A LONGITUDINAL ANALYSIS CRITIQUING THE EFFECT OF CAPITAL GAINS TAX POLICY ON THE INVESTMENT PREFERENCES OF VENTURE CAPITAL COMPANIES IN THE UNITED STATES OF AMERICA

BY

JAMES L. SILVESTER

UNITED KINGDOM

June 2015

A Thesis In Partial Fulfilment Of The Requirements Of Anglia Ruskin University For The Degree Of Doctor Of Philosophy
Acknowledgements

This thesis journey started with this researcher’s enrolment in the DBA Program at Nova Southern University, taking taught courses in research applications at the urging of Dr. Herbert Myers, DBA, Harvard University. The doctoral journey was a tenuous process distracted by family life and publishing opportunities. Even after parting from professional affiliation, Dr. Myers encouraged this researcher to proceed along the doctoral path. He was always in the background, pushing. Although never making it to his funeral in 1995, this researcher visited his gravesite in the national cemetery in Culpepper, Virginia, saluted him for serving his country, and vowed to finish the doctorate. He was a mentor and friend.

This researcher would like to acknowledge the faculty and staff of Anglia Ruskin University. Particular consideration is given to Dr. John Webb for twice visiting with this researcher in the United States over wonderful meals and engaging in thirty gruelling hours of intense reflections upon this thesis. Over the course of this thesis journey his insight and helpful hand has been invaluable to this scholarly endeavour. Thanks also go out to the third supervisor, Dr. Pamela Webber, who early on in the thesis adventure drilled this researcher hard on the research question and hypothesis alignment.

Finally, this researcher cannot say enough about the primary supervisor, Dr. Rob Willis. He endorsed this researcher’s efforts to achieve re-enrolment. It took a year but his steady hand always calmed the day. He assisted this researcher through some difficult personal situations that could have once again compromised this thesis process, and was always present, offering both insight and encouragement. Dr. Willis is a mentor and good friend.
Anglia Ruskin University

Abstract

Faculty Of The Lord Ashcroft International Business School

Doctor Of Philosophy (PhD)

A Longitudinal Analysis Critiquing The Effect Of Capital Gains Tax Policy
On The Investment Preferences Of Venture Capital Companies In The United States
Of America.

By James L. Silvester

March 2015

Long term changes in capital gains tax affect the investment preferences of venture capital companies over time. This is an acceptance of the working hypothesis and answers the basic research question, which is: Do Longitudinal Changes In The Capital Gains Tax Effect The Investment Preferences Of Venture Capital Companies?

The literature review was delimited by time and terminology, and orbited about the theoretical foundation of the thesis. The secondary data displayed unusual depth and richness yet was subject to rapid obsolescence and political polarization due to the topical and controversial nature of capital gains tax.

The methodological inquiry protocol was positivist and deductive in practice, using vetted and static survey instruments with which strict ethical standards were maintained. Nonparametric tools were employed given the quantitative and categorical nature of the data, and the null hypothesis was rejected.

Findings were triangulated via the primary and secondary data. The secondary data proved helpful but inconclusive, as did the minor phenomenology inputs. Reliance on primary data was key to the outcome.

This thesis concludes that statistical significance exists between capital gains tax and the investment preferences of venture capital companies over time in the United States. This does not mean there is an association in the form of a correlation or a causal relationship.

The work contributes to scholarly endeavour and to date is unique in its longitudinal posture. Future research should build upon the thesis findings to update and refine the longitudinal interaction between the variables in question.
# Table Of Contents

Acknowledgements i

Abstract ii

Table Of Contents iii

Copyright Declaration And Notation Of Style iv

Chapter One - Introduction To The Thesis

  Introductory Statement 1
  Why Perry 5
  What Is The Importance of This Research Effort? 6
  The Initial Journey 7
  Reasons For The Research 7
  Statement Of Research Problem 8
  Background To The Research Problem 10
  Statement Of Purpose (Aims And Focus) 10
  Initial Reflections On The Literature 11
  Justification For The Research 15
  Limitations Of The Research 18
  Statement Of Previous Work 19

Chapter Summary 21

Chapter Two - Literature Review

  Introductory Statement 22
  The Argument 23
  Parent Disciplines Supporting the Argument 28
  Parent Disciplines And Their External Impact 29
Inductive Research 181
Expanded Data Mining 183
Logic Behind Multi Variant Selection 186
Critical Analysis Of Combined Primary And
Secondary Data 187
Statistical Analyse Of Surveys One, Two, And Three 187
Statistical Analyse Of Surveys One, Two, Three, Four 195
Overview Of The Survey 204
Comments On The Fourth Survey 206
Review Of Individual Investment Preferences 207
Global Comments On Findings 221
Chapter Summary 225

Chapter Five - Conclusions And Discussions

Introductory Statement 227
General Conclusions 227
Triangulation Of Data 229
Research Question Answered 230
Research Problem Explored 231
Working Hypothesis Tested 231
Basic Theory Explored 233
Justification For Further Research 234
New Paradigm Needs Further Research 241
Public Sector Implications 244
Private Sector Implications 248

(iii) continued
<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gaps In The Literature</td>
<td>250</td>
</tr>
<tr>
<td>General Reflections</td>
<td>252</td>
</tr>
<tr>
<td>Contributions And Implications</td>
<td>253</td>
</tr>
<tr>
<td>Chapter Summary</td>
<td>255</td>
</tr>
<tr>
<td>PostScript</td>
<td>256</td>
</tr>
<tr>
<td>Thesis Epilogue</td>
<td>256</td>
</tr>
<tr>
<td>Definitions Glossary – I</td>
<td>258</td>
</tr>
<tr>
<td>List Of Appendices – II</td>
<td>261</td>
</tr>
<tr>
<td>List Of Exhibits – III</td>
<td>268</td>
</tr>
<tr>
<td>List Of Figures – IV</td>
<td>317</td>
</tr>
<tr>
<td>List Of Tables – V</td>
<td>319</td>
</tr>
<tr>
<td>Bibliography – VI</td>
<td>321</td>
</tr>
</tbody>
</table>

(iii) continued
Copyright Declaration

This thesis is protected under the copyright laws of the United Kingdom.

Attention is drawn to the fact that copyright of this thesis rests with: (i) Anglia Ruskin University for one year and thereafter with, (ii) James L. Silvester

This copy of the thesis has been supplied on condition that anyone who consults it is bound by copyright.

This work may (i) be made available for consultation within Anglia Ruskin University Library or (ii) be lent to other libraries for the purpose of consultation or may be photocopied for such purposes.

/s/ James L. Silvester
Thesis Author

Notation Of Style

The main body of this thesis is written in United Kingdom (UK) English utilizing Times New Roman at 12-point font on size A4 paper conforming to Harvard Styling. Third person style is used. United States (US) English styling is maintained when appropriate. For example, the Center For Tax Policy is an American organization. In this case, the spelling of the word “center” is in U.S. English as opposed to U.K. English, which would be “centre”. Additionally, there is a mixing of UK and US styles within the Appendices and Exhibits depending on how and when they were developed. The Anglia Ruskin University Guide to the Harvard Style of Referencing, September 2010 was utilized. Reference Works was employed to construct and store the citations databank and styled in Harvard v.4 (Anglia). The reference list and reading list were combined, and consequently some bibliographical citations referring to the same author in the same year but for different publications may not appear “in text” but instead exist within the reading list.
CHAPTER ONE

INTRODUCTION TO THE THESIS

Introductory Statement

If entrepreneurs are the champions of western economies because of their employment-creating attributes, then venture capitalists are the lifeblood that feeds these job-producing juggernauts.

So significant are they to western economies, that political leaders of all persuasions cite business and employment statistics to indicate robust growth within their respective small business sectors (Bond, 2002). Promises of economic stimuli directed at entrepreneurial sectors are made but are mostly of a fiscal nature. Direct monetary stimulation is rare, except in times of economic crisis. Such stimulation resembles a broad approach and seldom offers any benefit to smaller entrepreneurial firms. The governmental stimulus packages in the United States brought about by the financial panic of 2008 confirm this (Blinder and Zandi, 2010).

Yet the entire job creation debate adds credence to the idea of moving forward and invoking a study of the venture capital industry that may give rise to changes within this field; even hinting at a paradigm shift.

Consequently, the title of this thesis, “A Longitudinal Analysis Critiquing The Effect Of Capital Gains Tax Policy On The Investment Preferences Of Venture Capital Companies In The United States Of America.”, links directly to a research question that helps in this thesis’ process:

Do Longitudinal Changes In Capital Gains Tax Affect The Investment Preferences Of Venture Capital Companies?

The research question ties into the idea that targeted fiscal policy affects the
venture capital industry by executing targeted tax reductions. This is the basic theory and theoretical framework on which this thesis rests and “underpins the research question” (Collis and Hussey, 2009, p. 118). This idea also influences the research path illustrated in Figure 1-A, which defines the methods used to reach a conclusion based on the chosen research paradigm. The steps are in tandem and not mutually exclusive. One must exist for the other to develop and have relevance to the research exercise.

Figure 1-A Research Path

Research Question

Research Problem

Hypothesis/Hypotheses/Propositions

Research Paradigm of Choice

Methodological Path

Literature Review

Application of Methods

Analysis of Data

Conclusions

Source: James Silvester, 2012
This research question also expresses the possibility of a relationship between the independent and dependent variables. This implies that this thesis is a positivist study (Collis and Hussey, 2009); a concept that is reviewed and discussed elsewhere in the work.

This thesis is topical and argumentative in nature. The study seeks to analyse and debate whether changes in capital gain taxes affect investment capital preferences within the venture industry. The argument is clear and concise and stimulates the following bivariate working hypothesis:

Changes in the capital gains provision of the tax code affect venture capital investment preferences. This statement links directly into the theoretical framework (Creswell, 2009) and research process.

Capital gains tax is the primary independent variable in this study, while the investment preferences of venture capital companies are the main dependent variables. The hypothesis clearly defines the approach of this thesis and attempts to test current theories as opposed to creating a new theory.

The primary research is longitudinal in nature, spanning over two decades and involving over 1200 queries in closed-end static survey questionnaires. Two follow-up open-ended survey questionnaires completed by opinion leaders also tested the stated hypothesis. The secondary research was vast, yet topical due to American presidential politics focusing on capital gains provision in 2012. In the current debate over the rich vs the poor and the middle classes, the topic of capital gains is prominent on the national stage, as the provision is widely viewed as favouring the wealthy; in particular, the wealthiest one percent of the population. A new view is evolving, centring on the argument over whether the capital gains provision is an economic instrument used to manipulate economic behaviour or just a lever used by
the wealthy and elite to accumulate additional economic power (Burman, 2007). This argument, as debated in American politics, is controversial.

The literature is split along political lines and inconclusive. Literature supporting lowering or eliminating capital gains taxes is part of conservative platforms, and support for increasing those taxes is part of liberal positions. The few unbiased pieces of literature concerning capital gains provision originate outside the United States, with a few exceptions. Therefore, the weight of the secondary sources, critically analysed and viewed within the bias circle illustrated in Figure 1-B, is an important consideration. Personal epistemology and interpretation can invoke bias if a researcher is not careful. Ontology and axiology should also be included in the bias circle. This critical analysis will place much weight upon the validity of the primary research to ensure outcome accuracy in particular in view of emerging paradigms.

**Figure 1-B**

![Bias Circle Diagram](source: University of Otago (2011, p. 1))
WHY PERRY

Why consider Perry? This researcher went to significant ends to study various PhD structures. This journey included searching many databanks containing doctoral theses, including Pro-Quest and Google Scholar. The search was narrowed to business-related studies using deductive approaches and quantitative methods.

In almost all cases, a five-chapter structure approach emerged. This is standard within business-related quantitative studies at a PhD level, according to Perry (1994a). The widely accepted Perry structure stood out because it was born out of a business marketing study and has those characteristics that can best express the outcome of this thesis.

This structure appears to be the optimal choice for several reasons. It is flexible in that Perry (1994a) suggests modifications to his promulgated structure if the course of the research demands a change, and several alterations occurred in the course of the study. His advocacy of a section on private sector implications and a section on public sector implications were also important factors in choosing this structure.

Given that the data and outcomes of this thesis concern a sensitive and ongoing debate in the political realm, Perry’s suggestion of public and private sector inclusions intrigues this researcher and seems unique among the structures reviewed.

Another consideration was the inclusion of an introduction and summary of the individual thesis chapters, although this was not particularly unique among the thesis examples examined. This approach allows the researcher to reflect on each chapter and these sections serve as building blocks for the thesis conclusions.

In addition, Perry highlights discussions of parent and immediate disciplines. Few of the business thesis examples reviewed included such an opportunity in this
format. Given the depth of the theory surrounding the research question and working hypothesis before the theoretical foundation takes hold, the breadths of all related disciplines are established. Tackling capital gains taxes, the primary independent variable in this thesis, as well as the investment characteristics of the venture industry and the outcome variables, is a formidable task requiring an understanding of the environmental and internal forces imposing upon the variables.

Perry (1994b) implies that the five-chapter approach is a highly focused approach to the thesis and answers the criticisms of 139 thesis examiners regarding faulty thesis design. He acknowledges that the approach does have flaws and remarks upon the delimitations; for example, the structure does not lend itself to unorthodox methodologies, it fails to address writing technique and styles, and it does not suggest a starting point. However, Perry does point out the importance of proper style and structural consistency.

In conclusion, the Perry five-chapter structure has a proven record within business academe. It is a pliable platform upon which to launch and complete a PhD in business and is often found in studies using quantitative means that tend toward positivist, post-positivist and pragmatic inquiry paradigms. Perry’s model is illustrated in Exhibit L. This demonstrates the broad, important and interacting elements of the research path, and suggests that all five key modules exist without mutual exclusiveness, being dependent on one another.

**What Is The Importance Of This Research Effort**

It is naïve to assume that any research endeavour is unique. In most cases, the research area has already been examined to one degree or another. The key is to build upon what has been accomplished thus far by building upon and/or testing existing theories. This thesis seeks to test the prevailing theory that specific fiscal stimuli
affect the investment preferences of the venture capital industry. It is significant to the field because it is unique in its application of a longitudinal study covering a 24-year time span, using four separate surveys. Previous research suggests that this is a unique field of study, and this is confirmed by interviews with opinion leaders within the venture industry such as the executive director of the venerable National Venture Capital Association.

The Initial Journey

The doctoral journey began in 1984 in research courses at Nova Southeastern University; a fully accredited institution. The path of everyday life intervened, in terms of family issues, professional demands and publishing opportunities, and thus repeatedly disrupted the journey.

The roots of this research extend even further back, beginning in 1978. This researcher taught courses in entrepreneurship and international business and simultaneously authored a regionally syndicated newspaper article specialising in small business topics, as illustrated in Appendix B. The article concerns entrepreneurial funding topics.

Reasons For The Research

Due to the construction of a venture capital database, one of the few in existence at the time and completed in cooperation with the United States Small Business Administration while a university instructor, this research began the foray into the venture capital industry. Appendix C, reproduced from a local newspaper, illustrates the computer program used, along with two academic assistants who assisted in development of the database. This project produced the development and international publication of a book entitled *How To Start, Finance, And Operate Your Own Business* (Silvester, 1984), with a foreword contributed by the then United States
Senator, Paul S. Trible, Jr. The book contained an extensive and detailed collection of venture capital sources. It went into multiple printings and numerous editions over twenty years, finally ending up in a third edition. Other books followed, including *Secrets of Success In Your Own Business* (Silvester, 1986), also with a foreword by Senator Trible, *401 Questions Every Entrepreneur Should Ask* (Silvester, 2006), with a contributing foreword by Virginia Governor Tim Kaine, and finally *151 Quick Ideas For Start-Up Entrepreneurs* (Silvester, 2007).

The republications of the 1984 book occurred at approximately the same time as the passages of important pieces of fiscal legislation. A data pattern developed suggesting a potential relationship between capital gains tax, the independent variables in this thesis, and the investment preferences of the venture capital industry, the dependent variables, over a longitudinal span.

At the same time, this researcher started to take doctoral level research-oriented courses and the thesis concept developed.

The development of the computer application described above began as an academic exercise. Upon leaving academia, this researcher charted a career in banking, followed by an extensive career in the financial consulting business and venture capital industry. Combining experiences acquired as a practicing consultant, venture capitalist and finance professor helped launch what would become this doctoral endeavour.

**Statement Of Research Problem**

Historically, the investment preferences of individual venture capital firms change infrequently. The venture industry is conservative and “arcane” in structure according to Bussgang (2010), and a more recent trade article published in *Entrepreneur* confirms this (Anonymous, 2013). As a practicing venture capitalist,
this researcher noted that more subtle changes occur for internal reasons, such as
increases or decreases in available investment capital, opening an office in another
geographic area or changes in corporate leadership. Nevertheless, when major
changes in investment preferences occur, they seem to happen together throughout the
collective of firms operating within the industry and reacting to outside external
factors beyond their control, as recently reported by the Wharton School of Business
(2010). Some, such as financial journalist Kudlow (2007), believe this is due to
changes in those fiscal policies directed towards the entrepreneurial sectors of the
larger systemic economy. Conversely, other experts (Wharton School of Business,
2010) and economists (Burman and Gale, 2011) attest that these targeted fiscal
manipulations have no effect on these venture firms. They believe that changes in
collective investment preferences are due to larger systemic factors, such as across the
board tax increases, tax decreases or other elements that affect the venture industry,
including poor returns. However, Keuschnigg (2003, p. 28) notes, “policy makers and
representatives of the industry often consider the capital gains tax as the most
important tax barrier to VC investments”. Further, a study conducted by a professor at
the University of London on behalf of The British Private Equity and Venture Capital
Association with the support of the Association of British Insurers, concluded that a
relaxation of the tax on capital gains would enhance venture activity and resources
within the UK insurance industry (Burgel, 2000).

The research problem is simple: no definitive longitudinal research exists
linking changes in the investment preferences of the venture capital industry to
changes in capital gains tax.
Background To The Research Problem

The background to the problem is public policy. Previous research suggests a relationship between national fiscal policies and venture capital investments. The art is political acceptance and implementation. As nations react to economic stagnation political leaders turn to entrepreneurial sectors, where most job creation occurs; in particular, the “technology and innovation subsectors where venture capital thrives”, according to Keuschnigg (2003, p. 28). However, these direct fiscal tools used to stimulate venture capital are unpopular with the public; in particular, the capital gains tax which is the primary independent variable and focus of this thesis. Left-leaning politicians refer to the capital gain provisions of the tax code as financial breaks for the rich because most venture firms have wealthy partners. A professional academic paper presented by Auerbach and Siegel (2000) suggests that wealthy taxpayers are more sensitive to changes in capital gain tax than they are to adjustments in other rates that have a more systemic effect, such as general tax rates (Mufson and Yang, 2011).

Statement Of Purpose (Aims And Focus)

This thesis is an original contribution to the knowledge and understanding of how changes in capital gains tax affect the investment preferences of the venture capital industry over a long time period. It is a longitudinal examination (Collis and Hussey, 2009) that seeks to expand upon current knowledge by testing common theory within the field, filling informational gaps, and replacing or modifying existing theory if appropriate (Creswell, 2009). Therefore the thesis is “testing out research” as prescribed by Perry (1994c) and employs an analytical approach and argumentative style (Purdue University Owl Online Writing Lab, 2002).
This brings to mind three questions. What is the prevailing theory within the venture industry? What are the information gaps? Do the findings of the thesis alter the prevailing theory? Chapter Four analyses these questions and Chapter Five provides the answers. These three questions must be answered to resolve the promulgated research question, which is: Do Longitudinal Changes In Capital Gains Tax Affect The Investment Preferences Of Venture Capital Companies?

**Initial Reflections On The Literature**

Chapter Two is a comprehensive evaluation of the literature. However, this thesis is largely written within the context of a highly charged political debate surrounding the primary independent variable of this thesis: capital gains tax. Capital gains tax has been highly controversial since its inception in 1921. Understandably, much of the literature is predisposed to ideological influence. Some non-aligned organisations have taken a position on the elasticity of capital gains tax as it relates to economic activity, and this researcher drew upon these.

The vast amount of information and long time span involved in this thesis demanded subject-matter controls to ensure the literature included did not stray outside the normal bounds of reason. A scope was therefore established. Literature from the last 50 years, including references to classical contributors such as Hume, helped develop this scope. The only literature used dealt specifically with the subject of venture capital, fiscal policy and numerous combinations of the two. This researcher is keenly aware of the sensitive nature of this topical literature. However, this research is a longitudinal study spanning several decades. Therefore, reviews of some older studies within this time line are necessary.

The main objective of this literature review is to critically analyse the literature to build a convincing debate about the research problem.
The organisation of the information is somewhat thematic and loosely chronological, revolving around the interaction between the numerous variables, as recommended by Creswell (2009). As the review ensued, the literature began to build into an increasingly narrow focus, imposing itself upon the research question and trying to produce an answer.

The central theme of this literature review is the theoretical foundation of this thesis; the notion that fiscal stimuli directed towards the entrepreneurial sectors of the economy affect the collective investment preferences of the venture capital industry. Sub-themes are built around the specific independent variables of the thesis: capital gains tax, investment tax credit and depreciate write-offs. Additionally, and despite the reality that little literature exists on the interactions between the independent and dependent variables, the sub-themes also extend to the dependent variables where appropriate and applicable. These dependent variables are the common investment preferences within the venture capital industry, known as funding preference, industry preference, geographic preference and type of funds preference.

Consequently, the natural question becomes: do changes in capital gains taxes, the primary independent variable for this thesis, have an impact on the investment preferences of venture capital firms (the dependent variables)?

A basic assumption permeates the political and economic leadership of the American nation, which espouses that a statistical significance exists between the independent variable and dependent variables. As implied above, this is simply the basic theory and theoretical foundation upon which this thesis rests. More specifically, the theory assumes that the manipulation of capital gains tax changes general business perceptions throughout the economy, which will in turn affect business and individual investment decisions.
Without question, the structure of the literature review is important in the overall thesis strategy and, after careful review, a thematic approach was executed but not before much soul-searching and debate among the doctoral supervisors.

The University of North Carolina’s (2012, p. 3) writing centre has taken a position that a “purely thematic literature review is the most authentic and should break away from chronological order”. However, they do imply that at times a chronological “progression of time” may be included within the thematic structure if it is important (University of North Carolina, 2012, p. 3).

Given that this is a longitudinal study comparing specific pieces of fiscal legislation against the backdrop of the aforementioned dependent variables, the progression of time is used only to the extent that it contributes to the logical thematic thrust of the literature review.

The primary threat to the literature is rapid obsolescence and information overload. There is a significant debate currently taking place within western governments concerning fiscal stimuli, with vast amounts of new data pouring into the literature on a daily basis. This has been further complicated by the 2012 presidential campaign in the United States, in which Mitt Romney stirred debate about capital gains tax. This created an explosion of new literature on the subject, discussed later in Chapter Two.

Guarding against personal bias is paramount. Professionally, most venture capitalists support the notion that capital gains tax should be relaxed or abolished altogether, even though they may personally disagree with that position. This researcher was no different, believing capital gains tax to be a burden to the economy, stifling growth and job creation. This doctoral journey changed that perspective to
some degree but not entirely. It did give pause to a critical eye and cautioned this researcher against subjectivity and personal bias.

A flow chart of the literature search was constructed, as suggested by Hart (1999) and illustrated in Chapter Two. In addition, as recommended by Taylor (2010) of the University of Toronto’s Health Sciences Writing Centre, this researcher used a descriptive approach to the literature review, as opposed to writing an annotated bibliography.

The argument is that capital gains taxes, a component of fiscal policy, influence the nature of venture capital firm investments. The research problem is the gap in the literature and that no previous primary studies have attempted a longitudinal study of the effects of changes in capital gains tax provisions on venture management.

The literature becomes a debate rather than fact analysis, with much political bias injected into the argument. This is particularly true given that the tax cuts introduced during the Bush Administration expired at the end of 2012. Since Bush drastically lowered the capital gains provisions within those tax cuts, a major political debate emerged during the presidential election year of 2012, with one major party supporting and one opposing the expiration of the taxes, making this a topical thesis.

This review first separates the literature into manageable sections, staying focused on the variables, as suggested by Creswell (2009). The objective is dissection of such literature to understand the interactions between the variables. The only deviation from this course is a review of the literature involving the development of this thesis in terms of overall design and the approach to the research question and hypothesis.
The literature review also centres on the basic theory of this thesis. This invokes an immediate and ongoing debate amidst the literature that supports, refutes or is neutral to the basic theory. It was felt that such interaction would add a dynamic flow to the discussion, as opposed to the segmentation of the literature purely based on support or lack of support for the working hypothesis or on chronology.

Readers will notice a high concentration of literature from 2010 onwards. This explosion in literature is due to the events and political discussions leading up to the enactment of the Job Act of 2010. This was the first time in history that elimination of capital gains and other taxes on investment in small companies occurred. Secondly, the presidential Campaign of 2012 spawned a tumultuous debate on capital gains tax.

The global objective of the literature review is to expand the common body of knowledge within the field of entrepreneurship. Filling the gaps and enhancing understanding are the primary objectives of this study. Therefore, the thesis is original inquiry by means of combining inconclusive and vague past and current research, and then moving to the next level-seeking outcome.

**Justification For The Research**

Political leaders believe that employment creation in western countries originates from the expansion of the small business sectors of their respective national economies (Bond, 2002). This researcher believes this to be true but over-simplified. It is necessary to understand the research issues within this thesis for further clarification.

In the United States there has been little employment growth within the Fortune 1000 group for the last decade, with about two-thirds of the growth attributed to small businesses (Baily et al., 2010). The primary research in this thesis covers the period 1983 to 2007. During this time, job creation was concentrated mostly in the
small business sector (Weitekamp and Pruitt, 2009). However, growth was not uniform within the small business sector divisions (Stangler and Litan, 2009). Most of the job growth was concentrated in the entrepreneurial subsectors made up of start-up firms (Kiviat, 2011). Seasoned small businesses that have existed for some time are not employment producers to the extent that is widely believed (Haltiwanger et al., 2010).

Furthermore, employment growth is actually concentrated in only a small portion of the small business start-up sector, namely technology and innovation start-ups. Traditionally, investment capital has concentrated itself around these start-ups, where the futures of firms within these technology and innovation subsectors directly link to capital availability via the venture capital industry (Markovich, 2012). For the purposes of this thesis, the venture capital industry is defined as any funding outlet that provides risk-prone capital to businesses for start-up, growth and expansion purposes. Venture capitalists may represent private individuals, often called investment angels, banks, insurance companies, pension funds, hedge funds, small business investment companies (SBICs) or venture capital companies. “Venture capital has in recent years played a key role especially in Anglo-Saxon countries” according to Belke and Schaal (2004, p. 5). Belke and Schaal (2004, p. 5) further state, “venture capital is crucial for financing structural change, new firms and innovations and therefore possibly also nowadays for employment growth”.

Prevailing theory suggests that national systemic fiscal policies can directly affect venture capital availability and risk capital deployment within various business subsectors. Every venture capital outlet has a defined set of investment parameters. The question becomes whether these investment parameters, also known as preferences, shift because of changes in national fiscal policy, in particular those
fiscal policies directed towards the entrepreneurial sectors of the systemic economy, such as capital gains provisions.

In addition, an evaluation of other fiscal and monetary policies must be considered in this analysis, lest these factors skew the results and intent of the research exercise. In addition, it is necessary to review countervailing policies. Generally, monetary and fiscal policies move in tandem but, in rare times, they move in different directions (Iversen and Soskice, 1999). Therefore, the outcome of accommodating systemic fiscal policy and restrictive systemic monetary policy must be considered. Such a case may also exist where part of fiscal policy is simulative and part is restrictive.

Fortunately, in the four major timelines researched over a 24-year period fiscal and monetary policies moved in conjunction, despite policies being managed by different presidential masters. This was due to a managed relationship between the Federal Reserve Chairman, who controlled monetary policy, and the President, who controlled fiscal policy during these periods.

In addition to the intensive debate within the United States and other EU countries over employment creation, much focus has been placed on the effect of targeted fiscal stimuli on growth and job generation as stated previously. Within America, there exists a significant debate on the issue of tax rates in general, in particular on the lowering of taxes targeted specifically to the job-creating entrepreneurial subsectors of the economy (Center on Budget and Policy Priorities, 2007).

Some within the professional community of certified public accountants (CPAs) suggest that neither fiscal nor monetary policy drives venture capital investment but the state of the overall systemic economy is the primary force. A 2012
investigation of CPAs and other accounting professionals suggested that this belief has not changed. This raises the question of whether fiscal and/or monetary stimulus should occur during a period of low growth or economic stagnation with overall confidence in the economy waning, where venture capital availability would not improve despite the stimulus efforts. In fact, some notable economists such as former Secretary of Labor Reich believe that the Bush tax cuts did little to stimulate economic growth or job creation. Bartlett (2001) predicted this outcome early into the Bush Administration. Venture capital became almost non-existent and those who did invest sought risk averse situations, doing little to stimulate growth.

Finally, capital gains tax has been the political tool of choice to stimulate entrepreneurial venture investment; therefore, it is necessary to study its effects on economic sectors given its historically controversial reputation.

**Limitations Of The Research**

This researcher is not naïve as to the information explosion and freely admit that several professional organisations routinely conduct research on the venture capital industry. These organisations execute similar yearly surveys related to the investment preferences of venture capital firms, publish results periodically, and have engaged in this activity for decades (National Venture Capital Association, 2010). To what degree they attempt to match the results to systemic shifts in fiscal policy over long intervals of time may be the separation point that makes this thesis somewhat asymmetrical to the prevailing research within the field. One executive director of a venture capital association, who wishes to publish the results of this thesis in his association newsletter, implied the same. However, other prestigious research outlets, such as the Brookings Institute (Samuel, 2010), have made broad references to 20-year comparisons as recently as 2010 in a limited study concerning venture capital
confined to the Great Lakes Region of the United States. The study was geographically limited and noted a shift from start-up funding to later stage funding and the potential reasons behind the departure. No major or detailed longitudinal studies of a national scope could be located and this is the primary limitation on this research endeavour. This limiting factor is mitigated by building upon this research effort and extending the time line with the intention of expanding the longitudinal results.

Statement Of Previous Work

This thesis developed over two decades ago. In the academic environment of the time, any suggestion of course creation and development that did not follow the norms of standard American business culture was anomalous and relegated to the bottom of the curriculum committee’s agenda. These courses were considered eccentric and consigned to the backwash of the semester schedule, mostly as non-required electives.

This researcher was successful in gaining approval for three courses on small business management, venture management and international business. Presently, universities build elements of their curricula and degree programmes around these topics.

Teaching these courses and the pressures of publishing within the confines of an academic life lead to writing and publishing the book mentioned earlier. The most important component of the work was a list of venture capital sources that included names and addresses as well as their respective investment preferences, gathered through survey questionnaires. The survey instrument used was time tested and reviewed keeping in mind the recommendations set forth in the publication entitled *Survey Research Methods* (American Statistical Association, 1980). A focus group of
practising venture capitalists received the original questionnaire as a way of soliciting their comments and opinions about the instrument.

The book went through multiple printings and editions. The completion of four venture capital surveys over the span of approximately 24 years occurred. Knowing the first book was being released in a new edition requiring a second survey, this researcher sought to refine the survey process by studying a typical venture capital investment contract, illustrated in Exhibit A. The venture capital investment contract is the centrepiece of the venture management process that affects venture capital investment preferences. This researcher also operated at the time as an independent financial consultant actively engaged in negotiating venture capital deals, which also contributed to the survey process.

It became apparent after the second survey that there were presumptions about the nature of venture funding and its relationship to systemic fiscal policies. After the Economic Recovery Act of 1981 had taken effect its paradigm shifting results related to new business creations gained global attention.

As time ensued and additional surveys were completed because of new and expanded editions of the first book, it was obvious that a valuable time line affixed to major changes in systemic and targeted fiscal policies could be developed; the objective being to analyse changes in venture capital preferences on a longitudinal basis. This researcher made efforts to find other trend studies. Similar studies do not exist.

The basic exercise of gathering the primary and secondary data led this researcher to believe that the mountain of information garnered should be organised and presented in a form expanding the common body of knowledge within the field.
Chapter Summary

It is desired that the efforts herein elevate this thesis to an above average standard. Its purpose is to fill gaps in the existing research and within the literature; those deficiencies being a lack of longitudinal primary studies and literature sources tied to cumbersome pieces of politically sensitive fiscal legislation that create confounding paradigm shifts and directly affect venture capital investment preferences. Therefore, the research problem implies a contribution to the field.

This thesis is an original study in that it explores the potential statistical significance between changes in capital gains tax and changes in the collective investment preferences of venture capital firms over a 24-year period.

Consequently, the research question ties into the statement that targeted fiscal policy affects the venture capital industry. This is the theoretical framework upon which this thesis rests and, as Collis and Hussy (2009, “p. 118) state, “underpins the research question”, which is: Do Longitudinal Changes In Capital Gains Tax Affect The Investment Preferences Of Venture Capital Companies?
CHAPTER TWO

LITERATURE REVIEW

Introductory Statement

It is difficult to pursue the literature review in a purely thematic way given that the secondary sources used had mostly parochial and subjective opinions. Unavoidably, due to the topical and political implications surrounding the research question, a thematic format was developed to the degree that this was possible with some chronological protocols.

This literature review is linked to a discussion of parent and immediate disciplines and variables. The former helps to establish a foundation of understanding for the general constructs affecting the venture industry, and the latter helps with comprehending the common applications within the field. Creswell (2009) insists on variable-based theming if the thesis utilizes a positivist research paradigm. Therefore, the thesis consists of two themes and, after considerable probing into the literature, another emerging theme erupts or maybe it’s nothing more than a proposition. Investigation determines the literature to be inert regarding the conclusions of this thesis.

The best that can be said is that the literature review was consistently inconclusive for reasons cited later. Had the literature review not taken place surrounding the 2012 presidential campaign, in which the primary independent variable, capital gains tax, was of topical focus, perhaps a more thematic approach would have been possible. However, capital gains tax has always been a controversial topic since its inception in 1921, producing dubious and debatable results. This is not to suggest that the literature review is indolent in terms of the overall findings of the thesis, only in reference to the conclusions. On the contrary, the review was an
important and potent leg in the triangulation of the entire data collection effort and contributed immensely to the findings.

The Argument

A field of study approach is presented in this section, as opposed to a historical review as prescribed by Perry (1994). However, the reader must understand that this thesis is also a longitudinal study incorporating historical primary data. This is the correct time to advance this research into capital gains tax. The immediate disciplines of this thesis are topical in nature and are currently discussed in the highest political chambers.

Capital gains tax has been a contemporary issue within the political mainstream for decades. However, a new paradigm seems to be developing within the venture industry that leads to further inquiry. This is crowd funding, which has been fashioned outside the traditional corridors of the venture capital industry and is deserving of further inquiry beyond the scope of this study (Mills, 2012). In 2010, U.S. President Obama announced a new initiative focused on enhancing job creation via entrepreneurship and innovation through his program called ‘Start-up America’ (White House, 2011). The creation of crowd funding out of this piece of pro-small business legislation incorporated an adjustment of capital gains tax (Markovich, 2012).

Obama (2011, p. 1) stated, “Entrepreneurs embody the promise of America; the belief that if you have a good idea and are willing to work hard and see it through, you can succeed in this country… and in fulfilling this promise, entrepreneurs also play a critical role in expanding our country and creating jobs”.

Despite the president’s optimistic words, there are those who think he is less pro-small business than he appears (Bailey, 2012). However, Obama’s sponsorship
and passage of the Jobs Act in late 2010 seems to be a demonstration of his support of the entrepreneurial community.

The president has proposed complete elimination of capital gains tax on investments directed to certain employment-creating sectors of the entrepreneurial economy. In 2010, Congress temporarily passed the legislation and Obama desires to make it permanent (White House, 2011).

Specifically, the Small Business Jobs Act of 2010 – Section 2011 eliminates capital gains taxes on all angel and venture capital investments in entrepreneurial activities held for a minimum for five years. The act was designed to be an interim measure for small business investments made between 28 September 2010 and 31 December 2010. However, this interim 100% elimination of capital gains tax on the sale of small business stock was further extended into 2011 under the Tax Relief, Unemployment Insurance Reauthorization, and Job Creation Act of 2010. The president announced that these tax exclusions on targeted investments in small business enterprises would become permanent as of 2013. He has also advanced the prospect of expanding the New Markets Tax Credit Program, established in 2000, which will enhance angel and venture capital investment in start-ups and existing small firms that do business in distressed areas.

Debates over the systemic benefits of relaxing capital gains tax continue. Conservatives tend to support a reduction in this tax, while liberals do not want to change the tax. Political neutrals favour non-systemic cuts that strictly target the job-creating entrepreneurial sectors of the economy. In addition, some neutrals favour no cuts.

One issue is evident: since the massive economic expansion in the 1940s during World War II and the ensuing employment explosion of that era, job creation
has been more difficult as time has passed, as Figure 2-A illustrates. It clearly demonstrates that structural employment changes have taken place and have culminated in no job growth in the first decade of the 21st century. In comparison, there was 20% growth in the 1990s and 1980s, 25% growth in the 1970s, 30% growth in the 1960s and 22% growth in the 1950s.

Figure 2-A Job Growth


The Conservative Position and Fiscal Policy

Based on policy analysis, the conservative think tank the Cato Institute has taken the position that capital gains tax is a sensitive fiscal tool and should be lowered or eliminated to stimulate economic growth and increase employment. Writing for the Institute, Moore and Silva (1995, p. 1) stated in Policy Number 242:

“This study examines the historical experience with the capital gains tax in the United States, as well as the findings of more than 50
economic studies on capital gains taxation. We conclude that a capital gains tax cut would substantially raise tax collections and increase tax payments by the rich; increase the rate of capital formation, economic growth, and job creation through the year 2000; unlock hundreds of billions of dollars of unrealized capital gains, thus promoting more efficient allocation of capital; expand economic opportunities for the most economically disadvantaged workers by bringing jobs and new businesses to capital-starved areas, such as America’s inner cities”.

Another conservative think tank, The National Centre for Public Policy Research (1996, p. 2), bluntly stated, “A reduction in the capital gains tax rate would increase investment, make capital more available and cheaper, and create additional jobs”.

For 20 years, the Cato Institute and other conservative organizations have been debating with American public opinion over the benefits of relaxing capital gains taxes. It is difficult to educate the public about why capital gains tax should have preferential treatment when it does not affect them directly. Most citizens do not know what capital gains tax mean, and those who have some understanding have heard it’s a tax break for the rich.

*The Liberal Position And Fiscal Policy*

At the other end of the spectrum is the Brookings Institute. On behalf of this institute, Burman and Gale (2011, p. 1) take the opposite view by stating, “Capital gains tax cuts would provide a windfall for the wealthy”. Brookings implies that conservatives support a reduction in capital gains tax because this invokes political campaign contributions. Burman and Gale (2011, p. 2) go on to say, “Nor would a cut affect venture capital much. Already taxed at half the rate of other capital gains are capital gains on small new ventures. Much of the funds for venture capital come from sources that do not pay capital gains taxes and so would not be affected by cuts”.

Irons (2005), writing for the think tank Centre for American Progress, also makes a case against the favourable treatment of capital gains tax, implying that reducing the
tax favours physical capital over human capital, which is compromising to an advanced economy requiring enhanced skills and education to foster economic growth.

The UK Labour Party platform is characteristic of Fabian policy in the United Kingdom (Wenzel, 2009), with the Fabian Society having long and deep ties with the Labour Party. Both profess a Keynesian approach to economic policy (Dobbs, 1971), similar to the liberal movement in America, and take a dim view of capital gains tax favouring the wealthy classes.

*The Moderate Position And Fiscal Policy*

As might be presumed, the few politically moderate think tanks, such as The Third Wave, are more subtle in their position on capital gains taxes but generally support the liberal viewpoint that capital gains tax reductions have few stimulatory effects on the entrepreneurial economy.

The non-partisan Center on Budget and Policy Priorities (2012) notes that capital gains tax is not an effective fiscal stimuli. In addition, the moderate think tank the Institute on Taxation and Economic Policy (2009, p. 8) summarises its position by saying, “preferential treatment for capital gains is simply not an effective means of promoting economic growth”.

The issue of targeted fiscal stimulus directed toward the entrepreneurial sector of the economy has been debated for decades and the argument continues today. Political leaders from both major US parties parade the notion that certain small business sectors are the employment-generating machinery that needs to be stimulated (Bond, 2002). They do, however, disagree on how to execute those stimulus efforts. The conservatives (Moore and Silva, 1995) believe that capital gains tax should be relaxed or eliminated, while the liberals contend otherwise (Burman, 2007). There are
too few moderates nowadays to assess their real position other than that they tend to support the liberal view on the topic or lean towards a hybrid approach in which targeted tax cuts are specifically directed to entrepreneurial sectors.

Following his congressional election defeats in November of 2010, it is interesting to watch President Obama abandon his progressive political agenda in favour of a much more moderate position. Contrary to his campaign promise, he has embraced many Bush Administration policies directed toward the entrepreneurial sectors (Khazan, 2012).

However, despite the new literature pouring into the field because of the fiscal stimuli enacted in 2010 and 2011, the debate continues about the sensitivity of capital gains tax with regard to entrepreneurial sectors.

**Parent Disciplines Supporting the Argument**

The two important economic levers at the disposal of national political leaders are fiscal and monetary policy. Literature on the latter far exceeds that of the former since fiscal policy has its origins much earlier in America’s economic history and is topical of late in terms of the national debate on methods of stimulating economic growth and jobs. In addition, the United States Federal Reserve (2011) has even suggested that over time monetary policy has come to play a less significant role in policymaking decisions. For the sake of information control and focus on the thesis hypothesis, only fiscal policy is used as the parent discipline, with some minor references to monetary policy. However, both should be defined in order to keep the two separate in the mind of the reader. Hipple (1999, p. 1) says, “Fiscal policy is changes in the taxing and spending of the federal government for purposes of expanding or contracting the level of aggregate demand”. Hipple (1999, p. 2) goes on
to define monetary policy as follows: “It is the changes in interest rates and money supply to expand or contract aggregate demand”.

The United States Department of State (2012, p. 1) has stated, “Much of the history of economic policy in the United States since the Great Depression of the 1930’s has involved a continuing effort by the government to find a mix of fiscal and monetary policies that will allow sustained growth and stable prices”.

Price stabilization and controlling inflation is a key objective of the Federal Reserve through the use of monetary policy. Stiglitz (2012) attacks the notion that current monetary policy is inflationary, making the point that aggressive monetary tooling via printing money will not create inflation during periods of economic slack. Although lacking in quantitative input and secondary sourcing, the article does take the somewhat scholarly approach expected of Slate Magazine, which is a Washington Post Company holding. Contemporary history would seem to support the author's theory, as the Federal Reserve has been printing and stimulating the economy with new money, and both producer and consumer prices have been historically low for many years (Harvey, 2011).

**Parent Disciplines and Their External Impact**

Fiscal Policy is the primary parent discipline of this thesis. Over the last decade, the nation has experienced the lowest job growth rate in the last one hundred years, as Figure 2-B demonstrates. Growth from 1950 to 1999 showed a choppy but steadily upward trend until 2000, when employment creation abruptly halted. Consequently, the United States employed all of its fiscal tools to promote economic and employment growth to overcome the worst economic conditions since the Great Depression (Blinder and Zandi, 2010).
In addition, through the extension of the Bush Administration tax cuts, targeted tax cuts have been applied and aimed directly at those entrepreneurial sectors of the larger systemic economy known to develop innovation and produce jobs. In addition to tax cuts, the federal government is utilizing massive spending stimuli and generating budget deficits the size of the gross domestic product of some European
countries. As of 5 February 2011, the efforts seemed to be paying off as the
government reported a huge decline in unemployment from 9.8% to 9% in two
months (Rugaber and Aversa, 2011); the largest decline since 1958.

Specific components of fiscal policy are varied. They include manipulation of
personal and corporate income tax and changes in the investment tax credit directed
towards business equipment purchases, innovation and energy efficiency.
Depreciation write-off schedules for business equipment and capital gains provision
are also fiscal tools. As indicated above, the application of government spending
related to the national budget is also a fiscal lever.

A discussion of the individual fiscal tools precluding those three fiscal
instruments identified as independent variables further delimits this thesis with regard
to the parent disciplines. These are reserved as immediate discipline discussions.

*Corporate Income Taxes As A Confounding Variable*

A discussion of corporate income tax rates is motivated by the Tax Foundation
(2011, p. 1) when they state,

“The federal corporate income tax was first instituted in 1909 when
income above $5,000 was subjected to a one percent tax rate. Since
then it has changed approximately 35 times, with the current top rate at
35 percent. Additionally, many states levy corporate income taxes of
their own. Government and private economists have long understood
that corporate income taxes are double taxes, since the same income is
taxed once as profit, and once as individual income when distributed as
dividends to shareholders. Contrary to popular misconception, the
ultimate burden of corporate income taxes does not fall on
corporations, but is instead borne by workers, shareholders and
consumers”.

The debate continues between political ideologies and parties in a stalemate
concerning the direction of corporate income taxes. This was evident in the 2012
presidential contest between Obama and Romney, where one favoured a massive cut
in the corporate tax rate while the other opposed this policy. Appendix D
demonstrates that America is at a clear disadvantage, with its corporate tax revenue as a percentage of GDP, compared to some of its major trading partners. However, economists are split on whether this is truly a disadvantage. Enhanced corporate tax revenues might suggest higher tax rates, which could be a disincentive to domestic investment. This is being argued presently and may well be a topical issue in the 2016 presidential campaign.

Politi and Crooks (2010) reported that reconstruction of the U.S. corporate tax code could cause consternation within the business community. Lower rates may exacerbate an already inflated federal budget deficit. President Obama has signalled his willingness to modify the rates. However, he warns that this must be offset by the elimination of some business write-offs, in order to make any rate decision revenue neutral. Politi and Crooks (2010), cited in McArdle (2010, p. 1), noted, “… The administration’s plans to lower the corporate income tax in exchange for simplification--getting rid of a bunch of deductions”. Ettlinger (2010), cited in Politi and Crooks (2010, p. 1), succinctly stated that, “There are going to be winners and losers and the losers aren’t going to like it”.

Corporate income tax is as controversial today as it was in 1909, the first year of its inception, and will remain so well into the future.

Much of the current debate surrounding the United States corporate tax rate centres on international competitiveness (Hines, 2005), as America has called into question its ability to compete with other nations, given its recurring large balance of payment deficits. Conservatives point to America’s higher corporate tax, as compared to some of its trading partners, as a major reason for the nation’s declining competitiveness. Former presidents Reagan, Clinton and Bush have all suggested complete elimination of corporate income tax. Most of America’s larger trading
partners have lower corporate income tax rates, yet collect more in tax with regard to
the sizes of their respective economies than America (See Appendix D)

*Personal Income Taxes As A Confounding Variable*

Personal income taxes provide even more angst than corporate income taxes.
First enacted by Congress in 1913 (Rosenberg, 2012) because of the 16th Amendment
to the American Constitution, the tax has been a source of controversy ever since. In
1913, the lowest rate was 1% but did increase to 7% for the higher income brackets.
The American presidential election of 1980 proved the political sensitivity of
individual tax rates when candidate Ronald Reagan promised at least a 33% personal
income tax reduction along with inflation indexing, preventing individual taxpayers
from being pushed into higher tax brackets due to the impact of inflation on their
incomes. Once elected, he kept his promise to the American people to lower taxes.

Again, many conservative pundits argue that lowering personal income tax
rates, in conjunction with lowering capital gains tax, provides a systemic economic
stimulus by increasing the buying and investing power of the citizenry (Moore, 2008).
If individuals save those funds, they assist in lowering the cost of business investment
by injecting the funds into national savings and investment pools.

*Government Spending As A Confounding Variable*

The entire political system in the United States is now focused upon the issue
of government spending and the subject could not be more topical. With national
budget deficits reaching dangerous levels, and many economists of all political
persuasions calling those deficits “unsustainable”, there are demands for dramatic cuts
in federal spending. This is not an easy decision, since cutting spending is considered
an anti-stimulus for the systemic economy and can be risky, especially during periods
of recession. Even the American Federal Reverse Board Chairman, a student of the
Great Depression, has warned that cutting spending too quickly and deeply could have severe negative implications for the general economy. He compares America to those European Union countries that embarked upon austerity measures in the face of economic stagnation, with dubious results (Stiglitz, 2012).

Blinder and Zandi (2010) offer a supplement to the Stiglitz piece. Steeped in descriptive statistics with quantitative methodology, the article is an unbiased approach to the effects of fiscal stimuli on the Great Recession of 2008.

Respected economic journalists contend that cutting capital gains tax actually contributes a net flow to Treasury, thereby reducing the need to increase, or at least mitigate, government spending (Moore, 2008). Figure 2-C illustrates the relationship between government spending and the nation’s GDP. It expresses government expenditures as a percentage of Gross Domestic Product. It is interesting to note that two major spikes in the ratio occurred during the war years of 1917-19 and 1941-45. However, the overall trend is an upward slope representing the advancement of the social welfare state in a post-industrial era. In addition, Figure 2-D illustrates the federal budget deficit expressed in absolute dollar amounts. Even though government spending may increase in percentage comparison to the gross domestic product, this does not imply that government budget deficits increase. In fact, they may decrease. The deciding factors could be a slowing of government spending while receipts increase due to robust economy activity and/or tax rate increases or any number of combinations.
Figure 2-C Relationship Between Government Spending and GDP

Source: Chantrill (2012, p. 1)
Figure 2-D Federal Budget Deficit Expressed In Absolute Dollar Amounts

Source: Chantrill (2012, p. 1)
Some classical and contemporary input into the theoretical framework of this thesis is necessary. This researcher decided to concentrate on the works of Smith, Ricardo and Malthus, given their classical work on how taxation affects economic systems. Rawls, Buchanan, and Auberbach were chosen for a more contemporary analysis of taxes and the economy.

Views Of The Classical Economists

It is appropriate to begin this section by noting that,

“Although economic theories have changed throughout time, the basis of economics rests in the developments of classical economists. In everyday life we live, breathe, and work in conditions that have been set forth previously by all three: Smith, Malthus, and Ricardo. It’s hard to imagine an economy, or for that matter, a world without these natural ways of being and diversity”. (Literature Essays, 2012, p. 1)

In the Wealth of Nations, it was clearly stated that taxation should be considered carefully in terms of impact on the growth and availability of capital. This document describes taxation as uneconomical if it slows the creation of capital or forces its flight abroad. Smith (1776), as cited in Economic Concepts (2012, p. 1), states, “Every tax is to be so contrived as both to take out and keep out of the pockets of the people as little as possible over and above what it brings into the public treasury of the state”.

Both Thatcher in the UK and Reagan in the US (Chapman, 2004) embraced the beliefs of Smith and his Invisible Hand and Laissez-Faire approach to economic stimulation, reflecting it in their respective economic policies, in particular with regard to the growth of capital. The weaknesses in Smith’s positions are that they failed to consider the context of an industrial economy, as most of his analysis was based on an agricultural setting (McNally, 1988).

Ricardo (1821), although agreeing with Smith in principle on many issues, moved in different directions; most notably in investigating the implication of
taxation on capital as related to a crude industrial economy and mass wealth creation. Some of these positions on taxation were in direct contrast to Smith, (Ricardo, 1817 cited in Pullen (2008) and further demonstrated in his work, On the Principals of Political Economy and Taxation. In Chapter 8, On Taxes, Ricardo began to dispute Smith. The discussion is more focused in Chapter 16, Taxes on Wages, where Ricardo continues to attack Smith and even states, “If the effect of taxes on wages be such as I have described, they do not merit the censure cast upon them by Dr. Smith”. (Ricardo, 1817 cited in Library of Economics and Liberty, 2012, p. 19)

Smith contended that if capital was increased it would benefit the poorer classes, at the expense of society as a whole. Ricardo (1821) disagreed and implied that an increase in systemic capital would benefit all sectors of society.

This researcher reflected upon the similarities between Ricardo and Marx in their respective approaches to income and wealth. Kurz (2010) presented an academic paper displaying deductive methods with descriptive statistics drawing comparisons between the two noted economists.

A discussion of the major classical economists would not be complete without reference to Malthus, in particular given his heavy influence on the latter works of Keynes, the father of modern fiscal policy. Corry (1959, p. 717) notes, “In the past few years the view has solidified that Malthus was one of the most important precursors of the Keynesian way of thinking. This view was given its main impetus by Keynes himself, first in the memoir on Malthus and later in the General Theory”.

Concerning Malthus, the British Broadcasting Corporation (2012, p. 1) noted, “His views became popular again in the 20th century with the advent of Keynesian economics”. In addition, Malthus contributed to the origins of modern demographic analysis applied on a national scale (Literature Essays, 2012).
The same elements of the media have lately been citing Malthus and his positions. Fendrich (2011) authored an article entitled *The Republican Malthusian Philosophy* and the popular blog *Doren* (Fendrich, 2011), and published an article entitled *Malthusian Indoctrination of Children Funded with your Tax Dollars*.

Therefore, it would seem that Malthus still retains appeal despite most modern economic writers discrediting his theories Zubrin (2007). Existing in an agriculturally based economy, Malthus never fully embraced modern technology and its impact on resource discovery and food production. Hence, his theories have become obsolete in the modern era. Nevertheless, his position on tax policy has become a rallying cry for many conservative groups.

Malthus (1798, p. 314) notes,

"The effects of taxation are no doubt in many cases pernicious in a very high degree but it may be laid down as a rule which has few exceptions that the relief obtained by taking off a tax is in no respect equal to the injury inflicted in laying it on and generally it may be said that the specific evil of taxation consists in the check which it gives to production rather than the diminution which it occasions in demand”.

This is demonstrated today within the American political theatre, as a significant debate about fair taxation has emerged as a central theme in the presidential election. Political centralists are contending that Reagan’s economic policies and the Smith Invisible Hand have heavily influenced the United States’ current tax system, largely drafted by President George Bush and enacted in 2003. Many from the political left, such as Warren Buffett, argue that current tax policy favours the rich in that many wealthy individuals pay less tax on a proportionate basis than the general population. Buffet (2013) is famous for asserting that his secretary pays more taxes than he does. Of course, the theory of tax minimisation for the wealthy is that investors will invest more, thereby increasing capital and the national wealth for all of society.
It is beyond the scope of this thesis and author to debate the positions of Smith, Ricardo and Malthus as to their influences upon systemic fiscal policy. Suffice to say they have contributed significantly to the application of fiscal policies over the last two centuries. However, they wrote hundreds of years ago, against an agrarian backdrop in the case of Smith and an emerging industrial society in the case of Ricardo and Malthus.

Shea (2006) from the University of Maine notes, “The theoretical arguments concerning the economy by Malthus, Ricardo, Smith, and others both described the rise of the mercantile economy and helped to mould and shape it”.

This section is completed by quoting an anonymous source that eloquently describes the mutual dynamics of the main classical economists:

“Without classical economists such as Adam Smith, Thomas Robert Malthus, and David Ricardo, modern economic theory would not be the same. Although differences of opinion were numerous among the classical economists in the time span between Smith’s Wealth of Nations (1776) and Ricardo’s Principles of Political Economy and Taxation (1817), they all mainly agreed on major principles. All believed in private property, free markets, and… invisible hand”. (Anonymous, n.d.)

These classical icons laid the foundations for debate on fiscal policy and its effect on economic growth and job formation among contemporary economists. The 20th century introduced refined discussions about targeted fiscal policies and their effects upon the systemic economy. This led to an even narrower introduction of specific fiscal tools such as depreciations write offs, investment tax credits, and the capital gains tax provisions which have been identified here as independent variables in this thesis.

Views Of The Contemporary Economists

Consideration of some contemporary fathers of taxation is necessary, and in that regard a review of Auerbach, Buchanan, and Rawls seems appropriate.
Auerbach (2007) seems concerned about how a government employs domestic tax policies in a modern global economy where many owners of domestic capital may be foreign. Of interesting note is the comment, “The optimal tax system depends on why the tax is levied” (Auerbach and Devereux and Simpson, 2008, p. 53). This implies that promulgated national political goals can seemingly dictate the ideal tax system. The Bush tax cuts of 2003, favouring higher wage earners, were promulgated as good for the economy and job growth. Therefore, they were promoted as good tax policy.

Buchanan and Faith (1987, p. 1023) bluntly note,

“A second interesting result emerges when we allow for differences among the economic positions of those who might be members of the ruling coalition. The rich are favoured over the poor as potential entrants into the sharing group, quite independently of the identity of those who might initially hold the power of governance. Outside the coalition, the rich can, under our assumptions, more readily set up seceding politics. Hence, the threat that they will do so must reduce maximal tax that may be imposed”.

Reflecting on the past 10 years makes it difficult to dispute Buchanan’s assumptions. The election of George Bush and the Republican Congress, and the ensuing tax cuts in 2003, are today regarded as a tax giveaway to the wealthy classes at the expense of the middle and lower classes. They were then disguised and promoted as an economic growth programme, which can hardly be justified. The hallmark of the Bush tax cuts was the lowering of capital gains tax to 15%, and in some cases to 5% and 0%.

Buchanan implied that the ruling classes would dominate societal decision making despite political outcomes. In 2004, this researcher swayed from a lifetime of Republican support as the presidential election unfolded. It became quite clear, at least to the educated and intellectual classes, that the Bush campaign team and pundits were promoting an agenda of fear to the electorate based on questionable radicalized
terrorism, as opposed to debating the more important issues affecting America. Issues such as the emergence of China and the long-term slide in the value of the U.S. dollar on international currency markets were ignored. It seemed they would do anything to win and would use any tool to accomplish that goal.

Rawls (1971) espouses egalitarian views in his book, *A Theory of Justice*. He makes the case that social and economic priorities should be arranged so that maximum benefits are delivered to the least fortunate members of society and that equal opportunities must be afforded to all sections of society. Rawls is more a social philosopher than economist. Sugin (2004, p.1194) writes.

“Rawls wrote a great deal about economic justice generally, but very little about taxation in particular, and what he did say is puzzling. He preferred a consumption tax to an income tax, and he suggested that such a tax could have flat rates. This is surprising because Rawls' broader conception of economic justice - e.g., the famous difference principle -manifests great concern for the least advantaged in society, and a flat, consumption-based tax is quite generous to the rich, as compared to alternatives such as a progressive income or wealth tax”.

*Closing Impressions Of The Economists*

The objective of this section is to understand how classical and contemporary economic thought relates to taxation and its impact on systemic and entrepreneurial economies. It is interesting to hear politicians invoke the Invisible Hand theory of Smith, The Theory of Comparative Advantage and the Law of Diminishing Returns by Ricardo, and the Malthus Theory of Population Implosion two centuries hence. At the same time, present society is fortunate to have access to the genius of James Buchanan who, two hundred years from now, will most likely continue to be a reference. The contributions of these great classical and contemporary economists will have a lasting impact on our economic landscape and society. As significant minds come and go, each passing adds another rung to the common body of economic
knowledge, which enhances new dimension of understanding to the increasingly complex system called the economy.

**Immediate Disciplines And Independent Variable Selection**

The immediate disciplines related to this thesis are the independent variables are reviewed below.

*Depreciation Write Offs As An Independent Variable*

Depreciation schedules are a form of fiscal manipulation that allow companies to write-off tax expenses on investments in plants and equipment. This in turn affects their tax liabilities, ultimately having an impact on profits. A government may increase the schedule and/or accelerate the write-off period to stimulate investment in new plants and equipment with the hope of enhancing industrial productivity and employment growth. Likewise, a retraction of the schedule or a decrease in the time-period would signal a fiscal tightening.

No single piece of legislation better illustrated the use of depreciation write-off for stimulus purposes than Ronald Reagan’s Economic Recovery Tax Act of 1981, in which he enacted the Accelerated Cost Recovery System, also known as ACRS. This provided companies with depreciated write-offs for investment in new plants and equipment. Many of the tax advantages provided by the 1981 Act were related to depreciation write-offs and were repealed with the Tax Reform Act of 1986, which had the support of President Reagan.

*Investment Tax Credits As An Independent Variable*

Many believe that the origins of the investment tax credit lie in the Kennedy Administration, when the young president was wrestling with a tough economy and trying to send a singular message to the business community that he was not anti-business (Rotstein, 1990). A key component of his tax package that passed Congress a year after his death was a permanent 7% investment tax credit for investment in new plants and equipment. Long hailed as being an integral part of Kennedy’s tax plan, the economy started a rapid expansion.

“In effect, the credits are subsidies for investment. Investment credits and investment allowances were adopted by the U.S. in 1962 in order to protect domestic business from foreign competition but have since been applied toward the support of energy conservation, pollution control, or various forms of desirable economic development” (Universalium, 2010, p. 1).

The Investment Tax Credit related to plant and equipment was eventually repealed because of passage of the Tax Reform Act of 1986, as well as many other tax credits, with just a few remaining in force until the passage of the Economic Growth And Tax Relief Reconciliation Act of 2001.

**Capital Gains Tax As An Independent Variable**

Of the three independent variables, capital gains provision has been the one constant variable, dating back to 1913, and became more predominant because of the Revenue Act of 1921. Therefore, it is referred to as the prime independent variable in this thesis. The other two independent variables are depreciation write-offs and investment tax credits. These have appeared and disappeared because of numerous tax acts over time and are therefore controlled in this thesis. The history of capital gains tax in the United States has been controversial (Kahn, 2008).
Over the 97-year history, capital gains rates have increased from 7% in 1913 to a high of 35% in 1986, and dropped to 0% in 2011 in some investment categories, with 5% to 15% being the average. These rates are a focus of much political controversy, with conservatives and most Republicans contending that a relaxation of capital gains provisions is pro-growth and creates employment. Conversely, liberals and most Democrats generally take the position that lowering capital gains tax is a subsidy for the wealthy classes and produces few benefits for the economy. Some economists suggest it is counterproductive to add to an already bloated federal budget deficit that is only used by conservatives to encourage political campaign contributions from their wealthy supporters.

The arguments for and against capital gains tax could fill volumes, and a detailed analysis does nothing to achieve the objectives of this thesis. Kahn (2008) has written an article approaching the topic in earnest. He discusses the advantages and disadvantages of both raising and lowering capital gains tax, and uses such sources as McGraw Hill, Satow, Thorne and the Congressional Record. Arguments abound on the topic.

An article by Mufson and Yang (2011) reveals the controversy surrounding capital gains tax as it relates to income inequality. The article reviews both sides of the issue but tends to favour those that suggest that capital gains tax gives preference to the wealthy.

Conclusions About Disciplines

Keynesians appreciate the debate currently taking place in western countries on the application of fiscal policy to stimulate economic growth. With monetary policy taking a backseat role, the dissection of fiscal policy occurs, with history being
the judge as to which policy is better. It would be naïve to assume that political debate alone causes this historical analysis. Larger economics are at play.

The major fiscal tool emerging within the debate is capital gains tax; significantly reduced because of George Bush's Economic Growth and Tax Relief Reconciliation Act of 2001, and extended by President Obama under the Jobs Act. In addition, designed as a part of the Act, the *New Markets Tax Credit Program* is devised to promote investment in start-ups and small businesses operating in lower-income communities (White House, 2011).

To maintain uniformity in this thesis, the four primary pieces of tax legislation over the last thirty years that were studied via the survey questionnaire are reviewed below in Table 2-A. They are marked as either friendly, meaning pro-business investment through tax reductions/credits, or unfriendly, meaning the converse, raising taxes on business investments. These important and critical laws came about because of contortions within the economy at the times of their introduction.

<table>
<thead>
<tr>
<th>Table 2-A Four Critical Tax Laws</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue Reconciliation Act Of 1993 – Date Collected 1994 – Increased Taxes Unfriendly To Business</td>
</tr>
</tbody>
</table>

Source: James Silvester, 2013
Exhibit B illustrates capital gains tax rates over the last decade. The last column, marked 2013-2013, assumes preferential rates. These were legislated to expire on 31 December 2010 but extended through 2012. However, by all political indications, the tax cuts passed in the Economic Growth and Tax Relief Reconciliation Act of 2001 and further extended in 2003 may become permanent.

Figure 2-E compares the number of tax dollars collected on capital gains versus the capital gains rate itself. The chart signals that reducing the capital gains tax rate may stimulate investment activity. It reports an inverse relationship between the capital gains tax rate and taxes collected on transactions subject to the tax.

Figure 2-E Tax Dollars Collected on Capital Gains Versus Capital Gains Rate

Source: United States Department of the Treasury (2013 p. 1)
The 2001 Act was further refined in 2003 to phase in a significant capital gains tax reduction, as reported by the Tax Policy Center (2011, p. 1) as follows:

“Taxed capital gains with a 15 percent rate for most gains and 5 percent for gains of moderate income taxpayers for 2003-07; becomes 15 percent/0 percent in 2008 and reverts to present law in 2009. Taxed dividends with a 15 percent/5 percent rate structure for 2003-07, 15 percent/0 percent in 2008, reverting to present law in 2009”.

These rates were extended into 2011 and whether they should be permanent is currently being debated.

Fourthly (2003) highlighted the fact that tax is not the sole motivating factor behind job creation; quality of life and transportation issues are also important factors to consider. The level of public spending on elements such as schools and roads are often asked for by investing entrepreneurs. The article goes on to indicate that there is no relationship between tax rates in municipalities and economic activity.

University of Tennessee Professor of Economics Murray (2011, cited on FoxNews.com, 2013, p. 1) claimed, “Concerns about tax are overstated”. Murray (2011, cited on FoxNews.com, 2013, p. 1) notes, “Labor costs, K-12 education and infrastructure availability are all part of a good business climate. And you cannot have those without some degree of taxation”.

Over the past 50 years, many politicians have called the Kennedy economic programme their own; none more so than Ronald Reagan in the 1980 presidential contest. There has been much literature written about the Kennedy economic programme, which even today survives both criticism and praise as a supply-side miracle (Greenberg, 2004).

President Kennedy’s views concerning systemic economic stimulation grew from his belief that the economy had become stagnant under the Eisenhower Administration. His plans for recovery were bold, novel and pugnacious, culminating
in one of the largest income tax decreases in American history (Greenberg, 2004). Additionally, he initiated major business tax incentives and is often credited with inventing the investment tax credit. His plan was outlined in an official position paper delivered to Congress on 22nd April 1962 and can be accessed at www.nationalcenter.org/JFKTaxes1961.html.

This promulgated public policy was one of only two times in American economic history when all facets of fiscal policy were coordinated and proposed in one approach; the 1981 Reagan programme being the other.

Many contemporary economists and business journalists credit Kennedy with the economic expansion of the 1960s. Both Reagan and Romney repeatedly referred to the Kennedy tax cuts in their respective campaigns. In addition, even the Club for Growth joined this theme (Greenberg, 2004).

The Kennedy plan is discussed in this thesis because President Kennedy, through his Revenue Act of 1964, executed the largest tax decrease in modern times (Ahern, 2004) and ushered in an era of tax credits specifically designed to stimulate business investment, such as the investment tax credit. Ahern (2004, p. 5), writing for The Tax Foundation, states, “Comparing the size of these tax cuts with the federal budget shows that the Kennedy's tax cuts represented 8.8% of the budget. In 1981, Reagan's tax cuts represented 5.3% of the budget”.

Figure 2-F illustrates some interesting results limited to these comparative time-periods. The chart points out that Reagan's Economic Recovery Tax Act of 1981 resembled the Kennedy tax cut in scope and detail. It was the second largest systemic tax cut of the last 50 years and expanded many business tax credits offered in the Kennedy programme. The net effects of the Acts were exploding GDPs and enhanced investments in the overall core of the economy.
Despite the seeming systemic success of both tax programs some economic ills emerged in the form of income inequality and budget deficits. Political arguments and debate erupted surrounding the programs for years after passage. Not surprisingly, both political parties took credit for successes and blamed the other for program failures.

**Figure 2-F Economic Report of the President**

**Annual Growth Rates in Real Private Fixed Investment**

![Annual Growth Rates Graph]

*Source: Economic Report of the President, 1996*


Intervening, confounding and extraneous variables were at play because the periods affected by the tax cuts saw massive increases in spending for the military and space sciences. These were due to the Vietnam and Cold Wars. In addition, despite
the fact that investment increased, resulting government receipts from these two tax acts remained constant or declined (Ahern, 2004).

Both acts were pioneering in their approach to applying tax incentives to business investment. The business community held Kennedy in ill regard and Reagan was revered. Both produced some interesting results and expanded the depth of knowledge surrounding issues related to this thesis, and thus examination is required.

There is a belief that the Bush tax cuts were small in comparison to the Reagan and Kennedy tax cuts (Ahern, 2004) as a percentage of national income. Economists have postulated this did not provide enough stimulus to produce respectable economic growth.

This discussion must also mention the Laffer Curve, which is closely associated with the Kennedy-Reagan tax bills and supply-side economics. This model was developed in the 1970s with input from former Vice President Dick Cheney and former Defense Secretary Rumsfeld, and was used as the basis from which historic and contemporary pro-capital gains tax cut advocates justified their positions. Although a model of diminishing returns on both extremes of the normal bell curve, the Curve seeks to prove that the cost of reducing tax rates, in particular capital gains tax, will be more than offset by increasing government revenues caused by the stimulus effect of reducing tax burdens. It also seeks to determine the optimal tax rate to accomplish this result. Largely forgotten after the Reagan years, it still finds its way into popular political culture on occasion.

This thesis does not try to explain the entire U.S. Tax Code, given its massive size and complexity. Suffice to say that the code became both more controversial and complex with the advent of the income tax provision in 1913 and further introductions
Capital Gains

Increased employment is the new theme among politicians of most western nations. *At least for America*, by Neil Irwin (2010, p. 1), summed up the theme by stating,

“For most of the past 70 years, the U.S. economy has grown at a steady clip, generating perpetually higher incomes and wealth for American households. But since 2000, the story is starkly different. The past decade was the worst for the U.S. economy in modern times, a sharp reversal from a long period of prosperity that is leading economists and policymakers to fundamentally rethink the underpinnings of the nation’s growth. It was, according to a wide range of data, a lost decade for American workers”.

Capital gains tax was born out of the Revenue Act of 1921, set at a rate of 12.5%. Its original purpose was to stimulate business investment and it is still utilized for this reason today (Markovich, 2012). Since 1921, the rate has been altered through legislation, recently hitting a high of 33% in 1986 and 5% to 15% in 2008, depending on individual tax brackets. In addition, a 0% rate was targeted to certain assets employed as investments in small businesses that add to the national employment rolls and contribute to economic growth. Exhibit B clearly demonstrates this varying pattern during recent years.

With political establishments throughout the western world advised to stimulate economic activity and job creation in the midst of continued economic stagnation, political leaders are turning to their entrepreneurial sectors as engines of growth. The statistics confirm their impact. Figure 2-G, issued by the U.S. Bureau of Labor Statistics (2011), demonstrates that smaller firms are the job creators within the economy and generate about 67% of all employment growth, based on historic averages. The figure further illustrates the employment problems in the first decade of
the 21st century, with massive job losses across the board but highly concentrated in larger and mid-sized companies.

**Figure 2-G Job Report**

**Distribution of Net Gain in Employment by Firm Size**

Quarterly Net Change, SA, Thous.

Among the various fiscal and monetary stimuli available to national leaders, none stand as more pervasive or controversial than capital gains provision; hailed by conservatives as a booster for national economic growth and by liberals as a subsidy for wealthy individuals. Despite these claims and the considerable statistical research obtained by both camps, there is no conclusive evidence supporting either camp. However, it is important to guard against absolutism (Kemerling, 2011) and bias within political ranks.

**Interaction Between Independent And Dependent Variables**

An academic paper summarising quantitative work conducted on the investment preferences of venture capital companies caught this researcher’s attention. It does not direct any comment on the effects of changes in fiscal policies such as capital gains tax; however, Gupta and Sapienza (1992) do describe the potential relationship between the different investment preferences. The paper does not take on an affirmative position one way or another.

Gupta and Sapienza (1992) again wrote a very detailed professional article, mostly employing secondary references. Citing several quantitative studies, the most important information in this piece is its acknowledgement that venture capital firms that emphasise early-round financing tend to limit their geographical focus. Moreover, the larger the venture capital firms become in terms of assets, market share, influence and reach, the more diverse they will be in terms of both industry and geographic preferences.

In 1992, a report emerged in another professional journal, noting that venture capital companies were moving away from early-round funding for small young companies and moving their investments into more secure lower-level technology
based enterprises. Camp and Sexton (1992) used secondary sources, citing experienced experts within the venture research field such as Timmons and Gupta, based on empirical evidence gained through quantitative means.

An article in a professional journal acknowledges that venture capital firms do have specific investment preferences that are affected by changes in capital gains tax. This establishes at least the potential for a partial linear relationship between the primary independent variable and the dependent variables. Norton and Tenenbaum (1993) acknowledge the use of empirical research derived from quantitative sources and cite some secondary sources from within the venture research field, such as Driscoll and Siegel, in taking the above position.

The authors below put forth a professional paper with quantitative analysis and cited numerous secondary sources. This piece of business prose recites the mechanics behind the venture capital industry and is mentioned in this thesis when analysing the gaps within the literature and conflicts with the working hypothesis. Through their reference to the dependent variables, authors Gompers and Lerner (1998) support Gupta by inferring that smaller funds tend to invest more in early-round funding opportunities. In addition, they suggest that venture capital funding is both local and regional in terms of geography. Gompers and Lerner (1998) contend that capital gains tax is inert and has no effect upon venture investing.

An article by Recklies and Recklies (2000) employing quantitative methodology has been reviewed, building on the Gupta and Sapienza study. This study is a piece of literature grounded in quantitative methodology. It touches on all five dependent variables, and the outside forces that impose on them, as shown in Exhibit C. Contrary to Gompers and Lerner, Recklies and Recklies (2000) take the position that capital gains taxes have a direct impact on the dependent variables,
thereby implying a relationship between the variables. Nevertheless, the authors explain the venture industry in depth; in particular the forces imposing on venture management. The 2000 article correctly predicted difficult times for the venture capital industry.

Gomper and Lerner discuss some of the dynamics affecting the dependent variables of this thesis, and support the notion that gaps in the research exist and that the issue of venture capital is politically sensitive. The authors note, “Venture capital is increasingly regarded as an important component of the U.S. economic landscape. While policy makers have often tried to affect the flow of funds into the sector, little has been known about the real impact of such policy measures” (Gomper and Lerner, 2004, p. 63). Additionally, in support of a literature gap, Gomper and Lerner (2004, p. 62) state that, “…these programs have received little scrutiny by economists”. Their book is quoted throughout the venture industry and is researched using quantitative methodology with descriptive statistics, as well as secondary sources.

An article reports the return of venture capital into the economic mainstream after suffering setbacks between 2000 and 2004. However, the article lacks direct references to fiscal tools, such as capital gains tax, and is void of any methodology other than journalistic spirit. Grimes (2005) does, however, review the history of the venture capital industry from 2000 onwards, and concludes that between 2000 and 2003 there was a major contraction in the industry and a return to pre-2000 levels, starting in 2004, and a renewed interest in start-up funding in 2005. Baily and Gershenberg (2008) support Grimes in a short article on primary research and methodology, and put forth an argument using secondary sources.

The Grimes and Baily and Gershenberg pieces of literature are significant to this thesis. These pieces of literature review how the Bush Administration pushed
capital gains tax to historic lows. Disregarding confounding events, such as the 9/11 terrorists attacks and their effects on the systemic business cycle, it appears that once the business cycle returned to normal there were suggestions by venture capital industry leaders that investment in start-up enterprises would rebound as a result of lower capital gains taxes. If true, this would imply a relationship between the primary independent variable and one component of the dependent variables. Not broached in the Grimes article is whether the connection is a causal or correlative relationship. The historical reflection makes this work relevant to this thesis. It is also interesting to note that at least one source verifies Grimes’ prediction. Toner (2013) reported in an article for the Northern Virginia Technology Council that early-stage funding for start-up companies has recovered and is active. Of course, this recovery may be unique to the Washington, D.C. technology corridor, one of the largest concentrations of technology companies in the country, but it is most likely happening elsewhere throughout the nation.

Bruce and Deskins (2006) authored a methodologically structured article citing numerous variables related to this thesis. The authors outlined their quantitative methodology and scope in detail. They make an argument that tax rates have at best only a small influence on entrepreneurship.

Taking an opposite position to Burman, Minniti, Bruce and Deskins is a piece of literature written by White, Lockwood and Miles, (2009). Using some quantitative analysis, the article does approach tax incentives as a lever in stimulating entrepreneurial reward by graphically comparing the returns on early stage investments with and without favourable tax treatment. The authors also draw an inference about the topical nature of the discussion about fiscal stimuli and entrepreneurship by stating,
"Policy makers in the U.S. and Europe understand that entrepreneurship by large and small corporations can be influenced both by regulatory controls and reward structures... Government policy makers, globally, tend to rely on two major categories of tolls to induce entrepreneurial activities by corporations (or SMEs): (1) tax incentives; and (2) direct government support”. (Wise and Miles, 2003, cited in White et al., 2009, p. 1)

The paper concludes by suggesting that fiscal policy targeted to entrepreneurial activities can have a varying and profound positive effect on investment in this economic sector, in particular in the investment preference areas of developmental and start-up funding. These are two sub-dependent variables within this thesis.

Following up on the White position is a study grounded in secondary sources and employing some light quantitative inputs. The author's position is clear. Gentry (2010) claims that capital gains tax directly affects the investment decisions of venture capital firms and defends his assertions with quantitative modelling. This underscores the theory that there is a relationship between the primary independent variable and the dependent variables.

A working paper backing the positions of Gentry et al. (2009) calls upon numerous secondary sources and is extremely detailed and quantitative in its methodological approach. Achleitner et al., (2011) have taken the position that capital gains tax does affect venture capital firms in terms of their investment preferences and cite examples of funding preferences.

Hipple (2012), in a methodologically constructed piece of literature, reviews the difference between monetary and fiscal policy. Since monetary policy is potentially a confounding variable in this thesis it is important to express its impact. The author also goes into mathematical depth about the relationships between
variables, in particular the interaction between the independent and dependent variables.

The dependent variables in this thesis are the collective investment preferences of the venture capital firms analysed and listed in Table 2-B below. They represent the broadest of categories and are further broken down into sub-categories later in the thesis.

**Table 2-B Investment Preferences**

<table>
<thead>
<tr>
<th>Funding Preference</th>
<th>Industry Preference</th>
<th>Geographic Preference</th>
<th>Type of Funds Preference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amount Invested from Minimum to Maximum (Not used in the in the four surveys due to the nature of data collected)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: James Silvester, 2013

The above list represents the most common types of investment preferences studied by the venture capital industry and its respective trade associations, such as the National Venture Capital Association and the National Association of Small Business Investment Companies.

**The Variables**

In attempting to understand the nature of the independent variables, definitions of these variables were first sought, and thus Bittel (1978) and the Internal Revenue Service booklet entitled *Accounting Standards and Financial Reporting Requirements for Small Business Investment Companies* were relied upon, in addition to the United States Internal Revenue Service Website. The above are strictly reference materials.

Before proceeding, this researcher deferred to a brief history of capital gains tax set forth by Deutch (2008). It makes for light reading but does offer up some
quantitative comparative data. This piece does not take a position about the effects of the capital gains tax on any economic sector, and is therefore considered inert with regard to this thesis, but it did provide a foundation of understanding. Since capital gains tax links directly to personal tax rates, a review of Rosenberg (2012) ensued. He offers up a brief article on the history of personal income tax provision, beginning when it was introduced in 1913.

Capital gains tax is a fiscal tool that has been around for approximately one hundred years and has always been politically debated. That debate reached heated levels during the 2012 presidential race when it was discovered that candidate Mitt Romney had used the capital gains tax to reduce his tax burden by 50%.

It is appropriate that this section begin with a piece of literature that sets the tone for this literature review. On becoming president, and through his address to Congress on 20 April 1961, John Kennedy laid out his economic vision, which made him the biggest tax cut leader in American history as he reduced the top marginal rate from 91% to 70%. Simultaneously, he enacted a 7% investment tax credit, which is of course one of the independent variables in this thesis and is treated as a constant due to its precarious history and dubious value.

Many conservative politicians of the modern era consistently invoke Kennedy’s name and refer to his tax cuts as the reasons for the massive economic expansion that followed. During the 1980 presidential campaign, Ronald Reagan repeatedly referred to the Kennedy tax cuts, as did Bush in 2000. However, often forgotten is that Kennedy also led the country on a large-scale military expansion and engaged the Soviet Union in a space race. These two events saw billions pouring into military and civilian research and development efforts, the output of which had a major positive impact on the country’s productivity and national growth. This raises
the question of the extent to which these two confounding variables contribute to the positive impact on the economy, as opposed to the tax cuts.

It would seem that a new worldview has emerged, given the successive tax decreases of the last 50 years. In fact, tax rates, including capital gains tax, are much lower today compared to 50 years ago. Some authors hint that the young president kick-started the move to reduce taxes and quote Kennedy (1961): “The tax on capital gains directly affects investment decisions, the mobility and flow of risk capital… the ease or difficulty experienced by new ventures in obtaining capital and thereby the strength and potential for growth in the economy” (cited in Moore and Silva, 1995, p. 1).

Kennedy retreated in his address to Congress in April 1961. The president wanted to eliminate capital gains tax and instead tax capital gains as ordinary income, which has a higher rate. Kennedy seemed to have recommended abolishing capital gains tax and to have felt that having capital gains tax and preferential tax treatment was unfair in light of the introduction of investment tax credit. Thus he recommended its end, forcing income from capital gains to be taxed at ordinary income tax rates. Kennedy (1961, p. 1) stated, “Our capital gains concept should not encompass this kind of income. This inequality should be eliminated, and especially so in the view of the proposed investment tax credit”. Kennedy felt that the massive reduction in general tax rates and introduction of the investment tax credit were enough to stimulate and maintain the economy. Congress disagreed and kept the 25% capital gains tax in place, despite other tax reductions being enacted.

Interestingly, in the later stage of his presidency, Reagan also embraced the Kennedy position with his Tax Reform Act of 1986, and equalised the capital gains tax and ordinary tax rates. Lindsey (1987) authored a piece of literature, breaking
down the act by using quantified descriptive statistics, modelling and secondary sources. The author’s conclusions are unfavourable to those opposing a relaxation in the capital gains provisions within the tax codes. Additionally, the work is unlikely to satisfy those favouring a relaxation of the tax rates. The study takes the position that an increase in capital gains tax will not increase or decrease the tax revenues derived from capital gains tax, and essentially implies that capital gains tax may be inert as a fiscal stimulus tool.

Siding with Kennedy, David (1964) suggests in his article that capital gains tax has a significant impact on the nation’s factors of production. The article was written 25 months after the Kennedy speech, at a time when the full force of the Kennedy tax cut was taking effect. Even though David agrees with Kennedy on the importance of understanding the impact of capital gains tax on the systemic economy, the article's theme runs counter to Kennedy’s position on capital gains.

Randle is somewhat more focused than David. After 30 years, the venture capital industry had emerged as a major and viable part of the American entrepreneurial sector. By that time, debate had come and gone on the subject of whether capital gains tax had an effect on venture management. Randle (1993) supports the notion of a cut in capital gains as a way to stimulate investment in the entrepreneurial sector but his position is subdued, as demonstrated by the careful use of terminologies at the expense of tangible analysis.

The economically robust decade of the 1960s ended in a major economic contraction, often referred to as the Recession of 1970. It was severe by every account and actually ushered in a decade of lacklustre economic performance. Calls for significant economic reforms ensued and were tied to civil unrest among the student population over the Vietnam War. There was much renewed focus on Keynes and his
theories. Wenzel (2009) also established this link. The economic circumstances of the period seem to have ushered in a new debate on fiscal stimulus as a means to jump-start the economy before economic issues become an excuse for civil unrest.

Taubman (1972) wrote a paper on the Investment Tax Credit, an independent variable in this thesis. The credit is insignificant, given its short and precarious lifespan, and thus treated as a constant. Quantitatively analysed, the paper questions whether a reintroduction of the Kennedy-era investment tax credit phased out in 1969 would have economic benefits. He concludes that investment tax credit is inert in so far as affecting systemic economic conditions is concerned.

The debate about economic stimulation continued to increase throughout the 1970s, culminating with the election of Reagan in 1980 and the introduction of the Economic Recovery Act of 1981. The law drastically reduced capital gains tax, significantly enhanced depreciation write offs and maintained investment tax credit.

History has shown the Reagan years to be ones of rapid economic growth, with much job creation and innovation and dynamic entrepreneurial activity. However, large budget deficits ensued and, like the Kennedy years, there was massive defence spending and investment in technology that may have contributed significantly to the economic boom.

Deviating from the Kennedy concept, Dyl (1979) writes a professional journal article. It relies heavily on secondary sources as opposed to any primary research, and the author states, “Economists generally agree that a basic characteristic of a good tax is economic neutrality” (Dyl, 1979, p. 1). He further notes that a tax should not attempt to alter or modify systemic behaviour unless intended to do so. In other words, shotgun approaches to tax policies should be avoided and more targeted approaches are needed. He raises concerns that capital gains tax is too static and
inflexible and may have been counterproductive as it existed in the 1970. In support of Dyl’s position, Poterba (1989a) appears as an opponent of capital gains tax, implying that it does not have any positive effect on venture capital. Writing in a professional journal and using a quantitative methodology, he makes the case that the capital gains tax rate has little effect upon venture capital and there is misdirection in government policy in assuming it does. He notes that it is hard to measure the impact upon venture capital since the capital gain tax rate also affects many other asset classes. In a working paper, Poterba (1989b) takes a negative view of any relationship between venture capital and capital gains tax. Using quantitative analysis and a host of secondary sources, the author makes an argument that capital gains taxes may be more important to the entrepreneurs starting and running a business than to the investors who invest. He concludes in the abstract by stating "… that reducing the tax rate on all gains is a relatively blunt device for encouraging venture investment" (Poterba, 1989, p. 48).

Siding with Dyl and Poterba, Minarik (1992) also expresses concerns about capital gains tax being used as a fiscal policy instrument. More a policy statement than a methodologically based study, the paper concludes that history has shown that changes in capital gains tax produce no effect, and hints that its manipulation may be an attempt to provide the wealthy with preferential tax rates on their investments.

Vindicating Dyle, Poterba and Minarik in a study, Gompers (1994) emerges and writes a paper with a quantitative methodology and e secondary source references. His conclusions are multi-fold. Gompers (1994, p. 22) states,

“Venture capital in the U.S. is significantly larger and more active than in any other country. The control mechanisms and tight monitoring of high risk/high reward projects and the information generating activities of venture capitalists are clearly valuable. Venture capitalists are a long term competitive advantage for the American economy. Present and future world leading firms have been, are, and will continue to be
financed by venture capital. Promoting an efficient venture capital sector should be a goal of any administration”.

Gompers (1994, p. 23) notes further that, “Reduction in capital gains taxes alone would likely have little or no effect on venture capital investments in the absence of other changes”. The author raises doubts about who would benefit from lowering the capital gains tax rate. He concludes by implying that the capital gains tax strategy should be more long term in focus, and Gompers (1994, p. 24) ends by saying, “If capital suppliers do not have equally long horizons, the process of new firm development, effective product development, and cutting-edge research will be hindered”. Gompers supports a healthy venture capital industry and believes it is the centrepiece of a healthy economy. However, he does not support the notion that there can be industry manipulation via capital gains tax without damaging the systemic economy.

This researcher decided to introduce the piece of literature below outside the chronological path because it completely supports the positions of Dyle, Poterba, Minarik and Gompers. The United States Congressional Budget Office (1990), also known as the CBO, published a study taking a position against relaxing capital gains tax, citing no systemic economic benefits. The study chides other works for supporting a relaxation by utilizing unwarranted economic assumptions. The CBO is without political affiliation and used modelling, quantitative comparison and descriptive analysis to make its case. Hungerford, writing for the Congressional Research Service (2010), another non-partisan non-affiliated entity reporting to Congress, supported the position of the CBO with statistical analysis of capital gains tax using descriptive means and a few secondary sources.

It is necessary that readers should consider the period and negativity surrounding capital gains tax. Presidents Reagan and Bush raised taxes considerably
in the late 1980s, followed by President Clinton's tax increases and the imposed budgetary restraints forced on him by the Republican Contract with America Campaign. This, in combination with a robust economy, finally led to a balanced federal budget and budget surpluses in the late 1990s.

A working paper by Fazzari and Herzon (1995, p. 28) supports Gompers when the authors acknowledge, “The view that lower capital gains taxes will somehow stimulate much investment and growth has little support”. The authors make an argument using an array of quantitative analysis and secondary sources. They go on to hint that capital gains tax is a preferential tax for the wealthy and make the case on several different occasions that lowering capital gains taxes has little or no positive effect on venture capital investment or economic growth. They close the paper by insisting on proof that lowering capital gains tax is beneficial and conclude that their research undermines the proponents of lower capital gains taxes.

McIntyre (1996) sets out an argument against capital gains tax being treated as a preferential provision within the tax code, in complete agreement with Fazzari and Herzon. This work provides some quantitative analysis, and debates the use of capital gains tax over the last 35 years. McIntyre (1996, p. 1) concludes strongly by stating,

“The reason why economic conservatives might worry about special tax breaks for capital gains was aptly summarized in testimony by the Treasury before the House Ways and Means Committee in January 1995 concerning the Republican “Contract”…". Increasing the preferential treatment of capital gains would create economic efficiency losses and make the tax system more complex by encouraging taxpayers to convert ordinary income into capital gains"… Numerous economists, including some very conservatives ones, have echoed Treasury's serious concerns about the GOP’s proposed capital gains tax cuts. They note that capital gains are already the lowest taxed form of capital income (due to deferral and preferential rates), and they fear the likely waste of capital resources from new tax shelters”.

66
A working paper arguing against a relaxation of capital gains tax is authored by Auerbach and Siegel (2000), implying that investors view capital gains taxes as secondary to tax avoidance and as a tool for accomplishing such avoidances. This is in agreement with McIntyre, Fazzari and Herzon. The paper adds little but is worth noting that opponents of a cut in capital gains tax feel the same. Auerbach and Siegel’s paper is researched with a deductive methodology incorporating both primary and secondary sources of information.

In reference to depreciation write-offs, Boskin (1988) notes in a professional article that in the 1980s two pieces of legislation were passed and provisions of both forced revisions in the promulgated depreciation schedules. Most importantly, he inferred that this instability in tax policy might be a negative factor in managing the economy. His positions are grounded in deductive methodology using mostly secondary sources. Well-known financial moguls, such as Donald Trump, argued before Congress that instability within the tax code related to financial incentives, in particular depreciation write off allowances, were creating disorder within financial centres.

Trump is interesting and points to a central theme supported among some such as Prescott (2004). Prescott conveys the belief that broader systemic economic factors outweigh more focused economic stimuli in terms of affecting economic growth, and these targeted attempts to manipulate the economy may be counter-productive.

Returning to the Kennedy tax plan as presented in a small but comprehensive targeted article, and taking aim at Taubman’s and Boskin’s positions, Rotstein (1990) uses some quantitative graphing and makes an argument for the use of tax credits as fiscal stimulants. He evaluates and promotes the Kennedy and Reagan tax plans as
similar, which is often the case among contemporary economists and commentators. Both Randle’s (1993) and David’s (1964) positions agree with Rotstein.

The think tank, the Cato Institute, supports Randle, Rotstein and David, taking a policy position in favour of cuts in capital gains tax, as promulgated by Moore and Silva (1995). The Randle quantitative study is extensive. Moore and Silva (1995, p. 1) state,

"This study examines the historical experience with the capital gains tax in the United States, as well as the findings of more than 50 economic studies on capital gains taxation. We conclude that a capital gains tax cut would:

- substantially raise tax collections and increase tax payments by the rich;
- increase the rate of capital formation, economic growth, and job creation through the year 2000;
- unlock hundreds of billions of dollars of unrealized capital gains, thus promoting more efficient allocation of capital;
- expand economic opportunities for the most economically disadvantaged workers by bringing jobs and new businesses to capital-starved areas, such as America’s inner cities”.

This position paper, known as Policy Analysis No. 242, reflects upon the reality that capital gains is a politically sensitive issue and not fully understood by the American populace. It seeks to inform in non-technical language and tries to avoid the confusion of technical language.

The policy position suggests a total elimination of capital gains tax. A substitution is unclear in the document but the suggestion is no tax at all on gains from selected investments. Another study in support of liberation from capital gains tax was published by The National Center for Public Policy Research (1996, P. 2) and suggested total elimination of any tax on capital gains in blighted areas, stating, “Aspiring entrepreneurs should be encouraged by government in their pursuit of the American Dream, not punished by taxation”.

68
Disputing Moore and Silva, Engen and Skinner (1996) attacked the question of tax cuts from a broader, more systemic approach. However, the Cato Institute and the National Center for Policy Research may be relieved that Engen and Skinner did appreciate their study. Overall, the quantitative piece concluded that systemic tax cuts do have a positive effect on economic growth but only modestly so. The findings went on to suggest that lower taxes could improve living standards in the long term. However, the study also points out that enhanced economic activity does not produce enough tax revenue to fully fund tax cuts. This is a significant argument in relation to those political leaders who are sensitive to budget deficits and believe no tax cuts should be legislated unless the potential exists to recover their costs completely through enhanced revenues. This is also an argument quite often used by those who contend that tax cuts neither stimulate nor produce economic benefits.

A member of Congress countered the Engen and Skinner piece, which could only have made the Cato Institute sigh in relief. A study commissioned by United States Senator, Jim Saxton, for the Joint Economic Committee of Congress supports the notion that changes in capital gains tax affect not only systemic economic output but entrepreneurial subsectors as well. The study states,

“Capital gains taxation further effects economic and employment growth through its impact on entrepreneurial activity and business creation. Entrepreneurship is the driving force of a market economy. It is crucial to job creation, innovation, and productivity. Entrepreneurship is affected by, among other things, the strength of the incentives that motivate entrepreneurs to undertake innovative projects and the ability of the entrepreneur to raise enough capital to finance projects. The taxation of capital gains discourages innovation, risk-taking, and capital investment, thus diminishing entrepreneurial activity in the economy”. (Knight, 1997, p. 5)

The following statement from the study concerns the effects that capital gains tax has upon the venture capital industry:
“Capital gains taxation effects entrepreneurship through its impact on venture capital, an important source of funding for entrepreneurial projects. High capital gains tax rates lower the potential return from backing innovative companies, thus restricting the amount of venture capital available to new firms. Some analysts argue that most venture capital comes from tax exempt sources such as pension funds and foreign investment; therefore, a capital gains tax reduction would not have much effect on venture capital.” (Knight, 1997, p. 5)

However, one must be careful to consider that conservatives as a matter of ideology, and not for practical reasons, favour lower capital gains taxes because this helps their primary voting constituents. They populated the Saxton Committee in the late 1990s, and therefore political bias may be a factor.

Another interesting piece of literature in support of the Cato position comes from Cordes et al. (1993, p. 474). They wrote an article tying venture capital directly to the capital gains tax in which they stated, “In everyday economics, entrepreneurs are the heroes”. Using quantitative modelling, this study takes an affirmative position that capital gains tax has an impact upon venture capital. To quote them more succinctly, Cordes et al. (1993, p. 475) say, “The more that a capital gains tax raises the return to savers and lowers the cost of capital to business, and the more that saving and investment respond to such changes, the more likely it is that such a tax cut will spur saving and investment and raise GNP”. They go on to note, "… it is the result of the most successful (venture capital) investments that most greatly benefit our nation” (Cordes et al., 1993, p. 475).

Writing for the Small Business & Entrepreneurship Council, venture capitalist Keating produced a paper on the history of capital gains taxes. Keating (1998, p. 2) states, "… the goal should be to eliminate the destructive capital gains tax, thereby further unleashing the creative, productive powers of the U.S. entrepreneurs”. This is in complete support of Cordes et al. (1993). It lacks a clear methodology and is devoid of analysis but is driven by the reputation of Keating.
In addition, the Cato Institute surfaced yet again in a piece of literature published by the Institute's Policy Forum. The forum consisted of noted conservative leaders all supporting reduction or total elimination of capital gains tax (Gingrich et al. 1998). Although acknowledging the intense emotion and polarized opinions surrounding the topic of capital gains tax, their conclusions are based on subjectivity and lacking in qualitative or quantitative support. It is an editorial opinion paper only, but it is important to demonstrate the political divide partially fuelled by capital gains tax.

Using a quantitative methodology to connect the Efficient Market Hypothesis to social responsibility as it relates to shareholder wealth, a professional journal article by Rieck and Hall (1998) is included in this literature review. It is topical in nature given the discussion that took place within the 2012 American presidential debate on wealth creation and how capital gains tax is being used to generate that wealth. Mitt Romney’s use of private equity as a venture capitalist via Bain Capital to spawn entrepreneurial firms, and his subsequent accumulation of wealth, are in full view within the American political arena. The article is inconclusive as to whether private wealth may be translated into socially responsible actions by wealth holders. Suffice to say that, were social responsibility to be politically demanded of wealth holders, it would affect how venture capital is deployed in the future. This would most probably influence venture capital investment preferences.

No business thesis is complete without a mention of the father of modern management and his input on imposing entrepreneurial forces. Drucker’s article is an opinion piece and not driven by methodology but is noteworthy because it conspicuously lacks any mention of the use of fiscal tools to stir entrepreneurial innovation. Drucker (1998) strongly implies that innovation within an economy is
akin to a religion and must be viewed and promoted as such to make it a sustainable force. The article ends with him stating, “But the foundation of entrepreneurship – as a practice and as a discipline – is the practice of systematic innovation” (Drucker, 1998, p.8). Drucker goes on to suggest that management education is an important tool in stimulating and maintaining systemic entrepreneurial innovation. He seems to repeat the two CPAs cited elsewhere in this thesis that convey the notion that fiscal stimuli do not affect entrepreneurial investment; instead, there are other more profound forces at work, such as systemic economic conditions, education, experience and innovation.

Using his personal experience as a noted venture capitalist and some quantitative studies, Zider (1998) does not direct any comments towards fiscal issues but describes the venture management process in this piece of literature. Zider, like Drucker, believes that positive venturing is more related to developing a systemic entrepreneurial mind set and culture than anything else.

A report exists on the rise of private equity use within the United States economy and its increasing influence within the venture capital industry, and thus the entrepreneurial sectors. To that limited extent, the piece ties in with Zider. Again, this researcher found this report by Borrell (2003) of interest, since it is nine years old and predicts the rise of private equity, which is now unfolding upon the American political stage thanks to Mitt Romney’s tenure at Bain Capital, a private equity firm. It would appear that the author did use some limited quantitative statistics in his analysis, and the article is an overview.

There is an article with more data analysis than opinion. The work by Taylor (2003) contains a quantitative chart listing corporation income tax rates back to their inception in 1909. It is significant to this thesis because of the impact of overall
corporation tax on business decisions in general. Some pundits, such as Sridharan (2012), have proposed establishing a link between capital gains tax and general corporate tax, either inversely or concurrently, as a more efficient way to stimulate economic growth and job creation. A historical analysis incorporating Taylor’s work would assist in this process.

A non-partisan organisation offers a report that provides an interesting and helpful analysis of the Tax Reform Act of 1986; a piece of legislation tied to the second primary survey conducted for this thesis. It goes on to highlight the Bush tax cut, known as the Economic Growth and Tax Relief Reconciliation Act of 2001, a piece of legislation tied to the last survey conducted as primary research within this thesis (The Tax Policy Center, 2011). It is a source of fiscal data and analysis used by all political persuasions.

Two authors on fiscal policy conducted a structured and quantitative study. Its construction would make this a reasonable study if it were not void of references to capital gains taxes. Nevertheless, Auerbach and Gorodnichenko (2011) offer up this piece of literature. Although abstract and esoterically, it is informative, in particular on the issues of fiscal multiplier effects and how some fiscal tools could affect economic outcomes and possibly be considered as extraneous or confounding variables. Specifically, they approach The Organisation for Economic Co-operation and Development, also known as the OECD, economies and use real-time forecasting to purge immediate policy inputs, and macroeconomic variables and the business cycle to identify patterns in the data. It is a supplement to the Taylor piece mentioned earlier.

An article goes to the heart of the debate unfolding within the American presidential campaign on tax fairness. Although the piece does not pinpoint capital
gains tax as such, it does go into an analysis, using quantitative percentages, of why capital gains tax, a preferential tax, may be tolerable here in the United States as opposed to other countries. This article (Anonymous, 2011a) is useful to this thesis in macro terms and in establishing that the debate about tax fairness is in fact topical and currently intense.

There is a study of interest to the sitting scholars at the Cato Institute and the National Center for Public Policy Research that applied some quantitative reasoning to a study in Massachusetts and concluded that capital gains tax benefits all wage earners and is not exclusively a shelter for the rich. Suffolk University (1999) presents a study that is strictly localized to just one state. It lacks implications for the venture industry but, as a whole, the paper does take the position that an increase in capital gains tax would be a punitive measure, potentially dampening investment in the systemic state economy.

Adding intellectual stamina to the Suffolk paper by conducting a study on capital gains tax using some quantitative input, Staszczuk (2001) reviews the history of capital gains tax in South Africa, the United Kingdom and the United States. Although this study was largely confined to the South African economy, it draws comparisons with the U.K. and U.S. models. It concludes by suggesting a termination of all tax on capital gains as a means of encouraging investment, enhancing employment, raising the bar for productivity and expanding national wealth. It lacks any direct reference to venture capital, as it relates to capital gains taxes, but there are mild overtones that suggest he understands the relationship.

In support of Cato, Suffolk and Staszczuk, Tobias (2002) takes the position that a zero-bracket should be targeted and reserved specifically for investment in new start-up firms. Tobias (2002, p. 1) states,
“Such a rifle-shot tax cut would be a huge incentive to invest in new companies, and to fund the expansion and modernization of old ones, but at a tiny fraction of the cost of an across-the-board cut. It would be a boon for Wall Street, making it that much easier to find buyers for newly issued stocks and bonds”.

Despite the fact that this literature is ten years old, it is interesting to note that President Obama and Congress recently passed legislation identical to that proposed by Tobias in the column under the Small Business Jobs Act. It is impressive that, while ultimately implemented, this piece is lacking in solid methodology and analysis.

Another work in support of a capital gains tax cut is an article, heavily quantified and much more extensive than Staszczuk and Tobia in terms of depth. It investigates both taxation and venture capital, and comments on the effects of taxation, in particular capital gains tax, on venture capital firms (Keuschnigg and Nielsen, 2004). What makes this paper so useful to an entrepreneurial researcher and to this thesis is its appraisal of how a venture capitalist might respond to capital gains tax stimuli. For example, the authors distinguish between direct government subsidies to offset the cost of capital versus a lowering of the capital gains tax. Some may suggest this is inconsequential but to an entrepreneurial researcher it is highly significant. This study concludes by stating, “In the realm of taxes proper, the capital gains tax is usually considered as particularly damaging to VC activity”. (Keuschnigg and Nielsen, 2004, p. 369)

An article lacking in detail on the relationship between fiscal policy and venture capital, but essential in terms of explaining why this thesis is important on a macro-level, was written by Belke and Schaal (2004, p. 2). They state, “Venture capital has in recent years played a key role especially in Anglo-Saxon countries in financing structural change, innovations and new firms”. This piece of literature, with
acceptable methodology, is not specific to this thesis, although it complements the macro arguments offered up by Keuschnigg, Nielsen and even Taylor.

Gompers and a co-author penned a report that takes direct aim at those who favour relaxation of capital gains tax. A quantitative study with secondary sources, this piece of literature concludes that capital gains tax as a stand-alone fiscal tool has little effect on venture capital. Gompers and Lerner (2004) suggest that identifying and investing in high-quality start-up enterprises is a venture capital motivator. In addition, and in agreement with Drucker, these authors also recommend that, as a matter of policy, the government should seek to enhance technological innovation and the potential for entrepreneurship, and that these factors may be more valuable than a cut in capital gains tax to stimulate economic growth. This supports the Prescott comments noted earlier. Poterba takes the same position.

The Washington Post’s Slate Magazine has more comment on the Kennedy fiscal stimulus policy, discussed earlier in this chapter. Again largely supported by the author's personal opinion with some quantitative data, the piece focuses on primarily tax cuts, similar to Taylor's position. An interesting note is on the similarities between Greenberg’s (2004) opposition to cuts in the capital gains tax, encompassed within the Kennedy plan influenced by the political left, and the contemporary opposition from the same corridors.

Supporting Gomper, Lerner and Kobes, the well-known contemporary economist Burman (2007) proves to be hostile to capital gains tax and has consistently taken a negative position on lowering this tax or treating it as a preferential tax. In this article he employs quantitative charts to indicate his point that relaxation of capital gains taxes provides no economic benefits.
A journal article about the effects of fiscal policy upon economic growth resembles the Burman position. Quantitative data combined with secondary sources makes this a contributory work in the context of this thesis. Although Ali (2005) does not debate any direct link between capital gains provisions and venture capital, he does make a claim about fiscal policies in general. He concludes by noting that there is no evidence to suggest fiscal policy has any effect on economic growth and contends that the existing literature does not support the popular notion that a relationship exists: in other words, there is a gap in the literature.

Another article supporting the notion of folding capital gains tax into general tax rates surfaced in 2005. Using some limited quantitative analysis and a few secondary sources, the author makes the case for eliminating capital gains tax provisions in favour of lower and flatter general tax rates. This was also proposed by Kennedy in 1961 and was implemented by Reagan through the Tax Reform Act of 1986. Irons (2005) is unconvincing in his assertions that capital gains tax is a tax that only benefits the wealthy and that the tax code should be shifted in favour of those in middle and lower income brackets. However, he does position himself with the growing chorus of those who question the economic benefits of capital gain tax relaxation.

Together with Ali, Burman, Brennan and Gompers, there is a quantitative study with deductive methodology concluding that tax breaks are not the primary motivators for savers and investors. Brennan et al. (2005) discuss issues of portability and investment liquidity as prime movers in this working paper. The paper does not give comfort to those who want relaxation and/or elimination of capital gains tax.

Another study was proffered by Bruce and Mohsin (2006) supporting the contentions of the Cato Institute and other pro-capital gains tax relaxation advocates.
These authors produced a quantitative study and identified a relationship between systemic fiscal policy and targeted fiscal policy, i.e. capital gains tax, and showed how both affect entrepreneurship. In their analysis, the results of other studies were reviewed and they state, “The recent theoretical literature in this area has established that tax policy has fundamentally ambiguous effects on entrepreneurial activity” (Bruce and Moshin, 2006, p. 410). They also assert “… That tax policy can affect entrepreneurship is not at all surprising” (Bruce and Moshin, 2006, p. 409). The authors show their affinity with capital gains tax as an economic stimulus by stating, "… capital gains are also important. As they affect the net return from (and inevitably the supply of) capital that is provided to finance new ventures”. (Bruce and Moshin, 2006, p. 413). The work uses some regression and causality analysis and displays deductive methodology. The overall conclusion of the study suggests, however, that in order to affect entrepreneurial activity, changes in tax policies should be global in application and not an isolated ‘hit and miss’ strategy.

Writing for the Brookings Institute and relying on his own experience and expertise as opposed to solid methodology, Burman re-emerges and attempts to cement his credentials as a nationally known sceptic over the effectiveness of capital gains tax as an economic stimulator. Burman (2007) puts forth an article suggesting that the preferential treatment of capital gains is a subsidy for the wealthy and does little to improve systemic savings and investment. Burman, like Gompers, contends that capital gains tax has little effect on venture capital companies because these firms procure their capital from sources not subject to capital gains tax.

Capital gains opponents such as Ali, Brennan, Brennan, Gompers, Hulse and Vines take a negative view of the preferential nature of capital gains tax and attack the provisions as a failure in terms of increasing government revenues. They have an ally
in the non-partisan Center on Budget and Policy Priorities (2007), which, through a position paper that is short on methodology and long on opinion, does not favour capital gains tax. The article cites Burman on the subject of capital gains tax. He wrote a book on the subject with traditional methodology, and utilises descriptive statistical tooling and secondary sources.

In broad support of the Center on Budget and Policy Priorities and Burman is an interesting paper written by Minniti, which draws a line concerning the impact of government fiscal policies on entrepreneurship. Minniti (2008) cites the popular and topical belief that governments publicly promote the notion that an active entrepreneurial sector creates economic growth and employment, and the article raises some debates. Relying heavily on secondary sources instead of primary research, the author concludes that although changes in capital and investment taxes may affect entrepreneurship, which would influence a venture capital firm’s investment preferences, these fiscal changes may do nothing to stimulate the larger systemic economy.

A conservative columnist who is confident about his support for a complete elimination of any tax on capital and investment gains has published an article that contrasts with the ideas of Minniti. The article lacks a methodological basis, as would be expected of a newspaper piece. However, it does quote some secondary sources. Columnist Kudlow (2007) identifies the capital gains tax debate as politically charged and blames the democrats and liberals for wanting to tax capital gains at ordinary tax rates, leading to an increase in taxes on investment gains. He also blames them for the recent controversies that have resulted in labelling capital gains tax a subsidy for the wealthy class. This is a biased article proffered by a known neoconservative
journalist, although it is included in this review in order to bestow a flavour of the
debate currently unfolding on the political stage in the United States.

What Kudlow lacks in sound professional methods is more than compensated
for in the study conducted by Veldhuis et al. (2007), which demonstrates their
asserted disdain for anything that resembles a tax on capital and investment gains.

Conforming to the Cato Institute, David, Randle and Rotstein, based their arguments
on some quantitative analysis and, although mostly directed towards the Canadian
economy, their work does have implications for the United States as well. An
important characteristic of this report is its drawing of a link between capital gains tax
and entrepreneurship, which is vital to this thesis. They state in their executive
summary that,

“Capital gains taxes have a detrimental impact on the number of
entrepreneurs and risk-takers in Canada. Entrepreneurs and their
financiers are critical to a successful economy in that they challenge
the status quo, advance technology, develop new products and
services, create jobs, and increase wealth. These individuals trade-off
low current compensation because they expect to generate significant
future returns. Capital gains taxes reduce the return that entrepreneurs,
venture capitalists, and other investors receive from risk-taking,
novation, and work effort. Lower expected returns decreases the
number of entrepreneurs and risk-takers and ultimately reduces
vestment, technological advances, employment, and overall
economic growth”. (Veldhuis et al., 2007, p. 3)

Not surprisingly, their conclusion is in favour of complete elimination of any
gain on capital and investment, as they boldly assert:

“Given the relative efficiency of other types of taxes, Canadian
governments, both federal and provincial, should eliminate capital
gains taxes. The revenue loss from such a move would be small given
that capital gains taxes accounted for less than one percent (0.8%) of
total federal and provincial government revenue in 2005/06. If lost
revenues must be replaced, other, less costly, forms of taxation should
be used. Eliminating capital gains taxes would substantially increase
prosperity in Canada”. (Veldhuis et al., 2007, p. 3)
The authors go on to recite the words of former Federal Reserve Chairman Alan Greenspan: “the major impact [of capital gains tax] is to impede entrepreneurial activity and capital formation. While all taxes impede economic growth to one extent or another, the capital gains tax is at the far end of the scale. I argued that the appropriate capital gains tax was zero”. (Greenspan, n.d. cited in Veldhuis et al., 2007, p. 4)

In support of Veldhuis et al. (2007) is another study, billed as a policy report and employing some quantitative analysis. This study takes a firm stand in favour of reducing capital gains tax as a way of stimulating the systemic economy. Although Moore and Grimm’s (2008) assertions are short and lean on implications for the entrepreneurial sectors, the work does give a convincing argument in support of the Bush tax cuts. The authors also resurrect the Kennedy tax cuts narrative as a means of comparison. Moore and Grimm (2008, p. 25) proclaim:

“The Treasury Department recently provided a concise summary of the 2003 capital gains cut experience:

The lower tax rates on dividends and capital gains lower the cost of equity capital and reduce the tax biases against dividend payment, equity finance and investment in the corporate sector. All of these policies increase incentives to work, save and invest by reducing the distorting effects of taxes. Capital investment and labor productivity will thus be higher, which means higher output and living standards in the long run.

The Treasury’s analysis is by no means a modern revelation. In 1963 President John F. Kennedy clearly understood the fundamental importance of capital investment’s role in the economy:

The tax on capital gains directly affects investment decisions, the mobility and flow of risk capital.....the ease or difficulty experienced by new ventures in obtaining capital, and thereby the strength and potential for growth in the economy”.

Another study by Gale and Harris (2008) is an analysis conducted on the effects of the Bush tax cuts. This work supplements the Moore and Grimm study. Embedded with s quantitative methodology, this research focused on the positives and
negatives of the tax cuts in terms of their effect on systemic economic behaviour, without taking a position for or against such actions. Gale and Harris (2008) described a survey of members of the National Association of Business Economists and found that enhanced depreciation write-offs had no effect on their investment decisions, bringing into question whether depreciation write-offs have any use as a fiscal tool.

In addition, a w blog (Section179.org, 2012) notes the re-emergence of depreciation write-offs as fiscal tools, re-entering them into the political debate about fiscal stimuli via the Jobs Act of 2010. This is important given the topical discussions about fiscal stimuli presently occurring on the political stage. The Jobs Act focuses on job creation, not just for capital gains, but incorporates other fiscal tools as well. However, the primary tool of this Act is the relaxation of capital gains tax.


An article by Weitekamp and Pruitt (2009) reviews the results of a study by the Kauffman Foundation. These authors take the position that start-up firms create the most job opportunities in the United States. The article lacks academic presentation. Weitekamp and Pruitt (2009) do bring into question the government's current employment creation paradigm. The work is geared to larger firms but suggests other approaches aimed at the entrepreneurial sectors as a way to create employment. This may imply the use of targeted fiscal incentives.

It is interesting to note that many of the Kauffman recommendations were included within the Jobs Act of 2010, which re-introduced fiscal incentives focused directly on the entrepreneurial sectors of the economy, and particularly targeted capital gains tax cuts.
Although similar to Kauffman's Foundation, a report by Samuel (2010) on the Great Lakes region of the United States is quantitative in scope. This area was hit hard by industrial disintegration and consequently potential economic solutions flourish. The paper, weak on formal methodology, acknowledges that the lack of venture capital within the region is hampering economic recovery and hints that entrepreneurial activity could stimulate jobs and economic growth. Samuel (2010) concludes by suggesting private-public cooperation and the establishment of a venture capital fund specifically investing in early-stage companies within the region. The author does not convey how the region will raise the money or whether any fiscal incentives will be provided. This researcher decided to include this piece of literature within the literature review because it demonstrates the political sensitivity of the economic development debate over entrepreneurial sectors within specific geographic regions.

In support of David, Randle and Rotstein, and promoting the complete elimination of capital gains tax, Jackson (2010) presents an article. Eliminating capital gains taxes can have two meanings: 1) tax gains at the ordinary rate, which is higher than the preferential capital gains rate, and 2) complete elimination of all tax on any capital gains. The first scenario occurred under the Tax Reform Act of 1986 for the first time in the tax history of the country but the tax was later restored. Jackson’s article promotes the latter scenario. Jackson (2010, p. 1) boldly states, “Clearly, high capital gains taxes erect a significant barrier to the movement of savings from old established companies to newer and more innovative companies”. The author supported his position that all tax on capital gains must be terminated with evidence from quantitative studies. It should be clarified that, in 1986, the capital gains tax was
more than just neutered; the tax became inert because gains were taxed at the nominal rate. However, ultimately there was a reduction in the tax on gains.

Winston (2010) interviews Meg Whitman, Chief Executive Office of Hewlett-Packard and former candidate for Governor of California. The interviewer projected the argument that the capital gains tax rate in California is the same as the ordinary nominal tax rate, which is rare among the states. Her opinion, lacking in any statistical findings, suggests this situation is impeding California’s economic growth. This piece of literature is a supplement to Samuel’s (2010) paper because of its regional flavour.

Another professional piece of literature using quantitative methodology global in its analysis, and draws a clear distinction about the effects of corporate taxation on entrepreneurship is presented by Djankov et al. (2008). Using multiple variables, these authors critically analyse the effect of business taxes on systemic economic growth and entrepreneurial sector growth. The primary weakness of this study is that it does not focus on capital gains tax as such but takes a broader approach to business taxation. It does conclude by noting that higher tax environments do impede investment in, and the growth of, the manufacturing sectors. It is macro in approach and supplements the study by Engen and Skinner (1996).

A summary of the Small Business Jobs Act of 2010, which exempts capital gains from investments in small firms, is presented. Although lacking in primary research, Maltby (2010) does provide secondary input from well-known managers within the venture capital industry. These professionals are in favour of the act but acknowledge that it was originally enacted as a temporary exemption and the authors are disquieted about a tax code that is unstable. This literature is an extension of the Kauffman Foundation's (2013) position.
“The taxation of capital gains is a perennial issue in tax policy. One critical aspect for understanding the overall effects of capital gains taxation is how these taxes affect entrepreneurs” states Gentry (2010, p. 1). Gentry acknowledges that changes in capital gains tax can affect an entrepreneur’s cost of capital, which will in turn affect how they manage their company. He uses quantitative methodology to analyse the relationship between the capital gains tax rate and venture capital investments. In agreement with Winston and Samuel, Gentry concludes (2010, p. 1) that, “… in states with higher capital gains tax rates, fewer entrepreneurs are starting businesses that seek venture capital funding”. This implies that capital gains tax has a relationship with funding preference.

The Tax Policy Center (2010) proclaims that the preferential provision of capital gains tax law favours the wealthy. Within this piece of literature, a quantitative chart demonstrating the beneficiaries of capital gains tax is put forth. The authors conclude that capital gains tax unnecessarily complicates the national tax code and a better approach to taxation must exist; however, they do not provide suggestions for this. Entrepreneurial implications are also ignored.

In another article that uses quantitative data to support the notion that capital gains tax favours the wealthy classes, the Tax Policy Center (2010) confirms its position on the issue. It is difficult to ascertain whether the centre opposes the capital gains tax provisions because it believes the tax disproportionately rewards the rich or because they do not benefit the economy and/or its entrepreneurial sectors.

One of the few pieces of literature that deals with regional economic issues is an article about the phasing out of a version of capital gains taxes in Ontario, Canada, is relevant given that geographical preference is a dependent variable for this thesis. Demonstrating quantitative methods and secondary sources, Cumming and Johan...
(2010) make a case for the phasing out of Ontario’s venture capital tax credit. However, caution is necessary, given the political environment in Ontario and the possible bias of the authors. Despite these possibilities it is a piece of literature that notes the importance of entrepreneurial stimulation at a regional level.

The Meg Whitman interview described earlier is favourable to a relaxation of capital gains tax. The article by Winston (2010) prompted responses, challenging Whitman’s position on capital gains tax. Again Burman assumes the position that there is little or no evidence supporting the notion that a relationship exists between the capital gains rate and economic growth. In addition, the Winston (2010) blog cites the Center for American Progress as suggesting that lowering the capital gains tax rate does not have a positive impact on the systemic economy.

Leonhardt (2010) makes the same case as Burman and the Tax Policy Center. Although Leonhardt’s column is opinionated and lacking in methodology, it does pose some arguments. The author has clearly studied the capital gains provision over some time. He concludes it has done little in the short term to improve the economic stock of the nation. He recommends a longer-term tax policy that incorporates across-the-board tax cuts, inclusive of all income classes, much like Reagan's Tax Reform Act of 1986.

Bartlett (2010) presents a small article about the tenuous and dubious nature of the Bush tax cuts. This researcher reviewed this article because a massive reduction in capital gains tax was a cornerstone of those tax cuts. The article was tendered by Bartlett (2010) for the Financial Times, a publication generally unbiased about American politics.

Aside from the position espoused by Burman, Leonhardt, Cumming, Johan and the Tax Policy Center (2010), an author wrote a newspaper article for the Wall
Street Journal taking a position rejecting the notion of raising overall tax rates, including the capital gains tax, back to pre-1962 levels. Using secondary quantitative data comparing tax rates to growth in GDP and government revenues, Reynolds (2011) argues a case for maintaining the current Bush tax cuts by making them permanent, in particular the preferential capital gains tax rate. The author extols the virtues of the Kennedy, Reagan, and Bush tax cuts almost to the point of bias but a careful reader may extract some beneficial material from this work.

Reynolds (2011, p. A19) ends the article by stating:

“... reductions in the top tax rates under Presidents Kennedy and Reagan, and reductions in capital tax rates under Presidents Clinton and George W, Bush, not only “paid for themselves” but also provided enough extra revenue to finance negative income taxes for the bottom 40% and record-low income taxes at the middle incomes”.

Another source regional in orientation and relevant to this research endeavour, given that geographic preference is a dependent variable, is a quantified forum paper by Brannon et al. (2011). This paper examines the impact of a reduction in capital gains tax and its effect on employment. Although limited to the state of Ohio the article demonstrates the political sensitivity of the topic and is analytical and quantitative in style. Brannon et al. (2011, p. 2) state, “Given the strong link between capital gains taxation and entrepreneurial behaviour, policy makers have often reduced capital gains tax rates to spur economic activity, in particular job creation”. In support of this researcher’s contention that significant gaps exist within the literature, the authors strongly suggest that the literature within the field has not evolved to the point where any conclusion can be drawn on how changes in capital gains tax may affect investment or employment.

A press release issued by the White House (2011) defends the favourable tax treatment of targeted capital gains incorporated into the Jobs Act. Taking an example
from Reynolds (2011) above, it emphasises that these capital gains provisions strictly focus on small business start-ups; the sector of the economy with abundant employment growth. The Jobs Act is not only capital gains-sensitive but also directs new attention to depreciation write-offs. The political implication regarding depreciation write-offs and capital gains, and to a lesser extent investment credits, deals with employment creation. The history is interlinked.

Given the renewed emphasis on depreciation write-offs as expressed in the Jobs Act, a small article by Universalium (2010) attempts to highlight the investment credits of the 1960s. Without mentioning Kennedy by name, Universalium (2010) distinguishes between investment credits, depreciation allowances and depreciation by accelerated methods. This piece makes a point given that this discussion has been historically overlooked.

Despite depreciation write-offs as a serious fiscal tool to affect economic outcome being largely irrelevant, they do surface on occasion, as the Jobs Act has proven. Gerra (2012) reports that, as part of President Obama’s economic recovery programme, depreciation write-offs are once more at the forefront of economic debate and an important element in his plans. The article is strictly trade in nature, devoid of any serious methodology and seeks only to report. However, it is a complement to the Universalium article that precedes it. It can be considered an indicator that depreciation write-offs have recently returned as a serious fiscal tool.

A Washington Post article by Khazan (2012) cites President Obama’s desire to extend tax cuts for job-creating entrepreneurial firms even further, and a possible elimination of capital gains tax for the purchasing of stock in these job-creating firms. Khazan’s (2012) article is strictly a reporting piece of work that offers no sound methodology or detail. It is important to this thesis because it suggests information on
the current political opinion of American leaders and the national desperation to create employment; the essence of what makes capital gains tax a topical issue.

Reviewed in earnest was a paper touching on the significance of the worldwide economic meltdown and global entrepreneurship. Lacking in methodology and somewhat opinionated, Shahzad et al. (2012) do little to support this thesis, other than their acknowledgement that entrepreneurs victimised by the Panic of 2008 could help in systemic economic recovery. This researcher included this piece of literature to educate readers that the Panic of 2008 was a major event and its credit-restricting effect influenced entrepreneurs on a global scale, potentially making it a confounding variable requiring closer examination. Pointedly, the severity of the Panic of 2008 may have been used as a political argument to extend the Bush tax reductions beyond their expiration date of 31 December 2011, which ultimately occurred. This kept capital gains tax at a historical low.

An interesting article by Kroger (2012) in support of Burman (2004) and the Tax Policy Center (2004) included some quantitative analysis of capital gains tax. Although the author does express bias, which this researcher guarded against, some statistics are provided. Kroger (2012) takes the position that the wealthy receive preferential treatment through capital gains tax. However, Warren Buffet (2013) implies that he never saw a good investment lacking in capital because of potential tax on the gains.

Again critical of the capital gains tax provision in his book, Burman (1999) appears confident in his theories. The author used quantitative and qualitative methods and secondary sources. It is referenced in recent literature because of the current national debate about the capital gains tax. In a recent piece written for Forbes, Burman (2012b) chides Romney for his use of capital gains provision. This
trade article is fairly typical and written in Associated Press prose, and Burman does include some quantitative charting. The article simply reaffirms Burman’s opposition to any relaxation in capital gains tax.

Sridharan (2012) wrote an article describing how Mitt Romney brought the issue of capital gains tax to the forefront of American politics during the 2012 presidential campaign. It is an opinion piece lacking any methodological standing. Authors Sridharan (2012) and Moon (2012) take the position that raising the capital gains tax rate is rational if coupled with a reduction in the overall corporate tax rate. The reasoning is that this could reduce income inequality and at the same time attract foreign investment in the United States because of lower corporate tax rates. This article is deserving of attention because it mentions the topical nature of capital gains tax. It is one of several pieces of literature attempting to tie capital gains tax to overall corporate tax rates. To what extent they may be interrelated is not addressed in depth but the article does hint that the two may not be mutually exclusive.

Venture capital funding is difficult to secure at present, even in the popular biotech field. Articles abound on this topic and report the industry’s slow recovery from the recession, despite the lowest capital gains tax rate in history. An article by Rockoff and Tam (2012) provides a light quantitative approach but is nonetheless convincing about the bleak conditions within the venture industry as recited above. The authors do not conclude that a relationship exists between the capital gains tax provision and the disappearance of venture capital on a national scale but only suggest that this phenomenon could exist.

Poston et al. (2010) further support the notion of a damaged venture capital industry. They not only report on the bleak conditions within the industry but also qualify the negatives with a study using descriptive statistics. The following year
Poston et al. (2011) reported on the venture industry, reaching the same conclusion and employing an identical methodology to collect the data. Both studies recite historically low capital gains tax rates and the negative state of the venture industry, which in itself could be the reflection of a mild paradigm shift or temporary dichotomy deviating from the prevailing theory.

In support of those who oppose a relaxation in capital gains tax provision, the unaffiliated Center on Budget and Policy Priorities (2012) offers something interesting. It has published a detailed and quantitative paper, drawing into question the economic benefits of a reduction in capital gains tax. This work supports the positions of the Tax Policy Center and the United States Congressional Budget Office, also unaffiliated in their respective positions.

The larger unaffiliated research organizations mentioned so far have supported positions unfavourable to the working hypothesis; therefore, a null hypothesis seems plausible.

Strauss (2012), a Harvard Fellow, is direct on the matter of a 50-year reduction in U.S. tax rates beginning with the Kennedy Administration. He cites data showing that lowering taxes on a massive scale has not contributed to the nation’s economic stock to the degree originally anticipated. Strauss (2012) concludes that the massive tax cuts may have been counter-productive. Vermont Governor Dean (2012) supports Strauss, citing numerous studies from unnamed non-affiliated think tanks on the MSNBC network.

Journalist and Harvard/Yale professor Solman (2012) reports on the relevance of cutting capital gains tax to stimulate growth in his Public Broadcasting System column on a national debate about the tax. Although long on opinion and short on in-depth analysis of any kind, the one striking feature of this work is Solman’s
concluding statement identifying capital gains taxes and economic growth as two variables that lack statistical significance. It is the first work found to refer to capital gains tax as a variable with no significance as to the output variable of economic growth.

In support of Dean, Solman, the Congressional Budget Office and the Congressional Research Service is Huang (2012), who wrote for another non-affiliate organization opposed to a relaxation of capital gains tax. Huang supports this position with structured methodology and includes an array of descriptive statistics and many secondary references.

**Impact Of Crowd Funding Paradigm On The Variables**

Literature does exist that labels crowd funding as a paradigm. In a study, Rothler and Wenzlaff (2011) indicated the use of crowd funding within Europe and implied it was a new emerging world-view or paradigm. This article lacks primary and secondary research, but does present a deductive approach to reporting. In a trade publication Cline (2013) also refers to crowd funding as a paradigm when reporting on the success of Kickstarter, a funding portal for small independent film producers and one of the first crowd funding outlets in the United States.

Stangler and Litan (2009) add credibility to Rothler, Wenzlaff and Cline through a quantitative study displaying structured methodology about future job creation. The authors verify the importance of small firms in terms of employment generation and their article is used politically to support the Jobs Act, which was ultimately passed by Congress and signed by the president to legitimize crowd funding.

The best method of launching a literature critique of the crowd-funding paradigm is to offer a theoretical analysis of crowd funding to date. Belleflamme *et al.*
(2011) created such a study which possessed structured methodology and used multiple descriptive statistics and a host of secondary sources. Belleflamme et al. (2011) conclude in their discussion paper that crowd funding is in fact a new phenomenon offering opportunities within the entrepreneurial funding realm. However, given crowd funding’s structure and small deal composition, the authors also warn of potential hazards of this type of financing, most notably the lack of regulations and the potential for investor fraud. Interestingly, the United States Securities and Exchange Commission is presently grappling with these issues of crowd funding. In addition, a year after the complete passage of the Jobs Act, which gave crowd funding its legitimacy, the commission has yet to promulgate its final rules and regulations on the issue, to the frustration of Congress and the entrepreneurial community.

Mills (2012) has published an article describing the Jobs Act. It addresses the law’s easing of regulatory reforms on the rules relating to initial public offerings. The piece provides data from the U.S. Small Business Administration to make points and seek to prove the author's assertions. It has direct focus on the new crowd-funding paradigm.

Similarly, Markovich (2012) defended the Jobs Act by providing some quantitative data supporting the notion that small businesses create most of the nation’s new employment. The Markovich article is lengthy, informative and written on behalf of the Council on Foreign Relations. It describes in detail such things as technology, funding, and regulatory reform. It also approaches the topic of crowd funding being a new paradigm as does Mills.

There is further evidence that the crowd-funding phenomenon is gaining attention and accelerating in acceptance within the financial industry. El Nasser
(2013) published an article in USA Today about the implementation of the crowd-funding concept in public projects, in particular on a localised basis. Although this is a typical trade article written in newspaper prose and lacking in any credible methodology, it does provide examples of public/private crowd funding at work and identifies some of the operatives within the field.

The crowd-funding concept has now advanced beyond its originally intended scope and entered the world of charitable giving. A student at George Washington University started a crowd-funding site known as Crowdance assisting smaller social organizations to raise funds. It is reported by Small (2013) in a well-respected trade business publication that this student has helped some two hundred community groups and is now poised to compete on an equal footing with larger charitable funding organizations that also use crowd-funding platforms. The article is presented in Associated Press prose, typical of this type of newspaper business journal. Its methodology is solely based on secondary sources.

In attempting to synthesise the crowd-funding paradigm, confusion seems to abound. Many of the traditionalists within the entrepreneurial funding sector refuse to even accept its existence and, if they do, predict its demise. Others accept it with enthusiasm and foresight while some acknowledge its presence and choose to ignore it or do not view it as a threat (Overly, 2013). This researcher believes that ignoring or refusing to accept this new approach to entrepreneurial funding results from a lack of information and understanding. In that regard, there exists an online report defining the finer points of crowd funding by Neiss (2013), a Silicon Valley entrepreneur. It is short on primary analysis and secondary sources but Neiss does define crowd-funding. Of particular import is the inclusion of how regulatory bodies have reacted to
this new paradigm, which, according to Khan (2013) and the Kaufman Foundation (2013), is slowly.

The non-partisan Kaufman Foundation (2013), the primary think tank dealing with entrepreneurial issues, published a quantitative and deductive article using secondary sources. This article reviews the current state of entrepreneurship. In addition, it goes into extreme depth about entrepreneurial funding, tying together the Jobs Act and crowd funding. The videos of Kauffman President McDonnell (2013) and Small Business Administration Administrator Mills (2012) were informative. Of particular interest was the panel discussion that followed, where it was quite apparent, although officially denied, that friction existed between the venture capitalists on the panel and crowd funders.

The full force of the Jobs Act has been enacted. This should have driven crowd funding to new heights given the favourable tax treatments afforded to investors in targeted small firms under the new law. However, despite all the excitement about crowd funding and the Jobs Act, some are sceptical. Khan (2013) blames the consternation on the United States Securities and Exchange Commission, known as the SEC, and its apparent delay in issuing regulations governing crowd funding, which is deferring deals, as cited previously.

A Wall Street Journal article by Gamerman (2013) discussed crowd funding’s most notable portal; Kickstarter. This piece relied on secondary sources and interviews with real portal entrepreneurs and investors, and surmised that not all that glitters is gold. Although not necessarily painting a bleak picture of crowd funding, Gamerman (2013) has uncovered some frustrations with the crowd funding process. To what degree the SEC delay is contributing to this process and/or real market forces within the financial industry, are subject to further inquiry.
Perhaps of greater concern, and possibly cultural in nature, is the growing "risk averse" attitude now prevailing among entrepreneurs (Casselman, 2013, p. 1). According to the United States Small Business Administration (2013), business start-ups are just recovering to near pre-recession levels, despite the advent of the Jobs Act, and may not be sustainable despite the new law. In fact, the number of business start-ups decreased last year. In a Wall Street Journal article, Casselman (2013) used quantitative statistics and secondary sources to describe this scenario. The article speculates on why this risk aversion has emerged, and suggests the severity of the last recession, growing regulatory burdens, Obamacare and the concentration of corporate power as contributing factors. This literature asserts that this developing risk-averse culture will impede future job creation and has negative consequences for the systemic economy.

The message of the above data is somewhat disconcerting. Both the U.S. Small Business Administration (2012) and Stangler (2013) report that even if business start-ups rebound to historic pre-recession levels, the types of businesses that are being created are less disposed to job creation. Entrepreneurship may lose the mantle of the nation's primary employment creator. This could bring the Jobs Act under political scrutiny, as well as the tax breaks afforded by this legislation, including the elimination of capital gains tax for investments in companies qualifying under the Act.

This scrutiny of the Act puts the Kauffman Foundation in an interesting position. Never supporting the notion that a relaxation in capital gains tax spurs economic growth and employment, it is a major supporter of the Jobs Act, which obviously incorporates reductions in capital gains tax for certain investments in small firms. This may be a dichotomy.
Conventional wisdom suggests that business start-ups should reach pre-recessionary levels once the dragging effects of this Great Recession subside. However, the traditional systemic economic benefits historically achieved from a re-emerged entrepreneurial sector may not materialise to the same degree as in the past. The new entrepreneurial funding paradigm, crowd funding, lowers the barrier to business entry, and from this the economy can expect a greater number of micro firms producing fewer employment opportunities and a greater number of business failures. People lacking in entrepreneurial talent will be lured into entrepreneurship, some by economic necessity and others by curiosity, and yet more by impending opportunities. It is therefore important for any government agency assisting the entrepreneurial sectors to consider whether successful entrepreneurship is a matter of instinct, breeding, education or any combination of the three. A useful article by Adcroft and Dhaliwal and Willis, (2005) approaches this dilemma. Using a group of secondary sources and some descriptive charting, the authors do not reach any definite conclusions but do recall the potential resource conflicts facing society concerning entrepreneurial education.

Another significant factor concerning crowd funding is the production of positive economic outcomes. As cited earlier, crowd-funding has its share of detractors and results have been less than expected since its official inception via the Jobs Act of 2010. However, more time is needed to allow the crowd-funding paradigm to mature. Nevertheless, it should be indicated that budgetary restraints and fiscal discipline might intervene and cause some of the favourable taxation treatment under the Jobs Act to reverse unless solid economic results are quantified and promulgated.
In an article by Webb and Hussain (2011) that deals with Post-Panic of 2008 fiscal policy in the United Kingdom and United States, crowd funding is described as having major applications for both nations, despite the fact that both countries took different post-panic budgetary and fiscal paths. Using structured quantitative methodology and descriptive statistics, along with a host of secondary sources, the authors explain the psychology behind modern post-panic fiscal policy and the risks associated with government actions perceived as mistakes by the populace. This questions whether the Jobs Act can ultimately maintain its favourable tax status under the weight of heavy scrutiny as time ensues. The law’s destiny is bound to a simple statistic reported monthly by the United States Department of Labor: the unemployment rate.

However, in a trade publication that cites extensive secondary statistics, Daley (2013) reports on the continued success of crowd funding, particularly in the United Kingdom. Though it lacks primary research, the publication’s deductive direction and conclusion make for a convincing argument in support of the crowd funding concept and hints that the powerful momentum of this paradigm may overcome all opposition, at least in the short term.

**Generic Literature Relevant To The Thesis**

McNally (1998) writes about the jump from an agricultural economy to one that is mercantile and industrial in nature, and how this significantly influenced the classical economists. These economists were free marketers who believed in the heavy burden of taxation and railed against such positions. Marx and some others were exceptions to this rule. McNally (1998) makes for formidable reading but he attempts to explain the thought process of these classic economists in terms of the effects of early incentives, or lack of, on the systemic economy of the time.
A 42 page long professional paper explores the relationship between corporate taxation and international competition (Hines, 2005). This macro study utilizes much quantitative and secondary input to make its case and is informative on the intricate mechanics of corporate taxes. It lacks specific detail about capital gains tax but, like the Belke and Schaal (2004) paper, Hines (2005) establishes a foundation for the underlying relationship between corporate taxation and venture management.

Building on Hines’ work and reporting on the political divisions within the United States over the sensitive topic of corporate tax reform, is an article by Politi and Crooks (2010). It is a small article lacking quantitative detail, although it draws a comparison of corporate tax revenue estimates among America’s leading trade partners and makes comment about the nation’s high nominal corporate tax rate compared to other countries.

The Hines (2005), Politi and Crooks (2010) studies are extensions of one another and hints at a relationship between venture dynamics within an economy and the economy’s ability to compete on a global scale. This debate is taking place presently in the United States, as business start-ups and innovation have both been in decline for some time while negative international balances of payments continue to soar.

There seems to be a topical debate growing about corporate taxation and its interplay on the international stage. All of the G-8 nations, led by U.K. Prime Minister Cameron, are pressing on the issue of corporate tax reform and seem to be concerned about corporate tax avoidance by means of international hedging. Foroohar (2013) makes this point, as well as reporting that U.S. companies are retaining two trillion dollars in cash outside the U.S. and will not repatriate the funds for tax reasons. She states,
"Major corporations will be pressed to do their part. In an economically bifurcated world, where companies are flush but workers are not and the historical relationship between corporate profits and local economic growth looks broken, big companies are going to be under a lot more pressure to do more for the countries in which they operate”. (Foroohar, 2013, p.20)

This two trillion dollar cash hoard deserves consideration as a potential confounding variable.

Frase (2011) provides a look at the Clinton Administration and its fascination with the bond markets, interest rates and, by proxy, monetary policy. He appreciates the days when monetary policy ruled over fiscal policy and complains that presently bond markets exert little influence over fiscal policy. This is only a piece of literature based on personal opinion and lacks academic analysis, yet it is useful because it explores monetary policy, a potential confounding variable as to this thesis.

As implied above, extraneous and confounding variables could be limitless in number since the underlying theory of this thesis has multiple foundations. For example, systemic monetary policy could affect both independent and dependent variables (Hipple, 2012), yet the literature on such is massive and untenable to manage within the confines of a literature review. The same is similarly true for systemic fiscal policy. The possibility of another major terrorist attack could be construed as a confounding variable. The 9/11 attacks on the United States in 2001 altered the national business cycle for months after the incident. Literature abounds on this subject. An interesting piece of literature was authored by Roberts (2009) writing for the United States Department of Homeland Security. This quantified study, using descriptive statistics and secondary sources, makes an argument in favour of the above, and confirms the notion that the 9/11 attacks created a potential confounding variable. Rose et al. (2009) complement Roberts’ findings with a study similar in terms of methodology, modelling use, descriptive statistics and secondary sources,
taking the same position. Both studies note an economic impact in the immediate aftermath of the attacks with GDP recovering quickly in approximately one year. However, Roberts’ study indicated that employment did not recover as quickly as GDP.

Understandably, this researcher went to significant lengths to cover the literature dealing with the other variables important to this thesis in other sections and subsections as well as within the literature review to some extent. By other variables, this researcher means extraneous and confounding variables, the former being variables that can exert influence on the relationship between the independent and dependent variables (Hipple, 2012). The latter are a form of extraneous variables with a direct relationship with the independent variable and can affect the dependent variable in a negative way (Collis and Hussey, 2009). This means that the independent variable will change as the confounding variables change and, if not accounted for, this effect is unwanted and may compromise outcome validity (Missouri University of Science & Technology, 2012).

The confounding variables (Price, 2012) for this thesis are broad and overbearing. Since capital gains tax is the single primary independent variable within the thesis this researcher must ascertain what other variables could impose on the outcome, should there be an increase or decrease in capital gains tax. According to prevailing theory, increasing capital gains tax would stymie the volume of venture capital within the economy. This could in turn slow systemic growth and employment creation because less funding would be available for start-up businesses, and these enterprises are responsible for the creation of most new jobs within the economy, according to Kiviat (2011) in a trade article citing some secondary statistics but lacking in primary research.
Conversely, lowering the capital gains rate could stimulate economic growth and job creation by enhancing venture capital investment in start-up firms and providing more capital to existing firms with promising futures. This may affect how a venture manager would respond in terms of managing investment preferences and highlights the question of whether changes in capital gains tax directly affect the dependent variables.

Government stimulus programmes can create growth and employment within a specific investment preference such as alternative energy, notwithstanding changes in the capital gains provision. So in this case, government stimulus efforts could be considered a confounding variable.

It is therefore important to investigate what influences the investment preferences of a venture capital firm. The answer may be a modification in the capital gains tax or a change in systemic conditions such as an adjustment in employment, also an extraneous variable that could possibly be a confounding variable as well. Alternatively, the venture industry could be affected by any number of other outside conditions.

**Literature Epilogue**

This literature review has one common thread. It is a study and review of the interaction between the targeted parent and immediate disciplines and the thesis variables. Creswell (2009) insists that variables be a key element of any literature review that is part of a thesis embracing a positivist paradigm. With this focus in mind, the thesis effort imposed the disciplines in question upon the three independent variables via the literature investigation. Two major sections evolved. The first dealt with the parent and immediate disciplines and the second was a direct critique of the literature surrounding the independent variables; in particular, capital gains tax, the
primary independent variable for this thesis. There is heavy focus on the impact of changes in capital gains tax and how these affect the venture industry in terms of investment priorities.

Key factors are those that impose an impact on the investment preferences of the venture industry. These factors are generally topical in nature and constantly at the forefront of news outlets.

Influencing factors are important but have less to do with direct impact upon investment preferences compared to key factors. They generally influence the key factors, which are the primary motivators that affect investment preferences.

Limited factors are those that have little impact upon the decisions of venture capitalists. With thirty years of experience within the industry this researcher cannot remember any investment situation in which climate change influenced a venture decision. It is worth noting that some venture funds are emerging that invest in deals emphasising social issues or include social considerations in their decision matrix. This social input on the part of venture capitalists may be prevalent in the future.

Figure 2-H illustrates the external forces imposing on the venture industry from a point where this researcher entered the field in 1977 to the present day. The industry’s dynamics have remained relatively static because of resistance to change. Bussgang (2010) points out this fact out by referring to the industry as old fashioned, set in its ways and resistant to change.

In the 1970s, overall Cold War issues weighed somewhat on business decisions; in particular, the 1979 invasion of Afghanistan. However, the oil shocks of 1973 and 1979 also became major influencing factors. In addition, environmental protection was introduced into business modelling due to the creation of the United
States Environmental Protection Agency in 1970. Presently, not much has changed. Military conflict has become a norm and the debate about climate warming is now topical and weighs on decision models across industry genres.

The most interesting aspect is the key factors. Gompers et al., (2005) who is cited often in this thesis, reports on a 20-year study. Gompers and his colleagues note that public markets and venture industry experience drive and influence the investment decisions of venture capitalists and that reality has not changed over time. The argument could be expanded to suggest that public markets are driven primarily by systemic and targeted fiscal and monetary policies with an occasional intervening variable such as war, flood or terrorist attacks, to name a few.

Figure 2-H Evolution of Thought As A Result of the Literature Review

**Influencing Factors**
- Parent And Immediate Disciplines (Fiscal Policies In General And General Tax Environment)
- Specific Fiscal Tools (Capital Gains Tax, Investment Tax Credits, Depreciation Write Offs, Carried Interest)
- Monetary Policy (Interest Rates)
- Climate Issues
- Economic Perception (Real Or Perceived)
- Economic Conditions
- Energy Issues

**Limited Factors**
- Non-Energy
- International Environment
- Military Conflict

**Key Factors**
- Public Market
- Industry Expertise
- Gompers et al. (2005)

Source: James L. Silvester, 2014
Figure 2-H (Continued) Evolution of Thought As A Result of the Literature Review

1978

**Influencing Factors**

- Parent And Immediate Disciplines (Fiscal Policies In General And General Tax Environment)
- Specific Fiscal Tools (Capital Gains Tax, Investment Tax Credits, Depreciation Write Offs, Carried Interest)
- Monetary Policy (Interest Rates)
- Economic Perception (Real Or Perceived)
- Economic Conditions
- Energy Issues
- Military Conflict
- Climate Issues

**Limited Factors**

- Non-Energy
- International Environment
- Cold War

**Drivers Of Changing Investment Preference**

**Key Factors**

- Public Market
- Industry Expertise
- Gompers et al. (2005)

Source: James Silvester, 2014

**Chapter Summary**

The key point brought forth thus far is that the research question and working hypothesis are melding together and solidifying the basic theory. This helps construct the theoretical foundation upon which this thesis rests.

The literature review is segmented by theme and is topical and targeted to the research question. This researcher was constantly aware of this segmentation throughout the literature journey. Upon completion of the literature review, it became
quite apparent that it was not necessary to change the research question or statement of the problem.

Many pieces of the literature propose a relationship between capital gains tax and the venture capital industry. Some articles do not mention that relationship at all and yet others only slightly. Suffice to say that an understanding of the dynamics at work concerning capital gains tax is necessary, not only to understand its impact on the systemic economy but, more importantly, to comprehend its effect on those entrepreneurial subsectors where venture capital thrives.

In articles that report a relationship between capital gains tax and the venture industry, it is presumed that changes in capital gains tax effect the investment preferences of individual venture capital firms. Some articles that were reviewed addressed this presumption as fact (Moore and Grimm, 1995).

Some authors propose that capital gains tax stymies economic growth and call for its elimination. Eliminating capital gains tax without any other fiscal adjustments would in fact raise taxes on capital investment since gains would then be taxed at the ordinary marginal rate, which is always higher than the preferential capital gains tax. Alternatively, proposing a complete elimination of all taxes upon investment gains is another matter. A keen and critical eye is necessary when analysing this subject within the literature review.

This researcher made every effort to ascertain the methodology of each study included in the literature review. Since the thesis relies heavily upon professional papers and articles, as opposed to standing dissertations and theses, methodology was at times difficult to determine. Methodology was more apparent among the professional and working papers.
Generally, the literature pertaining to the research question is both broad and rich and is adequate to analyse the hypothesis and draw conclusions.

This researcher is aware of the potential lure of the easy access provided by modern information gathering technology and has guarded against this situation. Significant care was used to ensure the sources presented herein were of appropriate academic standing and doctoral level quality. Nonetheless, appearances can still be deceiving. For example, a supervisor pointed out that a particular citation in this thesis, The Owl Writing Lab, was of questionable academic standing. The supervisor was unaware that the Writing Lab is actually managed by Purdue University. In another example, this researcher cited Yee (2004) about methodology on a blog. On the surface, it would appear this person lacks any academic standing but upon further investigation it was discovered that he is a research scientist at the Palo Alto Research Center. Similarly quoted was Cline (2012) with regard to theoretical frameworks and other conceptual issues. It took considerable searching on a website to determine that Cline is a Professor of Educational Leadership at Arkansas State University. Next cited was Andrew Tobias. Upon examination of his website, it would seem that he is a nonprofessional but upon further investigation it was found that Mr. Tobias is a Harvard graduate and author of 12 books, three of which made the New York Times best-selling list. He was also treasurer of the National Democratic Party in the United States.

Another example is the source PolitiFact.com, owned by the Tampa Bay Times, a major U.S. newspaper. On the surface it appears to be an ordinary political blog but upon scrutiny a reader would find it to be a Pulitzer Prize winning blog that attracts a national following.
The point is that many referencing systems are struggling with the information explosion on the Internet and are not equipped to cite the core source of a website reference, which may be of sufficient academic standing and quality. In some cases this researcher expanded the reporting field of Reference Works to cite the core source if it were readily available. For others, this was impossible.

As far as corporate and institutional authorship is concerned, where an individual was unidentifiable as the author the researcher cited the firm, as per the recommendation of the Harvard referencing system. Where there was no author identification, the author was cited as anonymous.

Suffice to say this researcher has made every effort to ensure that the citations and reading list are of an appropriate academic level.

A traditional literature review builds upon the thesis argument and then attempts to answer the research question. However, this researcher has taken the position that the literature review cannot prove or disprove the working hypothesis or answer the research question. It is clear that beliefs, values and opinions segment along ideological lines. For example, the Heritage Foundation, Cato Institute and Club for Growth favour a reduction in capital gains tax to stimulate business investment and job creation (Greenberg, 2004), as the prevailing theory suggests. Conversely, the Brookings Institution takes an opposing view. The non-affiliated Tax Policy Center, along with a few others, seems neutral on the issue and poses arguments both ways, with some favouring the null hypothesis.

Therefore, organized by broad themes, the literature review is driven by the variables, as per Creswell (2009), with chronology playing a secondary role.

In support of the suggestion by Rudestam and Newton (2007c) that important literature should be identified, this researcher sought to review quality content, and
consequently felt compelled to review those pieces deserving enhanced consideration as a matter of ethical consideration.

The use of descriptive adjectives for a piece of literature, such as brilliant, significant, detailed, poor, to mention a few, were avoided as value laden. In addition, with some exceptions, there was no significant attempt to compare any single piece of literature with other works to any vast degree. Notably, much of the literature selected claimed to be refereed, editorially reviewed, organizationally based or widely accepted. Comparative analysis between the literature in support of the working hypothesis and the literature opposed to it was not extensively conducted, although there was light review. Interconnection of the literature was mentioned at times if it supported the general direction and theme of the literature review.

Additionally, when it became apparent that the totality of the literature would not answer the research question or accept or refute the working hypothesis, building to a climatic ending was abandoned in favour of a more pragmatic closing. The literature sourcing was executed early on with significant care and conducted in accordance with strict guidelines and an overall literature map, as suggested by Collis and Hussey and illustrated in Exhibit M. The final checklist used is listed in Table 3-G.

The literature research progress has resulted in over 640 bibliographic sources maintained in Anglia Ruskin University’s Reference Works databank and open for inspection by the doctoral committee.

In conclusion, the research question proffered by this thesis is as follows:

*Do Longitudinal Changes In Capital Gains Tax Affect The Investment Preferences Of Venture Capital Companies?*
Given the biased and segmented nature of the literature, it is impossible to answer the research question succinctly. Literature that is neutral to the working hypothesis may offer some insight. The unaffiliated think tanks operating within the scope of the research suggest that the working hypothesis cannot be accepted, and are instead in favour of the null hypothesis, and thus the research question could be answered.

However, accepting the above is precarious and dubious, given that neutral literature sources are few. Therefore, this researcher prefers to side with caution and allow the primary research output to influence the conclusions.
CHAPTER THREE
METHODOLOGY AND METHODS

Introductory Statement

This researcher is aware that methodology is not methods, in that methods are the application tools used to implement the methodology, and are driven by the selected inquiry paradigm. This chapter will be broken into three broad reviews: the philosophy behind the research paradigm choice, the research frameworks, and the methods contemplated and ultimately used.

The Perry structure, illustrated in Exhibit L, assisted in the contemplation and overall design of the thesis project. However, an overall design map, illustrated in Exhibit M below, emerged from the process. It is a unique design by this thesis author and demonstrates the relationships among various components of a positivist oriented study that seeks to test and then verify or reject a promulgated hypothesis or a number of hypotheses.

Selection Of The Research Paradigm

Early in the research process, a positivist paradigm was identified and a deductive research methodology was selected and successfully defended in the research proposal, which is reproduced in Appendix A. Action research was also considered. Dick (1997a) and Kurt Lewin (O’Brien, 1998) imply that action research can fall within a positivist paradigm, using many methods common to a positivist approach. However, upon further consideration it became apparent that action researchers are involved in deep inquiry and reflective study and “they recognize their own view as subjective”. (Riel, 2010, p. 1). Milne (1971) supports Riel, in that he implies that action research is a behavioural approach, but at times employs scientific methods that either accept or reject a hypothesis.
Other research methodologies and paradigms of inquiry were reviewed in light of the collection task. In addition to the two major paradigms, positivism and phenomenology, recognized by Hussey and Hussey (1997), other less well-known paradigms were reviewed, for example post-positivism, critical theory, constructivism and participation, as identified by Guba and Lincoln (1994).

During the process of choosing the methodology, Creswell’s Alternative Strategies of Inquiry Table (Creswell, 2009, p. 12), which is reproduced in Exhibit D, was analysed. Additionally, his Qualitative, Mixed, and Qualitative Methods Table (Creswell, 2009, p. 15) and his Qualitative, Quantitative, and Mixed Methods Approaches Table (Creswell, 2009, p. 17), illustrated in Exhibits E and F, were scrutinized.

In an attempt to simplify and evaluate the inquiry process this researcher relied upon a simple illustration that is labelled *Inquiry Process Analysis* and shown below.

<table>
<thead>
<tr>
<th>Positivist</th>
<th>Post Positivist</th>
<th>Pragmatic</th>
<th>Ground Theory</th>
<th>Action Research</th>
<th>Phenomenology</th>
</tr>
</thead>
</table>

(Straub et al. (2004) presented a paper that provided guidelines for validating a positivist inquiry selection. They used both quantitative analyses and secondary sources to make their point. The paper was useful in the design of this thesis.

A researcher should know the methodology required before data collection (Howell, 2004). This thesis lends itself to a quantitative approach and this researcher wants to simplify the study as much as possible without having any detrimental effects on the results. Action research, and other inductive approaches, could have
become uncontrollable given the large amount of raw numeric data subjected to reflective inquiry (Riel, 2010), as noted earlier.

**In Search Of A Research Paradigm**

This researcher reviewed inquiry approaches that span from the extreme inductive all the way to the extreme deductive, with some in-between.

Guba and Lincoln's four paradigms of choice were considered (Creswell, 2009).

The first research proposal embraced a phenomenological posture that included action research as a paradigm aligned to critical theory. Once the process began, it was soon determined, in consultation with the primary supervisor, that action research was an inappropriate fit. Fortunately, this happened early in the research period before a change in research inquiry method might prove impossible.

Yee (2004) acknowledged in a report that there is no perfect methodology; however, once a methodology is chosen it might be difficult to defend an alternative path. The author’s comments resonated when the idea of a mixed methodology was considered and the comments about paradigm wars and action research were further examined.

The first article this researcher reviewed was by Anglia Ruskin University (2004). This piece set the tone of what was to become inquiry selection. It reviewed Kuhn’s (1962) influence on the inquiry process, and described and justified the importance of an identifiable structure to the research effort.

In addition, Rudestam and Newton (2007a) provided insight and technical data related to engaging in a scholarly research project. Their work is structured with the professional researcher in mind.
Williams (1998) distinguishes between major research paradigms. However, nothing was extracted from this literature, as it is no more than a rendition of what has already been reviewed. The author reviews and defends his point of view, emphasizing the importance of the researcher being comfortable with the paradigm of choice. More support for a quantitative design is evident if there is an abundance of numerical data (Burns and Grove, 1991). Ross (1999) draws some distinctions between quantitative and qualitative designs. He touches upon the different kinds of quantitative research and defines common terms used within research.

Samdahl (1999) reviews the broad differences between quantitative and qualitative research, relying heavily on Guba and Lincoln (1994). The piece supports the positivist mode of inquiry and touches upon mixed methods, identifying them as post-positivist in nature. However, the article was useful. Contributing nothing more than Williams and Ross above, Fierro’s (2003) paper offers a definition and discussion of the two major research paradigms and goes no further. This serves to reinforce this researcher’s belief that the correct inquiry paradigm was selected for this thesis.

Trafford (2004) went far in building the original research foundation for this thesis. His article went into detail about the reasons for carrying out research. The author included design considerations and implications, data sources and how they may affect the research design, quantitative and qualitative features, theory foundations, project stages and fieldwork implications.

Following on from Trafford, Howell (2004) synthesised the paradigms of inquiry and methodology. He extended his analysis to include a review of phenomenology and constructivism. He described participatory input as ontology and discussed mixed methods and post-positivism. In addition, Howell (2004) articulated
his positions on separating the positivistic and phenomenological inquiry paradigms. He approached constructivism, grounded theory and critical theory with an action research slant, which this researcher initially considered but abandoned in favour of a positivist approach.

Trafford (2004) proved useful in the development of a research mapping strategy that aided in the construction of the final research map and the designing of a deductive research model. These were evaluated in comparison to the research process model. Likewise, Collis & Hussey (2009) and Creswell (2009) provided insight, special tools, procedures and direction for navigating scholarly research, through their combined publications.

Tardiff and Brizee (2011) emphasized how to write a thesis statement, taking into account the style of the paper. The authors implied that style, be it analytical, expository or argumentative, would influence the thesis statement.

Madrigal and McClain (2012) penned an article addressing the issue of the strengths and weaknesses of quantitative and qualitative research. It also stressed the importance of using correct methodologies early in the research process.

**Logic Supporting Paradigm Selection**

Since collection of much of the raw data occurred prior to the start of the thesis, to some degree the methods of collection were already established and irreversible. In addition, since the raw data output was numeric and quantitative in nature, it lent itself to a more deductive approach (Creswell, 2009). The free nature of action research with its focus on participatory physical observation and other loose methods did not match the structure and nature of the data output already achieved.

On a broader level, it was necessary to explore an interpretive constructivist paradigm but this was quickly dismissed as being too qualitative to support the
objective of the thesis. Given this researcher’s view of the venture industry, developed through experience and practice, it was felt that personal bias could skew assumptions and ultimately invalidate the findings if utilizing a constructivist paradigm. The venture industry is a field driven by numbers in an accounting sense. Numeric and quantitative evaluation is the mainstay in managerial decision making within the industry. Therefore, narrow categorisation becomes the prime thrust, with the objective of a deductive conclusion (Creswell, 2009). In other words, there is no room for speculation derived from subjective personal views.

The participants in the survey efforts (Collis and Hussey, 2009) eliminated a participatory approach as an inquiry option because this qualitative approach promotes direct involvement. However, this was not the case in this thesis; the participants had no active role.

One could argue that involving the two opinion leaders mentioned later within this chapter might justify some participatory and constructivist influence. However, those two participants failed to follow through on the comments section provided on the two open-ended questionnaires, and were suspect as to occupational bias.

There was a strong inclination to edit out any mention of these two individuals; in essence, striking their responses from the discussion within the thesis. However, it was felt this action could potentially constitute unethical behaviour and consequently their responses were included.

Partially convinced that grounded theory may have merit, this researcher explored constructivist grounded theory, also known as CGT. Glaser (2002) implies that Charmaz is the leading expert on CGT and he clearly makes the case that CGT is a qualitative approach involving direct participation between the researcher and the subjects. The objective of CGT is to create primary data and influence the final
analysis. Since 75% of the output results existed prior to the initiation of this thesis and all the results involved short closed-end questionnaires extracting quantitative data, this approach was not possible. Additionally, ground theory was avoided because the aim of the study was to test the existing theory that changes in capital gains tax affect the venture industry and then build upon that theory, as opposed to developing a new theory.

A critical theory paradigm was dismissed as too closely associated with action research (Dash, 2005). The paradigm is highly inductive in approach and so not suitable for this thesis.

Post-positivism was explored because of the long affiliation this researcher has had with the venture capital industry and the resulting potential for occupational bias. Popper (1927), as cited in Gattei (2004), was instrumental in recognising that human supposition and presumption brought about by experience, education, speculative theories and personal belief systems can influence research, and thus potential findings. He postulated that post-positivism is a results-oriented exercise in social science and never rejected the positivist paradigm outright, only suggesting it needed modification to account for bias. Popper intimated that some qualitative injection into the thesis progress could be possible to accomplish this task and thus defended dual inquiry methods.

Conditions within the venture capital industry, not unlike that of the commercial banking sector, where venture capitalists canvass and find much of their employment talent, dictate an unemotional application of quantitative numeric crunching. Its applications are “arcane” according to Bussgang (2010, p. 1), highly disciplined and scientific. Given that large sums of money are usually involved, little is left to chance, empathy or emotion. The numbers are the driving force behind
management decisions, which are textbook examples of scientific experimentation in action, suggesting a positivist approach.

The questionnaire used to collect data that was developed within the confines of the venture industry by its primary trade association is an example of this approach to analysis. The questions were concise and there were no additional inputs required of the participants. The questionnaire was purely a scientific exercise, producing numerically quantitative categorical results subject to deductive reasoning while at the same time attempting to minimize any inductive inputs. Given these characteristics, Collis and Hussey (2009) suggest a positivist paradigm. Furthermore, the thesis was approached with a particular set of beliefs and value systems about the venture industry and bias was considered. This research journey has uprooted long-held opinions. Consequently, this researcher must now be wary of other biases should further study on the topic ensue.

**Justification For Research Paradigm Selected**

Hussey and Hussey (1997) noted two major research paradigms: positivism and phenomenology. However, Lincoln and Guba (2000) cite other paradigms, most notably post-positivism, critical theory, hermeneutics, constructivism, ethnomethodology and participation, each having distinguishing sets of methodological, ontological and epistemological foundations. Packer (2003) wrote a paper on hermeneutic phenomenology incorporating a description of empirical-analytics and its relationship to hypothesis testing. Parker’s references to ontological and epistemological assumptions were insufficient to draw any conclusions.

In defence of a positivist approach, Gage (1994), as cited in Toussaint (2005), stated,

“The ideals of quantitative research call for procedures that are public, that use precise definitions, that use objectivity-seeking methods for
data collection and analysis, that are replicable so that findings can be confirmed or disconfirmed, and that are systematic and cumulative—all resulting in knowledge useful for explaining, predicting, and controlling…."

One might argue that introducing mixed methods represents a post-positivist inquiry (Lincoln and Guba, 1994). However, this is overstated in that the phenomenological inputs were so slight that it did not justify a major shift away from the positivist inquiry model. However, dual inquiry did justify mention and a corporal defence of mixed methods.

This researcher contends that this inductive input was not sufficient to declare this thesis post-positivist, and still argues it to be a positivist paradigm of inquiry requiring slight subjective input for validity purposes. A more thorough review of the different research paradigms was conducted as a result of graphic analysis, as shown in Exhibits D, E and F.

As the history of this thesis has shown, the path to a suitable research paradigm has been challenging. Many different approaches were analysed and heavily lobbied for by people who were directly and indirectly involved in the thesis process. At that time in 2003, the university’s doctoral committee was heavily oriented toward phenomenological research. Therefore, action research methodology was seriously considered. Hart (1999) and Dick (1997b) also influenced the approach to initial research.

This researcher was always uncomfortable with action research and sought out the counsel of several research experts. Collectively, they did not favour an action research approach, given the large amount of quantitative data involved in the raw research output, and concurred that the thesis should be a deductive exercise incorporating a top-down approach. It became apparent that the output of the raw data did not favour inductive analysis given its numerical structure. Instead, a more
deductive quantitative inquiry approach was appropriate. Thus, a positivist paradigm was more suitable.

This researcher directly queried Howell. Despite the fact that Howell (2004) embraces phenomenology and is an interpretivist who supports constructionist inquiry paradigms and grounded theory, he did support a top-down deductive approach to this thesis.

In broad terms, the top-down deductive approach involves establishing a theory, developing hypotheses that can be tested and measured, using an observation platform and design methods, data collection and analysis including literature, output review and interpretation, and then confirming or rejecting the theory or stating that no outcome can be determined. Conversely, the bottom-up qualitative subjective approach establishes an initial debatable issue, followed by the development of an observation platform with methods, and then data collection and literature review, concluding with the researcher analysing the research results and then taking a position on the outcome and possible theory. This researcher approached the inquiry analysis by observing the paradigm wars of the 1980s and chose to ignore the extremes on each side, focusing instead on the traditional inquiry approaches ranging from positivism to interpretivism. Therefore, post-positivism and pragmatism were considered because both embrace dual methods, finding some acceptance within academic research circles. Other critical analysis methods such as grounded theory and action research are not applicable given their heavy reliance on observation and subjective analysis.

Morgan (2007) supports mixed methods and his paper on the subject is relevant to the present study since some mild constructionist inputs are used in this thesis process. He identifies positivism as the primary research paradigm presently
used within social science research but seeks for an alternative. Morgan (2007, p. 59) calls this alternative a “metaphysical paradigm” which seems to embody qualitative inquiries. He goes on to defend his position and puts forward an argument for a “pragmatic approach”, being careful not to label it a paradigm (Morgan, 2007, p. 65). The argument seems to be nothing more than a debate about mixed methods, which he supports. Some of the informative components of his article were his descriptions of the key elements of a paradigm change by citing Kuhn:

> “a clear characterization of an existing dominant paradigm an increasing sense of frustration with the problems in the existing paradigm a clear characterization of a new paradigm, and agreement that the new paradigm resolves the problems in the existing paradigm”.

(Kuhn, 1996 cited in Morgan, 2007, p. 55)

Morgan’s objective of establishing pragmatism as the dominant research paradigm within social sciences in general is clear.

On a broad level the particular ontological, epistemological, axiological and methodological concepts of positivism versus interpretivism were evaluated by Cohen and Crabtree (2006).

In analysing the various research paradigms to select the appropriate paradigm for this thesis, Shrestha (2009) used. He described the conditions and logic for selecting a particular inquiry protocol. In his paper, he covered the broad spectrum of paradigms between positivism and interpretivism, as illustrated in Exhibit F by Creswell.

The research design employed within this thesis was influenced by the inquiry paradigm choice and relied upon causal hypotheses testing as presented by Sellitz (1965), cited in Shrestha (2009). Other research typologies were considered as presented by McGrath (1970), cited in Shrestha (2009), and included controlled experiment, study, survey, investigation, and action research. Isaac and Michael
(1995, p. 1) mentioned “historical, descriptive, developmental, co-relational, case or field study, causal-comparative, true experimental, quasi-experimental, and again action research methods”. In addition to the causal hypothesis testing that was selected, Sellitz (1965), as cited in Shrestha (2009), presented formative or exploratory and descriptive research as alternatives.

Appropriate study efforts attempt to minimise personal bias in order to enhance output validity. In order to control bias, a researcher must endeavour to understand how it develops.

The general ontology and epistemology of this thesis rest on many personal beliefs concerning the nature of knowledge and how it originates relative to the general theory promulgated in this thesis. The thesis is further complicated by the introduction of value systems sometimes referred to as “axiological assumptions” (Collis & Hussey, 2009, p. 332).

With the advent of computer and information technology, existing and future knowledge is constrained only by the limits imposed by political and business processes. In this regard, technological innovation can be slowed, advanced or even reversed. The information and knowledge universe will continue to expand exponentially, and potentially asymmetrically, as new depths of understanding and knowledge create new technologies.

In addition, most knowledge is gained because of behaviour modification influenced by personal, educational and professional pursuits. Values are formed and changed because of lifetime exposure to family, friends, teachers, colleagues and technological change.

Most researchers will be conscious of bias and attempt to understand how it imposes on the research journey and outcome.
Dual Inquiry Justification

Quantitative research is based primarily on positivist thought, while qualitative research is more phenomenological and constructivist in approach and is sometimes referred to as anti-positivism (Fierro, 2003). Until recently, the strict scientific methods employed by quantitative analysis techniques have been considered the best way to conduct research but, according to Howe (1985, p. 10), “the positivist notion that qualitative data is inherently untrustworthy and therefore to be avoided, is untenable to most. Arguments are advanced to support the view that social research is based on qualitative knowing and that quantification extends, refines and cross-checks qualitative knowledge”. Howe (1985, p. 13) continues by saying that

“current thought holds that two paradigms are not mutually exclusive and could very well support each other in most social science inquiry. To disparage qualitative data as subjective is to accuse it of having high fallibility; to laud the objectivity of quantitative data is to construe it as having low fallibility”.

Howe (1988) further advances the argument for mixed methods. At least some elements of phenomenological inquiry can be used to support the foundation of the main research approach, which is positivist inquiry in this thesis, as an additional means of verification or falsification. In essence, positivist and non-positivist inquiry are sometimes combined (Giedymin, 1975). This occurred in the present study.

For reasons cited previously, subjective/inductive aspects were introduced to fill data gaps and reduce measurement error due to deductive inflexibility. Therefore, a modest phenomenology input was necessary to underpin the quantitative data collected via the closed-end questionnaire (Collis and Hussey, 2009) in order to ensure a reliable output.
In further defence of mixed methods, imposing phenomenology upon positivistic results can suggest that any model is as acceptable as the next, making it impossible to discriminate between true and false knowledge (Creswell, 2009). Patton (1990) suggests that the application of multiple methods to the same research question is practical if it improves the chance of better results.

This application supports Patton's *paradigm of choice*. This might seem unorthodox, as Patton (1990, p. 30) states, "you must employ the best methodologies and methods that fit the context of the problem setting and forget orthodoxy in favour of pragmatism". Dual paradigms are widely accepted in all areas of research and Patton (1990, p. 30) further states, “This will allow for situational responsiveness that strict adherence to one paradigm or another will not”.

Additional defence for a dual inquiry was put forward by Colorado State University (2012, p. 1) when it was acknowledged that, “some researchers think that both qualitative and quantitative methods can be used simultaneously to answer a research question. It is important for researchers to realize that qualitative and quantitative methods can be used in conjunction with each other”.

Rudestam and Newton (2007, p. 51) agree and stated, “An increasingly popular approach to designing a thesis is to use a combination of quantitative and qualitative methodologies”. Tashakkori and Teddlie (1998) also agree, enumerating several possible designs, including mixed methodology studies that combine aspects of both paradigms. They support a pragmatic approach in which questions of method are secondary to adopting an overriding paradigm.

In closing on the defence of dual inquiry, this researcher relied heavily on Patton but also must include Howe at this point. Howe (1998) encouraged an end to the paradigms wars. In rejecting both the extreme positivist and constructivist
positions he has taken a position of pragmatism, implying that both have legitimate bases in the same inquiry to the extent that dichotomy does not exist within the research argument.

Padgett (2003) wrote an article on multiple methods, citing Howe, Creswell, Guba and Lincoln. The author dissects the advantages and disadvantages of effectively using mixed methods. He laments about the friction caused by mixed methods debates among academics, and notes that the term pragmatism was developed to describe and employ mixed methods in reaction to the paradigm conflicts of the late 1980s.

This researcher can only speculate as to whether Kuhn (1962) ever envisioned the significant debate he sparked upon advancing the notion of a paradigm and whether he foresaw the wars it would ignite among academic researchers.

**Development Of The Research Question**

The development of the research question is more fully explored and recited in the introduction section of this thesis.

The research question eventually creates a potential number of sub-hypotheses, which develop into a pliable working hypothesis. Creswell (2009, p. 129) implies that research questions and hypotheses give purpose and focus to a thesis and helps point research in the right direction by acting as directional signposts. The major concern is whether the research question and hypothesis correlate and if a null hypothesis can be tested within the scope of a positivist study for acceptance or rejection. In addition, in the case of the latter, does the output backing a rejected null hypothesis adequately support the alternate hypothesis and lead back to the research question? A tight relationship between the research question and the working hypothesis minimises the likelihood of difficulty in evaluation and testing.
The research question is as follows: *Do Longitudinal Changes In Capital Gains Tax Affect The Investment Preferences Of Venture Capital Companies?*

In addition, the working hypothesis is as follows:

*Changes in the capital gain provisions of the tax code significantly affect venture capital investment preferences.*

Parahoo (2013, p. 2) states that, “a hypothesis translates the research question into a prediction of expected outcomes”. This has been accomplished in this thesis.

Development of the research question a decade ago came after considering the primary objective and goal of this thesis. Although a prevailing theory existed, it was determined that a gap in the common knowledge was missing to support such a theory. It became apparent that it was necessary to develop appropriate research questions in order to provide and maintain the overall research emphasis. There was also a need to construct an adequate theoretical framework to provide focus and conceptualisation to guide the research implementation (Ohab, 2010). The research questions could develop as the research process ensued. Several variations of the research question were considered. However, given that much of the primary data output was static by the time the research process began, the research question as promulgated in the original research proposal remained unchanged, with two minor exceptions.

**Development Of The Working Hypotheses**

The platform hypothesis is that changes in capital gains taxes affect venture capital investment preferences. A broader interpretation, or another hypothesis, might read that venture capital preferences within the collective of venture capital firms are modified by changes in the targeted fiscal policies directed toward the entrepreneurial subsector of the systemic economy.
In its most basic form a hypothesis must comment on two or more variables, and conclude that a relationship exists between those variables and that a population can be measured (Parahoo, 2013). As the research progressed, the hypothesis developed such that it tied directly into the research question and suggested the correct overall systemic research approach to pursue (Prasad and Rao and Rehani, 2001). The hypothesis gives aim and focus to this thesis journey.

Table 3-A below list the three hypotheses developed along the research and literature path. They build to a more specific focus as each subsequent hypothesis matures, and all tie into the theoretical structure of the thesis.

**Table 3-A Three Hypotheses**

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Source: James Silvester, 2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>There is a relationship between fiscal policies of the tax code and venture capital investment preferences</td>
<td></td>
</tr>
<tr>
<td>Changes in the capital gains provisions of the tax code affect venture capital investment preferences</td>
<td></td>
</tr>
<tr>
<td>Changes in the capital gains provisions of the tax code significantly affect venture capital investment preferences</td>
<td></td>
</tr>
</tbody>
</table>

Hypotheses one and two were evaluated against the backdrop of the prevailing literature, and supported by the prevailing theory.

The fully developed third and final working hypothesis above was tested in null form using non-parametric analysis. The acceptance of a null hypothesis would imply there is no significance between the variables. If true, an alternative hypothesis would be impossible (Sharma and Battina, n.d.). These hypotheses are not propositions but are speculative statements revolving around the research question and tested to determine alternative status or accepted as null.

Other possible hypotheses could exist for this thesis and evolve in concert with the expansion of the literature. Other variations could be broken down into individual hypothetical statements according to the individual variables, such as the ones
mentioned in Table 3-B below. The approach is to develop hypothesis statements and build upon or modify each of them until reaching one final working hypothesis that works to assist in answering the research question.

**Table 3-B Other Hypotheses**

<table>
<thead>
<tr>
<th>Hypothesis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Changes in capital gains tax affect venture capital investment preferences</td>
</tr>
<tr>
<td>Changes in depreciation write-offs affect venture capital investment preferences</td>
</tr>
<tr>
<td>Changes in investment tax credits affect venture capital investment preferences</td>
</tr>
</tbody>
</table>

Source: James Silvester, 2013

These are statements of working hypotheses based on each primary independent variable. Each of the above statements relating to the independent variables can be broken into 15 separate hypothetical statements; for example:

Changes in capital gains tax affect venture capital funding preferences.

The number of hypothetical statements could be multiplied; however, this would be arbitrary and not serve any useful purpose.

This researcher selected only one primary independent variable, capital gains tax, and two primary dependent variables, funding preferences and type of funds invested preferences. As testing progressed, it became necessary to include the two secondary dependent variables, geographic and industry preference.

The reason for selecting capital gains tax as the single primary independent variable is justified elsewhere in this thesis. As to the two primary dependent variables selected, this researcher used his extensive academic study, publishing and professional experience within the field to determine the elasticity and sensitivity of venture capital investment preferences to changes in external stimuli. The two selected primary dependent variables seemed at first to be more pliable to external environmental changes than the two secondary variables of industry and geographic
preferences (Silvester, 1995a). This is not to suggest that the two are inelastic, just not to the same degree of flexibility as was originally believed. However, the breadth of the study necessitated their presence in the statistical analysis, which later revealed a degree of elasticity among all four independent variables sufficient to warrant inclusion.

The Basic Theory And Independent Variable

In approaching the basic theory and the primary independent variable, this researcher wanted first to establish the definition of a variable and relied upon Collis and Hussey (2009, p. 342), who say: “a variable is a characteristic or phenomenon that can be observed or measured”.

Targeted fiscal policy affects the venture capital industry. This statement represents the basic theory and theoretical framework upon which this thesis is defined and, according to Collis and Hussey (2009, p. 92), such a statement “underpins a positivist study”. An interpretivist might call it the grand theory (Skinner, 1990). The underscored above is widely accepted within the prevailing literature but some credible literature suggests otherwise and this was referred to in the literature review. Some common terms used to help define the basic theory are fiscal policies, targeted fiscal policies, investment tax credit, capital gains tax, and inventory write offs. Capital gains tax is the most sensitive of the independent variables (Moore and Silva, 1995). The tax is of primary focus to this thesis.

An independent variable is a controllable factor that can be manipulated to study a possible outcome(s). However, it is recognised within the literature that some independent variables are not controllable and are already fixed in place without error. In statistical modelling, most independent variables are considered fixed (Newsom, 2011). Exhibit R illustrates the influences upon the independent variables and primary
independent variable. It ties together how the decision was made to select the primary independent variable and what forces imposed upon that choice. Disciplines, constructs, theoretical framework and confounding variables, to name but a few factors, were all blended and focused into a final decision.

Theoretical Framework Versus Conceptual Framework

Highlighting the difference between theoretical framework and conceptual framework is noted because they are often viewed as being the same within the literature (Liehr and Smith, 1999). They should be distinguished to minimise confusion. Exhibit S was modified from Liehr and Smith (1999, p. 10) for this thesis. The exhibit provides a critical thinking map providing substance and seeks to clarify the differences between theoretical and conceptual frameworks. If a deductive process guides a researcher’s thinking, it will lead in two directions and a choice is necessary between a conceptual framework and a theoretical framework. Under these conditions, terms used to describe the frameworks will be distinguished from one another based on whether the researcher is creating a structure or the structure has already been constructed and lies within, or has been defined by the literature.

Liehr and Smith (1999, p. 12) say, “if it is a conceptual framework, it is a structure of concepts and/or theories which are pulled together as a map for the study. If it is a theoretical framework, it is a structure of concepts which exists in the literature, a ready-made map for the study”.

Inductive processes piece together data to form the research question or problem. In this case, the framework might be avoided all together. The literature does suggest that a framework need not be articulated in subjective studies (Cline, 2012). However, theoretical frameworks are more defined in quantitative studies than qualitative ones and are handled in different ways (Pajares, 2007). A positivist
paradigm was defended using a quantitative methodology and relied on Creswell, (1994) as cited in Pajares (2007, p. 1) in setting the tone of the theoretical framework of this paper:

“in quantitative studies, one uses theory deductively and places it toward the beginning of the plan for a study. The objective is to test or verify theory. One thus begins the study advancing a theory, collects data to test it, and reflects on whether the theory was confirmed or disconfirmed by the results in the study. The theory becomes a framework for the entire study, an organizing model for the research questions or hypotheses for the data collection procedure”.

The literature within the field is both massive and mature with sufficient theory and terminology to suggest that a research framework already exists. Therefore, the thesis proceeded within a theoretical framework working from existing grand theory forward to the development of the hypothesis and research question. Since the grand theory was so well defined, only one theoretical framework exists, which is constant within the literature, taking on a single form. Cline (2012, p. 5) states, “once a framework has been prepared, it is important to ask what advantages and disadvantages may accrue as a result of using it. In the event that there seems to be available only a single alternative framework, its use is mandated even though it may have some obvious drawbacks”.

Collis and Hussey (2009, p. 341) defined a theoretical framework as “a collection of theories and models from the literature… which unpins the research question”. Cline (2012, p. 1) follows up and says, “… a theoretical framework is the set of terms and relationships within which the problem is formulated and solved. Such frameworks may vary significantly in format and sophistication”.

A third and final definition of a theoretical framework is advanced by Borgatti (1999, p. 1) when he says,

“a theoretical framework is a collection of interrelated concepts, like a theory but not necessarily so well worked-out. A theoretical framework
guides your research, determining what things you will measure, and what statistical relationships you will look for... theoretical frameworks are obviously critical in deductive, theory-testing sorts of studies. In those kinds of studies, the theoretical framework must be very specific and well-thought out”.

In developing the theoretical framework it seems wise to define and explain the theory around which the theoretical framework is constructed within the mind of the researcher (Creswell, 2009), followed by stating and testing the hypothesis, articulating the research question, and then finally acknowledging that expected results will ensue. A flow chart of this process is included in Appendix E. The chart starts with the basic theory and then navigates its way down through some basic terminology that assists in defining the theory. Once determined, the theory is incorporated into the hypotheses for testing purposes.

While defining the theoretical framework above some researchers suggest that a theoretical framework can also be expressed in descriptive terms alone (Cline, 2012). Should that be the case, some terms relevant to this theoretical framework are fiscal policy, targeted fiscal policy, venture capital, venture capital firms, investment preferences, entrepreneurial sub sector and investment mix. Although a theoretical framework is not definable with just terminology alone, terms can be an important addendum to the overall process of simplifying the promulgated theoretical framework in order to make it easier for the reader to understand.

**Justification For The Theoretical Framework**

The American entrepreneur is, and has been, the driving force behind the nation's job creating machine, as reported by Bond (2002). As many larger firms have contracted out their workforces over the last 20 years, small business start-ups and the expansion of existing small firms have not only absorbed the job losses created by their larger counterparts but have also added millions of jobs to the economy, in
particular within the technology and innovation areas (Keuschnigg, 2003). The efficiency of small business job creation is not new to either political party. Both wave the entrepreneurial banner, generally for political reasons, making promises to the small business community, which has mobilised a powerful political lobby over the last ten years. Information concerning job creation disparities between the larger firms and small firms has been known for some time. Stangler and Litan, (2009) raised the issue of corporate ethics as it relates to events in America’s larger corporate sector (i.e. Enron, WorldCom, Arthur Anderson, Freddie Mac, Fannie Mae, to name but a few), encouraging the country’s political machinery to refocus on the entrepreneurial economy.

This necessitates an understanding of the nation’s entrepreneurial economy, especially in the face of ominous economic conditions and general business stagnation. Not only is more research needed but also more sub-sector specific research, such as data collection and analysis of the investment preferences of venture capital companies and what motivates their actions; the latter being at the core of this thesis. The literature indicates that entrepreneurial research already exists within these sectors and various sub-sectors, and it would be naive to suggest that no other researcher has endeavoured to conduct study in this chosen area. The missing link is the data tying these investment preferences to national fiscal policy that targets the entrepreneurial sectors of the economy, in particular capital gains tax.

This tax is the most sensitive to capital creation and the manipulation of investment preferences (Moore and Silva, 1995). Moore and Silva (1995), writing for the Cato Institute, suggested the elimination of capital gains tax because it was a punitive hindrance on entrepreneurship, and quoted a speech by President Kennedy (1961) in which the leader said, “the tax on capital gains directly affects investment
decisions, the mobility and flow of risk capital…. the ease or difficulty experienced by new ventures in obtaining capital and thereby the strength and potential growth in the economy”.

Additionally, there is no evidence in the literature of a significant longitudinal study of the venture capital industry. The literature, in addition to the questionnaire results, has yielded some quantitative comparative data on this subject that transcends former speculative conjecture. However, a gestalt within the field has not developed (Ross, 1999).

The above comments demonstrates the importance of this thesis, particularly since the political establishment is once again enhancing its focus on the entrepreneurial sector of the economy, as can be seen in the current literature, including calls to eliminate all taxes on entrepreneurial gain within the American economy. The root of this recent position can be traced back to 1998 (Gingrich and Kudlow and Kies, 2008).

A common body of knowledge related to both national fiscal policy and venture capital exists. However, when fiscal policy and venture capital combine as a single search item, output results within the literature decrease dramatically. This raises the threshold of potentially new and/or expanded findings within this sub-sector of the economy. Conceptual theory abounds where few have trod thus far, implies Howell (2004). The sub-sector has enough literature to support a theoretical framework, yet the literature does not reach far enough to address issues specific to the research question. Some elements exist but the sum total of those rare glimpses never produces enough insight to shed any understanding on the research question or central theme.
The prevailing thought by organizations such as the Heritage Foundation and the Cato Institute is that previous relaxations of capital gains provision in the U.S. have historically resulted in collective shifts in investment behaviour on the part of the venture capital industry. This increases the attention paid to early-stage investments of a more speculative nature and fosters the increased use of equity instruments on a broader scale.

The survey tool used to collect primary data for this thesis identifies these shifts. Markets are highly efficient in most first-world countries and run largely in accordance to the efficient market hypothesis in one of three forms, and this simplifies the identification protocol. Russel and Torbey (2012, p. 1) identify these forms as “weak, semi-strong, and strong”. There is little room for individual bias and, if it does exist, it is in limited form and would be overridden by market-driven dynamics. Yet there is a collective bias that can move even the most efficient markets on a mostly temporary basis. Rumours, environmental issues such as oil spills, military conflicts such as Korea and volcanic ash clouds are all emotional inputs that can affect the collective investment behaviour of investors and fund managers of even the soundest markets. These effects are short lived and generally not measured but are confounding variables none the less (Creswell, 2009). Additionally, and as a point of clarification, managerial styles, in this context, denotes collective managerial styles purged of relativism and cultural bias to the maximum degree possible.

The anticipated outcome referenced above refers to the investment preferences of the venture capital companies surveyed. The research question attempted to tie changes in these investment preferences to changes in national fiscal policy; long considered the primary tool used by the government to stimulate economic growth. By chance, each research period was preceded by a major shift in fiscal policy
imposed by the government. These are described in more detail in Exhibit G. Most shifts in fiscal policy take at least eighteen months to have an effect on the systemic economy and its various sectors and sub-sectors.

In closing, it is important to remember that, “problems do not exist in nature but in the minds of people and problems cannot be articulated except with a conceptual system”. (Cline, 2012, p. 1 as cited in Guba, n.d.)

It is important to close by stating what a theoretical framework hopes to achieve in the research process. According to the website Thesis Notes (2009, p. 1), a “theoretical framework is used to limit the scope of the relevant data by focusing on specific variables and specifying the specific frame or viewpoint that the researcher will take in analysis, and interpreting the data that will be gathered, understanding concepts and variables according to the given definitions, and building knowledge by validating the theory”.

Concerning this, the broader theoretical framework of this thesis is that fiscal policy can be employed and manipulated to affect economic growth and employment. The framework can state that fiscal policies targeted to the entrepreneurial sectors of the economy affect systemic national economic growth and job creation. Additional refinement of the framework is achievable by taking the position that a targeted fiscal tool, such as capital gains tax, which is the primary independent variable used in this thesis, impacts upon systemic economic growth and employment.

**Analysis Plan**

Books, thesis databanks, periodicals, professional newsletters, professional trade articles and the internet were all used as part of the secondary inquiry mechanism in addition to the primary data collected by survey instrument. These two approaches were synthesised in order to address the research question.

Literature on statistical methods related to different inquiry paradigms has been well defined for some time. Therefore, debate concerning differences between
the numerous approaches will be forgone in favour of selecting those that are constructive to the research paradigm elected for this thesis. However, some technical evaluations are given later in this chapter.

This thesis uses a positivist inquiry paradigm driven by deductive analysis of quantitative data. Collis and Hussey (2009, p. 221) state, “if you have adopted a positivist paradigm, you have collected quantitative data”.

Another factor that will drive the type of statistical analysis used is the type of data created. In the case of this thesis, the data are defined as descriptive statistics. Mason (1974, p. 2) simply notes that descriptive statistics is nothing more than “describing numerical data”. In essence, it is a straightforward deductive approach to data analysis. The numeric data is expressed in categorical form, which is an important consideration in terms of hypothesis testing. In addition, the thesis is largely a bivariate analysis. This refers to the study of the relationship between two variables, and is often used when testing hypotheses. Additional data mining did use multivariate analysis and data categorization led to non-parametric testing.

More specifically, quantitative inquiry calls for the use of descriptive and inferential statistical analysis (Madrigal and McClain, 2012). Consequently, a two-pronged approach was used. The descriptive study employed parametric measures such as frequency mean analysis, scatter plot graphing, linear analysis and standard deviation analysis; all considered strong tests of data reliability (University of Glasgow, 2012) and used for such.

Inferential statistics employs non-parametric measures used to test hypotheses (Penn State University, 2014). These are considered a less potent measure, yet can be important and supplemental to an overall statistical review. The Chi-square test is one of the most useful of the non-parametric tests (Nova Southeastern University, 2012).
In this case, since the variables are reported in categorical as opposed to numeric form, the chi-square test is the appropriate measure to employ (The Mathbeans Project, 2012). This is further supported because the dependent variables have “non-normal distributions”. (MIT, 2012, p. 2)

The comprehensive study guide of the SPSS program also incorporates a process that evaluates the optimal test to use for hypothesis testing. It considers such factors as types of variables (nominal, ordinal or dichotomous), the relationship between the variables in terms of what output is being sought and the nature of the research, experimental or non-experimental.

The program focused on one optimal test and chose the chi-square for this thesis. Creswell (2009) further supports this decision, noting that categorical information dealing with parameters with regard to testing a null hypothesis should use chi-square analysis.

Non-parametric testing with the use of right-tailed chi-square analysis (Dean and Illowsky, 2012) is the optional non-parametric tool to use when studying the primary data. Exhibit H highlights the basic assumptions considered with regard to both descriptive statistics and the inferential outputs.

As cited above, given that non-parametric measurements such as the chi-square are less potent than descriptive statistics, employment of other non-parametric measurement tools was necessary to strengthen the output. Scatter plot graphs with linear trend lines using the coefficient of determination, generally denoted as $r^2$ (Fonticella, 2012), and also referred to as the Spearman Test, were employed (University of California, 2000). Pearson’s Correlation Coefficient, denoted as r, and was also studied as it tests the relationship between variables (University of Glasgow, 2012). Pearson is a parametric test, and is closely related to the Spearman tool.
Choice Of Methods

This thesis was conducted within a positivist paradigm using a quantitative deductive methodology. Collis and Hussey (2009, p. 76) notes, “in a positivist study, a survey methodology is designed to collect primary and secondary data from a sample…”. Consequently, the methods used to collect the primary data were straightforward. In this case two surveys employing two questionnaires were used and can be described as a descriptive and quasi-experimental research (Howell, 2004) in that the characteristics of phenomena were explained in addition to observing the relationship between the independent and dependent variables (Wuensch, 2004). The first and larger survey exercises comprised a collective longitudinal study which was also a trend study (Palmquist, 1999) conducted over many years and employing four separate data collection efforts, beginning in 1983 and ending in 2007. The second, smaller and more recent survey was conducted as an interruptive exercise (Howell, 2004) to verify the results of the collective longitudinal study. This was due to the rigidity of the questionnaire used in the four larger surveys and the potential risks to outcome validity of this inflexibility.

Methods Employed

Instrumentation/Measures

The first in a series of four studies was launched 32 years ago using a questionnaire employing closed questions (Collis and Hussey, 2009). The survey instrument had been utilized to conduct primary research on the venture capital industry by numerous trade associations, publishers, universities and think tanks over a 20-year period. Given the backward (Bussgang, 2010) and conservative nature of the venture industry, the questionnaires used by the industry’s trade associations have changed little over the decades. No particular originator has been
identified for this instrument and, given its continual use over many decades without modification, this researcher considered the preferences common knowledge within the public domain that were not subject to referencing.

The questionnaire used was evaluated in the light of methods adopted by the book, *Characteristic of Surveys* (American Statistical Association, 1980), with the basic objective of providing focus on what information was needed and ultimately on which questions should be used (McNamara, 2002). Issues of universal sampling were examined against the backdrop of the literature review.

It should also be noted that later data collection efforts and sampling were influenced by prior questionnaire design in an effort to maintain sampling consistency. However, rigidity factors in the survey output must be considered, as recited earlier.

This thesis depended largely on numbers and the organization of raw numeric data into categories. It was felt that a quantitative, bottom-up, deductive approach, using both survey and longitudinal methods, was the best approach. According to Liebscher (1998, p. 669), “a quantitative research methodology is appropriate where quantifiable measures of variables of interest are possible, where hypotheses can be formulated and tested, and inferences drawn from samples to populations”. Liebscher (1998, p. 670) also states, “to conduct quantitative research implies the need for precise identification and definition of variables and the ability to operationalize them in such a way that numbers can be attributed to them”.

For the reasons cited above and the numeric nature of the raw data, the hypothesis was tested by comparing propositions and prevailing theory to the numeric facts (Liebscher, 1998). Moreover, the Comte principal that the goal of inquiry is to explain and predict (Bourdeau, 2012) guides this positivist thesis.
Consequently, a questionnaire sampling typology (Shibatani and Bynon, 1995) was used to collect primary numeric data, with secondary data drawn from the literature.

Recalling the measurement error inherent in an inflexible quantitative environment, some phenomenological inquiry was necessary, but ultimately ignored.

Collis and Hussey (2009, p. 192) note that “a questionnaire is a method for collecting primary data in which a sample of respondents are asked a list of carefully structured questions chosen after considerable testing, with the view to eliciting reliable responses”. Collis and Hussey (2009, p. 77) also state, “there are several methods for collecting survey data in a positivist study, including postal questionnaires”. In addition, the pair further noted, “a survey methodology can also be used in an interpretivist study”. (Collis and Hussey, 2009, p. 77)

The American Statistical Association (1980, p. 252) says, “designing the questionnaire represents one of the most critical stages in the survey development process… the questionnaire links the information to the realized measurement”.

This thesis employed two questionnaire tools, a closed ended questionnaire and a quasi-open ended questionnaire, which implies a mixed-methods approach (Creswell, 2009). Exhibits I and J illustrate these instruments. Nearly nine hundred closed-end questionnaires were used in the deductive abstraction of the data.

In analysing the first questionnaire, displayed in Exhibit I, which also includes the introductory letter in Exhibit I Continued, it is quite obvious that simplicity was applied as prescribed by Creative Research Systems (2013, p. 1). The American Statistical Association (1980, p. 252) also cautions against unwieldy questionnaires by noting that, “designing a suitable questionnaire entails more than a well-defined concept… attention must also be given to its length, for unduly long questionnaires
are burdensome to the respondent, are apt to induce respondent fatigue and hence response errors, refusals, and incomplete questionnaires”.

The instrument is a one-page questionnaire using short questions. The questions were industry specific and several questionnaires from other research organizations studying the industry were procured for examination purposes. Testing was carried out by sending questionnaires to a focus group (American Statistical Association, 1980), a small random subset of the population, with follow-up telephone inquiry and feedback recording.

The primary recommendations from this focus group were to make responses simple, easy and inexpensive to return. Keeping in mind the compressed work schedules and the relatively short attention span of a typical business executive within the busy environment of a venture capital firm, the questionnaires were designed to be short and precise in design. The questions are best described as multiple choice (Creative Research Systems, 2013) and closed end (Collis and Hussey, 2009), meaning the respondents received a questionnaire with a number of predetermined questions. The questionnaire performed well with consistent output and was evaluated against a more recent set of norms as presented in Exhibit K, to ensure proper development.

Concerning the first questionnaire, care was taken to ensure a properly constructed instrument providing usable results, recognizing that a carelessly designed tool would produce invalid results. Thus the recommendations of Babbie (1973), as cited in Palmquist (1999, p. 1), were reviewed. Busha and Harter, (1980) as cited in Palmquist (1999. p. 1), were also evaluated concerning questionnaire design.

As noted, designing suitable questions can be more difficult than it seems. A way of ensuring that questions measure what they should measure is to test them first,
using a small focus group, as reviewed above. Some researchers argue that using focus groups is a qualitative research tool (Word IQ, 2010, p. 1). According to Market Street Research (2004, p. 1), “focus groups are a form of qualitative research that brings together small numbers of people to discuss a topic”.

A focus group study was used only to assemble data about the questionnaire itself and to study the quality and validity of the questionnaire. However, the group did not provide any data related to the outcome results of this thesis (Steppingstones 2004). The group was utilized because Mullens and Kasprzyk (1996) have suggested that using focus groups to validate a quantitative survey instrument is appropriate.

This researcher realized the inherent risks to outcome from using a static measurement instrument in a longitudinal study. Noting the quote above by Collis and Hussey (2009) which acknowledges that survey methodology can be applied to an interpretivist study, some phenomenological input was utilized to test outcomes. A semi open-ended questionnaire was devised and is illustrated in Exhibit J. It included an introductory letter shown as Exhibit J Continued. This instrument was untested. However, it was designed in accordance with the protocol set forth in the subsection entitled Methods Employed, highlighted earlier in this chapter. One open-ended questionnaire was directed to the executive director of one of the associations (populations) used in the closed end questionnaire surveys and the other open-ended instrument sent to the executive director of the largest and oldest regional association representing the venture capital industry, most of whose members also belong to the former association. These are opinion leaders, representing many members operating within the industry.

The questionnaires were forwarded by email for speed and convenience. Responses were prompt and compared against the results of the larger surveys to
ensure the validity of the outcomes. However, the outcomes were dismissed for reasons cited earlier in this chapter.

In reference to the four original surveys, various means of delivery were reviewed, each of which have distinct advantages and disadvantages which are beyond the scope of this thesis (American Statistical Association, 1980). The first three were executed by post with self-addressed return envelopes and postage included. The fourth survey was conducted by means of electronic delivery through email.

**Population Characteristics**

The populations used for all four surveys came from the same sources, with 900 members per survey, and the surveys were static in nature (see the subsection entitled *Sampling Protocol* within this chapter). Only venture capital firms and small business investment companies were surveyed; attorneys, accountants, consultants and non-affiliate third parties were avoided. Careful sample population selection is important to any survey effort (Macleod and Hockey, 1981).

**Sampling Protocol**

The first three surveys were conducted by surface mail with an addressed postage-paid return envelope included and the fourth survey by email. There was no personal contact with the participants.

Research spans a 24-year time line, encompassing four separate surveys of the same universe using the same survey questionnaire. The study is described as a longitudinal survey (Collis and Hussey, 2009). All four surveys were conducted in the aftermath of changes in fiscal national policy directed at the entrepreneurial segment of the economy, with a lag time of between 18 and 24 months to allow the
effects of the legislation to filter throughout the economy. Lag time for the fourth and final survey was longer at 60 months.

Analysis was conducted to determine the collective changes in the investment preferences occurring within the industry because of these changes in fiscal policy.

Only members of the National Venture Capital Association and the National Association of Small Business Investment Companies were queried in all four surveys, the two leading professional associations within the venture capital industry in the United States. Consequently, the universe and population queried were captive groups throughout the research process. Some might imply this to be a delimitation (Collis and Hussey, 2009) which limits the scope of the thesis.

Statistical Techniques Used

Many different statistical tools came under consideration when attempting to analyse the primary data. It was first necessary to ascertain the type of data outcome. Since no particular normal distribution frequencies were expected or occurred, the data is of non-parametric character. Therefore an inferential statistics tool was used, that being the chi-square. Some tools better associated with parametric data such as standard deviation analysis, scatter-plotting and linear graphing were also employed.

The scatter-plots accompanied by calculation of the Pearson Correlation Coefficient \( r \) derived from the Coefficient of Determination \( r^2 \) proved useful for verifying the chi-square results to the greatest degree possible. They are of secondary importance subordinate to the chi-square results. However, standard deviations and Chronbach Alpha were the primary tools engaged to verify questionnaire validity and accuracy.
There are various inferential statistical tools available. This researcher used a computer program to determine the best tool selection. The chi-square surfaced. So as not to leave matters to computer chance, an intense manual evaluation verified the chi-square result. Below, in Table 3-C, are some of the other inferential tools analysed, with their characteristics (Quesada and Rash, 2001) (Smith, n.d.) (Hoskin, n.d.). Although not entirely inclusive of all the tools available, it is a representation of those tools likely to be useful for the raw data collected for this thesis.

<table>
<thead>
<tr>
<th>Table 3-C Table of Tools</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mann-Whitney Rank-Sum Test</strong> – Assesses two samples that are independent</td>
</tr>
<tr>
<td><strong>Kruskal-Wallis Statistic</strong> – Examines autonomous groups of three or greater</td>
</tr>
<tr>
<td><strong>Wilcoxon Signed-Rank Test</strong> – Two quantitative measurements taken from the same sample</td>
</tr>
<tr>
<td><strong>Wilcoxon Rank-Sum Test</strong> – Means comparison between two autonomous groups</td>
</tr>
<tr>
<td><strong>Friedman Statistic</strong> – Contrasts samples categorized by two diverse features.</td>
</tr>
<tr>
<td><strong>Spearman Rank Correlation Coefficient</strong> – Determines linear relationship among variables</td>
</tr>
<tr>
<td><strong>Chi-Square</strong> – Assesses unrelated sample clusters</td>
</tr>
<tr>
<td><strong>McNemar’s Test For Change</strong> – Assesses related sample clusters</td>
</tr>
<tr>
<td><strong>Chronbach Alpha</strong> – Assesses data reliability and internal consistency of data</td>
</tr>
</tbody>
</table>

Source: James Silvester, 2013

In evaluating the primary characteristics of the non-parametric procedures listed above against the nature of the raw data outcomes, chi-square and Spearman’s Rank Correlation Coefficient are the more appropriate tools.

Criticism may occur for seeking what appears to be a blend of statistical tooling via the use of both chi-square, a non-parametric tool, and the Pearson Coefficient of Correlation (r), a parametric tool, to study the same sampling that has been determined as inferential. Not so. The Spearman Correlation Coefficient (r²), a non-parametric tool, is related to the Pearson tool as a square root function – arguably the same for determining the scale of significance among quantitative variables. Pearson was only reported because of calculating Spearman.
Validity Of Survey Questionnaire Used

The survey questionnaire used to collect the primary data was a common and recurring instrument used by the venture capital associations of the era, which included the National Venture Capital Association (1982) and the National Association of Small Business Investment Companies. No modification to the instrument occurred during the four data collection periods.

This researcher assumed the instrument’s validity, given its heavy use by entities within the industry, as recited above, and it did successfully pass the scrutiny of the focus group, which consisted of venture capital executives.

The questionnaire instrument was also evaluated for nomological validity (Trochim, 2006) against the prevailing constructs within the industry, such as its conservative nature. It was determined that the instrument was valid and unbiased and repeatedly performed well.

As stated previously, the questionnaire was developed more than three decades earlier by associations within the venture capital industry. Findings related to investment preferences extracted from their questionnaire have been widely distributed throughout the media and regularly used and quoted by global business and financial experts. That same questionnaire instrument is still in use today by the same research entities, 30 years hence, with their investment preference findings still being disseminated worldwide. Therefore, the instrument has endured with recurring use over the decades, thereby demonstrating its validity.

Finally, the best test of the questionnaire’s accuracy came from the raw data. After manual calculation the chi-square results were tested three times using Excel, SPSS 20 and a statistical calculator. All produced similar results and the outcomes
were verified via linear comparison with the $r^2$ value. Thereafter, these results were compared back to the standard deviation analysis to ensure the quality of the questionnaire output. The lack of significance in 27 out of 38 sub-variables at .05 alpha was indicative of small standard deviations of the means of those particular sub-variables. Ultimately, the respondents were reporting similar results over time, despite changes in the independent variable, confirming the chi-square results against the standard deviation results, as can be seen in Exhibits O and P.

A lower confidence level at .10 alpha was also tested. Though this represented a 50% decrease in the confidence level, the number of events lacking in significance only decreased by approximately 10% to 24 out of 38.

Since the significance factors between the standard deviation analysis and chi-square analysis mesh, the questionnaire used in all four surveys was properly validated.

Chronbach Alpha tooling was also used to validate data reliability and the internal consistency of the data, which proved acceptable. This is more fully explored in Chapter Four.

Subjects/Participants

The subject participants for this exercise were executive officers of venture capital firms that belong to the two largest associations representing the venture capital industry. According to Basha and Harter (1980), as cited in University of Texas (2013), “a population is any set of persons or objects that possesses at least one common characteristic”.

The populations used in the study were small, having no more than 450 members each. Membership lists were procured and in all four studies entire populations were queried. This eliminated the need for sampling and quota analysis.
Had sampling been an issue, and with regard to future research with an expanded population, this researcher would execute random sampling in that all population members would have the same chance of being selected and, according to Collis and Hussy (2009, p. 340), this would “… provide for an unbiased subset of the population”.

In 1983, the date of the first survey, only a dozen or so associations, mostly regional in nature, represented the venture capital companies in the country. The two associations that served as the population platforms for this thesis were the two national associations at the time.

**Procedures**

Despite the fact that this survey process started in 1983, its intention was to be part of this researcher’s doctoral studies, which began in 1984. Therefore, at the time, care was taken to develop the survey plan in accordance with the established guidelines of American Statistical Association, as set forth in their publication, *Characteristics Of Surveys* (1980).

The following were evaluated, as set forth by Creative Research Systems (2013, p. 1), which states, “Establish the goals of the project-Determine your sample-Choose interviewing methodology-Create your questionnaire-Pre-test the questionnaire, if practical-Conduct interviews and enter data-Analyse the data”.

**Justification For The Methods Used**

A paper by Andrews (2003) received attention as it related to the development of research methods. He relies upon Mitchell (1992), as cited in Andrews (2003), in terms of creating the research question and then relating it back to the methodology and methods employed. Both Andrews and Mitchell see the whole research process as evolving as it moves forward, particularly in relation to the research question,
methodology and methods. This researcher found this to be true in many research designs. However, in the final analysis of this thesis both Creswell (2009) and Collis and Hussey (2009) were included because they suggest that those studies that deal with numeric data are best suited to a deduction approach that employs quantitatively constructed applications via questionnaires and surveys.

This thinking was influenced by the numeric nature of the data early in the thesis process. Accordingly, the entire research process was elastic from the beginning and appropriate changes in inquiry paradigm occurred which influenced how the methods could were approached.

**Delimitations And Scope Of Research**

This researcher desires to distinguish between delimitations and limitations. This is to preclude any confusion on the part of the readers and as a note that this section deals mainly with delimitations. The introduction section of this thesis references limitations.

Cline (2012, p. 1) says,

“The delimitations of a study are those characteristics that limit the scope (define the boundaries) of the inquiry as determined by the conscious exclusionary and inclusionary decisions that were made throughout the development of the proposal. Among these are the choice of objectives and questions, variables of interest, alternative theoretical perspectives that could have been adopted”.

Cline (2012, p. 1) further states,

“The limitations of the study are those characteristics of design or methodology that set parameters on the application or interpretation of the results of the study; that is, the constraints on generalizability and utility of findings that are the result of the devices of design or method that establish internal and external validity”.

The primary delimitation of this thesis is that the inquiry is focused solely on fiscal stimuli that directly affect the entrepreneurial sectors of the systemic economy, notably capital gains tax, the centrepiece within the political discourse currently
taking place (Kudlow, 2007). Other broad-based fiscal stimuli, such as across-the-board income tax reductions, could have the effect of influencing the systemic economy with economic benefits for all sectors. In addition, the effect of systemic monetary policy on the entrepreneurial sector of the economy is touched upon in the literature but not researched for primary data.

The specific fiscal stimuli directly affecting the entrepreneurial sector of the economy are investment tax credits, capital gains provisions and depreciation write-off of equipment, with emphasis placed on capital gains tax as stated above (Moore and Silva, 1995). These limit the scope of this thesis to specific fiscal policies and further limit the boundaries of the thesis to a particular portion of the systemic economy, which is the venture capital industry.

As noted earlier, when the first survey was conducted in 1983, there were few trade associations. The two associations that served as the population platforms for this thesis were the two national associations. According to Cumming and Dai (2007, p. 2), “the membership of regional associations have geographical bias which affect their investment preferences”. As time ensued, additional associations surfaced but again most were regional in focus. To date, the two populations used in all four studies remain the only two that represent the venture capital industry with a national scope.

Confining the population to the two national associations is a limiting factor in reference to the scope of the thesis. However, it did increase the breadth of the research because it represented a larger cross section of venture firms left unbiased by geographic preference. For example, a venture capital company located in Northern California biased in favour of investments only in the city of San Francisco will not be invoked to invest elsewhere by any level of positive fiscal stimuli if there are no
opportunities present within the city. In other words, investment preferences will not change despite positive fiscal stimuli. This is a case of bias-skewing results (Tommasi, 2010).

Listed in Exhibit U are the dependent variables and, for the purposes of this study, these are the collective investment preferences of the venture capital firms surveyed. They are incorporated here as a matter of reference only. Four of the five were selected for analysis, as referenced before, the fifth being too unwieldy in reporting to be functional within the study.

These are the most noted investment preferences mentioned in the literature, as well as the most queried by other researchers. These limit the scope of this thesis by their nature and the fact that other investment preferences are available but of a less significant nature. Included are size of the investment opportunity in terms of number of employees, legal and organisational structure of the targeted opportunity and market share position within its industry.

The confounding or extraneous variables in this exercise would be monetary policy in general and the broader fiscal stimuli. These confounding variables have an effect on the other independent variables, which in turn will affect the dependent variables referenced above and must remain constant or be controlled (Guerin et al., 2004). However, these confounding variables are positioned outside the scope of the theoretical framework and are delimited for this research.

With the research design in mind, there was an attempt to limit the scope of the literature review to a review of systemic and targeted fiscal policies related to venture capital investment within the entrepreneurial sector of the economy. Given past debates in western countries on fiscal stimuli via economic stagnation, there is an abundance of information present within the literature. Therefore, obsolete
information is a key limitation on the scope of the thesis. While the literature is
directed towards fiscal stimuli, other economic stimulus issues were reported in the
literature, such as monetary policies. Although reflected upon as possible threats to
validity, these issues were not used to expand the scope of the research.

Prior to launching the literature review the publication *Doing a Literature
Review* by Hart (1999) was used as a primary guidepost. Hart (1999, p. 26) states,

“The originality of a research topic often depends on a critical reading
of a wide-ranging literature. The nature of this concern, on the one
hand, immersing oneself in the topic to avoid shallowness of quick and
dirty research and, on the other, there is need to identify the key ideas
and methodologies from which some contributions to knowledge might
be made”.

Hart (1999) goes on to describe eleven purposes of the literature in the
research process. These are discussed more in detail later with reference to how they
apply to this thesis to limit its scope.

At least part of the research design was delimited from the beginning of the
thesis process because the first questionnaire was used prior to embarking upon
doctoral studies. Since the same confined population was used for all four data-
gathering exercises, to maintain the consistency of the results, the original
questionnaire was never modified; this situation assisted in the formation of the
ultimate research design and theoretical framework. One could argue this is both a
delimitation and limitation; a limitation being outside the control of the researcher
(Rudestam and Newton, 2007b). No changes were made, which precluded other data
collection methods that may or may not have been more appropriate. This was despite
the fact that it was within this researcher’s power to modify collection methods and
even the questionnaire in subsequent inquiries. No changes were made because the
literature suggested the correct methods were selected.
The Variable Types Used With The Instrument

Nature Of The Independent Variables

Three independent variables were identified: capital gains tax, investment tax credit and depreciation write-offs. The latter two variables have been terminated, reintroduced, changed and alternated many times throughout the last 100 years of the nation’s economic history. Much debate surrounds their relative importance; therefore, they were viewed as extraneous variables and treated as constants with regard to this thesis.

Capital gains tax was identified as the primary independent variable throughout the thesis, due to its consistent existence and the topical and national debate surrounding it. Confounding variables, which are a type of extraneous variable, are systemic and pose threats to outcome validity, and therefore attempts should be made to control their influence.

Since the analysis of the four-survey results ties to specific changes in systemic fiscal policies, only those confounding variables existing at the time of those changes require review and control. For example, survey number one was conducted in the aftermath of the passage of President Reagan’s Economic Recovery Act of 1981, which provided favourable tax incentives to the entrepreneurial sectors, including venture capital firms. At the same time, the nation fell into a severe economic contraction often referred to as the Recession of 1981-1982. In addition, the full impact of the Soviet invasion of Afghanistan was reverberating throughout political capitals and affecting financial markets. These two events were considered confounding variables in this thesis and were controlled for and treated as constants.

Most governments have two broad systemic levers available to control their respective economic systems: fiscal policy and monetary policy; the latter being the
less important of the two (Hipple, 1999). Generally, these operate in tandem, but on rare occasions do not. Monetary policy was not a factor or subject of analysis in this thesis. However, monetary policy had the potential to affect the outcome and was thus viewed as a threat to the results and therefore controlled and treated as a constant.

President Reagan used fiscal policy aggressively (Public Broadcasting System, 2000). Later, during the Clinton Administration, with its fixation on bond markets and the advent of Alan Greenspan, monetary policy was accepted. Monetary policy is still subordinate to fiscal policy (Frase, 2011) and was treated here as a confounding variable. The University of Chicago’s Milton Friedman was the standard-bearer of monetary policy in the United States and a friend and trusted advisor of Reagan and his economic policies (Public Broadcasting System, 2000).

Nature Of The Dependent Variables

Four dependent variables were investigated and are listed in Figure 3-E.

The dependent variables in this thesis are investment preferences of the typical venture capital firm. Queries to venture capital firms concerning investment preferences are conducted on a regular basis by their professional associations in order to establish a consistent and stable database. The type of firm preference was studied but not analysed. Venture capital companies are generally static in terms of legal structure over time, making this preference inelastic and of little importance to this thesis.

Funding preferences deal with the stage of development at which a venture fund will invest. Some firms will invest only in early-development and start-up companies. Others may prefer more established situations, often referred to as second- or third-round investment, while others may only want to invest in well-established firms, called later stage funding. Leverage buyouts and acquisitions would be
included within the funding preference category, as some venture firms specialize only in these transactions. Table 3-D below displays a detailed list of investment preferences commonly used within the venture industry, starting with funding preference, which displays the different stages of funding at which venture capital firms typically deploy their resources. It is more comprehensive in scope than previous tables and figures listing these preferences because it identifies the business function and application of each preference.

**Table 3-D Investment Preferences In Detail**

<table>
<thead>
<tr>
<th>Funding Preferences</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seed Funding – Organization Costs</td>
</tr>
<tr>
<td>Start-Up Funding – People And Equipment</td>
</tr>
<tr>
<td>First-Round Funding – Implementation</td>
</tr>
<tr>
<td>Second-Round Funding – Marketing Phase One</td>
</tr>
<tr>
<td>Third-Round Funding – Marketing Phase Two</td>
</tr>
<tr>
<td>Fourth-Round Funding – Market Share Penetration</td>
</tr>
<tr>
<td>Later-Stage Funding – Additional Product/Service Marketing</td>
</tr>
<tr>
<td>Leverage Buyouts – Purchase Of Companies Using Internal Assets Of Target Companies</td>
</tr>
<tr>
<td>Acquisitions - Purchase Of Companies Using Various Funding Vehicles</td>
</tr>
</tbody>
</table>

Industry preferences are just what the name implies: the type of industry the venture firm prefers to place funding into. A list of industry preferences commonly used with the venture industry is below.
Table 3-D Continued Industry Preferences

<table>
<thead>
<tr>
<th>Industry</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diversified</td>
</tr>
<tr>
<td>Communications Technology</td>
</tr>
<tr>
<td>Computer Hardware</td>
</tr>
<tr>
<td>Computer Software</td>
</tr>
<tr>
<td>Manufacturing</td>
</tr>
<tr>
<td>Wholesale Distribution</td>
</tr>
<tr>
<td>Medical Technology</td>
</tr>
<tr>
<td>Media</td>
</tr>
<tr>
<td>Other High Technologies No Included</td>
</tr>
<tr>
<td>Retail</td>
</tr>
<tr>
<td>Services</td>
</tr>
</tbody>
</table>

Geographic preferences are the physical areas where venture firms will invest. Although a few are strictly tied to a particular city and/or state, most prefer a region-wide or national approach.

Table 3-D Continued Geographic Preferences

<table>
<thead>
<tr>
<th>Geographic Preferences</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Preferences</td>
</tr>
<tr>
<td>Northeast</td>
</tr>
<tr>
<td>Middle Atlantic</td>
</tr>
<tr>
<td>Southeast</td>
</tr>
<tr>
<td>Mid-West</td>
</tr>
<tr>
<td>Rocky Mountain States</td>
</tr>
</tbody>
</table>
Types of funds preferences is representative of how venture firms invest their funding resources. This would include the purchase of equity ownership through the acquisition of common stock of the target company. Alternatively, the preference may take the form of debt financing, where the venture capital firm will invest in promissory notes or bonds issues by the company that carry an interest rate. In many cases, funding preferences can take on the characteristics of both equity and debt financing in the form of preferred stock, convertible bonds and convertible notes, which are held as debt or converted into equity stock or a combination of the two.

**Table 3-D Continued Geographic Preferences**

<table>
<thead>
<tr>
<th>Region</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northwest</td>
</tr>
<tr>
<td>Far West</td>
</tr>
<tr>
<td>Southwest</td>
</tr>
<tr>
<td>State Only</td>
</tr>
<tr>
<td>Immediate Area</td>
</tr>
<tr>
<td>International</td>
</tr>
</tbody>
</table>

**Table 3-D Continued Type of Funding Preferences**

<table>
<thead>
<tr>
<th>Type of Funding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equity (Stocks)</td>
</tr>
<tr>
<td>Loans</td>
</tr>
<tr>
<td>Loans With Equity Conversion Privileges</td>
</tr>
<tr>
<td>Bonds</td>
</tr>
<tr>
<td>Bonds With Equity Conversion Privileges</td>
</tr>
</tbody>
</table>
Table 3-D Continued Type of Funding Preferences

<table>
<thead>
<tr>
<th>Leasing</th>
<th>Mezzanine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amount</td>
<td>Amount</td>
</tr>
<tr>
<td>invested</td>
<td>invested</td>
</tr>
<tr>
<td>preference</td>
<td>preference</td>
</tr>
</tbody>
</table>

Source: James Silvester, 2013

Amount invested preference is how much absolute capital a venture firm will invest. Most often, this is expressed as a range between a minimum and maximum preference. This preference was not analysed and therefore not displayed herein.

Relationship Between The Independent Variable And Dependent Variables

Of course, the title of this subsection is the crux of the research problem and hypothesis, in so much as this thesis seeks to understand the collective relationship between these variables.

This researcher narrowed down the complexity of the interaction by assigning priorities to both the independent and dependent variables. As such, only one independent variable was selected as a primary: capital gains tax. The other two independent variables were treated as extraneous and held as constants for the sake of outcome consistency. Depreciation write-offs and investment tax credit have a dubious past as means of economic stimulus as recited previously. However, capital gains tax is topical and continually controversial on the political scene.

In terms of dependent variables, it was necessary to narrow the field to the more elastic of the variables. Funding preference and type of funds preferences were initially selected as the primary dependent variables because they are most prone to changes in the face of alterations to the primary independent variable. The remaining dependent variables, industry preferences, geographic preferences and amount-invested preferences, are all generally static with regard to changes in the primary independent variable. Eventually, both industry and geographic preferences were
elevated as holding primary status. The amount invested preference was ignored and treated as a constant because the outcomes specific to this preference did not conform to the research database configuration developed for the statistical analysis.

Exhibit T illustrates the relationship among the variables. The figure demonstrates how they interacted around and intersect through the working hypothesis.

**Outcome – Dependent Variable**

Changes in the investment preferences mix of the collective hive of the venture capital industry as a result of changes in fiscal policies directed toward the entrepreneurial sub-sectors of the systemic economy was the expectant outcome, and the dependent variables measured are illustrated in Figure 3-E below. The figure is a visual demonstration of the outcome variables and shows the five original dependent variables analysed and the four selected for study.

**Figure 3-E Dependent Variable Table**

<table>
<thead>
<tr>
<th>Dependent Variable Table</th>
</tr>
</thead>
<tbody>
<tr>
<td>Funding Preference</td>
</tr>
<tr>
<td>Stage Of Funding</td>
</tr>
<tr>
<td>Industry Preference</td>
</tr>
<tr>
<td>Geographic Preference</td>
</tr>
<tr>
<td>Type Of Funds</td>
</tr>
<tr>
<td>Amount Invested</td>
</tr>
</tbody>
</table>

Funding Preference, Industry Preference, and Types Of Funds are the Primary Dependent Variables. Geographic Preference, and Amount Invested Will Be Treated As Extraneous Dependent Variables.

Source: James Silvester, 2013
Other Variables

Other extraneous variables could also affect the research. For example, the effect of non-targeted systemic fiscal policies on the outcome might be considered an intervening variable, and could possibly have been measured (Creswell, 2009). In addition, confounding variables must also be considered, in that sudden systemic events such as terrorist attacks, war and natural disasters could impact results (Collis and Hussey, 2009) but are generally not measured, according to Creswell (2009). All were treated as constants.

Secondary Sources

Google Scholar was used as an identifier and extractor of literature, given its reach into both the mainstream and less known information platforms. Also used was the database at Anglia Ruskins University in addition to Dissertation Abstracts, ProQuest, Comprehensive Dissertation Index, Thesis Abstracts, Research Papers in Economics and the Library of Congress. The databases produced PhD and Masters Theses, professional journals, newspaper articles, magazine articles, conference papers, working papers, books, abstracts, indexes, electronic sources, conference proceedings and personal comments. It was difficult to locate any thesis that provided a constructive analysis of the research question and/or working hypothesis.

However, data did abound within the print medium; therefore professional journals, conference proceedings, reports, working papers and financial sections of major media were heavily used. Gaps in the literature, which will be more fully discussed in Chapter Five, were sizable. A small number of articles analysing venture capital investment preferences were found. Only one small crude and limited longitudinal study spanning eleven years was noted.
Assumptions About and Approaches to the Literature

Some confusion may exist in using the phrase "eliminate capital gains", for it can have two connotations. It may mean eliminating capital gains tax such that all investment gains are then taxed at the normal ordinary tax rates, as happened under the Tax Reform Act of 1986. Alternatively, it may mean a complete elimination of tax on all investment gains, even under the scope of ordinary income. This researcher was careful to make that distinction; nonetheless, the reader should use caution.

Due to the political sensitivity, highly charged debate and topical nature of the issue, the literature was adequate but had no clear focus. The literature is subjective along ideological lines and fractured in relation to the research question. A central theme was devised but with much difficulty given the situation cited above. In targeting the literature around the variables, as suggested by Creswell (2009) and as requested by the thesis assessors, opposing positions throughout the literature review were combined rather than purely grouping the literature into ideological positions. Some grouping was obvious, including a small number of opposing positions. The objective was to provide the reader with a flavour of the topical debate taking place. Therefore, no dramatic climax was reached.

Some of the literature is vague in terms of how it imposes on the research question. This could raise consternation about the reach of the literature via investment preferences. It is difficult to make the connection between changes in capital gains tax and the investment preferences of the venture capital industry other than through primary research. This is borne out by numerous literature gaps cited in the thesis. One of these was outlined by Brannon, et al. (2011) when they complained of gaps in the literature that make it difficult to link changes in the capital gains rate to venture investment. Current theory assumes that a change in the capital gains tax rate
will affect economic growth and/or how investment capital is employed. This would seemingly impose itself on the decisions of venture capital managers, thus modifying their investment preferences as the capital gains tax rate moves up and down. The literature is unclear about this proposition.

**Structure of the Literature**

Since the literature review is such an integral part of any thesis, an outline evaluation of its nature and structure should be conducted.

The literature review was generally thematic in nature as opposed to a chronological, methodological or annotated review, however, some chronology was applied. Creswell (2009) influenced the research when determining the structure of the literature review in reference to a quantitative study employing mixed methods. Creswell (2009, p. 44) asserted: "For a quantitative study or quantitative stand of a mixed methods study, write a review of the literature that contains sections about the literature related to major independent variables, major dependent variables, and studies that relate the independent and dependent variables".

Creswell (2009) suggests that a literature review is comprised of five major topics. These are listed below in Table 3-E. This is surely not the final word and the table should be modified to the particular needs of any thesis. In this case, this researcher found it to be adequate and functional and in keeping with a quantitative approach which builds literature around and upon the thesis variables.

**Table 3-E Literature Review Topics**

<table>
<thead>
<tr>
<th>Topic One:</th>
<th>Introduction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Topic Two:</td>
<td>Literature Related to the Independent Variable(s)</td>
</tr>
<tr>
<td>Topic Three:</td>
<td>Literature Related to the Dependent Variable(s)</td>
</tr>
<tr>
<td>Topic Four:</td>
<td>Literature Related to both the Independent Variable(s) and Dependent Variable(s)</td>
</tr>
<tr>
<td>Topic Five:</td>
<td>Summary of the Statement of the Problem</td>
</tr>
</tbody>
</table>

Source: James Silvester, 2013
Rudest am and Newton (2007, p. 72) suggested that, for the sake of consistency, a final topic entitled ‘Statement of the Problem’ should be added at the end of the literature review, by stating, "The Statement of the Problem is sometimes written as a separate chapter and sometimes located at the end of the Review of the Literature”.

Creswell (2009) also suggests the development of an overall map of the literature review, which is illustrated in Exhibit M. This map also serves to limit the scope of the literature.

**Chart of the Literature Process**

Collis & Hussey (2009) influenced the literature review early on in the thesis process. Table 3-E illustrates the guidelines employed during the review of the literature and they were used as the basis for evaluating, selecting and constructing the theoretical framework for the thesis. The Literature Review Diagram illustrated in Table 3-F was also beneficial.

Note that the use of quotes and sources was limited in the literature review.

The Writing Center of the University of North Carolina (2012, p. 7) states, "the survey nature of the literature review do not allow for in-depth discussion or detailed quotes from text”. This is only partially true.

The approach used in the Literature Review Diagram led to the development of a highly refined literature map, which was used to finalise the literature search effort. This chart was created based on Creswell’s thoughts on how a literature review in support of a quantitative deductive thesis should largely focus and concentrate on the literature surrounding the variables, notwithstanding other considerations.
Map of the Literature

Table 3-F, taken from Hart (1999, p. 34), was used as an initial guide to conducting the literature review. It incorporates such issues as constructs, outcomes and background to assist in developing a mental picture of the literature review process. A graphic display of the literature map is presented in Exhibit M. In addition, Table 3-G is a final inventory used to ascertain literature quality. It is an integrating table and guide used to delimit and define the scope of the literature search and review. The table is finally used to establish the goals and objectives of the literature exercise with the intention of developing an overall map of the review process.

**Table 3-F Literature Review Diagram**

<table>
<thead>
<tr>
<th>Stages</th>
<th>Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Background Information</td>
</tr>
<tr>
<td></td>
<td>And Ideas Search</td>
</tr>
<tr>
<td></td>
<td>Begin Mapping Topic</td>
</tr>
<tr>
<td></td>
<td>Focus Topic And Analyse</td>
</tr>
<tr>
<td></td>
<td>Information Needs</td>
</tr>
<tr>
<td></td>
<td>Detailed Search</td>
</tr>
<tr>
<td></td>
<td>Of Sources</td>
</tr>
<tr>
<td></td>
<td>Construct Initial</td>
</tr>
<tr>
<td></td>
<td>Bibliographies</td>
</tr>
<tr>
<td></td>
<td>Secondary Evaluations</td>
</tr>
<tr>
<td></td>
<td>Final Map</td>
</tr>
</tbody>
</table>

Source: Hart (1999, p. 34)
Table 3-G Final Checklist

<table>
<thead>
<tr>
<th>Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>Have you cited the most important experts in your field?</td>
</tr>
<tr>
<td>Have you referred to major research studies which have made a contribution to our knowledge?</td>
</tr>
<tr>
<td>Have you referred to articles in the most academic journals in your area?</td>
</tr>
<tr>
<td>Have you identified any major government or other institutional study in your research field?</td>
</tr>
<tr>
<td>Have you identified studies that use the same paradigms and methodologies you propose?</td>
</tr>
<tr>
<td>Have you identified serious criticisms of any of the studies conducted?</td>
</tr>
<tr>
<td>Have you avoided plagiarism?</td>
</tr>
</tbody>
</table>

Source: Collis and Hussey, 2009, p. 105

**Ethical Considerations**

Societal norms are expressed in many ways: through civil laws, regulations, canons of religion and work rules within businesses. These norms extend well beyond official promulgation to take on a completely new dimension in the form of ethical conduct, sometimes written and sometimes not published at all. The legal and accounting professions have developed codes of professional conduct generally not governed by civil law. These codes suit the aims and objectives of those professions as projected by their members, who seek to bring order and discipline to their ranks, and in doing so develop public trust (Creswell, 2009). In many professional sports there are unwritten standards of ethical conduct on the playing field. These unpublished edicts have also found their ways into academe, particularly with regard to institutional research conducted by both students and faculty members.

As an increasing number of learned institutions seek to produce quality research outcomes, they must be on constant guard against improper application of research standards and protocols. Many have developed internal quality controls
related to research activities to ensure proper compliance with acceptable research norms. Some institutions defer to the ethical standards established by the American Psychological Association (Collis and Hussey, 2009).

Writing for the *Journal of Ethics*, Bruhn (2008, p. 1) states, “Ethics is a part of the mission and culture of colleges and universities. It is here that ethics is taught, researched, modelled, and observed”.

Hesse-Bieber & Leavey (2006 cited in Creswell, p. 87) state, “In addition to conceptualizing the writing process for a proposal, researchers need to anticipate the ethical issues that may arise during their studies”.

This idea was best expressed in more detail by David Resnik (2010) when he stated on behalf of the National Institutes of Health that,

“There are several reasons why it is important to adhere to ethical norms in research. First, norms promote the aims of research, such as knowledge, truth, and avoidance of error. For example, prohibitions against fabricating, falsifying, or misrepresenting research data promote the truth and avoid error. Second, since research often involves a great deal of cooperation and coordination among many different people in different disciplines and institutions, ethical standards promote the values that are essential to collaborative work, such as trust, accountability, mutual respect, and fairness”.

The ethical map related to this thesis is illustrated in Exhibit V and is used as the guidepost to ensure proper ethical conduct in all facets of this thesis. Issues such as proper permissions, data security and qualifications, to name some, were reviewed and charted to ensure acceptable ethical standards. Additionally, this thesis proposal passed the scrutiny of the University’s Ethics Committee.

**Chapter Summary**

The merits and deficiencies of the inquiry paradigm were debated within this thesis. They resemble the paradigm wars of the 1980s. As Patton (1990) suggested, there is no best way to proceed. There is agreement that the optimal approach is the
one that best solves the research problem by answering the research question. A positivist inquiry approach was best suited to accomplishing this task. The thesis was a scientific study and, because of the categorisation of numeric output, a quantitative exercise using deductive analysis was appropriate. Using a static questionnaire over the course of all four surveys was a challenging process. The static characteristic was positive in terms of output consistency but other collection methods may also have been appropriate. As stated throughout this thesis, some mild phenomenological input was used. It is not enough to invoke a post-positivist and/or constructivist label but the spectre of pragmatism is arguably present.
CHAPTER FOUR

FINDINGS

Introductory Statement

This chapter is an encapsulation of the output data from the various statistical tools used in the thesis. It includes a detailed report of the results with an analysis tied to the research question.

Data Reliability

Chronbach Alpha and Spearman's Coefficient of Determination, denoted as $r^2$, were used in this study to test the reliability and internal consistency of the data analysed (North Carolina State University, 2009). The Chronbach Alpha of the data sets of the first three surveys reported a value of .666, while the second data sets, consisting of all four surveys, reported a value of .691. These results are both within the category of greater than .600, which is deemed acceptable for exploratory research (Lance and Butts and Michels, 2006). The results of the Spearman calculations using scatter-plots with linear expressions of both the bi-variant and multi-variant analyses referenced below were high, on a scale of 0.0 to 1.0, with some minor exceptions. This confirms the Chronbach Alpha results (North Carolina State University, 2009). These results are illustrated in Table 4-A.

The only substantive use of descriptive statistics is that of standard deviation, which is used to analyse the reliability of the questionnaire outcomes and identify anomalies in the data. The standard deviation was calculated for each of the four dependent variables, including the individual components of the dependent variables, also called sub-dependent variables.

Four dependent variables are subject to study; two originally classified as primary and two secondary. The reasoning here was that originally only two dependent variables would be used in this thesis. However, once the evaluation
process began it became apparent that the two secondary dependent variables would also need to be included in the study. Therefore the use of the words ‘primary’ and ‘secondary’ is not relevant except to emphasize the logic behind this decision. The total number of sub-dependent variables included in the standard deviation analysis is 38.

The objective was to observe the predictability of the data output for each variable. The standard deviations for all sub-dependent variables can be viewed in Exhibit O.

The sub-variables within the funding preference variable have standard deviations that range between 1.15 and 9.29, with a mean of 5.65. Given the range of data between 16 and 50, this SD is somewhat above normal. It is not large enough to suggest that the questionnaire was flawed, yet may indicate some degree of dispersion among the data.

The sub-variables within the industry preference variable have standard deviations ranging between 0.58 and 6.66, a mean of 3.54. Given the range of data between 6 and 52, this standard deviation is somewhat close-fitting, indicating less dispersion among the data.

Sub-variables within the geographic preference variable have standard deviations ranging between 0.58 and 7.37, with a mean of 2.52. Given the range of data between 0 and 52, this standard deviation is also close-fitting, indicating less dispersion among the data.

Sub-variables within the type of funds preference variable have standard deviations ranging between 0.58 and 1.73, with the mean of these standard deviations calculated as 1.07. Given the range of data between 0 and 61, this standard deviation is also close-fitting, indicating less dispersion among the data.
The mean of all standard deviations was found to be 3.38. From these standard deviations it can be concluded that there is an overall close-fitting pattern among the output data. Therefore, the questionnaire was validated as a useful tool.

**The Primary Research**

*Inferential Statistics*

The choice to rely upon inferential statistics is neither random nor arbitrary but based on careful consideration more fully outlined in Chapter Three. Chi-Square and Spearman’s Coefficient of Determination, both non-parametric measures, were selected as the optimal tools.

*Chi-Square And Spearman Analyses*

To determine whether there were potential differences between the observed and expected frequencies in multiple classifications, i.e. funding preference, industry preference, geographic preference, type of funds preference and capital gains tax rates, a series of chi-square analyses were conducted. The results of these are reported within this chapter.

Funding preferences were analysed, and significance was found between capital gains tax and seed funding, start-up funding, later stage funding preference and leveraged buyouts. In addition, significance was found between capital gains tax rates and the following industry preferences: diversified, communications, manufacturing and media. In terms of geographic preferences, there was a significance between capital gains tax and a preference for the Rocky Mountain States. There was no other significance with respect to geographic preference. Likewise, no significance was found with regard to type of funds preference.

Elaboration on these results is necessary to ensure understanding of the interaction among the variables. Significance in seed funding was found in cases
where the capital gains tax rate was higher. This was also the case for start-up funding and later stage funding, while mixed results were found with respect to leveraged buyouts.

Additionally, there is significance between capital gains tax rates and a preference for the following industries: diversified, communications, manufacturing and media. Some significance was detected between higher capital gains tax rates and a preference for diversified industries, communications and manufacturing. Mixed results were also found for each of these investment preferences with respect to media. There was significance in the geographic preference shown for the Rocky Mountain States when higher capital gains tax rates prevailed. Finally, there was no significance in the type of funds preference.

Exhibit N presents a contrast of the capital gains tax rate and all predictors of interest in the form of a series of scatter plots, including $r^2$ measures along with superimposed regression lines. The focus here is strictly upon significance. The proportion of respondents preferring seed funding increased as capital gains taxes increased ($r^2 = 0.477$). Additionally, a linear relationship was found between start-up funding and the capital gains tax rate, with the preference for start-up funding gradually increasing as capital gains tax increased ($r^2 = 0.915$). There was also a clear linear relationship between the capital gains tax rate and a preference for later stage investment: there was a gradual increase in the preference for later stage investing as capital gains taxes increased, with an $r^2$ of .973 recorded. Leveraged buyouts were preferred and found to first decrease and then increase as capital gains taxes increased. This produced a low $r^2$ of .037.

There is statistical significance between the capital gains tax rate and the industry preference for diversified industries, communications, manufacturing and
media. The scatter plots show a clear linear relationship between diversified industries and capital gains taxes. This analysis produced an $r^2$ value of .982. There was significance in the communications preference when capital gains taxes moved higher. This analysis produced an $r^2$ value of .873. There was a clear linear association between a preference for the manufacturing industry and higher capital gains taxes. This analysis produced an $r^2$ value of .996. With regard to media preference there was a smaller linear association, which increased as capital gains taxes increased. This analysis produced an $r^2$ value of .631. The preference for the Rocky Mountain States increased sharply, and then decreased as capital gains taxes increased. This produced an $r^2$ value of .346.

Here, only the $r^2$ values of those variables indicating significance was reported. It is easy to extrapolate the r-value and then compare the two values, as illustrated in Table 4-A below.

<table>
<thead>
<tr>
<th>($r^2$)</th>
<th>(r)</th>
</tr>
</thead>
<tbody>
<tr>
<td>.477</td>
<td>.690</td>
</tr>
<tr>
<td>.915</td>
<td>.956</td>
</tr>
<tr>
<td>.973</td>
<td>.986</td>
</tr>
<tr>
<td>.037</td>
<td>.192</td>
</tr>
<tr>
<td>.982</td>
<td>.990</td>
</tr>
<tr>
<td>.873</td>
<td>.934</td>
</tr>
</tbody>
</table>
Table 4-A Continued

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>.996</td>
<td>.997</td>
</tr>
<tr>
<td>.631</td>
<td>.794</td>
</tr>
<tr>
<td>.346</td>
<td>.588</td>
</tr>
</tbody>
</table>

Range 0.0 to 1.0  Range -1.0 to 1.0

Source: James Silvester, 2013

Note that within the table the r-value, sometimes called ‘Pearson’, a noted parametric measure, is a test of the linear significance between two variables. In the case of this thesis, it refers to the statistical significance between the primary independent variable and the selected dependent sub-variable. The closer the r-value is to 1.0, the higher the probability of significance between the variables. The $r^2$ value is a measure of variability between the two variables and is called ‘Spearman’, a noted non-parametric test. Basically, $r$ and $r^2$ reflect one another and are closely related and thus there is no need to defend the parametric input. The results above are a further vindication of the chi-square findings.

A weighted chi-square analysis was also observed. Only the four dependent variable groups identified in Figure 4-A were studied, one being eliminated as too unwieldy in format to be useful. In this analysis, the sub-dependent variables of each of the four groups were also observed and studied. These are illustrated in Exhibit O and Exhibit P. Their findings largely supported the previous non-weighted results although in a much broader context. Only funding preference was found to possess statistical significance when the variables were weighed according to their relative influences.
The questionnaire results shown in Exhibit O are expressed as percentages to support the standard deviation analysis and are recorded in whole numbers to support the chi-square calculations in Exhibit P.

These groupings required analysis incorporating both descriptive and inferential statistical analysis using various tools. Standard Deviation, Chronbach Alpha, Spearman’s and Pearson’s coefficient were utilized with the data and analysed from these groupings. Some objectives were to determine questionnaire reliability and significance among the variables.

**Figure 4-A Dependent Variable Groups**

![Diagram of dependent variable groups]

- Capital Gains Tax: Primary Independent Variable
- Funding Preference: Primary Dependent Variable: Group 1 With 9 Sub Variables
- Industry Preference: Secondary Dependent Variable: Group 2 With 12 Sub Variables
- Geographic Preference: Secondary Dependent Variable: Group 3 With 11 Sub Variables
- Type Of Funds Preference: Primary Dependent Variable: Group 4 With 6 Sub Variables

Source: James Silvester, 2013

The chi-square inputs, which analyse the results by breaking down the four groups into sub-variables, indicate statistical significance in 9 of 38 sub-variables at .05 alpha. The linear analysis shown in the scatter plot graph with the $r^2$ analysis
confirms this outcome. The majority of that significance was concentrated in the Funding Preference variable group confirming the weighed observation.

This is where the second definition of the word *significant* becomes vital. It seems obvious that some significance exists between the independent and dependent variables but no causal relationship exists. The question is, is the significance *significant*? Kremelberg (2013) recommends that, when a working hypothesis is partially accepted, it be noted that some significance has been identified. Yet the significance represents only 24% of the total number of sub-variables, and is largely concentrated in only one dependent variable grouping.

There are two studies within this thesis editorialised within Chapter 4. The one reviews the descriptive statistics and non-parameter tests used in the first three surveys. The second encompasses all four surveys using the same statistical tests and engages in a comparative analysis between both reports. The comparison between the two reports is worth noting since the inclusion of the fourth survey changes the outcome of this thesis.

**Accuracy Of The Primary Data**

All 38 dependent variables were analysed as mutually exclusive. In addition, all major group of preferences were also analysed as combined stand-alone groups of data to sharpen the focus of the results reported above.

The application of each survey was aligned with the passage of a major piece of fiscal legislation spanning a 24-year timeline. These are illustrated in Table 2-A. There was a sufficient time lag given prior to query because legislation takes time to filter through and affect an economy the size of the United States. The period generally ran between 18 and 24 months with the one exception being the last survey. This researcher has surmised that the 9/11 terrorist attacks in 2001, the Afghan and
Gulf wars and the monetary distortions of 2006 leading to the Panic of 2008 warped the business cycle, which could have skewed the outcome. Therefore, an economic healing time was necessary to restore the business cycle to normal before the survey was conducted. Consequently, the fourth survey was delayed by 60 months.

This researcher believes the aforementioned events are potential confounding variables. In fact, because of the uncertainty associated with this period, survey number four has come under scrutiny. Roberts’ (2009) study for the United States Department of Homeland Security supports this caution. However, some disagree with Roberts, such as Rose, et al. (2009). Even though their work is grounded in quantitative analysis, the Roberts methodology has the full backing and resources of the American government.

Additionally, although the universe for all four surveys numbered approximately 900 companies, surveys one, two and three garnered 212, 184 and 179 responses respectively, maintaining a consistent 23% to 20% return. However, survey number four only garnered an 11% return rate.

Nonetheless, some interesting findings exist within the data. The data from the fourth survey show a movement toward more secure investments in later stage funding with more mature companies. This is expected in times of economic uncertainty and implies data credibility.

To confirm this reaction to the uncertainty, the extrapolated data from the fourth survey shows a grouping of responses in two sub-dependent variable categories: industry diversification and no geographic preference. Venture capital firms tend to diversify their investments during dubious economic times as well as seeking opportunities beyond their normal and traditional geographic limitations (Bailey and Gershenberg, 2008).
Risking a potentially corrupted universe is too significant a risk in terms of outcome validity, therefore additional testing is required. Consequently, a dependent variable to dependent variable (DV to DV) observation, on a sub-dependent variable basis, was conducted to test the effect of including the fourth survey in the final analysis, as illustrated in Table 4-B.

The table shows that thirty bi-variant combinations were selected non-randomly, based on this researcher’s extensive experience within the venture industry. In comparing the results of the two new data sets where p < .05 was considered significant, only three DV combinations recorded a change in significance and crossed the p < .05 to become p > .05. This established confidence in the data, and the fourth survey was included in the overall analysis.

Table 4-B Comparison Of Surveys

<table>
<thead>
<tr>
<th>Threshold</th>
<th>Three Surveys</th>
<th>Four Surveys</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturing – Acquisitions</td>
<td>.012</td>
<td>.001</td>
</tr>
<tr>
<td>Manufacturing – Northeast</td>
<td>.724</td>
<td>.728</td>
</tr>
<tr>
<td>Manufacturing – Leasing</td>
<td>.514</td>
<td>.548</td>
</tr>
<tr>
<td>Start-Up – Medical Technology</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>Start-Up – Southeast</td>
<td>.035</td>
<td>.057</td>
</tr>
<tr>
<td>Start-Up – Southwest</td>
<td>.837</td>
<td>.913</td>
</tr>
</tbody>
</table>
Table 4-B Continued Comparison Of Surveys

<table>
<thead>
<tr>
<th>Category</th>
<th>Value1</th>
<th>Value2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Start-Up – Computer Software</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>Start-Up – Southeast Retail</td>
<td>.497</td>
<td>.895</td>
</tr>
<tr>
<td>Start-Up – Southeast Media</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>First-Round – Computer Hardware</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>Later-Stage – Manufacturing</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>Computer Software – Far West</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>Computer Software – No Preference</td>
<td>.022</td>
<td>.066</td>
</tr>
<tr>
<td>Acquisitions – Loans</td>
<td>.281</td>
<td>.365</td>
</tr>
<tr>
<td>Leverage Buyout – Manufacturing</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>Leverage Buyout – Bond with Equity Kickers</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>Diversified – No Preference</td>
<td>.024</td>
<td>.259</td>
</tr>
<tr>
<td>Communication Technology – No Preference</td>
<td>.101</td>
<td>.096</td>
</tr>
<tr>
<td>Other High Technologies – Far West</td>
<td>.850</td>
<td>.524</td>
</tr>
<tr>
<td>Other High Technologies – Equity</td>
<td>.024</td>
<td>.005</td>
</tr>
<tr>
<td>Start-Up – Services</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>Equity – No Preference</td>
<td>.007</td>
<td>.000</td>
</tr>
<tr>
<td>Seed – Communications Technology</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>Seed – Retail</td>
<td>.487</td>
<td>.986</td>
</tr>
<tr>
<td>Seed – No Preference</td>
<td>.046</td>
<td>.002</td>
</tr>
<tr>
<td>Seed – Equity</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>Wholesale – Northeast</td>
<td>.253</td>
<td>.481</td>
</tr>
<tr>
<td>Media – Far West</td>
<td>.001</td>
<td>.000</td>
</tr>
<tr>
<td>Fourth-Round – Manufacturing</td>
<td>.001</td>
<td>.000</td>
</tr>
<tr>
<td>Services – No Preference</td>
<td>.746</td>
<td>.077</td>
</tr>
</tbody>
</table>

Source: James Silvester, 1983-2007

The Questionnaire Instrument

The questionnaire instrument was vetted by the inclusion of standard deviation analysis, as noted above in the Data Reliability section. However, more comment is appropriate. This researcher has already discussed the history and construction of the
questionnaire used, which was unaltered in all four surveys. When planning this thesis, the researcher reviewed the questionnaire for validation issues.

The questionnaire used in this study is a standard (Sushil and Verma 2010) and universally used by numerous venture capital trade associations, in particular the two primary associations: the National Venture Capital Association and National Association of Small Business Investment Companies. The instrument was presented to a small focus group of opinion leaders and experienced managers within the venture capital industry for review and recommendation of possible modifications. Additionally, it was compared against standards set by the American Statistical Association (1980) and finally examined to determine output consistency. For example, the same questionnaire administered to two identical subsets of the two different trade associations within their particular sampling universe yielded exactly the same responses.

Note that, prior to the last survey, this researcher called upon a paper commissioned by a federal government agency dealing with the administration and validation of survey instruments. It assisted this researcher in concluding that the survey questionnaire in the prior three survey exercises was a valid instrument and usable in the fourth survey. The United States Department of Health and Human Services (2002, p. 2) study went on to reflect upon survey protocol by stating,

“The protocol specifies eight activities that must be undertaken as part of a methodologically sound survey:

1. Identification of survey purpose(s) and objective(s)
2. Identification of intended survey audience(s)
3. Selection of the survey instrument
4. Development of the sampling plan
5. Development of the strategy for maximizing the response rate
6. Implementation of the survey
7. Preparation and analysis of the data obtained from the survey
8. Documentation of the survey process and results”. 
This researcher evaluated the existing questionnaire in use against the above eight items and is satisfied that the proper protocol was carried out.

**Inductive Research**

Some mild phenomenological input was introduced within this thesis. This researcher felt that the rigidity of the survey questionnaire and the overreliance on numerical data required some inductive input.

This was carried out by personal interviews and open-ended questionnaires. Personal interviews were conducted by direct inquiry of four professionals within the accounting industry. Three were certified public accountants, each with more than 30 years of professional experience, and the other was a well-known British professor holding major standing within the profession and considered an opinion leader by this researcher. The open-ended questionnaires were directed to the executive directors of the two leading trade associations representing the venture capital industry: the National Venture Capital Association and the New England Venture Capital Association.

The question put forth to the accounting professionals was straightforward. It asked whether they felt that changes in capital gains taxes had any impact on how the partners and owners of venture capital funds managed their investment preferences. Their responses are recorded below in Table 4-C. The table summarizes their extensive responses into a concise output in reference to significance among the variables presented for discussion. The questions were static for all respondents.

It should be noted that conservations were held among the professionals to encourage and establish uniform delimitations and parameters about the subject matter before they rendered their opinions.
Dr. Webb was careful to point out the differences between the U.K. and U.S. standards related to capital gains tax. After several exchanges to equalize the plane of understanding between the two different systems, he then took the position noted above.

An open-ended questionnaire, illustrated in Exhibit J, was delivered to the trade association executives referenced previously. It is interesting to note that both executive directors gave the same answers except for the most important question of the six tendered. This dealt specifically with the investment preferences of venture capital companies: the variables. When asked whether they believed that differing fiscal policies would affect specific investment preferences they differed in their responses as illustrated in Table 4-D. The questions were static in nature and their extensive responses reduced to a simple yes or no.

**Table 4-C Responses Of Professionals**

<table>
<thead>
<tr>
<th>Professional</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Joseph Bullock, CPA, Leesburg, Virginia</td>
<td>Yes, significance exists</td>
</tr>
<tr>
<td>John Webb, PhD, Cambridge, UK</td>
<td>No, there is no significance</td>
</tr>
<tr>
<td>Norman Sites, CPA, Winchester, Virginia</td>
<td>Yes, there is significance</td>
</tr>
<tr>
<td>Philip Walsh, CPA, Winchester, Virginia</td>
<td>No, there is no significance</td>
</tr>
</tbody>
</table>

Source: James Silvester, 2013

Given the mixed responses to this question, the inductive analysis did not conclusively allow the null hypothesis to be rejected. Therefore, the research question cannot be answered solely from this output.
Inductive research was introduced to support or refute the findings of the primary data. In the final analysis, the inductive efforts were set aside as bias. Venture capitalists tend to publicly promulgate a collective theme, even though they may privately disagree. They believe this ensures occupational survival. This can broadcast mixed signals to any researcher. Given this, the inductive results were ignored.

The findings within the literature review mirrored the inductive output. Bias prevailed. As expected, the literature favouring the working hypothesis aligned with those organizations, think tanks and individuals who generally supported conservative political viewpoints. Conversely, the literature that did not favour the working hypothesis aligned with those entities supporting liberal viewpoints. The neutral literature seemed united in its collective position of referencing non-affiliated entities such as the Tax Policy Center and Congressional Budget Office. They favoured a position that fails to reject the null hypothesis.

Notwithstanding the views of the conservative and liberal positions and the need to set them aside as biased, the neutral positions warrant consideration. Additionally, the use of the words ‘conservative’ and ‘liberal’ are non-biased, given the highly charged political environment surrounding capital gains tax. The term is captive to both political parties and their factions and has become commonplace within the nomenclature.

The inductive research was so small as to be non-consequential to this research endeavour and therefore an argument for mixed methods cannot be supported.

**Expanded Data Mining**

The results of the expanded data mining that incorporated outcomes using multi-variant approaches confirmed the bi-variant results. The data set containing the
results of the first three surveys reported two categories showing statistical significance. The data set containing all four surveys reported five sets showing significance. Spearman analysis confirmed both the bi-variant and multi-variant studies with the results reported in Figure 4-B below. The data shows the degrees of freedom expressed as $\chi^2(df)$ along with the chi-square results based on $p<.05$, $p<.01$ and $p<.001$.

**Figure 4-B Chi-Square Analyses Of Category Intersections And Year**

<table>
<thead>
<tr>
<th>Category Surveys</th>
<th>Three Surveys $\chi^2 (df)$</th>
<th>All $\chi^2 (df)$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Start-Up Funding – Communication Technology – Southwest – Equity</td>
<td>3.145 (2)</td>
<td>3.217 (3)</td>
</tr>
<tr>
<td>Start-Up Funding – Communication Technology – Southeast – Equity</td>
<td>8.364* (2)</td>
<td>10.852* (3)</td>
</tr>
<tr>
<td>Start-Up Funding – Communication Technology – Southeast – Loans</td>
<td>3.311 (2)</td>
<td>3.431 (3)</td>
</tr>
<tr>
<td>Start-Up Funding – Computer Software – Southwest – Equity</td>
<td>2.408 (2)</td>
<td>2.700 (3)</td>
</tr>
<tr>
<td>Start-Up Funding – Computer Software – Southeast – Equity</td>
<td>5.578 (2)</td>
<td>7.788 (3)</td>
</tr>
<tr>
<td>Start-Up Funding – Computer Software – Southeast – Loans</td>
<td>3.311 (2)</td>
<td>4.222 (3)</td>
</tr>
<tr>
<td>Start-Up Funding – Medical Technology – Southwest – Equity</td>
<td>6.099* (2)</td>
<td>6.060 (3)</td>
</tr>
<tr>
<td>Start-Up Funding – Medical Technology – Southeast – Equity</td>
<td>4.870 (2)</td>
<td>5.698 (3)</td>
</tr>
<tr>
<td>Start-Up Funding – Medical Technology – Southeast – Loans</td>
<td>1.592 (2)</td>
<td>3.713 (3)</td>
</tr>
<tr>
<td>Later-Stage Funding – Communication Technology – Southwest – Equity</td>
<td>3.870 (2)</td>
<td>8.822* (3)</td>
</tr>
<tr>
<td>Later-Stage Funding – Communication Technology – Southeast – Equity</td>
<td>2.430 (2)</td>
<td>15.910** (3)</td>
</tr>
<tr>
<td>Later-Stage Funding – Communication Technology – Southeast – Loans</td>
<td>–</td>
<td>5.839 (3)</td>
</tr>
<tr>
<td>Later-Stage Funding – Computer Software – Southwest – Equity</td>
<td>2.483 (2)</td>
<td>3.957 (3)</td>
</tr>
<tr>
<td>Later-Stage Funding – Computer Software – Southeast – Equity</td>
<td>2.279 (2)</td>
<td>12.399** (3)</td>
</tr>
<tr>
<td>Later-Stage Funding – Computer Software – Southeast – Loans</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Later-Stage Funding – Medical Technology – Southwest – Equity</td>
<td>3.632 (2)</td>
<td>11.553** (3)</td>
</tr>
<tr>
<td>Later-Stage Funding – Medical Technology – Southeast – Equity</td>
<td>.731 (2)</td>
<td>12.599** (3)</td>
</tr>
<tr>
<td>Later-Stage Funding – Medical Technology – Southeast – Loans</td>
<td>.904 (2)</td>
<td>1.549 (3)</td>
</tr>
<tr>
<td>Leveraged Buyout – Manufacturing – No Preference – Bonds</td>
<td>2.279 (2)</td>
<td>2.841 (3)</td>
</tr>
<tr>
<td>Leveraged Buyout – Manufacturing – No Preference – Bonds With Equity Kickers</td>
<td>1.237 (2)</td>
<td>3.010 (3)</td>
</tr>
<tr>
<td>Acquisitions – Manufacturing – No Preference – Bonds</td>
<td>2.279 (2)</td>
<td>2.841 (3)</td>
</tr>
<tr>
<td>Acquisitions – Manufacturing – No Preference – Bonds With Equity Kickers</td>
<td>3.424 (2)</td>
<td>5.217 (3)</td>
</tr>
</tbody>
</table>

*Note.* $*p<.05$, **$p<.01$, ***$p<.001$.

Source: James Silvester, 2013

**Additional Mining Of Data**

Having initially achieved the basic objectives and of the study, it was an optional consideration to engage in additional detailed data mining, in the hope that some interesting insight would be produced.

The original data collection process was bi-variant in nature, meaning that one independent variable, known as IV, was observed with a single dependent variable, known as DV. Thirty-eight of these were observed across four surveys encompassing
only 148 data points. The additional data mining was multi-variant in nature. The four DVs were observed and studied across the four surveys and the groupings listed in Table 4-E below. The table illustrates that twenty-two of these combinations were measured, and the outcomes were reported in Figure 4-B.

Table 4-E Additional Mining Data

| Start-Up Funding – Communication Technology – Southwest – Equity |
| Start-Up Funding – Communication Technology – Southeast – Equity |
| Start-Up Funding – Communication Technology – Southeast – Loans |
| Start-Up Funding – Computer Software – Southwest – Equity |
| Start-Up Funding – Computer Software – Southeast – Equity |
| Start-Up Funding – Computer Software – Southeast – Loans |
| Start-Up Funding – Medical technology – Southeast – Equity |
| Start-Up Funding – Medical Technology – Southeast – Loans |
| Later-Stage Funding – Communication Technology – Southwest – Equity |
| Later-Stage Funding – Communication Technology – Southeast – Equity |
| Later-Stage Funding – Communication Technology – Southeast – Loans |
| Later-Stage Funding – Computer Software – Southwest – Equity |
| Later-Stage Funding – Computer Software – Southeast – Equity |
| Later-Stage Funding – Computer Software – Southeast – Loans |
| Later-Stage Funding – Medical Technology – Southwest – Equity |
| Later-Stage Funding – Medical Technology – Southeast – Equity |
| Later-Stage Funding – Medical Technology – Southeast – Loans |
| Leveraged Buyout – Manufacturing – No Preference – Bonds |
| Leveraged Buyout – Manufacturing – No Preference – Bonds with Equity Kickers |
| Acquisitions – Manufacturing – No Preference – Bonds |
| Acquisitions – Manufacturing – No Preference – Bonds with Equity Kickers |

Source: James Silvester, 2013

This additional data mining effort required the establishment of massive new data sets that far exceeded the original data sets used in the initial analysis in terms of
sheer numbers and organization. A total of 46,842 individual data points were entered into a computer program with two separate data banks. One represented the first three surveys and the second included all four surveys.

However, problems existed in the extraction of the additional data, due to the large volume. Many thousands of potential data tracks were possible and analysing them all was unmanageable. Therefore, only 22 of the more topical and important preferences were scrutinized. Significance relevant to the individual groupings were observed when spread across the four dependent variable preferences. This output was studied by comparing the data set of the first three surveys with the data set of all four surveys. The selection of the 22 groupings was deliberate by virtue of this researcher’s 30 years of experience in the field. It represents a cross-section of common activity within the venture industry. This uniform activity has remained stable over the timespan of the four surveys, given the unvaried and “arcane” nature of the venture capital industry (Bussgang 2010, p. 1).

**Logic Behind Multi-Variant Selections**

The specific logic behind the selection of the 22 multiple variables is nondescript. As the survey outputs indicated, interest in start-up funding and later-stage funding remained static within the funding preferences over the span of the research. Industry preferences in the computer and information and medical technology industries were also stable over time. Additionally, this situation held true for the geographic preferences in reference to the south-eastern and south-western sections of the country being targeted investment havens. For types of funds preferences, equity investments and loan transactions showed consistent resilience over time as the primary investment vehicles.
Popular funding genres covering the timespan of the study also included leveraged buyouts and acquisitions preferences. These were large transactions in historic terms, concentrated in the manufacturing sectors and generally made on a national basis not encumbered by geographic restrictions.

Consequently, the interaction between the sub-variables referenced above, within the four dependent variables groupings, collectively known as the investment preferences, were selected for multi-variant analysis.

Critical Analysis Of Combined Primary And Secondary Data

The research was initially driven by raw primary data collected prior to the start of this thesis. This was not a handicap but was viewed as a starting position. It allowed for an integrated launch of the data collection phase, uniting the primary and secondary data collection efforts and then focusing directly on the research question. For example, the primary data concentrates on how changes in the capital gains tax rate affect the investment preferences of venture capital firms. Once the variables were identified, the literature search primarily focused on the interactions between the variables. Other evidence entered the research effort as the basic theoretical foundation took form. The literature is focused on the independent variable, about which the primary data output is based. The primary data is extensive with appropriate outputs, in particular in the aftermath of the additional data mining efforts. This original information is direct and has tethered a connection between the primary and secondary data.

Statistical Analysis Of Surveys One, Two, And Three

Descriptive Statistics

As discussed elsewhere, standard deviation was used to analyse the reliability of the questionnaire outcomes and to identify anomalies in the data. The standard
deviation was calculated for each of the four dependent variables including the individual components of the dependent variables, also called sub-dependent variables.

The standard deviation formula used is as follows:

\[ s = \sqrt{\frac{\sum(x - \bar{x})^2}{n-1}} \]

where:

\( s \) = sample standard deviation

\( \sum = \) sum of

\( \bar{x} = \) sample mean

\( x = \) score

\( n = \) number of scores in sample

The objective is to observe and predict the reliability among the data output for each variable. The standard deviations for all sub dependent variables can be viewed below:

### Table 4-F Standard Deviations

<table>
<thead>
<tr>
<th>Category</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Funding Preference</strong></td>
<td></td>
</tr>
<tr>
<td>Seed Funding</td>
<td>6.245</td>
</tr>
<tr>
<td>Start-Up Funding</td>
<td>7.638</td>
</tr>
<tr>
<td>First Round</td>
<td>7.000</td>
</tr>
<tr>
<td>Second Round</td>
<td>3.055</td>
</tr>
<tr>
<td>Third Round</td>
<td>1.155</td>
</tr>
</tbody>
</table>
Table 4-F (Continued)

<table>
<thead>
<tr>
<th>Industry Preference</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fourth Round</td>
<td>1.528</td>
</tr>
<tr>
<td>Later Stage</td>
<td>9.292</td>
</tr>
<tr>
<td>Leveraged Buyouts</td>
<td>9.074</td>
</tr>
<tr>
<td>Acquisitions</td>
<td>5.859</td>
</tr>
<tr>
<td><strong>Diversified</strong></td>
<td>6.658</td>
</tr>
<tr>
<td><strong>Communications</strong></td>
<td>6.028</td>
</tr>
<tr>
<td><strong>Computer Hardware</strong></td>
<td>1.732</td>
</tr>
<tr>
<td><strong>Computer Software</strong></td>
<td>6.028</td>
</tr>
<tr>
<td><strong>Manufacturing</strong></td>
<td>5.196</td>
</tr>
<tr>
<td>Wholesale Distributi</td>
<td>0.577</td>
</tr>
<tr>
<td>Medical Technology</td>
<td>4.000</td>
</tr>
<tr>
<td>Media</td>
<td>1.155</td>
</tr>
<tr>
<td>Other Technology</td>
<td>4.041</td>
</tr>
<tr>
<td>Retail</td>
<td>2.646</td>
</tr>
<tr>
<td>Services</td>
<td>3.786</td>
</tr>
<tr>
<td>Franchises</td>
<td>0.577</td>
</tr>
</tbody>
</table>

**Geographic Preference**

<table>
<thead>
<tr>
<th>Region</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Preference (USA)</td>
<td>7.371</td>
</tr>
<tr>
<td>Northeast</td>
<td>2.517</td>
</tr>
<tr>
<td>Mid Atlantic</td>
<td>0.577</td>
</tr>
<tr>
<td>Southeast</td>
<td>1.732</td>
</tr>
<tr>
<td>Midwest</td>
<td>3.215</td>
</tr>
<tr>
<td>Rocky Mountain Sts</td>
<td>0.577</td>
</tr>
<tr>
<td>Northwest</td>
<td>4.163</td>
</tr>
<tr>
<td>Far West</td>
<td>1.528</td>
</tr>
</tbody>
</table>
Table 4-F (Continued)

<table>
<thead>
<tr>
<th>Type of Funds Preference</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equity (Stock)</td>
<td>1.528</td>
</tr>
<tr>
<td>Loans</td>
<td>1.732</td>
</tr>
<tr>
<td>Loans with Equity</td>
<td>1.528</td>
</tr>
<tr>
<td>Bonds</td>
<td>1.155</td>
</tr>
<tr>
<td>Bonds with Equity</td>
<td>1.000</td>
</tr>
<tr>
<td>Leasing</td>
<td>0.577</td>
</tr>
</tbody>
</table>

The sub-variables within the funding preference variable have standard deviations that range between 1.15 and 9.29, with the mean of these standard deviations calculated as 5.65. Given the range of data between 16 and 50, this standard deviation is above normal but within accepted limits. It is not large enough to suggest a flawed questionnaire yet may indicate some degree of dispersion among the data.

The sub-variables within the industry preference variable have standard deviations that range between 0.58 and 6.66, with the mean of these standard deviations calculated as 3.54. Given the range of data between 6 and 52, this standard deviation is tighter, indicating less dispersion among the data.

The sub-variables within the geographic preference variable have standard deviations that range between 0.58 and 7.37, with the mean of these standard deviations calculated as 2.52. Given the range of data between 0 and 52, this standard deviation is also tighter, indicating less dispersion among the data.
The sub-variables within the type of funds preference variable have standard deviations that range between 0.58 and 1.73, with the mean of these standard deviations calculated as 1.07. Given the range of data between 0 and 61, this standard deviation is also tighter, indicating less dispersion among the data.

The mean of all standard deviations is observed to be 3.38. From a standard deviation approach it can be concluded that an overall tight pattern exists among the output data. Therefore, reliability among the responses obtained is indicated.

*Chi-Square Analyses*

In reference to other statistical tools, an inferential statistical tool was employed. The non-parametric chi-square is considered the optimal application for the data herein for reasons recited within chapter three. Chi-square utilizes the following equation:

\[ \chi^2 = \sum \frac{(O - E)^2}{E} \]

where:

- \( O \) = observed values
- \( E \) = expected values
- \( \sum \) = sum of

A series of chi-square analyses were conducted in order to determine whether significance exist between the measures of funding preference, industry preference, geographic preference, type of funds preference and capital gains tax rates. The results of these analyses are summarized below. First, with regard to funding preference, significance was observed between capital gains tax and seed funding, start-up funding, later stage funding preference and a preference for leveraged
buyouts. With regard to industry preference significance were observed between capital gains tax rates and the following industry preferences: diversified, communications, manufacturing and media. In terms of geographic preference, a significance was observed between capital gains tax and a preference for the Rocky Mountain States. No other significance was observed with respect to geographic preference. Finally, with regard to type of funds preference, no significance were indicated.

Table 4-G Results Of Chi-Square Analyses

<table>
<thead>
<tr>
<th>Category</th>
<th>Chi-Square</th>
<th>df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Funding Preference</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seed Funding</td>
<td>6.160</td>
<td>2</td>
<td>.046</td>
</tr>
<tr>
<td>Start-Up Funding</td>
<td>20.612</td>
<td>2</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>First Round</td>
<td>3.616</td>
<td>2</td>
<td>.164</td>
</tr>
<tr>
<td>Second Round</td>
<td>.753</td>
<td>2</td>
<td>.686</td>
</tr>
<tr>
<td>Third Round</td>
<td>.683</td>
<td>2</td>
<td>.711</td>
</tr>
<tr>
<td>Fourth Round</td>
<td>3.049</td>
<td>2</td>
<td>.218</td>
</tr>
<tr>
<td>Later Stage</td>
<td>13.705</td>
<td>2</td>
<td>.001</td>
</tr>
<tr>
<td>Leveraged Buyouts</td>
<td>22.111</td>
<td>2</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Acquisitions</td>
<td>4.369</td>
<td>2</td>
<td>.113</td>
</tr>
<tr>
<td><strong>Industry Preference</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diversified</td>
<td>15.502</td>
<td>2</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Communications</td>
<td>13.751</td>
<td>2</td>
<td>.001</td>
</tr>
<tr>
<td>Computer Hardware</td>
<td>.068</td>
<td>2</td>
<td>.966</td>
</tr>
<tr>
<td>Computer Software</td>
<td>4.864</td>
<td>2</td>
<td>.088</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>8.725</td>
<td>2</td>
<td>.013</td>
</tr>
<tr>
<td>Wholesale Distribution</td>
<td>1.301</td>
<td>2</td>
<td>.522</td>
</tr>
</tbody>
</table>
Table 4-G (Continued)

<table>
<thead>
<tr>
<th>Sector</th>
<th>Value</th>
<th>df</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medical Technology</td>
<td>3.821</td>
<td>2</td>
<td>.148</td>
</tr>
<tr>
<td>Media</td>
<td>8.301</td>
<td>2</td>
<td>.016</td>
</tr>
<tr>
<td>Other Technology</td>
<td>1.205</td>
<td>2</td>
<td>.547</td>
</tr>
<tr>
<td>Retail</td>
<td>2.965</td>
<td>2</td>
<td>.227</td>
</tr>
<tr>
<td>Services</td>
<td>.983</td>
<td>2</td>
<td>.612</td>
</tr>
<tr>
<td>Franchises</td>
<td>.139</td>
<td>2</td>
<td>.933</td>
</tr>
</tbody>
</table>

Geographic Preference

<table>
<thead>
<tr>
<th>Region</th>
<th>Value</th>
<th>df</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Preference (USA)</td>
<td>4.872</td>
<td>2</td>
<td>.088</td>
</tr>
<tr>
<td>Northeast</td>
<td>2.680</td>
<td>2</td>
<td>.262</td>
</tr>
<tr>
<td>Mid Atlantic</td>
<td>.548</td>
<td>2</td>
<td>.760</td>
</tr>
<tr>
<td>Southeast</td>
<td>1.735</td>
<td>2</td>
<td>.420</td>
</tr>
<tr>
<td>Midwest</td>
<td>.037</td>
<td>2</td>
<td>.982</td>
</tr>
<tr>
<td>Rocky Mountain Sts</td>
<td>7.213</td>
<td>2</td>
<td>.027</td>
</tr>
<tr>
<td>Far West</td>
<td>2.057</td>
<td>2</td>
<td>.358</td>
</tr>
<tr>
<td>Southwest</td>
<td>2.233</td>
<td>2</td>
<td>.327</td>
</tr>
<tr>
<td>One State Only</td>
<td>4.215</td>
<td>2</td>
<td>.122</td>
</tr>
<tr>
<td>Immediate Area</td>
<td>.236</td>
<td>2</td>
<td>.889</td>
</tr>
</tbody>
</table>

Type of Funds Preference

<table>
<thead>
<tr>
<th>Type</th>
<th>Value</th>
<th>df</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equity (Stock)</td>
<td>4.346</td>
<td>2</td>
<td>.114</td>
</tr>
<tr>
<td>Loans</td>
<td>2.507</td>
<td>2</td>
<td>.286</td>
</tr>
<tr>
<td>Loans with Equity</td>
<td>.053</td>
<td>2</td>
<td>.974</td>
</tr>
<tr>
<td>Bonds</td>
<td>1.976</td>
<td>2</td>
<td>.372</td>
</tr>
<tr>
<td>Bonds with Equity</td>
<td>2.041</td>
<td>2</td>
<td>.360</td>
</tr>
</tbody>
</table>

To elaborate further on these results, first, with regard to funding preference, significance was observed between capital gains tax rates and seed funding, start-up funding, a later stage funding preference and leveraged buyouts. With regard to seed
funding, significance was observed in cases where the capital gains tax rate was higher. Higher capital gains tax rates were also linked to where significance existed for start-up funding and later stage funding, while mixed results were observed with respect to the preference for leveraged buyouts.

Next, with regard to industry preference, significance was observed between capital gains tax rates and a preference for the following industries: diversified, communications, manufacturing and media. Higher capital gains tax rates were associated with a greater preference for diversified industries, communications and manufacturing, while mixed results were observed with respect to media. With regard to geographic preference, significance was only observed with regard to a preference for the Rocky Mountain States. Significance for this geographic region was observed with higher capital gains tax rates. Finally, no significances were observed with respect to the type of funds preference.

Exhibit N presents the results of a series of scatterplots constructed between capital gains tax and all predictors of interest, which include $r^2$ measures along with superimposed regression lines. As before, only significance will be focused upon here. First, with regard to seed funding, the proportion of respondents who favoured seed funding was observed to increase and then slightly decrease as capital gains taxes increased. This analysis produced an $r^2$ of .477. Next, with regard to start-up funding, a linear relationship was observed, with the favour for start-up funding gradually increasing as capital gains tax increase. An $r^2$ of .915 was achieved. A linear relationship was also observed with respect to favour for later-stage investing. A gradual increase in favour for later-stage investing was observed as capital gains taxes increased, with an $r^2$ of .973 achieved. Finally, with respect to leveraged buyouts,
favour for leveraged buyouts was first observed to decrease then to increase as capital gains taxes increased. This produced a low $r^2$ of .037.

With respect to industry preference, statistical significance was observed with regard to diversified industries, communications, manufacturing and media. The constructed scatterplots focusing upon diversified industries observed a linear relationship between this preference and capital gains taxes, with favour being created with higher capital gains taxes. An $r^2$ of .982 was observed in this analysis. The results with the communication preference was also observed to be linear, with favour being created in cases where capital gains taxes were higher. This analysis achieved an $r^2$ of .873. A linear association was observed within manufacturing, with favour being created in situations where capital gains taxes were higher. An $r^2$ of .996 was achieved in this analysis. Finally, with regard to media preference, a less linear association was observed, while favour was found to increase as capital gains taxes increased. An $r^2$ of .631 was achieved in this analysis. The only remaining significance observed in these analyses came from the comparison between capital gains taxes and the Rocky Mountain States preference. Significance for the Rocky Mountain States was observed to increase sharply and then decrease as capital gains taxes increased. This produced an $r^2$ of .346.

**Statistical Analysis Of Surveys One, Two, Three, And Four**

*Descriptive Statistics (Repetitive Introduction From Page 187)*

As discussed elsewhere, standard deviation was used to analyse the reliability of the questionnaire outcomes and to identify anomalies in the data. The standard deviation was calculated for each of the four dependent variables including the individual components of the dependent variables, also called sub-dependent variables, which number 38.
The standard deviation formula used is as follows:

\[ s = \sqrt{\frac{\sum (X - \bar{X})^2}{n - 1}} \]

where,

\( s \) = sample standard deviation
\[ \sum \] = sum of
\( \bar{X} \) = sample mean
\( X \) = score
\( n \) = number of scores in sample

The objective is to observe and predict the reliability among the data outputs for each variable. The standard deviations for all sub-dependent variables can be viewed below.

**Table 4-H Standard Deviations**

<table>
<thead>
<tr>
<th>Category</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Funding Preference</strong></td>
<td></td>
</tr>
<tr>
<td>Seed Funding</td>
<td>5.123</td>
</tr>
<tr>
<td>Start-Up Funding</td>
<td>13.229</td>
</tr>
<tr>
<td>First Round</td>
<td>16.052</td>
</tr>
<tr>
<td>Second Round</td>
<td>18.502</td>
</tr>
<tr>
<td>Third Round</td>
<td>13.200</td>
</tr>
<tr>
<td>Fourth Round</td>
<td>8.756</td>
</tr>
<tr>
<td>Later Stage</td>
<td>13.089</td>
</tr>
<tr>
<td>Leveraged Buyouts</td>
<td>14.387</td>
</tr>
<tr>
<td>Acquisitions</td>
<td>20.402</td>
</tr>
</tbody>
</table>
**Table 4-H (Continued)**

*Industry Preference*

<table>
<thead>
<tr>
<th>Industry</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diversified</td>
<td>17.056</td>
</tr>
<tr>
<td>Communications</td>
<td>5.377</td>
</tr>
<tr>
<td>Computer Hardware</td>
<td>3.775</td>
</tr>
<tr>
<td>Computer Software</td>
<td>5.099</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>4.690</td>
</tr>
<tr>
<td>Wholesale Distribution</td>
<td>2.380</td>
</tr>
<tr>
<td>Medical Technology</td>
<td>6.397</td>
</tr>
<tr>
<td>Media</td>
<td>2.517</td>
</tr>
<tr>
<td>Other Technology</td>
<td>6.272</td>
</tr>
<tr>
<td>Retail</td>
<td>3.304</td>
</tr>
<tr>
<td>Services</td>
<td>14.012</td>
</tr>
<tr>
<td>Franchises</td>
<td>.577</td>
</tr>
</tbody>
</table>

*Geographic Preference*

<table>
<thead>
<tr>
<th>Geographic Preference</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Preference (USA)</td>
<td>26.850</td>
</tr>
<tr>
<td>Northeast</td>
<td>4.349</td>
</tr>
<tr>
<td>Mid Atlantic</td>
<td>3.862</td>
</tr>
<tr>
<td>Southeast</td>
<td>7.141</td>
</tr>
<tr>
<td>Midwest</td>
<td>20.006</td>
</tr>
<tr>
<td>Rocky Mountain Sts</td>
<td>3.697</td>
</tr>
<tr>
<td>Northwest</td>
<td>4.646</td>
</tr>
<tr>
<td>Far West</td>
<td>3.096</td>
</tr>
<tr>
<td>Southwest</td>
<td>1.500</td>
</tr>
<tr>
<td>One State Only</td>
<td>7.047</td>
</tr>
<tr>
<td>Immediate Area</td>
<td>5.188</td>
</tr>
</tbody>
</table>

197
Table 4-H (Continued)

_Type of Funds Preference_

<table>
<thead>
<tr>
<th>Type of Funds</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equity (Stock)</td>
<td>14.387</td>
</tr>
<tr>
<td>Loans</td>
<td>1.500</td>
</tr>
<tr>
<td>Loans with Equity Kickers</td>
<td>9.912</td>
</tr>
<tr>
<td>Bonds</td>
<td>1.500</td>
</tr>
<tr>
<td>Bonds with Equity Kickers</td>
<td>1.291</td>
</tr>
<tr>
<td>Leasing</td>
<td>.500</td>
</tr>
</tbody>
</table>

The sub-variables within the funding preference variable have standard deviations that range between 5.12 and 20.40, which is higher than what was observed when focusing upon the first three studies alone. The mean of these standard deviations is calculated as 13.64, which is more than twice that observed earlier. Given the range of data between 0 and 68, this standard deviation is high but within accepted limits. It is not large enough to suggest a flawed questionnaire yet indicates a fairly high degree of dispersion among the data.

The sub-variables within the industry preference variable have standard deviations that range between 0.58 and 17.06, with the mean of these standard deviations calculated as 5.96. The upper limit of this range, as well as this mean, was observed to be higher compared to the analyses conducted on the first three studies. Given the range of data between 4 and 80, this standard deviation is high, but not alarming.

The sub-variables within the geographic preference variable have standard deviations that range between 1.50 and 26.85, with the mean of these standard deviations calculated as 7.94. This data indicates a higher maximum as well as larger standard deviations compared to the previous set of analyses. Given the range of data between 0 and 96, this standard deviation is high, but not alarming.
The sub-variables within the type of funds preference variable have standard deviations that range between 0.50 and 14.39, with the mean of these standard deviations calculated as 4.85. The descriptive analyses also indicate a much higher maximum standard deviation as well as a higher mean compared to the analyses conducted on the first three years of data. However, given the range of data between 0 and 88, this standard deviation is high, but not alarming to impose on data reliability.

The mean of all standard deviations is observed to be 8.18. This result is found to be more than twice that indicated in the analyses conducted on the first three years of data only. Overall, these results indicate a greater variance in the data when including all four years of data. From a standard deviation approach it can be concluded that, with regard to the current analyses, moderate variance is indicated when comparing these standard deviations with the larger ranges and greater dispersion observed when focusing upon all four years of data. Reliability among the responses obtained is still indicated.

*Chi-Square Analyses (Repetitive Introduction From Page 191)*

In reference to other statistical tools, an inferential statistical tool was employed. The non-parametric chi-square is considered the optimal application for the data herein for reasons recited elsewhere within chapter three. Chi-square utilizes the following equation:

\[
\chi^2 = \sum \frac{(O - E)^2}{E}
\]

where:

- \( O \) = observed values
- \( E \) = expected values
- \( \sum \) = sum of
A series of chi-square analyses were conducted in order to determine whether significance exist between the measures of funding preference, industry preference, geographic preference, type of funds preference and capital gains tax rates. The results of these analyses are summarized in the table below.

First, with regard to funding preference, a significance was observed between capital gains tax and all measures with the exception of seed funding. These results contrast with those observed earlier, which only found significance with respect to seed funding, start-up funding, later stage and leveraged buyouts. With regard to industry preference, significance was observed between capital gains tax rates and the following industry preferences: diversified, communications, manufacturing, medical technology, media, other technology and services. While significance was also indicated with respect to the measurements of diversified, communications, manufacturing, and the media in the previous analyses, in these current analyses, significance was also observed with respect to medical technology, other technology and services.

In terms of geographic preference, while the only significance observed was between capital gains tax and a preference for the Rocky Mountain States in the original analyses, this was not found to be significant in this study. However, in these current analyses, significance was indicated with respect to no preference, northeast, mid-atlantic, southeast, midwest, far west, one state only and the immediate area.

Finally, with regard to type of funds preference, significance was observed in the analyses conducted on equity (stock) as well as loans with equity kickers. This contrasts with the earlier set of results, which observed no significance with respect to any of the type of funds measurements. In summation, when contrasting these results
with those observed earlier, a greater number of significance results were indicated when incorporating all four surveys of data compared to the first three surveys.

Table 4-I Results Of Chi-Square Analyses

<table>
<thead>
<tr>
<th>Category</th>
<th>Chi-Square</th>
<th>df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Funding Preference</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seed Funding</td>
<td>6.159</td>
<td>3</td>
<td>.104</td>
</tr>
<tr>
<td>Start-Up Funding</td>
<td>44.189</td>
<td>3</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>First Round</td>
<td>40.334</td>
<td>3</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Second Round</td>
<td>58.338</td>
<td>3</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Third Round</td>
<td>35.460</td>
<td>3</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Fourth Round</td>
<td>25.089</td>
<td>3</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Later Stage</td>
<td>24.708</td>
<td>3</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Leveraged Buyouts</td>
<td>40.610</td>
<td>3</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Acquisitions</td>
<td>59.713</td>
<td>3</td>
<td>&lt;.001</td>
</tr>
<tr>
<td><strong>Industry Preference</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diversified</td>
<td>46.704</td>
<td>3</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Communications</td>
<td>15.270</td>
<td>3</td>
<td>.002</td>
</tr>
<tr>
<td>Computer Hardware</td>
<td>4.092</td>
<td>3</td>
<td>.252</td>
</tr>
<tr>
<td>Computer Software</td>
<td>5.522</td>
<td>3</td>
<td>.137</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>10.033</td>
<td>3</td>
<td>.018</td>
</tr>
<tr>
<td>Wholesale Distribution</td>
<td>1.912</td>
<td>3</td>
<td>.591</td>
</tr>
<tr>
<td>Medical Technology</td>
<td>10.068</td>
<td>3</td>
<td>.018</td>
</tr>
<tr>
<td>Media</td>
<td>21.945</td>
<td>3</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Other Technology</td>
<td>19.297</td>
<td>3</td>
<td>&lt;.001</td>
</tr>
</tbody>
</table>
Table 4-I (Continued)

<table>
<thead>
<tr>
<th>Category</th>
<th>Value 1</th>
<th>Value 2</th>
<th>Value 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retail</td>
<td>3.080</td>
<td>3</td>
<td>.380</td>
</tr>
<tr>
<td>Services</td>
<td>99.881</td>
<td>3</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Franchises</td>
<td>.139</td>
<td>2</td>
<td>.933</td>
</tr>
</tbody>
</table>

*Geographic Preference*

<table>
<thead>
<tr>
<th>Region</th>
<th>Value 1</th>
<th>Value 2</th>
<th>Value 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Preference (USA)</td>
<td>92.411</td>
<td>3</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Northeast</td>
<td>7.875</td>
<td>3</td>
<td>.049</td>
</tr>
<tr>
<td>Mid Atlantic</td>
<td>9.412</td>
<td>3</td>
<td>.024</td>
</tr>
<tr>
<td>Southeast</td>
<td>21.626</td>
<td>3</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Midwest</td>
<td>133.729</td>
<td>3</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Rocky Mountain Sts</td>
<td>7.235</td>
<td>3</td>
<td>.065</td>
</tr>
<tr>
<td>Far West</td>
<td>8.236</td>
<td>3</td>
<td>.041</td>
</tr>
<tr>
<td>Southwest</td>
<td>2.265</td>
<td>3</td>
<td>.519</td>
</tr>
<tr>
<td>One State Only</td>
<td>19.515</td>
<td>3</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Immediate Area</td>
<td>11.935</td>
<td>3</td>
<td>.008</td>
</tr>
</tbody>
</table>

*Type of Funds Preference*

<table>
<thead>
<tr>
<th>Type</th>
<th>Value 1</th>
<th>Value 2</th>
<th>Value 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equity (Stock)</td>
<td>29.164</td>
<td>3</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Loans</td>
<td>2.514</td>
<td>3</td>
<td>.473</td>
</tr>
<tr>
<td>Loans with Equity Kickers</td>
<td>25.185</td>
<td>3</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Bonds</td>
<td>4.797</td>
<td>3</td>
<td>.187</td>
</tr>
<tr>
<td>Bonds with Equity Kickers</td>
<td>4.873</td>
<td>3</td>
<td>.181</td>
</tr>
</tbody>
</table>

To elaborate further on these results, first, with regard to funding preference, significance was observed between capital gains tax rates and all measures with the exception of seed funding in the current analyses. In reviewing this data, a significance for start-up funding and first round to fourth-round funding were indicated with higher capital gains tax rates. Leveraged buyouts displayed
significance, however, did not have a linear association with capital gains tax rates. Additionally, acquisitions displayed statistical significance.

With regard to industry preference, significance was observed between capital gains tax rates and a preference for the following industries: diversified, communications, manufacturing, medical technology, media, other technology and services. When analysing these data, a linear association was observed between communications, manufacturing, medical technology, media and capital gains tax rates when incorporating all four years of data. Additionally, a negative, linear association was observed with other technology. No clear linear relationship was indicated with respect to the remaining significant analyses.

With regard to geographic preference, a significance was observed with regard to no preference, northeast, mid-atlantic, southeast, midwest, far west, one state only and the immediate area. Linear associations for these regions and capital gains tax rates were observed only with respect to the Far West and the Immediate Area.

Finally, with regard to the type of funds preference, statistical significance was indicated with respect to equity (stock) as well as loans with equity kickers.

Exhibit N presents the results of a series of scatterplots constructed between capital gains tax and all predictors of interest, including $r^2$ measures along with superimposed regression lines. First, with regard to funding preference, linear results were observed with respect to start-up funding and first-round to fourth-round funding. Next, with regard to industry preference, linear results were observed in regard to the following industries: diversified, communications, manufacturing, medical technology, media, other technology and services. Linear results were
observed with communications, manufacturing, medical technology and media, while a negative, linear result was observed with other technology.

Among the analyses conducted with geographic preference, statistical significance was indicated with respect to no preference, the northeast, mid-atlantic, southeast, midwest, far west, one state only and the immediate area. A linear result was indicated with respect to the analyses conducted on the far west and the immediate area, while linear associations were not indicated in any other case. Finally, the type of funds preference analyses found significance with respect to equity and loans with equity kickers. Linear associations were not indicated in either of these analyses. The scatterplots presented in Exhibit N include the $r^2$ measurement associated with all analyses.

**Overview Of The Surveys**

Survey number one was conducted in 1983 and completely executed by surface mail. The contents included a cover letter, questionnaire and postage-paid return envelope. Nine hundred questionnaires were mailed to venture industry executives and 212 returned, representing a 23.6% response rate. It was executed in the aftermath of the 1980 Reagan election and the passage of the Economic Recovery Act of 1981. This legislation marked the beginning of what has become known in the vernacular as Reaganonics and ushered in a period of simulative fiscal policies. Massive depreciation write-offs were enacted, investment tax credit was expanded and there was a reduction in the capital gains tax rate to 20%. As this was the first of four surveys, there is no basis of comparison other than to note that the capital gains tax rate was 35% prior to 1980. It is obvious from the output data that the Act stimulated a high concentration of activity in those investment preferences that lend themselves to speculative adventures, such as seed and start-up funding, particularly
in the computer and information technology areas. Additionally, equity investment was widely used as the main type of funding input, which is characteristic of a speculative investment mind-set.

Survey number two was conducted in 1983 and completely executed by mail. It included a cover letter, questionnaire and postage-paid return envelope. Nine hundred questionnaires were mailed and 184 returned, representing a 20.4% response rate. The survey was completed after the passage of the Economic Reform Act of 1986, which reversed many of the fiscal investments provided by the earlier 1981 Act referenced above. Investment tax credit was repealed under this legislation and the capital gains tax rate increased back to 33%. The increase in capital gains tax in this case eroded interest in all of the speculative early-stage preferences, excepting start-up funding. Favour fell upon the latter as well as on more mature stages of funding. However, interest in equity funding was maintained.

Survey number three was conducted in 1995 and completed by mail. Included were a cover letter, questionnaire and postage-paid return envelope. Nine hundred questionnaires were mailed and 179 returned, representing a 19.9% response rate. It was completed after the passage of the Revenue Reconciliation Act of 1993, which lowered the capital gains tax rate back to 29%. Again, in keeping with prevailing theory, the decrease in the capital gains provision stimulated interest in early-stage funding and reduced interest in later-stage deals. Interest in equity funding remained virtually unchanged.

Survey number four was conducted in 2007 and was completed by email. It included a cover letter and questionnaire. Nine hundred questionnaires were emailed and 102 returned, representing an 11.3% response rate. Two replies were rejected as incomplete. It was completed after passage of the Economic Growth and Tax
Reconciliation Act of 2001, also known as the Bush Tax Cuts. This piece of legislation was similar to the Economic Recovery Act of 1981 in that it was stimulus-oriented. Depreciation write-offs were provided, in particular for small firms, and the maximum capital gains tax rate was further lowered to 15%, and in some instances down to 0%. The results of this survey completely defy the basic theory of the venture capital field. Despite the lowest capital gains tax in history, investment in early-stage speculative deals collapsed in favour of more stable and mature deals. Equity investment remained the preferred form of investment. As explained elsewhere in this section, confounding variables could be at the root of these disparities and the survey warrants scrutiny.

**Comments On The Fourth Survey**

The results of the fourth survey in the primary output completely change the dynamics of the findings. The dramatic events that unfolded during the period of primary data collection, and whether those events are in fact confounding and include extraneous variables, must be considered. The question becomes academic in terms of the validity of the results of the fourth survey. Several factors were considered:

1. The length of time between the fourth survey and the third survey is longer compared to earlier survey intervals.
2. The post-9/11 environment existed during the collection period.
3. There were financial contortions leading up to the monetary convulsions of the Panic of 2008 during the collection period.
4. The reduction in the capital gains tax rate was radically steep compared to previous relaxations.

The time lapse is not a confounding factor due to the static nature of the industry (Bussgang, 2010). In addition, the literature indicated that the effects of the
9/11 attacks were minimal, both in terms of their direct effect and duration. Additionally, given the short-term fixation of American management and financial markets, it would be dubious at best to conclude that item three is confounding. It may have been confounding in 2008 but that was outside the collection period.

Item four is of more concern. The basic theory and theoretical foundation upon which this thesis rests imply that a reduction in the capital gains rate stimulates business investment, in particular entrepreneurial venturing, and thus creates employment. That did not happen in the 2000 to 2008 period. In fact, there was no growth in employment, and business investment remained stagnant.

Of course, this is not relevant to this thesis. The purpose of the study is to determine whether a statistical significance exists between the capital gains tax rate and the investment preferences of the venture capital industry.

Moreover, the fact remains that the results of Chronbach Alpha testing and DV to DV modelling indicate data reliability and show that the inclusion of the fourth survey does not compromise the study outcome.

**Review Of Individual Investment Preferences**

Below is an editorial review of the investment preferences used as the dependent outcome variables in this thesis. It is recognized that the non-parameter test used, the chi-square test, is only a test of significance between the variables and does not attempt to conceptualize the findings. Similarly, descriptive tools were used to verify questionnaire accuracy and to functionally proof the chi-square findings by plotting the data on a scatter plot with linear analysis and by calculating $r^2$, also known as the Spearman coefficient of determination, a non-parametric tool. Scatter plotting and linear analysis are descriptive in nature and were only employed to determine $r^2$. Analysis of the primary data was largely a non-parametric exercise.
The survey results were broken down into percentage proportions because this provided a better representation of the relationships between the individual surveys and the variables in order to determine questionnaire integrity. Whole numbers were used for the non-parametric chi-square testing. It was determined that the data output of the fourth survey should be combined with the first three surveys and analysed against the backdrop of the results of the first three surveys by comparing the outputs. The standard deviations between the two data-set groupings were used strictly for comparative analysis and, as suspected, were significantly different. This in itself would not void the fourth survey.

_Funding Preference_

_Seed Funding_: of all the preferences, seed funding may be the most telling. The results of the first three surveys indicate a close-fitting pattern, with a range of between 21 and 30 and a mean of 23, with a standard deviation of 6.25, indicating that changes in the capital gains tax rate have little effect on these preferences. It is safe to assume that no causality exists but some mild correlation is certainly present, most likely of a minimal measure. There is significance in the non-parametric testing. Including the fourth survey does not affect the range; it only increases the mean to 24, and decreases the standard deviation to 5.12, and eliminates the statistical significance all together.

_Start-Up_: the results of the first three surveys indicate a somewhat close-fitting pattern in the start-up funding preference, with a range of between 35 and 50, and a mean of 43 with a standard deviation of 7.64. This indicates that changes in the capital gains tax rate have little effect on these preferences. It is safe to suggest that no causality exists but some mild correlation is certainly present, most likely of minimum measure. There is significance in the non-parametric testing. Including the
fourth survey decreases the lower range to 20, decreases the mean to 37.5, and increases the standard deviation to 13.23, and results in statistical significance.

First Round: the results of the first three surveys indicate a close-fitting pattern of correlation between a preference for first-round funding and the capital gains tax rate, with a range of between 31 and 45, and a mean of 38 with a standard deviation of 7.00, indicating that changes in the capital gains tax rate have little effect on these preferences. It is safe to say that no causality exists but some mild correlation is certainly present. There is no significance in the non-parametric testing. Including the fourth survey decreases the lower range to 8, decreases the mean to 30.5, and increases the standard deviation to 16.05, and results in statistical significance.

Second Round: the results of the first three surveys indicate a close-fitting pattern in the second-round funding preference with a range of between 34 and 40, and a mean of 37 with a standard deviation of 3.06, indicating that changes in the capital gains tax rate have little effect on these preferences. Again, no causality exists but some mild correlation is certainly present, most likely of minimum measure. There is no significance in the non-parametric testing. Including the fourth survey decreases the lower range to 0, decreases the mean to 27.5, increases the standard deviation to 18.5 and displays significance.

Third Round: the results of the first three surveys indicate an extremely close-fitting pattern in the third-round funding preference with a range of between 25 and 27 and a mean of 26 with a standard deviation of 1.15, indicating that changes in the capital gains tax rate have little effect on these preferences. It is safe to say that no causal relationship exists but some mild correlation is certainly present, of minimum measure. There is no significance in the non-parametric testing. Including the fourth
survey decreases the lower range to 0, decreases the mean to 19.8, increases the standard deviation to 13.2 and displays significance.

*Fourth Round:* the results of the first three surveys indicate an extremely close-fitting pattern with a range of between 16 and 19, and a mean of 17 with a standard deviation of 1.53, indicating that ups and downs in the primary independent variable - capital gains tax - have little effect on these preferences. It is safe to say that no causal relationship exists but some mild correlation is certainly present, of minimum measure. There is no significance in the non-parametric testing. Including the fourth survey decreases the lower range to 0, decreases the mean to 13.0, increases the standard deviation to 8.76 and displays significance.

*Later Stage:* the results of the first three surveys indicate a moderate pattern with a range of between 24 and 41, and a mean of 35 with a standard deviation of 9.29, indicating that ups and downs in the primary independent variable - capital gains tax - have little effect on these preferences. It is safe to say that no causal relationship exists but some mild correlation is certainly present, most likely of minimum measure. There is some significance in the non-parametric testing. Including the fourth survey decreases the range to 20, decreases the mean to 37.5, increases the standard deviation to 13.23 and displays significance.

*Leveraged Buyouts:* the results of the first three surveys indicate a moderate pattern with a range of between 17 and 34, and a mean of 27 with a standard deviation of 9.09, indicating that ups and downs in the primary independent variable - capital gains tax - have little effect on these preferences. It is safe to say that no causal relationship exists but some mild correlation is certainly present, of minimum measure. There is some significance in the non-parametric testing. Including the
fourth survey increases the upper range to 52, increases the mean to 34, increases the standard deviation to 14.39 and displays significance.

*Acquisitions:* the results of the first three surveys indicate a moderate pattern with a range of between 24 and 35, and a mean of 28 with a standard deviation of 5.86, indicating that ups and downs in the primary independent variable - capital gains tax - have little effect on these preferences. It is safe to assume that no causal relationship exists but some mild correlation is certainly present, of minimum measure. There is no significance in the non-parametric testing. Including the fourth survey increases the upper range to 68, increases the mean to 38, increases the standard deviation to 20.40 and displays significance.

*Summary Of Funding Preference Findings*

The three-survey study had a range of 17 to 50 with a weighted standard deviation of 5.65 and significance in four of nine categories. Including the fourth survey in the analysis expanded the range from 0 to 68, with a weighted standard deviation of 13.64 and significance in eight of nine sub-variable categories.

*Industry Preference*

*Diversified:* the results of the first three surveys indicate a close-fitting pattern with a range of between 40 and 52, and a mean of 48 with a standard deviation of 6.67, indicating that ups and downs in the primary independent variable - capital gains tax - have little effect on these preferences. It is safe to say that no causal relationship exists but some mild correlation is certainly present, of minimum measure. There is significance in the non-parametric testing. Including the fourth survey increases the upper range to 80, increases the mean to 56, increases the standard deviation to 17.06 and displays significance.
Communications: the results of the first three surveys indicate a close-fitting pattern with a range of between 22 and 34, and a mean of 28 with a standard deviation of 6.03, indicating that ups and downs in the primary independent variable - capital gains tax - have little effect on these preferences. It is safe to say that no causal relationship exists but some mild correlation is certainly present, most likely of minimum measure. There is significance in the non-parametric testing. Including the fourth survey does not affect the range, decreases the mean to 27, decreases the standard deviation to 5.38 and displays significance.

Computer Hardware: the results of the first three surveys indicate an extremely close-fitting pattern with a range of between 13 and 16, and a mean of 15 with a standard deviation of 1.73, indicating that ups and downs in the primary independent variable - capital gains tax - have little effect on these preferences. It is safe to say that no causal relationship exists but some mild correlation is certainly present, of minimum measure. There is no significance in the non-parametric testing. Including the fourth survey decreases the lower range to 8, decreases the mean to 13, increases the standard deviation to 3.78 and displays no significance.

Computer Software: the results of the first three surveys indicate a close-fitting pattern with a range of between 17 and 29, and a mean of 23 with a standard deviation of 6.03, indicating that ups and downs in the primary independent variable - capital gains tax - have little effect on these preferences. It is safe to say that no causal relationship exists but some mild correlation is certainly present, of minimum measure. There is no significance in the non-parametric testing. Including the fourth survey does not affect the range, decreases the mean to 22, decreases the standard deviation to 5.1 and displays no significance.
Manufacturing: the results of the first three surveys indicate a close-fitting pattern with a range of between 26 and 35, and a mean of 32 with a standard deviation of 5.20, indicating that ups and downs in the primary independent variable - capital gains tax - have little effect on these preferences. It is safe to say that no causal relationship exists but some mild correlation is certainly present, of minimum measure. There is significance in the non-parametric testing. Including the fourth survey does not affect the range, decreases the mean to 28, decreases the standard deviation to 4.69 and displays significance.

Wholesale Distribution: the results of the first three surveys indicate an extremely close-fitting pattern with a range of between 7 and 8, and a mean of 7.3 with a standard deviation of 0.58, indicating that ups and downs in the primary independent variable - capital gains tax - have little effect on these preferences. It is safe to say that no causal relationship exists but some mild correlation is certainly present, of minimum measure. There is no significance in the non-parametric testing. Including the fourth survey increases the upper range to 12, increases the mean to 8.5, increases the standard deviation to 2.38 and displays no significance.

Medical Technology: the results of the first three surveys indicate a close-fitting pattern with a range of between 27 and 35, and a mean of 31 with a standard deviation of 4.00, indicating that ups and downs in the primary independent variable - capital gains tax - have little effect on these preferences. It is safe to say that no causal relationship exists but some mild correlation is certainly present, of minimum measure. There is no significance in the non-parametric testing. Including the fourth survey decreases the lower range to 20, decreases the mean to 28, increases the standard deviation to 6.40 and displays significance.
Media: the results of the first three surveys indicate an extremely close-fitting pattern with a range of between 8 and 10, and a mean of 8.67 with a standard deviation of 1.15, indicating that ups and downs in the primary independent variable - capital gains tax - have little effect on these preferences. It is safe to say that no causal relationship exists but some mild correlation is certainly present, of minimum measure. There is significance in the non-parametric testing. Including the fourth survey decreases the lower range to 4, decreases the mean to 7.5, increases the standard deviation to 2.52 and displays significance.

Other Technology: the results of the first three surveys indicate a close-fitting pattern with a range of between 15 and 22, and a mean of 17 with a standard deviation of 4.04, indicating that ups and downs in the primary independent variable - capital gains tax - have little effect on this preference. It is safe to say that no causal relationship exists but some mild correlation is certainly present, of minimum measure. There is no significance in the non-parametric testing. Including the fourth survey increases the upper range to 28, increases the mean to 20, increases the standard deviation to 6.27 and displays significance.

Retail: the results of the first three surveys indicate a close-fitting pattern with a range of between 8 and 13, and a mean of 11 with a standard deviation of 2.65, indicating that ups and downs in the primary independent variable - capital gains tax - have little effect on this preference. It is safe to say that no causal relationship exists but some mild correlation is certainly present, of minimum measure. There is no significance in the non-parametric testing. Including the fourth survey increases the upper range to 16, increases the mean to 12, increases the standard deviation to 3.30 and displays no significance.
Services: Results of the first three surveys indicate a close-fitting pattern with a range of between 14 and 21, a mean of 17 with a standard deviation of 3.79 indicating that ups and downs in the primary independent variable - the capital gains tax - has little effect on this preference. It is safe to say that no causal relationship exists but some mild correlation is certainly present, of minimum measure. There is no significance in the non-parametric testing. Including the fourth survey increases the upper range to 44, increases the mean to 24, increases the standard deviation to 14.01 and displays significance.

Franchises: the results of the first three surveys indicate an extremely close-fitting pattern with a range of between 6 and 7, and a mean of 6.33 with a standard deviation of 0.58, indicating that ups and downs in the primary independent variable - capital gains tax - have little effect on this preference. It is safe to say that no causal relationship exists but some mild correlation is certainly present, of minimum measure. There is no significance in the non-parametric testing. Including the fourth survey decreases the lower range to 0, decreases the mean to 5, leaves the standard deviation unchanged at 0.58 and displays no significance.

Summary Of Industry Preference Findings

The three-survey study had a range of 6 to 52 with a weighted standard deviation of 3.54 and significance in 4 of 12 categories. Including the fourth survey in the study expanded the range from 0 to 80, with a weighted standard deviation of 5.95 and significance in 7 of 12 categories.

Geographic Preference

No Preference (USA): the results of the first three surveys indicate a somewhat close-fitting pattern with a range of between 38 and 52, and a mean of 44 with a standard deviation of 7.37, indicating that ups and downs in the primary independent
variable - capital gains tax - have little effect on this preference. It is safe to say that no causal relationship exists but some mild correlation is certainly present, of minimum measure. There is no significance in the non-parametric testing. Including the fourth survey increases the upper range to 96, increases the mean to 57, increases the standard deviation to 26.8 and displays significance.

Northeast: the results of the first three surveys indicate a close-fitting pattern with a range of between 6 and 11, and a mean of 8 with a standard deviation of 2.52, indicating that ups and downs in the primary independent variable - capital gains tax - have little effect on this preference. It is safe to say that no causal relationship exists but some mild correlation is certainly present, of minimum measure. There is no significance in the non-parametric testing. Including the fourth survey increases the upper range to 16, increases the mean to 10, increases the standard deviation to 4.35 and displays significance.

Mid Atlantic: the results of the first three surveys indicate an extremely close-fitting pattern with a range of between 4 and 5, and a mean of 4.33 with a standard deviation of 0.58, indicating that ups and downs in the primary independent variable - capital gains tax - have little effect on this preference. It is safe to say that no causal relationship exists but some mild correlation is certainly present, of minimum measure. There is no significance in the non-parametric testing. Including the fourth survey increases the upper range to 12, increases the mean to 6, increases the standard deviation to 3.86 and displays significance.

Southeast: the results of the first three surveys indicate an extremely close-fitting pattern with a range of between 5 and 8, and a mean of 6.25 with a standard deviation of 1.73, indicating that ups and downs in the primary independent variable - capital gains tax - have little effect on this preference. It is safe to say that no causal
relationship exists but some mild correlation is certainly present, of minimum measure. There is no significance in the non-parametric testing. Including the fourth survey increases the upper range to 20, increases the mean to 9.5, increases the standard deviation to 7.14 and displays significance.

*Midwest:* the results of the first three surveys indicate a close-fitting pattern with a range of between 6 and 12, and a mean of 8 with a standard deviation of 3.21, indicating that ups and downs in the primary independent variable - capital gains tax - have little effect on this preference. It is safe to say that no causal relationship exists but some mild correlation is certainly present, of minimum measure. There is no significance in the non-parametric testing. Including the fourth survey increases the upper range to 48, increases the mean to 18, increases the standard deviation to 20.01 and displays significance.

*Rocky Mountain States:* the results of the first three surveys indicate an extremely close-fitting pattern with a range of between 0 and 1, and a mean of 0.66 with a standard deviation of 0.58, indicating that ups and downs in the primary independent variable - capital gains tax - have little effect on this preference. It is safe to say that no causal relationship exists but some mild correlation is certainly present, of minimum measure. There is significance in the non-parametric testing. Including the fourth survey increases the upper range to 8, increases the mean to 2.5, increases the standard deviation to 13.70 and displays no significance.

*Northwest:* the results of the first three surveys indicate a close-fitting pattern with a range of between 3 and 11, and a mean of 5.66 with a standard deviation of 4.16, indicating that ups and downs in the primary independent variable - capital gains tax - have little effect on this preference. It is safe to say that no causal relationship exists but some mild correlation is certainly present, of minimum measure. There is
no significance in the non-parametric testing. Including the fourth survey decreases the lower range to 0, decreases the mean to 4.75, increases the standard deviation to 4.65 and displays no significance.

*Far West:* the results of the first three surveys indicate an extremely close-fitting pattern with a range of between 4 and 7, and a mean of 5.66 with a standard deviation of 1.53, indicating that ups and downs in the primary independent variable - capital gains tax - have little effect on this preference. It is safe to say that no causal relationship exists but some mild correlation is certainly present, of minimum measure. There is no significance in the non-parametric testing. Including the fourth survey decreases the lower range to 0, decreases the mean to 4.25, increases the standard deviation to 3.10 and displays significance.

*Southwest:* the results of the first three surveys indicate an extremely close-fitting pattern with a range of between 5 and 8, and a mean of 7 with a standard deviation of 1.73, indicating that ups and downs in the primary independent variable - capital gains tax - have little effect on this preference. It is safe to say that no causal relationship exists but some mild correlation is certainly present, of minimum measure. There is no significance in the non-parametric testing. Including the fourth survey does not change the range, increases the mean to 7.25, decreases the standard deviation to 1.50 and displays no significance.

*One State Only:* the results of the first three surveys indicate a close-fitting pattern with a range of between 10 and 17, and a mean of 13 with a standard deviation of 3.79, indicating that ups and downs in the primary independent variable - capital gains tax - have little effect on this preference. It is safe to say that no causal relationship exists but some mild correlation is certainly present, of minimum measure. There is no significance in the non-parametric testing. Including the fourth
survey decreases the lower range to 0, decreases the mean to 9.5, increases the standard deviation to 7.05 and displays significance.

Immediate Area: the results of the first three surveys indicate an extremely close-fitting pattern with a range of between 10 and 11, and a mean of 10.33 with a standard deviation of 0.58, indicating that ups and downs in the primary independent variable - capital gains tax - have little effect on this preference. It is safe to say that no causal relationship exists but some mild correlation is certainly present, most likely of minimum measure. There is no significance in the non-parametric testing. Including the fourth survey decreases the lower range to 0, decreases the mean to 7.75, increases the standard deviation to 5.19 and displays significance.

Summary Of Geographic Preference Findings

The three-survey study had a range of 0 to 52 with a weighted standard deviation of 2.52 and significance in 1 of 11 categories. Including the fourth survey in the study expanded the range from 0 to 96, with a weighted standard deviation of 7.94 and significance in 8 of 11 categories.

Type Of Funds Preference

Equity (Stock): the results of the first three surveys indicate an extremely close-fitting pattern with a range of between 58 and 61, and a mean of 59 with a standard deviation of 1.53, indicating that ups and downs in the primary independent variable - capital gains tax - have little effect on this preference. It is safe to say that no causal relationship exists but some mild correlation is certainly present, of minimum measure. There is no significance in the non-parametric testing. Including the fourth survey increases the upper range to 88, increases the mean to 67, increases the standard deviation to 14.39 and displays significance.
Loans: the results of the first three surveys indicate an extremely close-fitting pattern with a range of between 17 and 20, and a mean of 19 with a standard deviation of 1.73, indicating that ups and downs in the primary independent variable - capital gains tax - have little effect on this preference. It is safe to say that no causal relationship exists but some mild correlation is certainly present, of minimum measure. There is no significance in the non-parametric testing. Including the fourth survey does not affect the range; the means remains the same at 19, decreases the standard deviation to 1.50 and displays no significance.

Loans With Equity Kickers: the results of the first three surveys indicate an extremely close-fitting pattern with a range of between 18 and 21, and a mean of 20 with a standard deviation of 1.53, indicating that ups and downs in the primary independent variable - capital gains tax - have little effect on this preference. It is safe to say that no causal relationship exists but some mild correlation is certainly present, of minimum measure. There is no significance in the non-parametric testing. Including the fourth survey decreases the lower range to 0, decreases the mean to 15, increases the standard deviation to 9.91 and displays significance.

Bonds: the results of the first three surveys indicate an extremely close-fitting pattern with a range of between 1 and 3, and a mean of 1.75 with a standard deviation of 1.15, indicating that ups and downs in the primary independent variable - capital gains tax - have little effect on this preference. It is safe to say that no causal relationship exists but some mild correlation is certainly present, of minimum measure. There is no significance in the non-parametric testing. Including the fourth survey decreases the lower range to 0, keeps the mean unchanged at 1.75, increases the standard deviation to 1.50 and displays no significance.
Bonds With Equity Kickers: the results of the first three surveys indicate a close-fitting pattern with a range of between 1 and 3, and a mean of 2.3 with a standard deviation of 1.0 indicating that ups and downs in the primary independent variable - capital gains tax - have little effect on this preference. It is safe to say that no causal relationship exists but some mild correlation is certainly present, of minimum measure. There is no significance in the non-parametric testing. Including the fourth survey decreases the lower range to 0, decreases the mean 1.75 decreases the standard deviation to 1.29 and displays no significance.

Leasing: the results of the first three surveys indicate an extremely close-fitting pattern with a range of between 0 and 1, and a mean of 0.33 with a standard deviation of 0.58, indicating that ups and downs in the primary independent variable - capital gains tax - have little effect on this preference. It is safe to say that no causal relationship exists but some mild correlation is certainly present, of minimum measure. There is no significance in the non-parametric testing. Including the fourth survey does not change the range, decreases the mean to 0.25, decreases the standard deviation to 0.50 and displays no significance.

Summary Of Type Of Fund Preference Findings

The three-survey study had a range of 0 to 61 with a weighted standard deviation of 1.07 and significance in 0 of 6 categories. Including the fourth survey in the study expanded the range from 0 to 88, with a weighted standard deviation of 4.85 and significance in 2 of 6 categories.

Global Comments On Survey Results

In synthesizing the survey results above it is clear that the inclusion of the fourth survey has a profound impact on the overall data output. When considering only the first three surveys as a group, the standard deviation values are relatively
close fitting in most cases, with statistical significance in only 9 of the 38 categories. When adding the fourth survey to the grouping, the standard deviation values expand dramatically and statistical significance exists in 25 of 38 categories. Likewise, the weighed global standard deviation for the first three-survey group is 3.195. Including the fourth survey increases this standard deviation to 8.096.

This brings to mind the question: should the fourth survey be included in the overall statistical analysis within the thesis? This was addressed via the Chronbach Alpha and Spearman tools recited earlier and inclusion was accepted.

From a purely observational standpoint, there are some interesting points that run counter to the prevailing theories that simulative fiscal policies create economic growth and employment. Prior to the first survey, the Carter Administration had a historically high 35% capital gains rate, high inflation and high interest rate levels. Despite these issues, millions of jobs were created until an oil shock from the Middle East halted the economic expansion and introduced a severe recession lasting until 1982. The Economic Recovery Act in 1981 promoted by President Reagan introduced an era of massive fiscal incentives, including a reduction in the capital gains tax rate to 20%. This stimulated a high concentration of activity within the speculative venues of the entrepreneurial economy. This can be seen in the results of the 1983 survey.

Within the 1983 survey, there was a high concentration of venture capital activity in the early phases of company existence, including seed funding, start-up funding, first-round funding, second-round funding and third-round funding. An enhanced level of activity in technology areas including communications, computer hardware and computer software was also detected. The more traditional areas of business, such as distribution and retail, suffered. In addition, most venture companies showed sensitivity to equity investment tools, such as stock and convertible loans,
which by their nature are more speculative in character. The period after 1982 represented a massive economic expansion with accompanying employment creation; however, federal budget deficits soared.

The Tax Reform Act of 1986 attempted to correct many of the excesses of the 1981 Act, including addressing the growing budget deficits. It repealed investment tax credit and increased the capital gains tax rate to 33%, both of which are fiscal tools and independent variables, with the latter being of importance to this thesis. In support of the prevailing theory, the increase in the tax burden on investment gains dampened early-stage funding in all categories except start-up funding, running counter to some earlier output. The shift was notably in favour of more mature funding alternatives such as fourth-round, later-stage and leveraged buyouts. The appetite for technology companies in all categories remained high, as did the use of equity investments as the primary type of funding tool. Economic expansion continued until 1991, when recession gripped the economy.

In 1993, Congress passed the Revenue Reconciliation Act of 1993, which again decreased the capital gains tax rate to 29%. This stimulated early-stage funding in the form of seed funding, first-round funding, second-round funding and third-round funding. Start-up funding was the exception, although activity within that sub-preference was still high at 45% of the venture companies taking part in this type of endeavour. Technology investments remained the primary thrust, although the data registers a slight increase in investment in service and retail businesses. Equities continued to be the choice of investment input. Other systemic taxes were imposed. In a rare moment, both parties within Congress and the President agreed to cooperate on fiscal and monetary discipline in a way that created a massive economic expansion, a
high rate of growth in employment, a balanced budget for the first time since 1969 and a continuing federal surplus until 2002.

Next came the passage of the Economic Growth and Tax Relief Reconciliation Act of 2001, the signature piece of economic legislation driving the Bush Administration. It drove the capital gains tax rate down to 20% and in some cases to 0, representing historic lows. Other systemic taxes were also lowered. Bush was taking a Reagan approach to economic policy and attempting to stimulate economic and entrepreneurial expansion. However, contrary to the basic theory and theoretical foundation of this thesis, and despite the fiscally stimulating nature of this piece of legislation, all traditional assumptions were challenged in its aftermath. The venture community abandoned most early-stage funding preferences. There was a marked decrease in seed funding, start-up funding, first-round funding, second-round funding, third-round funding and fourth-round funding. Investments in the more mature later stage, leveraged buyouts and acquisition venues saw increases. Although investment in technology firms continued to be popular, there was a marked increase in traditional industries, in particular investment in the service industry. Equity inputs continued to be the main investment tool.

These contradictions bring into question why the massive fiscal stimuli within this piece of legislation failed to stimulate speculative investment. History shows that in the aftermath of this Act economic growth was lacklustre; there was little or no employment growth and entrepreneurial activity all but collapsed to half of its former levels according to the literature (Bartlett, 2010).

There were major confounding variables during the period between 2001 and 2006. The 9/11 attack did impose upon economic activity but the literature reports its effects as insignificant and short-lived. Monetary and federal budget disruptions
leading to the Panic of 2008 may have played on business psychology by creating an investment disincentive in the entrepreneurial economy. During this period, corporate profits soared as middle-class incomes continued to stagnate. Corporations compiled huge cash reserves, moving much of their liquid assets offshore and refusing to invest domestically.

From a researcher’s perspective, the question emerges of whether these economic anomalies represent an emerging paradigm. Some of these economic conditions continue to this day and create speculation about whether fiscal policy will resume a more classical curve. Given the timeline, the fourth survey became suspect and subjected to additional scrutiny.

The geographic preferences remained relatively constant throughout the period covered by the first three surveys, although the fourth survey revealed a marked increase in companies lacking a geographical preference, again indicating a more secure and diversified posture. This runs counter to the speculative nature of the fiscal stimuli proffered during this survey period, raising further questions related to the reliability of the fourth survey, which were dispelled by testing.

Chapter Summary

This chapter tied together all the pertinent threads of both the primary and secondary data. It established a synchronised theme, despite the fact that much of the current secondary data was collected in a highly charged political environment and debated on the national political stage. This made it difficult to find literature sources not impinged by bias. The sifting process was both methodical and mechanical and served to identify useful sources. The difficulties associated with a vast longitudinal study, such as non-concurrent timespans between the four surveys and confounding variables, proved challenging. A large timeline between the third and fourth surveys
raised questions about the integrity of the fourth survey. That timeline represents one-
half of the longitudinal process. The last effort was to manage the results of both the
primary and secondary data investigations and to test the hypothesis several times so
that the research question could be resolved, and ultimately answered, which is
reviewed in the next chapter.
CHAPTER FIVE

CONCLUSIONS AND DISCUSSIONS

Introductory Statement

Do Longitudinal Changes In Capital Gains Tax Affect The Investment Preferences Of Venture Capital Companies?

This research question has been answered, the working hypothesis tested and affirmed, and the research problem mitigated. Consequently, this thesis has accomplished its objective. That objective concerned the evaluation of the prevailing theory and concluding that changes in capital gains tax do affect the investment preferences of the venture capital industry. The findings in Chapter Four clearly support the conclusion and theoretical framework upon which this thesis is built.

Significance was discovered among the variables by virtue of detailed testing. Despite achieving this goal as a unique longitudinal study, more information analysis, harvesting and research must be conducted to supplement the fruits of this research endeavour. Advancing technology will pose both challenges and opportunities in future collection efforts. Although the universe will be less segmented, this will be offset by increasing size and scope. This will expand the number of variables to be analysed and enlarge the arsenal of statistical tools to employ.

General Conclusions

This researcher takes the position in reference to the major research components of the null hypothesis of this thesis, as recorded in Table 5-A below. This table is just an annotated expression of vast research underpinnings. Its simplicity is deceiving yet steeped in sound methodologies and methods.
Table 5-A Conclusions

<table>
<thead>
<tr>
<th>Research Method</th>
<th>Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inductive Research</td>
<td>Inconclusive</td>
</tr>
<tr>
<td>Literature Review</td>
<td>Inconclusive</td>
</tr>
<tr>
<td>Deductive Research</td>
<td>Alternative Hypothesis Accepted</td>
</tr>
</tbody>
</table>

Source: James Silvester, 2013

The null hypothesis below was rejected.

*Changes in capital gain provisions do not have statistical significance for the investment preferences of venture capital companies*

The research question, *Do Longitudinal Changes In Capital Gains Tax Affect The Investment Preferences Of Venture Capital Companies?*, is answered in the tabulated results published in Chapter Four on a variable-to-variable basis. Statistical significance between variables was observed and was initially found to be specific among just a few areas of the primary data, invoking the ethical requirement to report significance. However, expanded statistical tooling indicated the presence of broader significance among the variables. Therefore, the investment preferences of venture capital companies are sensitive to changes in capital gains tax.

Another way to approach the research question is to investigate the theory that if changes in capital gains tax have no effect on the entrepreneurial subsector of the systemic economy, then venture capital companies will not change their investment preferences. Conversely, if changing capital gains tax rates do have an economic influence, then venture managers will change their investment preferences. The literature is vast on these opposing analogies and influenced by political affiliation. There are a few credible non-aligned entities that support the former proposition but not enough to proclaim a definitive conclusion.
Since longitudinal studies concerning venture capital investment preferences are few, and those that do exist are extremely narrow in scope, the research question was probed by way of the primary data and limited inductive input. However, the topical nature of the literature forces a dissection of the relationship between capital gains tax and various economic outputs given the ongoing debate on these topics within the political field.

**Triangulation Of Data**

In the perfect research setting a coordination of the data would be likely to produce statistical significance among the data. This was not the case in this thesis. The literature was topical but fragmented across ideological platforms, making a theme structure nearly impossible to achieve. Some literature supported the alternate hypothesis and some the null hypothesis, almost equally divided. Despite the bias appearing overbearing, some non-affiliate sources surfaced, mostly in support of the null hypothesis. The non-affiliate findings were in direct conflict with the deductive and inductive findings. However, the inductive findings were also found to be bias coming from executives within the venture industry. They were therefore given scrutiny and held as inconclusive, as illustrated in Table 4-D. The overall weighed deductive findings displayed significance, suggesting a correlation with the literature supporting the alternate hypothesis. However, the discovery of significance was not uniform among all dependent variables and differed with the inclusion of the fourth survey, as the findings revealed. As cited above, the literature was too splintered and the inductive research too biased to prove useful. Further, although the primary output was not entirely conclusive, it did display significance among a sufficient number of dependent variable categories to support the alternate hypothesis.
Research Question Answered

The primary research has demonstrated statistical significance among the variables. In other words, a change in the independent variable effects change in the dependent variables. That condition in and of itself provides no direct answers that would make any political party happy or sad. These parties are looking for inverse relationships they can carry into political battle. For example, does a decrease in capital gains tax increase venture funding? Does an increase in capital gains tax reduce venture funding?

Largely, the literature and inductive inputs are too inconclusive to answer that question, and the primary research was not designed to suggest either but only to identify potential differences in responses among the variables.

Pure observation of the raw data would suggest an inverse relationship but only in the case of extremely low capital gains tax, based on historic trends. However, a narrow strip of literature encompassing a few c non-affiliate organizations takes the collective position that no significance exists.

Former Vermont Governor and Presidential Candidate Dean (2012) noted that several non-partisan studies take the position that tax increases and reductions have little effect on the economic stock of the nation unless they are so extreme as to be impractical.

Finally, Yale Professor, author and journalist Solman analysed the issue of whether capital gains taxes affect savings and investment. His reasoning is important to this research endeavour because of the cautious opinion about the interactions between variables. Solman (2012, p. 2) states,

“The lack of correlation you refer to is failure to find, in the data, a growth spurt in the wake of a capital gains tax cut. In fairness, economic growth depends upon many factors. Any correlation analysis has to hold the main variables constant before pronouncing on a
statistically significant relationship between two variables like a tax cut and growth. And even a statistically significant correlation does not prove a causal connection”.

The thesis has taken the position that some significance exists between the primary independent variable, capital gains tax, and the primary dependent variables, the four major investment preferences illustrated previously in Figure 4-A and broken into 38 sub-variable groups. This grouping can also be recast and labelled as individual hypotheses if so desired.

Consequently, the research question is answered and affirmed as recited earlier.

**Research Problem Explored**

It should be indicated that there is a clear distinction between the research problem and the working hypothesis. The problem cannot be measured but the hypothesis can (Sharma and Battina, n.d.). This is where the differences end. The problem and hypothesis must tie together into a uniform research design.

The lack of longitudinal studies related to the venture capital industry is the primary research problem at hand. Few of these studies exist and the ones conducted are extremely limited in terms of the size of the sampling universe and short timelines.

Even though this thesis helps to correct this situation, more longitudinal studies need to be conducted, properly assembled and correctly promulgated.

**Working Hypothesis Tested**

The working hypothesis states that changes in capital gain provisions affect venture capital investment preferences. The working hypothesis as presented within this thesis is a digestible proposition. In addition, the null hypothesis is not accepted,
naturally invoking an acceptance of the alternate hypothesis (Sharma and Battina, n.d.).

The secondary sources are generally split and biased along ideological lines. This researcher relied upon the few non-aligned sources noted in the literature review. A few additional pieces of literature were called upon to support this conclusion and were not included within the literature review but are discussed here. A report conducted by the non-partisan United States Congressional Budget Office (1990) analysed capital gains tax and economic growth. Using quantitative methodologies, the editors and contributors concluded that capital gains tax as a fiscal tool is difficult to quantify in terms of outcome and should not be used as a tool to enhance economic performance. Hungerford (2010) agreed in his paper prepared for the nonpartisan Congressional Research Service. He implied that capital gains tax is used as a political tool and has been the subject of much debate over the last 90 years. Using quantifications, Hungerford made an argument that a reduction in the capital gains tax rate does only two things: it reduces tax revenues and lowers the tax burden for the wealthy. He flatly rejected the notion that capital gains tax adds to the economic stock of the nation in any way.

Bussgang (2012), writing for the Center on Budget and Policy Priorities, produced a paper in support of Hungerford’s ideas. Although relying on 76 secondary sources and some primary data, the piece includes an argument against lowering capital gains tax. The author articulated the notion that the literature about the relationship between taxes and entrepreneurship is not conclusive. Huang (2012, p. 2) boldly stated, “there is little evidence that the current preferential tax rates for capital gains and dividends substantially stimulates investment in new ventures”. He even went on to suggest that a higher capital gains tax rate might be stimulatory. The
author quantitatively compared the entrepreneurial job creation of the Clinton Administration, during which taxes, including capital gains tax were increased, with the last Bush Administration, during which all tax rates were pushed to historic lows with little or no employment growth and a decline in the number of business start-ups and expansions. Of course the 9/11 terrorist attacks could have influenced economic behaviour, thus skewing various facets of the business cycle. This may have been a confounding variable. Other confounding variables may be the 2003 Afghan and Gulf Wars and the mounting monetary crisis beginning in 2006, which culminated in the Panic of 2008.

The number of potential hypotheses equalled the number of sub-variables (38). In terms of manageability, the general hypothesis was statistically measured against the four primary dependent variables group illustrated previously. There appear to be four separate hypotheses seeking to validate each other to prove or disprove the one working hypothesis. In addition, statistical analysis was conducted on all sub-variables.

**Basic Theory Explored**

The basic theory is now front and centre, politically speaking. Whether it is proven does not seem to matter on the grander political stage. In terms of backroom discussions among academics, economists and researchers, this thesis will add some debate to those proceedings and will contribute to the continuing and more complex nature of the dialogue on the theory.

This thesis was never intended to create theories but only to test existing theories, which has been accomplished. The major trade associations within the field, in particular the National Venture Capital Association, await the outcome of this thesis, as do some national political elements. Embedded in the American populace is
the simple concept that lower taxes stimulate growth and employment (Moore and Silva, 1995). Whether it is correct or not is unimportant. Correct outcomes are often ignored in favour of less optimal solutions for political reasons, such as ease of selling to the population at large.

**Justification For Further Research**

For the last fifty years, politicians have promoted the theory that lower capital gains taxes stimulate investment in the entrepreneurial sectors of the larger systemic economy and that these sectors are largely responsible for job creation. Although this represents an over-simplification of the larger job creation debate, it does demonstrate the political import of employment creation.

Although this thesis and others (O’Connell, 2012) cast doubt on the job-creation hypothesis, one thing is evident in the current business culture and is verified within the literature: a paradigm has formed called *crowd funding*.

Crowd funding is an extension of angel funding, in which a single or a few individuals invest in an enterprise. Many of these angels operate with other angels within informal investment networks and clubs, generally in direct conflict with existing securities laws and regulations (Popper, 2012). Crowd funding takes this informal progress one-step further by organizing these angels into formal online investment platforms allowing the angels to invest collectively in a business. It almost takes on the configuration of an organized stock market, and thus the United States Securities Exchange Commission (SEC) has taken notice and demanded authority over such activity, which it has exercised in 2013 and 2014.

Crowd funding is legitimized by the passage of the Jobs Act, also known as the Jumpstart Our Business Startups Act, which minimized the regulatory burden on crowd funding activity (Mills, 2012). Congress has warned that overregulation by the
SEC and state regulatory authorities will harm crowd funding and impede its positive impact on the economy via job creation (Colao, 2012). The impact of crowd funding is demonstrated in Figure 5-A and in a trade article by Daley (2013), who reports on its international standing as well. Figure 5-A shows the rapid rise of crowd funding over a three-year span; the expansion is concentrated in the electronic sectors, start-up firms are the primary players, and large businesses also indulge in the new funding paradigm.

**Figure 5-A Crowd Funding**

The primary research timeline for this thesis ends in 2007 with the build up to the panic of 2008. There was no real change in capital gains tax from 2001 to late 2012, when the Bush tax cuts expired. The economic contortions created because of the Great Recession are both unique and trend setting and can be seen in the form of the new crowding funding markets that have emerged. In essence, as economic stagnation lingers, American corporate profits are at an all-time high, including those in the banking sectors. Corporations and banks are amassing a record amount of free cash, and research by Tunguz (2012) confirms this shift, as illustrated in Figure 5-B. Between mid-2008 and mid-2011 excess depository reserves increased from 0 to 1.5 trillion dollars, and the institutions have no intention of releasing this liquidity for investment or lending (Krugman, 2011), as Figure 5-C confirms. Corporate net investment and corporate net cash flow converged just after the Panic of 2008 at about 1.4 trillion dollars. The economic recovery saw a confounding event in that both net corporate investment and cash flow grew slowly in tandem, indicating smaller investment and cash hording. By 2011 investment had only recovered to the 1.5 trillion dollar level, as compared to 1.7 trillion in early 2008, and net cash had soared from 1.2 trillion dollars in early 2008 to just under 1.5 trillion in 2011. In addition, traditional venture capital funding has decreased, despite the lowest capital gains tax rate in history (Rockoff, 2012).

U.S. Depository institutions continue to horde their cash. The *Economist* reported in its May 2015 issue that over two trillion dollars sit idle in American accounts across the global that could be used for business investment purposes. The article suggests this is hindering economic growth.
Figure 5-B

Excess Reserves Of Depository Institutions

This lack of, or reduction in, corporate, bank lending and venture investments have hurt those entrepreneurs attempting to start or expand operations, and has led to a lending and investment vacuum. Crowd funding has thus emerged as an alternative.
Given the attention of the SEC and state regulators, crowd funding is a movement here to stay and will develop and mature. The Wall Street Journal recently published a series of in-depth articles on the positive and negative aspects of the crowd-funding phenomenon. In reference to the issue of the legality of equity-based crowd funding, investment banker Lavinsky (2012, p. R3) argued in favour, stating, “Letting small firms sell equity online is angel investing on steroids”. Lavinsky's critics, such as Torrens (2012), cited the possibility of investor fraud, which has haunted the micro-cap market for decades. However, the author’s supporters contended that the little fraud generated in this funding sector would be more than offset by the significant positive effect it would have on the economy in terms of economic growth and job creation.

Some disagree and take a position that opposes that of Lavinsky. Torrens (2012, pp. R3-R4) implies that opening up a flood of capital to the entrepreneurial sector is too risky for many reasons. Torrens states, “There are better ways to get capital into the hands of entrepreneurs”. The author agrees with the opponents that a lack of proper financial disclosure could expose inexperienced investors to poor investment decisions. He also implies that some of the enterprises seeking funding through this new venue need managerial assistance just as much as financial help. Torrens ends by lamenting that crowd funding could create more problems than it solves, exposing both companies and investors to greater perils than would otherwise be the case.

In terms of pure tax incentives, the Wall Street Journal exposé is definitely favouring tax breaks and credits that increase the stock of potential investors and thus expand the capital base for start-ups and other existing companies. Weaver cites Wisconsin as an example, where in 2005 the state passed a tax credit for its citizens to
invest in start-up companies. The outcome was positive in terms of new business
creation and employment growth which produced high-paying jobs. Weaver (2012, p.
R5) concluded, “angels play a role in the economy that’s worthy of government
support”.

Cornwall (2012) sees things quite differently. His arguments are grounded in
recent history and he takes the position that angel-directed tax credits do little to spur
economic or employment growth. A section of the Wall Street Journal article provides
some quantitative data about the recent passage of tax incentives, including lowering
the capital gains tax to zero for some start-up investments, but contends that the new
regulations have done little to spur angel financing. In fact, angel funding has
investment tax credit doesn’t deliver on what it promises”. He blames uncertain
systemic economic conditions and takes the position that any tax incentives should be
based on a larger and more focused overall tax policy with benefits directed towards
entrepreneurs rather than investors.

The debate has reached the highest vestibules of political power in the United
States and is starting to emerge in the European Union as well. Crowd funding is still
largely untested and its overall impact is unknown. It is a new research frontier; a
paradigm that will add to the common knowledge about the imposing forces within
the venture capital industry and a natural extension of the study concluded thus far.

The elements that define the venture capital industry change rapidly, along
with the industry’s traditional investment preferences. The investment behaviour of
crowd angels is quite different as compared to traditional venture capitalists. It is yet
to be determined to what extent this new paradigm will infiltrate the traditional halls
and back alleys of the close-knit, parochial venture capital industry. So far, its
emergence is noticeable. Whether the crowd-funding phenomenon reaches a mature level exuding gestalt status, where the segment as a whole is more important than the individual players, is yet to be determined. Poston, et al. (2010) and Poston, et al. (2011) confirmed this in two studies.

These changes require continuing research because of the information gaps that exist, which are significant. The apparent paradigm forming is in stark contrast to the former status quo. The fragmented nature of this new paradigm may require a departure from traditional methods of inquiry and require new methodologies and methods or at least the use of those not widely accepted within research protocol. Dual inquiry and mixed methods may abound and need to be tolerated if proper data extraction is to be achieved with credible outcomes. The current literature on this new paradigm is sparse and evenly split regarding its relevance and importance within the financial services field. The test will come as economic recovery ensues in earnest and the traditional sources of entrepreneurial funding begin to re-emerge within the venture capital sector. The early evidence, as of autumn 2014, suggests that crowd funding is working and creating enterprise, and may in fact be a formidable force within the venture industry.

New Paradigm Needs Further Research

Enough cannot be said on the development of the new paradigm referred to as crowd funding. Recent articles highlight the importance of this new entrepreneurial funding paradigm, which tears down the traditional walls of small business finance.

Best et al. (2013, p. 1) define crowd funding as “a revolutionary financial technology that offers individuals an opportunity to engage with small businesses and start-ups and participate in their growth”. Its origin dates back to 2008 with the sale of the Pabst Blue Ribbon beer manufacturing company and a marketer named Mike
Migliozzi, who understood the potential power of social media (Best et al. 2013). He executed a plan to sell the company online. The process was so successful in raising almost 300 million dollars that the United States Securities and Exchange Commission (SEC) took notice and raised the spectre that the sale of Pabst shares online was illegal. The public outcry against the agency action was noticeable and a movement to reform SEC regulation related to the sale of securities online via social media developed. Thus crowd funding came of age. Terms such as token crowd funding, crowd fund investing and Regulation D entered the vernacular (Best et al. 2013).

Laws and regulations were streamlined to mostly encompass smaller firms since research indicates that small businesses create most of the employment growth in the country (Carter, 2012). This modification of existing securities regulation was accomplished through the Jobs Act of 2010, mostly promulgated in 2013 and 2014. Crowd funding is creating consternation within the traditional venture capital industry. Overly (2013, p. 1) asserted the following about crowd funding, "…. the practice seems to pose a threat to traditional venture capital firms that will face new competition for the best deals”.

Some disagree. Small (2013) reported on the comments of three venture capital professionals. One of the professionals reported that the emergence of crowd funding forced them to work harder to close venture deals but did not seem overly concerned. The other two professionals contended that there would be no competition due to the segmentation of the entrepreneurial capital markets, implying that crowd funding and venture funding have their own mutually exclusive segments. Overly (2013) does acknowledge that angel financing could be compromised by crowd funding.
Overly (2013) ended the article with comments by Mark Heesen, president of the National Venture Capital Association, who was interviewed by questionnaire as part of this thesis. Heesen described the marked difference between crowd funding and traditional venture capital funding. He then raised the spectre of doubt that crowd funding cannot facilitate the future funding needs of growing companies and speculated that many of these companies should never have started.

Bornstein (2013) counters Heesen by noting that eleven major crowd-funding platforms exist. In addition, only a small number are specialized to a specific industry such as energy or microfinance. He also noted that crowd funding has matured, as its procedures have become increasingly electronic in nature and automated processes are being applied to crowd funding investment decisions.

A discussion paper offered up by Belleflamme et al. (2011) is the most study available to date to compare traditional entrepreneurial financing to crowd funding. Using quantitative modelling, the authors justify the arguments in favour of crowd funding. Belleflamme et al. (2011, p. 1) stated,

“The basic idea of crowd funding is to raise external finance from a large audience (the “crowd”), where each individual provides a very small amount, instead of soliciting a small group of sophisticated investors. The paper develops a model that associates crowd funding with pre-ordering and price discrimination, and studies the conditions under which crowd funding is preferred to traditional forms of external funding. Compared to traditional funding, crowd funding has the advantage of offering an enhanced experience to some consumers and, thereby, of allowing the entrepreneur to practice menu pricing and extract a larger share of the consumer surplus; the disadvantage is that the entrepreneur is constrained in his/her choice of prices by the amount of capital that he/she needs to raise: the larger this amount, the more prices have to be twisted so as to attract a large number of “crowd funders” who pre-order, and the less profitable the menu pricing scheme”.

Crowd funding is a concept that is here to stay. The SEC has called for continuing public comments about developing an efficient platform to regulate crowd-
funding investments. The word *efficient* is the key term as Congress has directed the SEC to streamline and loosen its current regulations to accommodate crowd funding.

Carter (2012) reports on the emergence of a trading market, the *California Stock Exchange*, which will trade in crowd-funding financial instruments, beginning sometime in 2014 or 2015. It has developed a website and trading platform and plans to petition the SEC for permission to operate as an official stock exchange. The trading will be done by digital means.

Elkington and Love (2013) agree with Carter and report that crowd funding stock exchanges are about to emerge in London. They also report that crowd funding is viewed as replacing venture capital.

**Public Sector Implications**

The public sector implications of this thesis are immense. As the Bush-era tax cuts expired on 31 December 2012, capital gains tax came under the political microscope during the 2012 presidential campaign. Bush’s tax programme reduced the capital gains rate to the lowest level in history.

The United States Senate voted down a lower house bill to extend the Bush tax cuts as they stood in law. However, the Senate did pass a bill extending the tax cuts but only to those individuals making $200,000 or less (FoxNews.com, 2012). The bill did not survive to become law.

The political debate exacerbated even more when it was reported that Republican presidential candidate Mitt Romney, a former venture capitalist, made financial gains from a special preferential capital gains provision offered to venture capital firms called *carried interest* (Syre, 2012). Burman (2012a) concurred with this assessment.
Therefore, the debates are both topical and intense. Republicans contend that lower capital gains tax rates stimulate business investment and create employment (FoxNews.com, 2012). The Democrats counter that lowering capital gains tax is nothing more than a tax gimmick and a guise to benefit the wealthy class by shifting ordinary income into preferential tax brackets, and they argue that lowering capital gains tax produces no economic benefits. These Democrats cite that the decade between 2000 and 2010 saw the lowest capital gains tax rates in history, yet was the poorest decade for employment creation in 70 years. Figure 5-D and Figure 5-E illustrate this point by noting that during this period both the absolute dollars raised for systemic venture funding and the number of venture deals sharply declined. Conservatives counter-argue that the normal business cycle was disrupted by the 2001 9/11 terrorist attacks, not to mention the two ongoing wars that were draining the treasury, as well as the monetary disruptions of 2006 that lead to the Panic of 2008 as reasons for the above referenced shift. In 2000 over 80 billion dollars in venture funds were raised. This declined to under 20 billion dollars by 2009. Additionally, the average size of individual investments ranged from 1 million to 20 million in 2000, depending on the investment stage, down to 1 million to 8 million by 2009.

**Figure 5-D Venture Dollars**

![Venture Dollars Raised in $B for Trailing 15 Years](image)

Source: Tunguz, 2012

Nonetheless, though, the debate continues within the political spectrum about the influence of capital gains tax on the investment preferences of venture companies. Suffice to say that its controversial status will continue.

At times political necessity and expediency demand what appear to be quick economic solutions to long-term structural problems within the systemic economy. Other fiscal tools, such as investment tax credit and depreciation write-offs, both independent variables within this thesis, have fallen victim to this type of political manipulation.
In general, this type of fiscal inconsistency has sent mixed signals to the business community, causing decision consternation and, at times, retrenchment. An often-cited example of this political behaviour is the comparison between the Economic Recovery Act of 1981 and the Tax Reform Act of 1986. Pro-business depreciation write-offs and investment tax credits offered up in the 1981 law were later rescinded in the 1986 law, thereby projecting confusion to the business community. American magnate Donald Trump complained before Congress that his many business interests suffered harm because of these sudden changes in fiscal policies. Trump contended that he had invested based upon one set of promulgated rules only to have the fiscal landscape changed by Congress within a few years (Summers, 1999).

As cited previously, banks and corporations have been sitting on two trillion dollars in liquidity, unwilling to lend or commit to business investment, citing mixed fiscal signals, political infighting and economic stagnation as the reasons (Byrne, 2011). Within the nation’s political leadership there are calls for a consistent, focused and highly honed fiscal and monetary policy that serves the economic interests of the country in terms of growth and employment creation.

Investment tax credit dates from 1962 and depreciation write-offs have been around since the late 1940s. Capital gains tax is one stalwart that has stood the test of time, originating in 1922, but it is no less subject to rate changes due to political wrangling, as referenced earlier.

The political battle lines are drawn in reference to capital gains tax. This researcher has taken the position that changes in the capital gain tax, as a stand-alone fiscal tool, impose upon the investment preferences of venture capital firms. Therefore, the debate would seem to be a moot point with regard to public policy,
because this researcher’s position does not have a positive or negative effect on the systemic economy. However, popular notions dictated by politics of the masses can side-track optimal outcomes.

Barlett (2001, p. 1) commented on this frustration over a decade ago, stating, "… there is likely to be a renewed effort in Congress to cut the capital gains tax rate - something conspicuously absent from the recently passed tax bill. Proponents of this change will cite economic studies showing increases in economic growth, realizations of gains and even higher revenue for the government. Opponents will dispute these points, but mainly argue that a capital gains tax cut is unfair because it only benefits the rich. If history is any guide, neither of these arguments will be decisive. In the end, whether the capital gains tax rate is cut or not will be solely a function of politics”.

An American economy exercising consistent fiscal policy oriented toward sustainable growth, price stability and job creation is good business but demands the exercise of political leadership by the nation’s ruling political parties. Undoubtedly, this would re-energize business confidence. Unfortunately, there has been a trend against that possibility in recent history due to systemic political divisions.

Political leaders of all persuasions understand the politics involved in employment creation. In addition, job creation is robust within the entrepreneurial sectors of the larger economy at least partially financed by venture capital. Recent bipartisan bills enacted into law, such as the Jobs Act, and other pieces of pro-entrepreneurial legislation that use favourable capital gains provisions as a rallying cry, are surfacing (Mills, 2012). Whether these laws produce the desired political outcome, economic growth and job creation, is yet to be determined.

One thing is quite clear: as stated by Holan (2012, p. 1), “Over the years, capital gains taxes have gone up and down, providing lots of fodder for economic analysis”.

**Private Sector Implications**
The private sector implications of this thesis are interesting. As referenced earlier, venture capital management is a close-knit group that tends to share the same values and bias when it comes to their industry.

During the time this researcher has studied the venture industry, which exceeds 30 years, not one comment advancing the notion that supports the null hypothesis has been made by a venture capitalist. This powerful bias is one reason why a more phenomenological approach to the thesis was avoided. Ingrained bias was a consideration. Through quantitative application, bias could be controlled to some extent.

Conclusions rendered in this thesis may impart some comfort to venture capitalists. The research demonstrates that a change in capital gains tax suggests a shift in industry investment preferences. This implies significance among the variables.

However, it does not denote a correlational or causal relationship. The results of this thesis could give support to the Conservative notion that changes in capital gains tax modify how the venture industry manages itself and invests its money. That in itself is neither good nor bad. From a purely observational standpoint, the significances observed support one prevailing theory that lowering capital gains taxes does stimulate investment in early-stage enterprises, where job creation flourishes, but it invokes questions in other preference areas as well.

Whether or not these venture managers truly believe the notion that capital gains tax affects their respective investment preferences is open to speculation. They are in unison in their private chorus that capital gains tax needs to be lowered or terminated altogether.
In this regard, they will find a friend in this thesis that will add to their stock of weapons when making their collective case.

**Gaps In The Literature**

*Primary Research*

The gaps in the research are evident. There have been no longitudinal studies conducted on how changes in capital gains tax effect the investment preferences of venture capital firms, with the exception of a few that are limited by time span and scope. Both executive directors of the two primary venture capital associations interviewed for this thesis confirmed that these studies simply do not exist. In addition, they acknowledged that there are no venture capital longitudinal studies tied to major changes in national fiscal policies.

A discussion paper presented by Romain and Van Pottelsberghe (2004) on behalf of Deutsche Bundesbank made two important points concerning these issues. The first acknowledges the important role venture capital has on the political stage, and the second the lack of appropriate research as stated, (Romain and van Pottelsberghe, p. 1),

“A growing number of empirical investigations outlines the crucial importance of VC for high-tech start-up growth (e.g., Engel (2002), and Davila, Foster and Gupta (2003), product marketing strategy (Hellmann and Puri, 2002) and survival (Manigart and Van Hyfte, 1999). The aggregate role of VC in the economy begins also to be an important area of research but very few quantitative investigations have been performed so far. At the aggregate economic level, Baumol (2002) argues with a theoretical model that entrepreneurial activity may account for a significant part of the “unexplained” proportion of the historical growth of the Western nations’ output” (pp. 58-59)."
Although the paper focuses on issues of venture capital within the German economy, comments were made about the venture capital industry within the United States as well.

Again, concentrating on the issue of the knowledge gap, the authors of the paper conclude,

“In a nutshell, there is some evidence that VC and entrepreneurial activity fosters innovative, patenting and growth performances, at least in the USA and Germany. Nevertheless, there is no formal evaluation of the impact of VC on aggregate economic growth, and very few investigations in other industrialized countries” (Romain and van Pottelsberghe, 2004, p. 4).

The U.S.-based National Venture Capital Association, the oldest of the venture capital trade organizations, has embarked on numerous studies, the latest of which is entitled Venture Impact, The Economic Importance of Venture Capital-Backed Companies to the U.S. Economy and was published in 2009 as a fifth edition. The piece is grounded in deductive methodology. Despite its apparent evidence that venture capital contributes mightily to the U.S. economy, it falls short in tackling the issues of venture capital investment preferences and how these preferences may be modified as a result of changes in systemic fiscal policies, in particular changes in capital gains tax.

Secondary Research

There is much data concerning the primary independent variable, as more fully demonstrated in the literature review. However, the other two less popular and less utilized independent variables are lacking in informational depth. They were treated as extraneous variables, and as such rendered constant in the analysis of the results.

Theory

Gompers and Lerner (1998, p. 190) expressed their position best by stating in a working paper that, “Venture capital is increasingly regarded as an important component of the U.S. economic landscape. While policy makers have often tried to affect the flow of funds into the sector, little has been known about the real impact of
such policy measures”. Gompers and Lerner (1998. p. 190) go further and state that, “… these programs have received little scrutiny by economists”.

Further reinforced by a forum paper concerning the effects of capital gains tax on employment in the state of Ohio is a position taken by Brannon et al. (2011, pp. 1-2) when they state,

“Given the strong link between capital gains taxation and entrepreneurial behavior, policy makers have often reduced capital gains tax rates to spur economic activity, in particular investment and job creation. Unfortunately, the literature has not kept pace with policy, offering little guidance on the magnitude of gains in investment or employment that might be expected from a cut in capital gains tax rates”.

Finally, financial journalist Holan (2012) notes that changes in capital gains tax policies do not necessarily influence economics quickly. He further questions the research foundation of the current theory, suggesting a link between capital gains tax and venture investing by hinting that the data supporting either side are not easily obtained, and thus conclusions are not reliable. This implies a gap in the literature.

General Reflections

In 2007 Congressman Sander Levin (2012) introduced legislation that would have terminated the preferential tax treatment afforded to venture capital managers for earning carried interest - money earned by using someone else’s funds. Since most venture capital firms are partnerships of one kind or another where tax benefits flow directly to the individual partners, a political firestorm erupted. Both sides dug in and prepared for battle.

Once the debate started raging, economic consultant Jackson issued the following statement that caught the eye of this researcher because it cites the time-period partially covered by the primary research. Jackson (2010, p. 1) stated,

“In 1978 Congress for once did the sensible thing and slashed capital gains taxes: This resulted in the supply of venture capital exploding.
By the start of 1979 a massive commitment to venture capital funds had taken place, rising from a pathetic $39 million in 1977 to a staggering $570 million at the end of 1978. Tax collections on long-term capital gains, despite the dire predictions of Keynesian big-spending critics of tax cuts, leapt from $8.5 billion in 1978 to $10.6 billion in 1979, $16.5 billion in 1983, and $23.7 billion in 1985. By 1981 venture capital outlays had soared to $1.4 billion, and the total amount of venture capital had risen to $5.8 billion. In 1981 the maximum tax rate on long-term capital gains was cut to 20 percent. This resulted in the venture capital pool surging to $11.5 billion. Astonishingly enough—to conventional economists, that is—venture capital outlays rose to $1.8 billion in the midst of the 1982 depression. This was about 400 percent more than had been out-laid during the 1970s slump. In 1983 these outlays rose to nearly $3 billion....In 1982 the U.S. General Accounting Office sampled 72 companies that had been launched with venture capital since the 1978 capital-gains tax cut. The results were startling. Starting with $209 million dollars in funds, these companies had paid $350 million in federal taxes, generated $900 million in export income, and directly created 135,000 jobs”.

However, there are detractors from this position. Economist Burman (2012, p. 1) asserted, "… it’s no surprise that there’s no obvious relationship between capital gains tax rates and economic growth. Indeed, the low rates on gains might do more harm than good”.

Finally, the unaffiliated Center on Budget and Policy Priorities (2012) published a detailed paper bringing into question the economic benefits of a reduction in capital gains tax. They use quantitative data to make their case.

This researcher cited the above to give notice to the reader about the large number of differing opinions concerning the independent variable, making the literature review difficult the manage.

Contributions And Implications

The literature and additional investigation do indicate this thesis to be original by virtue of its long time scale, with further gaps needing to be filled by appropriate research.
The contribution of this thesis can be defined in two realms, the applied and the academic. From an applied practical standpoint a venture manager will be able to use the results of this study to observe how his/her contemporaries and peers react to changes in capital gains tax. To some degree, it eliminates the risks of arbitrary action. Academically, future scholars will be able to build upon the only longitudinal study of its kind and carry it forward to an even longer timeline, maintaining its originality.

The challenge to any future research on the venture capital industry is the ability to access data in an orderly and timely fashion. For decades, the traditional venture capital industry has maintained important trade associations, such as the National Venture Capital Association, from where orderly data has been readily available and mined for research purposes. This situation has allowed 100% population testing without risking error due to random sampling, which strengthens confidence in the outcome.

The more recent appearance of individual angel investors has fostered the formation of local and regional membership clubs. Most maintain some limited records that can be accessed for research purposes. However, many clubs have disclosure restrictions. Presently, the crowd funding portals appear to be holding their investor files as confidential.

So the venture industry is becoming decentralized and segmented. With that comes problems associated with acquiring, managing and interpreting unwieldy raw data. In the future, data collection will not be as simple as calling the National Venture Capital Association and the National Association of Small Business Investment Companies and simply asking for their collective membership lists for the purposes of a questionnaire survey, and having the representative universe at hand.
The universe has expanded into diverse groups of both business entities and individuals demanding confidentially, making raw data collection nearly impossible. Additionally, it is too soon to conduct research of a longitudinal nature on crowd funding since it has only recently existed as an entrepreneurial funding outlet and a long-term footprint does not yet exist.

**Chapter Summary**

As Charles Dickens (1859) so profoundly professed in *A Tale of Two Cities*, “it was the best of times, it was the worst of times”. So goes the transition from the administration of Bill Clinton to that of George W. Bush, Jr. From an economic standpoint, the Bush was a failure, sporting the worst economic downturn since the 1930s, a banking crisis that took the western world to the precipice of another Great Depression and the worst decade for job growth in last seven decades (United States Bureau of Labor Statistics, 2011). All this occurred despite the fact that capital gains taxes were adjusted to their lowest levels in history because of the Bush tax package known as The Economic Growth and Tax Relief Reconciliation Act of 2001.

As recited earlier, the political right argues that confounding and extraneous variables prevented the capital gains tax reductions from taking hold. They claim long-term lingering effects from such events as the 9/11 attacks on the World Trade Center Twin Towers and the Pentagon, not to mention two ongoing regional wars having skewing effects. Even though the confounding and extraneous variables are controlled in this thesis, this researcher nonetheless observed this phenomenon and concluded there may have been some residual effects in the early part of the decade. They were systemically absorbed and priced out by mid-decade.
The knowledge gap is all too real by virtue of this being a longitudinal study spanning 24-years with numerous changes in fiscal stimulus provisions encompassing four major pieces of legislation. Some of the changes are accommodating to capital gains taxes and some are not. The length and complexity of the study lends itself to potential miscalculations and sampling errors. Additionally, the secondary data contained little data on longitudinal studies within the venture capital industry.

Additional research is needed because of the new crowd-funding paradigm. Since crowd funding transcends the traditional bounds of the venture capital industry, the degree to which it is influenced by capital gains tax must be explored. This thesis achieved a 100% population analysis which eliminated random sampling errors. This will not be possible with future research given universe decentralization and segmentation.

PostScript

Today, 18 January 2015, in the twilight of this thesis project, President Obama proposed raising capital gains tax, the independent variable of this study, from 15 to 23.5%, the highest rate since the mid-1990s.

The president and his party are packaging the request into a middle-class-oriented populist political platform that will be debated in the national presidential arena, as it has repeatedly in past campaigns. The opposing party is resisting the reduction, with debates already raging.

This vindicates and validates this researcher’s assertions that the thesis subject matter is topical, politically sensitive and subject to further research, as new primary data will soon be available as well as expanded literature in the future.

Thesis Epilogue
A little-known but interesting fact about the American Civil War is that the McLean family house stood in the middle of the battlefield of the first large conflict of that great tragedy called the Battle of Bull Run, also known as First Manassas. The family fled to a small town in central Virginia to escape the war but as fate would have it the conflict ended four years later in the little town of Appomattox with the surrender of General Lee to General Grant in the new McLean home: a complete circle.

Using the same analogy, this thesis began in 1978 and finished in 2014. The thesis assembled the research puzzle pieces and tied the problem statement to the theory, hypothesis, findings and results: a complete circle.

This researcher has been humbled by this thesis journey, hoping that the societal value of the research conclusions outweighs the emphasis placed on style and proper thesis structure, although these are important for the scholarly pursuit of any thesis process. Having much experience in the venture industry as a practitioner, consultant, professor and author, this researcher embarked upon the thesis with unwavering beliefs and constructs about the field. These have changed. Suffice to say that the journey has been invigorating, inspiring, and eye opening. This thesis concludes by quoting two famous Americans. Actor and director Woody Allen (n.d.) stated, “Confidence is what you have before you understand the problem”. In addition, world-renowned genius Albert Einstein (n.d) stated, “The formulation of the problem is often more essential than its solution”.

How true in both instances.
Definitions Glossary

Definitions that are common to the business and financial vernacular are not included, as per Creswell (2009). Other words that may not be well known but add structure to the theoretical framework are as follows.

- **Amount Invested from Minimum to Maximum** -- absolute amounts invested by venture capital firms into their clients’ companies.

- **Angel Investor(s)** -- an individual investor or group of individual investors who invest in entrepreneurial enterprises on their own account and conduct their own proprietary investment research. Many belong to clubs where the members have the same interests in terms of investment preferences.

- **Capital Gains Tax** -- a provision within the tax code that gives preferential treatment to those taxpayers who invest in certain assets, normally those assets that contribute to the economic stock of the nation. It first appeared in 1913 and became more developed from 1922.

- **Crowd Funding** -- a new paradigm in small business funding brought about by social media via the World Wide Web in which individual investors can directly invest in entrepreneurial enterprises, in many cases avoiding traditional financing intermediaries and the burden of excessive government regulation.
• Depreciation Write Off For Equipment -- a provision in the tax codes since the 1940s and used to reduce tax burdens for those businesses investing in physical assets. It is based on a yearly percentage of the total price of the purchase of the physical asset and is terminated once the asset is fully written off over time.

• Fiscal Policy -- those national policies dealing with taxing and spending.

• Funding Preference -- this is the stage at which a venture capital firm will invest its capital. It could be a company in its development stage, early stage or some later stage of existence. There are approximately ten stages.

• Geographic Preference -- this is the physical location where a venture capital firm invests its capital such as the Northwest, Southeast or Middle Atlantic, among others.

• Industry Preference -- this is the specific industry where a venture capital fund will invest its capital, such as computer software, consumer goods or retail, to name but a few.

• Investment Tax Credit -- a tax credit first proposed by the Kennedy Administration to stimulate investment in plant and equipment. The first credit was 7% of the amount invested. It has been phased in and out since its birth in 1962.

• Monetary Policy -- those national polices dealing with forced changes to the money and credit supply to manipulate systemic economic behaviour.
• Significance/Significant (1) -- this word is used in conjunction with the working hypothesis to denote whether variable interaction has sufficient magnitude and weight to be considered of import to the findings, at times rendered as an opinion by the researcher.

• Significance/Significant (2) -- this word is used to define “dependency” among the variables.

• Sub-Variable -- a dependent variable broken down into small measureable parts.

• Target Fiscal Polices -- those national policies dealing with taxes and spending directed towards specific purposes or industries. For example, the recently passed Jobs Act gives tax breaks to those individuals and/or entities that invest in early stage small businesses.

• Type of Funds Preference -- this is the form in which a venture capital company will inject funds into a client company. It could take the form of equity, debt, convertible instruments or any number of other possibilities.

• Venture Capital -- funding resources directed to more risky endeavours, such as business start-ups or market introductions of new products and services.

• Venture Capitalist -- usually a managing partner in a venture capital company who makes investment and management decisions on behalf of the company.

• Venture Capital Preferences – these are the collective marketing mixes of venture capital firms that determine how and where they invest their capital.
II

List Of Appendices

Appendix A – Original Research Proposal
Appendix B – Newspaper Article One
Appendix C – Newspaper Article Two
Appendix D – Corporate Tax Revenue Estimates By Country
Appendix E – Theoretical Framework
Appendices

Appendix A

Note: This Appendix Is The Original Research Proposal Only In Part To Demonstrate Its Direction And Focus. The Complete Original Is Included With The Raw Primary Data And Is Placed On Deposit With The University Library For Examination Purposes.

PROPOSED THESIS TITLE: A Longitudinal Analysis Critiquing The Effect Of Capital Gains Tax Policy On The Investment Preferences Of Venture Capital Companies In The United States Of America.

Aim And Focus Of The thesis

This research intends to study the effects upon managerial priorities and personal management styles of collective changes in the investment preferences of individual venture capital companies. It will be tied to a segment of national fiscal policy. This will help decision-makers, including this researcher, by providing a more enhanced understanding of potential “predictive” elements related to entrepreneurial sensitive fiscal policies that affect client markets. It will also help determine whether these elements are predictive in characteristic.

This leads to the basic research question: Do Longitudinal Changes In Capital Gains Tax Affect The Investment Preferences Of Venture Capital Companies?

Thus, the research will document changes in the investment preferences of individual venture capital companies against a backdrop of changing fiscal
Appendix A - Continued

policies, in particular as related to entrepreneur-sensitive fiscal policies. This will assist investment banking companies, their managers and this researcher to become attuned and adapted to the predictive elements of these fiscal policies. The implications are quite clear. If the research question is supported in the affirmative, then changes in fiscal policy do have a direct influence on our industry. This will assist this researcher and his firm to become more studious and acceptant of formal research input on an ongoing basis.

The researcher of this thesis project has reflected upon issues related to positivist versus phenomenological paradigms. This thesis embraces a positivist paradigm in an industry traditionally biased in favour of quantitative results. This researcher will build theory to validate positivist studies and open the doors to possibility and acceptance of additional methods of inquiry.

The objective of this thesis is to publish a definitive paper attempting to tie changes in entrepreneurial capital flows to changes in particular taxes and possibly national budget policies at large. After this the researcher will evaluate how these changes affect managerial policy within the researcher’s industry and company. A broad and historic correlational relationship exists between fiscal policy and venture capital (Minniti, 2008). The literature does not determine how the trend-line shifts collectively within the industry as a result of fiscal policy changes. This “information gap” will be filled as a result of this thesis.
Financing Your Small Business

Commercial banks will help the small business entrepreneur to a limited degree. It must be remembered that commercial banks are very conservative by nature and have the tendency to favor small businesses that have consistently demonstrated a strong track record. For the most part, these banks will not finance new unseasoned small business ventures.

When small businesses are financed by the commercial banks in the form of bank loans, the interest rates are usually higher than those rates afforded to the larger companies. The commercial banks supporting contention, relative to this position, is based upon risk factors.

Increased risks demand higher interest rates.

ANOTHER source of small business financing is the Small Business Administration, an agency of the United States Government. When conventional financing sources fail to produce tangible results, the SBA will facilitate small businesses in their search for capital. The SBA, under the Guarantee Loan Program, will guarantee up to 90 percent or $50,000, whichever is less, of a bank loan to a small firm.

The Participation Loan Program will allow the SBA to advance funds on a participation basis with a bank.

The interest rate on the SBA loan is usually the same as the bank loan rate. The SBA guarantee provides the bank with an incentive to make the loan. The SBA guarantee protects the bank if the borrower defaults on the loan.

MANY OTHER capital sources exist that cannot be explained within the confines of this discussion. Some of these include insurance companies, savings and loan associations, and other financial institutions. It is not possible to include all sources of capital in this discussion.

IT IS WRONG to assume that small businesses have no avenues for the borrowing and raising of capital. Many small firms are more exposed to capital than the larger enterprises. The difference is that the larger enterprises are more attuned to the capital markets than the small firms.

Small businesses will have to acquaint themselves with the availability of capital and how to go about acquiring it.

SINCE THE SMALL businessperson is faced with an array of capital sources as well as the complex task of preparing a proposal package, when considering obtaining of capital, it might be wise to seek the services of financial intermediaries (middlemen). These organizations will develop and market your proposal package to prospective capital sources for a retainer fee and/or a percentage of the total capital sources for a retained fee and/or a percentage of the full capital obtained.

Usually, the retention fee amounts to about $500 and the percentage fee of around 5 percent.

Free information relating to proposal packages, likes of small business investment companies and venture capital firms, along with small business administration programs, can be acquired by writing to:

James L. Silvester
Shepherd College Management Office
Winchester, Virginia 22601
All inquiries held in strict confidence.

Appendix C

Appendix D

Corporate tax revenue estimates (2008) As a % of GDP

Source: Organization for Economic Co-operation and Development (2012, p. 1)
### Appendix E

**Basic Theory Foundation**

(Targeted Fiscal Policy Affects the Venture Capital Industry)

**Theoretical Terminology**

(Recited Herein)

### Hypothesis/Hypotheses Development And Testing

**Working Hypothesis**

(Changes in the Capital Gain Provisions of the Tax Code affect Investment Preferences of Venture Capital Companies)

**To Be Tested**

- Changes in the Capital Gains Tax affect Venture Capital Funding Preferences
- Changes in the Capital Gains Tax affect Venture Capital Industry Preferences
- Changes in the Capital Gains Tax affect Venture Capital Geographic Preferences
- Changes in the Capital Gains Tax affect Venture Capital Type of Funds Preferences

Source: James Silvester, 2013
III

List Of Exhibits

Exhibit A – Outline Of An Investment Agreement
Exhibit B – Capital Gain Tax Rates
Exhibit C – Outside Forces Affecting The Five Dependent Variables
Exhibit D – Alternative Strategies Of Inquiry
Exhibit E – Quantitative, Mixed And Qualitative Methods
Exhibit F – Qualitative, Quantitative And Mixed Methods Approaches
Exhibit G – Tax Acts
Exhibit H – Basic Assumptions Used In The Statistical Analysis
Exhibit I – Short Question Style Questionnaire
Exhibit J – Semi Open Ended Questionnaire
Exhibit K – Questionnaire Evaluation
Exhibit L – Perry Structure
Exhibit M – Literature Map
Exhibit N – Graphing Supporting Surveys
Exhibit O – Questionnaire Results Expressed In Percentages
Exhibit P – Questionnaire Results Expressed In Whole Numbers
Exhibit Q - Map Of Overall Thesis Design
Exhibit R - Influences Upon Independent Variables And Primary Variables
Exhibit S- Critical Thinking Map
Exhibit T - Relationship Between Variables

Exhibit U - Dependent Variable Table

Exhibit V - Ethical Map
Exhibit A

Outline of an Investment Agreement

What follows is a detailed outline of the contents of a venture investment agreement. The main sections of a typical agreement are briefly described and many of the terms that might appear in each section are noted. However, not all of the terms listed will appear in an investment agreement. Venture capital investors select terms from among those listed (and some not listed) to serve their needs in a particular venture-investment situation.

1. Description of the Investment

This section of the agreement defines the basic terms of the investment. It includes descriptions of the:

a. Amount and type of investment.

b. Securities to be issued.

c. Guarantees, collateral subordination and payment schedules associated with any notes.

d. Conditions of closing: time, place, method of payment.

When investment instruments are involved that carry warrants, or debt conversion privileges, the agreement will completely describe them. This description will include the:

a. Time limits on the exercise of the warrant or conversion of the debt.

b. Price and any price changes that vary with the time of exercise.

c. Transferability of the instruments.

d. Registration rights on stock acquired by the investor.

e. Dilution resulting from exercise of warrants or debt conversion.

f. Rights and protections surviving after conversion, exercise, or redemption.

2. Preconditions to Closing

This section covers what the venture must do or what ancillary agreements and documents must be submitted to the investor before the investment can be closed. These agreements and documents may include:

a. Corporate documents; e.g., by-laws, articles of incorporation, resolutions authorizing sale of securities, tax status certificates, list of stockholders, and directors.

b. Audited financial statements

c. Any agreements for simultaneous additional financing from another source or for lines of credit.

d. Ancillary agreements; e.g., employment contracts, stock option agreements, key man insurance policies, stock repurchase agreements.

e. Copies of any leases or supply contracts.
### Exhibit A Continued

#### 3. Representations and Warranties by the Venture

This section contains legally binding statements made by the venture's officers that describe its condition on or before the closing date of the investment agreement. The venture's management will warrant:

<table>
<thead>
<tr>
<th>a.</th>
<th>That it is a duly organized corporation in good standing.</th>
</tr>
</thead>
<tbody>
<tr>
<td>b.</td>
<td>That its actions in entering into an agreement are authorized by its directors, allowed by its by-laws and charter, legally binding upon the corporation and not in breach of any other agreements.</td>
</tr>
<tr>
<td>c.</td>
<td>If a private placement, that the securities being issued are exempt from registration under the Securities Act of 1933 as amended, under state securities law, and that registration is not required under the Securities Exchange Act of 1934.</td>
</tr>
<tr>
<td>d.</td>
<td>That the capitalization, shares, options, directors and shareholders of the company are as described as (in either the agreement or an exhibit).</td>
</tr>
<tr>
<td>e.</td>
<td>That no trade secrets or patents will be used in the business that are not owned free and clear or if rights to use them have not been acquired.</td>
</tr>
<tr>
<td>f.</td>
<td>That no conflicts of interest exist in their entering the agreement.</td>
</tr>
<tr>
<td>g.</td>
<td>That all material facts and representations in the agreements and exhibits are true as of the date of closing (includes accuracy of business plan and financials).</td>
</tr>
<tr>
<td>h.</td>
<td>That the venture will fulfil its part of the agreement so long as all conditions are met.</td>
</tr>
<tr>
<td>i.</td>
<td>That any patents, trademarks or copyrights owned/used by the company are as described.</td>
</tr>
<tr>
<td>j.</td>
<td>That the principal assets and liabilities of the company are as described in attached exhibits.</td>
</tr>
<tr>
<td>k.</td>
<td>That there are no undisclosed obligations, litigations or agreements of the venture of a material nature not already known to all parties.</td>
</tr>
<tr>
<td>l.</td>
<td>That any prior year income statements and balance sheets are accurate as presented and have been audited, and that there have been no adverse changes since the last audited statements.</td>
</tr>
<tr>
<td>m.</td>
<td>That the venture is current on all tax payments and returns.</td>
</tr>
</tbody>
</table>

#### 4. Representations and Warranties by the Investor

This section contains any legally binding representations made by the investor. They are much smaller in number than those made by the company. The investor may warrant:

<table>
<thead>
<tr>
<th>a.</th>
<th>If a corporation, that is duly organized and in good standing.</th>
</tr>
</thead>
<tbody>
<tr>
<td>b.</td>
<td>If a corporation, that its action in entering into an agreement with the venture is authorized by its directors, allowed by its by-laws and charter, legally binding upon the corporation, and not in breach of any existing agreements.</td>
</tr>
<tr>
<td>c.</td>
<td>If a private placement, that the stock being acquired is for investment and not with a view to or for sale in connection with any distribution.</td>
</tr>
<tr>
<td>d.</td>
<td>The performance of his or her part of the contract if all conditions are met.</td>
</tr>
</tbody>
</table>
5. Affirmative Covenants

In addition to the above representations and warranties, the company in which the investor invests usually has a list of affirmative covenants with which it must comply. These could include agreeing to:

- a. Pay taxes, fees, duties and other assessments promptly.
- b. File all appropriate government or agency reports.
- c. Pay debt principal and interest.
- d. Maintain corporate existence.
- e. Maintain appropriate books of accounts and keep a specified auditing firm on retainer.
- f. Allow access to these records to all directors and representatives of the investor.
- g. Provide the investor with periodic income statements and balance sheets.
- h. Preserve and provide for the investor's stock registration rights as described in the agreement.
- i. Maintain appropriate insurance, including key man life insurance with the company named as beneficiary.
- j. Maintain minimum net worth, working capital or net assets levels.
- k. Maintain the number of investor board seats prescribed in the agreement.
- l. Hold prescribed number of directors’ meetings.
- m. Comply with all applicable laws.
- n. Maintain corporate properties in good condition.
- o. Notify the investor of any events of default of the investment agreement within a prescribed period of time.
- p. Use the investment proceeds substantially in accordance with a business plan that is an Exhibit within the agreement.

6. Negative Covenants

These covenants define what a venture must or must not do without prior investor approval; such approval not to be unreasonably withheld. A venture usually agrees not to do such things as:

- a. Merge, consolidate with, acquire or invest in any form of organization.
- d. Sell, lease or dispose of assets whose value exceeds a specified amount.
- e. Purchase assets whose value exceeds a specified amount.
<table>
<thead>
<tr>
<th>Exhibit A Continued</th>
</tr>
</thead>
<tbody>
<tr>
<td>f. Pay dividends.</td>
</tr>
<tr>
<td>g. Violate any working capital or net worth restrictions described in the investment agreement.</td>
</tr>
<tr>
<td>h. Advance to, loan to or invest in individuals, organizations or firms except as described in the investment agreement.</td>
</tr>
<tr>
<td>i. Create subsidiaries.</td>
</tr>
<tr>
<td>j. Liquidate the corporation.</td>
</tr>
<tr>
<td>k. Institute bankruptcy proceedings.</td>
</tr>
<tr>
<td>l. Pay compensation to its management other than as provided for in the agreement.</td>
</tr>
<tr>
<td>m. Change the basic nature of the business for which the firm was organized.</td>
</tr>
<tr>
<td>n. Borrow money except as provided for in the agreement.</td>
</tr>
<tr>
<td>o. Dilute the investors without giving them the right of first refusal on new issues of stock.</td>
</tr>
</tbody>
</table>

7. **Conditions of Default**

This section describes those events that constitute a breach of the investment agreement if not corrected within a specified time and under which an investor can exercise specific remedies. Events that constitute default may include:

<p>| |</p>
<table>
<thead>
<tr>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Failure to comply with the affirmative or negative covenants of the agreement.</td>
</tr>
<tr>
<td>b. Falsification of representations and warranties made in the investment agreement.</td>
</tr>
<tr>
<td>c. Insolvency or reorganization of the venture.</td>
</tr>
<tr>
<td>d. Failure to pay interest or principal due on debentures.</td>
</tr>
</tbody>
</table>

8. **Remedies**

This section describes the actions available to an investor in the event a condition of default occurs. Remedies depend on the form an investment takes. For a common stock investment the remedies could be:

<p>| |</p>
<table>
<thead>
<tr>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Forfeiture to the investor of any stock of the venture's principals that were held in escrow.</td>
</tr>
<tr>
<td>b. The investor receiving voting control through a right to vote on some or all of the stock of the venture's principals.</td>
</tr>
<tr>
<td>c. The right of the investor to “put” his stock to the company at a predetermined price.</td>
</tr>
</tbody>
</table>

For a debenture, the remedies might be:

<p>| |</p>
<table>
<thead>
<tr>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Forfeiture of any collateral used to secure the debt.</td>
</tr>
</tbody>
</table>

In the case of a preferred stock investment, the remedy can be special voting rights (e.g., the right to vote on the entrepreneurs’ stock) to obtain control of the Board of Directors.
## 9. Other Conditions

A number of other clauses that cover a diverse group of issues often appear in investment agreements. Some of the more common issues covered are:

- **a.** Who will bear the costs of closing the agreement; this is often borne by the company.
- **b.** Who will bear the costs of registration of the investors’ stock; again, the investors like this to be borne by the company for the first such registration.
- **c.** Right of first refusal for the investor on subsequent company financings.

## Exhibit B

### Capital Gains Tax Rates

<table>
<thead>
<tr>
<th>Ordinary Income Tax Rate</th>
<th>Short-term Capital Gains Tax Rate</th>
<th>Long-term Capital Gains Tax Rate</th>
<th>Short-term Capital Gains Tax Rate</th>
<th>Long-term Capital Gains Tax Rate</th>
<th>Short-term Capital Gains Tax Rate</th>
<th>Long-term Capital Gains Tax Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>10%</td>
<td>10%</td>
<td>5%</td>
<td>10%</td>
<td>0%</td>
<td>15%</td>
<td>15%</td>
</tr>
<tr>
<td>15%</td>
<td>15%</td>
<td>5%</td>
<td>15%</td>
<td>0%</td>
<td>15%</td>
<td>10%</td>
</tr>
<tr>
<td>25%</td>
<td>25%</td>
<td>15%</td>
<td>25%</td>
<td>15%</td>
<td>28%</td>
<td>28%</td>
</tr>
<tr>
<td>28%</td>
<td>28%</td>
<td>15%</td>
<td>28%</td>
<td>15%</td>
<td>31%</td>
<td>20%</td>
</tr>
<tr>
<td>33%</td>
<td>33%</td>
<td>15%</td>
<td>33%</td>
<td>15%</td>
<td>36%</td>
<td>20%</td>
</tr>
<tr>
<td>35%</td>
<td>35%</td>
<td>15%</td>
<td>35%</td>
<td>15%</td>
<td>39.6%</td>
<td>20%</td>
</tr>
</tbody>
</table>

Source: RTK & Associates, 2013
### Exhibit C

**Outside Forces Affecting The Five Dependent Variables**

<table>
<thead>
<tr>
<th>4.2 Drivers for change</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Driver: Expected Future development and Impact on Venture Capital industry</strong></td>
</tr>
<tr>
<td>Development of technology, esp. IT and communication</td>
</tr>
<tr>
<td>- Will go on at a high pace</td>
</tr>
<tr>
<td>- Broad variety of new developments; it is uncertain which of these will become industry standards and which not</td>
</tr>
<tr>
<td>- Higher risk of failure for investees gets higher</td>
</tr>
<tr>
<td>- Harder to determine successful investments</td>
</tr>
<tr>
<td>- Venture capital firms need more expert knowledge in various fields</td>
</tr>
<tr>
<td>- Shorter lifecycles for IT systems lead to higher capital requirements</td>
</tr>
<tr>
<td>- IT provides much easier access to information for everyone</td>
</tr>
<tr>
<td>- Investors seeking for higher returns are better informed and take smarter decisions – money will concentrate in investments with the best track records</td>
</tr>
<tr>
<td>- Knowledge, not money, becomes the key factor for a competitive advantage</td>
</tr>
<tr>
<td>Development of financial markets</td>
</tr>
<tr>
<td>- Rising liquidity leads to</td>
</tr>
<tr>
<td>- More money available to invest</td>
</tr>
<tr>
<td>- Higher prospects for IPOs</td>
</tr>
<tr>
<td>- Rise of new/alternative forms of investments that compete for funds</td>
</tr>
<tr>
<td>- If the first wave of e-start-ups starts to break down, the attractiveness of the whole industry for funds might decline, specialized and small venture capital firms will have problems</td>
</tr>
<tr>
<td>- Rising integration, liberalization on a global scale will improve the attractiveness and performance of financial markets in general, thus also boosting the venture capital industry</td>
</tr>
<tr>
<td>State of the economy</td>
</tr>
<tr>
<td>- Business cycles, economic up- and downturns influence venture capital companies and all industries in which they invest</td>
</tr>
<tr>
<td>- Economic upturn:</td>
</tr>
</tbody>
</table>
### Exhibit C Continued

**Outside Forces Affecting The Five Dependent Variables**

| · fuels growth and the number of start-ups – need for venture capital |
| · high returns seek for re-investment – willingness to invest in venture capital - funds will rise |
| · Economic downturn: |
| · investors’ preferences will slide from high returns to stable returns – investments in venture |
| capital funds lose attractiveness |
| · companies need money for restructuring/recovering |

**Development of political climate for the economy, globalization**

| · Global deregulation of capital markets provides new opportunities |
| · National protectionism and national subsidies programmes in some countries would make |
| these economies less attractive for investments |
| · Positive climate for education, R&D fuels new business opportunities and start-ups |
| · Tax policy can have a huge influence on investment preferences and can change the |
| attractiveness of venture capital funds for investors in both directions |
| · Globalization drives scale |
| · Requires huge investments in acquisitions and market development |
| · Need for external expertise |
| · Ongoing globalization and liberalization provide twofold opportunities for venture capital |

**Firms**

| · Direct venture capital activities in new markets, e.g. eastern European entrants into the EU |
| · companies go global and need funding for their international activities |

Source: Recklies and Recklies, 2000, pp. 10-11
## Exhibit D

**Alternative Strategies Of Inquiry**

<table>
<thead>
<tr>
<th>Quantitative</th>
<th>Qualitative</th>
<th>Mixed Methods</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Experimental designs</td>
<td>• Narrative research</td>
<td>• Sequential</td>
</tr>
<tr>
<td>• Non-experimental designs, such as surveys</td>
<td>• Phenomenology</td>
<td>• Concurrent</td>
</tr>
<tr>
<td></td>
<td>• Ethnographies</td>
<td>• Transformative</td>
</tr>
<tr>
<td></td>
<td>• Grounded theory studies</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Case study</td>
<td></td>
</tr>
</tbody>
</table>

Source: Creswell, (2009, p. 12)
Exhibit E

Quantitative, Mixed, and Qualitative Methods

<table>
<thead>
<tr>
<th></th>
<th>Quantitative Methods</th>
<th>Mixed Methods</th>
<th>Qualitative Methods</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-determined</td>
<td>Both pre-determined and emerging methods</td>
<td>Emerging methods</td>
<td></td>
</tr>
<tr>
<td>Instrument based questions</td>
<td>Both open- and closed-ended questions</td>
<td>Open-ended questions</td>
<td></td>
</tr>
<tr>
<td>Performance data, attitude</td>
<td>Multiple forms of data drawing on all</td>
<td>Interview data, observation data, document data,</td>
<td></td>
</tr>
<tr>
<td>data, observational data,</td>
<td>possibilities</td>
<td>and audio-visual data</td>
<td></td>
</tr>
<tr>
<td>and census data</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Statistical analysis</td>
<td>Statistical and text analysis</td>
<td>Text and image analysis</td>
<td></td>
</tr>
<tr>
<td>Statistical interpretation</td>
<td>Across databases interpretation</td>
<td>Themes, patterns, interpretation</td>
<td></td>
</tr>
</tbody>
</table>

Source: Creswell, (2009, p. 15)
Exhibit F

Qualitative, Quantitative and Mixed Methods Approaches

<table>
<thead>
<tr>
<th>Tend To Or Typically</th>
<th>Qualitative Approaches</th>
<th>Quantitative Approaches</th>
<th>Mixed Methods Approaches</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use these philosophical assumptions</td>
<td>Constructivist/advocacy/participatory knowledge claims</td>
<td>Post-positivist knowledge claims</td>
<td>Pragmatic knowledge claims</td>
</tr>
<tr>
<td>Employ these strategies of inquiry</td>
<td>Phenomenology, grounded theory, ethnography, case study and narrative</td>
<td>Surveys and experiments</td>
<td>Sequential, concurrent and transformative</td>
</tr>
<tr>
<td>Employ these methods</td>
<td>Open-ended questions, emerging approaches, text or image data</td>
<td>Closed-ended questions, predetermined approaches, numeric data</td>
<td>Both open-and closed-ended questions, both emerging and predetermined approaches, and both quantitative and qualitative data and analysis</td>
</tr>
<tr>
<td>Use these practices of research as the researcher</td>
<td>Positions him-or herself</td>
<td>Tests or verifies theories or explanations</td>
<td>Collects both quantitative and qualitative data</td>
</tr>
<tr>
<td></td>
<td>Collects participant meanings</td>
<td>Identifies variables to study</td>
<td>Develops a rationale for mixing</td>
</tr>
<tr>
<td></td>
<td>Focuses on a single concept or phenomenon</td>
<td>Relates variables in questions or hypotheses</td>
<td>Integrates the data at different stages of inquiry</td>
</tr>
<tr>
<td></td>
<td>Brings personal values into the study</td>
<td>Uses standards of validity and reliability</td>
<td>Presents visual pictures of the procedures in the study</td>
</tr>
<tr>
<td></td>
<td>Studies the context or setting of participants</td>
<td>Observes and measures information numerically</td>
<td>Employs the practices of both qualitative and quantitative research</td>
</tr>
<tr>
<td></td>
<td>Validates the accuracy of findings</td>
<td>Uses unbiased approaches</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Makes interpretations of the data</td>
<td>Employs statistical procedures</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Creates an agenda for change or reform</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Collaborates with the participants</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Creswell (2009, p. 17)
- Individual income tax reductions. Reduced marginal tax rates 23 percent over three years; reduced maximum rate to 50 percent and maximum capital gains rate to 20 percent; indexed income tax brackets, personal exemption and standard deduction for inflation beginning in 1985; and provided new deduction for two-earner married couples.

### Tax Reform Act of 1986
- Individual income tax provisions. Lowered top marginal tax rate to 28 percent; increased standard deduction to $5,000 for married couples; increased personal exemption to $2,000; and increased earned income tax credit.
- Repealed two-earner deduction, long-term capital gains exclusion, state and local sales tax deduction, income averaging and exclusion of unemployment benefits. Limited IRA eligibility, consumer interest deduction, deductibility of passive losses, medical expenses deductions, deduction for business meals and entertainment, pension contributions and miscellaneous expense deduction.
- Reduced top corporate marginal tax rate to 34 percent and tightened corporate minimum tax.
- Repealed investment tax credit and lengthened capital cost recovery periods.
- Extended research and experimentation credit: initiated new low-income housing tax credit and phased in deductibility of health insurance costs of self-employed individuals.

### Omnibus Budget Reconciliation Act of 1993
- Individual income tax rate increases. Imposed new higher tax rates of 36 percent and 39.6 percent. Increased tax rates and exemption amounts under the AMT. Permanently extended the itemized deduction limitation and the personal exemption phase-out legislated in OBRA 1990.
- Corporate tax rate increases. Increased corporate tax rate to 35 percent on income above $10 million.
- Motor fuels tax increase. Increased fuel taxes by 4.3 cents per gallon (plus extended the current motor fuels tax of 2.5 cents per gallon).
- Reduced business meals and entertainment deductions.
### Economic Growth and Tax Relief Reconciliation Act of 2001 (EGTRRA)

- **Individual income tax rate reductions.** When fully-phased in 2006, levied a new 10 percent rate on the first $12,000 of income for a married couple ($10,000 for a single head of household and $6,000 for an individual); the 15 percent rate begins thereafter; reduced 28 percent rate to 25 percent, the 31 percent rate to 28 percent, the 36 percent rate to 33 percent and the 39.6 percent rate to 35 percent. Repealed the phase-out of the itemized deduction and personal exemption by 2008. Made the 10 percent bracket retroactive, resulting in refund checks of up to $300 for individuals and $600 for couples 4-5 months hence.

- **Child tax credit increase.** Doubled the $500 per child tax credit to $1,000 and made it refundable for persons earning above $10,000 to the extent of 10 percent for every dollar of earned income above $10,000 up to the maximum per child. The refundable rate rises to 15 percent in 2005 and the $10,000 threshold is indexed for inflation.

- **Marriage penalty abatement.** Lowered marriage penalties for couples by making the standard deduction and 15 percent bracket twice the size as for a single taxpayer.

- **Child and dependent care tax credit increases.** Provided a credit of 25 percent on expenditures for employer-provided childcare and increases the dependent care and adoption credits.

- **Estate and gift tax reduction and elimination.** Gradually reduced the estate and gift tax rate from 55 percent to 45 percent by 2007; raised the effective exemption from $1 million in 2002 to $3.5 million in 2009. Eliminated the estate tax portion entirely in 2010 in lieu of a capital gains tax with high disregard ($3.3 million) for transfers to a surviving spouse.

- **Retirement savings contribution ceiling increases.** Increased IRA annual contribution limits from $2,000 to $5,000 and 401(k) limits from $10,000 to $15,000; allowed individuals 50 and older to make larger, catch-up contributions; permitted Roth 401(k)s beginning in 2006; and established a temporary credit for retirement savings for households earning $50,000 or less.

- **Education credit and deduction expansions.** Among others, allowed $4,000 maximum deduction of college tuition expenses; allowed tax-free distributions from pre-paid college tuition plans, allowed private institutions to offer these, and allowed taxpayers to simultaneously claim HOPE or Lifetime Learning credits in some instances; eliminated the 60 month limit on student loan interest deduction.

Source: Tax Policy Center, 2012
Exhibit H

Basic Assumptions Used In The Statistical Analysis

• Each variable received its own column in Excel, SPSS 20 and TI84 Plus.

• The dependent variables were noted on the Y-axis and the independent variable on the X-axis (Mason, 1974).

• The descriptive statistics used both the percentages of questionnaires received and the number of questionnaires received.

• Percentages were used in analysing the descriptive statistics. Although the universe remained relatively constant in term of the raw numbers queried by the questionnaire in all four surveys, the returning questionnaires which made up the sample declined every year. Therefore, samples returns were compared to the questions answers on the questionnaire to develop a proportional percentage matrix to use with the descriptive analysis.

• The chi-square analysis used only whole numbers of questionnaires…. no percentages were used. The chi-square results were expressed as significance among the variables.

• Standard deviations and Spearman’s Coefficient were expressed as correlations.
Exhibit H Continued

- An alpha ($\alpha$) value of .05 was used in the chi-square analysis and is generally accepted within the scientific research community (Czaplewski, 2012).
- No cell within the chi-square analysis had an expected frequency below 1, as suggested by Cochran (1952) as cited in Howell (n.d.).
- No less than 80% of the cells within the chi-square analysis had an expected frequency of 5 or more, as suggested by Cochran (1952) as cited in Howell (n.d.).
- Two variable rows were collapsed into other rows due to low or no frequencies.
- All rows displaying zero or low frequencies in any given cell were collapsed into the preceding row, accounting for a difference in the number of sub-variables, which was 38, and the number of scatter plots, which was 36.

This researcher found the term ‘hypothesis testing’ to have different meanings among varying groups, leading to fallacies emerging.

Consequently, this researcher adopted Gerstman (2006, p. 6.5), as set forth below,

“1. Failure to reject the null hypothesis leads to its acceptance. (WRONG! Failure to reject the null hypothesis implies insufficient evidence for its rejection.)
Exhibit H Continued

2. The p value is the probability that the null hypothesis is incorrect. (WRONG! The p value is the probability of the current data or data that is more extreme assuming H0 is true.)
3. $\alpha = .05$ is a standard with an objective basis. (WRONG! $\alpha = .05$ is merely a convention that has taken on unwise mechanical use. There is no sharp distinction between “significant” and “insignificant” results, only increasingly strong evidence as the p value gets smaller. Surely god loves $p = .06$ nearly as much as $p = .05$)
4. Small p values indicate large effects. (WRONG! p values tell you next to nothing about the size of an effect.)
5. Data show a theory to be true or false. (WRONG! Data can at best serve to bolster or refute a theory or claim.)
6. Statistical significance implies importance. (WRONG! Statistical significance says very little about the importance of a relation.)

- Since Gerstman contends the p value has no relevance to absolute value other than to accept or reject the null hypothesis at plus or minus .05, this researcher relied heavily on the r and $r^2$ coefficient within the descriptive statistics to evaluate degree of independence or dependence between the variables and to proof the chi-square results.
- Significance was also tested at .10 alpha.
- This researcher points out the use of the word significant when it comes to accepting or rejecting the null hypothesis. Some statistical outcomes will reveal correlations by alternative testing. In this instance, this researcher made a value judgment about how to interpret the results and using what parameters, and then applying them to the particular analysis being used (Mason, 1974).
- There is one primary independent variable, that being capital gains tax. Initially, the thesis started out with two primary
Exhibit H Continued

- dependent variables: funding preferences and type of funds preferences. Upon analysing the findings it became increasingly apparent that another two secondary variables would have to enter the analysis: industry preferences and geographic preferences, making a total of four primary dependent variables.

- This thesis studies data dispersion among the dependent variables, also known as output variables, derived from changes in the independent variable, in this case 3 changes spanning 12 years. It is assumed by this researcher that the tighter the pattern of output data, the more independence displayed, with diminished significance between the independent variable and dependent variables.

- This study does not attempt to analyse any proportionate relationships between the x and y variables. It only endeavours to acknowledge whether or not any changes in x contribute to changes in y, without regard to proportionate measurements.
## Exhibit I

**Short-Question-Style Questionnaire**

<table>
<thead>
<tr>
<th><strong>Venture Capital Survey</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Firm Name &amp; Address:</strong></td>
</tr>
<tr>
<td><strong>Contact Person:</strong></td>
</tr>
<tr>
<td><strong>Telephone Number:</strong></td>
</tr>
<tr>
<td><strong>Type Of Firm:</strong></td>
</tr>
<tr>
<td><strong>Funding Preference:</strong></td>
</tr>
<tr>
<td>- Seed Funding</td>
</tr>
<tr>
<td>- Start-Up Funding</td>
</tr>
<tr>
<td>- First-Round Funding</td>
</tr>
<tr>
<td>- Second-Round Funding</td>
</tr>
<tr>
<td>- Third-Round Funding</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Amount Invested:</strong></td>
</tr>
<tr>
<td><strong>Maximum:</strong></td>
</tr>
</tbody>
</table>
Exhibit I Continued

March 1, 2004

Dear Venture Manager:

I am completing my doctoral work at Anglia Polytechnic University in the United Kingdom. The title of my thesis is A Longitudinal Analysis Critiquing The Effect Of Capital Gains Tax Policy On The Investment Preferences Of Venture Capital Companies In The United States Of America.. I am U.S. based and this is a study dealing with the American venture capital industry.

Enclosed is a brief questionnaire that is being used to gather information and data concerning the investment preferences of your company.

I am attempting to collectively analyze the shifting investment preferences of individual venture capital companies in relation to changes in national fiscal policies. For example, do changes in the capital gains tax affect the investment preference of venture firms? This is but one factor that will be addressed.

Your company information will be held in the strictest of confidence.

Answering and returning this questionnaire will signify your willingness to participate in this sampling survey. Only a responsible party (officer and/or partner) over the age of eighteen should reply.

Only members of the National Venture Capital Association and the Association of Small Business Investment Companies are being queried. These two stalwart organizations have been in existence for many years with longstanding members who readily give investment preference information. They best represent a stable cross-section of the venture capital industry given the fragmentation of the industry into dubious and less identifiable subgroups in the last few years.
Exhibit I Continued

The information will be used to construct a collective model integrating all returned surveys. Conclusions will be included in my thesis and be available for publication.

However, no company-specific information will be published or released. Strict confidence for your reply will be assured.

Should you have a change of heart after participating in the survey, you may withdraw your survey response prior to June 1, 2004.

Should you so desire, I will email a copy of the thesis upon completion and/or a summary version of the findings. Please let me know.

Thank you for assistance, time, and consideration.

Best Personal Regards, James L. Silvester
Exhibit J

Semi Open-Ended Questionnaire

Do you believe that targeted fiscal policy, such as changes in the capital gains provisions, changes in depreciation write off provisions, and changes in marginal tax rates, have an overall effect on investment in the entrepreneurial sector of the economy?

Yes        No

Do you believe that an accommodating (relaxation) in fiscal policy such a reduction in the capital gains provision, reductions in marginal tax rates, and increases in depreciation write-off have a positive effect on entrepreneurial investment?

Yes        No

If you believe that fiscal policy does in fact have an effect on investing in the entrepreneurial sector, do you think it affects the investment preferences of the investor? For example, would a favorable or negative fiscal policy environment dictate whether an investor would invest in an early stage or later stage company or whether they would invest with equity or debt?

Yes        No

There is a small but growing number of professionals, mainly CPAs that believe fiscal policies have little or no effect on the investment in the entrepreneurial sector, that instead “overall economic conditions” drive entrepreneurial investment. In other words, investors are driven by general economic conditions and not by changes in tax rates. Do you believe this to be true?

Yes        No
Exhibit J Continued

Do you believe it to be partially true? In other words, both general economic conditions and fiscal policy have an effect on entrepreneurial investment. For example, during a period of restrictive fiscal policy where marginal tax rates and capital gains provision are high but general economic conditions are very robust with an expanding and growing general economy, will investors invest in the entrepreneurial sector?

Yes        No

Conversely, when fiscal policy is favorable with low marginal tax rates and low capital gains provisions but a negative overall general economy (low or negative growth), will investors invest in the entrepreneurial sector?

Yes        No

James L. Silvester
102 Lakeside Drive
Stephens City, Virginia  22655
540-664-2934
netsil01@gmail.com
www.jamessilvester.com

June 23, 2010

Brett Palmer, President
National Association Of Small Business Investment Companies
1100 H Street, NW
Suite 610
Washington, D.C.  20005
Dear Mr. Palmer:
Exhibit J Continued

I am a PhD student completing research for my thesis at the Ashcroft International School of Business in the United Kingdom.

I am studying the effects that changes in national fiscal policies, in particular those policies directed to the entrepreneurial sector of the economy such as changes in the capital gains provision, overall marginal tax rates, and to a lesser extent depreciation write-off rates, have on the “investment preferences” of investment firms.

My research has been conducted over a 20-year span using a survey questionnaire that has not been modified or changed over that period to ensure data validity. Each survey was conducted at a time immediately (18 to 24 months) following a major shift in national fiscal policy, the thinking being that it generally takes that long for changes to have an effect on the economy.

I surveyed only members of the National Association of Small Business Investment Companies and the National Association of Venture Capital Companies to maintain a “controlled” sample.

As executive officer of one of the above organizations I would greatly appreciate your taking a few minutes and completing the survey questionnaire enclosed. It is essential to my completing the final leg of the research endeavor.

I am enclosing herein the survey questionnaire. Please fax back to me at 540-722-6364 at your convenience. I will also email this letter and survey should you decide to return it by email. My email address is netsil01@gmail.com.

Thank you for your time and consideration, and I will submit to you the final results of my research at least sixty (60) days prior to going public with the data, to use as you wish.
Exhibit J Continued

You may check my background at www.jamessilvester.com. If you have any questions or additional comments please feel free to call me at 540-664-2934.

Again, thank you in advance for your time and consideration.

Best Personal Regards,

/s/Jim Silvester

James (Jim) L. Silvester
Exhibit K

Questionnaire Evaluation

<table>
<thead>
<tr>
<th>Design the Questions and Instructions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Determine the Order of Presentation</td>
</tr>
<tr>
<td>Write Accommodating Letter/Request Letter</td>
</tr>
<tr>
<td>Test Questionnaire with Small Sample</td>
</tr>
<tr>
<td>Choose Method for Distribution and Return</td>
</tr>
<tr>
<td>Plan Strategy for Dealing with Non-Responses</td>
</tr>
<tr>
<td>Conduct Tests for Validity and Reliability</td>
</tr>
</tbody>
</table>

Source: Creswell (2009, p. 192)
Exhibit L

Perry Structure

Title page
Abstract (with keywords)
Table of contents
List of tables
List of figures
Abbreviations
Statement of original authorship
Acknowledgments

1 Introduction
1.1 Background to the research
1.2 Research problem, hypotheses/research issues and contributions
1.3 Justification for the research
1.4 Methodology
1.5 Outline of the report
1.6 Definitions
1.7 Delimitations of scope and key assumptions
1.8 Conclusion

2 Research issues (sections 2.3 and 2.4 might be allotted a chapter to themselves in a PhD or DBA thesis)
2.1 Introduction
2.2 (Parent disciplines/fields and classification models)
2.3 (Immediate discipline: analytical, theoretical frameworks and related research issues or hypotheses) (this section sometimes has its own
2.4 Conclusion

3 Methodology (there may be separate chapters for the methodologies of stages one and two of a PhD or DBA thesis)

3.1 Introduction

3.2 Justification for the paradigm and methodology

3.3 (Research procedures)

3.4 Ethical considerations

3.5 Conclusion

4 Analysis of data (this chapter usually refers to the analysis of the major stage of the research project)

4.1 Introduction

4.2 Subjects

4.3 (Patterns of data for each research issue or hypothesis)

4.4 Conclusion

5 Conclusions and implications

5.1 Introduction

5.2 Conclusions about each research issue or hypothesis

5.3 Conclusions about the research problem

5.4 Implications for theory

5.5 Implications for policy and practice

5.5.1 Private sector managers
5.5.2 Public sector policy analysts and managers

5.6 Limitations (if the section is necessary)

5.7 Implications for theory (this section is optional)

5.8 Further research
Exhibit M
Exhibit N

Scatter Plot Graphs With $r^2$ Calculations

Graphing Supporting Surveys One, Two & Three

Graphing Supporting Surveys One, Two, Three & Four

(Note: There are over seventy-two (72) graphs. Only two are presented herein in order to demonstrate the method of calculation and to save space. One graph includes the first three surveys and one includes all four surveys. All graphs will be included with the raw primary data and held on deposit with the University Library for the purposes of future examination.)

GRAPH

/SCATTERPLOT(BIVAR)=Capital_Gains_Tax WITH Seed_Funding

/MISSING=LISTWISE.

[DataSet1] T:\Research work\James Silvester\dataset 01.sav
Exhibit N Continued

GRAPH

/SCATTERPLOT(BIVAR)=Capital_Gains_Tax WITH Seed_Funding

/MISSING=LISTWISE.

[DataSet2] T:\Research work\James Silvester\August 20 2013 (With additional survey)\dataset 02 (Combined).sav
### Exhibit O Questionnaire Results Expressed In Percentages

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Survey Number</td>
<td>*1</td>
<td>*2</td>
<td>*3</td>
<td>*4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Capital Gains Tax: Primary Independent Variable X</td>
<td>20%</td>
<td>28%/33%</td>
<td>29.20%</td>
<td>15.70%</td>
<td>Source: Citizens For Tax Justice, 2011</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Preference Categories: Dependent Variables Y</td>
<td>Numbers Below Expressed As Percentage Of Questionnaires Returned</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Funding Preference - Primary Dependent Variable</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seed Funding</td>
<td>18</td>
<td>21</td>
<td>30</td>
<td>24</td>
<td>23.25</td>
<td>6.244998</td>
<td>5.123475</td>
</tr>
<tr>
<td>Start-up Funding</td>
<td>35</td>
<td>50</td>
<td>45</td>
<td>20</td>
<td>37.5</td>
<td>7.637626</td>
<td>13.22876</td>
</tr>
<tr>
<td>First Round</td>
<td>38</td>
<td>31</td>
<td>45</td>
<td>8</td>
<td>30.5</td>
<td>7</td>
<td>16.052</td>
</tr>
<tr>
<td>Second Round</td>
<td>36</td>
<td>34</td>
<td>40</td>
<td>0</td>
<td>27.5</td>
<td>3.05505</td>
<td>18.50225</td>
</tr>
<tr>
<td>Third Round</td>
<td>27</td>
<td>25</td>
<td>27</td>
<td>0</td>
<td>19.75</td>
<td>1.154701</td>
<td>15.11</td>
</tr>
<tr>
<td>Fourth Round</td>
<td>17</td>
<td>19</td>
<td>16</td>
<td>0</td>
<td>13</td>
<td>1.527525</td>
<td>8.76</td>
</tr>
<tr>
<td>Later Stage</td>
<td>24</td>
<td>41</td>
<td>39</td>
<td>56</td>
<td>40</td>
<td>9.291573</td>
<td>13.09</td>
</tr>
<tr>
<td>Industry Preference - Secondary Dependent Variable</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>--------------------------------------------------</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diversified</td>
<td>40</td>
<td>52</td>
<td>51</td>
<td>80</td>
<td>55.75</td>
<td>6.658328</td>
<td>17.06</td>
</tr>
<tr>
<td>Communications</td>
<td>22</td>
<td>34</td>
<td>29</td>
<td>24</td>
<td>27.25</td>
<td>6.027714</td>
<td>5.38</td>
</tr>
<tr>
<td>Computer Hardware</td>
<td>16</td>
<td>13</td>
<td>16</td>
<td>8</td>
<td>13.25</td>
<td>1.732051</td>
<td>3.77</td>
</tr>
<tr>
<td>Computer Software</td>
<td>22</td>
<td>17</td>
<td>29</td>
<td>20</td>
<td>22</td>
<td>6.027714</td>
<td>5.10</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>26</td>
<td>35</td>
<td>35</td>
<td>28</td>
<td>31</td>
<td>5.196152</td>
<td>4.69</td>
</tr>
<tr>
<td>Wholesale Distribution</td>
<td>7</td>
<td>8</td>
<td>7</td>
<td>12</td>
<td>8.5</td>
<td>0.57735</td>
<td>2.38</td>
</tr>
<tr>
<td>Medical Technology</td>
<td>27</td>
<td>31</td>
<td>35</td>
<td>20</td>
<td>28.25</td>
<td>4.75</td>
<td>6.40</td>
</tr>
<tr>
<td>Media</td>
<td>8</td>
<td>10</td>
<td>8</td>
<td>4</td>
<td>7.5</td>
<td>1.154701</td>
<td>2.52</td>
</tr>
<tr>
<td>Other Technology</td>
<td>15</td>
<td>22</td>
<td>15</td>
<td>28</td>
<td>20</td>
<td>4.041452</td>
<td>6.27</td>
</tr>
<tr>
<td>Retail</td>
<td>12</td>
<td>8</td>
<td>13</td>
<td>16</td>
<td>12.25</td>
<td>2.645751</td>
<td>3.30</td>
</tr>
<tr>
<td>Services</td>
<td>15</td>
<td>14</td>
<td>21</td>
<td>44</td>
<td>23.5</td>
<td>3.785939</td>
<td>14.01</td>
</tr>
<tr>
<td>Franchises</td>
<td>7</td>
<td>6</td>
<td>6</td>
<td>NA</td>
<td>4.75</td>
<td>0.57735</td>
<td>NA</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Geographic Preference - Secondary Dependent Variable</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>No Preference (USA)</td>
<td>41</td>
<td>38</td>
<td>52</td>
<td>96</td>
<td>56.75</td>
</tr>
<tr>
<td>Northeast</td>
<td>6</td>
<td>8</td>
<td>11</td>
<td>16</td>
<td>10.25</td>
</tr>
<tr>
<td>Mid Atlantic</td>
<td>4</td>
<td>5</td>
<td>4</td>
<td>12</td>
<td>6.25</td>
</tr>
<tr>
<td>Southeast</td>
<td>5</td>
<td>5</td>
<td>8</td>
<td>20</td>
<td>9.5</td>
</tr>
<tr>
<td>Midwest</td>
<td>7</td>
<td>6</td>
<td>12</td>
<td>48</td>
<td>18.25</td>
</tr>
<tr>
<td>Rocky Mountain States</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>8</td>
<td>2.5</td>
</tr>
<tr>
<td>Northwest</td>
<td>3</td>
<td>5</td>
<td>11</td>
<td>0</td>
<td>4.75</td>
</tr>
<tr>
<td>Far West</td>
<td>4</td>
<td>6</td>
<td>7</td>
<td>0</td>
<td>4.25</td>
</tr>
<tr>
<td>Southwest</td>
<td>5</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>7.25</td>
</tr>
<tr>
<td>One State Only</td>
<td>11</td>
<td>10</td>
<td>17</td>
<td>0</td>
<td>9.5</td>
</tr>
<tr>
<td>Immediate Area</td>
<td>10</td>
<td>10</td>
<td>11</td>
<td>0</td>
<td>7.75</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Type of Funds Preference - Primary Independent Variable</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Leveraged Buyouts</td>
<td>31</td>
<td>34</td>
<td>17</td>
<td>52</td>
<td>33.5</td>
</tr>
<tr>
<td>Acquisitions</td>
<td>26</td>
<td>24</td>
<td>35</td>
<td>68</td>
<td>38.25</td>
</tr>
</tbody>
</table>

302
**Equity (Stock)**

<table>
<thead>
<tr>
<th></th>
<th>58</th>
<th>59</th>
<th>61</th>
<th>88</th>
<th>66.5</th>
<th>1.527525</th>
<th>14.39</th>
</tr>
</thead>
</table>
**Loans**

|        | 17 | 20 | 20 | 20 | 19.25 | 1.732051 | 1.50  |
**Loans with Equity Kickers**

|        | 20 | 18 | 21 | 0  | 14.75 | 1.527525 | 9.91  |
**Bonds**

|        | 3  | 3  | 1  | 0  | 1.75  | 1.154701 | 1.50  |
**Bonds with Equity Kickers**

|        | 3  | 2  | 1  | 0  | 1.5   | 1        | 1.29  |
**Leasing**

|        | 1  | 0  | 0  | 0  | 0.25  | 0.57735  | 0.45  |
**Mezzanine**

|        | NA | NA | NA | 44 | 11    | 11       | NA    |

| Universe | 900 | 900 | 900 | 900 | 900 |
| Returns  | 212 | 184 |    | 179 | 102 |
| Percentage Of returns | 23.6 | 20.4 | 19.9 | 11.3 |

**Facts:**
There is no subset since the entire membership of both the NVCA and NASBIC were required


*2 represents the § Tax Reform Act of 1986 – Data Collected 1988 - Capital Gains Tax : 28%/33% Survey Two

*3 represents the § Revenue Reconciliation Act Of 1993 – Data Collected 1995 - Capital Gains Tax: 29.2% Survey Three

*4 represents the § Economic Growth And Tax Relief Reconciliation Act of 2001 -Data Collected - 2007 Capital Gain Tax: 15.7% Survey Four
<table>
<thead>
<tr>
<th>Survey Number</th>
<th>*1</th>
<th>*2</th>
<th>*3</th>
<th>*4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capital Gains Tax: Primary Independent Variable X</td>
<td>20%</td>
<td>28%/33%</td>
<td>29%</td>
<td>15.70%</td>
</tr>
</tbody>
</table>

Sources: Citizens For Tax Justice 2011

<table>
<thead>
<tr>
<th>Preference Categories: Dependent Variables Y</th>
<th>Observed Values</th>
<th>Row Sums</th>
</tr>
</thead>
<tbody>
<tr>
<td>Funding Preference - Primary Dependent Variable</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seed Funding</td>
<td>39 44</td>
<td>52 24</td>
</tr>
<tr>
<td>Start-up Funding</td>
<td>75 107</td>
<td>81 20</td>
</tr>
<tr>
<td>First Round</td>
<td>80 65</td>
<td>80 8</td>
</tr>
<tr>
<td>Second Round</td>
<td>77 73</td>
<td>72 0</td>
</tr>
<tr>
<td>Third Round</td>
<td>58 52</td>
<td>44 0</td>
</tr>
<tr>
<td>Fourth Round</td>
<td>36 41</td>
<td>28 0</td>
</tr>
<tr>
<td>Later Stage</td>
<td>62 87</td>
<td>70 56</td>
</tr>
<tr>
<td>Leveraged Buyouts</td>
<td>65 73</td>
<td>31 52</td>
</tr>
<tr>
<td>Acquisitions</td>
<td>55 51</td>
<td>63 68</td>
</tr>
<tr>
<td>Column Sum</td>
<td>547.00 593</td>
<td>521 228</td>
</tr>
<tr>
<td>Industry Preference - Dependent Variable</td>
<td>Observed Values</td>
<td></td>
</tr>
<tr>
<td>----------------------------------------</td>
<td>-----------------</td>
<td></td>
</tr>
<tr>
<td>Diversified</td>
<td>85  110  92  80  367</td>
<td></td>
</tr>
<tr>
<td>Communications</td>
<td>47  72  51  24  194</td>
<td></td>
</tr>
<tr>
<td>Computer Hardware</td>
<td>33  28  29  8   98</td>
<td></td>
</tr>
<tr>
<td>Computer Software</td>
<td>47  36  52  20  155</td>
<td></td>
</tr>
<tr>
<td>Manufacturing</td>
<td>56  74  63  28  221</td>
<td></td>
</tr>
<tr>
<td>Wholesale Distribution</td>
<td>18  21  15  12  66</td>
<td></td>
</tr>
<tr>
<td>Medical Technology</td>
<td>58  65  63  20  206</td>
<td></td>
</tr>
<tr>
<td>Media</td>
<td>31  46  28  4   109</td>
<td></td>
</tr>
<tr>
<td>Other Technology</td>
<td>26  18  24  28  96</td>
<td></td>
</tr>
<tr>
<td>Retail</td>
<td>32  29  38  16  115</td>
<td></td>
</tr>
<tr>
<td>Services</td>
<td>15  17  12  44  88</td>
<td></td>
</tr>
<tr>
<td>Franchises</td>
<td>15  12  11  0   38</td>
<td></td>
</tr>
<tr>
<td>Column Sum</td>
<td>463 528 478 284 1753</td>
<td></td>
</tr>
</tbody>
</table>
### Geographic Preference - Dependent Variable

<table>
<thead>
<tr>
<th>Preference</th>
<th>Observed Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Preference (USA)</td>
<td>87  81 93 96 357</td>
</tr>
<tr>
<td>Northeast</td>
<td>13  17 19 16 65</td>
</tr>
<tr>
<td>Mid Atlantic</td>
<td>9   10  7  12 38</td>
</tr>
<tr>
<td>Southeast</td>
<td>11  11 15 20 57</td>
</tr>
<tr>
<td>Midwest</td>
<td>14  12 11 48 85</td>
</tr>
<tr>
<td><strong>Rocky Mountain Sts</strong></td>
<td>7  10 19  8 44</td>
</tr>
<tr>
<td><strong>Northeast</strong></td>
<td>1   2  0  0  3</td>
</tr>
<tr>
<td>Far West</td>
<td>8   12 12  0 32</td>
</tr>
<tr>
<td>Southwest</td>
<td>11  16 15  8 50</td>
</tr>
<tr>
<td>One State Only</td>
<td>23  21 31  0 75</td>
</tr>
<tr>
<td>Immediate Area</td>
<td>21  21 19  0 61</td>
</tr>
<tr>
<td>Column Sum</td>
<td>205 213 241 208 867</td>
</tr>
</tbody>
</table>

### Type Of Funds Preference - Primary Dependent Variable

<table>
<thead>
<tr>
<th>Preference</th>
<th>Observed Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equity (Stock)</td>
<td>124 126 110 88 448</td>
</tr>
<tr>
<td>Loans</td>
<td>35  42 35 20 132</td>
</tr>
<tr>
<td>Loans with Equity Kickers</td>
<td>43  38 38  0 119</td>
</tr>
<tr>
<td>Bonds</td>
<td>6   6  2  0 14</td>
</tr>
<tr>
<td><strong>Bonds with Equity Kickers</strong></td>
<td>6  5 2  0 13</td>
</tr>
<tr>
<td><strong>Leasing</strong></td>
<td>1   0  0  0  1</td>
</tr>
<tr>
<td>Mezzanine</td>
<td>NA  NA  NA  44 44</td>
</tr>
<tr>
<td>Column Sum</td>
<td>215 217 187 619 771</td>
</tr>
</tbody>
</table>
### Survey

<table>
<thead>
<tr>
<th></th>
<th>*1</th>
<th>*2</th>
<th>*3</th>
<th>*4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seed Funding</td>
<td>44.458</td>
<td>48.197</td>
<td>42.345</td>
<td>19.191</td>
</tr>
<tr>
<td>Start-up Funding</td>
<td>86.611</td>
<td>93.895</td>
<td>82.494</td>
<td>34.158</td>
</tr>
<tr>
<td>First Round</td>
<td>74.097</td>
<td>80.328</td>
<td>70.575</td>
<td>28.123</td>
</tr>
<tr>
<td>Second Round</td>
<td>73.109</td>
<td>79.257</td>
<td>69.634</td>
<td>26.795</td>
</tr>
<tr>
<td>Third Round</td>
<td>50.715</td>
<td>54.98</td>
<td>48.305</td>
<td>18.588</td>
</tr>
<tr>
<td>Fourth Round</td>
<td>34.579</td>
<td>37.486</td>
<td>32.935</td>
<td>12.673</td>
</tr>
<tr>
<td>Later Stage</td>
<td>72.121</td>
<td>78.186</td>
<td>68.693</td>
<td>33.192</td>
</tr>
<tr>
<td>Leveraged Buyouts</td>
<td>55.655</td>
<td>60.335</td>
<td>53.01</td>
<td>26.675</td>
</tr>
<tr>
<td>Acquisitions</td>
<td>55.655</td>
<td>60.335</td>
<td>53.01</td>
<td>28.606</td>
</tr>
<tr>
<td>Diversified</td>
<td>90.457</td>
<td>103.16</td>
<td>93.387</td>
<td>59.454</td>
</tr>
<tr>
<td>Communications</td>
<td>53.581</td>
<td>61.103</td>
<td>55.317</td>
<td>31.428</td>
</tr>
<tr>
<td>Computer Hardware</td>
<td>28.366</td>
<td>32.349</td>
<td>29.285</td>
<td>15.876</td>
</tr>
</tbody>
</table>

### Expected Values

- **SALE = .05 IN ALL CASES**

### P For Surveys
- One, Two, & Three
- One, Two, & Three & Four

### P For Survey

- Seed Funding: 0.02577
- Start-up Funding: 0.00026
- First Round: 0.09758
- Second Round: 0.67656
- Third Round: 0.45120
- Fourth Round: 0.09759
- Later Stage: 0.29540
- Leveraged Buyouts: 0.00125
- Acquisitions: 0.00319
- Diversified: 0.66921
- Communications: 0.21347
- Computer Hardware: 0.51056

### Expected Values

- Seed Funding: 0.21752
- Start-up Funding: 0.02577
- First Round: 0.00026
- Second Round: 4.45688
- Third Round: 0.00015
- Fourth Round: 0.00319
- Later Stage: 0.00041
- Leveraged Buyouts: 3.76888
- Acquisitions: 0.18875
- Diversified: 0.04804
- Communications: 0.18357
- Computer Hardware: 0.15426
<table>
<thead>
<tr>
<th>Category</th>
<th>Percentage</th>
<th>Expected Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer Software</td>
<td>42.549</td>
<td>0.074987</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>60.83</td>
<td>0.707101</td>
</tr>
<tr>
<td>Wholesale Distribution</td>
<td>17.02</td>
<td>0.754637</td>
</tr>
<tr>
<td>Medical Technology</td>
<td>58.624</td>
<td>0.923378</td>
</tr>
<tr>
<td>Media</td>
<td>33.094</td>
<td>0.217282</td>
</tr>
<tr>
<td>Other Technology</td>
<td>21.432</td>
<td>0.242977</td>
</tr>
<tr>
<td>Retail</td>
<td>31.203</td>
<td>0.320224</td>
</tr>
<tr>
<td>Services</td>
<td>13.868</td>
<td>0.757234</td>
</tr>
<tr>
<td>Franchises</td>
<td>11.977</td>
<td>0.572649</td>
</tr>
</tbody>
</table>

**Expected Values**

<table>
<thead>
<tr>
<th>Category</th>
<th>Percentage</th>
<th>Expected Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Preference (USA)</td>
<td>81.191</td>
<td>0.736283</td>
</tr>
<tr>
<td>Northeast</td>
<td>15.243</td>
<td>0.786471</td>
</tr>
<tr>
<td>Mid Atlantic</td>
<td>8.088</td>
<td>0.586316</td>
</tr>
<tr>
<td>Southeast</td>
<td>11.51</td>
<td>0.878542</td>
</tr>
<tr>
<td>Midwest</td>
<td>11.51</td>
<td>0.60283</td>
</tr>
<tr>
<td><strong>Rocky Mountain Sts</strong></td>
<td>12.132</td>
<td>0.117507</td>
</tr>
</tbody>
</table>

* Rocky Mountain Sts*
<table>
<thead>
<tr>
<th>Region</th>
<th>Combined Above</th>
<th>Equity (Stock)</th>
<th>Loans</th>
<th>Loans with Equity Kickers</th>
<th>Bonds</th>
<th>Bonds with Equity Kickers</th>
<th>Leasing*</th>
<th>Mezzanine</th>
<th>Universe</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northeast*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Far West</td>
<td>9.9545</td>
<td>10.343</td>
<td>11.703</td>
<td>7.677</td>
<td>0.720093</td>
<td>0.03959</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Southwest</td>
<td>13.065</td>
<td>13.575</td>
<td>15.36</td>
<td>11.995</td>
<td>0.681125</td>
<td>0.55220</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>One State Only</td>
<td>23.331</td>
<td>24.241</td>
<td>27.428</td>
<td>17.993</td>
<td>0.636608</td>
<td>0.00028</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Immediate Area</td>
<td>18.976</td>
<td>19.716</td>
<td>22.308</td>
<td>14.634</td>
<td>0.673667</td>
<td>0.00148</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Expected Values</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equity (Stock)</td>
<td>125.04</td>
<td>126.2</td>
<td>108.76</td>
<td>70.655</td>
<td>0.988514</td>
<td>0.23266</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Loans</td>
<td>38.901</td>
<td>39.263</td>
<td>33.835</td>
<td>16.058</td>
<td>0.732677</td>
<td>0.66170</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Loans with Equity Kickers*</td>
<td>41.333</td>
<td>41.717</td>
<td>35.95</td>
<td>0</td>
<td>0.772859</td>
<td>NA</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bonds</td>
<td>4.8627</td>
<td>4.9079</td>
<td>4.2294</td>
<td>0</td>
<td>0.430812</td>
<td>NA</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bonds with Equity Kickers*</td>
<td>4.8627</td>
<td>4.9079</td>
<td>4.2294</td>
<td>0</td>
<td>0.486051</td>
<td>NA</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Leasing*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mezzanine</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>35.328</td>
<td>NA</td>
<td>NA</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Universe</td>
<td>900</td>
<td>900</td>
<td>900</td>
<td>900</td>
<td></td>
<td></td>
<td>309</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Returns</td>
<td>212</td>
<td>184</td>
<td>179</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---------</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percentage Of returns</td>
<td>23.6</td>
<td>20.4</td>
<td>19.9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

11.3

Facts:
There is no subset since the entire membership of both the NVCA and NASBIC were required
*2 represents the Tax Reform Act of 1986 – Data Collected 1988 - Capital Gains Tax: 28%/33% Survey Two
*3 represents the Revenue Reconciliation Act Of 1993 – Data Collected 1995 - Capital Gains Tax: 29.2% Survey Three
*4 represents the Economic Growth And Tax Relief Reconciliation Act of 2001 - Date Collected - 2007 Capital Gains Tax: 15.7% Survey Four

*Rows Collapsed Per Cochran (Lack of Responses)

**Note:** All Numbers Are Expressed In Questionnaires Received
Exhibit Q

Map As To Overall Thesis Design

Basic Theory

Hypothesis

Research Question (Problem)

Positivistic Quantitative Inputs
• Deductive Analysis
• Close End Questionnaires
• Literature

Mild Phenomenology Qualitative Inputs
• Inductive Analysis
• Semi-Open End Questionnaires
• Interviews & Literature

Ongoing Hypothesis Testing
Interactions Among Dependent, Independent, & Confounding Variables

Verify/Reject

No Outcome

Theoretical Framework

Source: James Silvester, 2013
Exhibit R  Influences Upon Independent Variables And Primary Variables

The confounding, extraneous, and two of the three independent variables will be controlled leaving the primary variable

Source: James L. Silvester, 2013
Exhibit S Critical Thinking Map

Researcher’s View Of The External Environment

Deductive Reasoning or Inductive Reasoning

Construct A Process To Guide Research

Conceptual Framework

Indentify Existing Structure To Guide Research

Theoretical Framework

Grand Theory
Midrange Theory
Micro-Range Theory

Researcher States The Research Question

And The Conceptual Definitions Of The Study Variables

and Utilized Operational Definitions To Articulate Measurement Of The Study Variables

Source: Liehr and Smith (1999, p. 10)
Exhibit T

Relationship Between Variables

Primary Independent Variable

Capital Gains Tax

Hypothesis

*Funding Preference

*Industry Preference

*Geographic Preference

*Type Of Funds

*Primary Dependent Variables

Source: James L. Silvester, 2013
### Exhibit U

**Dependent Variable Table Also Known As Investment Preferences**

<table>
<thead>
<tr>
<th>Preference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Funding Preference</td>
</tr>
<tr>
<td>Industry Preference</td>
</tr>
<tr>
<td>Geographic Preference</td>
</tr>
<tr>
<td>Type of Funds Preference</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Amount Invested from Minimum to Maximum</th>
</tr>
</thead>
</table>

Source: James Silvester, 2013
Exhibit V
Ethical Map

ETHICS FLOWCHART

• Rationale For Research
• Researcher Qualifications
• Aims Of The Research
• Project Design
• Literature Review

Proper Ethical Conduct

- Ethics In Systemic Research
- Ethics As To This Dissertation In General
- Ethics As To Methodology
- Ethics As To Methods
- Ethics As To Security Of Raw Data
- Ethical Weaknesses As To This Dissertation

Sources: James L. Silvester, 2013
List Of Figures

Chapter One

1-A  Research Path
1-B  Bias Circle

Chapter Two

2-A  Job Growth
2-B  United States Economic And Employment Growth
2-C  Relationship Between Government Spending And GDP
2-D  Federal Budget Deficit Expressed In Absolute Dollar Amounts
2-E  Tax Dollars Collected On Capital Gains Verses Capital Gains Rate
2-F  Economic Report Of The President
2-G  Job Report
2-H  Evolution Of Thought As A Result Of The Literature Review

Chapter Three

No Figures In Chapter Three

Chapter Four

4-A  Dependent Variable Groups
4-B  Chi-Square Analysis Of Category Intersections And Year
Chapter Five

5-A  Crowd Funding
5-B  Excess Reserves of Depository Institutions
5-C  PNFI And CNCF
5-D  Venture Dollars
5-E  Median Investment by Stage
V

List Of Tables

Chapter One

No Tables

Chapter Two

2-A  Four Critical Tax Laws
2-B  Investment Preferences

Chapter Three

3-A  Three Hypotheses
3-B  Other Hypotheses
3-C  Table Of Tools
3-D  Investment Preferences In Detail
3-E  Literature Review Topics
3-F  Literature Review Diagram
3-G  Final Checklist

Chapter Four
4-A $r^2$ and $r$ Values

4-B Comparison Of Surveys

4-C Responses Of Professionals

4-D Responses Of Executive Directors

4-E Additional Mining Data

Chapter Five

5-A Conclusions
Bibliography


Allen, W., Unknown. Quoted Statement.


American Enterprise Institute, 1966. The Bill to suspend the investment tax credit for machinery and equipment and rapid depreciation on commercial buildings. [on-line] [Accessed: 1/05/2011 2:04:15 PM].


Blank, S., Why governments don’t get startups | Entrepreneurial *Entrepreneurial* Available at: [Accessed 3/2/2012].


325


335


Hart, C., 1999. Figure 2.1 - Flow chart of the literature search - Table 2-D. 1999. Doing A Literature Review. Thousand Oaks, California: Sage Publications. , p. 34.


Holan, A.D., PolitiFact | Grover Norquist said the economy has grown or been damaged by capital gains tax changes [on-line] Available at: <http://www.politifact.com/truth-o-meter/statements/2011/jul/19/grover-norquist/grover-norquist-said-economy-has-grown-or-been-dam/> [Accessed: 7/31/2012].


Howell, D., n.d. *CHI-SQUARE - ANALYSIS OF CONTINGENCY TABLES*. [e-].
Burlington, Vermont: University of Vermont.12/15/2012. Available through:
[Accessed: 12/15/2012].

Danbury, United Kingdom: Anglia Ruskin University.


Howell, K.E., 2004. General Introduction: Linking Levels of Theory and
Methodological Approaches. 2004. *Europeanization, European Integration and

Danbury, United Kingdom: Dr. Kerry E. Howell. p. 1.

Huang, C., 2012. *Recent Studies Find Raising Taxes on High-Income Households
Would Not Harm the Economy*. Washington, D.C.: Center on Budget and Policy
Priorities.


Repealing State Tax Breaks for Capital Gains Would Ease Budget Woes and


Penn State University, Quantitative Inquiry. [on-line] Available at: <Quantitative> [Accessed: 02/01/2014].


Rosenberg, J.M., 2008. SMALL BUSINESS / TAXES / Stimulus package aids even pint-size ventures / Some companies will be able to claim the equipment deduction and depreciation provisions, which will mean big savings in '08. Houston Chronicle, Feb 24. p. 6.


Saint Mary's University, Writing A Literature Review. [on-line] Available at: <http://www.smu.ca/administration/library/litrev.html> [Accessed: 03/03/2011].


The Learning Center, 2007. Some of the questions a review of the literature can answer - Table 2-B. [on-line] Available at: <http://www.le.unsw.edu.au/onlib/ref_elec3.html#elec23> [Accessed: 12/31/12].


University of Arizona, Research and Publications. [on-line] Available at: <http://www.entrepreneurship.arizona.edu/research/> [Accessed: 2/7/2012].


University of Glasgow, n.d. Test Validity. [on-line] Available at:


University of North Carolina, *Literature Reviews* [on-line] Available at:

University of Otago, *Bias Circle - Table I-B*. [on-line] Available at:

University of Texas, *Survey Methods*. [on-line] Available at:

University of Wisconsin Writing Center, 2011. *Creating an Argument: Thesis vs. Purpose Statements* [on-line] Available at:


