Nebraska's Innovation & Entrepreneurial Ecosystem

"Supporting and Increasing Venture Capital in Nebraska"

LB 1114, 2014

Prepared by Invest Nebraska Corporation

December 1, 2014

December 1, 2014

To Members of the 103rd Legislature of the
State of Nebraska:

During this past legislative session, LB 1114 was approved unanimously by the Legislature and signed into law by Governor Heineman. The provisions of this legislation required the Nebraska Department of Economic Development to contract with a private, nonprofit organization to provide research, analysis of best practices in other states, and make recommendations on ways to support and increase venture capital in Nebraska.

Invest Nebraska Corporation was subsequently selected by the Nebraska Department of Economic Development to coordinate this project. This final report, *Supporting and Increasing Venture Capital in Nebraska*, has three main components. The first is a historical perspective of Nebraska entrepreneurial and innovation programs approved by past Legislatures. It is important for policymakers to understand how the state has arrived at this point based on past legislative actions.

Secondly, Dr. Eric Thompson, Director of the Bureau of Business Research and Associate Professor of Economics at the University of Nebraska-Lincoln, provides research and economic analysis of the programs under the Nebraska Business Innovation Act. Passed by the Legislature in 2011, these pre-seed and seed funding programs provide financial assistance to Nebraska's emerging and serial entrepreneurs with promising innovative technologies and processes. An economic analysis of these programs is now warranted to determine whether they are producing the results intended by policymakers.

Finally, Cromwell-Schmisseur LLC presents an independent analysis of best practices in other states and makes recommendations on ways to support and increase venture capital in Nebraska. Cromwell-Schmissuer is a nationally recognized leader in the field of entrepreneurial development and state-sponsored venture capital programs.

We are pleased to present "Supporting and increasing Venture Capital in Nebraska".

Sincerely,

Invest Nebraska Corporation

OVERVIEW

During the past six years, Nebraska policy makers made a concerted effort to focus on the state's innovation and entrepreneurial ecosystem. The tipping point occurred in 2010, when the Nebraska Department of Economic Development (DED), in collaboration with the Nebraska Department of Labor, selected the Battelle Technology Partnership Practice (TPP) to assess Nebraska's competitive advantages. That same year, the Nebraska Innovation and High Wage Employment Act was passed by the Legislature and signed into law by the Governor. The main purpose of the Act was to create the Innovation and Entrepreneurship Task Force to "develop a statewide strategic plan to cultivate a climate of entrepreneurship that results in innovation and high-wage employment."

The Battelle TPP Study and the Legislature's Innovation and Entrepreneurship Task Force Study both made specific recommendations to increase new high-growth business creation, provide state funded financial assistance, and develop a long term plan for attracting more venture capital to the state.

In 2011, Governor Heineman introduced the Talent and Innovation Initiative which incorporated many of the recommendations from both studies into specific legislative bills. Of particular importance was the Business Innovation Act. This Act provided financing options for early stage, high-growth companies located in Nebraska or willing to locate to Nebraska.

From October 2011 to December 2014, funding programs under the Business Innovation Act experienced significant demand from startup companies wanting to utilize these new financing options. In 2014, the Legislature unanimously passed, and the Governor signed, LB 1114 which was comprised of two main components: 1) extending the sunset date for the Business Innovation Act from 2016 to 2021, and 2) requiring the Nebraska Department of Economic Development to contract with a Nebraska-based non-profit organization to "provide research, analysis of best practices in other states, and make recommendations on ways to support and increase venture capital in Nebraska."

Invest Nebraska was selected by the Nebraska Department of Economic Development to author the study as required under LB 1114. Invest Nebraska subsequently contracted with Dr. Eric Thompson, Director of the Bureau of Business Research and an Associate Professor of Economics at the University of Nebraska-Lincoln to conduct a research study on the Nebraska Business Innovation Act. Invest Nebraska also retained Cromwell Schmisseur, LLC to conduct an analysis of best practices for increasing venture capital from other states. Cromwell Schmisseur is a nationally recognized leader in the field of state sponsored entrepreneurial development and venture capital programs.

Dr. Thompson conducted a research study of the four main innovation programs under the Nebraska Business Innovation Act specifically 1) the Pre-seed Prototype grant program, 2) the matching state support for Federal Small Business Innovative Research (SBIR) grants, 3) the Academic Research and Development grant program, and 4) the Seed/Commercialization program. Surveys were received from companies participating in the programs between October 2011 and June 2014.

Dr. Thompson's economic impact analysis found significant private sector investment for each dollar of state support. Businesses participating in Nebraska Business Innovation Act programs raised $5.12 in

private investment funding for each $1 dollar of state funding. A significant portion of this private investment was money raised after the required match. These initial investments of equity, loans, grants and other sources of capital helped sustain these businesses throughout their development processes. The goal is for businesses to ultimately be funded by revenue from sales, and some participating businesses already have advanced to the point of earning substantial revenues. Dr. Thompson's study found that participating businesses have earned $2.32 in revenue from sales for each $1 of state funding. Revenue earned from sales will grow as firms advance further through the development and commercialization process.

Businesses participating in Nebraska Business Innovation Act programs have already had an economic impact on Nebraska. These businesses have added 162 jobs with annual wages totaling $8.20 million since their initial involvement in Nebraska Business Innovation Act programs. These are direct economic impacts. These businesses also had a significant total economic impact and tax revenue impact. The total annual economic impact was $53.45 million. The annual economic impact in terms of direct and indirect employee compensation is $15.23 million spread over 307 jobs. These results suggest wages per job of $49,665 including both the direct and multiplier employment. This finding implies that the innovative, growing businesses supported by Nebraska Business Innovation Act programs provide high wage employment.

The Cromwell-Schmisseur analysis of best practices from other states resulted in three main recommendations:

1. Consistently support the state's "innovation farm system" through long-term (i.e., more than 10 years) and increasing financial support of programs launched by the Nebraska Business Innovation Act.

2. Create a specialty function within, or sponsored by, the Nebraska Department of Economic Development to actively promote and recruit venture capital and private equity investment in Nebraska small businesses.

3. Anticipating success with the Nebraska Business Innovation Act programs, begin planning for a state-sponsored "fund-of-funds" venture capital program that includes a focus on financing "emerging managers" of venture capital funds based in Nebraska. Any state-sponsored venture capital initiative should adhere to four key principles:

    a. Programs should be capitalized efficiently;
    b. Managers should be selected competitively;
    c. Scope of investments should be restricted to a stage of investing not reasonably served by private investors; and
    d. The state and private investors both should have similar financial interests in investments.

HISTORICAL PERSPECTIVE OF NEBRASKA'S ENTREPRENEURIAL PROGRAMS: 1980 TO PRESENT

In today's knowledge-based economy, there is no doubt Nebraska's greatest resource is its people. Nebraska enjoys a wealth of home-grown talent and has the human resources to outperform most other states. However, surveys and research have shown that the State could do more to encourage its home-grown talent to stay in Nebraska and to attract new talent to Nebraska from elsewhere.

In the past, typical economic development policies focused on attracting new businesses to a particular region. However, state and local governments have begun to realize that their existing local business and entrepreneurial talent can and should be the primary catalyst for economic growth. Successful development policies are clearly shifting from "economic hunting" to "economic gardening."

If Nebraska's goal is to increase the number and diversity of high-wage jobs in the State, a key area of focus should be improving the entrepreneurial ecosystem. The reason for this is that top-performing young companies are the most fruitful source of new jobs and offer Nebraska's economy the best prospect for growth.

Nebraska's approach to supporting its entrepreneurial and innovation ecosystem over the past three decades has been one of piecemeal solutions. In comparison to other states, much of the recent legislation and policies have been short-term and targeted at specific entrepreneurial issues, such as micro-lending, venture capital, and assistance to the agriculture sector. As a result, Nebraska has been ranked toward the bottom in many nationally recognized entrepreneur and innovation rankings. Despite the often low rankings, there have been some noticeable efforts to support entrepreneurship in Nebraska.

In 1985, Governor Kerry's Policy Research Office released a study that showed Nebraska was being overlooked by venture capitalists across the country. As a result, the Nebraska State Legislature enacted two pieces of legislation: the 1986 Venture Capital Network Act (LB 163) and the Nebraska Research and Development Authority Act (LB 850).

The purpose of the Venture Capital Network Act was to "improve the dissemination of information regarding informal investment opportunities to potential investors and entrepreneurs and thereby stimulate the growth of small businesses in Nebraska." The Department of Economic Development contracted with the Nebraska Business Development Center at the University of Nebraska at Omaha to assume administration of the Venture Capital Network. The program initially received funding of $25,000 in FY2008 and $25,000 in FY2009, but was not funded in subsequent years.

That same year, the Nebraska Research and Development Authority Act was passed. This additional piece of legislation provided $4 million in General Funds for "engaging in seed capital financing for the development and implementation of innovations or new technologies for existing and emerging industries." Results of the program were mixed. Only five companies received seed capital. The Legislature eventually repealed the act after only three years of operation.

In 1997 the Microenterprise Development Act (LB 327) was passed by the Legislature and approved by Governor Nelson. This Act established the Nebraska Microenterprise Partnership Fund. In 2008 the

Partnership Fund name was changed to Nebraska Enterprise Fund, which still is structured as a non-profit and awards loans to mostly micro-small businesses in the state.

In 2002, at the request of Governor Johanns, the Legislature passed the Nebraska Venture Capital Forum Act. The purpose of the Act was to have the Department of Economic Development select an organization to facilitate relationships between venture capitalists and Nebraska entrepreneurs. Invest Nebraska Corporation, a non-profit organization, was formed to carry out the provisions of the act. The Legislature appropriated $500,000 for three years. The Act expired in 2005.

In 2005 the State enacted the Agricultural Opportunities and Value-Added Agriculture Partnership Grant Program (VAA). The VAA provided grants of up to $75,000 to cooperatives, start-ups, and associations to subsidize their research, education, training, and market development costs. From 2006-2009, the State awarded $3,158,064 in VAA grants for buildings and building rehabilitation, equipment, marketing and advertising, website development, education, studies and plans, salaries and stipends, organizing fees, and supplies. The return on this $3,158,064 investment was an aggregated total of 8.75 full-time equivalent positions paying an average salary of $14.90/hour or $30,992/year. This program was eliminated in 2011 under the Business Innovation Act.

A related Act, the Building Entrepreneurial Communities Act, was passed in 2006. The program "supports economically depressed rural areas of Nebraska with grants that create community capacity to build and sustain programs that generate and retain wealth in the communities and regions." The program was funded at $500,000 per fiscal year (increased from $250,000 by the 2007 Nebraska Unicameral) and provided up to $75,000 per project over 2 years with a 50% cash match requirement (sometimes reduced to 25%). The State invested $1,363,950 in the program. This program was eliminated in 2011 under the Business Innovation Act.

In 2007 the Nebraska Advantage Microenterprise Tax Credit Act was passed to provide a $10,000 lifetime tax credit to microbusiness (5 or fewer employees) owners located in distressed geographic areas that make a "new investment or employment in the microbusiness." Total funding for the credit is capped at $2 million annually. That same year, the Legislature passed the Nebraska Operational Assistance Act. The purpose of the Act is to create a program to assist startups and businesses in achieving the thresholds necessary for private equity investments. The Legislature has provided $250,000 each fiscal year for this program.

In 2010, the Nebraska Department of Economic Development (DED), in collaboration with the Nebraska Department of Labor, selected the Battelle Technology Partnership Practice (TPP) to assess Nebraska's competitive advantages. The study focused on three highly inter-related building blocks[1]:

- The underlying performance of specific industry clusters in Nebraska, based on employment trends, economic output, and geographic patterns of development.
- The talent position of Nebraska overall and within its leading industry clusters, and how to establish more concrete strategies and linkages of talent within the state's overall economic development efforts.
- The position of Nebraska in innovation and high growth potential entrepreneurial development in the state, and how Nebraska is positioned in core competencies for future growth.

[1] "Growing Jobs, Industries, and Talent: A Competitive Advantage Assessment and Strategy for Nebraska"; Battelle Technology Partnership Practices; October 2010

Also in 2010, the Nebraska Innovation and High Wage Employment Act was passed unanimously by the Legislature and signed into law by the Governor. The main purpose of the Act was to create the Innovation and Entrepreneurship Task Force "to develop a statewide strategic plan to cultivate a climate of entrepreneurship that results in innovation and high-wage employment."

Subsequently, the Executive Board of the Legislature appointed six state senators to the Task Force, including a Chairperson and Vice-Chairperson. The Task Force members were:

- Senator Danielle Conrad, Chairperson
- Senator Deb Fischer
- Senator Galen Hadley, Vice-Chairperson
- Senator Heath Mello
- Senator Rich Pahls
- Senator Ken Schilz

The Act required the Task Force to hire outside assistance to prepare and present a strategic plan to the Legislature by December 1, 2010. The study recommended various policy recommendations to further Nebraska's economic development efforts.

The Battelle TPP Study and the Legislature's Innovation and Entrepreneurship Task Force Study made specific recommendations to increase high-potential business creation, provide state funded financial assistance, and develop a long term plan for attracting more venture capital to the state.

In 2011, Governor Heineman introduced LB 387, the Business Innovation Act, which incorporated many of the recommendations from both studies. The Business Innovation Act provided financing options for early stage, high-growth companies located in Nebraska or willing to locate to Nebraska. The Act was unanimously approved by the 2011 Legislature and signed into law by the Governor. The Act was funded annually at $7 million per year with the potential to increase funding up to $9 million per year.

The Business Innovation Act contains five main components:

I. Federal Small Business Innovation Research (SBIR) Program

1) Phase 0 grant – This grant provides up to $5,000 for small businesses that qualify under the SBIR program, to plan and submit an application under the Program.
2) Phase I grant - Nebraska businesses receiving an SBIR Phase I Award can also receive an additional state grant up to 65% of the federal grant (maximum $100,000).
3) Phase II grant – Nebraska businesses receiving an SBIR Phase II Award can also receive an additional state grant up to 65% of the federal grant (maximum $100,000).

II. Nebraska Research and Development Program

Businesses operating in Nebraska using faculty or facilities of a public or private college or university in Nebraska are eligible to apply for two grants under this program:

1) R&D Phase I grant - provides up to $100,000 matching grant.
2) R&D Phase II grant - provides up to $400,000 matching grant.

Both grants must be matched by the business on a 1:1 basis with non-state resources.

III. Nebraska Innovation Prototype Grant Program
Small businesses located in Nebraska or willing to locate to Nebraska are eligible to apply for a grant of up to $50,000 for the purposes of creating a prototype of a product or a process.
The grant requires a 50% match or a 25% match for value-added agriculture projects from non-state government resources.

IV. Nebraska Innovation Seed/Commercialization Fund Program
Small businesses located in Nebraska or willing to locate to Nebraska are eligible to apply for an investment of up to $500,000 for the purpose of commercializing a prototype of a product or process. The investment can either be a convertible note or equity and is held by Invest Nebraska.
There must be a 100% match or a 25% match for value-added agriculture projects from non-state government resources.

V. Microenterprise Lending and Assistance Program
Microbusinesses defined as fewer than 10 employees located in distressed areas are eligible for micro-loans up to $50,000. The Microenterprise Assistance Program assists these microbusinesses with business plan development and technical assistance. Currently, this program is administered by the Nebraska Rural Enterprise Assistance Project and their urban partners in Omaha and Lincoln.

In 2014, Senators Mello and Hadley co-introduced LB 1114, which extended the sunset date for the Business Innovation Act from 2016 to 2021. The bill was approved unanimously by the Legislature and signed into law by the Governor.

Historically, it is clear that Nebraska has recognized the importance of financing small business and start-ups, specifically high-growth companies that may eventually need venture capital. The state is now on the right, long-term focused path, to accelerate its innovation and entrepreneurial ecosystem.

Dr. Thompson's economic impact study and the Cromwell-Schmisseur recommendations of best practices are included for the reader's review. It is important to note that the economic impact study and the Cromwell-Schmisseur recommendations were developed independently and were not influenced by the Nebraska Department of Economic Development or Invest Nebraska.

A Bureau of Business Research Report
From the University of Nebraska—Lincoln

Final Report

The Annual Economic Impact of Businesses Supported by Nebraska Business Innovation Act Programs

Prepared for the Invest Nebraska Corporation

November 18, 2014
Bureau of Business Research
Department of Economics
College of Business Administration
University of Nebraska—Lincoln
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Executive Summary

Thriving state economies require successful entrepreneurial firms. For this reason, many states have programs which assist innovative businesses with capital at key early stages of development. Under the Nebraska Business Innovation Act, the State of Nebraska provides such assistance with a variety of programs, including 1) the Pre-seed Prototype grant program, 2) matching state support for Federal Small Business Innovative Research (SBIR) grants, 3) the Academic Research and Development program and 4) the Seed/Commercialization program. The Business Innovation Act was part of the Nebraska Talent and Innovation Initiative passed by the Nebraska Legislature and signed into law by the Governor in 2011. There also additional incentives for businesses involved in value-added agriculture. This study by the UNL Bureau of Business Research provides an economic impact assessment of Nebraska businesses which have been supported by Nebraska Business Innovation Act programs. The research study is conducted for the Invest Nebraska Corporation.

The study finds significant private sector investment for each dollar of state support. Businesses participating in Nebraska Business Innovation Act programs raised $5.12 in private investment funding for each $1 dollar of state funding, with much of that money raised after the required match. These initial investments of equity, loans, grants or other sources of capital help sustain the businesses throughout the development process. Businesses will ultimately be funded by revenue from sales, and some participating businesses already have advanced to the point of earning substantial revenues. The study found that participating businesses have earned $2.32 in revenue from sales for each $1 of state funding. The revenue earned from sales will only grow as firms advance further through the development and commercialization process.

Businesses participating in Nebraska Business Investment Act programs already have an economic impact on Nebraska. These businesses have added 162 jobs with annual wages of $8.20 million since their initial involvement in Nebraska Business Innovation Act programs. These are direct economic impacts. These businesses also had a significant total economic impact and tax revenue impact. The total annual economic impact was $53.45 million. The economic impact in terms of value-added is $28.97 million. The annual economic impact in terms of employee compensation is $15.23 million spread over 307 jobs. The state and local tax impact is estimated to have already reached $1.22 million

annually and also will grow as businesses advance further through the development and commercialization process.

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1. Introduction

Many states have public programs which assist with capital at key stages in the development of entrepreneurial businesses. Under the Nebraska Business Innovation Act, the State of Nebraska provides such assistance with a variety of programs, including 1) the Pre-seed Prototype grant program, 2) matching state support for Federal Small Business Innovative Research (SBIR) grants, the 3) Academic Research and Development program, and 4) the Seed/Commercialization program. The Business Innovation Act was part of the Nebraska Talent and Innovation Initiative passed by the Nebraska Legislature and approved by the Governor in 2011. This study provides an estimate of the annual economic impact of businesses which have been supported by Nebraska Business Innovation Act programs.

Program funding supports businesses in the early stages of development, as many recipients are developing new products or working to bring new products and services to market. Others recipients have just begun to increase employment and sales after successfully launching new products and processes. Our analysis therefore provides an initial snapshot of the current economic impact of funding recipients since the Act went into effect in October 2011; the economic impact of these businesses is likely to grow further over time. The study focuses on early stage venture capital and the ecosystem for venture capital. Therefore the study focuses on SBIR grants and Nebraska Innovation Fund grants and investments rather than businesses in the Microenterprise program or the Economic Gardening program.

At any time, Nebraska Business Innovation Act programs will be working with businesses which have completed projects but also many businesses with projects which are recently underway. For this reason, this study examines the age of various funded projects, and in particular, which funding recipients have completed the initial development planned in each grant, and which recipients are only partway through that project.

The study examines economic impact from multiple perspectives. The first perspective focuses on private sector funding. In particular, among the funded businesses, how much private sector funding has been obtained per dollar of state funding? The study provides information on matching funds but also on additional equity, loan or grant funding received for each dollar of funding provided under Nebraska Business Innovation Act programs. The study also examines the sales revenue per dollar of state funding given that sales ultimately will need to support these growing businesses.

The study also focuses on economic impact as measured by jobs, wages and economic activity. The study gathers data on new jobs created at businesses in the period after their involvement with Nebraska Business Innovation Act programs. New job growth is combined with information on annual wages and benefits per job to estimate the new annual employee compensation. The growth of these businesses and the resulting increase in direct annual economic activity is the basis for the estimated economic impact. Such direct impacts are the first part of the economic impact estimate. The second part is the multiplier impact, which is the additional jobs and wages generated as money circulates further within the state economy. Estimated multiplier impacts are added to direct impacts to determine the total annual economic impact of participating businesses.

A description of the project methodology is provided below in Section 2. Section 3 summarizes impact estimates while Section 4 is the conclusion. Appendix 1 provides information about the UNL Bureau of Business Research and Project Principal Investigator Eric Thompson. Appendix 2 provides a description of Nebraska Business Innovation Act programs.

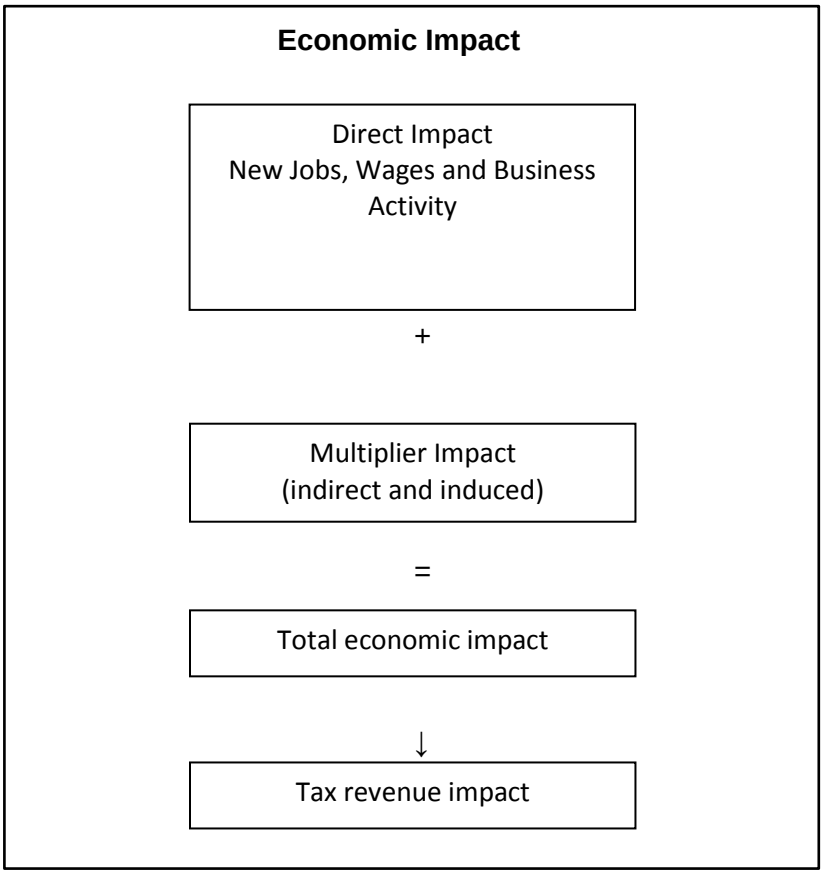
2. Methodology

The study examines the increase in employment and wages at each firm after its application for funding from a Nebraska Business Innovation Act program. This approach allows the research team to analyze the incremental employment growth in businesses through mid-2014. Average wages and benefits per job are then used to estimate the annual employee compensation from these new jobs.

Economic impact analysis is designed to show the direct economic impact from the expansion of businesses selected to participate in Nebraska Business Innovation Act programs. Impact estimates are feasible since participating businesses are the types of businesses which generate an impact on the local economy. In particular, these businesses serve markets which are regional, national and even international in scope. In other words, these are not locally-oriented businesses. As businesses serving external markets, businesses involved in Nebraska Business Innovation Act programs draw new money into the Nebraska economy. In initial stages this money is from the capital market, which is inherently national and global in nature. In later stages of develop, money is drawn in via revenue from customers located around the country and the world. Importantly, as these businesses grow there is a growing direct impact on the Nebraska economy.

The direct economic impact refers to the increase in economic activity at these firms as they grow in the form of jobs and employee compensation, as well as broader measures such as value-added and output. The economic impact analysis also considers the "multiplier" impact, which describes the additional economic activity as growing firms and their employees support local businesses. For example, growing firms make additional purchases of supplies and services from other businesses within the state, supporting sales, wages and employment at these businesses. This is known as the indirect impact. In addition, the new employees of firms spend their paychecks on ordinary household items such as housing (mortgage payment or rent), food, retail items, entertainment, insurance, health care, or transportation. This spending supports other businesses throughout the state and is known as the induced impact. The indirect and induced impacts together form the multiplier impact, which is the additional economic activity in the state which results from the initial direct impact when businesses expand. The total economic impact is the sum of the direct impact and the multiplier impact, as seen in Figure 1.

Figure 1
The Economic Impact Process



The multiplier impact is estimated using the IMPLAN model. IMPLAN is a widely used input-output analysis software package and database which provides a detailed picture of the economy for any state and sub-state region in the nation. Specifically, the IMPLAN model can be used to calculate the relationship between the direct economic and multiplier impact. For example, for each job created at a firm involved in a Nebraska Business Innovation Act program, the IMPLAN model will estimate the additional job or jobs in the Nebraska economy due to the multiplier impact. Direct, multiplier and total economic impacts will be prepared for each of four economic concepts*: output, value-added, proprietor and labor income and employment.*

- *Output* is equivalent to an increase in business activity.

- *Value-added* is analogous to gross domestic product and reflects the increase in labor income, proprietor profits, business taxes paid and capital consumption in the economy.

- Employee compensation, which includes proprietor and labor income*,* corresponds closely with personal income estimates maintained annually for state and local units of government by the U.S. Department of Commerce, Bureau of Economic Analysis.

- E*mployment* is a critical measure to consider, and includes both full and part-time positions.

These economic impacts also imply tax impacts for the Nebraska economy. In particular, businesses receiving investments pay direct taxes to state and local government and to the Federal government. There are also additional tax revenue impacts beyond these direct payments. Employees receiving the newly created jobs pay income taxes on this income and sales taxes on their spending. Wages also support mortgage and rent payments, and therefore, local property taxes. At the same time business patronized by these employees pay property taxes. These additional state and local tax payments also must be included in any tax revenue estimates. For example, estimates of wages can be used to calculate estimates income taxes using the effective, or average, tax rate paid on income in the state. This effective income tax rate is 2.7 percent. Wages also lead to sales tax, depending on the percentage of income which is spent on taxable sales. In Nebraska, approximately 40 percent of income is spent on taxable sales. This formula can be applied to the total wage impact and multiplied by 7 percent to yield an estimate of state and local sales tax impact. Income also yields taxable property.

There is approximately $1.6 of taxable property in Nebraska for each $1 of annual income. This rate can be applied to the total employee compensation impact and a weighted average state property tax rate of 2 percent to yield an estimate of the property tax impact.

A. Sources of Data

Data on business activity for firms participating in Nebraska Business Innovation Act programs were gathered from both administrative records and a business survey (see Appendix 3). Administrative records were available for 7 firms which participate in the Commercialization program, given that the Invest Nebraska Program invests in these firms. Surveys sent by Nebraska Department of Economic Development personnel yielded information about 47 of the approximately 75 other firms participating in the other Nebraska Business Innovation Act programs. Survey responses represent a response rate of just above 60 percent.

While some firms received investments from multiple Nebraska Business Innovation Act programs, firms were sent only a single survey form. For example, firms might receive $50,000 in funding for an initial Prototype program grant and as development proceeds also receive a Commercialization program investment. Similarly, firms may receive an initial $5,000 grant for the SBIR 0 program, in order to develop a SBIR I grant application for a Federal agency, and may later receive a SBIR 1 or SBIR 2 grant from the Federal government, and a matching grant from the State of Nebraska.

Participants in the Commercialization program or respondents to the survey provide data about their business including key measures of growth. In particular, businesses report growth in full- and part-time employment since their initial application to the Nebraska Business Innovation Act program and the average wages and benefits (i.e., employee compensation) of any new jobs. Application dates were a good measure because the start date of most projects is very close to the application date. Data on job growth and average wages and benefits were used to estimate the growth of businesses involved in the program. In particular, the research team measured cumulative job growth in each business. Reported wage and benefit data were used to estimate the cumulative growth in employee compensation. Estimates of value-added and output in each participating firm were estimated based on employee compensation, using industry averages.

Growth in employment, employee compensation, value-added and output is the measure of the direct economic impact of each participating business. Direct annual economic impacts were summed across businesses to yield the total economic impact from businesses participating in Nebraska Business Innovation Act programs. This focus on growth as a measure of economic impact was appropriate for multiple reasons. First of all, some businesses were established businesses with employees when applying to the program. The program helped these businesses to develop a new product or process and expand employment. The expansion of employment is the appropriate measure of impact for these firms. In many other cases, participating businesses were at a very early stage of development when applying for a grant with a Nebraska Business Innovation Act program. For these firms, growth in employment is essentially equivalent to current employment.

The point is that the focus on business growth better reflects the amount of business activity associated with Nebraska Business Innovation Act programs. The approach is superior to simply counting all employment, employee compensation and sales of firms which received funding, given that some firms already had significant levels of employment when first applying to a program.

Businesses responding to the survey also provided other key information. Firms provided information about the size of their matching investment. More importantly survey respondents provided information about additional funds obtained in the period since applying to a Nebraska Business Innovation Act Program. In particular, survey respondents indicated: 1) how much additional funding that has been received from equity investments, loans, grants and other sources and 2) how much revenue, if any, has been earned by selling products and services. All of this information allows for an analysis of the return in addition investment and revenue for each dollar invested by the State of Nebraska in a SBIR, Prototype, Academic Research and Development and Commercialization programs. Further, this information also was available in the administrative records of firms involved in the Commercialization program.

Survey respondents also provided other key information such as the share of the project completed, that is, whether product development or other activities funded by the grant have been fully or partially completed. This information is valuable for analyzing the program, since firms at the beginning of the project may be less likely to have recruited new employees by the time of the survey.

3. Economic Impact Estimates

Early stage investments of the type supported by the Nebraska Business Innovation Act programs take time to develop. Projects often do not immediately yield wage and salary employment or revenue. Further, prototype project may need sufficient development to establish a proof of concept before being able to attract further investment. This implies that in any point in time the portfolio of funded projects will include both new projects which have not yet yielded employment as well as completed projects which are already at the employment and revenue stage.

This section of the report examines the portfolio of funded projects using administrative data on businesses in the commercialization program and survey data on other businesses. Analysis considers the programs utilized by participating business and the number and share of projects at various stages of completion. Table 1 shows the type of program utilized by businesses which responded to the survey or for which administrative data is available (i.e., the Commercialization program). Table 1 focuses on the program which each business is currently involved in or most recently involved in, reflecting the fact that the Nebraska Business Innovation Act provides a suite of programs for businesses in the early stages of development including pre-seed funding as well as seed funding. Pre-seed funding includes the Prototype program in which firms may be involved in the development of a prototype of a new product or service requiring a proof of concept. There is also a SBIR Phase 0 grant where businesses receive funding to develop a SBIR Phase 1 proposal for submission to a Federal agency. Businesses which participate in these programs move on to later stage of development, when appropriate, and the Nebraska Business Innovation Act is able to help with funding through the Academic Research and Development program, matching grants for businesses which earn a Federal SBIR Phase I and II grant, and through the Commercialization program. Table 1 lists participating businesses according to their current or most recent program. For example, if a business participated in the Prototype program and through a successful effort was able to receive later stage funding through the Academic Research and Development Program, that businesses would be listed in the Academic Research and Development category in Table 1.

Results in Table 1 indicate that nearly 60 percent of the responding businesses were involved in the Prototype grant program where the businesses developed a prototype for an innovative product or service. Businesses which develop such products moved into a later stage of development and commercialization, sometimes utilizing additional services from Nebraska Business Innovation Act

programs. Among responding businesses, 8 received funding from a Federal government agency under the SBIR program and a matching grant under the Nebraska Business Innovation Act. There were 7 businesses in the Commercialization program, accounting for 13 percent of the businesses analyzed. There are also 7 businesses in either the Academic Research and Development 1 or Academic Research and Development 2 program.

Table 1
Program Utilized by Responding Business[1]

	Number of Projects	Percent of Responding Projects[1]
Prototype	32	59.3%
SBIR (0, 1 and 2)	8	14.8%
Academic R &D (1 and 2)	7	13.0%
Commercialization	7	13.0%

The second issue is the number and share of projects at various stages of completion. Table 2 shows the total amount of funding received from business involved in the Commercialization Program or survey respondents to other Nebraska Business Innovation Act programs. Table 2 also shows the share of projects which had been completed. A total of $7.3 million of state funds had been devoted to reported investment projects. A significant number of projects are just underway. The Table shows that 7.3 percent of funded projects had completed just 0-24% of the contracted work. These projects accounted for just $585,000 of the $7.3 million in grants and investment. Another 9.1 percent of funded projects had completed 25-49% of the contracted work while 9.1 percent had completed 50-74% of work. These projects accounted for approximately $260,000 and $350,000 of investment. Overall, these results suggest that approximately one-quarter of projects are less than 75% complete.

However, Nebraska Business Innovation Act programs have been ongoing only since October 2011 and many firms have completed their initial contracted work and have moved on to later stages of development. Specifically, 26 percent of projects have completed between 75-99% of the grant-funded work. These projects accounted for $1.2 of $7.3 million in grants and investments. Approximately 36 percent of projects had completed 100% of the initial grant-funded work and these projects accounted for $1.8 million in funding. Commercialization projects also are listed. Commercialization projects receive an investment rather than a grant. Investments are ongoing so there is no need to consider the share of Commercialization projects which have been completed.

Table 2
Percent of Projects Completed

% Project Completed	Number of Projects	Percent of Projects	Amount Invested
0-24%	4	7.3%	$584,940
25-49%	5	9.1%	$261,461
50-74%	5	9.1%	$352,500
75-99%	14	25.5%	$1,184,156
100%	20	36.4%	$1,788,173
Commercialization	7	12.7%	$3,150,000
Total	55	100.0%	$7,321,230

Businesses at the early stage of development are often pre-revenue and require investment spending to operate and hire any required workers. For this reason it is often critical for firms to obtain capital beyond the state funding which is provided, and the match which is required. Additional funding can be in the form of equity, loans, or grants. The survey which was sent to businesses inquired about additional funding from each source. Another issue is that businesses will eventually need to earn revenue from sales to support operations and to make new investments. The survey also asks about any revenue earned by each business since the time of the application to a Nebraska Business Innovation Act program. The same information was available from administrative records for businesses in the Commercialization program.

Table 3 summarizes the additional sources of investment obtained by businesses and the revenue earned from sales. Information also is provided on the private match required in the application. There is also information on Federal revenue received in the case of businesses which won a SBIR grant.

Note that matching funds exceed funds provided through state support. This is perhaps surprising given that the many programs such as the Prototype grant program require less than a one-to-one match. For example, the Prototype grant program requires a match of $1 for each $2 in state support. The match is even less in the case of a Value-Added Agriculture business where a match of $1 is required for each $4 received from state support. The reason for the high match is the Academic Research and Development program which requires a $1 to $1 match and the Commercialization program. Businesses in the Commercialization program in several cases provided more than the minimum required match. Further, the highest state investment takes place in the commercialization program. The end result is that the

match aggregated across all programs exceeds the level of state support, even if the match is less for the Prototype grant program.

Table 3
Additional Sources of Investment and Revenue

Type of Funding	Funding	Relative to State Support
State Support	$7.32	
Matching Support	$8.65	118%
Federal Support	$2.74	37%
Other Investment Sources	$26.10	356%
Total Other Investment Sources	$37.49	512%
Revenue	$16.96	232%

As seen in Table 3, matching support is 118 percent of state support, or 18% greater. Federal support is 37 percent of state support but that support comes primarily from the SBIR program. Just 8 of the respondents to the survey were SBIR program recipients. This shows the large Federal dollar amounts if the Federal support from just 8 projects is more than one-third of the overall state government support for all 54 businesses which either responded to the survey or were listed in the administrative records of the Commercialization program.

Other Investment source is the largest category of support. This category includes additional capital (beyond the match) raised after each business received support from a Nebraska Business Investment Act program and includes funding from equity investments, loans, and grants. There was $26.10 million in funding from other sources, which is 356 percent of the level of state support. Across all sources, including match, Federal Support and other support, businesses participating in a Nebraska Business Innovation Act program obtained $5.12 of capital to invest for each $1 of state support. In this sense, Nebraska Business Innovation Act programs are very efficient in helping firms obtain sufficient private capital to work through the development process.

Businesses completing the development process ultimately will rely on revenue from sales to sustain and grow the business. While many participating businesses are in the pre-revenue phase, there was nearly $17 million in revenue earned by firms since they began involvement with a Nebraska Business Innovation Act program. This is 232 percent of state support indicating $2.32 in revenue earned for each

$1 of state support. Earned revenue will likely grow as time passes and as more participating businesses proceed further into the development and commercialization process.

State support, additional investments, and revenue have supported new jobs and investment at businesses receiving support from Nebraska Business Innovation Act programs. These new jobs and associated employee compensation are summarized in Table 4. Table 4 shows the number of new jobs added by businesses since applying to a Nebraska Business Innovation Act program. These are the reported new jobs created by mid-2014. Table 4 also shows the annual wages and benefits earned in these jobs (i.e., employee compensation), as reported by businesses either in administrative records or in response to the survey. Table 3 shows that there were 162 jobs created with annual employee compensation of $8.20 million. These figures reflect the direct annual economic impact in jobs and employee compensation for businesses participating in Nebraska Business Innovation Act programs.

Table 4
New Employment and Annual Employee Compensation

Concept	Amount
Employment	162
Annual Employee Compensation ($ millions)	$8.20

As noted in the methodology section, these direct economic impacts also will yield multiplier impacts in the Nebraska economy; for example, as businesses make purchases of equipment and supplies and as owners and workers at businesses spend their income on all the elements of household spending. The magnitude of these multiplier impacts are estimated utilizing the IMPLAN model. The IMPLAN model is the most widely used model for calculating economic multipliers and can be used to calculate economic multipliers for hundreds of industries in states, counties, or combinations of states and counties. The IMPLAN model was used to calculate economic multipliers for the Nebraska economy for the industry of each business participating in a Nebraska Business Innovation Act program.

Multiplier impacts show the additional economic activity for each unit of direct economic activity. For example, a job multiplier would show the additional jobs created in the economy for each 1 job created at a business participating in a Nebraska Business Innovation Act program. Multiplier impacts, once calculated, are added to direct economic impacts in order to estimate the total economic impact.

Tax impacts in turn are estimated based on the economic impact. Purchases associated with business expansion lead to taxable sales while the income of employees leads to taxable income. An estimate of tax revenue impacts therefore can be completed once the economic impact has been calculated.

Table 5 shows the total annual economic impact of businesses participating in Nebraska Business Innovation Act programs in terms of output, value-added, employee compensation and employment. The Table also shows the estimated tax revenue impact for federal taxes but also state and local income, sales and property taxes, in aggregate. The annual economic impact is $53.45 million while the economic impact in terms of value-added is $28.97 million. Note that the value-added impact is a component of the output impact, implying that the two numbers should not be added together. The annual economic impact in terms of employee compensation is $15.23 million. Note that this figure is nearly twice as large as the figure reported in Table 3, showing that there is a significant multiplier impact in the State of Nebraska. This employee compensation is a component of the value-added impact. There is an employment impact of 307 jobs. This suggests wages per job of $49,665 including both the direct and multiplier employment. The state and local tax impact is $1.22 million annually.

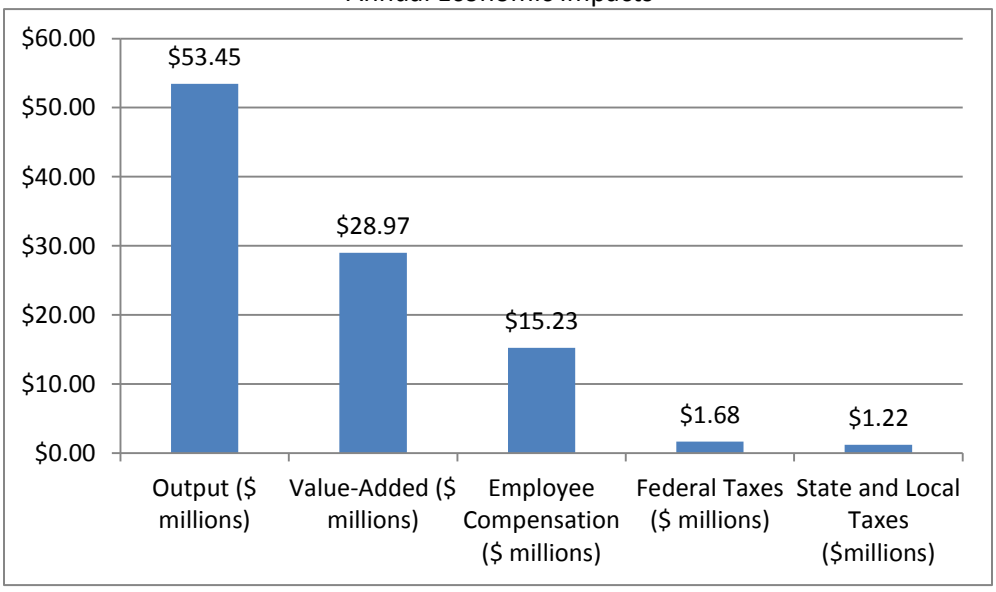
Table 5
Annual Economic Impact Due to Growth

Impact Concept	Total Annual Economic Impact
Output ($ millions)	$53.45
Value-Added ($ millions)	$28.97
Employee Compensation ($ millions)	$15.23
Employment	307
Federal Taxes ($ millions)	$1.68
State and Local Taxes ($millions)	$1.22

4. Conclusion

This study provides an economic impact assessment of Nebraska businesses which have participated in Nebraska Business Innovation Act programs. Specifically, the study examines employment growth at businesses which received funding from Nebraska Business Innovation Act programs, as well as the annual wages and benefits associated with these new jobs. The growth of these businesses and the resulting increase in direct annual economic activity is the basis for estimating economic impact. Multiplier impacts also are estimated and added to direct impacts to yield an estimate of the total annual economic impact. The study also summarizes the additional investments and revenues that businesses have attracted and earned after receiving funding from a Nebraska Business Innovation Act program.

Figure 2
Annual Economic Impacts



One finding is that participating businesses received $5.12 in additional investments through matching funds, equity and other sources for each $1 of initial support from a Nebraska Business Innovation Act program. Supported businesses also have earned $2.32 in revenue from sales for each $1 of such state support. Revenue from sales will continue to grow as more businesses complete the development and commercialization process. These results hold for those businesses which responded to a survey request for information or businesses for which administrative data was gathered by the Invest Nebraska Corporation.

Businesses in the Commercialization program and businesses which responded to the survey have added 162 jobs since their initial involvement in a Nebraska Business Innovation Act program. These jobs had annual wages and benefits of $8.20 million. These are direct economic impacts. These businesses also had a significant total economic impact and tax revenue impact, which were presented in Figure 1. The total annual economic impact was $53.45 million. The economic impact in terms of value-added is $28.97 million. Note that the value-added impact is a component of the output impact, implying that the two numbers should not be added together. The annual economic impact in terms of employee compensation is $15.23 million. The state and local tax impact is $1.22 million annually.

While not shown in Figure 2, the employment impact is 307 jobs. These results suggest wages per job of $49,665 including both the direct and multiplier employment. This finding implies that the innovative, growing businesses supported by Nebraska Business Innovation Act programs provide high wage employment.

Appendix 1: About the Bureau of Business and Principal Investigator

The Bureau of Business Research

The UNL Bureau of Business Research is a leading source for analysis and information on the Nebraska economy. The Bureau conducts both contract and sponsored research on the economy of Nebraska and its communities including: 1) economic and fiscal benefit analysis; 2) models of the structure and comparative advantage of the current economy; 3) economic, fiscal, and demographic outlooks, and 4) assessments of how economic policy affects industry, labor markets, infrastructure, and the standard of living. The Bureau also competes for research funding from federal government agencies and private foundations from around the nation and contributes to the academic mission of the University of Nebraska-Lincoln through scholarly publication and the education of students.

Dr. Eric Thompson – Principal Investigator

Dr. Eric Thompson will be the principal investigator on this project. Dr. Thompson is the Director of the Bureau of Business Research and an Associate Professor of Economics at the University of Nebraska-Lincoln. Dr. Thompson produces a twice-annual long-term economic outlook for the State of Nebraska as well as a monthly leading economic indicator reports and the monthly Survey of Nebraska Business report. He has conducted a variety of economic impact studies for Nebraska industries such as the agriculture, insurance, heritage tourism and horseracing and Nebraska attractions and events such as the Sandhill Cranes migration, the Omaha Zoo, Omaha Performing Arts, the Omaha Symphony, the Lincoln Children's Zoo, and Husker Harvest Days. He also has conducted numerous studies for the Lincoln, Omaha, and State Chambers of Commerce as well as the Nebraska Department of Economic Development and the Nebraska Department of Labor. Dr. Thompson also has conducted numerous studies on the economic benefit and relative costs and benefits of transportation investments. He is currently developing reports on *Under-Investment in Rural Highways* and *Trends in Rural Transportation Finance and the Role of Private Investment* for the U. S. Department of Transportation. Dr. Thompson's research has received support from the National Science Foundation, the U. S. Department of Labor, the U.S. Department of Agriculture, the U.S. Department of Transportation and the Robert Wood Johnson Foundation. In his previous employment, Thompson served as the Director of the Center for Business and Economic Research at the University of Kentucky. Dr. Thompson received his Ph.D. in agricultural economics from the University of Wisconsin-Madison in 1992. His research fields include regional

economics, economic forecasting, and state and local economic development. His research has been published in *Regional Science and Urban Economics*, the *Journal of Regional Science*, and the *American Journal of Agricultural Economics*.

Appendix 2: Nebraska Business Innovation Act Programs

SBIR Program

The federal Small Business Innovation Research (SBIR) program provides funding competitions in two phases that are relevant to the Nebraska SBIR Initiative. Phase 1- to conduct feasibility research; and Phase 2-to expand and develop Phase 1 results into commercially viable innovations. The federal SBIR program is administered by 11 federal agencies. Applicants for federal SBIR program funding compete by submitting proposals in response to solicitations issued by the participating federal agencies. The Nebraska SBIR Program establishes a financial assistance program to individuals and businesses with a principal place of business in Nebraska to support applications to the Federal SBIR Program solicitations.

Phase 0 Program – Provides funding up to $5,000 to assist small businesses for the purposes of planning for an application under the Federal SBIR program.

Phase 1 Program – Nebraska small businesses that receive a federal notification of award for a Phase 1 federal SBIR grant will receive a state grant of 65% of the federal grant up to a maximum of $100,000.

Phase 2 Program – Nebraska small businesses that receive a federal notification of award for a Phase 2 federal SBIR grant will receive a state grant of 65% of the federal grant up to a maximum of $100,000.

Nebraska Innovation Fund

Prototype Grant Program - provides financial assistance to individuals and businesses operating in Nebraska to support proof of concept activities. Helps businesses develop new technologies and leverage innovation to enhance quality job opportunities within the State. The grant is up to $50,000 and must be matched 50% by the individual or business. If the project is a value-added agriculture project the match is 25%. Matching funds must come from non-state sources government.

Nebraska Commercialization/Seed Fund Program – provides financial capital to businesses in Nebraska for the purposes of commercializing a prototype of a product or process. The investment (equity or convertible debt held by Invest Nebraska) can be up to $500,000 and must be matched 1:1 by non-state government sources. If the project is a value-added agriculture project the match is 25%.

Academic Research & Development Program - Academic R & D involves **applied** research, new product development, or new uses of intellectual property. The academic research and development being performed on behalf of the business must be directed toward: the commercialization of new products, the modification of existing products that lead to substantially improved marketability, or to the improvement of existing processes that will provide new sources of revenue to a Nebraska business. The business must use faculty or facilities of a public or private college or university in Nebraska.

First Phase – The grant amount is up to $100,000 and must be matched 1:1 by the business with non-state government sources.

Second Phase – The grant amount is up to $400,000 and must be matched 1:1 by the business with non-state government sources.

Appendix 3: Survey Form

Talent & Innovation Program Report

The Nebraska Department of Economic Development is seeking information about all companies that received assistance through the Talent and Innovation Initiative programs in order for us to determine the impact of these programs and better administrate them. Please report about the changes in your company since the time you received funding from a TI2 program (Prototyping, Academic R&D, or SBIR). If you have received assistance with multiple projects or through multiple programs, please think back to the situation at the time of your **first** project.

If you have any questions about this report, please contact either Joe Fox (joe.fox@nebraska.gov) or Ben Kuspa (ben.kuspa@nebraska.gov).

* indicates a required field

Please enter your company name:

Please enter your contract number(s) (if known):

Please enter your name:

1. What percentage of your (most recent) DED assisted project has been completed? *

- 0-24%
- 25-49%
- 50-74%
- 75-99%
- 100%

2a. How many new, full-time positions have been added since you first applied for funding?

2b. What was the average annual wage for the newly hired full-time positions (if applicable)?

2c. What was the average annual value of benefits paid for the newly hire full-time positions (if applicable)?

3a. How many new, part-time positions have been added since you first applied for funding?

3b. What was the average annual wage for the newly hired part-time positions (if applicable)?

3c. What was the average annual value of benefits paid for the newly hire part-time positions (if applicable)?

4a. Are you still located at the same location?

- Yes (Skip to Q5)
- No (Please continue)

4b. What is your new business address?

5. Have you received new, additional follow-on investment beyond the matching funds listed at the time of application for the DED program?

- No (Skip to Q7)
- Yes (Please continue)

6a. How much additional equity investment capital has your business received (if applicable)?

6b. How much additional loan capital has your business received (if applicable)?

6c. How much additional grant capital has your business received (if applicable)?

6d. How much other capital has your business received (if applicable - please note type)?

7. On what was the capital described in 6a-6d spent (percentages should total 100%):

Percentage spent on Operations (wages, marketing, overhead, etc.):

Percentage spent on Equipment or Machinery:

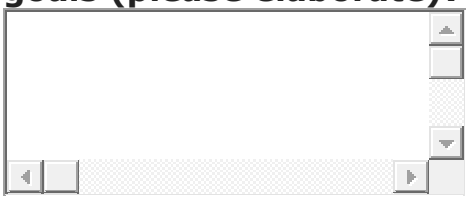
Percentage spent on Construction:

Percentage spent on Other Capital Investment (please describe):

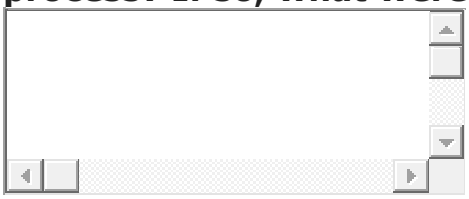
Description of Other Capital Investment spending:

8. How much revenue has been generated since receiving the grant (if pre-revenue, please state so)?

9. Has receiving DED assistance helped accomplish your business goals (please elaborate)?



10. Did you encounter any obstacles during the development process? If so, what were they?



11. Do you plan on applying for additional DED assistance?

12. Do you have any additional feedback you would like to share with DED regarding the TI2 programs?

13. If you received an SBIR matching grant (Phase 2), did the project result in a contract?

- Yes
- No

14a. Has your company been acquired or acquired any other company? If so, what was your valuation at the time of the acquisition?

- Yes (Continue)
- No

14b. What was your valuation at the time of the acquisition?

Research and Analysis of Best Practices with State Venture Capital Programs

and Recommendations to Support and Increase Venture Capital in the State of Nebraska

LB 1114

103rd Legislature

Of the

State of Nebraska

Prepared for:

Invest Nebraska
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Prepared by:

Cromwell Schmisseur LLC

Cromwell Schmisseur LLC

December 1, 2014

To Members of the 103rd Legislature of the
State of Nebraska:

We are pleased to submit this report, *Research and Analysis of Best Practices with State Venture Capital Programs and Recommendations to Support and Increase Venture Capital in the State of Nebraska.* With guidance from Dan Hoffman and the team at Invest Nebraska, we designed this report to serve as a reference tool for Legislators evaluating venture capital initiatives as a component of more general job creation economic development initiatives.

In a portfolio of state-sponsored economic development programs, initiatives that support high-potential small businesses from the earliest stage of conception complement more traditional company recruitment and retention initiatives. They support the spirit of innovation and the kind of entrepreneurial optimism that drives perceptions about the quality of life and business climate in regional economies.

Figuring out how to provide greater accessibility to venture capital investors is an essential task for the developers of regional innovation ecosystems. Over the past 20 years, many states have experimented with various approaches to increasing venture capital accessibility. We were asked to author this report due to our extensive knowledge and experience working with state-sponsored venture capital initiatives.

Ultimately, there is no single approach that works for all states, and measuring or projecting outcomes for venture capital initiatives is an inexact science. Consistent with the nature of the subject, this report includes many of our opinions for which we are solely responsible. We hope this report contributes to the better understanding of state venture capital initiatives. We would welcome an opportunity to answer questions or elaborate on our perspectives upon request.

Sincerely,

Cromwell Schmisseur LLC

Cromwell Schmisseur LLC
Brentwood, Tennessee

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Venture capital represents a specialized niche of private equity investing within the financial services industry. In the U.S., **the venture capital industry is highly concentrated**, with 50% or more of the nation's venture capital supply invested in small businesses in a single state.[i]

Venture capital is used to finance a very small number of "high-potential" small businesses. Less than 5% of the 2 million businesses created in the U.S. every year are likely even interested in venture capital investment, were it available to them.[ii] Most small businesses secure capital from the company founders, friends and family, credit card loans and banks (assuming the borrower has personal assets for collateral) to cover startup costs. Some entrepreneurs operate business models that require little to no start-up costs and can attract paying customers to finance growth.

While all states in the U.S. have banks serving the needs of small business customers, many states like Nebraska have very few, if any, resident venture capital funds capable of investing significant amounts of capital in high-potential small businesses. In Nebraska, the rate of venture capital investment per capita is a small fraction of the national per capita average.

Nebraska is a great state for starting, operating and growing a business. It is the home of five Fortune 500 companies. In 2014, CNBC ranked Nebraska as the 4th best state in the country for doing business. **If Nebraska doesn't have a lot of venture capital, does it really matter?**

* * * * *

The authors of Legislative Bill 1114 were convinced that it matters enough to appropriate state funds for "research, analysis of best practices in other states, and… recommendations on ways to support and increase venture capital in Nebraska." This report, prepared for Invest Nebraska, is intended to partially satisfy this legislative mandate.

The short answer is, "Yes, it matters."

The majority of job creation in the U.S. comes from "young businesses" – those that are less than 5 years old.[iii] The high-growth business stars emerging from the upstarts are more often than not backed by venture capital investors. Far beyond the potential for vast job creation and the standard economic multipliers derived from employment, small businesses with the potential to transform global economies also carry the potential to create substantial, transformational wealth for its founders, employees and investors. **Job creation sustains regional economies. Wealth creation transforms regional economies, creating greater demand for products and services and a new generation of investors and philanthropists.**

Economic development is an area where perceptions heavily influence reality. Regions with small amounts of venture capital under management and minimal venture capital investment activity will be perceived as regions to avoid for entrepreneurs with high-growth aspirations. There will likely be entrepreneurs who persist and find success in the region, but there will be others who want to stay but are forced by business realities to seek success elsewhere.

Perceptions about a region's innovation ecosystems can be improved with support from effective state initiatives. An attractive entrepreneurial environment is primarily about culture and capital, and through targeted economic development programs, regions with adequate innovation capacity can effectively address both of these shortcomings at realistic scale.

The goal should not be to become "the next Silicon Valley" or to create some branded variation for marketing purposes. The goal is to effectively manage addressable factors that currently impair the accessibility of venture capital for the region's future transformational companies.

Eventually, the "supply side" of venture capital must be addressed. Regional innovation ecosystems benefit from having multiple venture capital funds backed by institutional investors actively working in the region. Professional venture capital investors form national networks and collaborate in evaluating high-potential companies, syndicating investment rounds and preparing companies for larger investments or acquisitions at higher valuations. Active and nationally-respected venture capital investors are a necessary ingredient for any innovation ecosystem to reach its true economic development potential.

While government programs can play a role in providing venture capital funds an opportunity to develop a successful track record of investing, governments cannot simply "fix" supply side issues by creating large pools of capital for investment in regional funds. Billions of dollars of taxpayer funds have been invested by other states to "support and increase venture capital" and leverage investments in innovation infrastructure for economic development outcomes. Unfortunately for taxpayers and entrepreneurs, a significant number of these initiatives failed because they were poorly designed, were not given adequate time to mature, and/or were not appropriately attuned to market realities that doomed the initiatives to fail.

In the near term, much can be accomplished with relatively small economic development program investments. The most important near-term objective is to support the state's innovation ecosystem by increasing the demand for venture capital investment and creating a foundation for future programs that effectively address issues pertaining to the supply side of venture capital.

The Nebraska Business Innovation Act created a portfolio of programs with the potential to increase the supply of innovation into the state's regional entrepreneurial ecosystem and to increase the number of new businesses started with the potential to raise venture capital. In our opinion, these programs are necessary, but not sufficient by themselves, to support and increase venture capital investment in Nebraska.

* * * * *

This report identifies 5 key takeaways for Legislators to consider when developing any venture capital initiative:

1. *State funding for venture capital initiatives should be allocated exclusively to efforts that "prime the pump" for innovation and private investment*. This is accomplished by seeding high potential companies for angel investor co-investments and increasing the supply and accessibility of early stage, equity-based venture capital. State incentives for later stage venture capital are generally not addressing market inefficiencies and have greater risk of competing with private interests.

2. *A venture capital initiative should include a "portfolio" of investments that is judged over a long period of time*. Champions of legislative initiatives should be prepared to defend the portfolio of programs for at least 10 years, even if the early returns from some investment initiatives look unsuccessful.

3. *One "yes" trumps a dozen rejections.* Just because a small number of venture capitalists pass on an investment doesn't mean that the small business can't or won't be successful. Networks to connect entrepreneurs with venture capital need to be substantial in scale. True "access" to venture capital in a state like Nebraska requires a combination of sophisticated angel investors, resident venture capital investors, and an intentional, strategic effort to facilitate local entrepreneurs connecting with venture capital investors nationally and even globally.

4. *Active early stage venture capital investors play an essential role in regional innovation ecosystems*. They effectively educate the region's innovators and entrepreneurs about the venture capital investment model and provide role models, mentors and other intangible benefits for entrepreneurs and early stage investors that cannot be replicated solely by angel investors and later stage venture capital funds.

5. *Job creation is a lagging indicator of economic growth*. Robert Louis Stevenson famously wrote, "Don't judge each day by the harvest you reap but by the seeds you plant." In the near term, programs like the Nebraska Business Innovation Act should be compared to "best practices" from similar programs. Over time, leading indicators such as R&D investment and venture capital investment should be the measures by which Technology Based Economic Development (TBED) and venture capital initiatives are measured.

* * * * *

To support and increase venture capital investment in Nebraska, Cromwell Schmisseur recommends the following:

1. *Consistently support the state's "innovation farm system" through long-term (i.e., more than 10 years) and increasing financial support of programs launched by the Nebraska Business Innovation Act*. These programs provide small prototype grants, convertible debt and equity investments and R&D grants. They rarely demonstrate immediate job creation or windfall investment gains but fundamentally and profoundly support the state's innovation ecosystem and will produce "but for" impacts if the state support is consistent and structurally sound.

   The rate of state investments in similar programs across the U.S. has varied significantly. Too little funding produces insignificant results; too much creates opportunities for waste. Based on Nebraska's population and research base, combined with our cumulative knowledge and experience working with state programs in the technology-based economic development industry, we recommend annual funding in the range of $8-12 million for the current portfolio of Nebraska Business Innovation Act programs.

2. *Create a specialty function within, or sponsored by, the Nebraska Department of Economic Development to actively promote and recruit venture capital and private equity investment in Nebraska small businesses.* Economic development organizations can do a lot at the margins of deals to facilitate investments without directly investing in the deals. Many existing state incentives could be packaged to lure a growing venture-backed company to relocate. Moreover, west coast and east coast venture capital funds will often take a look at investment opportunities they might not otherwise see as a courtesy to their Nebraska-based limited partner investors. Sometimes all it takes is the right person to know and how to ask, or someone with enough knowledge of existing state incentives to package them for high-growth small businesses.

3. *Anticipating success with the Nebraska Business Innovation Act programs, begin planning for a state-sponsored "fund-of-funds" venture capital program that includes a focus on financing "emerging managers" of venture capital funds based in Nebraska.* Any state-sponsored venture capital initiative should adhere to four key principles:

   a. Programs should be capitalized efficiently;
   b. Managers should be selected competitively;
   c. Scope of investments should be restricted to a stage of investing not reasonably served by private investors; and
   d. State should have similar financial interests in investments made as private investors.

   Consistent with these principles, Nebraska could develop a fund-of-funds model that attracts interest from respected investment managers while also supporting new or emerging Nebraska-based venture capital funds managed by professionals with existing relationships in prolific venture capital networks. The economic development goal is for the region to build credibility

with regional and national investors as a location capable of generating competitive investment returns. A longer term objective is to build additional in-state investment capacity by helping emerging managers develop a successful track record of investing so that they will be more competitive when pitching institutional fund investors for future capital investments.

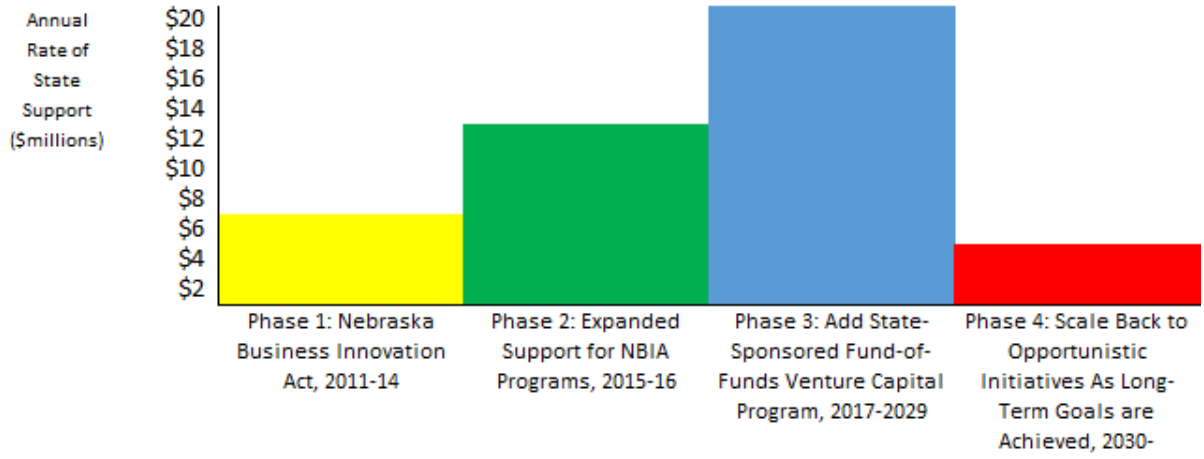
* * * * *

Transformational economic development outcomes are neither fast nor cheap nor guaranteed. It can be highly counterproductive for sponsors of technology-based economic development initiatives to embrace unrealistic expectations.

The goal of any state-sponsored economic development goal should be to reach a future reality where state intervention is no longer required. When Nebraska-based innovators can raise venture capital funding as readily as similarly-situated entrepreneurs anywhere in the world, then there will be no need for further investments of taxpayer funds.

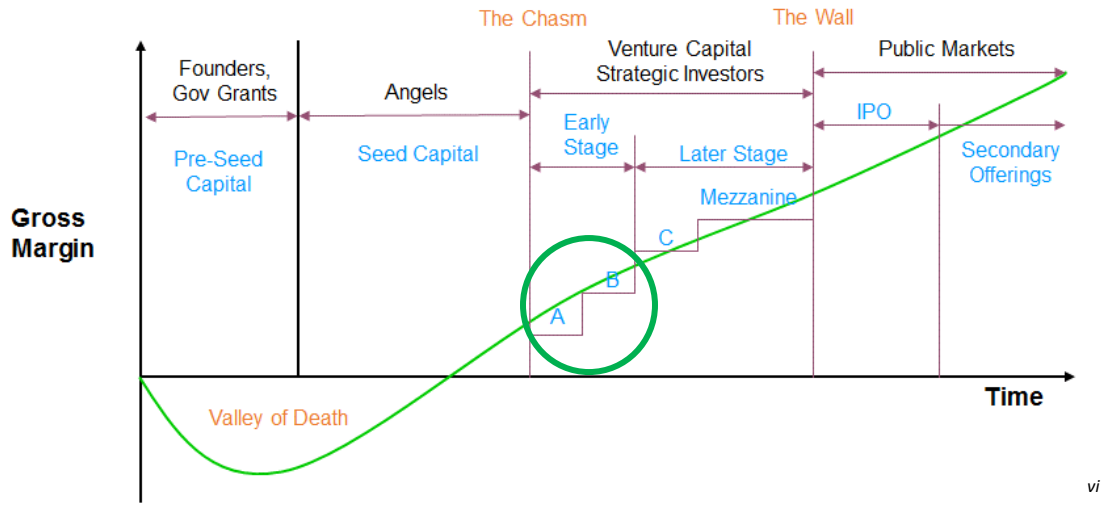
Realistically, this is a 20-year goal. Our industry knows much more today than it did when the first experimental programs were developed in the 1980s. Increasingly, the federal government is co-investing in state-sponsored initiatives with similar goals.[iv] All factors considered, the timing is right for states to increase their investments in state-sponsored venture capital initiatives.

For illustration purposes, the following chart shows a progression of the annual rate of state expenditures over a 20-year period with the potential of achieving transformational outcomes for the Nebraska economy. Importantly, it should be noted that the indirect economic development returns from Phase 1 and Phase 2 programs combined with direct financial returns from a successful fund-of-funds could dramatically lower the net fiscal impact to the state from operating successful programs.



The term "venture capital" is often misunderstood, and at times misrepresented, to state legislators. Understanding what venture capital is – and what it isn't – is critical to designing state policy that attracts the right inputs to the state. Following are five key elements from a widely-cited definition of venture capital[v], with commentary:

1. Venture capital (VC) is financial capital provided to early-stage, high-potential, growth startup companies. The typical venture capital investment occurs after the seed funding round as the first round of institutional capital to fund growth (also referred to as Series A round) in the interest of generating a return through an eventual realization event, such as an IPO or trade sale of the company.



[vi]

The first observation is that venture capital is not pre-seed, angel and most often not seed capital. **Pre-seed capital** includes research funding or grants used to develop an innovation or prove that it works. **Seed capital**, often provided by **angel investors, government supported seed funds (like Nebraska's Business Innovation Act) and at times specialized investment funds**, is generally used to cover business start-up costs and begin operations to prepare for customer acquisition.

"Angel investors" is the term for individuals investing personal capital in small businesses. Active networks of angel investors are critical to the development of high-potential companies that attract venture capital investment. Many state technology-based economic development (TBED) initiatives, such as the 2011 Nebraska Business Innovation Act, are effective in increasing the flow of innovation from scientists and inventors into small businesses. *Accelerators* are also value creators in an innovation ecosystem, as they help first-time entrepreneurs position their innovations for angel capital investments and potentially venture capital as they meet early development milestones.

The second observation is that "later stage" venture capital does not truly align with the spirit of the definition of venture capital. There is a reasonable supply of later stage venture capital available to

companies anywhere in the U.S. that have survived the most challenging early development stages. Many later stage venture capital investors require small businesses to have at least $5 million of revenue and positive cash flows from operations to even consider them for an investment.

Regions with a reasonable supply of or access to early stage venture capital (Series A and B) have little trouble attracting later stage investment. Regions that focus on attracting later stage venture capital without a reasonable supply of or access to early stage venture capital are surprised and then disappointed when the later stage investors complain that the region lacks quality deal flow.

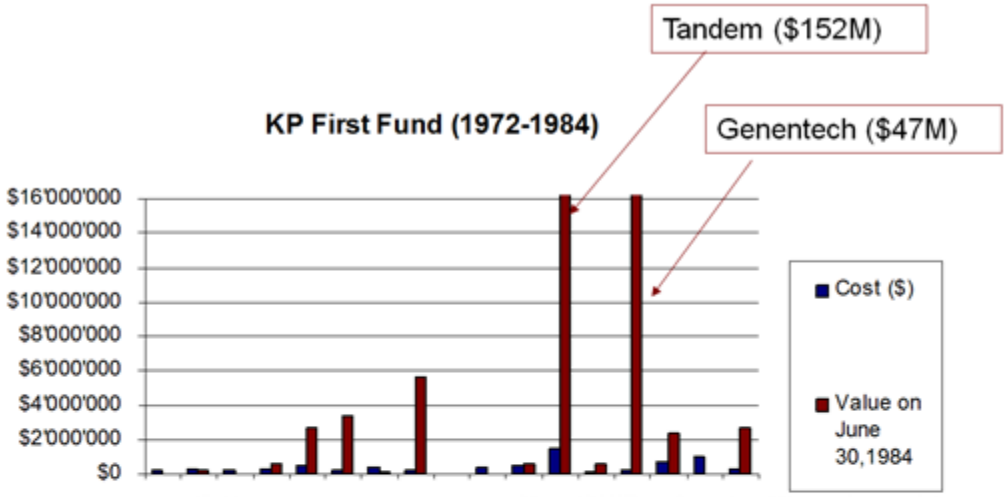
Key takeaway for Legislators: State funding for venture capital initiatives should be allocated exclusively to efforts that "prime the pump" for innovation and private investment. This is accomplished by seeding high potential companies for angel investor co-investments and increasing the supply and accessibility of early stage, equity-based venture capital. State incentives for later stage venture capital are generally not addressing market inefficiencies and have greater risk of competing with private interests.

2. A venture capital fund earns money by owning equity in the companies it invests in, which usually have a novel technology or business model in high technology industries, such as biotechnology and IT. Venture capital is a type of private equity investment.

The mindset of a venture capitalist making equity investments is *completely different* than the mindset of a banker lending capital through a rules-based decision process to small businesses. A banker's primary mission is to lend money to borrowers that are virtually guaranteed to pay them back. They typically look for small businesses with assets for collateral, two or more years of operations with positive cash flows demonstrating an ability to service the debt, and owners with personal assets and a willingness to personally guarantee repayment. Whether a small business is wildly successful or merely able to survive, the end result is the same for a lender. If one out of twenty small businesses receiving loans from a bank fails to repay its loan, the banker will not make a profit on its portfolio.

A venture capitalist's mission is to generate financial returns for Limited Partner investors by helping a small number of high potential small businesses achieve their full potential. A portfolio of venture capital investments will generally include several complete write-offs – failed investments that with the benefit of hindsight may appear foolish and wasteful of investor capital. However, by fully participating in the upside of successful businesses through equity ownership, venture capital funds have the potential to generate substantial returns for investors from just one or two highly successful investments.

To illustrate a highly successful venture capital fund, consider the published results of the first Kleiner Perkins (KP) venture capital fund, which invested just over $7 million in 17 companies, primarily during a four year investment period from 1973-77.[vii]



Venture	Field	Year of Initial Investment	Cost ($)	Value on June 30,1984	Multiple
Advanced Recreation Equipment Corp.	Recreational Equipemnt	1973	$229'200		0
Antekna Inc.	Electronic Training Systems	1973	$275'000	$150'000	0.5
Antex Industries	Light-emitting Diodes	1973	$200'000	$2'529	0
Applied Material Inc.	Semiconductor Processing Equipment	1973	$317'658	$589'000	1.9
Dynastor Inc.	Computer Disk Drives	1973	$497'405	$2'713'540	5.5
Novacor Medical Corp.	Implantable Medical Products	1973	$219'058	$3'369'836	15
Office Communications Inc.	Word Processing Systems	1973	$429'748	$94'453	0.2
Qume Corp.	Computer Printers	1974	$246'762	$5'662'748	23
Speech Technology Corp.	Computerized Speech Products	1974	$41'353	$0	0
American Athletic Shoe Corp.	Athletic Shoe Repair and Manufacturing	1975	$418'782	$0	0
Cetus Corp.	Biomedical Products	1975	$500'100	$641'795	1.3
Tandem Computers Inc.	Nonstop Computers	1975	$1'450'001	$152'204'847	105
Amdahl Corp.	Mainframe Computers	1976	$92'500	$607'148	6.6
Genentech Inc.	Biomedical Products	1976	$200'005	$47'289'150	236
Collagen Corp.	Medical Products	1977	$655'211	$2'370'913	3.6
Enviro Development Co.	Waste Treatment Systems	1977	$953'495		0
Andros Analyzers Inc.	Gas Analysis Equipment	1980	$279'059	$2'677'010	9.6
Total			**$7'005'337**	**$218'372'969**	**31.2**
				IRR	**51%**

Seven investments completely failed. 41% of the small businesses and 36% of the fund's capital yielded a 90% loss. KP invested 6% of its capital in a small business that repaired athletic shoes. This investment was made at a time when Nike was still a development stage company just up the coastline. Another 6% of its capital was invested in a small business developing word processing systems with an 8-year head start on the Microsoft development team that created Microsoft Word. This investment yielded just 22 cents on the dollar. 14% of its capital was invested in a waste treatment system developer – not exactly a prototypical Silicon Valley investment. Two failed investments were probably just ahead of their time, as technologies related to light-emitting diodes and speech recognition systems have become commercially viable much more recently.

A reasonable investor in the first KP fund would not dwell on the seven failed investments and the loss of 90% of the $2.5 million invested in those companies, because eight investments yielded $18.6 million of returns on $2.8 million invested. Combined with the losses, the "solid hits" from the portfolio yielded a "3.5X" return on $5.3 million invested over a 12-year period. These results alone would likely have earned KP an ability to raise a second fund of greater value from institutional

investors.

But the first KP venture capital fund is legendary for the two "grand slam" investments in its portfolio. A large equity $1.5 million investment in Tandem, a computer company that was eventually acquired by Compaq (which in turn was acquired by HP), eventually returned $152 million to KP. And a small $200k equity investment in biotechnology pioneer Genentech eventually returned $47 million to KP investors.

So despite its unproductive investment in an athletic shoe repair company and a number of other ill-timed bets, the venture capitalists with the first KP fund became legends in Silicon Valley for generating a 51% IRR on its first $7 million fund. The firm's "carried interest" on the fund likely enabled them to personally share more than $40 million of profits. The "limited partner" investors, possibly pension funds benefiting school teachers or state employees, or possibly a university endowment using a portion of investment proceeds to offer scholarships or recruit research faculty, likely earned $175 million on $7 million invested.

Key takeaway for Legislators: A venture capital initiative should include a "portfolio" of investments that is judged over a long period of time. Champions of legislative initiatives should be prepared to defend the portfolio of programs for at least 10 years, even if the early returns from some investment initiatives look unsuccessful.

3. In addition to angel investing and other seed funding options, venture capital is attractive for new companies with limited operating history that are too small to raise capital in the public markets and have not reached the point where they are able to secure a bank loan or complete a debt offering. The challenge is that investment decisions are highly subjective, and even seasoned venture capital investors are often wrong.

Venture capital investors can surprise entrepreneurs unfamiliar with the venture capital investment model when they tell the entrepreneurs that their targeted "market isn't big enough" to warrant further consideration. Decisions about venture capital investments are highly subjective compared to bank lending decisions that are based largely on quantitative data, and venture capitalists are very often wrong in their early judgments. In fact, the most successful venture capitalists have the self-confidence for self-deprecation when they share information about the investments they *didn't* make. For example, the highly regarded and successful Bessemer Venture Partners, a firm that made highly profitable investments in startups like Skype, LinkedIn, Pinterest, Yelp and Staples, shares its misjudgments on the "anti-portfolio" page of its website – stories of passing on opportunities to invest in Apple, eBay, Google, FedEx, Intel, Intuit, PayPal and Cisco.

Key takeaway for Legislators: *One "yes" trumps a dozen rejections. Just because a small number of venture capitalists pass on an investment doesn't mean that the small business can't or won't be successful. Networks to connect entrepreneurs with venture capital need to be substantial in scale. True "access" to venture capital in a state like Nebraska requires a combination of sophisticated angel*

investors, resident venture capital investors, and an intentional, strategic effort to facilitate local entrepreneurs connecting with venture capital investors nationally and even globally.

4. In exchange for the high financial risk that venture capitalists assume by investing in smaller and less mature companies, venture capitalists usually get significant control over company decisions, in addition to a significant portion of the company's ownership (and consequently value).

You see this on *Shark Tank* all the time – the delightful but naïve small business inventor with a great product invention but woefully inadequate high-growth business experience and possessing a fatal reluctance to give up control of the company. Venture capitalists that have been investing long enough will have at least one story of a promising company that failed due to a fatal lack of self-awareness of the founder.

Silicon Valley has hundreds of stories of entrepreneurs that scuttled their businesses with self-inflicted wounds, but a key difference between Silicon Valley and areas with limited access to venture capital investors is the socialization of the venture capital investment model. A faculty inventor at Stanford will know a dozen colleagues with experience licensing technologies to startups or even taking a leave of absence to launch a startup and raise venture capital. They have peers driving really nice cars that ended up with just 1.5% of a company that sold for $400 million. You don't need to explain to a Silicon Valley entrepreneur that a small piece of a really big pie can produce a life-changing event.

Key takeaway for Legislators: Active early stage venture capital investors play an essential role in regional innovation ecosystems. They effectively educate the region's innovators and entrepreneurs about the venture capital investment model and provide role models, mentors and other intangible benefits for entrepreneurs and early stage investors that cannot be replicated solely by angel investors and later stage venture capital funds.

5. Venture capital is also associated with job creation, the knowledge economy, and used as a proxy measure of innovation within an economic sector or geography. According to the National Venture Capital Association, 11% of private sector jobs come from venture backed companies and venture backed revenue accounts for 21% of US GDP.[viii]

In economic development, perceptions matter. Regions known for innovation ecosystems with reasonable access to venture capital will be more likely to recruit or retain companies known for innovation. They will be more likely sustain a large class of creative, self-employed professionals working with multiple startups as independent contractors while perpetually developing their own. When new breakthrough companies emerge in their regions hundreds or even thousands of high-wage jobs, they will likely point to venture capital financing as integral to their successful development. Regions without reasonable access to venture capital may learn about graduates from their colleges that moved to other regions before finding entrepreneurial success.

Although the venture capital industry can clearly point to large employers that emerged from early development stages with venture capital backing, the industry suffers by comparison from the immediacy of job creation resulting from established company relocations or expansions. Most venture capital does not translate immediately into new jobs but may be used for contract development, intellectual property development, marketing and other business development activities with mostly indirect employment outcomes not even tied to the region. When the primary measure is job creation relative capital invested, near-term results will mostly likely fall short of expectations.

On the other hand, venture capital investment offers the potential for local wealth creation that traditional economic development programs cannot match. When a mature, public company negotiates major tax incentives to build a manufacturing plant with 1,000 employees, incremental wealth created for the company from the profits of the new plant will accrue to the company's global shareholders. When a local startup supplements employee compensation with "stock options" and then finds breakthrough success, the wealth created will largely be shared by the founders, investors and employees. Despite a number of significant business recruitment successes, the single greatest economic driver for vibrant "technopolis" known as Austin, Texas was the creation of more than 2,000 "Dellionaires" in the 1990s. **Job creation sustains regional economies. Wealth creation transforms regional economies, creating greater demand for products and services and a generation of investors and philanthropists.**

Key takeaways for Legislators: Job creation is a lagging indicator of economic growth. Robert Louis Stevenson famously wrote, "Don't judge each day by the harvest you reap but by the seeds you plant." In the near term, programs like the Nebraska Business Innovation Act should be compared to "best practices" from similar programs. Over time, leading indicators such as R&D investment and venture capital investment should be the measures by which Technology Based Economic Development (TBED) and venture capital initiatives are measured.

Advocates of limited government have no shortage of failed government programs to point to as case studies for why government should only intervene in free markets when absolutely necessary. Even when the evidence of inefficient capital markets is overwhelming – and Nebraska consistently performing 90% below the national per capita average for venture capital investment is overwhelming evidence – government leaders need to be cautious about the programs they design to ensure that they first and foremost "do no harm." Besides wasting taxpayer funds, faulty program designs can interfere with the economics of transactions that would likely happen without government stimulus, and they can deprive resident investors from providing capital to private companies on reasonable terms when faced with government-subsidized competition.

A. What Can Go Wrong with State Innovation, Entrepreneurship and Venture Capital Programs?

At the state level, where most government supported venture capital programs are initiated, the impacts of poorly designed programs can have disastrous results. Some of the worst cases – Louisiana's certified capital companies (CAPCO) program and Hawaii's high technology investor tax credit – resulted from uncapped tax credits exploited by opportunistic applicants to the tune of $600+ million[ix] and $1+ billion[x] of foregone state tax revenue, respectively. It is reasonable to expect that state financial commitments of that size would have created a lasting legacy of private venture capital investors able to sustain funds without public funding, but in fact, the residual value from poorly designed programs is surprisingly small, with Louisiana reporting $14.8 million of venture capital investment in 2013 and Hawaii just $2.5 million.[xi]

In 2009, Harvard Business School professor Josh Lerner published *Boulevard of Broken Dreams: Why Public Efforts to Boost Entrepreneurship and Venture Capital Have Failed – and What to Do About It*. The thesis of the book is not "don't do it" but rather "do it right." However, the case study method of learning requires looking at failures first to learn important lessons on government interventions.

Lerner notes that initiatives can fail due to either "conceptual" or "implementation" issues.[xii] Frequently encountered issues mentioned by Lerner include:

- Timeframe – many states have abandoned initiatives after a few years, failing to realize the economic reality that venture capital programs take many years to produce measurable results;

- Scope – many state initiatives are either too small to produce a measurable impact or so large that they overwhelm private sector efforts;

- Awareness – many state programs overreach and attempt to make a market where the private sector is uninterested in participating;

- Fairness – whereas the private sector obsesses over incentive programs to ensure that performance is rewarded for results, many state programs reward program participants for

suboptimal behavior (such as double-dipping on government incentive programs), creating situations where the program fails to achieve objectives while the participants are handsomely rewarded;

- Evaluation – many programs reward participants for being adept at procuring public funds rather than being those with the greatest potential to deliver transformational results; and

- Geography – many programs fail to recognize that venture capital is a national if not global industry, and that policies designed to restrict movements of capital or firms post-investment can deter the important bottom line financial performance of programs.

Of these issues, we have observed some of the most significant design flaws fall under the "fairness" category and the most significant implementation flaws relate to the "evaluation" category.

1. **Programs that reward investors with a tax credit for merely making an investment do not align investor interests with taxpayer interests.** When a tax credit is issued to an investor, the state's direct financial "cost" is fixed at the amount of the tax credit and the amount of its direct financial return is fixed at zero. Proponents argue that the state benefits indirectly from jobs and wealth created. The problem is that direct-to-investor tax credit programs do not tie the value of tax credits to the results of the investment for the state. Furthermore, there are no effective controls to prevent tax credits for being awarded for investments that would have been made with or without the incentive. <u>If taxpayer funds are effectively used as investment capital, whether in a fund or a small business, then state government should retain its right to receive its share of the direct financial returns from that investment</u>.

2. **Programs should require subjective investment evaluations by independent experts and empower independent boards to make investment decisions.** The highly subjective nature of investment decisions – whether choosing fund managers or evaluating small businesses for an investment – will create perceptions of political influence, real or imagined, if government officials are directly involved. <u>Investment decisions should be made following a comprehensive due diligence process which would include private co-investors, and should be made by independent, qualified professionals vested with the authority to make the final decisions on how taxpayer funds are invested.</u>

3. **Too many programs "talk like venture capitalists" and "walk like bankers."** From our earlier definition, venture capital is equity capital provided to early-stage, high-potential, high-growth startup companies. The typical venture capital investment occurs after the seed funding round as the first round of institutional capital to fund growth (also referred to as Series A round) in the interest of generating a return through an eventual liquidation event, such as an IPO or trade sale of the company. <u>If the policy goal is to support and increase venture capital in the state, then</u>

program designers need to ensure that bona fide venture capital funds participate, and that they are restricted to making bona fide venture capital investments.

B. What Can Go Right with State Innovation, Entrepreneurship and Venture Capital Programs?

Fortunately, there are many examples of states that have operated successful TBED programs inclusive of venture capital initiatives, but even the managers of those initiatives are looking to tweak the formula or improve their models. As Dr. Lerner concedes, "Our understanding of the ideal policies to promote new ventures is still at an early stage. But the desire for information on how to encourage entrepreneurial activity is very real."

Two highly-regarded TBED programs with a record of successfully investing public funds directly into small businesses are the Maryland Venture Fund (MVF) and the Ben Franklin Technology Partners (BFTP) in Pennsylvania.

MVF primarily invests alongside seed and early stage investors and facilitates relationships with venture capital funds for follow-on financing rounds. Seeded $25 million of state capital for its initial fund, MVF investments have returned $68 million of proceeds on $52 million of investments in 114 companies, all while creating substantial indirect economic benefits for the state.[xiii] With its credibility established with public and private leaders, the Maryland Department of Economic Development supported the 2012 legislative effort to create the $100 million Invest Maryland program, which added $21 million to MVF and created a $56 million fund-of-funds program managed by the newly created Maryland Venture Capital Authority.[xiv]

In Pennsylvania, BFTP has a 30-year track record of providing pre-seed, seed and early stage capital and business development assistance to high-potential early stage companies. With a consistent methodology of serving "clients" through four regional offices, BFTP is able to show that companies seeking its assistance generally outperform peer companies, producing $3.60 of incremental tax revenues to the Commonwealth for every $1.00 of taxpayer funds invested to provide BFTP support services.[xv] Many of the BFTP assisted companies fail because they work with startups at the earliest, riskiest stages of development; however, there have been several that have grown into extraordinary companies long after BFTP received a return on its investment. For example, in 2013, ViroPharma, a Pennsylvania-based pharmaceutical company, was acquired for $4.2 billion.[xvi] Founded in 1994, ViroPharma received a $50,000 investment from BFTP in 1995.[xvii]

Like MVF, BFTP has supported its state's experiments with various programs including a couple of venture capital programs. In 2013, BFTP supported the development of a $100 million Innovate in PA initiative that, starting in 2015, will provide incremental funding for BFTP operations and fund the development of a $35 million fund-of-funds venture capital initiative.

Massachusetts is another state that has operated a successful venture capital program. Although this state is the #2 state in the nation in terms of total venture capital investment and #1 in per capita venture capital investment, the state has recognized that even prolific financing markets for early

stage companies can produce market gaps that undermine the state's innovation ecosystem. Key success factors for the Massachusetts Technology Development Corp. (MTDC) include:[xviii]

- **Exclusive focus on viable companies in market gaps**. Perhaps tempered by its prolific investing environment, MTDC is restrained from co-investing in the most lucrative deals that private capital readily serves, but it also expects to make a profit on its investments and will not invest in companies that fail to meet its rigorous due diligence tests.

- **Investing in industries overlooked by or out-of-vogue with venture capital**. Many for-profit venture capital funds are as concerned about timing the market as they are concerned with finding high-potential companies. There can be big picture issues, such as Wall Street trends in the "IPO" market (initial public offering), or FDA trends related to the regulatory costs and hurdles of bringing new drugs or medical devices to market. MTDC is more likely to sit out the next social media business model for an investment in a clean energy startup, even as that market has recently cooled.

- **Backing less experienced entrepreneurs**. MTDC recognizes that every great entrepreneur was at some point a first-time entrepreneur. Many venture capitalists greatly prefer working with experienced entrepreneurs, recognizing that while many entrepreneurs learn from previous failures, they would prefer those failures to have been financed with someone else's capital. While not measured by any known methodology, anecdotally we understand that serial entrepreneurs are economic development dynamos that can produce a generation of economic benefits long after the first venture. Giving first-time entrepreneurs the capital and support for the opportunity of success can build great loyalty to the region and help retain economic benefits related to a lifetime of future ventures.

Over 30+ years of investing, MTDC reports a 16.5% internal rate of return on its investments, which is lower than the venture capital industry rate of 21.7% over the same period of time. MTDC attributes its sub-average ROI to its focus on investing in market caps and backing companies that are struggling to raise capital rather than those whose offerings are oversubscribed with private venture capital.

C. State Experiments with Innovation and Entrepreneurship Programs

Regional innovation ecosystems vary greatly from state to state, making it impractical to forecast whether a specific program model working well in one state would have comparable success in another. The best approach is to begin with a detailed assessment of a regional ecosystem's assets and deficiencies to determine where government stimulus is most needed.

The State Science and Technology Institute (SSTI) has a dated (2006) but still relevant report, "A Resource Guide for Technology-Based Economic Development: Positioning Universities as Drivers, Fostering Entrepreneurship Increasing Access to Capital," which provides a wealth of information about various state program experiments.[xix]

According to SSTI, there are five key components to a high-performing technology-based economy:

1. A research base generating new knowledge;
2. Mechanisms for transferring knowledge to the marketplace;
3. An entrepreneurial culture;
4. Sources of risk capital; and
5. A technically-skilled workforce.

The following table expounds on these five components and describes how state programs can be designed to support a state's innovation ecosystem:

Component	Key Elements	Key Metrics	State TBED Programs
Research base	Tier 1 research universities, non-profit research institutions, medical schools and teaching hospitals, corporations with significant R&D expenditures, and small businesses competing for SBIR grants.	Per capita R&D expenditures; eminent scholars; per capita patents issued; SBIR grants received	Eminent Scholars programs; State R&D tax credits; technical assistance for SBIR applications and matching grants
Knowledge transfer	University and research institution programs and policies designed to transfer intellectual property rights to high-growth companies; corporations	# of licenses issued and # of startup companies launched with intellectual property from research institutions	Pre-seed and seed-stage investment funds; angel investor co-investment funds or tax credits.
Entrepreneurial culture	4-H programs; university entrepreneurship programs; technology business accelerators and incubators; business plan competitions; awards and recognition programs.	Participation levels by entrepreneurs and mentors/advisors in entrepreneurship support programs	Statewide business plan competitions; entrepreneur-in-residence programs
Risk capital	Angel investor groups, early stage venture capital (Series A), growth-stage venture capital (Series B)	VC investment per capita; actively-investing VC under management	Seed-stage co-investment funds; Fund-of-funds programs
Technically-skilled workforce	Supply of scientists and engineers from universities; major employers with R&D base	# of engineering graduates, jobs	State R&D tax credits

In Nebraska, programs created by the Nebraska Business Innovation Act programs primarily address the "innovation" and "entrepreneurship" components. The following page summarizes features of these programs and our analysis of how these programs align with the categories of technology-based economic development programs we have observed in other states:

Program / Budget	Features	Cromwell Schmisseur Analysis
Small Business Innovation Research (SBIR) Program $1 million/year	• Phase 0 grant – This grant provides up to $5,000 for small businesses that qualify under the SBIR program, to plan and submit an application under the Program. • Phase I grant - Nebraska businesses receiving an SBIR Phase I Award can also receive an additional state grant up to 65% of the federal grant (maximum $100,000). • Phase II grant – Nebraska businesses receiving an SBIR Phase II Award can also receive an additional state grant up to 65% of the federal grant (maximum $100,000).	Nebraska ranked 43rd nationally in 2011 with 11 SBIR awards to resident small businesses.[xx] SBIR is an "innovation" program. Growth in SBIR grants can best be achieved through providing information, mentoring and technical assistance to entrepreneurs without prior SBIR grant awards. Program managers should advise angel investors to encourage investees to pursue SBIR grants for non-dilutive development funding. Persistence is key. Colorado is a state with an "SBIR culture" that could be emulated.
Nebraska Research and Development Program $3 million/year	Businesses operating in Nebraska using faculty or facilities of a public or private college or university in Nebraska are eligible to apply for two grants under this program: 1.R&D Phase I grant provides up to $100,000 2.R&D Phase II grant provides up to $400,000. Both grants must be matched by the business on a 1:1 basis with non-state resources.	Another "innovation" program. This model is designed to encourage university collaborations with private sector business. Nebraska ranked 34th nationally in industry R&D performance and 35th in academic R&D expenditures in 2011. This is an example of a program that takes time to mature and should be given a 7-10 years prior to evaluating efficacy.
Nebraska Innovation Prototype Grant $1 million / year	Small businesses located in Nebraska or willing to locate to Nebraska are eligible to apply for a grant of up to $50,000 for the purposes of creating a prototype of a product or a process. The grant requires a 50% match or a 25% match for value-added agriculture projects from non-state government resources.	An "entrepreneurship" program that helps innovators build a prototype, thereby improving the probability of raising seed capital for a startup business. This is another program that should be given a long runway and perhaps a funding increase to $2 million per year to determine the cost/benefit of continued state funding.
Nebraska Innovation Seed/Commercialization Fund $2 million / year	Small businesses located in Nebraska or willing to locate to Nebraska are eligible to apply for an investment of up to $500,000 for the purpose of commercializing a prototype of a product or process. The investment can either be a convertible note or equity and is held by Invest Nebraska. There must be a 100% match or a 25% match for value-added agriculture projects from non-state government resources.	Even though the program involves an investment of capital, this program is really more of an "entrepreneurship" program as it provides small amounts of co-investment capital for primarily angel-backed seed and early stage companies. This program is arguably more valuable to angel investors than an angel investor tax credit and provides state taxpayers an opportunity to participate in the upside returns of successful investments. If demand is unmet, an increase to $3-5 million per year of annual funding may be warranted.

D. Various State Experiments with Venture Capital Programs

The Nebraska Business Innovation Act programs, given consistent funding over at least 10 years, will support an innovation ecosystem that should increasingly produce young small businesses with the potential for venture capital investment. However, these programs alone will not "support and increase venture capital investment in Nebraska." Eventually, Nebraska will need a "venture capital strategy" that may require a substantial commitment of state capital to fully execute.

In the past two decades, other states have committed more than $2 billion experimenting with programs intended to support and increase venture capital investment with mixed results.

Following is a summary of the common types of venture capital programs with some prominent examples:

1. Direct Investment Funds

Recognizing an unmet need for seed stage equity investors capable of *leading* investment rounds and syndicating co-investments from institutional venture capital funds as well as angel investors, several states support venture capital funds restricted to in-state investing. These state supported funds are most often operated by a quasi-governmental entity with a focus on generating investment returns but a strategic mission to invest in underserved markets and facilitate economic development. The aforementioned Massachusetts Venture Fund is an example. Others include:

- **Connecticut Innovations** – Since 1995, CI's venture capital fund has invested $260 million in 204 companies, with private capital leverage of more than $1 billion. From its portfolios, CI has participated in capital gains from 7 IPOs and 40 acquisitions. Its investments played a role in recruiting 26 high-potential small businesses to relocate to Connecticut.[xxi]

- **Maryland Venture Fund** – Created in 1994, MVF has invested $52 million in 114 early-stage high-technology companies, realizing $68 million in returns from those investments. MVF requires at least a 3:1 match on its initial investments of up to $500k. MVF investment decisions are based on recommendations from a 10-person Advisory Board based on their assessment of the returns potential as well as other economic development factors such as potential job creation.[xxii]

- **i2E (Oklahoma)** – i2E is a state-sponsored non-profit venture development organization that manages a portfolio of equity investment "proof-of-concept" and "seed" funds for the state of Oklahoma. Over a 12-year period, concurrent with or subsequent to i2E's investments of $20.9 million, its portfolio companies received more than $478 million of private investment for a 23:1 leverage.[xxiii]

2. Fund-of-Funds

The primary objective of a "fund-of-funds" investment program is to create greater accessibility to institutional venture capital funds through state capital investments in the funds. Some state

programs allow for the state's investment capital to be invested nationally, requiring only a "best effort" from the participating venture capital funds to review investment opportunities in the state. Others restrict the state's capital to investments only in small businesses within the state, often using a "sidecar" structure to track state capital investments. Still others negotiate a "side letter" agreement in which fund managers agree to invest a ratio of the state's equity investment (typically 1:1 but sometimes 3:1 or more) in small businesses within the state. Notable fund-of-funds programs include the following:

- **Utah Capital Investment (formerly known as Utah Fund of Funds)** – UCI has invested $107 million in 28 private equity funds ranging from venture capital, growth equity and buyout funds. million state-backed fund that has made investments in 2 seed funds, 17 venture capital funds and 9 growth equity funds.[xxiv] 55 Utah-based small businesses have received a total of $266 million of venture capital and growth equity investments from funds that received UCI investments. Importantly, more than 350 Utah-based companies have been reviewed by fund managers, providing valuable feedback to small businesses in the state's innovation ecosystem whether or not the review ultimately led to an investment. This program was financed with an innovative "contingent tax credit" model, in which the loans of program underwriters are guaranteed by state tax credits that will only be issued to cover program losses.[xxv]

- **New Jersey Economic Development Authority** – NJEDA has invested $39 million in 11 venture funds with a focus on investing in New Jersey technology companies with less than $3 million in revenue. Through 2011, New Jersey companies receiving investments from the participating venture capital funds had received $850 million of private capital investments.[xxvi]

- **Maryland Venture Fund Authority** – Capitalized by two-thirds of the proceeds from the $84 million Invest Maryland program, MVFA operates a $56 million venture capital fund of funds program. State capital invested in regional venture capital funds must be invested in Maryland-based companies. The program was noteworthy for its use of deferred insurance premium tax credits to finance the capital investments. (Cromwell Schmisseur provided advisory services to the Maryland Venture Fund during the legislative development process.)

3. Certified Capital Companies (CAPCO)

More than $2 billion of state capital has been invested in CAPCO models in the past 20 years.[xxvii] These programs award deferred tax credits to funds that meet the minimum application requirements by the statutory application date. If oversubscribed, tax credits are allocated to applicants on a pro rata basis. In some states, programs provide for a nominal share of investment profits to accrue to the state, but importantly, the state loses ownership rights to the investment principal derived from the tax credits.

CAPCO programs have been widely criticized for unfair economics, excessive financing costs, investments structured as loans to mature companies and disputed job creation claims. If the stated goal is to support and increase venture capital investment, this model is not recommended.

Cromwell Schmisseur, LLC has had the privilege of supporting the U.S. Treasury's State Small Business Credit Initiative since 2012 as technical advisors on state venture capital programs. Through SSBCI, thirty-five states have allocated more than $450 million of capital to support existing or new venture capital programs. Invest Nebraska is investing $3.6 million of SSBCI capital for direct investments in seed and early stage small businesses in Nebraska. In a report published by the U.S. Treasury in 2013 about SSBCI venture capital programs, Information and Observations on State Venture Capital Programs, we were asked to include a section titled "Principles of Well-Designed Venture Capital Programs" based on our pre-SSBCI experience in this niche economic development industry. This section reproduces these "principles" with commentary specific to our understanding of the opportunities/needs for Nebraska:

1. **Understand the supply of and demand for venture capital**. In order to design a state venture capital program that alleviates market inefficiencies and increases access to risk capital, it is necessary to have a realistic understanding of capital supply and demand unique to a specific geographic region. Venture investing can vary greatly from state to state and region to region. Program managers who communicated knowledge of the current financing lifecycle in their state – # of resident VC funds, # of transactions, $ amounts invested, funding sources, funding stages – are more likely to develop programs with targeted investment strategies implemented at an appropriate scale to support small businesses and create value.

   Nebraska clearly has unmet demand for venture capital that exceeds the supply, because the supply is virtually non-existent. Nebraska does have a reasonable amount of angel capital and other stimulus capital, such as that provided by SSBCI, to "prime the pump" with pre-seed and seed-stage companies that could eventually be attractive to venture capital, but until the state's innovation ecosystem has greater access to Series A venture capital, the perceptions and realities of a lack of venture capital will persist.

2. **Focus on capacity building with an ecosystem approach**. The potential comprehensive benefits of a state venture capital program will be limited if the program operates as a stand-alone initiative rather than integrating into a larger small business support system. Program managers committed to building entrepreneurial capacity and a sustained venture capital presence are more likely to design strategies aligned with market-based principles. Several state program managers communicated how SSBCI will interact with and support complementary development strategies while building innovation capacity within their state's economy.

   The Nebraska Business Innovation Act is an important first step to capacity building in Nebraska, and it will be important for the state to consistently build this infrastructure. It is critically important to design a portfolio of capital formation and venture development programs that are synchronized to support companies through the different stages of growth. Small business financing programs need to be synchronized to be available as ecosystem needs move from pre-seed support to attracting risk capital from institutional venture capital.

3. **Create pathways to the next investment round**. Nearly all state program managers communicated their expectation that the SSBCI funds allocated to venture capital would be readily absorbed by market demand. However, with a majority of VC programs focused on the seed/early stage of investment along the capital continuum, the greater challenge that faces program manages may well be in securing follow-on investment rounds in markets underserved by institutional venture investors. The most successful private VC investors continually plan for the next financing event, actively communicating about investment opportunities and expanding professional networks to the benefit of portfolio of companies. If pathways to the next financing event are not created, small businesses receiving seed investments might not survive.

   This is an area where Nebraska's corporate leadership could serve as an effective partner with the state in recruiting Series A venture capital to the state. The ability to attract a major corporate customer to help prove the value of its innovation, is critically important to young companies. Nebraska's corporate leaders have the innate power to get the attention of the venture capital industry and satisfy corporate procurement needs, all while supporting the state's economy.. Are they willing to use it to bring a spotlight to Nebraska small businesses with the potential to attract venture capital investment?

4. **Plan for the long-term and manage expectations**. State venture capital programs are long-term development initiatives, and the term "patient capital" is used to describe VC for a reason. Venture investing, and particularly early-stage venture investing, is dynamic and unpredictable, so experienced program managers understand the need to plan for a six to ten year maturation cycle. Furthermore, when communicating about VC programs, it is important to manage expectations for achieving "comprehensive returns" that includes both financial ROI and economic development calculations. In any investment portfolio, there will be good investments and bad investments (and some likely total write-offs), so program leaders should be proactive in educating partners and stakeholders on a program's processes and expectations.

   Comprehensive returns means state government fully participating in the financial upside of good investments and incorporating intangible values into the returns equation, such as the investments in building the innovation ecosystems that do not translate directly into financial returns. Most importantly, comprehensive returns implies direct and open communications with state legislators about realistic expectations and maturation periods for venture capital programs.

5. **Specifically address the potential for conflicts of interest and political influence**. Several state VC program managers acknowledged the potential for conflicts of interest and/or political influence in a state-managed capital formation initiative. It is not unheard of for a manager of a VC program to receive correspondence from a state official (elected or appointed) about an investable deal that has their interest. Similarly, state capital programs commonly engage volunteer civic leaders to serve on advisory committees with responsibilities for vetting opportunities and making investment recommendations. Well-designed initiatives specifically address the potential for conflicts and influence by having clearly stated policies and processes in

place to govern activities and investment decisions.

Legislators should recognize that elected government officials should not put themselves in potentially bad situations by directly evaluating and selecting investment managers or small businesses for an investment of taxpayer capital. Furthermore, legislators should be wary of removing competitive selection processes by dictating in legislation qualifications for fund managers or setting up "first come, first served" allocation processes.

6. **Attract the most capable leaders to manage resources.** A critical success factor for state capital programs is the ability to attract capable investment managers to manage public resources. Some state programs have demonstrated success with engaging high-performance leaders as part of the internal team or through a state-sponsored organization. Other state programs seek capable managers by contracting with for-profit investment managers rather than building duplicate internal capabilities. Both strategies can deliver expected outcomes; however, successful programs are built on the understanding that success is determined largely by who is involved with managing funds.

   National credibility with private investors is a critical success factor. Fund managers in a venture capital fund-of-funds program should demonstrate abilities to lead investment rounds and syndicate investments with elite venture capital funds in Silicon Valley and Boston. Also, it's critically important that fund managers have a business model aligned with the bona fide venture capital industry. If they don't raise capital like real venture capital funds, invest capital like real venture capital funds (meaning equity, not debt), or make money like real venture capital funds, then they will not be able to leverage the state experience to raise private capital for future, unsubsidized investing in the state.

7. **Measure results accurately with defensible logic**. Some state program managers have significant experience with evaluating key metrics for VC program performance and reporting results. Although there are currently no recognized national standards for evaluating the direct and indirect impact of state VC programs, potential best practices are emerging, and SSBCI could be helpful in bringing clarity to the national debate by offering sound, logical methodologies for calculating value. Program managers have communicated perspectives on this important topic and expressed interest in sharing information on how to move towards a best practice approach. Key measurement issues with VC programs relate to calculations of investment leverage, job retention/creation, causal impact on investment transactions, etc.

   For state venture capital programs, the purest measurement criteria is the amount of venture capital invested in the state as reported by NVCA. Nebraska should have a laser focus on this metric and find a 10-year trajectory to achieve the national per capita average for venture capital investment. Using 2013 numbers, this would mean increasing venture capital investment from $11 million to $175 million in Nebraska-based companies.

8. **Align state economic development interests with the financial interests of fund managers and limited partner VC fund investors.** "Double bottom-line" rhetoric has persuaded some state policy leaders to trust that private sector interests will focus equally on creating jobs as well as maximizing their personal financial interests. In the Consultants' view, the two goals do not always coincide. State policy leaders should recognize that indirect economic development benefits such as the creation of high-wage jobs and the development of new industries are achieved *indirectly* from profit-motivated investing, not by placing new priorities on professional investors that perform best when singularly focused. In the Consultants' view, states can best target economic objectives by influencing the parameters of allowable investments, and then fully participate in the sharing of financial returns so that successful investments create new sources of capital for future investments.

   One cannot overstate the critical importance to the success of state venture capital programs for the state fully participate in the upside of successful investments. Legislators should not allow program advocates to use sponsored economic impact studies to justify the state foregoing its full rights to providing capital for investments in private companies.

As context for our recommendations, the key points of this report are as follows:

1. Why is venture capital important to states?

Venture capital has financed the development and growth of dozens of *transformational* businesses that employ tens of thousands of workers, often highly-skilled and well-paid. Innovative businesses responsible for ushering in the information technology revolution, for developing medicines and devices that cure diseases and improve our quality of life, and for creating new business models impacting what we eat, wear and drive and how we interact with other people, are disproportionately financed with venture capital.

Regions and states without an adequate supply of venture capital to meet the legitimate financing needs of high-potential entrepreneurs cannot expect to be the home of as many transformational businesses as those with an abundance of risk capital. Venture capital will not help save 50 jobs at a struggling manufacturer today or help recruit 500 jobs for the next major corporate expansion tomorrow. Venture capital in reasonable supply and with reasonable accessibility signals to businesses, entrepreneurs and private investors that a region has the right business conditions for innovation, wealth creation and economic growth.

2. Does Nebraska have a "venture capital problem"?

Yes. Nebraska is one of 45 states with per capita venture capital investments below the national average. How far below? If based on 2013 U.S. Census Bureau population data and 2013 National Venture Capital Association (NVCA) investment data, Nebraska would have $175 million of venture capital investments in 2013 if it were at the national per capita average. How much venture capital was actually invested in Nebraska in 2013? $11 million.[xxviii]

3. Why is the rate of venture capital investment in Nebraska more than 90% below the national per capita average?

This is not a problem of not enough innovation in Nebraska. Based on National Science Foundation data, Nebraska's academic R&D expenditures were 9% above the national per capita average in 2011. This is not a problem of not enough wealth in Nebraska. Per capita personal income was 1% above the national average, and GDP was 9% above the national per capita average. Many states do not have the advantage of five Fortune 500 company headquarters anchoring regional economies.

The venture capital issue in Nebraska – and in a majority of states – is in part caused by perpetual biases influencing subjective "supply side" decisions of capital allocation and perceptions of regional ecosystems capable of supporting viable investment opportunities. The "supply" of venture capital is national in scope. Pension funds, university endowments and family offices of wealthy individuals are the major investors in illiquid, long-term, high-risk, and potentially high-reward venture capital funds. A majority of states "export" risk capital from their "alternative investments" portfolio to venture

capital funds in California and Massachusetts at the recommendations of investment advisors using fund qualifications that effectively eliminate smaller and younger middle-U.S. funds.

When venture capital fund managers raise capital, their sole purpose is to invest the capital efficiently and effectively to maximize the financial returns to investors. Because their time is limited, venture capitalists managing sizable funds prefer to invest in companies within a short drive or quick flight from their home base. For this reason, entrepreneurs seeking venture capital are encouraged to migrate to regions where venture capitalists are based, with talent flowing to capital rather than capital flowing to talent.

According to the NVCA, there is $94 billion of venture capital under management by California-based venture capital funds, and 68% of the $10.1 billion invested by California-based funds in 2013 was invested in California-based small businesses. Without a resident base of venture capital investors to mentor entrepreneurs and lead the syndication of investments with out-of-state funds, Nebraska saw only $11 million of venture capital invested in Nebraska-based small businesses in 2013.

4. Why should governments – federal and/or state – be involved with venture capital?

Governments can play a prudent, stimulating role in capital markets when markets are inefficient to the disadvantage of its taxpayers and citizens. The flow of venture capital in the U.S. is considered by many to be an example of an inefficient market with structural concerns. More than 50% of venture capital is managed within or invested within one state. According to the Wall Street Journal, 70% of startups with the potential to become "the next big thing" are located in one state. While the U.S. leads the world in innovation, our innovation economies are highly concentrated in a handful of regions where the cost of living and the cost of doing business are among the nation's highest. With high-potential entrepreneurs, research infrastructure, individual investors, and industry clusters distributed across the country, it is unreasonable to conclude the geographic concentration of venture capital is a model of efficiency. The nation's innovation ecosystem may not be broken, but it is badly in need of a tune-up.

The extreme concentration of our nation's innovation ecosystems is a national problem that the federal government has predominantly left up to individual states to manage by maintaining its focus on credit support programs. Funding from the new and innovative U.S. Treasury State Small Business Credit Initiative has been used by 35 states (including Nebraska) for venture capital initiatives, but the scale of federal equity-financing programs is relatively small compared to what individual states have been able to do on their own. If Nebraska legislators recognize venture capital as an essential economic development driver that needs to be addressed, it will need to take action with or without future federal government assistance.

5. What can state government do to support and increase venture capital in Nebraska?

The goal of a state-sponsored venture capital initiative should not be to replicate Silicon Valley, which will lead to unrealistic and unachievable expectations. Silicon Valley has led important industries in the U.S. innovation economy for three decades and likely will for many decades more. *The goal is to improve Nebraska's innovation ecosystem where Silicon Valley investments are accessible to Nebraska-based small businesses and the overall supply and utilization of risk capital is increased.* This goal cannot be accomplished at significant scale without a modest base of venture capital funds with operations in and around Nebraska.

When seeking to develop a base of venture capital funds in a state, the first fundamental objective is "do no harm." Several states have implemented flawed initiatives costing state taxpayers hundreds of millions of dollars with no perceptible benefits beyond the wealth transferred to out-of-state program proponents. Other state programs are designed too small to be impactful. Even others say "venture capital" when they mean late-stage "private equity," and there's an important difference between the two if the goal is *transformational* economic development outcomes and sustainable entrepreneurial ecosystems.

The second fundamental objective is to protect taxpayer interests in the upside of successful investments. Many state economic development programs are designed with government forgoing income via tax credits (thereby placing a greater burden on taxpayers) and forgoing a market-standard fair share of financial gains on investments that perform spectacularly. Private venture capital funds expect some investments to completely fail and a small number of investments to be so successful that the gains deliver profits for the entire fund. When government-backed programs limit or forgo direct financial returns, they should expect to engineer their own failure. Structured correctly, government-backed venture capital programs can participate in receiving financing returns alongside private investors and then reinvesting these returns in ongoing small business financing programs.

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Cromwell Schmisseur recommends that Nebraska Legislators pursue a venture capital industry development strategy with three key components:

1. *Consistently support the state's "innovation farm system" through long-term (i.e., more than 10 years) and increasing financial support of programs launched by the Nebraska Business Innovation Act.* Programs providing small grants, convertible equity investments and R&D support rarely demonstrate immediate job creation or windfall investment gains, but they fundamentally and profoundly support the state's innovation ecosystem and will produce "but for" impacts if the state support is consistent and structurally sound. Towards this purpose, the current demand for the state's prototype program and seed-commercialization program may warrant an immediate increase in state funding.

The rate of state investments in similar programs across the U.S. have varied significantly. Too little funding produces insignificant results; too much creates opportunities for waste. Based on Nebraska's population and research base, combined with our cumulative knowledge and experience working with state programs in the technology-based economic development industry, we recommend annual funding in the range of $8-12 million for the portfolio of Nebraska Business Innovation Act programs.

2. *Create a specialty function within the Nebraska Department of Economic Development to actively promote and recruit venture capital and private equity investment in Nebraska small businesses.* Economic development organizations can do a lot at the margins of deals to facilitate investments without directly investing in the deals. Many existing state incentives could be packaged to lure a growing venture-backed company to relocate. Moreover, west coast and east coast venture capital funds will often take a hard look at investment opportunities they might not otherwise see for nothing more than creating a good impression with their Nebraska-based investors. Sometimes all it takes is the right person to know when and how to ask, or someone with enough knowledge of existing state incentives to know how to package them for high-growth small businesses.

3. Anticipating success with the Nebraska Business Innovation Act programs, begin planning for a state-sponsored "fund-of-funds" venture capital program that includes a focus on financing "emerging managers" of venture capital funds based in Nebraska. Any state-sponsored venture capital initiative should adhere to four key principles:

a) Programs should be capitalized efficiently;
b) Managers should be selected competitively;
c) Scope of investments should be restricted to a stage of investing not reasonably served by private investors; and
d) State taxpayers should participate in fund gains on the same terms as other investors.

Consistent with these principles, Nebraska could develop a fund-of-funds model that attracts interest from respected investment managers while also supporting new or emerging Nebraska-based venture capital funds managed by professionals with existing relationships in prolific venture capital networks. The economic development goal is to build credibility with regional and national investors as a location capable of generating competitive investment returns. A longer term objective is to build additional in-state investment capacity by helping emerging managers develop a successful track record of investing so that they will be more competitive when pitching institutional fund investors for future capital investments.

Since its formation in 2010, Cromwell Schmisseur LLC has earned a reputation as a trusted resource to state governments and state-sponsored non-profit venture development organizations and has become a national leader in the field of entrepreneurial development and state-sponsored venture capital programs. A focus of the firm is to share best practice models for the development of customized strategies and new program offerings that achieve comprehensive economic development returns over the long term. A partial client and project list includes: The Federal Reserve Bank of Atlanta (Small Business Research Initiative), The U.S. Department of the Treasury (State Small Business Credit Initiative), Maryland Department of Business and Economic Development (Invest Maryland), Ben Franklin Technology Partners (Innovate in PA) and Empire State Development (New York State Innovation Venture Capital Fund).

Eric Cromwell is an entrepreneur and strong advocate for improving the business climate for innovation and entrepreneurship in America. Eric led the restructuring and re-launch of the Tennessee Technology Development Corporation (now operating as LaunchTN) as its president and CEO. This private, nonprofit corporation, was created by the Tennessee General Assembly to strengthen the innovation-based economy in Tennessee. Prior, Eric served as Tennessee's first-ever Director of Technology Development to be the point of contact for supporting technological innovation in Tennessee.

Eric started in the technology-based economic development field in Memphis, Tennessee, as the founding director of EmergeMemphis, a technology business incubation and accelerator program and later as part of the founding team that launched the FedEx Institute of Technology, a public-private initiative seeded by FedEx Corp to support advanced research and education. He is a subject matter expert and frequent speaker on development strategies related to entrepreneurial support systems, technology transfer and venture capital formation.

Dan Schmisseur is an entrepreneur and experienced tech-based economic development consultant. Dan was recruited to Tennessee as the vice president of operations and strategy for the Tennessee Technology Development Corporation, where he was responsible for strategy formation and partnership development to plan and implement a comprehensive competiveness agenda for innovation-driven economic development throughout Tennessee.

Previously, Dan was vice president of strategy and policy with the Kansas Technology Enterprise Corporation, where he managed the development of a strategic plan for implementing the Kansas Economic Growth Act legislation, a 15-year, $581 million initiative to support bioscience-related economic development. Dan also managed the development of a comprehensive business plan for the IC^2 Institute at The University of Texas at Austin to develop an outreach entrepreneurship education and support services program called The Texas Entrepreneurship Network.

[i] According to data in the National Venture Capital Association's 2014 Yearbook, venture capital investment in California companies represents 49.7% or more of total U.S. venture capital investments in every year since 2008.

[ii] While we have no data on the desire for venture capital from the 2 million newly created small businesses each year, the National Venture Capital Association reports between 1,000 and 2,500 investments in seed or early stage companies every year from 2002-2013, and the Angel Capital Association cites a Center for Venture Research that 35,000 small businesses received angel capital investments in 2008. Given these data points, it is likely that the number of new small businesses that would be interested in a venture capital investment is less than 100,000 annually.

[iii] Kauffman Foundation, *Where Will the Jobs Come From?,* November 2009

[iv] Cromwell Schmisseur, *Information and Observations on State Venture Capital Programs: Report for the U.S. Department of the Treasury and Interested Parties in the State Small Business Credit Initiative (SSBCI),* February 2013.

[ii] http://en.wikipedia.org/wiki/Venture_capital

[vi] Graphic from Bessemer Trust, a venture capital firm.

[vii] http://www.startup-book.com/2009/02/09/about-kleiner-perkins-first-fund-episode-3/

[viii] National Venture Capital Association, *Venture Impact: The Economic Importance of Venture Capital-Backed Companies to the U.S. Economy,* p. 2.

[ix] Rural Policy Research Institute, *Policy Brief – PB99-2*, November 1999.

[x] The Auditor, State of Hawaii, *Audit of the Department of Taxation's Administrative Oversight of High-Technology Business Investment and Research Activities Tax Credits*, July 2012.

[xi] National Venture Capital Association, 2014 Yearbook, p. 47-49.

[xii] Josh Lerner, "The Boulevard of Broken Dreams: Innovation Policy and Entrepreneurship," excerpt published by LSA Growth Commission.

[xiii] Office of Equity Programs, Maryland Venture Fund, *Annual Financial Status Report, Fiscal Year* 2013, p. 2.

[xiv] Ibid, p. 3.

[xv] http://nep.benfranklin.org/ben-franklin-technology-partners-releases-independent-report-on-its-economic-impact-on-pennsylvania-2/

[xvi] Bloomberg News, November 11, 2013, *Shire Agrees to Buy ViroPharma for About $4.2 billion.*

[xvii] Ben Franklin Technology Center of Southeastern Pennsylvania press release, May 16, 1995.

[xviii] Walter Frick, Bostinno, *Government as Venture Capitalist? It Works for Massachusetts,* March 19, 2012.

[xix] http://ssti.org/sites/default/files/resourceguidefortbed.pdf

[xx] Data from National Science Foundation database, *Science and Engineering State Profiles*.

[xxi] http://www.ctinnovations.com/about-impact

[xxii] Office of Equity Programs, Maryland Venture Fund, *Annual Financial Status Report, Fiscal Year* 2013, p. 2

[xxiii] http://www.i2e.org/impact/.

[xxiv] Utah State Auditor, *A Performance Audit of the Utah Fund of Funds*, August 2014, p. 69-70.

[xxv] http://business.utah.gov/partners/Utah+Capital+Investment/

[xxvi] New Jersey Economic Development Authority press release, *Venture Fund Investments Offer Early Stage Tech Companies*, March 15, 2011.

[xxvii] http://en.wikipedia.org/wiki/Certified_Capital_Company#Legislative_history

[xxviii] Data inputs: NE population of 1,868,516 and U.S. population of 316,148,990 in July 2013; $29.545 billion of venture capital investment in U.S. in 2013.