%	39.70%	40.70%	43.70%
Total Tax Credits and Tax Savings	\$2,602.50	\$2,757.50	\$3,057.50	\$3,185.00	\$3,385.00	\$3,485.00	\$3,535.00	\$3,685.00
Net Cost on \$5,000 Investment	\$2,397.50	\$2,242.50	\$1,942.50	\$1,815.00	\$1,615.00	\$1,515.00	\$1,465.00	\$1,315.00

Source: Cumming & MacIntosh, 2003, calculations by author

5.3.3 Measuring the performance of LSVCCs

This sub-section presents a review of the institutional and academic literature on LSVCC performance. Overall, the literature is critical of LSVCCs. However, the performance review is Canada-wide and does not necessarily speak to the performance of LSVCCs in British Columbia. This sub-section also presents a performance review and discussion of the two LSVCCs in British Columbia, WOF and BCMIF. The purpose is to showcase why the reliance on LSVCCs may create concerns for policy makers. However, it should be noted at the outset that the focus is not on the alleged downfalls of LSVCCs per se; rather, it is to point out various aspects of LSVCCs which can be used to trigger ideas about how to increase venture capitalism in the province.

Industry Canada, in their 2004 review of Canada's venture capital market, reports that the 21 LSVCCs in Canada managed \$8.2 billion, or 36.0 percent of the venture capital market in 2002. LSVCCs continue to be the largest single investor in venture capital, although their relative importance is declining over time. The average annual market share of total venture capital

investments has decreased from 40.0 percent in 1996 to 25.0 percent in 2002, a drop of nearly 38.0 percent. Moreover, LSVCC investments over the same period grew by 53.0 percent while other private sector funds grew by 139.0 percent. The report also acknowledges the numerous concerns and criticisms of LSVCCs from other market stakeholders, namely, that LSVCCs can get lower cost capital and crowd out private venture capital investment. Sandler (2004) provides an overview of the historical opposition about which Industry Canada (2004) was referring:

Opposition members supported the promotion of venture capital investment generally, but expressed concerns about several features of the proposed LSVCC regime: that the LSVCC must be sponsored by a labour union to the exclusion of other groups of employees (or, indeed, by employees at all); that the government significantly underestimated the tax expenditure involved; that the tax benefit offered to investors was too generous; and that the general body of taxpayers was assuming most of the risk involved. In hindsight, most of the concerns were valid. (p. 257)

Douglas Cumming of the University of Alberta, and Jeffrey MacIntosh of the University of Toronto are two of Canada's most well versed academics studying LSVCCs. In a series of papers from the late-1990s to the present, the two authors analyze in detail the inputs (organization and governance), and the outputs (performance and impacts), of LSVCCs. Overall, on the outputs, or performance side they conclude that LSVCCs: (1) have poor returns both in absolute terms, and in comparison to both mutual funds and private venture capital funds; (2) have achieved significant capital accumulation despite their low returns; (3) have crowded out more efficient private venture capital funds, and; (4) are associated with large tax expenditures (Cumming & MacIntosh, 2003).

A comparison of the returns of LSVCCs with other venture capital funds certainly showcases a reason for concern. To summarize, Cumming & MacIntosh (2003), explain that LSVCC performance is inferior relative other Canadian private equity investment and to US venture investments.²⁶ In addition, the underperformance of LSVCCs "is also consistent with Smith's (1997) evidence that returns to the Solidarity Fund, the oldest and largest LSVCC in Canada, have lagged that of short-term treasury bills, and Osborne & Sandler's (1998) evidence that average LSVCC performance has lagged that of guaranteed income certificates in Canada" (p. 27-31).²⁷

²⁶ See Barnder *et al.* (2002) for similar findings.

²⁷ Cumming & MacIntosh also report that their empirical findings are consistent with the theoretical work of Kannianen and Keuschnigg, 2000; 2001; Keuschnigg, 2002, and Keuchnigg and Nielsen, 2001; 2002.

Sandler (2004) reports similar findings in his cost benefit analysis of LSVCCs. He concludes that, “assuming that prospective LSVCC investors are rational investors who would perform a similar [cost benefit] analysis, the prognosis for the continued attractiveness of LSVCCs as an appropriate RRSP investment for Canadian individuals is not good” (p. 287). He bases this conclusion on the fact that LSVCCs yield a significantly lower rate of return compared to other investment vehicles. Unfortunately, LSVCCs cannot be compared (appropriately) with private sector venture capital funds in Canada because data are lacking. However, Sandler (2004) finds that if Canadian venture capital funds had performed half as well as their American counterparts over a 10-year period, Canadian LSVCC performance would look starkly less impressive than claimed by managers of LSVCCs.

In addition, comparing LSVCC performance with Canadian small-cap equity funds – a typical comparison – appears to indicate LSVCCs perform relatively well, but the historical longer rate of return (i.e. 20-year) indicates that small-cap equity funds yield substantially higher rates of return. Table 8 below shows the rates of return for selected LSVCCs and other investment vehicles.

Table 8: Rate of Return on Investment in Selected LSVCCs and other Investment Vehicles (for the period ended October 31, 2002)

	1-year rate of return	3-year rate of return	5-year rate of return	10-year rate of return
Fund				
<i>Selected Funds</i>				
Canadian Medical Discoveries	-17.0	-0.1	-3.8	-
Capital Alliance Ventures	-29.5	4.4	1.7	-
Crocus Investment	-7.0	-4.5	-0.9	-
First Ontario	-19.2	-7.8	-3.7	-
FSTQ	-11.4	-0.1	2.5	4.6
VenGrowth I Investment	-14.7	-2.5	2.6	-
Workers Investment Fund				
Working Opportunity Fund	-16.6	-0.6	6.6	5.7
Working Ventures Canadian	-14.6	-14.1	-8.2	-2.7
<i>Average of all LSVCCs in Canada</i>	-12.6	-2.5	-0.8	1.5
Other Investment Vehicles				
S&P 500 Composite (\$CAD)	-17.8	-11.7	1.4	10.6
S&P/TSX Total Return	-7.7	-3.4	-0.3	8.5
Canadian small-cap equity funds	5.4	3.4	-1.6	7.7
5-year average GIC rate	3.9	4.6	4.6	5.6
Canada Savings Bond	1.1	2.8	2.9	4.0

Source: Sandler, 2004, p. 284-285

The average 1-year rate of return of LSVCCs is -12.6 percent while the average 10-year rate of return is 1.5 percent. British Columbia's WOF fares better than average with corresponding rates of return of -16.6 percent and 5.7 percent. In contrast, the average 10-year rate of return of the S&P Composite Index is 10.6 percent, while the Canadian small-cap equity funds is 7.7 percent, and Canadian savings bonds are around 4.0 percent (Sandler, 2004).

Besides not being able to compare LSVCC performance with private sector funds, there are other problems with measuring the performance of LSVCCs. First, because the economy has shifted towards more technology and business services, it is difficult to determine the net effect of LSVCCs, and venture capital as a whole. That is, it is not clear what impact LSVCCs had on the economy given there was a sectoral shift in the 1990s.²⁸ Second, valuation of LSVCCs is based on the net asset value per share which does not appropriately reflect the true value of LSVCC investments.²⁹

Despite the measurement problems, many authors maintain that LSVCCs perform poorly. Given this contention, it is interesting to explore why LSVCCs continue to increase pools of venture capital. Since their inception and until recently, LSVCCs have continued to increase their funds, equating to roughly 35.0 percent of venture capital and 25.0 percent of investments in Canada over the last decade. Cumming & MacIntosh (2003) find that there is a significant amount of capital that is not invested and this investment "overhang" can largely be explained by the presence of LSVCCs. The investment overhang, coupled with poor rates of return explains why LSVCCs create a considerable capital misallocation problem in Canada. Put differently, LSVCCs are inefficient because they continue to increase their capital pool – given the incentive created by the tax credit – while simultaneously posting poor returns. In effect, they argue individuals are seeking LSVCCs as a tax shelter rather than an investment vehicle.

Cumming & MacIntosh (2003) report other, perhaps even more dire problems created by LSVCCs. First among these is the crowding out of more efficient private sector venture capital funds. The authors find that the growth of LSVCCs has increased the pool of venture capital in Canada, but that this growth has come at the expense of private venture capital funds and venture

²⁸ Sandler (2004) points out that reports from LSVCCs should be read with caution. They often report LSVCCs are responsible for job growth and economic growth in the high-tech and other sectors, yet this could merely be a sectoral shift in the economy and not at all a result of LSVCCs.

²⁹ This is the case because LSVCCs are evergreen, or open-ended funds, which means they constantly have money flowing in and out of the fund. Having a constant flow of funds makes it difficult to assess the portfolio at any one point in time for a block of investments. In contrast, closed-end funds – which are most private funds – have a set share price which moves up and down relative to one block of venture investments. The general argument from critics of LSVCCs is that the two are not comparable because LSVCCs are measuring their performance based on a changing block of investments rather than just one.

capital in Canada generally. In fact, their empirical calculations reveal that the crowding out by LSVCCs has decreased Canadian venture capital investments by about 400, or \$1.0 billion per year. In addition, they find that LSVCCs have come at considerable costs to taxpayers; approximately \$3.0 to \$4.0 billion in total without considering the costs of RRSP deductions. These figures are buttressed by Industry Canada. In a 2004 report, Industry Canada found that in 2002 the tax expenditures by the federal government and provincial governments associated with the LSVCC tax credits amounted to well over \$500 million.

Another aspect of LSVCC performance drawn out by Sandler (2004) is the “trickle up” phenomenon whereby high-income earners gain a windfall from their investment. That is, he explains that “if the after-tax rate of return from LSVCCs for lower-income investors is equal to the rate of return on an equivalent non-tax sheltered investment, there is an incentive for high-income earners to invest in LSVCCs” (p. 286-287). Essentially, a disproportionately large amount of the tax expenditure on this program is devoted to high-income earners. This effect of LSVCCs is not addressed by the program developers and remains a policy gap.

5.3.4 Review of British Columbia’s two LSVCCs

As mentioned in the beginning of this sub-section, the debate over the importance and existence of LSVCCs is certainly not one sided. There are numerous stakeholders and participants in the venture capital market who support LSVCCs and continue to argue they are critical to the venture capital market.³⁰ Perhaps one of the strongest cases against cancelling the LSVCC program altogether is the performance of British Columbia’s LSVCCs. Despite the criticisms put forward by several academics mentioned above, British Columbia’s record of LSVCC performance has been quite strong. In fact, what is important in British Columbia is not the under-performance of LSVCCs *per se*, but rather where LSVCCs marginal contribution to the market decreases and where other programs or market participants’ contribution takes off.

As mentioned earlier, there are two LSVCCs in British Columbia: the Working Opportunity Fund (WOF) and the British Columbia Medical Innovations Fund (BCMIF). Sandler’s (2004) analysis of LSVCCs revealed that WOF had a strong rate of return relative to other LSVCCs. As of the end of 2002, the 5-year rate of return was 6.6 percent and the 10-year rate of return was 5.7 percent. The latest prospectus from the WOF, based on data up to the end of

³⁰ For example, Richard Remillard, Executive Director of the Canadian Venture Capital Association stated that there is still widespread support for LSVCCs particularly because people still perceive them to help build retirement savings and build an innovation economy (Remillard, 2006, Interview).

2004, posted a 10-year rate of return of 4.5 percent.³¹ Coupled with the tax savings, the 2005 WOF prospectus claims an 11.1 percent rate of return. A review of the WOF completed by Perrin, Thorau & Associates in 2001 concluded that the costs of the LSVCC program between 1992 and 1997 were \$29.0 million while the benefits for the longer, 1992 to 1999 period were in the range of \$41.3 million to \$49.0 million. A large part of the benefits associated with LSVCCs in the province is the degree of leveraged capital. Specifically, because there are a lot of deals in the province that involve a number of investors (called syndication) the deals that LSVCCs make in the province bring in other investors, not only from the private market but the foreign market as well. As Sandler (2004) explains: “[according to] the study, each \$1 million of WOF investment resulted in roughly \$4 million of leveraged capital; put another way, each \$1 million of provincial tax credits resulted in \$20 million of venture capital in the province” (p. 282).

Two cautions, however, are necessary when looking at records of performance. First, long-term rates of return include the market boom in 1998 to 2000, having an effect of inflating the rates of return. Since 2000, the year-to-year rates of return (excluding tax credits) on WOF’s balanced shares are -11.5 percent, -22.9 percent, 4.7 percent, and -6.8 percent. Even though long-term performance is the appropriate measure for venture capital funds instead of year-to-year rate of return, it is difficult to conclude whether WOF will continue to post a high average rate of return.³²

Second, WOF holds a significant amount of its assets in marketable securities such as bonds and not in venture investments. In fact, WOF’s 2004 annual financial statements show that 48.0 percent of assets are held in marketable securities such as government and corporate bonds. WOF even has a low interest, \$11.0 million treasury bill. As Sandler (2004) reports on LSVCCs in general, there seems to be an under-utilization of WOF’s portfolio in terms of investing in British Columbian ventures. That is, while it is a wise investment strategy to diversify risk in a portfolio, having nearly half invested in low-return bonds and treasury bills is not typical of a fund with an objective of investing in British Columbian entrepreneurship.

The BCMIF has as its objective investing in British Columbia’s life sciences sector and is a much smaller fund than WOF. While having a less mature portfolio, the pattern of performance is similar. In 2005, BCMIF held \$4.6 million in assets, of which \$2.0 million was held in cash and cash equivalents.

³¹ The preceding rates of return are based on WOF’s balanced shares portfolio.

³² Sandler (2004) emphasized this point for LSVCCs in general.

The primary reason why LSVCCs in British Columbia are holding on to so much cash is because they are *evergreen* funds instead of *closed-end* funds. Evergreen funds do not have a specific time horizon with which to make investments; they continually take money in and pay out redemptions. In contrast, a closed-end fund has a lock-in time, or specified time horizon within which to make investments. The impact of a closed-end fund is that the investment manager can invest nearly the entire portfolio into ventures because there is no risk of redemption. On the other hand, evergreen funds such as LSVCCs in British Columbia have to not only continually calculate the amount of possible redemption, but must also continue to raise new capital for the fund. In addition, any gains that are accrued from investments in ventures and are sold are put into cash holdings for future redemption from shareholders. As explained by Murray Munro, Senior Vice President of GrowthWorks, this structure in effect ensures WOF (and other LSVCCs) maintain a significant cash flow (Munro, 2006, Interview). The counter point to this, as academics such as Sandler (2004) and Cumming & MacIntosh (2003) argue, is that closed-end funds may alleviate the need to hold on to so much cash in reserve. This counter point is presented in the section below.

5.3.5 Factors that explain performance and policy gap

The purpose of this sub-section is to point out that while LSVCCs in British Columbia may not be a dire problem in terms of performance, their presence nonetheless contributes to too little venture capitalism. That is, the arguments put forward by authors such as Cumming & MacIntosh and Sandler (2004) point out the over-reliance on LSVCCs explains in part, why British Columbia (and similarly other Canadian provinces) falls behind other jurisdictions in venture capital activity. Three factors are discussed: (1) structure and governance; (2) how LSVCCs contribute to an investment overhang, and; (3) the crowding out mechanism.

5.3.5.1 Structure and Governance of LSVCCs

Cumming & MacIntosh (2003) argue that the structure and governance of LSVCCs are one of the most important explanations of underperformance. First, the authors claim that the structure of other venture capital funds in Canada and the United States, namely limited partnerships, are superior to the corporation structure of LSVCCs. This is the case because the limited partnership is (contractually) more flexible, it minimizes capital gains taxation for investors and principals, and creates more managerial discipline with time constraints. While a limited partnership is certainly more risky for the partners, this form has been historically highly

efficacious in keeping managers incentives aligned with maximizing profits for investors. Second, the short lock-in time of LSVCC investment relative to other investment vehicles does lower the risk, but also lowers the rate of return.

In addition, the short lock-in times forces LSVCCs to maintain liquidity against the event of redemption, which partly explains why LSVCCs contribute to Canada's investment overhang. Third, the minimum capitalization threshold in British Columbia of \$55.0 million means LSVCC managers can only raise a certain amount of funds per year. Fourth, LSVCC managers are constrained by laws requiring pacing requirements, limitations on what sectors to invest in, and how the remainder of their portfolio can be invested. For instance, LSVCCs in British Columbia must invest 20 percent in the first year, 40 percent in the second year, 60 percent in the third year, and 80 percent in the fourth year of *any* capital they raise regardless of market conditions or availability of appropriate investments. This effectively hinders LSVCC managers' ability to adjust to changing market conditions.

Another interrelated problem created by the structure of LSVCCs is the creation of perverse managerial incentives. Unlike other venture capital funds, LSVCCs do not require active investment in the firm. Furthermore, investors in LSVCCs are less sensitive to the rate of return because of the significant up-front tax saving created by the tax credit.³³ Consequently, when coupled with the pacing requirements and investment limitations (regional and sectoral), LSVCC managers have little incentive to invest wisely. In fact, Cumming & MacIntosh (2003) explain that these incentives lead to hasty and poor investment decisions. In complement, Sandler (2004) points out that: (1) LSVCCs may invest in firms private funds have rejected and, (2) LSVCCs may place a higher value on potential investments than private funds (taking a smaller equity portion for the same cost) – LSVCCs lower the cost of capital to firms, but lose out on the valuable equity-expertise trade-off. Overall, Cumming & MacIntosh (2003) find that LSVCCs are an inferior form of venture capital organization, characterized by high agency costs and low returns relative to private venture capital funds. Interestingly, interviews of experts in the market did not necessarily agree with Cumming & MacIntosh's (2003) assessment. In fact, the relatively robust performance of WOF compared to other LSVCCs suggest that concerns over poor managerial performance are not supported by the performance to date in British Columbia.

³³ This is called a principal-agent problem in economics, whereby moral hazard and information asymmetry contribution to the investor not being able to sufficiently monitor the actions of the LSVCC manager.

5.3.5.2 LSVCCs contribute to investment overhang

In addition to poor rates of return, one of the main criticisms of LSVCCs is that their portfolios have too much liquidity. That is, LSVCCs hold on to too much cash reserves and treasury bills and not enough venture capital investment. There are three reasons for this as argued by Cumming & MacIntosh (2003). First, investment in LSVCCs is concentrated in the three months previous to the tax filing deadline because individuals are seeking the tax credits and RRSP deductions. This high concentration of funding inflow right before the tax deadline in effect overloads LSVCC managers' ability to invest that much money quickly (because of the pacing requirements) and thus, it appears the LSVCC has excessive cash. Second, as mentioned previously, LSVCCs are open-ended funds which forces LSVCC managers to maintain a certain percentage of the portfolio liquid to hedge the risk of redemption. The third and final reason put forward may be that, in line with Industry Canada's (2004) contention that Canadian venture capital managers have less experience and expertise than their US counterparts, LSVCC managers may also have less human capital than other fund managers. Brander et al., (2002) offers a theory that this may be the case because fund managers are seeking syndication deals for the purpose of seeking management expertise more so than a selection process, whereby fund managers are seeking a second opinion. The implication of this is that British Columbia's relatively high syndication rate may lead to the conclusion that LSVCC fund managers are seeking to syndicate because other fund managers are leading deals. However, the counter to this is British Columbia's performance. Elite Interviewee A, Senior Vice President of a venture capital firm explained that WOF is leading a substantial amount of deals in the province and thus, a conclusion that LSVCC managers have less human capital would be false (Elite Interviewee A, 2006, Interview). Overall, management expertise and experience should be given due diligence in considering policy given the attention paid to it by academic research but a concrete conclusion cannot be made without more empirical evidence.

5.3.5.3 The LSVCC crowding out mechanism

Simply, private venture capital funds are crowded out by LSVCCs because they cannot compete with the tax subsidy. As Cumming & MacIntosh (2003) explain: "because of the tax subsidies to LSVCC investors, an LSVCC fund can afford to earn nothing on its investments and still achieve a handsome reward for its investors" (p. 25). The tax subsidy given to investors essentially finances the LSVCC rate of return. This distortion masks the true opportunity cost of making a venture capital investment. Not only does this result in capital misallocation, as

Cumming & MacIntosh (2003) find, but it actually decreases the amount of venture capital available to SMEs in British Columbia and the rest of Canada.

5.3.5.4 Summary of LSVCCs

Government and academics alike have certainly supported the view that there are numerous aspects of the venture capital market that LSVCCs do not address, thus creating a policy gap where new alternatives could have a role to make improvements. For instance, Sandler (2004) concludes that “provincial and state government programs in the formal venture capital industry should focus on two areas: attracting investors than can and should include private equity in a diversified portfolio; and strengthening the pool of knowledgeable venture capital fund managers. Neither the LSVCC program in Canada, nor the CAPCO program in the United States, accomplishes these objectives” (p. 294). Similarly, Industry Canada (2004) concludes that “while LSVCCs were designed to play an important role in stimulating the growth of SMEs in Canada, it may be time for industry participants to collaborate with the federal government to identify a more effective role for LSVCCs, one which ensure that the Canadian VC market continues to attract new institutional capital” (p. 162). These findings are given due diligence as are the contrasting opinions of some experts suggesting British Columbia is unique in avoiding some of the problems identified. Overall, it seems LSVCCs will continue to have a significant role in British Columbia’s venture capital market and the key for policy makers is to identify areas where the marginal gain of spending funds on LSVCCs is exceeded by the opportunity costs of foregone investments elsewhere. Put differently, it is important for policy makers to recognize where other alternatives can serve to augment LSVCCs and so as to increase venture capitalism in the provinces and thereby, improve the marginal benefit of taxpayer dollars.

5.4 Increasing participation from US venture capital funds

The increase in US venture capital investment in British Columbia is prominent. In 2003, foreign investment – which is almost exclusively US investment – accounted for 20.7 percent, or \$22.4 million of venture capital invested in the province (table 9). In 2004, there was nearly a five-fold increase in foreign investment to \$103.7 million, or 41.8 percent of the market (table 9).

Table 9: Total venture capital activity by investor type, 2003-2004

Investor Type	2003 (\$ millions)	2004 (\$ millions)
Investor Type (All)	\$ 107,996	\$ 248,079
Corporate	\$ 7,962	\$ 9,207
Government	\$ 9,914	\$ 20,064
Institutional	\$ 878	\$ 6,939
Retail	\$ 31,235	\$ 51,717
Private Independent	\$ 25,241	\$ 43,199
Foreign	\$ 22,374	\$ 103,658
Other	\$ 10,392	\$ 13,295

Source: MacDonald & Associates, 2005

The prominence of US investment in British Columbia is a relatively new phenomenon. As explained by Elite Interviewee A, Senior Vice President of a venture capital firm, US venture capital funds are becoming increasingly aware of British Columbia's technology sector (Elite Interviewee A, 2006, Interview). However, while some foreign participation in the market is a good thing, an over-reliance on foreign capital is a risky proposition to sustain the future of venture capital financing in the province. Elite Interviewee A also pointed out that US venture capital funds are able to take some of the "best" ideas (Elite Interviewee A, 2006, Interview). That is, US venture capital funds can offer entrepreneurs significantly larger up-front deals than funds in British Columbia. For example, US venture capital funds are coming into Canadian technology clusters such as Toronto, Montreal, and Vancouver and securing initial deals that are worth three to four times the Canadian national average.

Richard Remillard, Executive Director of the Canadian Venture Capital Association explains that US venture capital funds are simply more plentiful and larger and are overflowing their investments into the Canadian market (Remillard, 2006, Interview). An interesting caveat of this however, as economist Jock Finlayson pointed out, is that US venture capital funds are primarily investing in large deals (Finlayson, 2006, Interview). That is, US venture capital funds are not coming to the Canadian market place to invest in small deals (i.e. less than \$1 million); rather, they come to Canadian provinces to source that "big idea" and bring it to the US market. The implication of this is that some of the most profitable ideas (i.e. the *Googles*) generating jobs, further investment, and productivity gains are moving to the US.

5.5 Very little involvement from institutional investors in British Columbia

A general agreement among the interviewees is that there is very little institutional involvement in the venture capital markets across Canada. For example, Richard Remillard, Executive Director of the Canadian Venture Capital Association, explained that leveraging institutional investment is one of the key issues facing the Canadian venture capital market (Remillard, 2006, Interview).³⁴ While his point applied on a Canada-wide basis, the data certainly supports his view and others that this is the case in British Columbia.

In 2003, institutional investment accounted for \$878,000, or 1.3 percent of total venture capital in British Columbia (table 10). In 2004, there was a substantial increase in volume raised, although it still reflected a minor portion of total venture capital in the province. In total, \$6.9 million was raised from institutional investors, accounting for 3.6 percent of total dollars invested and 2.8 percent of total deals made. In contrast, retail funds (which are almost exclusively LSVCCs) comprised 28.2 percent of the market in 2003 and 34.5 percent of the market in 2004. For comparison, the Canadian national average of institutional investment in 2002 was 5.1 percent while the US national average was 14.4 percent (MacDonald & Associates, 2004).

³⁴ Similarly, economist Jock Finlayson also emphasized the lack of institutional investors in the province (Finlayson, 2006, Interview).

Table 10: *Venture Capital Investments, by type, 2003-2004*

2003				
	Venture Capital (000s)	Number of Deals	Percentage of Venture Capital	Percentage of Deals
<i>Investor Type (All)</i>	\$ 107,996	163		
Corporate	\$ 7,962	16	12.9%	7.4%
Government	\$ 9,914	21	12.9%	9.2%
Institutional	\$ 878	2	1.2%	0.8%
Retail	\$ 31,235	46	28.2%	28.9%
Private Independent	\$ 25,241	43	26.4%	23.4%
Foreign	\$ 22,374	13	8.0%	20.7%
Other	\$ 10,392	22	13.5%	9.6%
2004				
	Venture Capital (000s)	Number of Deals	Percentage of Venture Capital	Percentage of Deals
<i>Investor Type (All)</i>	\$ 248,079	220		
Corporate	\$ 9,207	13	5.9%	3.7%
Government	\$ 20,064	25	11.4%	8.1%
Institutional	\$ 6,939	8	3.6%	2.8%
Retail	\$ 51,717	76	34.5%	20.8%
Private Independent	\$ 43,199	50	22.7%	17.4%
Foreign	\$ 103,658	24	10.9%	41.8%
Other	\$ 13,295	24	10.9%	5.4%

Source: MacDonald & Associates, 2005; calculations by author

A 2004 study conducted by MacDonald & Associates and funded by seven governments in Canada called *Finding the Key: Canadian Institutional Investors and Private Equity* concluded that there are two main reasons why Canadian institutional investors have historically been reluctant to participate in the venture capital market.³⁵ The first is perception that remains from negative experiences in the market from the 1980s. The second is simply the fact that the Canadian market is less mature and institutional investors have less information than US counterparts. The report marks not only the critical importance of increasing the volume of institutional investment, but also increasing the volume and quality of communication and education flowing between key stakeholders in the market. Overall, institutional involvement is key to increasing venture capitalism in British Columbia because they have huge sums of money

³⁵ Government funding came from the federal government, Alberta, Manitoba, Ontario, Quebec, Nova Scotia, and Prince Edward Island.

to invest and are typically sophisticated investors. Moreover, it is recognized as a central reason for the success of venture capitalism in the United States.

5.6 The deal sizes in British Columbia are small relative to other jurisdictions

The average deal size in Canada in 2002 was \$2.7 million. British Columbia fared well compared to the Canadian average mounting an average of \$3.1 million in the same year. For comparison, the province with the highest average deal size, Ontario, posted a \$5.8 million average. However, the average deal size in British Columbia along with every other Canadian province is dwarfed by deal sizes in the United States. In 2002, the average deal size in the US was \$12.6 million (Canadian dollars). Average deal size is an important indicator of the ability of the venture capital market to finance new, usually costly in the short-run, ideas and innovations. The industries targeted by venture capital, technology and life sciences, tend to require more capital than the average firm to bring products to the market. As such, a venture capital market that has the ability to make large deals when necessary to finance high-growth firms will reap the rewards of firm success. Conversely, a venture capital market that does not have the ability to finance large deals will miss out on those opportunities that may be costly in the short-run but highly beneficial in the long-run. As one prominent venture capitalist explained, British Columbia just does not have one of those venture capital markets that can finance large deals.³⁶

Industry Canada (2004) explains that there are three central reasons why deals in British Columbia and other Canadian provinces are consistently smaller than in the US. First, the American venture capital market simply has more and larger venture capital funds. A key explanation of why capital pools are larger in the US is because there is significantly more institutional involvement. Second, high technology firms are generally more successful and geographically concentrated (i.e. home bias in California and Massachusetts). Third, because there are a multitude of investor types in the US market there is a higher tendency to make syndicated deals. Put differently, there are larger deals made in the US because many deals are syndicated, whereby a number of investors can share the risk and thus, be willing to devote for funds to the investment.

³⁶ This quote was sourced from a conversation with a senior manager of one of British Columbia's largest venture capital firms in the bio-technology industry. As this person's name was not submitted in the original ethics approval document, the name will not be disclosed.

6 Case Studies: Canadian Provinces and US States

This section moves away from description and towards analysis of venture capitalism. The case studies serve to draw out general trends of venture capital programs, compare across Canadian and American jurisdictions, and reveal best practices. Sub-section 6.1 explores Canadian provinces. Since there is little variance among venture capital programs in the Canadian provinces, much of the focus is on experiences of the most prominent program, LSVCCs. Sub-section 6.2 presents three venture capital programs from US states: (1) Certified Capital Companies; (2) Oklahoma Capital Investment Board, and; (3) Iowa Capital Investment Board. Each provides a unique public policy approach to increasing venture capitalism not evidenced in Canadian provinces.

6.1 Canadian Provinces

Six other provinces in Canada have LSVCC programs: Manitoba, New Brunswick, Nova Scotia, Ontario, Quebec, and Saskatchewan. All other provincial programs generally have the same features as the British Columbia program. This includes a 15.0 percent tax credit, using a corporation structure, a holding period of 8 years, and similar pacing requirements. One notable difference is that Nova Scotia and Saskatchewan provide a 20.0 percent tax credit. The key aspects which make British Columbia's program stand out among the other provinces are the lack of requirements for the sponsoring organization to be on the board of directors, and government expenditure limits. British Columbia is the only province which does not specify in legislation the funds' board of directors. All the other provinces require at least half of the board be comprised of members of the sponsoring organization. In addition, British Columbia is one of four provinces to post a limit on tax credit expenditure, \$16.0 million.³⁷

Despite their subtle differences, the provinces have had very different experiences with their LSVCCs. In addition to British Columbia, Quebec has had some modest success with their LSVCC program. However, it should be noted this success falls far short of private venture

³⁷ Saskatchewan and Nova Scotia have \$5.0 million limits while Manitoba has a \$60.0 million limit. All other jurisdictions, including the federal government, have no limit on expenditure.

capital funds and even mutual fund benchmarks (Sandler, 2004).³⁸ Quebec's LSVCCs constitute 42.2 percent of the province's venture capital market. The best performing LSVCC in Quebec, the *Fonds de solidarité des travailleurs du Québec* (FSTQ), posts a modest 4.6 percent 10-year rate of return.

The overarching conclusion that can be drawn from looking at other provinces' LSVCC programs, however, is that they are falling short of their objectives. The most prominent examples of this come from Manitoba and Ontario. Manitoba's LSVCC program has been faced with numerous problems ever since its largest LSVCC, Crocus Investments, was brought to court in 2004 by its shareholders. Triggered by an Auditor General's report criticizing the fund's management and operations, the case (and RCMP investigation) is centred around the devaluations of the fund which the Auditor General deemed to have misled investors.³⁹ Subsequent legal action led to the Manitoba court halting trades of Crocus Investments and eventual bankruptcy. The fund is now in the process of being liquidated.

Ontario's experience is less climactic, but nonetheless illustrative of how the LSVCC program has performed. On August 29, 2005, Ontario's Ministry of Finance announced it was cancelling their 15.0 percent tax credit altogether. Finance Minister Greg Sorbara said: "Ontario's venture capital market is much healthier now, and we believe that this incentive is no longer the best fit in today's economic and fiscal climate."⁴⁰ The province's plan is to phase out the tax credit by 2010 but continue to maintain the presence of LSVCCs. This is an interesting approach to the policy problem: it provides the government an opportunity to observe reactions in the market. However, cancelling the tax credit was not an entirely incremental approach. To augment LSVCCs, Ontario also created a new Ministry of Research and Innovation, a new Research Council, a \$27 million Ontario Research Commercialization Program, and a \$36 million Ontario Commercialization Investment Fund.

6.2 American States

While there is a wide variety of state-level venture capital programs in the United States, none compare very closely with LSVCCs in Canadian provinces. Some have been triggered by the same motivation, like Certified Capital Companies in Louisiana after recession in the early 1980s, but overall most US states have taken a different approach to state involvement in the

³⁸ See section 5.4.

³⁹ See http://news.yahoo.com/s/cpress/20060112/ca_pr_on_na/mba_crocus_fund and <http://www.cbc.ca/story/business/national/2005/10/27/crocus-051027.html> for more information.

⁴⁰ See <http://www.fin.gov.on.ca/english/media/2005/nr08-lsif.html> for more information.

venture capital industry. Nonetheless, there are some important lessons that can be drawn from the US experience. The benefit of extracting information from US case studies is that many policy options have already been attempted, or are currently in operation. Three programs deserve particular attention: (1) Certified Capital Companies; (2) Oklahoma's Capital Investment Board, and; (3) Iowa's Capital Corporation. The reason for choosing these programs over others is that unlike most of the US programs they are not mixtures of various incentives and policies; rather, they are targeted programs designed to raise venture capital using one policy instrument. Looking at these programs only helps reveal the salient features of these different approaches. Each program is discussed in turn.

6.2.1 Certified Capital Company

The first case study under consideration is the Certified Capital Company (CAPCO) program. The CAPCO programs employed in nine states were developed with a similar objective to LSVCCs. In 1983, to provide a boost to the economy after recession, the government of Louisiana introduced a tax credit to provide an incentive for investors to invest in that state's largest industry, oil and gas. Since then, eight other states have followed with similar legislation.⁴¹ What makes CAPCOs different from LSVCCs, however, is the exclusive focus on insurance companies for sourcing capital. In exchange for investments (certified capital) in CAPCOs, the government allocates tax credits (100 percent at rate of 10 percent per year) to insurance companies.

Once established, "[to] maintain certification (and retain the tax credits for the insurance company investors), CAPCOs must meet specific investment milestones and invest the equivalent of 100 percent of certified capital before any liquidating distributions can be made, i.e., before any gains from the investments can be distributed to the partners" (Markley et al., 2001, p. 45). In other words, the government provides an incentive for insurance companies to lend money to the government, the government then invests that money in private venture capital funds that have a focus on small businesses within the state. Table 11 below presents features of CAPCO programs.

⁴¹ The other eight states are: New York, Wisconsin, Florida, Missouri, Colorado, Texas, Alabama, and Georgia (Sandler, 2004).

Table 11: Features of certified capital company programs

Organizational Form	Partnership, corporation, trust, or LLC
Eligible Investors	Insurance companies
Nature of Incentive	100% premium tax credit; maximum 10% per year. Credits may be transferred or sold.
Nature of Investment	Equity; or a debt instrument
Minimum and Maximum Capitalization	Minimum \$500,000; no Maximum
Government Expenditure	Depends on state: limits on aggregate levels and annual spending

Source: Sandler (2004) Appendix 6D; Markley et al., (2001)

6.2.2 Oklahoma Capital Investment Board

The second case study is the Oklahoma Capital Investment Board (OCIB). Markley et al., (2001) conclude that the OCIB is “based on a funding mechanism and structure designed to minimize the likelihood that public funding assistance will be necessary, to insulate the program from political interference, and to ensure qualified professionals manage funds” (p. 17). Put differently, its aim is to reduce asymmetric information in the market through risk mitigation. To do this, the OCIB acts as a “fund of funds” by raising capital from institutional and other investors through debt instruments, and in some cases equity.

The OCIB guarantees the principal and interest of the loans with a dedicated fund of marketable tax credits, then takes the borrowed funds and invests it in private venture capital funds. Markley et al., (2001) report that “returns from investments in these funds will be used to meet OCIB’s guaranty obligations and to make future investments in other limited partnerships” while, “state tax credits will be used only in the case that investment returns are insufficient to meet OCIB’s guaranty commitments” (p. 18). Essentially, the government provides an incentive (through guarantees and marketable tax credits) to lend funds to the OCIB, which in turn invests those funds in private venture capital funds. It uses the gains from investment to pay back the loans. The key features of Oklahoma’s venture capital program are presented below in table 12.

Table 12: Features of Oklahoma investment board

Organizational Form	State beneficiary public trust; a "fund of funds"
Eligible Investors	Individuals, corporations, fiduciaries, foreign, and insurers
Nature of Incentive	30% tax credit
Nature of Investment	Equity and near-equity (i.e. common or preferred shares) or debt into private venture capital funds.
Minimum and Maximum Capitalization	Minimum \$500,000; no Maximum
Government Expenditure	No limit

Source: Sandler (2004) Appendix 6B; Markley et al., (2001)

The appropriateness of the Oklahoma program to serve as a policy alternative has been endorsed by one of Canada's leading academics studying venture capital, Daniel Sandler (2004). He explains that Oklahoma's venture capital program "increases the capital available for venture capital investment in SMEs located in the state, while minimizing the risks of political interference in the investment decision-making process" by separating the activities of raising venture capital and investing in SMEs (2004, p. 295).

6.2.3 Iowa Capital Investment Board

The third and final case US case study is the Iowa Capital Investment Board (ICIB). While Iowa uses a similar structure as Oklahoma for its venture capital program – in terms of addressing information asymmetries through risk mitigation – there are some important differences. First, the (ICIB) raises capital by issuing equity shares rather than debt. Second, capital is raised from individual investors only. Lastly, the government provides an equity guarantee for investing in the funds of funds but unlike Oklahoma, does not directly benefit from the fund of funds' success. That is, the OCIB does not see any of the gains accrued from venture investments; all the gains fall to the equity investors. The equity interest and the rate of return are guaranteed to investors: "the scheduled rate of return and the redemption of equity interests are guaranteed by tax credits issued by the ICIB" (Sandler, 2004, p. 293). The features of the ICIB are delineated below in table 13.

Table 13: Features of the Iowa capital corporation

Organizational Form	Limited partnership or LLC
Eligible Investors	Individuals
Nature of Incentive	20% tax credit
Nature of Investment	Equity
Minimum and Maximum Capitalization	Minimum \$500,000; Maximum \$3.0 million
Government Expenditure	\$10.0 million over 3 years

Source: Sandler (2004) Appendix 6B; Markley et al., (2001)

6.3 Summary of the US experience

Several conclusions can be extracted from the US experience with venture capital programs. First, the successful Iowa program, as measured by the substantial influx of venture capital activity with minimal cost to taxpayers, illustrates that large sums of venture capital can be raised from individual investors without the need of costly tax credits, like those in Canadian LSVCCs. Second, the Oklahoma program and CAPCO program show that other sources of capital, namely institutional investors such as insurance companies and pension funds, can be used to leverage more capital; using debt instruments has been an efficient way of doing this. In addition, the Oklahoma program to date has spent no government funds on tax credits and seems unlikely it will in the future. This is the case because risk is appropriately diversified using a limited partnership structure with guaranteed principle. Third and finally, policy makers in British Columbia and other Canadian provinces may notice that these programs are a complement, not substitute, to current programs such as LSVCCs. The Oklahoma program and the CAPCO program do not raise capital from individual investors. The Iowa program, however, presents a possible and viable replacement for governments looking to raise venture capital from individuals.

7 Policy Objectives

Building off the knowledge of the venture capital market, this section describes the goals, or objectives of public policy in the steps forward towards a well-functioning market of small business finance in British Columbia. Establishing explicit policy objectives is “important in understanding what is to be done and how the policy is intended to realize a change” from the current state of affairs (McArthur, 2005, p. 3-4). In other words, policy objectives are the planned state of affairs with which any course of action will be compared.

For the purpose of this study, the ultimate policy objective is to facilitate a dynamic venture capital market in British Columbia, characterized by an accessible and large venture capital pool, minimal distortions and barriers to investment, and a focus on promoting small business and entrepreneurial investment in British Columbia. A well-functioning venture capital market in effect “fuels the engine” that is entrepreneurial discovery, innovation, and growth which is critical to British Columbia’s economic prosperity.

While having an overall goal of “fuelling the engine” and creating a well-functioning venture capital market serves useful to direct the overall trajectory of policy, more specific policy objectives are necessary to help formulate solutions to problems. Listed below are the key policy objectives, in no particular order, of this study.

- Improving the matching of entrepreneurs with potential high-growth opportunities and investors wanting to finance and take risk on those opportunities;
- Attracting investors that can and should include private equity in a diversified portfolio;⁴²
- Strengthening the pool of knowledgeable venture capital fund managers;⁴³
- Increase investment in British Columbian small businesses;

These are ambitious goals for any provincial government. However, British Columbia, perhaps more so than most other provinces, has the potential to achieve and excel in these goals. British Columbia is a growing economy with an improving investment climate and ready to take

⁴² Sandler (2004) argues this is a central policy objective, see page 294.

⁴³ The second of two policy objectives argued by Sandler (2004).

the next step forward in financing a boom of entrepreneurial activity.⁴⁴ Overall, the policy objectives delineated above, coupled with other policies improving the investment attractiveness of British Columbia, will serve to improve economic growth and prosperity.

⁴⁴ See Clemens et al. (2006) study on investment climates of the Canadian provinces.

8 Policy Alternatives

Stakeholders in the venture capital market are not shy of voicing their concerns regarding public policy. For instance, MacDonald & Associates Limited (2005) conducted a survey in 2004 of 22 senior professional managers in the Canadian venture capital market and prominent angel investors and concluded that they not only have a sound understanding of the policy process, but also have a number of recommendations. While the survey was conducted Canada wide and for venture capital as a whole and not British Columbia *per se*, it nonetheless has clear implications for all Canadian provinces given there is little policy difference. In sum, the venture capital managers and angel investors recommended that policy makers should have the following in their list of policy alternatives: “encouraging more institutional investor participation in the market; establishing a government role as limited partner in private funds, perhaps via funds-of-funds; investing in proof-of-principle activity at the front-end of early-stage projects; facilitating entrepreneurial skills development; assisting in the local organization of angel investors, and; removing tax and legal barriers that unnecessarily impair cross-border activity in early-stage syndicates” (MacDonald & Associates Limited, p.7). Coupled with views of elite interviews for this study, these views are given due diligence in the development of policy alternatives for British Columbia.

The views from venture capital managers and angel investors largely mirror the research provided by academics. Paramount among the research is the need for institutional involvement, reform to LSVCCs, and tax reform which encourages entrepreneurial growth (Sandler, 2004; Cumming & MacIntosh, 2003; Lerner, 2003). Overall, the policy alternatives presented below are chosen based on the following criteria: (1) ability to fulfill policy objectives and, (2) overlapping support from stakeholders. As mentioned previously, it is not the objective of the policy alternatives to replace LSVCCs. Rather, it is to focus on the policy gap of a well-intentioned policy initiative and explore other ideas and policies that could possibly fill the gap or contribute to a well-functioning venture capital market in British Columbia.

8.1 Angel Investor Network

A policy alternative which may serve to improve the link between financiers and entrepreneurs is an Angel Investor Network. Overall, its aim is to reduce information asymmetries in the venture capital market. As previously mentioned, Angel investors are high net-worth individuals who are seeking to finance an entrepreneurial endeavour for a high rate of return in exchange for assuming the high-risk of new business development. Similar to other formal venture capital funding, angel investors often take an active role in the new business.

While British Columbia already has several angel investor networks, such as Angel Forum and Vantec, there currently exists no active role for government to increase the usefulness and scope of such networks.⁴⁵ That is, the current angel investor networks in British Columbia lack a regional perspective and tend to be quite narrow in scope to the point where there are just not enough high-growth potential entrepreneurs meeting Angel investors. A provincial government could serve to substantially increase the size and scope of angel investor networks and ultimately, help to improve information asymmetry in the market. It could also add some legitimacy to the network, a very intangible but nonetheless valuable commodity in the business of financing SMEs. Moreover, introducing a well-functioning Angel Investor Network involves no changes to the tax system while simultaneously reducing the transactions costs of finding a match and thus, represents a simpler way of providing an alternative to LSVCCs compared to making changes to the tax system and the other alternatives.

The role of government is to coordinate, rather than operate a network for Angels and entrepreneurs. Coordination can come in several forms. For instance, the government can work to organize networking receptions at universities, hotels, and conference centres. Government can also create an online network to help entrepreneurs find capital and help Angel investors to find suitable investments. Again, the overall goal of this alternative is to help close the information asymmetry that currently exists.

The National Angel Organization (NAO) has been the strongest proponent of strengthening Angel Investor Networks and supporting angel investors in general. In a 2004 paper it was concluded that in British Columbia angel investors financed the creation of 40 new companies, whereas LSVCCs and other venture capital funds combined were responsible for only 5 new companies. As a result, given the personal nature of financier and entrepreneur, the NAO highly recommends supporting angel investor networks.

⁴⁵ See Angel Forum at www.angelforum.org and Vantec at <http://www.vef.org/angels/index.html>

8.2 Iowa Capital Investment Board

Iowa's venture capital program provides a general framework for a second policy alternative. Essentially, the Iowa Capital Investment Board (ICIB) separates the raising of venture capital and the investment in SMEs into two separate activities, each with different policy treatments. Unlike the LSVCC program, the ICIB does not actively invest in SMEs, it only uses tax credits to increase the size of the venture capital pool. Managers of the ICIB leave the choice of investment in SMEs to private venture capital funds. Overall, its aim is to address information asymmetries in the market through risk mitigation.

The ICIB, as it would be proposed for British Columbia, consists of the following: (1) creation of a capital formation corporation where all investors hold equal equity interest (equal value); (2) capital is raised through equity from individual investors and institutional investors, including pension funds; (3) the government must guarantee repayment of the equity shares and interest (which is capped); (4) a dedicated government fund for tax credits capable of financing the repayment of equity and interest of investors, and; (5) active investment in private venture capital funds.

In addition, there can be restrictions placed on the investment in private funds similar to the Oklahoma program. For instance, as Sandler (2004) explains, in Oklahoma, "the OCIB is obliged to ensure that at least \$2 will be invested in Oklahoma businesses for every \$1 of principal that it guarantees" (p. 292). Hence, the way in which the program is designed can reflect the trade-off between being focused on investing in British Columbian SMEs only and investing in SMEs to gain the maximum return. It is worthy to note that the state of Oklahoma, even with such a "home bias", has incurred no costs to finance the tax credits (other than development) and has been successful in increasing the venture capital pool.

The reason for applying the Iowa model rather than the Oklahoma model is keeping the same source of capital as LSVCCs – individuals. Using the Iowa model would provide an easier transition for policy makers wishing to reduce the costs of the LSVCC program. That is, the Iowa program presents an opportunity to rely on the same investor group as LSVCCs but potentially have much lower costs. Creating a policy alternative that eases the transition of current participants in the market is a key consideration for government. For instance, Andy Robinson, Acting Assistant Deputy Minister in British Columbia's Ministry of Finance pointed out that one of the most important concerns with considering reform of the LSVCC program is the issue of transition of individual investors (Robinson, 2006, Interview). That is, the government would need to have a transition plan for those individual investors who have invested in LSVCCs;

employing the Iowa model could potentially provide the same benefits of the Oklahoma program but with a much easier transition.

8.3 CVCA Policy Proposal

The Canadian Venture Capital Association (CVCA) has put forward a proposal to the Ontario provincial government that if appropriately modified, may serve to enhance British Columbia's venture capital market. The basic concept is that the government of British Columbia would become a limited partner in a private venture capital fund, serving to leverage some of the risk associated with investments. In turn for leveraging some of the risk, the government would require that the majority of funds are to be invested within British Columbia.

The details are as follows.⁴⁶ A private venture capital fund must raise a predetermined amount of money (the CVCA proposal is \$40 million) from institutional investors such as pension funds or insurance companies. Once the fund raises the predetermined amount, it goes to a bank and secures a 30.0 percent loan which raises the total amount of the fund, in the CVCA example, to \$52 million. In the CVCA example, the government's role is to guarantee that 30.0 percent loan, or \$12 million.

In this process the bank and the government become limited partners in the venture capital fund and in effect, diversifying the risk the venture capital fund and government. Essentially, the venture capital fund leverages the return in exchange for equity from institutional investors while simultaneously building legitimacy and confidence in the market. Once the funds have been raised and the loan secured, the venture capital fund invests directly in entrepreneurial endeavours in the province.

The attraction of this policy alternative, as articulated by the CVCA, is that the whole process is market driven. There is no artificial creation of incentives or any direct role for government. If the private fund is incapable of raising the funds, then it cannot secure the loan and hence, there would be no role for government to guarantee the loan.

From a government perspective, it is unlikely that it will be called on its guarantee. The venture capital fund has its entire prospectus based on turning a profit and creating a healthy rate of return on its investments. As a result, it will likely perform similar to other private venture capital funds. That is, turning a healthy profit. The only way the government would have to pay

⁴⁶ The complete document sent to Dwight Duncan, Minister of Finance for Ontario is available at: <http://www.cvca.ca/>

the loan would be if the venture capital fund went bankrupt, which seems unlikely given the fund is able to raise \$40 million in a market where confidence, reputation, and experience is critical to success. Due diligence on accountability for the fund lies with the fund managers although this could be augmented by having the bank play a role on the board of directors. The major downfall to the proposal from a government perspective is that it would have to guarantee the loan which is unlikely to garner much political support.

8.4 Angel Investor Tax Credit with Rollover

British Columbia's current Angel Investor tax credit program consists of a 30.0 percent tax credit to individuals and corporations. That is, high net-worth individuals using their own money or corporations can directly invest up to \$5 million in a pre-approved SME. While the tax credit generates considerable investment in SMEs, the problem with this policy is that there is no distinction between knowledgeable and experienced investors and investors without those qualities. This means that many investors, despite their initial wealth, will make poor investment decisions to receive the tax credit. Coupled with a short 5-year holding period and no sunset clause on the legislation, this represents an opportunity – similar to LSVCCs – to only exacerbate the inefficiency in the venture capital market.

Improving the angel investor tax credit can serve to increase the efficiency of matching financiers with entrepreneurs. First, and most importantly, is to introduce what Sandler (2004) refers to as an Angel Capital Rollover.⁴⁷ A rollover allows successful angel investors to reinvest the gains into new SMEs tax-free. As Sandler (2004) explains, a rollover clause “is limited to the reinvestment proceeds from successful investment in SMEs; thus, it rewards those individuals who (hopefully more through skill than luck) made good investment decisions and are therefore better able to address the information asymmetries affecting investment in SMEs” (p. 105). In effect, an angel investor tax credit that matches the tax credit associated with LSVCCs coupled with a rollover clause that rewards successful investment in SME ought to be highly efficacious in screening “good” venture investors. Furthermore, additional aspects of the tax credit such as extending the short holding period of 5 years to a more appropriate 8 or 10 year period and introducing a sunset clause will further embolden the incentive of investors to make better decisions.

⁴⁷ During production of this study, the new Conservative federal government proposed to introduce a capital gains rollover which would in effect, make this policy alternative much less attractive or even unnecessary.

9 Criteria and Measurement

The purpose of this section is to outline the objective criteria used to measure the impacts of each policy alternative relative to one another. The overarching goal of the criteria and subsequent measurements is to capture the salient features of each alternative with respect to their fulfillment of the policy objectives. In all, 15 criteria are considered and organized into three categories: (1) Economic Criteria; (2) Social and Procedural Criteria, and; (3) Political and Security Criteria.

While the goal of utilizing criteria and measurements is designed to remove partiality and any predisposition towards one policy alternative over another, there is some degree of subjectivity in the choice of criteria and the measurements used. It is also recognized that exact specifications are difficult, if not impossible to calculate without actually implementing the policy. Nonetheless, the criteria and measurements below can serve useful when examined in aggregate to calculate trade-offs and reveal which policy alternative(s) are best suited to fulfill the policy objectives.

9.1 Economic Criteria

The economic aspects of venture capital public policies are some of the most important when it comes to decision making. Government and other key stakeholders are intensely interested in changes to policies which may impact their rate of return. As such, measuring the impacts of each policy alternative is necessary to conceptualize how the venture capital market will react with different policy instruments. Table 14 below delineates the definitions and measurements used for the economic criteria used in this study. The measurements include: (1) efficiency; (2) expected increase in venture capital activity; (3) change in the size of capital pools; (4) change in the access to venture capital pools; (5) cost, and; (6) distortions.

Table 14: *Economic Criteria: Definition and Measurement*

Criteria	Definition	Measurement
Efficiency	What is the cost effectiveness of the alternative in terms of fulfilling the objectives with the least cost?	High/Medium/Low
Expected Increase in VC Activity	Will more SME financings result? Larger deals sizes?	High/Medium/Low
Change in the Size of Capital Pools	Will the pool of available money for SMEs increase?	High/Medium/Low
Change in the Access to Capital Pools	Will entrepreneurs and SMEs have easier access to money and willing investors?	High/Medium/Low
Cost	What is the cost in terms of program expenditure and/or tax credits?	High/Medium/Low
Distortions	Does the alternative create any negative externalities?	High/Medium/Low

9.2 Social and Procedural Criteria

The second category of criteria is social and procedural aspects. The purpose of measuring these aspects is to add comprehensiveness to the decision making process. This is important, given that when making decisions policy makers do not just consider economic factors. They also consider factors which may be left out of an economic calculation such as social impacts and equity. In addition, policy makers may also want to consider the complexity of various policy alternatives. As a result, this study incorporates four social and procedural criteria: (1) simplicity; (2) administrative operability; (3) equity, and: (4) changes to entrepreneurial activity and culture. Table 15 below shows the definition and measurement used for each criterion.

Table 15: *Social and Procedural Criteria: Definition and Measurement*

Criteria	Definition	Measurement
Simplicity	To what extent do investors need third-party assistance (i.e. accountants, lawyers, venture capitalists) to invest their money in SMEs?	High/Medium/Low
Administrative Operability	Is the policy alternative complex in design, implementation, and enforcement?	High/Medium/Low
Equity	Are there winners and losers created with a policy change?	High/Medium/Low
Changes to Entrepreneurial Activity/Culture	Does the alternative enhance the perception of SMEs?	High/Medium/Low

9.3 Political and Security Criteria

The third category of criteria used in this study is political and security criteria. The purpose of measuring these aspects is to capture the political factors which may impact predispositions towards one policy more so than others. The security aspect serves as complement in that it measures the potential risk and degree of stakeholder responsiveness of each alternative. Four political and security criteria are included in the study: (1) political feasibility; (2) responsiveness; (3) risk, and; (4) stakeholder response. Table 16 below delineates the definition and measurement used for each criterion.

Table 16: Political and Security criteria: Definition and Measurement

Criteria	Definition	Measurement
Political Feasibility	Would the current provincial government support this alternative?	High/Medium/Low
Responsiveness	Does the alternative contribute to an overarching goal of supporting SME development?	High/Medium/Low
Risk	Are taxpayers exposed to unnecessary risk in terms of ROR or transition? What is the potential of taxpayers losing in a policy implementation?	High/Medium/Low
Stakeholder Response	Does the alternative enhance cohesiveness among the stakeholders?	High/Medium/Low

10 Evaluation of Policy Alternatives

The evaluation of public policies that target small businesses and entrepreneurship is complex and often requires a broad perspective. In this regard, there are several methods for doing so which range from highly specified empirical measurements of certain impacts to broad, overall implications of a policy problem (Storey, 2000). This study focuses on the latter: the overarching results of a policy problem. Measurements of the criteria delineated above are chosen to present policy makers and other key stakeholders with the projected outcomes of different policy alternatives to the policy problem. The overall evaluation is the summation of those measurements.

It should be noted there are a few cautions that must be considered with taking a broad, comprehensive approach to public policy analysis. First, some measurements are subject to generalization and thus, are not as exacting as empirical measures. Second, measurements are based on interviews with key stakeholders and evidence from other jurisdictions and as a result are subject to some degree of bias or subjectivity. Ultimately, the evaluation is designed to consider the trade-offs with each alternative and to put forward the most objective, well-informed interpretation of actual impacts as possible.

Sub-section 10.1 presents the overall evaluation of the criteria and measurements divided into three categories: economic criteria; social and procedural criteria, and; political and security criteria. This section also presents a summation of the scores attributed to each measurement and an overall score for each policy alternative. The following four sub-sections present a brief summary and discussion of each alternative's score, positive impacts, and negative impacts.

10.1 Overall Evaluation

Table 17 below summarizes the measurement of the criteria for each policy alternative. Each criterion was measured on the same relative high-medium-low scale. That is, the policy alternative which is predicted to perform well on a given criteria will receive a score of "HIGH" while a policy alternative which perform relatively poorly will receive a score of "LOW". In complement, a brief rationale statement is included with each criterion.

Table 17: Evaluation of Policy Alternatives

	Alternative 1	Alternative 2	Alternative 3	Alternative 4
	Angel Investor Network	Iowa Program	CVCA Policy Proposal	Angel Investor Tax Credit with Rollover
Criteria				
Economic Criteria				
<i>Efficiency</i>	MEDIUM - Costly to develop but is expected to increase the number of profitable SME financings	HIGH - Low cost program with expected high returns	HIGH - market driven process	MEDIUM - Expenditure on strong Angels only with minor increase in profitable SME financings
<i>Expected Increase in VC Activity</i>	HIGH - Lower transaction cost makes Angels more willing to invest; large network makes it easier for SMEs to find financing	MEDIUM - Incentive of private VC funds to produce rate of return; but competition for individual investors	HIGH - Strong incentive of private VC funds to produce rate of return and source institutional investment	MEDIUM - Little change on the investment side but some increased participation from strong Angels
<i>Change in the Size of Capital Pools</i>	MEDIUM - More investment from Angels	HIGH - Both individual and institutional investors	HIGH - as proposed, \$52 million fund into the market	LOW - Minor increase in Angel investment
<i>Change in the Access to Capital Pools</i>	HIGH - Entrepreneurs can access province-wide network	HIGH - Entrepreneurs can source private capital funds as well as LSVCCs	HIGH - Entrepreneurs can source private capital funds as well as LSVCCs	MEDIUM - Entrepreneurs can target repeat Angels
<i>Cost</i>	MEDIUM - High initial cost to development network, then lower maintenance costs	LOW - Approximately \$600,000 to develop program	HIGH - Government must guarantee 30% loan; counted as deferred expenditure	MEDIUM - Tax credit expenditure but only for repeat investors
<i>Distortions</i>	LOW - Only key stakeholders are involved in spending time and money	HIGH - Introduction of competition for pension funds and other institutional investors	MEDIUM - If cap placed on government expenditure (i.e. number of funds)	MEDIUM - Creates a tax incentive only for Angel investors

	Alternative 1	Alternative 2	Alternative 3	Alternative 4
	Angel Investor Network	Iowa Program	CVCA Policy Proposal	Angel Investor Tax Credit with Rollover
Social and Procedural Criteria				
<i>Simplicity</i>	MEDIUM - Complex regional network of individual entrepreneurs and Angels	MEDIUM - Coordination of individual and institutional investors with LSVCCs and private VC funds is difficult despite increased investment opportunities	MEDIUM - Limited Partnership between Bank, Government, and Private Venture Capital Fund may present complex legalities	LOW - Increases complexity of tax deductions for wealthy investors; minor impact on other individuals
<i>Administrative Operability</i>	HIGH - Requires substantial resources to develop and coordinate	MEDIUM - Requires monitoring the inclusion of institutional investors in VC	MEDIUM - Requires monitoring of fund performance by government and bank	LOW - Requires monitoring and enforcement of repeat Angels who make good investments
<i>Equity</i>	HIGH - Only willing participants participate at their own cost; no burden on other income groups	HIGH - Only willing participants participate at their own cost; no burden on other income groups; additional benefit of gains being distributed across all income groups	HIGH - Only willing participants participate at their own cost; no burden on other income groups	MEDIUM - Angels making poor investments lose; creates a built-in filter for good investments
<i>Changes to Entrepreneurial Activity/Culture</i>	HIGH - Significant step forward in helping SMEs acquire financing	MEDIUM - Large step to create a large pool of venture capital with profit motivated private VC funds; but substantial government intervention in the market	HIGH - Signal to market government supports private venture capital activity	MEDIUM - Increase incentive to make good investments in SMEs

	Alternative 1	Alternative 2	Alternative 3	Alternative 4
	Angel Investor Network	Iowa Program	CVCA Policy Proposal	Angel Investor Tax Credit with Rollover
Political and Security Criteria				
<i>Political Feasibility</i>	MEDIUM - Fosters support from SMEs but requires increased spending	LOW - Requires substantial collaboration with Federal government to allow access to pension funds	LOW - Unlikely government would partake in limited partnership with investment decisions	MEDIUM - Support from wealthy individuals increases but some groups may perceive this as "helping the rich"
<i>Responsiveness</i>	HIGH - Creates a healthy arena for ideas and corresponding financing	HIGH - Creates a market where there is adequate capital pool and access to profit-motivated investors	HIGH - Creates a market where there is adequate capital pool and access to profit-motivated investors	MEDIUM - Helps to create SME investment opportunities but to a lesser extent
<i>Risk</i>	MEDIUM - Only Entrepreneurs and Angels are exposed to risk of investments	MEDIUM - Exposes government to private venture capital fund investments; although eases possible transition from LSVCC investments	MEDIUM - Risk is diversified among partners, but government holds significant burden	MEDIUM - Only well-performing Angels receive the benefit of repeat investments in SMEs
<i>Stakeholder Response</i>	HIGH - Engages entrepreneurs, Angels, and government into one arena	HIGH - Brings SMEs, individual investors, and institutional investors together to create growth; government serves an administrative role rather than an active role	MEDIUM - Entrepreneurs, venture capitalists, and banks on board; government may be 50-50 regarding trade-off	MEDIUM - No role for institutional investors but enhances participation of well-performing Angels

To conceptualize the impacts in aggregate of each alternative, it is useful to calculate an overall measure of each policy alternative. One way to do this is to allocate quantitative values for each high, medium, and low score. If each criterion is allocated a numerical value, then an overall evaluation in the form of an index score can be presented. To evaluate the policy alternatives in this way, values of 0, 5, and 10 were allocated to the scores of low, medium, and high. An average of each sub-section of criteria (i.e. economic, social and procedural, as well as

political and security) was then calculated. To calculate an overall score of each policy alternative, an equally weighted average of each criteria sub-section was calculated.⁴⁸ The results of this process are presented below in table 18.

Table 18: Calculation of Policy Alternatives

	Alternative 1	Alternative 2	Alternative 3	Alternative 4
	Angel Investor Network	Iowa Program	CVCA Policy Proposal	Angel Investor Tax Credit with Rollover
Economic Criteria				
<i>Efficiency</i>	5.0	10.0	10.0	5.0
<i>Expected Increase in VC Activity</i>	10.0	5.0	10.0	5.0
<i>Change in the Size of Capital Pools</i>	5.0	10.0	10.0	0.0
<i>Change in the Access to Capital Pools</i>	10.0	10.0	10.0	5.0
<i>Cost</i>	5.0	10.0	0.0	5.0
<i>Distortions</i>	10.0	0.0	5.0	5.0
Section Score	7.5	7.5	7.5	4.2
Social and Procedural Criteria				
<i>Simplicity</i>	5.0	5.0	5.0	0.0
<i>Administrative Operability</i>	0.0	5.0	5.0	0.0
<i>Equity</i>	10.0	10.0	0.0	5.0
<i>Changes to Entrepreneurial Activity/Culture</i>	10.0	5.0	10.0	5.0
Section Score	6.3	6.3	5.0	2.5
Political and Security Criteria				
<i>Political Feasibility</i>	5.0	0.0	0.0	5.0
<i>Responsiveness</i>	10.0	10.0	10.0	5.0
<i>Risk</i>	5.0	5.0	5.0	5.0
<i>Stakeholder Response</i>	10.0	10.0	5.0	5.0
Section Score	7.5	6.3	5.0	5.0
Overall Score	7.1	6.7	5.8	3.9

Calculating the sub-section scores allows policy makers to differentiate the strengths and weaknesses of each policy based on different aspects of criteria. Looking at the economic criteria sub-section reveals that the Angel Investor Networks, the Iowa program, and the CVCA proposal have equal positive impacts, all receiving a score of 7.5. The Angel Tax Credit Rollover

⁴⁸ An average was calculated for each section of criteria: economic, social and procedural, and political and security. To compute the overall score, an average of the three sub-scores was calculated.

alternative received a score of 4.2 largely because it fails to substantially increase the venture capital pool and comes at a significant cost relative to the other options.

The Iowa program and the Angel Investor Network received the highest score (6.3 out of 10) on the social and procedural criteria. The CVCA proposal had the second highest score with a value of 5.0. The Angel Investor Tax Credit Rollover received a score of 2.5.

The Angel Investor Network was alone having the highest score for political and security criteria (7.5 out of 10). The Iowa program received a score of 6.3 while the CVCA proposal and the Angel Investor Tax Credit Rollover both received a score of 5.0.

When all the criteria sub-sections are aggregated into an equally weighted index, it reveals the Angel Investor Network is the highest scoring alternative with a value of 7.1 out of 10. As mentioned previously, this score represents a relative score and not an absolute value. That is, a score of 10 does not suggest it is the optimal policy; rather, it suggests it helps to fulfill the policy objectives better than the other alternatives. The second highest scoring policy alternative is the Iowa program with a score of 6.7. The CVCA proposal had the third highest score of 5.8. The Angel Investor Tax Credit Rollover had the lowest overall evaluation with a score of 3.9.

10.2 Policy Alternative 1: Angel Investor Network

Based on the criteria and measurement the Angel Investor Network received the highest score and thus, presents one of the best policy options for increasing venture capitalism in British Columbia. The positive aspects of the Network that separates itself from the other options is the increase in interaction between entrepreneurs and angel investors, the increase in the venture capital pool and access, the signal to the market that the government has taken a step forward in promoting entrepreneurial activity and venture capital finance in the province, and doing all of these things with minimal distortion and cost to taxpayers in the province. These factors serve to reduce information problems such as asymmetries between lenders and borrowers in the venture capital market. The downfalls of this alternative include the complexity of start-up and organization as well as inability to include one of the major concerns of stakeholders in the market, institutional investors. Overall, it seems a valuable addition to the venture capital market in British Columbia – in that it closes the information asymmetry problem – that would work well in complement with the current policy mix and possibly another policy option that incorporates institutional investment.

10.3 Policy Alternative 2: Iowa Capital Investment Board

The Iowa program received the second highest score based on criteria and measurement. The positive elements of the Iowa program include increases in the venture capital pool, improvement in efficiency, and generally a positive reaction from stakeholders. In addition, the Iowa program presents a viable alternative to policy makers looking to reduce (potential) costs and ease transition of possible reform to the LSVCC program. The major negative aspects of the program include the low political feasibility of introducing a new, large government program in the market that brings with it risk of return that is pegged to private venture capital funds. Moreover, it should be noted that it is possible that the government may have to pay for greater redemptions than anticipated if the rate of return of the private venture capital funds falls below the guaranteed rate of return for the equity shares. The only way to counter this risk is to legislate spending limits, or limits on the amount of shares that can be redeemed in one period of time and to cap the threshold for investments. It is unlikely the government would want to expose taxpayers to that level of risk, or be exposed to paying redemptions.

This alternative surely presents risks for government that should be given due diligence. However, evidence from Iowa and the similar Oklahoma program show that there are substantial positive benefits. The governments of Iowa and Oklahoma have yet to spend any funds on the program as it has funded itself through gains in the market. If British Columbia were to incorporate this program correctly for the provincial market, and if politicians were convinced that the level of risk was relatively low, this could be a viable alternative in the medium-term for the province.

10.4 Policy Alternative 3: CVCA Policy Proposal

The CVCA policy proposal is a new idea that relies more on market forces than government intervention to grow venture capitalism. It received the third highest score based on the criteria and measurement. The main reason it ranked third overall in scoring rather than higher was because it has not been tested in the market and some impacts are unknown. The positive aspects include first and foremost the inclusion of institutional investors into the venture capital market. Other positive aspects are the increases in venture capital activity, venture capital pool size, and access to venture capital pools as well as the signal to the market that the government is supporting market driven entrepreneurial finance and venture capitalism in general. The pertinent downfalls are the cost and risk borne by taxpayers by guaranteeing a loan to a private venture capital fund and the political resistance to committing funds to a fund where it has little

decision making input. Overall, this policy option should be explored for no more than a viable means to bring institutional investors into the market.

10.5 Policy Alternative 4: Angel Investor Tax Credit Rollover

The Angel Tax Credit Rollover received the lowest score based on the criteria and measurement. The low score was largely the result of complexity, high cost, and facilitating little change in creating new venture capital. Also, stakeholder response and political support is likely to be lower with encouraging reinvestment from angels than the other possible alternatives. Some positive aspects include a modest increase in venture capital activity and fixing the distortion created by granting the tax credit to all new investments by wealthy individuals. An added dynamic in considering this alternative is the new federal government's plan to introduce a similar capital gains rollover at the federal level. If a rollover is implemented at the federal level, it would reduce the viability of introducing this alternative at the provincial level even less. Overall, this alternative is perhaps not the best choice relative to the other possibilities.

11 Policy Implications

Utilizing criteria and measurement certainly provides a framework for predicting outcomes of different policy alternatives. The above analysis revealed that Angel Investor Networks and the Iowa program present viable public policies to address venture capitalism in British Columbia. However, as McArthur (2006) explains, the further consideration of trade-offs remains critical to public policy analysis and more specifically, policy recommendations:

While the evaluation of alternatives weighted each category of criteria equally, this may not be reasonable, or even desired practically. That is, in making decisions about policy, policy makers may very well consider economic aspects paramount, or at certain times, political aspects the most important. Regardless, it is important to have a further understanding of the assessment of alternatives. One should undertake an evaluation that reveals the trade-offs of each alternative. (McArthur, 2006, Interview)

The consideration of trade-offs in this study calls for the practical consideration of economic factors versus other criteria such as social and political elements. Typically, public policies associated with venture capital and entrepreneurship focus more on impacts on the economy than impacts on political factors or social factors. This study is no different. Of paramount concern in this study is the fulfillment of policy objectives. That is, increasing venture capitalism in the province. As such, it may be the case that economic criteria need to be weighted more than the other categories of criteria. If this were done, the scores reveal that Angel Investor Networks, the Iowa program, *and* the CVCA proposal deserve equal consideration. In consolidating evidence gathered from interviews with experts in the market, this seems like a more accurate depiction of reality. While Angel Investor Networks and the Iowa program received the highest scores in the initial analysis, what brings the CVCA proposal on equal footing is the incorporation of institutional investors into the market, something the other two alternatives fail to do.

As a practical matter, it may be worth the cost and the associated risk to introduce the CVCA proposal. Not only would it increase venture capital activity in the province but it would provide an important signal to the rest of Canada and US markets that British Columbia is making a commitment to increasing venture capitalism. While it may not be ready for immediate

implementation, it is a policy alternative that ought to be considered carefully and may well be part of the venture capital policy mix in the near future.

Another trade-off that was discussed earlier but deserves attention once again is the balance of domestic investment versus foreign investment. While the optimal balance of domestic and foreign investment is unknown, it is generally considered that to create a healthy investment climate there needs to be large contributions from both; with the caveat that the market should not over rely on one or the other. Over reliance on domestic capital may be a signal that the domestic market is unattractive to foreign investors, which ultimately makes the venture capital pool smaller than it could be. On the other hand, over reliance on foreign capital is risky in that unfavourable market conditions may scare off foreign investors to the point that a huge gap is left open in the domestic market. The balance of domestic and foreign involvement in the venture capital market speaks more broadly to the debate raised in several interviews: why does British Columbia not produce *Googles*? Interviewee A, Senior Vice President of a venture capital firm, explained that British Columbia cannot produce huge success stories simply because British Columbia does not have large enough funds which ultimately means deal sizes are smaller compared to US counterparts (Elite Interviewee A, 2006, Interview).

Essentially, some of British Columbia's best ideas for innovative, high-technology businesses are being financed by US venture capital funds because there is not enough venture capital in the province. In terms of the policy alternatives, the Iowa program and the CVCA proposal again seem attractive. Both have the potential to raise considerable capital and in order for British Columbian venture capital funds to compete with US venture capital funds. Furthermore, because both are based in British Columbia they will likely have a stronger knowledge of the unique aspects of British Columbia. As economist Jock Finlayson explains, British Columbian venture capital funds which have strong knowledge of the domestic market are likely to facilitate better decision making (Finlayson, 2006, Interview).

One last trade-off to consider is the cost of each policy alternative. The cost element of a policy decision in this case is critical given the pressure on government to trim expenditure and secondly, the optics of spending taxpayer dollars on the market driven, venture capital market. At the outset, each policy alternative is less expensive than the status quo, British Columbia's current system of tax credits for LSVCCs and other programs. LSVCCs are a costly way to raise capital and thus, policy makers may look to ways of reducing that expenditure while simultaneously increasing venture capitalism. The Angel Investor Networks are by far the cheapest alternative. While they may require high initial set-up costs, government's role is more to coordinate than

operate. Angel Investor Networks also present an option the government can quickly and easily implement relative to the other alternatives. The downside is that with low risk, there is much less venture capitalism created in the province. The CVCA proposal calls for the government to guarantee a \$12 million (although this could be modified) bank loan for each private venture capital fund that partakes in the program. It is likely the government would wish to cap expenditure (or guarantees) of this program. For instance, the government may wish to cap the program to four funds over five years on a cyclical pattern, or only \$48 million in guaranteed loans every five years.

The Iowa program is more difficult to budget for, given the government will only spend taxpayer dollars if called on its guarantees. In addition, the government may be called upon to cover a non-trivial cost of the rate of return if the performance of the equity shares falls behind the guaranteed redemption rate. While the private venture capital funds are likely to outpace the guaranteed rate of return, it is a risk that policy makers need to consider. Moreover, since the government of Iowa (and the similar Oklahoma program), have not encountered being called on its guarantees (or covering any loss on low rate of return), it is difficult to estimate if the government of British Columbia would have a similar experience. However, it does not require a huge leap of faith to suggest the program will run in much the same fashion given sizes of the economy are quite similar. In fact, the Iowa program may perform even better – characterized by an increase in venture capitalism without getting called on its guarantees – in British Columbia given the positive outlook for the province as articulated by this study's interviews with market experts. Overall, from a cost perspective, Angel Investor Networks and the CVCA proposal seem like viable policy options. The Iowa program may be something the government would have to carefully consider for medium-term implementation coupled with more research into the potential costs; it may also depend on the fiscal position (i.e. deficit or surplus) of the province.

Overall, placing added emphasis on economic criteria, the balance of domestic and foreign investment, and the risk and cost trade-off reveals some subtle elements of policy implications not captured in the preceding overall evaluation. Policy makers, in their calculation of which policy options are best for the province, must weigh carefully these other aspects. This study reveals that in considering the overall evaluation and these trade-offs, the government may wish to pursue:

- Investing in a combination of regional Angel Investor Networks with the emphasis on coordination not operation to help close information asymmetries;

- Introduce the CVCA concept to key stakeholders in the province, conduct consultation before any implementation to determine the optimal fund and loan size to generate the greatest benefit to British Columbians;
- Push the Iowa program, and possibly the Oklahoma program onto the public policy agenda. Launch a research agenda to understand more in depth the potential risks and costs of the policy. Aim for medium-term implementation;
- Place the Angel Tax Credit Rollover option on hold – wait for the new federal government to implement their capital gains rollover plan; assess, and then amend if necessary;
- Launch consultation with institutional investors with the purpose of discovering why they do not invest in British Columbia's venture capital market.

12 Conclusion

Venture capitalism is not simply a pursuit of making the lives of British Columbia's better through financing entrepreneurs. More broadly, it is critical to the success of the provincial economy. The pressure of increasing competition from globalization coupled with declining reliance on resources pushes policy makers to think carefully about how to create an environment that facilitates the future of British Columbia: people in the business of innovation and technology.

Venture capitalism is the key aspect of supplying "fuel for the engine" that is entrepreneurial discovery and small business development in the technology and innovation sectors. Without it, entrepreneurs cannot acquire the funds to launch an idea and established ideas cannot get further financing to expand into valuable markets. As economist Joseph Schumpeter (1942) explained, this process of entrepreneurial discovery and financing to bring these ideas to market is called "Creative Destruction" and is simply the essence of capitalism. That is, venture capitalism finances the economy's shift to a new frontier of growth and prosperity. Ultimately, developing new ideas through venture capital finances our own advancement and thus, improves our living standards.

British Columbia is certainly ready to blossom into a hub for venture capitalism and technological innovation. Jock Finlayson explains that of the Canadian provinces, British Columbia is one of the most entrepreneurial provinces recording high rates of self-employment and small businesses (Finlayson, 2006, Interview). Moreover, in interviews with market experts it was revealed that British Columbia, primarily through Simon Fraser University and the University of British Columbia, are producing valuable ideas that are either not acquiring financing or are becoming financed by US venture capital funds. While the demand for venture capital (i.e. number of entrepreneurs) can certainly increase in the province, there simply needs to be more interaction between entrepreneurs and angel investors and more and larger venture capital funds in the province. Overall, British Columbia could become a wealthier province if government and other key stakeholders work to create a policy environment that facilitates the province reaching its potential.

The venture capital market and the associated public policies are complex. Examining a relatively small venture capital market such as British Columbia reveals that creating a policy environment conducive to growth requires knowledge of taxation, regulation, market forces, and human capital. This study is a modest exploration of just one aspect of entrepreneurial growth: finding ways to finance that small proportion of small businesses that grow big. In brief, it was found that there is too little venture capitalism in British Columbia. That is, relative to other jurisdictions, particularly in the United States, British Columbia's venture capital pool is small, is financing a small number of small businesses, and is not sourcing institutional investment.

Policy makers in British Columbia would be wise to explore public policy alternatives to address some of these concerns. The policy implications of this study illustrate that there are short, medium, and long-term policy initiatives that can be implemented by the provincial government. The overarching trajectory of these public policy initiatives is one that encourages entrepreneurship, particularly in the technology sectors. Interestingly, this is very much inline with a key priority set out in the current provincial government's campaign agenda. Overall, it is a set of policy implications that are likely to find support not only in government but among many key stakeholders as well; ultimately, to the benefit of all British Columbians.

Appendices

Appendix: Interview Questions

The general focus of the questions is: (1) your perception of venture capitalism in BC, and (2) insights into the feasibility and efficiency of different policy alternatives.

Area 1: Importance of the policy problem/study; insights into BC's venture capital market

1. What is your perception of BC's venture capital market? How important is it that BC builds up venture capital activity?
2. What is your view of LSVCCs in BC?

Area 2: Insights into Policy Alternatives

3. In terms of value-for-money from a public policy perspective, what do you think are the best options to create more venture capitalism in the province?
4. In your estimation, is the tax credit associated with LSVCCs needed to facilitate the creation of venture capital in British Columbia? Or, similar to Ontario, do you think venture capital can be raised exclusively by other means?
5. In your view, would the government consider reducing the tax credit? Or change the pacing requirements or investment restrictions?
6. What is your opinion of angel investor networks?
7. What is your opinion of the CVCA proposal?
8. What is your opinion of the Iowa or Oklahoma programs?
9. Are there any other ways to increase institutional investment?
10. What is your opinion of the Angel tax credit rollover?
11. Are there any other aspects of this policy study you would like to see?

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- McArthur, D. (2006) Interview, February.
- Munro, M. (2006) Interview, February.
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Statutory Laws

- Employee Investment Act*, RSBC 1996, Ch. 112.
- Small Business Venture Capital Act*, RSBC 1996, Ch. 429.