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A Formative Evaluation of the Bloomington-Normal Entrepreneurial Ecosystem

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A graduate capstone presented in partial fulfillment of a Master of Science Degree in Political
Science–Applied Community and Economic Development for the Stevenson Center of Applied
Community and Economic Development

Illinois State University, Normal, IL

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Abstract

This study serves as a formative evaluation of the Bloomington-Normal-McLean County, IL region's entrepreneurial ecosystem, which the development thereof is a tactical strategy outlined in the recently created Bloomington-Normal economic development plan (also known as BN Advantage). An entrepreneurial ecosystem is a network comprising of entrepreneurs, supporting organizations and entities such as investors, governments, universities and various other organizations with a focus on economic development. Vibrant entrepreneurial ecosystems strengthen local entrepreneurial capacity, which then spurs economic development through job creation and growth, economic diversity and increasing a region's competitive advantage. The methodology of this study involved combining qualitative and quantitative data to best understand the strengths, weakness, opportunities, threats and overall vibrancy of the ecosystem. This study aims to provide the Bloomington-Normal-McLean Co., IL community with a snapshot of the local entrepreneurial ecosystem, and to offer evidence-based approaches which the community can use to strengthen the entrepreneurial ecosystem in the future.

I. Introduction

As an Applied Community and Economic Development Fellow for the Bloomington-Normal Economic Development Council (BN EDC) from 2015-2016, I developed an interest in the community's recently released economic development strategic plan, often referred to as the BN Advantage. The BN Advantage is a comprehensive economic development strategy for the Bloomington-Normal-McLean County, IL region. This strategy is the result of a yearlong review of community assets commissioned by six local community stakeholder groups: Bloomington-Normal Economic Development Council, McLean County Regional Planning Commission, McLean County Chamber of Commerce, Bloomington-Normal Convention and Visitors Bureau, Bloomington-Normal Airport Authority and Connect Transit. The findings from BN Advantage show that the Bloomington-Normal community is a region rich in advantages, but is not immune to the uncertainties which lay in the future. Therefore, the six stakeholder organizations have joined together to implement various economic development strategies, also referred to as target industries. These strategies outlined in the BN Advantage plan are designed to ensure future, positive economic development in the region.

Entrepreneurship is one of the target industries outlined in the BN Advantage economic development plan. Fostering a strong entrepreneurial ecosystem is acknowledged in the plan as an important contribution to this region's economic future. The entrepreneurial component of the BN Advantage is in line with the BN EDC's mission of encouraging the next wave of entrepreneurs to establish their businesses within the community. Therefore, the BN EDC has been charged to oversee the BN Advantage entrepreneurial task force, created to foster an entrepreneurial ecosystem in the Bloomington-Normal community. The task force's mission is to galvanize the region's leadership to harness the resources of local entrepreneurs, organize the actors who are engaged in, or have ownership of, existing entrepreneurship programs, and then to champion, promote support and expand upon those programs that are working well, in order to enhance the vibrancy of the ecosystem.

Demonstrated by the widespread community buy-in for the BN Advantage plan, the Bloomington-Normal community has explicitly committed to foster a vibrant and sustainable entrepreneurial ecosystem. As the community has self-identified that this ecosystem is in its formative stages, this capstone is thus a formative evaluation of the vibrancy of the entrepreneurial ecosystem in Bloomington-Normal. Too often communities judge their ecosystem based off the

presence and quantity of aspects like research and development (R&D) funding at universities, available investment capital, and density of engineering degrees as a percent of the population. This paper will argue that these variables are only some of many inputs into the system, but are not necessarily the outcomes needed to be tracked, for it is the outcomes that indicate the ecosystem's vibrancy.

The purpose of this paper is therefore to capture a snapshot of the current state of the community's entrepreneurial ecosystem in order to provide the Bloomington-Normal community with the benchmarks and the means to track the progression of the ecosystem over time, enabling community leaders to make evidence-based decisions for improvement. In section 2 of this paper, a review of the literature will explore entrepreneurship and entrepreneurial ecosystems through a historical framework model, tracing the evolution of entrepreneurship as an engine of regional and local economic growth throughout US history. In addition, section 2 will explore what current literature identifies as common characteristics and common participants of an entrepreneurial ecosystem. The methodology section will identify the link between entrepreneurial ecosystem inputs and its outcomes, and how the outcomes are measured. The findings are presented in section 4, with a comprehensive framework used to identify and analyze Bloomington-Normal's entrepreneurial ecosystem's strengths, weaknesses, opportunities and threats (SWOT), in addition to the measurement of the current outcomes and performance indicators of this community's entrepreneurial ecosystem. Finally, a conclusion offering practical recommendations for the BN EDC and the BN Advantage's task force on entrepreneurship, as well as a discussion of this project's limitations and opportunities for further research will be provided in sections 6 and 7.

As a Community and Economic Development Fellow with the BN EDC, I was in the unique position to serve both as insider and outsider for the entrepreneurial task force, which was instrumental for the purpose of conducting this formative evaluation. I was able to build relationships with key actors charged with implementing the entrepreneurship ecosystem as outlined in BN Advantage. Yet, as I have no direct practice with being a member of the BN Advantage leadership committee or an official task force member, I was able to more objectively study the strengths, weaknesses, opportunities and threats of the programs without my judgment being biased by personal experience.

II. Literature Review

This report strives to address the research related to entrepreneurship and its impact on locally based economic development. This section seeks to invoke theoretical applications and historical evidence to advance the notion that entrepreneurial attraction is a necessary pillar of local economic development strategy, and that fostering a vibrant entrepreneurial ecosystem requires long term commitments from all participants within that system.

Entrepreneurship as Economic Development

The discipline of economic development is relatively new in academia and as a profession. Though the study of this topic is relatively new, scholars have identified up to three waves of economic development throughout recent history. Smith (2010) who referenced Robert Solow's, a founder of neoclassical economic development theory work, "Contribution to the Theory of Economic Growth", has determined that economic growth had been simply a function of labor, capital and only recently acknowledges the level of technology (the latter being an indicator of level of knowledge in a community) (Smith 2010). The first two inputs coincides with a time when free markets led economic development efforts. Therefore, pre-1970s economic development almost exclusively consisted of industrial recruitment practices, mainly in the manufacturing industry, which valued cheap labor. This is a period now often classified as the 'first wave of economic development' (Feser 2014, Bednarzik 2000, Hanley and Douglass 2014). During this era, industrial recruitment fostered competition between localities. Communities offered lower business costs, a cheap and abundant labor supply and competitive tax-schemes because they were trying to recruit (or poach) mostly manufacturing-based branch relocations, all at the expense of their neighboring communities (Hanley and Douglass 2014). The result of these tactics led to the rise of cities focusing on and exploiting cheap labor and low production costs, which left them incredibly vulnerable should the nation's economy become less manufacturing based.

As history can attest to, the nation did become less reliant on the manufacturing industry. Throughout the latter half of the 20th century, the number of jobs in the service industries outpaced those in the manufacturing industry by double (Bednarzik 2000). Formerly booming rust-belt cities were threatened because their property-tax dependent revenue base dwindled, due to the combination of rising unemployment and the rapid exodus of the city's residents to suburbia (Katz and Wagner

2013). This era began the second wave of economic development, as it quickly fell on the local government to provide greater services to its remaining population. To do so, local governments had to find ways to get people jobs, reinvigorating their tax base revenue supply. Research on this topic has shown that economic development, as we know it today, did not emerge until this time (Feser 2014, Smith 2010). Since this split from pre-1970s normative practices of letting markets run themselves, economic development has become an ingrained function within the public sector, described as one of the fastest growing domains of organized government activity (Feser 2014). Governments sought to supplement the gap left behind by the diminishing manufacturing boom by building economic growth from within, via an array of entrepreneurship support programs. These programs often took the form of technical assistance, incubators and seed capital (Feser 2014).

While the literature has argued that it wasn't until the 1970s when entrepreneurship became a targeted initiative in the economic development field, it is not to mean that entrepreneurial activities and high-growth startups were dormant and non-existent in America before that time. Examples of the 'entrepreneurial spirit' have been traced back to the California Gold Rush in the nineteenth century, when individuals would venture to the west taking on risks with the hopes of making it big (Engel 2015). Furthermore, there is research to support that the rise in industrial recruitment in certain geographies across the nation, consequently gave rise to entrepreneurial tendencies in the others geographies, simply because they had no other choice if they wanted to grow their economies (Feser 2014). These past generations of individuals taking risks, pursuing potentially high-growth ventures, seeking innovative solutions and creating disruptive technologies have paved the way and set the stage for those entrepreneurs who are now iconic figures in popular culture of our time, and arguably the reason why entrepreneurial study and pursuits have recently peaked the interests of economic developers and academia alike (Engel 2015). The widespread and enduring use of this approach solidified that economic development had moved to what the literature describes as second wave of economic development (Hanley and Douglass 2014, Smith 2010, Feser 2014).

The newfound attention given towards entrepreneurship during this wave did not supersede or diminish the emphasis that industrial recruitment had within the economic development field. The two strategies were and still are, often pursued together. Because of this, scholars have noted that it is a challenge to adequately study entrepreneurial attraction policy impacts separate from industrial recruitment policy impacts (Hanley and Douglass 2014).

However, most literature on entrepreneurship will advocate entrepreneurship as its own pillar of economic development and argues that it should be considered a variable in accounting for

economic growth independent of industrial recruitment. Three main arguments are used in the literature that advance this claim. The first argument is that entrepreneurship is a strong creator of jobs rather than a poacher of jobs. Job creation is the process by which someone has created a job that had never existed prior, instead of someone replacing a currently vacant position (i.e.-job poaching), which is what occurs when a firm or establishment relocates and needs to refill its positions (Decker et al. 2014, Hanley and Douglass 2014). Secondly, entrepreneurs not only tend to create more jobs than incumbent firms, but also higher paying wages for employees (Decker et al. 2014, Mazerov And Leachman 2016) over lower wage jobs that tend to be the type of jobs offered by recruited industries (Moretti 2012). The third is that entrepreneurship and industrial recruitment require different economic development perspectives. This last argument stems from economist Joseph Schumpeter's 1961's "Theory of Economic Development" and is supported by Hanley and Douglass (2014), in which it is argued that since entrepreneurship requires risk-tolerance, openness and innovation, and since innovation disrupts current processes and systems, then entrepreneurs cannot be attracted or created the same way as industries that are not as equipped nor inclined to handle disruptive technologies. This could mean that as more traditional employers value low production costs, encouraging economic practitioners to create location advantages by subsidizing various cost factors of production, studies have found that entrepreneurs tend to be attracted to locations by factors other than price reductions, and therefore require of the economic developer to come up with more untraditional types of attraction and interventionist strategies. However, while there is consensus throughout the literature that there is a correlation between positive economic growth and entrepreneurship, the need for more research dedicated to discerning what exactly that is, and to what extent, is still apparent (Kerr et al. 2014).

While economic development fully embraced entrepreneurship as an economic development strategy in the second wave of economic development, there is rapidly growing literature perpetuating the claim that there is now a third wave of economic development beginning from the late 1980s or early 1990s. However there is still a debate in the literature concerning the validity of this wave as a truly distinct approach toward economic development from the first two waves (Hanley and Douglass 2014). The third wave is based on two main premises. One is that in the wake of state and federal government shortcomings, exemplified by the rise in political gridlocks and over-bureaucratization, making it hard to implement a forward thinking agenda, it is up to the locality to take control to create a context for overall economic growth (Katz and Wagner 2013, Hanley and Douglass 2014). The second premise is that economic development has been around long enough to

identify best practices and so, Feser (2014) makes that claim that local economic development practitioners are finally seeing the need to veer away from blanket applications to generic diagnoses of economic challenges, a common practice in the second wave, and are now seeking creative solutions to the specific needs of their community. Whether or not the third wave is indeed, a true wave and not just a temporary fad, recent literature shows a consensus in recognizing that the way local economic development is practiced has indeed been changing.

The evolution of economic development has implications for the development of modern day entrepreneurial ecosystems. In the third wave, entrepreneurial attraction efforts from programs and policies derived from a variety of diverse community actors, including state, but mostly local governments, utilities, consulting firms, public-private development corporations and more, have created a complex web in which entrepreneurs must navigate through to increase chances of success (Feser 2014). There is still little research studying the effectiveness of third wave approaches towards entrepreneurial attraction and creation, mostly because this wave of local economic development is still in the relative early stages of fruition (Feser 2014). This means that there is a lack of comparable data available to prove if these practices will succeed in driving place based economic and entrepreneurial growth and development in the long run (Hanley and Douglass 2014, Stangler and Bell-Masterson 2015).

Entrepreneurship in general is a difficult field to study. While a popular topic in academic literature today (Feser 2014), there is still limited research pertaining to general entrepreneurial activity throughout history, making it difficult to track data and discover patterns over time. It wasn't until just before the year 2000 when time-series data on establishment births and deaths were available about industries outside the manufacturing sector in the US (Bednarzik 2000). And even today, data concerning entrepreneurial activity is limited (Hanley and Douglass 2014). Contributing to the lack of consensus and consistency in data is the fact that there is still no singular definition of what an entrepreneur is (Kerr et al. 2014). The implication of this has been highlighted in recent years as research led by leading entrepreneurial information authority, Ewing Marion Kauffman Foundation has presented their findings which claim that entrepreneurship rates have actually been declining for the past 10 years (Stangler 2015). Some argue that this is may not be the case and this reported decline may actually be the result of underreporting entrepreneurial activity because of the way it is defined. One compelling argument against Kauffman's findings is that it is relied on government data, which does not report data about nascent entrepreneurs, who are those that have begun the early stages of setting up a business, or about startups that have less than one employee

(Buchanan 2015, Bednarzik 2000). They argue that this system of tracking entrepreneurs is antiquated because technology has now made it possible for just one individual to adequately run and operate a business that can grow and mature (Bednarzik 2000, Buchanan 2015, Litan 2015). Conversely, another explanation as to why entrepreneurial activity may be declining is because larger business and corporations are finding out about and essentially gobbling up nascent entrepreneurs along with their ideas and innovations- thus taking would-be entrepreneurs out of the scope for reporting and out of the entrepreneurial ecosystem altogether (Litan 2015). These recognized limitations concerning entrepreneurial scholarship present an opportunity for future research on this topic.

The following section will focus on what recent literature has contributed to the study of entrepreneurship as it impacts to the local economic.

Impacts entrepreneurs have on local economy

Though there are still inconsistencies and no universally accepted method to study entrepreneurship in the United States, there are three main outcomes to economies discussed throughout the literature that most relate back to entrepreneurial activities. This signifies the importance of creating an entrepreneurial ecosystem. These outcomes are job growth, economic diversity and competitive advantage.

Job Creation

Entrepreneurs create jobs. The number of jobs created in a locale is dependent on both the type of entrepreneurial activity pursued and the level of overall entrepreneurial activity in a community. The literature had identified two general subgroups of entrepreneurs: transformative and subsistence (Schoar 2009). Subsistence entrepreneurs focus on local or regional “family” businesses and employ minimal people, do not push for product creation or innovation, but rather provide services needed in communities like retail, dining, entertainment, etc. (Engel 2015). These entrepreneurs are important in the economy, and both types are needed for a healthy, vibrant and attractive community. However, subsistence entrepreneurs are not primary job creators, as their success is actually directly dependent on local economic conditions (Moretti 2012, Garmise and Ghosh 2011). Transformative entrepreneurs are the primary focus of this report because this subgroup is primarily responsible for creating substantial job growth, economic diversity, and driving

up their communities' regional and global competitiveness (Feld 2012). Jobs that transformative entrepreneurs create are vital for a region's economic vitality.

Irrespective of industry and entrepreneurial type, research suggests that entrepreneurs as a whole are a principal contributor group to job creation in the economy. Between 1990 and 2009, startups added almost 3 million jobs per year in the United States (Mazerov and Leachman 2016). This means that the growth and health of an entrepreneurial ecosystem can have a profound impact on the local economy, especially in high growth industry sectors such as technology, pharmaceuticals and research and development (R&D). On average, young firms account for 20% of all US gross job creation nationwide, while high growth industries, which tend to be young, account for 50% of gross employment (Decker et al. 2014). While it is reported that most jobs that are created are from startups in the first year, and most startups fail or exit within their first five years, it can be assumed that these jobs are not very well secured. However, many argue that regardless, these entrepreneurs still tangentially create sustainable jobs. One explanation is that jobs lost to the high failure rate of young firms are almost always offset by the growth of the surviving firms because many of the startups that do survive, on average, grow 60% within their first 5 years (Decker et al 2014, Mazerov and Leachman 2016). Another explanation that the high exit rate of startups still creates jobs, is because some entrepreneurs do not exit due to failure, but rather get bought out by the larger corporations with either a job or with the opportunity to become fluid and embark on other entrepreneurial endeavors, thus wither allowing for another company to create new jobs or for an entrepreneur to have the opportunity to start a new business and hire more people (Feld 2012, Engel, 2015, Decker et al. 2014).

These aforementioned numbers however should not be taken as absolutes because, as literature on the subject attests to, accounting for all net jobs created through entrepreneurial activity has been a challenge. On the basis of the evidence currently available, some studies have found that over the past 25 years, new and young firms are responsible for about 75 percent of net new jobs into the economy (Garmise and Ghosh 2011). However, other studies have found that entrepreneurial job creation rates have gone down in the past 20 years and surmise that business startups (0-5 years) only have made-up about 20 percent of US total job creation during this same time period (Decker et al. 2014). While there is a lack of consensus in the literature about whether or not entrepreneurial activity is weakening in the United States, the basic premise that entrepreneurs create jobs remains intact, and if recent trends of decreasing entrepreneurial activity is accurate, then fostering

entrepreneurship is arguably more important now than ever for communities looking to grow their economies.

Diversification

Economic diversity is another major outcome which is generated through entrepreneurial activity. Diversity is the product of new ideas, new industries and new firms. Entrepreneurship is a mechanism for diversity because entrepreneurial ecosystems foster the transfer of knowledge across firms and industries. This then leads to the transformation of knowledge and to the exploitation of knowledge in the form of new firm creation, thus diversifying the business environment of a community (Audretsch and Keilbach 2004, Garmise and Ghosh 2011). Diversity is also beneficial for long term economic health, because a diverse economy is better able to weather the downturns in the economy than communities relying on just one economic base (Feld 2012, Engel 2015, Garmise and Ghosh 2011). Katz and Wagner (2013) use the history of Cleveland, OH to illustrate this point.

In 2001-2002, Cleveland was in the height of its 'quiet crisis' - companies that were once headquartered in Cleveland or Akron became branch offices of larger global concerns, severing the strong ties to the local communities and broader region that the corporate leaders once had...the region suffered from a manufacturing hangover of sorts, slow to realize that the sector was forever changed and would never again be the source of secure lifetime employment for people (66).

As Cleveland had no other industrial base or meaningful entrepreneurial activity at the time when the severity of the city's economic condition was realized, it had to hit rock-bottom before it was able to pick itself up and build its now widely successful entrepreneurial ecosystem (Katz and Wagner 2013).

The discussion around diversity is often followed with discussions about economic clusters. There is currently a debate in the literature over those that support communities pursuing cluster development or becoming cluster agnostic. Some argue that clusters often support the formation of new companies through so called "repeat entrepreneurs" who were previously successful at forming a startup company with an industry, and then repeatedly create and/or encourage other firm creation within that same industry (Feld 2012). Clusters also create location advantage, meaning when companies in the same or complementary industries co-locate, collectively they have lowered transaction costs through creating proximity to specialized resources and target markets related to that cluster, thus making it more likely to successfully launch a new business (Kalil and Irons 2007,

Engel 2015). The other side of the argument is based on the premise that targeting clusters may actually limit innovation and can lead to economic stagnation. There is a growing consensus in the literature that clusters can put up walls that block potential collaboration and obstruct an economy from growing in new directions, thus becoming stagnant and homogenous (Katz and Wagner 2013, Feldman 2009). The targeting-clusters versus becoming cluster-agonistic debate is ongoing in current literature, however best practices identified mostly encourage setting the stage for all entrepreneurs, regardless of industries, to be successful (Hanley and Douglass 2014, Motoyama and Wiens 2015).

Competition

The last major outcome of a vibrant entrepreneurial ecosystem is that, if successful, the ecosystem has the potential to increase that community's competitive advantage. Similar to Richard Florida's 'creative class theory', it is often argued that innovative and a high density of entrepreneurial activity attracts innovative people, and these trends will then dictate where firms, talent and consumers want to locate (Katz and Wagner 2013, Feld 2012, Moretti 2012). Furthermore, higher entrepreneurial activity creates greater opportunities to engage with and take advantage of global markets. Globalization has created a "rising global demand" for new products and services, and those places that are able to produce the knowledge required to fill this need will be more competitive because they will be able to sell their new innovations and bring fresh capital into the community, thus allowing for business spin-offs and startups to make and create more new things to sell to the outside world (Garnise and Ghosh 2011, Katz and Wagner 2013). Fierce global competition and the rapidity of changes in technology are driving the need to increase entrepreneurial activity and thus increase the community's competitive advantage.

The combined benefits of entrepreneurship; job creation, economic diversity, and competitive advantage are driving the efforts of communities across the nation to foster entrepreneurial ecosystems. The next section will present evidence to develop the claim that entrepreneurial ecosystems are a mechanism best suited for localities and is thus a highly important and recommendable local economic development strategy.

Entrepreneurial Ecosystems

An entrepreneurial ecosystem creates the social and economic environment that encourages entrepreneurship, thus maximizing the value that entrepreneurs can add to the local economy. This section will present evidence to develop the claim made in the literature that entrepreneurial ecosystems are a mechanism best suited for localities and is thus a recommendable local economic development strategy. The discussion to follow will point to evidence indicating that locally maintained entrepreneurial ecosystems are the most effective, the most beneficial and add the most value to entrepreneurs as well as to the economic development of the community. Four perspectives: political, economic, sociological, and geographical are presented to justify local entrepreneurial ecosystems as the most effective strategy. These perspectives are non-exclusive and complementary to each other.

Political Perspective

The political science perspective focuses on the duties and the responsibilities that localities have to better their own communities. This perspective is partially a result of the third wave of economic development, in the sense that it is a response to the federal political environment, which more often than not is in a gridlocked state (Katz and Wagner 2013). A consequence of this state is that no significant policy shift regarding frameworks for addressing city and state economic challenges have been made (Feser 2014). Metros, lacking any other choice are “innovating on the big stuff” by driving policies and practices that support wealth generation and are engaging and building relationships with trading partners and rising economies without first going through their state and federal government (Katz and Wagner 2013 p. 10). Moreover, finding local opportunities for growth is theorized to be a more effective approach for entrepreneurial ecosystems because no entity is more invested in the community than the people who live and work there, and so have vested interests in improving the quality of life there (Katz and Wagner 2013, Katz 2016).

Economic Perspective

The focus from the economic perspective is on the advantages for businesses located within the boundaries of an entrepreneurial ecosystem. When new and mature companies co-locate in the same geographical area, all benefit from economies of scale, especially if these companies are in like-industries. This is to mean that since all companies need certain inputs (infrastructure,

specialized services, suppliers, laborers, etc.), they can share the costs of those inputs in the same community, thus reducing the average cost per startup (Feld 2012). Competing or complementary companies clustered in the same area also are able to enjoy what economists refer to as the network effect. The network effect is the theory that when new members are added to the community, it enhances the overall value for the existing community members (Roja et al. 2014). For example, people in the programmer field during the internet boom of the late 1990s flocked to cities where other programmers were at the time. Over time, this created specialized knowledge clusters in this area which then attracted specialized businesses and led to increased entrepreneurial activity - developing these areas into vibrant entrepreneurial ecosystems (Moretti 2012).

Sociological Perspective

A third perspective comes from the field of sociology. Areas with a hotbed of entrepreneurial activity are typically found to be in communities where there is culture of openness (Feld 2012). A culture of openness, inclusion and connectivity are common characteristics of a vibrant entrepreneurial ecosystem because constantly utilizing new connections increases the level of knowledge transfer and knowledge creation, thus fostering greater amounts of entrepreneurial pursuits (Roja et al. 2014, Stangler and Bell-Masterson 2015). Increasing this culture of openness within a community boundaries is exponentially important for an entrepreneurial ecosystem. In fact, there are some who argue that local connections can be far more important to entrepreneurs than global ones (Roja et al. 2014). This may be partly because business owners in the same community are the best sources of specific information related to the local business environment that entrepreneurs need in order to optimize their chances of success (Motoyama and Wiens 2015).

Geographical Perspective

The last perspective comes from the field of geography. Entrepreneurial ecosystems exist in a confined and defined space, and to grow and foster an entrepreneurial ecosystem, the literature argues that these spaces must attract and retain talent, thus increasing competitive advantage. This perspective offers insights, as explored by Engel (2015), as to why some entrepreneurial ecosystems are much more vibrant than others. Therefore attracting talent *into* the community is important for entrepreneurial ecosystems. To attract and retain talented individuals who could become entrepreneurs, or as Richard Florida refers to as the 'creative class', communities are required to

make their cultural and physical landscapes more attractive than other communities (Feld 2012). A study of the 500 fastest growing companies in the United States by Inc. Magazine discovered that “entrepreneurs of fast-growing firms usually decide where to live based on personal connections and quality of life factors many years before they start their firms” (Mazerov and Leachman 2016). Based on this perspective, entrepreneurial ecosystems cannot be supported everywhere, but only the specific locations that talent is attracted to (Moretti 2012).

Each of these perspectives provide a useful lens with which to understand the argument for creating entrepreneurial ecosystems at the local level. However, as Feld (2012) recognizes, these frameworks are incomplete in explaining who the participants of an entrepreneurial ecosystem are, and how they work together to propel the ecosystem in motion.

Participants in an Entrepreneurial Ecosystem

Entrepreneurs

Undoubtedly, the core participants of any entrepreneurial ecosystem are the active entrepreneurs in the community. According to themes present throughout the literature, entrepreneurial cohorts in vibrant entrepreneurial ecosystems tend to be mobile, adaptable, risk tolerant, inclusive, highly involved in the community, and innovative. In this section it will also be argued that the entrepreneurs are the ones who should assume the leadership role in an ecosystem.

Many studies have found that entrepreneurs and innovators are a highly mobile demographic and are constantly fluctuating in, out, and throughout the ecosystem. On average, entrepreneurs whom adopt the entrepreneurial lifestyle will rotate from one startup to another every three to five years (Engel 2015). This type of fluid lifestyle allows for people in the ecosystem to optimize their community’s limited resource constraints, as there will always be a limited amount of capacity in each community to attract new knowledge, assets and firms. Mobility makes up for this limitation because as entrepreneurs change and join the ecosystem, there is more of an opportunity for the mixing and remixing of people and collaborative networks. The literature strongly supports that this bricolage of networks is necessary for the ecosystem’s sustainability over time (Stangler and Bell-Masterson 2015, Roja et al. 2014, Audretsch and Keilbach 2004).

In part because entrepreneurs are so mobile, they have also become highly adaptable. People, knowledge, technology, funding sources, government actors, policies, ideas, businesses, and even

people's tastes are constantly changing, and founders in young ventures are constantly adapting their business models, strategies and ideas to meet the needs of the market in the most efficient and innovative way possible (Engel 2015, Feld 2012, Audretsch and Keilbach 2004). Entrepreneurs and young companies are in a position where they are not limited by bureaucratic and hierarchical constraints, and so can easily and efficiently exploit new or changing resources and adapt to new knowledge or information. This freedom allows them to be more adaptable, pivoting in a way that is much easier to do than incumbent firms (Schumpeter 1961, Feld 2012, Engel 2015, Audretsch and Keilbach 2004). This characteristic represents a fundamental difference between young companies and established firms, indicating that entrepreneurs need resources in the community which make the legal process of discovery and adaptation easier and more streamlined than ever before (Motoyama and Wiens 2015, Hanley and Douglass 2014).

Risk is a large part of the entrepreneurial process, as entrepreneurship is fundamentally about experimentation and embracing the unknown. Therefore, risk is a large component to an entrepreneurial ecosystem. For every new firm, the level of success it will achieve cannot be known beforehand, making the business of starting a business a considerably risky venture (Kerr et al. 2014). This risk characteristic in entrepreneurship is expected to prevail in entrepreneurial ecosystems, even with policies are in place that seek to negate or dilute these risks for investors or entrepreneurs such as loan forgiveness programs (Motoyama and Wiens 2015). Therefore, it is stressed throughout the literature that entrepreneurs and entrepreneurial ecosystem participants need to be risk-tolerant, if not risk-encouraging. There are tangible implications of risk-intolerance cultures regarding its impact on entrepreneurial development. For example, the Aspen Network of Developing Entrepreneurs study of entrepreneurship in developing African countries found that increasing the number of entrepreneurs is difficult due, in part, to cultural mindsets about risk and failure (Dassel et al. 2013). This study's finding suggests that a risk averse culture could lead to the decline of entrepreneurial propensity.

Entrepreneurial ecosystem research has found that entrepreneurs tend to be highly active in their communities. This community-centric mindset allows entrepreneurs to form connections throughout the community. Connections between people, firms and with supporting organizations are highly indicative of a successful entrepreneurial ecosystem (Stangler and Bell-Masterson 2015). The benefits of these connections manifest in various ways. One is based on the premise that an entrepreneur's affiliation with community and community organizations is incentivizing for new businesses, because being known throughout the community can ultimately enhance the reputation of

a relatively unknown early-stage venture (Engel 2015). Furthermore, it is stressed in the literature that as interconnectedness among community actors increases, particularly between unlike institutions, it leads to greater innovation and higher rates of firm creation (Katz and Wagner 2013, Kalil and Irons 2007). Some studies have also suggested that strong community ties retain talent in the community, because when individuals are connected to multiple firms, networks and ventures, they tend to develop deep social capital throughout the community. High social capital increases the likelihood of an entrepreneur staying in the community (Feldman and Zoller 2012, Carmichael 2015). Current research seems to validate the view that entrepreneurs should be encouraged to leverage collaborative networks with place based institutions, initiatives and programs within their community in order to secure the success and vibrancy of an entrepreneurial ecosystem (Engel 2015, Feld 2012, Roja et al. 2014, Birch et al. 2013).

Entrepreneurial cohorts in a vibrant ecosystem are also often characterized as inclusive. While entrepreneurs recognize that more entrepreneurs may increase competition, they also know that it increases overall value to the ecosystem (Feld 2012). The influx of new people into a community brings along an influx of new ideas, new opportunities for connections and collaboration, thus preventing stagnation, which leads to the increasing of entrepreneurial activity and economic diversity (Schumpeter 1961, Stangler and Bell-Masterson 2015). Another perspective used to explain the inclusivity characteristic is provided by Feld (2012). This perspective is based on the premise that an ecosystem's success is dependent on having a strong and active leadership team. Hence, the more participants within that ecosystem, the greater chance for the ecosystem to have enduring and qualified leadership in the long term. Entrepreneurs are extremely busy running their day-to-day lives, balancing personal, families and their businesses simultaneously (Engel 2015). Because of this, entrepreneurs who are leaders in the ecosystem have been found to rise and then quickly fade away as they focus on other ventures or pursuits. This leadership component requires that there is always a pool of upcoming entrepreneurs that are available to take the reins when needed (Feld 2012).

This leadership component is important because a significant segment of the literature puts forward the view that it is the entrepreneur's responsibility to be leaders of the ecosystem. Feld (2012) leads this argument by postulating that it is the entrepreneurs who must lead by example, show up and be actively involved because they are the only ones in the ecosystem who truly understand and can fully commit to addressing the specific needs of the entrepreneurial community. Another reason offered throughout the literature as to why it is the responsibility of the entrepreneurs to lead is that other community institutions like government, universities and big businesses are, if

nothing else, ill-fitted for the role. This is because of their inability to change and adapt as rapidly as the entrepreneurial ecosystem requires (Feld 2012, Katz and Wagner 2013, Kerr et al. 2014). On top of that, data yielded by the literature supports the notion that the process of entrepreneurship should not be predetermined, but rather the entrepreneurs should have the freedom to innovate, collaborate and develop an ecosystem that is more organically determined and therefore more self-sustainable in the long term, which is unlikely to happen if an entity other than entrepreneurs steer the ecosystem (Engel 2015, Hanley and Douglass 2014, Motoyama and Wiens 2015).

However, this is not to mean that other entities are not important to the entrepreneurial ecosystem. There seems to be no compelling evidence in the literature which suggests that entrepreneurial ecosystems can be sustainable without the contribution of supportive institutions. The following sections will therefore explore other commonly identified participants of an entrepreneurial ecosystem and the various ways in which they can shape the ecosystem to support their community's entrepreneurs.

Investors

One of the most important components of the entrepreneurial ecosystem, second to the entrepreneurs, is the access to capital available to local entrepreneurs which is typically funneled to entrepreneurs by investors. Even though advances in technology are driving down some costs for startups, a 2013 Kauffman Firm Survey found that within the first three years of a firm's birth, 40 percent of the funding source for startups was still through outside financing, consisting of debt and equity. This figure was determined after accounting for the average 4 percent of founders' own credit card debt and personal loans to finance new business ventures (Stangler 2016). The literature identifies a broad range of activities and roles that investors have in the ecosystem, and acknowledges their importance in determining an ecosystem's success. This section will explore various types of investment entities related to entrepreneurship and the various ways that investors contribute to the entrepreneurial ecosystem.

Investors can, and many do, have a positive, value-added impact on an entrepreneurial ecosystem, as well as to the community as a whole. Many scholars have found that most investors at the local level want to, in addition to giving monetary contributions, engage in activities such as providing firm-saving services like mentoring and deal-making on behalf of the firm founders (Rojas et al. 2014). These types of investors recognize that the inherent risks of investing are outweighed by the prospect of growth and development in their community through job creation, economic

diversification, and competitive advantage (Feld 2012, Engel 2015). Furthermore, investors stand to receive big returns on their investments. A large return on investment (ROI) usually more than makes up for their losses from other ventures that have failed (Engel 2015, Feldman and Zoller 2012). Investments are also made from firms outside the community. These investment benefit entrepreneurs as well as overall economic development efforts. This is because money flowing into the community increases as capital accessed through foreign direct investment (FDI), nationally-based firms (usually venture capital firms) and individuals from outside the community, therefore adding value to an ecosystem (Engel 2015). However, the extent of this value is somewhat contested in the literature. Some propose the view that since it is less likely that outside firms and entities are not as heavily invested in the community as local ones, they may not act in the best interest of the ecosystem, and may even try to poach talent from nascent startup communities, thus potentially extracting value from the system (Feld 2012, Engel 2015).

While there is a myriad of investment agencies and individual investors throughout the nation and around the globe, most new enterprises still reportedly struggle in capital acquisition efforts. The phrase “there is not enough capital here for startups” is common in communities all around the world (Feld 2012). It is incredibly difficult for firms in the early stages, and especially for new entrepreneurs, to procure capital, as exemplified by recent investment trends (Stangler 2015). For example, in 2014, there was \$48 billion invested for what was broadly defined as startup capital, the most since 2000, however it was discovered that the majority of this invested money was actually towards later stage companies, which still fall in the start-up age range, but are not newly created (0-1 year) (Buchanan 2015). Moreover, Buchanan (2015) has found that between 2005 and 2014, the rate of seed investments (required for beginning/early stage firms) made by venture capital has stayed flat. These trends indicate that newly established firms and entrepreneurs who do not already have a reputation of success, are less likely to receive capital than firms in later stages. If this trend continues, and entrepreneurs are not able to rely on traditional investors for support, the way that developing entrepreneurial ecosystems is currently done could be threatened.

The literature provides many reasons as to why capital acquisition is exponentially difficult for new firms and new entrepreneurs. Many argue that securing capital is so difficult for new companies because, since most startups fail, investing in one is too much of a risk to take on by the investing person or agency (Connolly and Girdwood 2011). Therefore, it is theorized that investors seek to reduce the risk for themselves by investing in later staged companies. This helps explain why investment is much more plentiful for later stage firms who, because they have not yet failed, and/or

are turning profits, have demonstrated that their business is likely to be successful (Litan 2015). Scholars have also observed that another way large investors have reduced risks is to invest mainly in certain geographical areas, where there are hubs of innovation and where industry specific clusters have already been established and so have a competitive advantage (Stangler 2015). Engel (2015) claims that the use of this approach has barricaded a large part of the nation from these large investments which could have transformed emerging entrepreneurial ecosystems. However, this trend might be changing as it has been observed in recent literature that there is a stream of movement by large investors into the Midwest and other parts of the country, in addition to the recent surge of homegrown venture capital firms in communities across the nation (Deeb 2014, Chemmanur and Chen 2015).

Figure 2.1

Funding Source	Investor Type	About
Bootstrapping	The entrepreneur	Entrepreneur funds firm through personal investments: mortgages, credit cards, forgone salaries etc.
Friends, Families, & Employees	People with relations to the cofounder	Akin to bootstrapping, investors are more tolerate of risks but have fewer resources to give.
Parent Company/Joint Venture	A mature/incumbent business/organization	When a new venture is a firm that spins-off from another company –the parent co. provides resources and capital to new firm, and in return for investment, larger co. requires repayment in the form of exclusive production or use rights.
Angel Investors	loosely formed group of accredited investors in a community	Usually former entrepreneurs, invests locally in smaller firms and usually in smaller amounts. Invests financially and also through mentorships.
Venture Capital	An established firm of investors	Provide equity investments in high-risk ventures with high growth potential. Investments are long term, and involved in business management aspects.
Private Placement and Limited Offerings	Investment banks and agents	Banks and private agents secure investors for firm, investors are not typically involved in business management, but have lower risk tolerance.
Initial Public Offerings (IPOs)	Entrepreneur/firm issues stock on public market	Generally available for only high-valuation companies with public recognition because of the high transaction and legal costs.
The Small Business Administration (SBA)	A government program	Provides either long-term fixed financing options for small businesses, or guarantees on bank loans for small businesses. These are highly regulated and subjectable to FOIA.
Community Development Corporation (CDC)	The managing organization (usually an EDO)	Generally guarantees a portion of loans that may not be available through banks. Firms can take out smaller amounts that other financial institutions might not give away.
Grants	Varying agencies (foundations/governments/universities etc.)	Competitive, given to firms whose focus is most closely tied to meeting the funding agencies' needs.
Microloan Programs	Small Business Administration uses intermediary organizations	Smaller loans amounts given with smaller interests rates than typical banks for businesses to use to startup and expand.

Accelerators	Varying agencies (governments/universities/EDOs etc.)	Competitive, applicant recipients are awarded seed-funding, mentorship and space for a designate time to startup a business.
Crowdfunding	General public	Newer model, entrepreneurs raise capital and to offer equity to start and expand their business through an online platform. Young companies are encouraged to seek legal counsel before creating a crowdfunding campaign.
Sources: Connolly and Girdwood 2011, Feld 2012, Chemmanur and Chen 2015, Litan 2015		

Aside from risks associated with investing in newly established firms, procuring investment is incredibly difficult because investment decisions are incredibly subjective, meaning that even if a business model is sound and a product is innovative, there is no compulsory law forcing someone to invest in that business. This forces entrepreneurs to spend a lot of time and energy going after many (refer to figure 2.1) investors and investor types to increase their odds of procurement (Kerr et al. 2014). Lastly, the scope of allowable investment and breadth of available investing agencies and individuals is somewhat limited for early staged companies, hindering what types of investments can be made and to what type of companies (Litan 2015). While this is slowly changing as the ‘business’ of investing is beginning to open up to more people through means like crowdfunding (Litan 2015), the outlook remains consistent in the literature that most entrepreneurs will have trouble securing capital for their new firms, no matter where they are located (Feld 2012).

Even if a community finds itself comprised of multiple types of investors and investing agencies, it surprisingly does not necessarily mean that all entrepreneurs will benefit from them. The persistent view in the literature is that just having the presence of capital and investing agencies is not enough. New and ever-changing funding sources available to entrepreneurs, like accelerators and crowdfunding, combined with more traditional methods like angels, venture capital and banks, open entrepreneurs up to a lot of opportunity, but also put a lot of work on the entrepreneur to determine the best type of funding to go after, and at what stage in their company’s life cycle to go after it. In search for capital, entrepreneurs can quickly become overwhelmed with the array of financing options and firms that provide them (Chemmanur and Chen 2015). Figure 2.1 highlights the complicated investor network that entrepreneurs must navigate through, providing a non-exhaustive list of some of the more popular funding mechanisms entrepreneurs utilize, as found in extant literature. Figure 2.1 also provides brief descriptions regarding what type of industry and/or at what stage of the business’ life-cycle these mechanisms are most relevant for.

In addition to monetary considerations, entrepreneurs must also consider how involved they wish their investors to be, further filtering the available types of capital and investment to go after. Industry insiders frequently distinguish between “hands-on” (highly involved in business operations) versus “hands-off” (the obverse of hands-on) investment styles (Chemmanur and Chen 2015). While Feld (2012) and Roja et al. (2014) strongly believe that all constructive assistance and collaborative networks an entrepreneur can get should be welcomed, Engel (2015) puts forth the view that since entrepreneurs are made up of different types of people with different styles of work behaviors, communities should be cognizant that there may be some entrepreneurs who prefer to take as much ownership as possible over their new enterprises. For example, friends, families or private placement limited offerings might be preferable for founders who don’t want much council like angel or venture capital firms, who often tie funds with mentorship offerings (Connolly and Girdwood 2011). Therefore it is important that there are multiple avenues for capital acquisition available that meet all entrepreneurs’ needs, at every stage of their venture. It is therefore stressed in relevant literature that entrepreneurs and their supporters emulate the characteristics of the third wave of economic development by strategically identifying what the new firm is qualified for and able to pursue throughout that business’ startup phase instead of a blanket approach of going after any available capital (Feser 2014).

There are a variety of strategies that have been utilized by communities to increase the amount of capital resources, as well as increase the efficiency of these resources for entrepreneurs in a community. One such strategy recommended is for communities to inventory the types of capital available and then seek to identify and fill in the gaps in order to better streamline and foster the process for entrepreneurs seeking funding as effectively as possible (Roja et al. 2014 and Garmise and Ghosh 2011). This strategy requires strong presence of dealmakers, who are able to connect resources and assets of the community in order to fill identified gaps (Feldman and Zoller 2012). If the entrepreneurial ecosystem is able to better leverage collaborative partnerships with institutions and organizations, it could be a way to bring down startup costs overall (Garmise and Ghosh 2011, Roja et al. 2014). The second strategy found in the literature is to ensure that investors have aligned their long term goals and investment behaviors with that of the local entrepreneurs leading the ecosystem in order to foster a cohesive and forward thinking ecosystem (Feld 2012).

Overall, research into this topic supports the argument that investors are a necessary and value-added component of the entrepreneurial ecosystem. Entrepreneurs need outside capital, and they need to not only be aware of the funding sources available to them, but also be informed and

able to make smart choices of what type of funding source is best for them. To help entrepreneurs meet capital and resource needs, a strong ecosystem invests in creating opportunities to attract investors and invests in fostering collaborations that will help lower overall startup costs.

Government

Throughout modern history, government has had an integral yet complex relationship with entrepreneurs and with building an entrepreneurial ecosystem. Economic development has evolved to be an established function of government, and it is unlikely that will be changed (Hanley and Douglas 2014). As this paper argues that entrepreneurship is a pillar of economic development, it is therefore unsurprising that governments, especially at the local level, are expected to be highly invested in the development of a vibrant startup ecosystem. However, studies by the International Economic Development Council have found that for the latter half of the 20th century, governments at every level had largely un-prioritized fostering entrepreneurs in their communities, focusing attention mostly towards industrial and commercial recruitment economic development strategies (Feser 2014). Since the late 1980's however, with the rise of the second wave in economic development, entrepreneurial pursuits have been slowly taken on by the public sector (Hanley and Douglass 2014, Feser 2014). The exact role (as creator, supporter, funder etc.) that government should have in an entrepreneurial ecosystem remains difficult for scholars to define and agree upon because of the different needs in communities across the nation (Motoyama and Wiens 2015, Feser 2014, Hanley and Douglass 2014). Though there is a limited amount of research on this topic, what literature there is explores the various policies, practices and investments into entrepreneurship made by governments, and then on their reported outcomes of them and their impacts on entrepreneurial communities. This section will explore what the literature has identified as the various ways in which governments have interacted with ecosystems and the opportunities identified for more effective participation in the future.

Recent literature has touched upon several key features inherent in government that make it ill-equipped to assume leadership of an entrepreneurial ecosystem. First, the very structure of government serves as a barrier for creating a successful and sustaining entrepreneurial specific programs and initiatives. (Feld 2012). One striking government aspect exemplifying this point is that because several studies and supporting academic research argue that growing an entrepreneurial ecosystem takes a generation, however politicians in the United States are limited in the amount of time they can serve in office by election cycles of only a few years (Feld 2012, Katz 2016,

Motoyama and Wiens 2015). Time restraints make it difficult to commit to and secure funding to implement lasting entrepreneurial programs, as there is not always a guarantee that the successor's administration will continue on with targeted entrepreneurial specific initiatives (Feld 2012, Katz 2016).

It is also acknowledged in the literature that with what little time politicians do have in office, their attention is constantly pulled in many different directions, and entrepreneurs (who are incredibly busy) usually don't have the time or resources to lobby to keep their cause at the political forefront (Feld 2012). Historically, when entrepreneurship is high on the political agenda, the economy is down. When the economy is down entrepreneurship is an attractive solution to push people to in order to foster job growth. What scholars have found then is that when the economy recovers and unemployment is no longer the most pressing political issue, government involvement/interest in entrepreneurial programs goes down (Connolly and Girdwood 2011, Mazerov and Leachman 2016). Thus the danger of government funded entrepreneurial programs is rooted in the likely scenario that if the startup community becomes reliant on these funded programs, then funding for these programs are reallocated elsewhere, the entrepreneurs are ultimately left stranded (Feld 2012 Engel 2015).

Even when the public attention is focused on entrepreneurship, it is argued that the public sector is usually not the most qualified entity to create viable entrepreneurial-specific initiatives. Many government employees are not entrepreneurs themselves and therefore can have no way of truly knowing what entrepreneurs in their community need (Feld 2012, Feser 2014). Along those same lines, many policies aimed at fostering entrepreneurship have embodied blanket policies reminiscent of the second wave of economic development, which do not necessarily consider the specific needs of the entrepreneurs within their own community. In particular, some have argued that many policies implemented fail to distinguish between substantive and transformative entrepreneurs because policy-makers are not able to recognize that each type reacts differently to policy changes (Schoar 2009). It is because of these observations that most of the literature argues that the top-down approach by government towards an entrepreneurial ecosystem development is more often than not (excluding few exceptional communities) an imposition of a vision that wasn't organically created, and so is not as likely to be sustained over time (Feld 2012, Engel 2015).

These aforementioned observations are not to postulate that governments have no value-added benefit to the ecosystem. There are still a myriad of resources identified throughout the literature which highlight how government can contribute to the ecosystem, making them a value-

added participant into entrepreneurial ecosystems (Engel 2014, Feser 2014, Motoyama and Wiens 2015).

One of which is the rule of law. Maintaining the rule of law is a central government function, and is particularly important for an entrepreneurial community. “The most important part of a business environment is rules...to use property as collateral to obtain credit, to protect their personal from business assets, to expand their markets to create the kind of scale that generates wealth- they need the standards that only legal institutions can provide” (de Soto 2012, 12). The regulatory environment of a place can impact the equality, income mobility, and the ability of people with entrepreneurial skills to take risks, express their talents, and start a venture (Schoar 2009, Engel 2015, Dassel et al. 2013). Looking towards the future, scholars warn that governments must be diligent in monitoring and evaluating its community’s legal systems, particularly as it navigates and determines regulatory policies to accommodate modern day issues like the influx of destructive technologies, packaging and managing loans between investor and startups firms, and immigration (Kalil and Irons 2007, American Progress 2007).

Best practices are not commonly identified in the literature because, as the third wave of economic development implies, the uniqueness of each startup community demands unique practices. However government investment in the quality of place is arguably a universal best practice advocated throughout the literature. If a community does not create an attractive environment for startups, it is likely that it will not attract startups (Katz and Wagner 2013). Hanley and Douglass (2014) encourage governments to enact “supply-side” policies, comprising of investments in workforce, recreation and infrastructure. This is, in part, because needs like shared infrastructure, a talented workforce and other quality of life aspects are too big for one entrepreneur or group to take on alone and thus requires public sector intervention (Schoar 2009). A 2015 Business Climate report found that the top three aspects of a community that people considered most before relocating to a place was overall cost of living, affordable housing that meets the need of a person/family and crime rate - all of which are aspects that government sectors can influence considerably (Carmichael 2015). Aspects like attractive housing are actually found to positively correlate with entrepreneurship, as many startups use their real-estate as collateral for capital needs (Adelino et al. 2015). Meeting the basic needs of a community very well is a fundamental precursor for a startup community to thrive and sustain, and local governments that don’t prioritize these should expect to face an uphill battle in talent attraction and retention, and therefore in fostering a vibrant entrepreneurial ecosystem.

Furthermore, creating a community which recognizes the benefits of and supports having a strong entrepreneurial ecosystem is important for the ecosystem's vibrancy and sustainability. Motoyama and Wiens (2015) argue that fostering community support is something that politicians, particularly at the local level, have the resources to do effectively. Investments in programs geared towards developing entrepreneurs and assisting young businesses are hard to implement if voters don't understand the value of them (Motoyama and Wiens 2015). One way for governments to elicit widespread community support and to show support all entrepreneurs in an ecosystem is to not play favorites in the startup community. Governments that wish to support entrepreneurial ecosystems must support policies that are not geared toward any particular business or industry, but rather by being inclusive and creating favorable systems and processes that most or all startups go through (Hanley and Douglas 2014). This helps foster inclusion, which can attract different types of entrepreneurs, thus creating economic diversity as well as attracting community support from all facets of the region, not just those interested in promoting certain industries or business.

Another way identified that governments can use to galvanize public support and encourage collaboration and participation is to celebrate and act as a mouthpiece for the local entrepreneurs (Feser 2014, Motoyama and Wiens 2015). Government actors, at the local levels especially, often have the opportunity to engage with the entrepreneurial ecosystem, learning what the entrepreneurs are doing and what they need, and then able to vocalize these needs to the community. This creates community awareness of the entrepreneurs, which can create new opportunities for collaboration as more and more people know about the ecosystem, there is greater likelihood that more and more people will contribute to it (American Progress, 2007).

Furthermore, it's been found that entrepreneurs are notoriously busy people and are always wanting for collaborative spaces, but do not always have the time and resources to secure them. Governments have the opportunity to serve as a source of coordination, creating multiple channels in which innovators across multiple types of organizations – universities, government labs, corporate labs and so on – can access shared resources and spaces (Engel 2015, Feser 2014).

Lastly, local governments can greatly assist the entrepreneurs in their community by collecting and disseminate data related to entrepreneurialism (Feld 2012, Katz 2016). To continually and consistently track, compare and disseminate the outcomes of entrepreneurial policies and strategies will give communities and entrepreneurs the intelligence needed for sounder analysis to better inform policies and decisions relevant to the community's entrepreneurs in the future (Katz 2016, Stangler and Bell-Masterson 2015).

Regarding the role of government, the most effective public policies for entrepreneurs has been found to be those that encourage broad industry agnostic-innovation, and by provide above par amenities and create the environment that business can use to survive and thrive. Particularly, policies should embody a long term perspective, policies should be focused on investing in human capital, modernizing infrastructure, providing industry agnostic support, fostering collaboration, and collecting and disseminating critical information. It is not the role or capabilities of the government to arbitrarily decide what cluster to target or what vision to impose based on political priorities, but rather provide an environment that naturally encourages behaviors which lead to innovation and startups.

University

Another major participant of an entrepreneurial ecosystem is a community's university or universities if present. Similar to government, universities have also only recently begun to take on responsibility of upholding and improving quality of life in their communities. For in the not too distant past, universities and other place-based institutions like hospitals were mostly closed off, inward looking and removed from community engagement activities (Katz and Wagner 2013). But, Birch et al. (2013) has that if the community in which they are located in is blighted, deteriorated and with little economic development, they suffer as well. As quality of life and the affordability of a place are some of the main factors that students use to determine what school to go to (Carmichael 2015), it is in a university's best interest to help improve the community's quality of life, consequently becoming highly engaged place-based institution (Katz and Wagner 2013, Garmise and Ghosh 2011). Birch et. al. (2013) describes universities as anchor institution, and argues that they are a key entity in building up the civil infrastructure of a community. The literature has identified several capabilities embedded into universities' institutional framework which allow them to play such a vital role in the development and sustainability of an entrepreneurial ecosystem. They house talented individuals who are poised to create startups, they have relevant and readily available resources that entrepreneurs need to start and grow, many universities have entrepreneurship programs, and many have, or are in the process of creating technology transfer offices.

The most obvious and important role that universities can have in the startup community is housing and nurturing talented students and professors. The now popular Proenza-Akron Model is a university-centric model, placing the institution as the center of open sources of knowledge (Agtmael and Bakker 2016). Consequently, campuses of higher education facilities are a breeding grounds for

fresh ideas, new ways of thinking, collaboration, experimentation and evaluation (Feld 2012, Feldman 2009). According to Katz (2016), startups that are founded by students and their professors find that their proximity to campus and the people within them can be highly beneficial to their business' development. Therefore, communities without such a readily available pool of talent to draw from may have to engage more heavily in other attraction and retention efforts than those that do have the presence of universities.

The resources that a university can provide are incredibly valuable to a startup community. Universities have tangible and intangible resources that entrepreneurs can have access to, to further their own companies, and to strengthen connections throughout the ecosystem. Tangible resources include space and materials (Feld 2012, Agtmael and Bakker 2016, Motoyama and Wiens 2015, Kalil and Irons 2007). Universities also have resources such as research labs and equipment that can be used by students/faculty to create innovations which may lead to starting new businesses (Feld 2012). Aside from brick and mortar resources, universities have unique intangibles useful to entrepreneurs, particularly in fields where the university is strongest in. Universities are often considered 'cluster-hubs' and are able to provide knowledge and research relevant to their area's industrial specializations (Kalil and Irons 2007, Motoyama and Wiens 2015). This is beneficial for entrepreneurs because when universities find ways to bridge academia and business, it not only encourages innovative problem solving in the community, it also helps drive higher startup activity in the region it serves (Agtmael and Bakker 2016, Kalil and Irons. 2007, Litan 2015). Universities also can be used to fund and implement entrepreneurial competitions and accelerator programs, providing monetary resources to certain entrepreneurs and their new ventures (Connolly and Girdwood 2011, Agtmael and Bakker 2016)

Universities across the nation are racing to implement some sort of entrepreneurial program/s into their curriculum. In fact, from 1975-2006, entrepreneurship was the fastest growing undergraduate degree in the nation (Garmise and Ghosh 2011). This influx in entrepreneurial education pursuit may be because universities have begun acting as community agents (Birch et al. 2013) and they are using entrepreneurship to fill a community gap left by the low federal and private funding and support for entrepreneurs. Furthermore, universities have the potential to provide long term funding for entrepreneurial supportive programming more so than their local or state government entities (Birch et al. 2013, Feld 2012, Stangler 2016). Another perspective offered is that universities recognize that entrepreneurial programs increase theirs, as well as the communities', competitive advantage as a benefit of entrepreneurship in the community (Deeb, 2014). A study published in the

Academy of Management found that entrepreneurship education has a positive effect on attitudes, perceived behavioral control, and the intention to become an entrepreneur (Rauch and Hulsink 2015). The Kauffman Foundation reported that 95% of entrepreneurs studied, reported having a bachelor's degree or higher, and so, schools see the value in committing to programs that attract these entrepreneurial minded students (Garmise and Ghosh 2011). Additionally, some have found that by creating an entrepreneurial program, faculty may be more likely to engage in entrepreneurial activities (Feld 2012). The impact that incentivizing faculty to engage in entrepreneurial activity can be profound to a startup community. For example, in the latter half of the twentieth century at MIT, faculty were allotted 20% of their time “for outside professional activities” which many used to consult with industries in the science sector and then went on to create their own companies, which resulted in the development of one of the most successful entrepreneurial ecosystems in the world (Feldman 2009).

Technology transfer offices have also been cited as an incredibly useful tool provided by universities that encourage both students and faculty to partake in their community's entrepreneurial ecosystem. The 1980 Bayh-Dole act allowed for the creation of technology transfer offices in universities and since then, technology transfer from universities has increased remarkably, filling the gap left by the steady decline in federal R&D dollars in certain fields (Feld 2012, Connolly and Girdwood 2011, Katz and Wagner 2013). Technology transfers provide a system where professors and students can participate in the market with their innovations created on campus. Transfer offices also encourage universities to partner with private industries on technology with a focus on commercial application (Agtmael and Bakker 2016). Technology transfer offices can have strong implications to a local entrepreneurial ecosystem's vibrancy. A study conducted by the Association of University Technology Managers found that in 2008, 595 startups were launched through technology transfer offices, with approximately 446 of these new business remaining in the institution's home state (Garmise and Ghosh 2011). However technology transfer offices have also, in many circumstances, been a hindrance to local startup development. If utilized by the university solely as a tool to make money, without considering the local entrepreneurial ecosystem, patents get sold to the highest bidder regardless of where that bidder is located, thus preventing further development and job creation around that patent at the local level (Katz and Wagner 2013). It is therefore essential that as anchor institutions, universities place priorities in developing and fostering discovery, innovation and entrepreneurial activity at the local level.

This section briefly exemplifies how the value that a university can add to an entrepreneurial ecosystem is immense. Universities can attract talent, provide resources, implement programs that foster entrepreneurial development, and are a key source of innovative discoveries. Feld (2012) does stress that universities, while important, are not designed to be the primary drivers of the development of the entrepreneurial ecosystem. While universities, both public and private, have self-interests in making their communities attractive for students and faculty, there are missions and objectives in a university as an institution of learning that force them away from solely dedicating their missions to entrepreneurial development, thus limiting their involvement in their entrepreneurial ecosystem.

Other Actors

As in all ecosystems, there are many moving parts and entities, each with their own role to play in the entrepreneurial ecosystem. Startup communities in particular have a seemingly limitless amount of participants to the ecosystem. Communities have more than just anchor institutions described in the above sections, but they consist of a “broader networks of institutions and individuals—homeowners, hospitals, philanthropies, private businesses and utilities—that are committed to, and fundamentally depend upon, the betterment of their place” (Katz 2016, p. 1). Supporting entities in the entrepreneurial ecosystem typically are referred to as economic development agencies, service providers, large companies and nonprofit organizations. All of these aforementioned organizations assume some type of stewardship role in the regional economy and thus have a vested interest in their community’s entrepreneurial vibrancy (Katz 2016, Roja et al. 2014, Dassel et al. 2013). This section will explore the more common support organizations that the literature has identified and their functions and role in the ecosystem.

Economic Development Organizations

Economic development organizations (EDOs) have vested interests in diversifying their communities’ economies. Therefore, based on the claim put forward that entrepreneurs achieve this outcome, EDOs have an interest in developing a robust and sustainable entrepreneurial ecosystem. It has been advocated in the literature that it is up to the economic development practitioner, perhaps more so than any other participant, to become an effective dealmaker in the community, convincing different actors, especially ones that are currently not seeking assistance (like large businesses), that they stand to benefit from collaborating, feeding into and enhancing the entrepreneurial ecosystem

(Connolly and Girdwood 2011, Feldman and Zoller 2012, Garmise and Ghosh 2011). Feldman and Zoller (2012) describe a dealmaker as someone “mediating, shaping and configuring regional entrepreneurial networks by sharing expertise, information and resources among entrepreneurs and investors, thereby facilitating new firm creation and supporting entrepreneurship” (26). This is important for an ecosystem because interconnectedness between unlike institutions, industries and background leads to greater innovation and higher rates of successful ventures (Katz and Wagner 2013). Based on these premises, economic developers who tend to have deep social connections and social capital are well-suited to construct and formalize networks and consortia, thus growing entrepreneurial propensity (Roja et al. 2014). Other functions economic development organizations have been found to provide to entrepreneurs include business and market intelligence, advocate for incentives for entrepreneurs, help patent and market new technologies made in the community and even just serve as a cheerleader for entrepreneurs (Feld 2012, Connolly and Girdwood 2011, Roja et al. 2014).

Incumbent Firms

Entrepreneurs, particularly innovative ones, seek to disrupt the status quo and compete with incumbent firms. It therefore may seem counterintuitive that these incumbent companies happen to play a large role in the ecosystem, according to the literature. Mature companies help lay the foundations for entrepreneurs and the entrepreneurial community to develop in ways they otherwise could not: they help determine industry clusters, drive infrastructure development, increase tax base allowing for better schools, drive up wages of the citizens, and so on (Engel 2015, Feser 2014). There are also value-added resources/programs that these companies can directly contribute into the ecosystem. Feld postulates that the “two most powerful things large companies can do for the startup community are (1) provide a convening space and resources for local startups, and (2) create programs to encourage startups to build companies that enhance a large business company’s ecosystem” (Feld 2012, 77). The twofold benefit of sponsoring a space open to entrepreneurs is firstly an act of goodwill on behalf of the company to the community, and secondly, according to Connolly and Girdwood (2011) and Agtmael and Bakker (2016), it allows for the larger, more mature business to engage with and interact with the startup community in ways to benefit themselves.

There are various ways incumbent firms provide spaces and help implement programs to the benefit of entrepreneurs. One is, as Feld (2012) mentioned, to create incubators, co-working spaces

or something similar to house entrepreneurs. While there is a threat that startups housed by larger companies may recruit away the existing employees, or the obverse (large companies recruiting from entrepreneurs), this concern can seem menial because, as history shows, large companies do not seem to let that threat deter them (American Progress 2007, Stangler 2016, Stangler 2015, Dassel et al 2013).

Furthermore, it has been surmised that one of the most effective ways incumbent firms can enhance the startup community is to go into business with them, thus benefiting themselves in the process. It has been reported that among innovative firms, the younger a firm is, the higher the innovation is, as measured by the ratio of R&D spending to sales (Decker et al. 2014). Therefore, incumbent firms do not want to miss the chance on benefiting from breakthrough new technology, seeing as it has been noted that “those who build the infrastructure will get the fruits of advances in technology” (Agtmael and Bakker 2016, p. 62). Also, larger companies trying to stay modern, yet find it hard and slow to navigate corporate bureaucracy, stand to benefit from, and so leverage, business-to-business encounters with entrepreneurs (American Progress 2007). The forms of collaboration between startups and mature corporations are seemingly limitless. Engel (2015) has found that contractual agreements, equity investments, partnerships and even the acquisition of the young firm are very often utilized by mature corporations.

Universities also offer larger, incumbent firms ways to infiltrate and advance the entrepreneurial community. This is in part because universities have spaces and resources available to house entrepreneurs in, such as research parks- places where newly established firms and talented students can rub shoulders with, collaborate and formulate partnerships with fortune 500 companies and other incumbent firms (Engel 2015, American Progress 2007, Deeb 2014, Feldman and Zoller 2012, Feldman 2009).

Service Providers

The literature almost unanimously agrees that service providers are critical for the success of a new firm, as their support allows young firms to realize their true potential. Sometimes referred to as ‘capacity development providers’, this group is comprised of businesses and organizations that can supply technical assistance like lawyers, financial advisors and marketers, in addition to organizations that provide utilities like water and electric (Dassel et al. 2013). Most entrepreneurs need to outsource certain business functions because they either do not have the level of specialized

knowledge to address it internally or do not have the resources to perform that function internally (Garmise and Ghosh 2011).

Most communities will already have a number of businesses that provide services entrepreneurs need, but that does not always imply that these businesses are being used in an optimal way for entrepreneurs. Current literature seems to support the idea that service providers be not only competent providers, but also highly committed to the local economy and entrepreneurial ecosystem, offering reasonable and fair rates to young firms, or even, as some argue, offer free or subsidized services for startups (Feld 2012, Feldman and Zoller 2012). Feld (2012) finds that it is in the interests of service providers to do this because, when looking at the long term, helping entrepreneurs and young companies could reward them through their established long-term relationships with these potentially successful companies (Feld 2012). As there is an overwhelming consensus corroborating the notion that the professional services are necessary and are generally available in every community, the discussion in the literature has turned to how to attract and retain the highest quality of them for the entrepreneurial community. In terms of attraction, Moretti (2012) postulates that job creation, which is often what happens with entrepreneurial activity, will trigger a multiplier effect, thus creating up to 5 new jobs outside of the original job, and two of the five will be for professional services, which can have outstanding impact on emerging entrepreneurial ecosystems. For once the entrepreneurial presence grows and more quality jobs are created, higher quality services will be required, thus creating a cyclical effect because better service provides with aid in developing greater entrepreneurial capacity within the ecosystem.

Incubators

Traditionally, incubators provide year round and continuous space, infrastructure and other basic services for entrepreneurs in exchange for a small fee (Feld 2012, Garmise and Ghosh 2011). The first incubator was reportedly established in 1959 by Batavia Industrial Center, and gained popularity during the internet bubble with more than 1,400 reported incubators by the mid-2000s (Feld 2012, Motoyama and Wiens 2015). Typical establishments that house and operate incubators are universities, local governments, economic development organizations, research parks, and the private sector (Feld 2012, Garmise and Ghosh 2011, Motoyama and Wiens 2015). Incubators can take on many forms, catering to certain industries or to certain staged companies, but all incubators are designed so entrepreneurs do not use their limited resources on rent and other high cost needs, but

rather used to further develop and experiment with their ventures in addition to learning from other professionals also in the incubator (Garmise and Ghosh 2011, Motoyama and Wiens 2015).

These aforementioned participants of an entrepreneurial ecosystem explored above offer insight into the interconnectivity and complex web which the ecosystem is made up of, and also demonstrates their power to add immense value to the vitality to overall community development, in which entrepreneurs are an important part. These participants are instrumental in facilitating the transfer of knowledge and information, bringing in foreign or outside investment, maintaining regional attractiveness for investors and exploiting the region's competitive advantage for the long term benefit of the entrepreneurial ecosystem. There is an underlying debate concerning what is considered the appropriate amount of participants in an entrepreneurial community. There is some research to support the theory that the larger number of collaborators present in a community will lead to greater startup activity (Feldman and Zoller 2012). Conversely, others stress that while it is very important to have enough within the ecosystem so entrepreneurs have options, they are weary of economic developers focusing too much of an emphasis on quantity rather than quality, which can be to the detriment of the entrepreneurs in the ecosystem (Motoyama and Wiens 2015, Stangler 2015).

In summation of the review of the literature above, the claim is supported that entrepreneurship is an independent and incredibly effective mechanism for sustained local economic development. There is evidence indicating that the 'third wave' of economic development and the grandiose image of entrepreneurs recently perpetuated in popular and academic culture is having big implications for the future of entrepreneurship. Communities across the nation are hastily restructuring economic development strategies to accommodate and encourage entrepreneurial ecosystems in their communities. This has led to the creation of highly participatory, yet highly complex entrepreneurial ecosystems (Feser, 2014). Modern entrepreneurial ecosystems that are vibrant and sustainable are the result of a dense network of entrepreneurs that continually create a significant amount of, and a diverse set of, jobs in the community. They are open to and able to collaborate with firms in different industries and with different people. Modern entrepreneurial ecosystems are dependent upon inclusive and active entrepreneurs, active and open minded investors, and upon strong support from the community and its supportive organizations. While there is mostly limited and ad-hoc approaches towards measuring an entrepreneurial culture, it is nonetheless stressed in the literature that it is important that communities do engage in evidence-based, strategic

activities and find ways to track progress over time in order to ensure that community resources are being leveraged in a way that promotes economic opportunity and growth (Stangler and Bell-Masterson 2015). The next section discusses the methods that this study uses to measure the entrepreneurial ecosystem in Bloomington- Normal-McLean County, IL.

III. Methods

This study reports on an 11-month research project, capstoned into a formative evaluation. A formative evaluation is a type of action research, where the process involves an examination of a program, usually in its early stages, to determine what is or is not working, and to serve as a blueprint used to inform strategies that move the program forward (Taras and Davies 2013). This type of evaluation falls in line with the third wave notion that strategy formation should be evidence-based and focused on prioritizing and assessing outcomes accordingly (Feser 2014). As the BN Advantage Economic Development strategic plan is in the formative stages of implementation, a formative evaluation can function as a suitable method to use for this project. The focus of this study is on the vibrancy of the local entrepreneurial ecosystem in the Bloomington- Normal-McLean County, Illinois area. Entrepreneurial literature advances the premise that just inventorying the inputs into a system (universities, education levels, etc.) is not enough to measure the vibrancy of and provide insight into the sustainability of the ecosystem. These are rather determined through analysis of the outcomes produced by the inputs when they work together (Katz and Wagner 2013, Roja et al. 2014, Stangler 2015-Bell-Masterson). In order to capture this vibrancy, an approach that incorporates detailed qualitative and quantitative data about the current ecosystem compliments goals of this formative evaluation.

This formative evaluation incorporates semi-structured surveys of 12 key informants and incorporates strategically selected indicators informed by the literature which focuses on the existing outcomes of the ecosystem.

Qualitative Data: Key Informant Interviews

Twelve key informant interviews were conducted in total. Participants were comprised of entrepreneurial ecosystem stakeholders; entrepreneurs, economic developers, community leaders, educational leaders, and service providers. Each interview lasted for about 50 minutes, and the only

notes that were recorded were by hand. They occurred either at the subject's place of work, in a local coffee shop, or at the Bloomington-Normal Economic Development Council's office. I facilitated the discussions using a semi-structured guide (Appendix A) that was developed out of literary research surrounding the themes of entrepreneurship and the development of a startup community. The questions asked were designed to explore the respondents' attitudes, backgrounds (regarding entrepreneurial endeavors), level of knowledge and participation in the entrepreneurial ecosystem of Bloomington-Normal. During these interviews, key informants shared their knowledge, perspectives and observations about their entrepreneurial activities in the community, particularly what they viewed to be strengths weakness, opportunities or threats (SWOT) for the Bloomington-Normal entrepreneurial ecosystem.

The specific research protocol followed for the interviews was as follows: (1) identify possible individuals for key informant interviews; (2) design a key informant interview protocol based on the guiding research goals; (3) schedule and conduct key informant interviews (Appendix A); (4) analyze themes and relevant information from key informant interviews; (5) synthesize the data and incorporate SWOT analysis into this final report. IRB approval from Illinois State University was obtained for all interviews conducted.

Quantitative Data: Indicators for Entrepreneurial Vibrancy

To supplement the data from key-informant interviews, quantifiable indicators informed by the literature were also analyzed in this study. These indicators are designed to measure the vibrancy of entrepreneurial ecosystems. The indicators used closely follow what the Kauffman Foundation 2015 Research Series on City, Metro and Regional Entrepreneurship paper "Measuring an Entrepreneurial Ecosystem" have recommended; density, fluidity, connectivity and diversity. These aforementioned indicators are the four broad themes found throughout the review of the literature. It is important to note that best practices in this field advise that these indicators should not be looked at in isolation, and that the data must be tracked across time and/or space in order to gather the most comprehensive picture of a community's entrepreneurial ecosystem (Strangler and Bell-Masterson 2015, Roja et al. 2014).

Measuring the vibrancy of an entrepreneurial ecosystem can be a daunting task, as there is a limitless amount of indicators which could describe the outcomes of entrepreneurial activities. Strangler and Bell-Masterson (2015) provide a framework in which to view the ecosystem

comprehensively, but stress that it is important for each community to consider what its desired goals are so it can measure and monitor outcomes tailored around these specific goals, either instead of or in addition to the indicators proposed in this paper. In the absence of a formally announced targeted outcome for the Bloomington-Normal entrepreneurial ecosystem, this study will explore indicators that track the overall vibrancy.

Because of the importance that the locality plays in the formation of the entrepreneurial ecosystem, which was discussed in the literature review, it is therefore unsurprising that the first indicator of an entrepreneurial ecosystem is density. Greater density of people in an ecosystem is advantageous, as more people means more talent, more knowledge, more collaborations, more resources and more ideas available to draw from to make new businesses (Audretsch and Keilbach 2004). To evaluate density as it relates to entrepreneurial activity, the Kauffman foundation recommends three measurements; the density of new and young firms, the density of employment in new and young firms, and the startup density per industry sector. Density of new and young firms is measured as the percent of new and young firms of all firms in the Bloomington-Normal community. In this study, the data used to find the density of new and young firms came from the United States (U.S) Census Bureau's Firm Age by Firm Size by MSA Longitudinal Business database, 2013. Because there is a lack of more recent data, this paper uses these findings as a proxy, considering any company aged 5 years or younger as of 2013 as a new-young firm. The share of employment in new and young firms is the percent of jobs created by new and young firms from 2009- 2013 in relation to total jobs created in the same time period in the Bloomington-Normal MSA. To measure the employment density in new and young firms, I used the Edward Lowe Foundation's YourEconomy.org database. Measuring startup density per industry sector required the use of a proxy because data of startup activity per industry sector is not yet available to the public. In order to provide a general idea of industry sector density of new and young companies in the community, I choose to use the U.S Census Bureau's 2010 and 2013 County Business Patterns Dataset to calculate the percent change of firms in each industry sector over this time to serve as a proxy for new company creation. Therefore, the measurement of startup density per industry sector is the total firm growth in each industry as a percent of total firms per sector in McLean County by 2013. Though imperfect, because it will be impossible to distinguish between company relocations versus firm creation as the cause of firm growth in each sector, this proxy measurement will be able to inform what industries are becoming more prominent in the local economy, thus creating economies of scale

which could then, as arguments made in the literature suggest, attract entrepreneurs within that industry to the community.

Fluidity is a key component of entrepreneurial culture, as changing ideas, networks, knowledge and collaborations drive innovation and economic diversity. There are two proposed ways to measure this indicator that this report will use; population flux and labor market reallocation. Population flux is the measurement of net migration into the community as a percent of total population growth for the years 2009-2013, thus accounting for migration out of the community and for births within the community. United States Census' County Population Estimates and Migration/Geographic Mobility County-to County Migration Flows dataset for the time period for 2009-2013 informed the population flux measurement. Labor market reallocation describes job churning per industry, or the rate at which individuals in the workforce move from one job to the other (not accounting for job creation), therefore driving up the propensity for new collaborations and ideas to form from within a community (Stangler and Bell-Masterson 2015, Audretsch and Keilbach 2004). The Quarterly Workforce Indicator dataset provided through the U.S Census Bureau gives the ability to measure job churn as a share of total employment across industry sectors and was calculated from the time of Quarter 2, 2014 through Quarter 1, 2015.

The third proposed indicator of entrepreneurial vibrancy is connectivity, which is measured in this paper through program connectivity, and dealmaker networks. Program connectivity as it is stressed throughout the literature, is the connection between all participants in the entrepreneurial community. A reliable dataset, or an advanced networking analysis tool is not currently available for most communities (Stangler and Bell-Masterson 2015). As a proxy, a sample of nine entrepreneurial programs throughout the community were analyzed, particularly focusing on each program's partnerships and sponsorships (via providing space, services, resources, support etc.) that were acknowledged on the programs' websites (Appendix B). Other networks of note in an entrepreneurial ecosystem are dealmaking networks, which is the next metric for the connectivity indicator. Dealmakers are quintessential in connecting individuals and firms together, mediating relations and facilitating new firm formation (Feldman and Zoller 2012). While Feldman and Zoller have produced in-depth dealmaker maps of cities throughout the county, not only accounting for the number of confirmed dealmakers, but also for the number of connections per dealmaker "node" and the links between, there is no widely available dataset or even a consensus of what method to use for measuring dealmaker vibrancy (Stangler and Bell-Masterson 2015). As a proxy, this paper will define the dealmaker network as the number of people who have voluntarily signed on to serve on

the BN Advantage entrepreneurial task force managed by the EDC. The data for this measurement is tracked through the EDC and provided to all EDC and BN Advantage staff and members. This proxy may not be able to capture the exhaustive list of dealmakers in the entrepreneurial ecosystem, nor the number of networks connected to each dealmaker, but their involvement with the task force solidifies that there is a presence of dealmakers in the community and the task force is what links them together.

The last indicator that the Kauffman Foundation offers communities measuring an entrepreneurial ecosystem which is widely supported throughout the literature is diversity. Diversity prevents the entrepreneurial ecosystem from becoming stagnant and risk-averse (Feld 2012, Audretsch and Keilbach 2004, Garmise and Ghosh 2011). The Kauffman Foundation measures diversity along three dimensions: economic diversification, immigration, and income mobility. Economic diversification is not only comprised of the industrial makeup of a community, but also the diversity of specializations. This is based on the premise that economies with greater amount of specializations will reap higher entrepreneurial opportunities and activities in those specializations (Stangler and Bell-Masterson 2015, Bednarzik 2000). Regarding economic diversity, the Bureau of Labor Statistics Employment by Major Industry Sector 2016 database was used to find industrial makeup, and a proxy for specialization of industry was informed from U.S Bureau of Labor Statistics for the same year. The latter source enables the identification of location quotients, which are useful for identifying a specific region's concentration of a certain industry (by employment) against the national concentration, so that higher concentrations mean higher specializations. The next metric, immigration, is crucially important to consider in entrepreneurial ecosystems because immigrants bring different perspectives, new knowledge into the community and drive up entrepreneurship because they generally have higher propensity for entrepreneurial activity (Garmise and Ghosh 2011). Using data from Census Bureau, 2010-2014 American Community Survey 5-Year Estimates, the immigrant share of the total population in McLean County was determined. The last metric for the diversity indicator is income mobility. The Kauffman foundation defines income mobility as the probability of an individual moving up or down the economic ladder between different income quintiles (Strangler and Bell-Masterson 2015). Income mobility is often deterred in communities with high poverty and/or high inequality, as these factors promote community disengagement and inward looking behaviors by what would-be participants in an entrepreneurial community (Katz and Wagner 2013). There is little consensus in the literature about what dataset accurately captures income mobility on the county level (Stangler and Bell-Masterson 2015). Therefore, as a proxy, this

paper will draw on the Intersection of Poverty and Inequality by County, 2008-2013 dataset from Population Reference Bureau which captures both inequality and poverty rates at the county level. A county is classified as ‘high-poverty’ if the poverty rate is above 15.4% and ‘high-inequality’ counties are those with Gini indices (which measures inequality across households) greater than 0.43.

The main discussion of this paper is centered on capturing the vibrancy of an entrepreneurial ecosystem. These aforementioned indicators reflect the themes found in extant literature about characteristics of vibrant entrepreneurial ecosystems and provide a basic way to capture the characteristics of an ecosystem across time and/or space.

Considering that identifying broad themes and broad observations are the targeted outcomes for this paper, there is no major reason to believe the validity of this study’s results are inconclusive because the unit of analysis varies between McLean County, IL and the Bloomington-Normal MSA. While using a consistent unit of analysis would obviously be better, it was impossible to do so based on the availability of data that was relied upon for this study.

IV. Findings

Quantitative Findings

Many strengths, weaknesses, opportunities and threats (SWOTS) were identified and discussed during the key-informant interviews. These observations were made from Bloomington-Normal citizens involved in the entrepreneurial ecosystem. The high level of engagement in these interviews provided an invaluable contribution to establishing a framework for understanding the ecosystem’s assets and potential.

Strengths

Most of the entrepreneurial ecosystem strengths mentioned by the key-informants are actually the features of the community that they feel are attractive to not only entrepreneurs, but to the creative class demographic. Many key-informants reported that they are not originally from the community, and it was these strengths that attracted them to the area and retained them thus far. One of the attractive features discussed in the majority of interviews is the community’s high quality of life. Specifically, key-informants remarked that this area is extremely affordable and has strong economic foundations built up by the insurance and education industry sectors. Furthermore, some key informants noted that this community is of the perfect size, in the sense that it is not too big so

that it is not easy to get lost in the crowd, but it is also not too small, in the sense that residents here can still enjoy world class amenities that are typically found in much larger cities.

Collectively, the key-informants highlighted most of the plentiful resources and assets available to entrepreneurs in the community. These include the local co-working space, the entrepreneurial programs run out of some K-12 schools, the universities and their entrepreneurial-based programs, the bigger businesses in the community, the Town of Normal (for providing the co-working space), BN Angel Investor Group, the region's well-developed infrastructure, including internet capabilities and the small local businesses in the community that were credited as being incredibly helpful and encouraging to the entrepreneurial community. It was also often remarked in the interviews that Bloomington-Normal has an incredibly advantageous location, claiming that not only is it located in the center of the state, but there is also easy access to three highways that could take one anywhere in the Midwest in less than a day.

Certain intangible strengths were also acknowledged in the interviews. Many respondents reported feeling that Bloomington-Normal's community values are a strength. These key-informants perceived Bloomington-Normal as a very family-friendly and safe community, full of generous people who value hard work. They surmised that these characteristics are associated with successful entrepreneurs, in addition to strong entrepreneurial ecosystems. A small portion of key informants, who were more involved with startups in the high-technology sectors perceived Bloomington-Normal as an inclusive community and so viewed the current networking culture in the community as a strength.

Other assets that were not mentioned as frequently, but came up more than once throughout the interviews, were the Bloomington-Normal Economic Development Council, the Chamber of Commerce and Central Illinois SCORE.

Weaknesses

Key-informants are considerably concerned about the weaknesses of the entrepreneurial ecosystem in Bloomington-Normal. The most prevalent weakness identified by the key-informants was that the ecosystem is more disjointed than connected. Many key-informants expressed frustration about the lack of communication between organizations and programs, and believe it has created a lot of duplicated efforts and missed opportunities for collaboration. Furthermore, more than half of key-informants interviewed admitted that they felt they did not know about all of the community's entrepreneurial programs and activities. The entrepreneurial leaders of the entrepreneurial ecosystem

were described as a very connected, but small cohort. Some key-informants expressed concern that even though there are no signs of it yet, there is always a possibility that the current leadership will ‘burn-out’. If that were to happen, these key-informants observed that no one has indicated a desire to take their place. Furthermore, some key-informants perceived that the overall development of the entrepreneurial ecosystem in Bloomington-Normal is sluggish and are so worried that if momentum does not pick up, it is at risk of falling completely apart.

Another prevalent concern noted by many of the key-informants is that they feel there is a debilitating lack of capital and resources available to local entrepreneurs, hampering their ability to grow and expand the ecosystem in addition to their own entrepreneurial ventures. Key-informants cited that this perception is in part because banks are no longer lending money like they used to. Many key-informants acknowledged that the BN Angel network is an asset to the community. However some noted that its fragility, novelty, and lack of breadth in membership and presence in the community often makes it seem like an unobtainable or unknown participant in the ecosystem. Aside from the lack of capital available to support entrepreneurs, key-informants feel that many local entrepreneurial programs and services are not getting enough exposure in the local press. These key-informants feel that this could be inhibiting the local entrepreneurs’ ability to engage more within the community.

Furthermore, while many key-informants indicated that they feel they have strong social capital within their industry and social network, some key-informants shared that they find it difficult in this community to connect with groups outside their network and across industries.

The last weakness identified by key-informants, is that they perceive that Bloomington-Normal, as exemplified in its business and civic culture, is more risk-averse than other communities, preferring to stick to the “way it’s always been done”, which some feel creates an environment that is more inefficient and ill-equipped to support and engage with a new subculture and ecosystem, like that being developed by the local entrepreneurs.

Opportunities

The general sentiment from the key-informant interviews was that Bloomington-Normal’s economy is at a crossroad. The interviewees generally argued that the community has to start to diversify its economy and retain talent in order to secure future economic growth. These key-informants expressed the belief that developing a strong and vibrant entrepreneurial ecosystem is an obvious solution to quell the uncertainty of Bloomington-Normal’s economic future. Many of the

key-informants acknowledge that the community's recent attempts to engage with entrepreneurs and foster an entrepreneurial ecosystem has been started at the right time in the history of economic development. They perceive that there seems to be more national and community buy-in to entrepreneurial programs because in general, people are beginning to understand the impact that entrepreneurs can actually have on the economy.

Some key informants have identified BN Advantage as a great opportunity for entrepreneurs. These key-informants surmised that BN Advantage can be a way to help bring a public voice to entrepreneurial needs and accomplishments. In addition, these key-informants are hopeful that the BN Advantage economic development plan will be able to provide a platform for entrepreneurs to engage with the larger local business community and the press more than they ever could before.

The current entrepreneurs and entrepreneurial advocates in Bloomington-Normal believe that they are poised to set up the entrepreneurial ecosystem in a way that will make it easier and more attractive to the next generation of entrepreneurs. Some opportunities recommended by various key-informants include implementing stronger talent retention efforts in order to keep local talent in the community. Along these lines, many key-informants perceive educational institutions as key determinants to the ecosystem's success. While many of the key-informants who were entrepreneurs reported that they did not have a background in entrepreneurial studies, they all recognized that entrepreneurial programs can add-value to the ecosystem. Most key-informants expressed a belief that these entrepreneurial programs serve as a pipeline program -inspiring and training potential entrepreneurs, as well as getting them involved and invested in this community.

Lastly, some key-informants claimed that since there are certain programs geared toward entrepreneurial development that are now somewhat rooted into the community, Bloomington-Normal should seize the opportunity to create a type of one-stop-shop for entrepreneurs who currently need, and those who will need help to navigate the entrepreneurial ecosystem.

Threats

Key-informants identified various threats to Bloomington-Normal's entrepreneurial ecosystem. Unsurprisingly, the State budget impasse that has affected many local agencies, businesses and organizations is perceived as a threat to the future growth of the Bloomington-Normal entrepreneurial ecosystem, as explained by the key-informants. Reasons for this include concerns that the State's disinvestment in schools -who are the prime cultivators of talent, will drive both students and teachers away. Additionally, almost half of the key-informants believe that the current

State political environment is driving existing businesses away and discouraging new firm creation, further threatening our local economy and the sustainability of the ecosystem.

A portion of the key-informants also voiced concerns that the actions of the larger employers in the community are a threat to the ecosystem. One explanation offered was that the larger employers are taking all existing talent from within the community, therefore squandering entrepreneurial ambitions. Another explanation provided was that since the larger employers are seemingly downsizing, the community is becoming less and less attractive to transplants, thus reducing the propensity for entrepreneurial activity.

Bloomington-Normal's proximity to Chicago and St. Louis is also considered a threat to the livelihood of the ecosystem, according to some key-informants. The fear is that young talent will prefer the many resources offered by Bloomington-Normal's larger neighbors, and so will leave the community to pursue their ventures elsewhere. This is considered by some, as a threat, even if the entrepreneurs themselves still live in the community. Some of the key-stakeholders, who are trying to foster the entrepreneurial ecosystem in Bloomington-Normal, believe that when local entrepreneurs go up to Chicago to raise money, utilize resources, participate in their programs and network there, it weakens the system here as it can dilute the collective will-power to create a homegrown ecosystem.

The last threat identified by the key-informants is the increasing gap in income and equality in Bloomington-Normal, and the impact this can have to entrepreneurial activity in the community. Key-informants have noted that, like most of the nation, there is almost a glass ceiling dividing the population. It was observed by some key-informants that many entrepreneurs in the community are a more homogeneous group. This perceived lack of diversity and opportunity available to all types of people in the entrepreneurial community is a concern for some of the key-stakeholders, who feel that the success of the ecosystem is dependent upon creating equal opportunities and improving quality of life for the people in the entire community.

Quantitative Findings

Density

New Firm Density

This information shown in figure 4.1 provides a basic measurement of the density of startup firms relative to all firms in the community. In 2013 there were 585 new and young firms' ages 0-5 years in the community which had a total 2,947 firms (figure 4.2). Overall, new and young firms represent almost 20% of all firms in this community. When breaking down the category of new and

young firms by firm age (Figure 4.1), it can be determined that firms that are approaching maturity have a denser presence than the newer firms in the local economy.

Figure 4. 1

New Firm Density in the Bloomington-Normal MSA by Firm Age, 2013		
Firm Age	Total Firms	Density of New Firms
0	85	2.9%
1	103	3.5%
2	94	3.2%
3	91	3.1%
4	102	3.4%
5	110	4.9%
6+	2,242	75.4%

Source: U.S Census: Longitudinal Business Database, 2013

The fact that figure 4.1 shows that younger firms are less dense in Bloomington-Normal highlights the need to track this indicator over time. This is because most startups fail within their first five years and so, theory suggests that as time goes on, the number of new and young

Figure 4.2

New Firm Density in the Bloomington-Normal MSA, 2013		
Total firms, 2013	New firms (ages 0-5), 2013	New Firm Density, 2013
2,974	585	19.7%

Source: U.S Census: Longitudinal Business Database, 1977-2013

firms in each age cohort will decrease overall due to firm exits, mostly through failure. The fact that in each descending cohort, there is a smaller amount of entrepreneurs than in those older cohorts, it suggests that when the firms aged 5 years, who make up the densest cohort of the new and young firms, age out of their startup classification, the density of new and young firms will decrease significantly unless a substantial amount of new firms are reported to have been created in 2014 and beyond.

Density of Employment

Measuring the density of employment in new and young firms accounts for the number of people involved and impacted by startups in the community in a way that firm density cannot. This is an important metric because it explains entrepreneurial activity on a deeper level by accounting for job creation which, as explained in the literature review, is a major indicator of the entrepreneurial ecosystem’s vibrancy. Figure 4.3 shows that overall, new and young companies created account for approximately a quarter of all new jobs in the Bloomington-Normal community from 2009-2013. Therefore, even though Figure 4.1 shows a dip in founder activity, or new firm creation during this time, it can be inferred that generally, new and young companies are growing in Bloomington-Normal.

Figure 4.3

Density of Employment in New and Young Firms in Bloomington-Normal MSA, 2009-2013			
Firm Size	Total Jobs Created, 2009-2013	Startup Jobs Created, 2009-2013	Percent of Jobs Created from Startups, 2009-2013
All	9,058	2,320	25.6%
Self-Employed (1)	-448	-295	-65.8%
2-9 Employees	1,397	428	30.6%
10-99 Employees	3,497	2,187	62.5%
100-499 Employees	922	0	0.0%
500+ Employees	3,690	0	0.0%
Source: http://youreconomy.org/			

New Firm Density

This metric is also designed to further break-down the findings from the Figures 4.1 and 4.2 and inform the community of the density of entrepreneurial activity in terms of specific industry sectors. Just as density of startups explain how prevalent firms are by age, this metric determines the density of startups by industry sectors - which if patterns emerge indicating certain sectors with high entrepreneurial activity, could represent the potential for cluster development.

Figure 4.4

New Firm Density per Industry in McLean Co., IL 2010-2013				
Industry	Firms per Industry, 2010	Firms per Industry, 2013	Total firm Growth, 2012-2013	New Firm Density per Industry (as a percent)
Total	3,199	3,554	355	●
Agriculture, Forestry, Fishing Hunting	7	11	4	0.11%
Mining, Quarrying/Oil/Gas Extraction	●	1	1	●
Utilities	4	9	5	0.14%
Construction	394	414	20	0.56%
Manufacturing	100	103	3	0.08%
Wholesale Trade	162	172	10	0.28%
Retail Trade	468	494	26	0.73%
Transportation and Warehousing	121	131	10	0.28%
Information	29	36	7	0.20%
Finance and Insurance	192	210	18	0.51%
Real Estate and Rental and Leasing	133	139	6	0.17%
Professional, Scientific, and Technical	330	391	61	1.72%
Management of Companies and Enterprises	23	21	-2	-0.06%
Administrative and Support and Waste Management and Remediation Services	199	221	22	0.62%
Educational Services	46	51	5	0.14%
Health Care and Social Assistance	294	348	54	1.52%
Arts, Entertainment, and Recreation	50	69	19	0.53%
Accommodation and Food Services	304	349	45	1.27%
Other Services	392	436	44	1.24%
Industries not classified	6	6	0	0.00%

Source: U.S Census Bureau's 2000 and 2013 County Business Patterns

Based on the findings provided in Figure 4.4, new firms in the Professional, Scientific, and Technical Services industry sector accounted for 1.72% of all firms in this sector in McLean County from 2010-2013, and this is the sector which saw the most startup activity during this time. This sector also happens to be a targeted industry sector, determined by the BN Advantage economic development Plan (Morfessis 2015). The other targeted industry sectors in the plan are manufacturing, transportation and logistics and advanced business services. From what is able to be discerned from the data found in Figure 4.4, new firm creation in manufacturing was the lowest of all the industries, accounting for less than .1% of all firms in that sector over this time period. The transportation and logistics sector also did not see as much startup activity as most of the other industries shown.

These findings do not necessarily indicate if an industry is thriving in the local economy, but rather they are indicating the level of entrepreneurial activity within these industries. A review of the literature indicates consensus regarding the belief that driving up entrepreneurial activity in every industry is beneficial to the local economy. Yet there is some contention about whether communities should particularly focus on one or a few industries in attempts to create clusters. Ultimately, it is up to community, business and entrepreneurial leaders to determine what industries they want to see high entrepreneurial activities in. The BN Advantage strategic economic plan can use the metrics from Figure 4.4 as a benchmark to judge, over time, if the community’s entrepreneurial attraction programs and initiatives for certain industries are successful or not, which can then allow the community to recognize if it needs to pivot or change its strategy to do so.

Fluidity

Population Flux

Figure 4.5

McLean Co., IL Migration Flows, 2009-2013					
McLean County Gross Migration 2009-2013	McLean County Inflow 2009-2013	McLean County Outflow 2009-2013	McLean County Net Migration Change 2009-2013	Net Population Growth Due to Migration 2009-2013	Percent of population growth due to net migration 2009-2013
22,347	14,296	9,103	5,193	6,347	81.8%
Source: U.S. Census Bureau: County to County Migration Flows 2009-2013					

McLean County's gross migration flows from 2009-2013 totaled over 22,000 people, meaning that 13% of the total population in McLean County churned (based on 2013 population estimates, US Census Bureau ACS), either by leaving or entering the County during this time period. In the case of McLean County, more people were found to be migrating into the Bloomington-Normal community than out of. Furthermore, the fact that 81% of growth in the population during this time period was due to transplants indicates that attracting people into Bloomington-Normal is critically important for the County's population growth. As the literature argues, increasing population density increases the number of individuals who could potentially participate in the entrepreneurial ecosystem, as an influx of new people brings in new ideas and creates new potential for collaborations within the ecosystem.

Reallocation

In the year of Q2 2014 through Q1 2015, the rate of job reallocation varied considerably between industries as shown in Figure 4.6. Based on the literature, lower churn rates per quarter are not necessarily a desirable long term-outcome for local economies, especially not for local entrepreneurial ecosystems. Theory postulates that a high pace of worker churn improves the "quality of matches between workers to jobs" and also implies wage growth over the lifecycle of the worker, as workers move up to more advanced positions throughout time (Stangler and Bell-Masterson 2015, 4). Furthermore, literature supports the model in which entrepreneurial vibrancy is linked to recombining existing resources (people) into new creations (or networks created from job to job and organization to organization movement). Based on the findings presented in Figure 4.6, Bloomington-Normal should closely track the job reallocation rate, particularly in the financial activities sector, which began the selected time period with a job churn rate at 6.3% only to be at 1.5% by the end of the first quarter of 2015. The finance sector is, according to the key-informants, the economic base of McLean County, and lower job churn rates could have unwanted implications for the entrepreneurial activity that otherwise would have come out of this field, and on the economy as a whole. This sharp decrease could be a result of an unanticipated disruption in the economy, or could be the start of a pattern of decreased job churn rates in this sector, which is something that can be inferred only through continually tracking this metric over time.

Figure 4.6

Labor Market Reallocation per Industry in McLean County, Q2 2014-Q1 2015					
Industry	2014 Q2	2014 Q3	2014 Q4	2015 Q1	Average rate of reallocation, Q2 2014-Q1 2015
Agriculture, Forestry, Fishing and Hunting	16.0%	23.1%	31.0%	10.2%	20.1%
Mining, Quarrying, and Oil and Gas Extraction	0.0%	0.0%	0.0%	0.0%	0.0%
Utilities	1.8%	2.2%	3.2%	2.2%	2.4%
Construction	24.7%	28.4%	23.4%	10.2%	21.7%
Manufacturing	4.7%	3.8%	6.2%	3.7%	4.6%
Wholesale Trade	7.1%	12.8%	10.7%	6.2%	9.2%
Retail Trade	20.0%	18.3%	19.5%	14.5%	18.1%
Transportation and Warehousing	9.7%	11.9%	11.4%	9.0%	10.5%
Information	9.6%	8.1%	9.5%	8.6%	9.0%
Finance and Insurance	6.3%	2.7%	3.1%	1.5%	3.4%
Real Estate and Rental and Leasing	16.8%	18.9%	16.0%	12.3%	16.0%
Professional, Scientific, and Technical Services	7.5%	8.4%	7.0%	7.9%	7.7%
Management of Companies and Enterprises	6.4%	1.9%	2.9%	3.1%	3.6%
Administrative and Support and Waste Management and Remediation Services	31.9%	33.6%	28.2%	31.1%	31.2%
Educational Services	8.1%	10.0%	6.2%	5.7%	7.5%
Health Care and Social Assistance	9.0%	10.4%	8.9%	8.4%	9.2%
Arts, Entertainment, and Recreation	20.9%	26.9%	16.7%	16.2%	20.2%
Accommodation and Food Services	30.0%	31.1%	24.3%	21.5%	26.7%
Other Services (except Public Administration)	13.5%	13.3%	12.5%	9.2%	12.1%
Public Administration	9.2%	9.4%	11.8%	7.4%	9.5%
Source: Quarterly Workforce Indicators Indicators Used: Jobs hired (HireAS); Jobs created (FrmJbGn); Total quarterly employment (EmpS)					

Connectivity

Program Connectivity

Nine public entrepreneurial programs (meaning that University programs catered to only students were excluded), were used as a sample to analyze and measure entrepreneurial program connectivity in Bloomington-Normal. Sponsors and community partners that were cited on each program’s websites were used in this analysis. Figure 4.7 reveals the findings from this analysis.

Figure 4.7

Sample of Program Connectivity in McLean County, 2016							
Total Number of Programs	9		Total Number of Sponsors	10		Total number of programs that also sponsored other programs	3
Number of programs with 0-1 Sponsors	2		Number of sponsors who support 1-2 programs	6		Number of sponsors that are part of a university	3
Number of programs with 2-3 Sponsors	4		Number of sponsors who support 3-4 Programs	3		Number of sponsors that are professional service provider	2
Number of programs with 4-5 Sponsors	1		Number of sponsors who support 5+ Programs	1		Number of sponsors that are government entities	1
Number of programs with 5+ sponsors	2					Number of sponsors that are large community employers	1
Number of programs with at least 1 small business sponsor	4						

These findings are limited because they only account for these entrepreneurial programs’ officially recognized partners and sponsors, even though it is very likely that these programs have a much longer list of unofficial connections and supportive organizations throughout the community. Some noteworthy aspects about the program connectivity findings are that $\frac{1}{3}$ of entrepreneurial programs offered in the community also sponsor one or more different programs. This indicates that there may be a strong ‘giving back to the community’ mentality that Feld (2012) observed in successful entrepreneurial ecosystems. For the purposes of simplification, all small and local businesses that were cited as a sponsor were classified as a single entity under the label *small business sponsor*. The analysis revealed that there was a surprising amount of small, local businesses that were credited with sponsorship (usually by providing meeting space for entrepreneurs), as approximately 45% of all programs had at least one small, local business as a sponsor. This is further indicative of the ‘giving back’ mentality prevalent in entrepreneurship culture.

Of the nine programs sampled, the largest share of programs have about 2-3 community sponsors, but more than one program did have 5 or more sponsorships, indicating that there is a relatively strong community support for certain entrepreneurial programs. Increasing the sample size for future studies could prove that most entrepreneurial programs in the community have a strong and dense network of partners and sponsors.

Dealmaker Networks

This paper reluctantly identifies a minimum of 19 dealmaker networks based on the fact that in 2015, the Bloomington-Normal Economic Development Council identified and invited 19 leaders of the entrepreneurial ecosystem to come together to form the BN Advantage's entrepreneurial task force. The February 1, 2016 meeting was attended by 19 people and it was established throughout that meeting that current members were to recruit more entrepreneurial leaders to the next meeting, which is slated for late summer 2016. The individuals comprised of this group were also tasked with creating an assessment of community resources and conducting a gap analysis for the entrepreneurial ecosystem and use this assessment to seek out creative and collaborative based systems designed to address these gaps. Using the criteria identified by Feldman and Zoller (2012), this paper can confidently classify the members of this task force as entrepreneurial dealmakers. Though this metric cannot capture the number of connections made around these 19 dealmakers, it does serve as benchmark to compare to for the future.

Diversity

Economic Diversification

Figure 4.8 illustrates the diversity of industries present in Bloomington-Normal as of 2016. Financial activities, education and health services, and professional and business services collectively make up about 44% of the total industry presence in the community. The community's specializations of industries are reflected in the data used to find the location quotients for Bloomington-Normal-McLean County. Referring to location quotient data, it can be discerned that the community has a very high concentration in financial activities compared to the national average.

Other community targeted industries based on the BN Advantage plan; manufacturing, transportation and logistics, fall in industry super sectors that have less of a concentration in McLean County than the national average. This indicates that there is a need to encourage existing firms in those

industries to expand, and/or new firms to be created in those industries if McLean County is to meet the targets laid out in the plan.

Figure 4.8

Industries by Share of Employment in McLean Co., IL (2016)			
Industry	Number of Jobs	Percent of Industry by Share of Employment	Economic Diversity: Location Quotient per Industry (Private Sector) in McLean Co., IL
Total Nonfarm	93,500	100%	1.02
Mining and Construction	2,100	2%	0.41/0.57
Manufacturing	3,800	4%	0.57
Transportation, Warehousing and Utilities	3,000	3%	0.81
Retail Trade	9,700	10%	-
Information	800	1%	0.44
Financial Activities	20,300	22%	4.06
Professional and Business Services	9,400	10%	1.11
Educational and Health Services	11,100	12%	0.84
Leisure and Hospitality	11,000	12%	1.2
Other Services	3,800	4%	1.07
Government	16,200	17%	-
Source: Bureau of Labor Statistics			

Immigration

Based on the data collected by the 2010-2014 American Community Survey 5 Year Estimates and presented in Figure 4.9, the percent of foreign-born residents in McLean County compared to the native population is 6.2%. While it is important to encompass immigrants from all races in attraction efforts; there are a few races that presently stand out in McLean County. In particular, it can be argued that McLean County has recently seen the most success in attracting more Asian-born immigrants. 76% of the Asian population in McLean County is foreign born, and the Asian race accounts for 4.6% of the total population (based on 2013 population estimates, US Census Bureau ACS). These numbers indicate that McLean County immigration has momentum and efforts

should focus on maintaining this momentum to increase and attract a wider variety of immigrants moving forward.

Figure 4.9

Immigration in McLean County, IL 2014 Estimates									
	Total	White	Black or African American	American Indian and Alaska Native	Asian	Native Hawaiian and Other Pacific	Some Other Race	Two or More Races	Hispanic or Latino (any race)
Total	172K	144K	13,474	257	7,944	20	2,078	3,793	7,946
Foreign Born	10,713	2,979	440	84	6,094	20	853	243	2,299
Percent of foreign born of population	6.21%	2.06%	3.27%	32.68%	76.71%	100.00%	41.05%	6.41%	28.93%

Source: United States Census Bureau: 2010-2014 American Community Survey 5-Year Estimates

Income Mobility

By targeting four industries in addition to entrepreneurship, it is clear that the BN Advantage’s strategic economic plan seeks to diversify opportunities so that residents and individuals with varying interests can find the job or career they want and improve their individual economic condition. The proxy measurement for the income mobility metric seeks to classify the level of poverty and inequality at the county level. For the period of 2008-2012, the ‘County-Type’ designated to McLean County was high inequality-low poverty. McLean County does enjoy a higher standard of living, often boosting its community image by highlighting that its median household income (2014 dollars) is \$61,955, well over the national average of \$53,482, according to US Census Bureau American Community Survey 5-Year Estimates for 2010-2014. However this designation of high inequality-low poverty highlights that relatively high income cannot offset the relatively high inequality as it impacts income mobility. Inequality in a community results in restricted opportunities for certain individuals, decreasing propensity for career advancement and entrepreneurial pursuits, thus negatively contributing the entrepreneurial ecosystem (de Soto 2012, Dassel et al. 2013). It is not the purpose of this report to discern the variables that account for high inequality in McLean County, but if left unaddressed, theory found in the literature review suggests that entrepreneurial activity could suffer if the perception that equal access to opportunity remains low.

V. Conclusion

In conclusion, the findings from this formative evaluation of the Bloomington-Normal entrepreneurial ecosystem have implications for the Bloomington-Normal Advantage's entrepreneurial task force policy decisions, as well as practical implications for various participants of the ecosystem itself. Concerning policy, this study and growing entrepreneurial literature reflect a shifting focus in entrepreneurial pursuits that emphasize outcomes of the ecosystem instead of inventorying inputs into the system. Municipalities and localities in general are leading this new era, or 'third wave' of economic development, which recognizes the cost benefits associated with working together, being inclusive and improving the quality of life within the community, as opposed to implementing top down policies which are found to restrict the mobility, fluidity and capacity for organic entrepreneurial activity.

Vibrant entrepreneurial ecosystems are often the product of strong collaborations between all ecosystem participants, led by the entrepreneurs, and supported by a governments, education systems, investors, and other economic development minded entities and organizations. A wide breadth of literature has postulated that a vibrant entrepreneurial culture in a community creates jobs, increases economic diversity and increases competitiveness through strategic advantages. As such, communities across the nation and even across the globe are engaging in place-based economic development strategies designed to attract and grow local entrepreneurial activity. Mimicking and blindly copying other community strategies have not proven to produce as vibrant of ecosystems as implementing targeted location and evidence-based strategies. While this report offers Bloomington-Normal a template to use to track the vibrancy of its entrepreneurial ecosystem, it is ultimately up to the community to determine what the desired outcomes for the entrepreneurial ecosystem are, and these outcomes will affect the approaches used to develop and track its progression. This approach used towards entrepreneurial ecosystem development, when used with reliable research findings, can result in a vibrant and enduring entrepreneurial ecosystem that can be monitored effectively over time.

From an applied perspective, interviewees were generally supportive and optimistic of the BN Advantage's entrepreneur task force and of the entrepreneurial ecosystem as a tool to promote and expand opportunities for entrepreneurs at the local level. Overall, the key-informants recognized that Bloomington-Normal has the inputs needed for an entrepreneurial ecosystem to thrive. Assets mentioned were the universities, supportive government, attractive quality of life, location advantage

and strong economic base. Key-informants also recognized and expressed concern over the local economy's dependency on its largest industry sector, that Bloomington-Normal is a risk-averse culture and that it has a tendency of poor communication across entities. Many key-informants felt that the economy desperately needs to diversify if it is to weather the uncertain economic future and remain competitive. They believe that keeping and enhancing entrepreneurial vibrancy is an avenue in which to do that, but to do so, key-informants felt that resources and capital need to be more available for entrepreneurs. Interview subjects expressed weariness over the status of Illinois' economic and political culture, as well as concerns about the actions taken on by the community's largest employers and that the pull of neighboring megalopolises are deterring talent away from the community's local entrepreneurial ecosystem.

The quantitative findings yield inconclusive results for evaluation. The ecosystem itself is in its infant stages and these findings represent the benchmark that the Bloomington-Normal-Metro region should compare itself to throughout the years. What the quantitative findings did reveal was that over the five year period of 2009-2013, the community saw a decline in entrepreneurial activity, which is unsurprising as it is in line with what the literature reviewed has found to be a nation-wide trend. Based on the findings from multiple indicators, the community does seem to have a cluster of activity regarding one major industry sector; finance and insurance. However, job churn rates and unexceptional new firm density in this sector indicate that there may not be as much entrepreneurial activity in this field as the literature discussion on network effect and economies of scale might lead one to suspect. Furthermore, while a high industry specialization in it of itself is not a bad thing for the community's economy, the literature does warn that less diverse communities may face economic upheavals in the future, and so offer entrepreneurship across a wide variety of industries as a way to mitigate these uncertainties. The expressed dedication to implement the BN Advantage Strategic Economic Development Plan and the findings found in this report indicate that the community is taking steps to address both the decline of entrepreneurial activity and over-dependency on one industry sector. The small sample of entrepreneurial programs and dealmaking networks revealed that there is a certain strength in the connectedness of the entrepreneurial community, and as the community works to strengthen collaboration efforts, the connectivity map should prove to grow over time. Additionally, the Bloomington -Normal-McLean Co. entrepreneurial community stands to capitalize on its positive net migration flows, particularly from immigration, which has seen a jump in growth, but can do so as long as income mobility improves and opportunity is available to all.

As the leaders and participants of the entrepreneurial ecosystem allow for greater economic diversity, encourage fluidity, connectivity and make efficient entrepreneurial policy, programs, spaces and resources a priority, there is no reason to suspect that the entrepreneurial ecosystem will not flourish and be sustainable in the Bloomington-Normal community.

VI. Limitations and Opportunities

There were numerous limitations regarding both the quantitative and qualitative data collection process for this project. Key-informant interviews were chosen to help inform the perceived condition of Bloomington-Normal's entrepreneurial ecosystem, however limitations emerged with this method. A major weakness in this data collection process was with the small number of interviews conducted. There were only 12 key informant interviews completed for this project. This amounts to a small body of data to use for formulating a comprehensive SWOT analysis. In order to better consider the entire population in the Bloomington-Normal-Metro region, additional interviews would need to be conducted. A time constraint not only limited the number of interviews that could have taken place, but also limited the amount of empirical data collected for the findings. The time constraint prevented a comprehensive analysis and judgement regarding the vibrancy of the Bloomington-Normal entrepreneurship ecosystem, because the study does not cover the significant length of time needed for a proper evaluation. Another constraint in this project was the lack of available data regarding some of the indicators. Should data become available in the future, a more accurate analysis of the entrepreneurial ecosystem may occur.

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Appendix A: Key Informant Protocol

Dear _____

My name is Emily Rego and I am an Illinois State University Applied Community and Economic Development Graduate Fellow who is completing my professional practice component of this program at the Bloomington-Normal Economic Development Council.

As a fellow, I am required to complete a capstone paper in which I am to demonstrate my ability to select an important substantive question about some aspect of community development based from my professional practice experience and then apply my skills learned from the classroom and my professional practice to adequately address my question.

The broad topic that I have chosen to cover is entrepreneurialism attraction and retention efforts in McLean County. As you may be aware, BN Advantage was recently unveiled as McLean County's comprehensive plan that instructs us to leverage the region's competitive advantage in key business sectors. One sector identified in the plan is entrepreneurship.

The multifaceted approach I plan to use towards addressing my question of what the culture of entrepreneurship is today and what can be done in the future to strengthen and grow it includes collecting information from individuals from this community with knowledge about this topic.

My question to you is: *are you willing to sit down with me for a brief interview regarding your knowledge and perceptions on this topic?* All interviews will be voluntary, confidential and of minimal risk to you. Whether or not you choose to participate in this study will have no effect on your relationship with the Bloomington-Normal Economic Development Council. I have very flexible availability and am wondering, if you choose to participate, what your availability is between the following dates.

[DATES TBA]

Thank you and I look forward to hearing back from you soon.

Sincerely,

Emily Rego



Communications & Marketing Coordinator

Bloomington- Normal Economic Development Council
200 West College Avenue, Suite #402, Normal, IL 61761
Phone: (309)-452-8437 | www.bnbiz.org

Capstone Participant Interview Consent Form

As a second year master's candidate at Illinois State University, I am working on my capstone project; an assessment of the Bloomington-Normal area's entrepreneurial cultural. I am a student in the in Politics and Government Department with a track in Applied Community and Economic Development and conducting a capstone project is a requirement for my graduation.

Recently, a coalition of community organizations rolled out BN Advantage, an economic development strategy for the Bloomington-Normal, IL region. One of the various recommended action steps for the BN economic strategy is to strengthen entrepreneurialism in this region based on the belief that one of the most important building blocks for success is to ensure and enable a strong entrepreneurship ecosystem. Communities around the globe are active and focused on retaining talent and attracting entrepreneurs to their region in order to be competitive. Bloomington-Normal is one such community and this project is designed to be a type of SWOT (strength, weakness, opportunities and threats) analysis of Bloomington-Normal's current entrepreneurial climate, as well as recommended action steps to strengthen this initiative.

Part of the data collection for this project involves speaking to key stakeholders and informants who have knowledge about the entrepreneurial culture, initiatives that support entrepreneurialism, and those that may want to become entrepreneurs in the Bloomington-Normal area. The project hopes to better understand the needs and assets specific to the issue of entrepreneurial attraction, talent retention, and providing entrepreneurial support.

The interview will last between 20-40 minutes. The questions will focus on getting a better understanding of the current barriers, challenges, and initiatives related to attracting and retaining entrepreneurs as well as starting a business and operating as an entrepreneur in McLean County. To respect the privacy of entrepreneurs, local leaders, and anyone else involved, please do not identify any specific person by name or position at any time during the interview. Results from this project will be shared with the BN Advantage coalition and specifically the BN Economic Development Council who will use this information to better prepare the community as a competitive location for entrepreneurial attraction. Results may also be shared with any other interested public service agencies.

Your participation is completely voluntary and all information will remain confidential. I will not associate your name or any other identifying information with any of the final data or in any final reports. Confidentiality will be protected through the use of pseudonyms and by locking up all data documents. Participation involves minimal risks associated with a potential breach of confidentiality during an in-person interview. Other potential risks, as in every interview, include emotional distress based on the content of my questions. In addition, because of your social ties within the community, there could be a risk to your reputation by participating. The only benefits would be knowledge that you have helped to improve the entrepreneurial ecosystem for the Bloomington-Normal community. If you choose not to participate or choose to discontinue your participation at any point in time, there will be no penalty. You may skip any questions that you are not comfortable answering without any penalty.

If you have any questions or need any additional information, please contact the primary investigator for this project, Dr. Riverstone-Newell, Illinois State University, tel: (309) 438-2480, email: lrivers@ilstu.edu. You may also contact Illinois State University's Research Ethics and Compliance Office at (309) 438-2529. The role of the Research Ethics and Compliance Office is to field questions about participant research rights.

Capstone Participant Interview Consent Form Cont.

Statement of Consent:

I have read the above information and I consent to participate in the project.

Signature: _____ Date: _____

Thank you for your time and participation.

Interview Questions

1. How would you describe your involvement with the entrepreneurial ecosystem in Bloomington-Normal?
2. (If entrepreneur) Why did you decide to start your business in Bloomington-Normal?
3. (If entrepreneur) Can you describe the main barriers you faced when you were setting up your business here? Main benefits?
4. What do you think the main challenges are for entrepreneurs today? Locally and on a larger scale?
5. How do you collaborate with/or engage with entrepreneurs? How do you meet them? How often?
6. Are there any recommendations or suggestions you would like to make regarding entrepreneurial culture in Bloomington-Normal? Specifically- what are thoughts about the B-N advantage?
7. What stage would you say we're at in terms of the ecosystem? What are our main opportunities or threats to the further development thereof?

Appendix B:

Websites Used for Connectivity Metric

(Figure 4.7)

1 Million Cups McLean County

- <http://www.1millioncups.com/mcleancounty>

Meetup: Central Illinois Entrepreneurs

- <http://www.meetup.com/Central-Illinois-Entrepreneurs/>

Central Illinois SCORE

- <https://centralillinois.score.org/>

Illinois Business Intelligence

- <http://www.illinoisbusinessintelligence.org/>

Meetup: BN Open Coffee Club

- <http://www.meetup.com/BN-Open-Coffee-Club/>

Meetup: BN Bootstrappers

- <http://www.meetup.com/BN-Bootstrappers/>

Meetup: BN New Tech Meetup

- <http://www.meetup.com/BN-New-Tech-Meetup/>

BN Angel Investor Network

- <http://bnangels.com/>

Slingshot CoWork

- <http://bncowork.com/>