Kauffman Foundation Research Series on City, Metro, and Regional Entrepreneurship

The Regional Environment in Indianapolis:

INSIGHTS FROM HIGH-GROWTH COMPANIES

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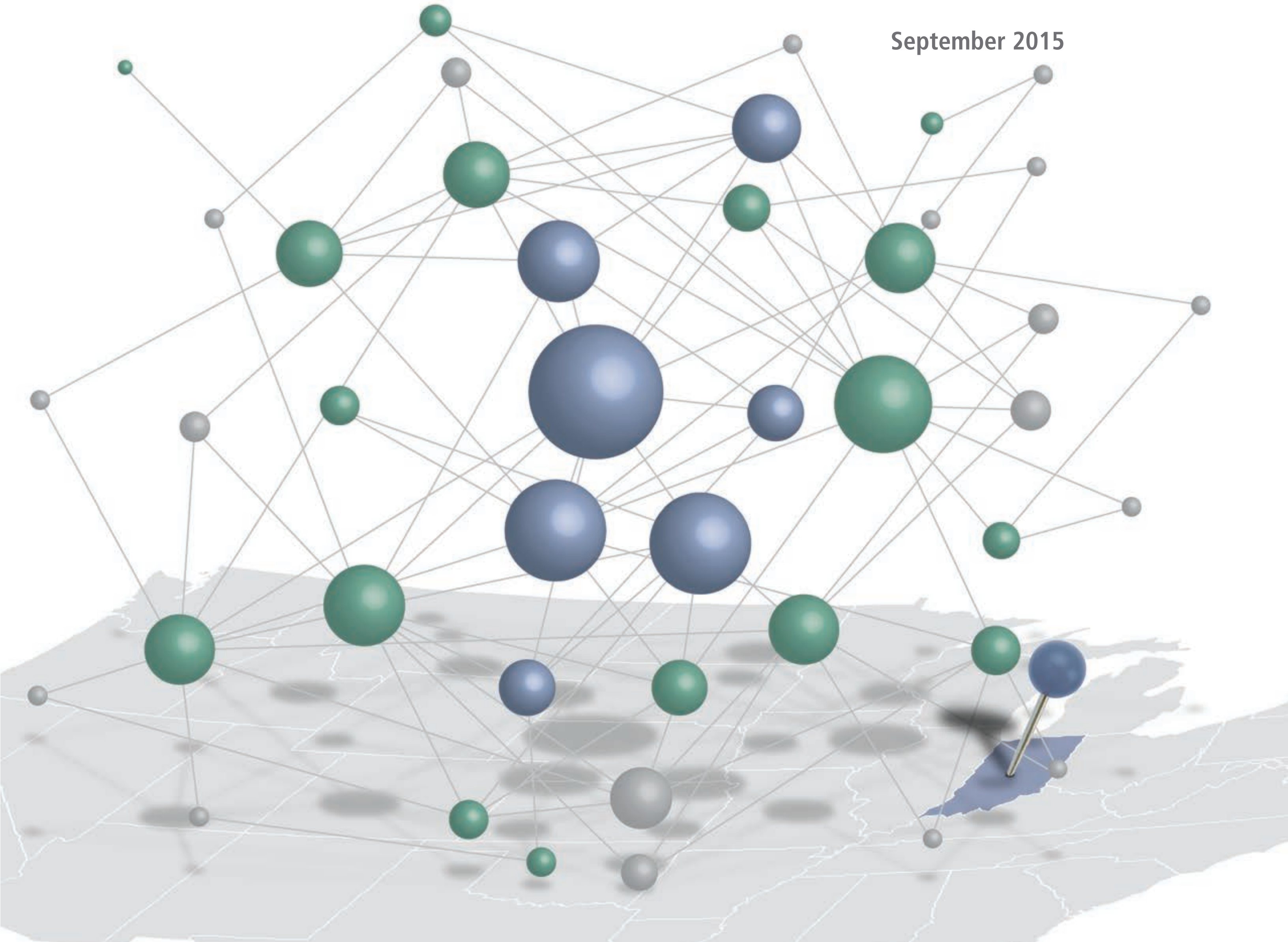

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Foreword

Indianapolis is a great city with a rich entrepreneurial history.

It was the home Eli Lilly—the first to mass produce penicillin, the polio vaccine, and insulin—chose for his fledgling pharmaceutical company in 1876. His legacy persists in the now-global Eli Lilly and Company and the philanthropic Lilly Endowment, both still based in Indianapolis.

In the early-twentieth-century, Indianapolis was the hub of innovative car manufacturers. It hosts the U.S. headquarters of British Rolls-Royce and Swiss Roche Diagnostics and, over the years, many other strong companies, including Marsh Supermarkets, Steak 'n Shake, Brightpoint, Angie's List, Salesforce, and Anthem, took root and grew from this area. However, like other cities in the Midwest, Indianapolis struggles to tell the story of our many successes.

In this report, Sameeksha Desai of Indiana University and Yasuyuki Motoyama of the Ewing Marion Kauffman Foundation uncover how the local environment affects the Indianapolis region's successful companies. Based on information collected with the founders or managers of these companies, the authors identify some key local assets and challenges affecting these high-growth firms. Moreover, this report challenges conventional wisdom about the entrepreneurial environment in a medium-sized, noncoastal city, many of which are in the Midwest, and lays out key issues and resources related to finance, talent, and locational choice in nuanced ways.

This report tells a compelling story about entrepreneurs and rapidly growing companies, their supporting mechanisms and challenges, and a Midwestern business culture. The Midwestern work ethic is real, and it matters for business. Indianapolis offers a high quality of life with a low cost of living and a family-friendly environment. In some sectors, Indianapolis has a market access advantage to Chicago, New York, Philadelphia, Washington, D.C., and cities on the coasts.

The report is timely as we emerge from the Great Recession, but still face challenges to redefine ourselves in the course of recovery. The issues laid out in this report will feed into ongoing discussions by policymakers, business associations, and entrepreneurs not only in Indianapolis, but also in cities across the United States.

Sincerely,

Michael Huber
Chief Executive Officer
Indy Chamber

EXECUTIVE SUMMARY

As with other "typical" cities in the Midwest, Indianapolis often is overlooked in academic studies, but has much to offer the research, practice, and policy communities interested in entrepreneurship and its benefits (Motoyama et al., 2013). Our study supports the idea that Indianapolis—specifically, the greater Indianapolis/Carmel metropolitan area—represents an attractive place for business in its unique way (Max, 2013).

Of special interest for regional competitiveness is a subset of companies: high-growth firms, also called gazelles, which make disproportionate economic contributions especially to job creation (Haltiwanger, Jarmin, and Miranda, 2013; Kolko and Newmark, 2007). Most research on high-growth firms focuses on their contributions to the regional and domestic economy, whereas few studies have examined the role of regional environment for high-growth firms (see Motoyama and Danley, 2012; Motoyama, 2015; Neumark and Wall, 2006).

This study focuses on the regional environment for high-growth firms in the Indianapolis/Carmel area.[1] Highlights of our findings are:

- **High-growth companies in Indianapolis were able to survive and grow largely without external angel or venture capital investments, two financial forms conventionally associated as the sources of growth.** Most of the companies were initially financed by the founder/s, with personal funds being the most common mechanism. In addition, several entrepreneurs used bootstrapping of some kind.
- **High-growth firms in Indianapolis face challenges in recruiting and retaining the right talent.** This is particularly the case for entry-level, recent college graduates and for technology-specific skilled talent.
- However, **there appears to be a "boomerang effect," which draws many former residents back to the region after they have lived elsewhere**, often for personal reasons such as raising children or being close to family.
- **High-growth firms in Indianapolis do not generally have strong direct business ties with other companies in the region**, including with vendors and customers, nor do they have significant direct competition in the region.
- **The locational choice of high-growth entrepreneurs appears to be "by chance," as opposed to a deliberate choice.** Many people interviewed were already in the region and did not move to Indianapolis specifically for the purposes of starting or growing a company, but they also touted its many advantages.
- Taking these findings together, **people start businesses where they live.** In other words, talented people in a region, such as entrepreneurs and technical experts, do not choose the place to start a business. This is in contrast to the currently dominant theories of the creative class.
- Other regional advantages identified in interviews include market size, locational advantage of proximity to other major

High-growth companies in Indianapolis were able to survive and grow largely without external angel or venture capital investment, two financial forms conventionally associated as the sources of growth.

1. Note that "Indianapolis" in this study refers to the Indianapolis/Carmel metropolitan area.

markets, and a "**Midwestern work ethic**," which seems to imply a hardworking attitude without job-hopping.

- **Findings on the overall ecosystem are mixed.** Most interviewees reported a generally positive overall environment, but not overwhelmingly so, and several interviewees indicated no effect or a negative impact of the overall ecosystem.

1. INTRODUCTION

Indianapolis was ranked sixth (population-adjusted) among the top twenty large metropolitan regions for the years 2000–2010 in a recent study on the geographic breakdown of high-growth entrepreneurship in the United States (Motoyama and Danley, 2012). A well-established pharmaceutical industry has grown in the city, likely attracted or related to the presence of Eli Lilly. In addition to its transition strengths in manufacturing and in agriculture (see Slaper and Krause, 2012), the region increasingly attracts innovative service firms in other industries, such as IT and technology-intensive services in the health sector. Indianapolis is located in a state with several large universities, including two highly ranked engineering universities in the United States, Rose-Hulman and Purdue University. Further, state-based incentives, as well as private initiatives and partnerships, have been undertaken explicitly to support entrepreneurship and to target key sectors with significant growth potential. For example, Governor Pence has listed jobs and innovation among his priorities for economic policymaking in Indiana. Finally, recently becoming a right-to-work state could mean a new set of implications and changes for companies in the state. We are interested in how entrepreneurs in high-growth firms have considered and taken advantage of this regional environment and its assets.

High-growth firms are especially important in a region like Indianapolis. For example, one IT services company in Indianapolis more than doubled its employees and almost tripled its revenues between 2009 and the end of 2012. An important question is how regional conditions in Indianapolis affect its high-growth firms. Insight into this question can provide cues for entrepreneurs, existing companies, and policymakers, as we investigate high-growth firms in the Indianapolis metropolitan area.

2. PREVIOUS STUDIES OF THE GREATER INDIANAPOLIS/ CARMEL REGION

Few studies have focused exclusively on high-growth firms in Indianapolis. Some clues can be taken from studies on other competitive and entrepreneurial dynamics. BioCrossroads, an organization dedicated to promoting the life sciences industry in Indiana, commissioned several reports of the industry in the state, which generally indicate positive changes and continued growth potential. A recent report (Batelle Technology Partnerships Practice, 2012) suggested that Indiana has much to gain as a state from university-industry-state collaborations. The same report also identified five promising strategic technology platforms that could play a role in supporting multiple life sciences areas, pointing to a critical role for the growth of the right infrastructure. An October 2014 report (Batelle Technology Partnership Practice, 2014) found that life sciences innovation capital has improved substantially since 2003 and that funds from angels and early-stage venture financing have grown from almost nothing prior to 2003. While these findings are positive indications for life sciences, they do not reflect financing for new business overall across sectors and can't be generalized in this manner, nor do they specifically concern the kind of financing that high-growth companies in this sector may be accessing.

Slaper and Krause (2012) examined job creation in the state of Indiana in order to model the potential effects of the Affordable Care Act (ACA). They credited two important sources with job creation: (1) hiring by small firms and (2) Indiana's ability to attract investment from outside the state. They distinguish between *homegrown* and *parachute firms*, noting that some firms (parachute firms) grow so quickly that it is likely they previously existed outside the state. Their study indicates that parachute firms—which "parachuted jobs into the state"—were compensating for job loss in established companies in Indiana. Their findings have significant policy implications, especially given the role of external investment into the state. However, they examined job creation and not revenue growth, which represents a different dimension of firm success. In addition, our focus here is on Indianapolis and on key sectors.

In a recent study of poverty and entrepreneurship in Indiana, Noonan (2014) suggested that state policymakers focus on making the business environment more supportive to microenterprises and entrepreneurship. The findings of the field-based study indicated that microenterprises can have direct anti-poverty effects, but they often are disproportionately hurt by significant regulatory barriers. In fact, Noonan (2014) reports that many microenterprises are pushed underground at least in part because of the regulatory environment and cost structure. This can have serious consequences for the owner because operating outside the formal sector limits legal protections and the scope of contracts, thereby also limiting growth of the enterprise; this also limits public revenues from business taxes. Although the scope of Noonan's study is poverty and entrepreneurship, the findings, particularly on regulatory matters, identify a consistent problem embedded in the business environment in the state.

Assessing the environment for high-growth firms in any environment is difficult because the business environment is a multi-dimensional phenomenon with many components that can evolve independently and together. The "whole" business environment may represent opportunities and advantages, but smaller components (e.g., tax code) could present hurdles. Thumbtack.com reports on the Small Business Friendliness Survey, which grades states along ten measures reflecting the business environment. States are "graded" along a scale where A+ is the highest possible grade. The overall picture for Indiana was moderate when it was first graded in 2012, but, despite fairly active ongoing attempts by policymakers and entrepreneurship supporters to improve the business environment, the picture actually appears to have worsened by 2014. Although Indiana ranked in the top ten nationwide for its health and safety and overall regulations, there was significant fluctuation in just a short period of three years even in these dimensions; the general picture for hiring, training, and networking programs, and employment overall was worse in 2014 than in 2012, and suggests there are some serious challenges for businesses when it comes to talent (see Table 1). Indianapolis, despite ranking sixth among the twenty top cities for high-growth firms (Motoyama and Danley, 2012), ranked thirty-fourth out of eighty-two cities in Thumbtack's overall small business friendliness measures.

Table 1. Several dimensions of the business environment in Indiana

Dimension of the business environment	2012	2013	2014
Overall friendliness	B+	B+	B-
Ease of starting a business	B+	B+	B-
Hiring costs	A	F	D
Regulations	A-	C	A-
Health and safety	A-	D	A
Employment, labor, and training	A+	C-	B
Tax code	B+	D	A-
Licensing	B+	A-	B+
Environmental	B+	D	B+
Zoning	B+	B-	B
Training and networking programs	No score	C-	D

Source: Thumbtack.com Small Business Friendliness Survey

The objective of this study is to better understand some key regional and other conditions that are important for high-growth firms in Indianapolis. We believe the findings of this study can be useful to several stakeholders, including policymakers seeking to foster the birth and expansion of such companies in the Indianapolis area and to the potential and current founders and managers of these companies. The findings also will be useful to other regions. Aside from those studies cited above, Indianapolis is not conventionally known as a hot entrepreneurial city and shares many traits of Midwestern cities. Yet, we uncover several regional characteristics that are meaningful and which local companies have leveraged. We also identify some important challenges that face local entrepreneurs and policymakers in the region.

3. METHODOLOGY

The findings in this study are derived from interviews with seventeen Inc. 500/5000 firms that achieved significant revenue growth over a three-year period.[2] We began by identifying fifty-four firms across six sectors that appeared on *Inc.* Magazine's 500/5000 list between 2007 and 2012: business products and services; health; IT services; software; telecommunications; consumer products and services.[3] Of these firms, thirteen could not be tracked or were no longer in existence. We tried to contact all of the remaining forty-one companies, of which we interviewed seventeen between February and October 2014; the rest did not respond, declined, closed, or could not be reached. We conducted semi-structured interviews with follow-up questions and secondary questions where relevant. The interviewees were either the original founders of the company or senior managers with intimate knowledge about the company's daily operations and strategies. The following core questions[4] guided the interviews:

1) How did you start your company? [Please elaborate on the nature and path of financing.]
2) What factors do you think have led to your company's growth?
3) Please describe your relationships with other companies in the greater Indianapolis/Carmel area.
4) Please describe your relationships with other companies outside the region.
5) How would you describe the Indianapolis business environment?
6) How do you expect the next five years to look for your company?

Interviews lasted between ten and sixty minutes, and were audio-recorded and transcribed. Company and interviewee names and identifying information have been removed, as some information can be sensitive or firm-specific. Interview content is anonymized and interviewees of companies are referred to by firm number (see also Motoyama et al., 2013). Details about the companies are presented in Appendix A.

4. FINDINGS

4.1. Access to capital

Financing sources for the companies at the time of founding, as well as after founding, are summarized in Table 2. Overall, the picture of financing that emerges from the interviews indicates that most high-growth companies are initially founder-financed, but that the nature and source of financing changes significantly after founding and during growth. It is noteworthy that venture capital and angel investing, two sources of

2. The 500/5000 list of high-growth companies is compiled annually by *Inc.* Magazine and reports high-growth companies in the United States. From 1982–2007, the list comprised the 500 fastest-growing firms; in 2007, the list was expanded to 5,000 firms. *High-growth* firms on the list are (a) for-profit, privately held, and U.S.-based and (b) have generated at least $2 million in net sales in the last year of the three-year period (see also Motoyama et al., 2013).

3. We selected these sectors based on Motoyama and Danley's (2012) indication that these are major sectors among high-growth companies at the national scale, which would be ideal to investigate the interactions between firms in the intra-industry sector at the local scale.

4. Some of these questions are derived from Motoyama et al. (2013).

Table 2: Financing for Indianapolis high-growth companies: at founding and after founding

	Founder-financed	Family and friends	Bank	Venture capital	Angel investor	Sales or profits	SBA loan	Don't know	Other
At founding	11	1			1	1		3	
After founding		1	6	1	0	6	1	1	2

external capital that are conventionally associated with rapid firm growth, are not common in the study.

Of the seventeen firms included in the study, the bulk of firms were financed by the founders, one firm was financed by angel investors, and initial financing information was unknown or unavailable for three of the seventeen firms. Of the founder-financed firms, one firm used a combination of founder funds and a major customer contract. Another ten founder-financed firms were fully or primarily reliant on founder money. One founder used proceeds from the sale of another business to finance the new firm. Similar to Motoyama et al.'s (2013) study of Kansas City, we find that bootstrapping is used in some kind of de facto way. At least six firms report using profits, revenues, and sales from the company to support business operations, expansion, capital purchases, and investment activities, and at least four firms used personal, salary, and other founder funds:

> "Every cent I had in the world went into buying what I needed to buy…. I was not going to hold something back and say, 'Well this is my rainy day fund, I'm not going to spend it.' There was no rainy day. There was absolutely no rainy day. I was going to be all in or out, and if you're not all in, you might as well be all out." (FIRM 15)

> "I grew very rapidly because my one client was 85 percent and the business grew very rapidly. I grew with them. I thought that's the way business was supposed to be." (FIRM 15)

> "…I was making enough cash money myself, by being employed, that I kind of financed the initial." (FIRM 4)

The financing picture is very different after the birth of these companies. One founder raised almost $200,000 in equity funds from friends, after first making an initial $50,000 investment using personal funds. Six firms reported establishing lending relationships with banks in order to maintain lines of credit, but all six firms did so after founding.

Venture capital financing is not common among firms in the study—in fact, only one firm reported using venture capital financing, and this occurred (fairly early on) after founding. One interviewee noted that credit or debt is used to fund equipment purchases, but earnings fund everything else. Another interviewee reported annuity-style financing, where revenues from one year can be deferred in order to accommodate a change in strategy. Only one firm reported taking advantage of any kind of government program and received a Small Business Administration (SBA) loan. It is noteworthy that none of the companies reported taking advantage of state or state-supported financing programs. No information on financing after founding was available for one firm of the seventeen in the study, and unspecified investors and unspecified short-term lending were reported for two other companies.

The difference in financing of these companies at the time of founding (birth) and after founding (growth) is striking. The overall trend indicates that founders will find ways to start companies even if formal financing is not available.

It is also worth noting that many interviewees reported that access to finance in the Indianapolis region is difficult. One interviewee reported applying for a bank loan of several hundred thousand dollars shortly after starting the company and being approved for close to only 10 percent of the loan request. After later developing a strong relationship with a local bank, the company was able to establish a substantial line of credit. He/she noted, ironically, that after achieving some success "…every single bank in the city wanted to give us money … which we no longer need or want." (FIRM 4)

One interviewee described "moderate financing abilities" in the regional market, noting good startup opportunities but more challenges for mid-level companies seeking middle-tier financing (FIRM 8). Two interviewees did not identify difficulties in financing. One interviewee acknowledged this could be the case because of his/her connections, and that otherwise access to finance in the region is difficult. The other said:

> "…it's easier to be given attention here, this is my theory, because we're a fairly small company still, but if we were in New York, Chicago, or even San Francisco, you get lost in the hectic big-company kind of environment. Here we're at least someone of importance, so we get attention and that's healthy." (FIRM 3)

4.2. Talent

All the interviewees noted that the right talent is critical for business success. One interviewee credited company growth with a team of "competent" people that have the ability to get things done (FIRM 14). Interviewees did, however, provide a mixed picture of the value and contributions of local university talent to their companies. For example, one interviewee indicated that students do not enter the market adequately prepared, despite the presence of universities and colleges in the state: "Well, the market is right here, the students are here, the professors are here, and then a year from now, everybody needs to be over here… the institutions themselves are not teaching the subjects that the market needs." (FIRM 17)

Most interviewees noted that, despite the presence of several strong universities in Indiana, finding and retaining the right talent is challenging. Two themes emerge from the findings. First, recruiting the right talent in general is difficult. This seems to be the case particularly for IT and tech-focused firms. Two interviewees in technology-intensive companies noted:

> "The talent situation right now is bad. Really bad. We are struggling. We cannot get people at all. So, I mean, for probably the last five years, when it's specialized skill sets, I've actually moved them in. So I've had to get them out of other states … which you're never getting anyone to leave California for Indianapolis, but you can definitely … out of Ohio … In Indianapolis, … I think the unemployment rate … is extremely low and getting that talent and keeping it here seems to be a huge challenge that we're having … I can put out a job posting all day long and not one person will respond to it." (FIRM 4)

> "… it's clear to me that the higher education institutions are producing high-quality graduates in the state of Indiana. The challenge that we've run into specifically is technical talent—engineers. We have a great deal of difficult[y] competing against other regions of the United States; so, outside the Midwest primarily, most commonly the San Jose area [or] the Boston sort of Northeast corridor and offering a compelling sales pitch to have somebody right out of school relocate … If we pay significantly above from a cost-of-living perspective at the coast, we still struggle to attract." (FIRM 13)

The previous interviewee explained that, although engineers are being trained in Indiana, they often leave the state after graduation and further, it is still hard to get good talent despite trying to offer higher salaries than what is being offered in other places.

Companies that require a large volume of talent logically may face more difficulty. One interviewee said he/she did not have trouble recruiting talent but noted this could be because the company does not hire large numbers at one time:

> "… generally speaking, it's pretty good and, honestly, it's mostly because we don't need tons and tons of people … now, if we had to go out and hire twenty or thirty people, that might be a little bit harder to get the kind of talent we would want, but we've just never been in that situation. I mean, when we're hiring, we're usually just doing one person here and a person there." (FIRM 2)

Second, there appears to be a distinction between entry-level talent and more experienced talent. One interviewee noted that "college students are fine with moving somewhere after they graduate that's not home, but probably 85 percent of them want to return home at some point" (FIRM 16). For this reason, he/she prefers to recruit from local universities, but noted that the local supply of talent likely would not satisfy company needs in the future:

> "…I like to recruit at IU and Purdue because the students that graduate from there typically are from Indiana and they are all willing to move to Indianapolis and stay here … I actually recruit at both. I can see a point when I'm going to need to go probably to a third place because I can't (find) enough from those two schools." (FIRM 16)

One interviewee identified a subset of experienced talent that is more likely to be recruited and to stay in the region:

> "I think the challenge that everybody has for attracting talent is that unless you have experience … you attended one of the universities in Indiana or you worked for Lilly or Roche or some big company, you're not going to move here … people are very regional in what they're grounded in … especially for a smaller entrepreneurial company, people aren't going to uproot their whole life to come to some place … the disadvantages are there's not this natural attraction to being a place that people are excited to move unless they have experience. The good news is, there's a lot of people with experience at a university or one of the major companies who are then at this life phase where they are living in a big city and they have kids and that's a pain.… And all of a sudden Indiana sounds like a good … option." (FIRM 12)

Another interviewee said the Indianapolis location can attract experienced consultants: "I mean there are so many people here that have said, 'I'm just done traveling. I want to see my kids grow up. I don't want to be leaving Monday morning and coming back Friday and never see my family.'" (FIRM 10)

The competition for talent affects the manner and the mechanisms used by high-growth firms for recruiting. Some companies focus on creating attractive compensation and benefits packages for talent, but it can be "very difficult on a company our size to offer competitive benefit packages. We think we do, but that doesn't mean that it's not expensive" (FIRM 7). One interviewee stated that the labor market is "one of our biggest challenges, if not the biggest challenge for us right now," noting that employee "success or failure really becomes our success or failure, so we obviously have a very motivated interest to make sure those folks are on time, looking sharp, professional, they can communicate, and they'll show up tomorrow" (FIRM 7). He/she identified a corporate promote-from-within mentality designed to attract talent:

> "…if you'll show up every day, work hard, make our customer happy, show an interest and an aptitude in our business, odds are you're gonna have an opportunity to get promoted …We have a strong promote-from-

within mentality and so that opportunity is there." (FIRM 7)

Some interviewees noted having to tailor special recruiting strategies. These strategies consistently seem to focus on entry-level employees and college graduates. One interviewee commended the role of special university-industry programs in helping with recruitment. One well-established program is the Orr Fellowship,[5] which places promising college graduates in the state in two-year positions at local companies, and is supported by business and community leaders. This "great alignment" is an example of the type of recruiting mechanism that is "really key for planting the seed that staying in Indy is an option and that you don't just come here for the schools and then leave…" (FIRM 11)

Another interviewee noted "what we're seeing is to attract the right talent, you have to go above and beyond in terms of what you're giving back to the employee…. They don't just want that salary" (FIRM 10). The same interviewee went on to describe a special program to attract new graduate hires from area universities, with an eye toward integrating them into the company full-time later. This strategy, which reflects "investment back into the younger generation that we've had before" means new graduate hires receive formal training, a mentor, and structured professional development and networking opportunities. Although "the younger people tend not to stay as long" and sometimes "they get their training, they are awesome, and we put that investment in and then, like, for $10,000 more they will go," the company has been able to retain good talent (FIRM 10). In addition, the company supports cultural and social activities, offers a kitchen stocked with food, and regularly provides lunches for employees.

One interviewee said talent was a strategic concern in the past, if "ultimately we may not achieve our goals because we can't find experienced talent." To address this, the company pursued both experienced talent and began to invest heavily in an internship program designed to train and retain entry-level graduates. The internship program involved creating an internal infrastructure using senior and mid-career employees to work closely with the interns and train them effectively. The interviewee credited this college hiring program as a big secret to corporate success (FIRM 5).

Another interviewee noted that limited employee turnover could be related to a recruitment strategy that actively tailored hiring policies and programs specifically toward entry-level talent, including professional development opportunities. In this interviewee's company, the strategy described included actively going after college students, either fresh graduates or interns, and then offering professional development opportunities for them. Though the cost of direct training and professional development support can be significant, the interviewee noted having success in recruiting and retaining good people.

4.3. Market size and geography of the market

4.3.1 Locating in Indianapolis

We found that, while many interviewees reported being satisfied with Indianapolis as a place for business, none of them actually moved to the region specifically with the intention of starting a company. One interviewee reported starting the company because of a major life change. Another interviewee reported being interested in finding a business to start or buy, after getting some business experience in a major city, noting the business selection decision was opportunistic. At least two interviewees were working as employees in other companies and were unsatisfied or were laid off, driving them to start companies. One interviewee stated that he/she realized that he/

5. For more, see www.orrfellowship.org.

she could do a better job serving customers than the former employer.

Our findings also indicate that high-growth firms in Indianapolis tend to be founded and staffed by people already living in the area. People do not seem to move to Indianapolis with the intention of starting a company. This is interesting in light of recent work by Slaper and Krause (2012), which found that the state's ability to attract investment from outside the state was one of two trends[6] critical to job creation. However, the interviewees in our study reported having already been in Indianapolis. Interviewees noted that they originally chose to move to (or return to) Indianapolis (if not already living in the region) because of its overall attractiveness as a place to live. Several interviewees praised the city's quality of life, cost of living, and family-friendly atmosphere:

> "I'll tell you why I moved here. Cost of living is less here in the Midwest. It's a good environment to raise a family in. Right? It's got the *Forbes* listing as number one for Hamilton County, which is the Carmel area … So that's a big reason, four mild seasons, I love it … You got everything you need, but it's not too big and it's not too crowded. You got the professional sports teams and all that. A nice downtown. A very nice downtown." (FIRM 9)

> "You know location for me wasn't so much of a business as opportunity. I moved to Indianapolis for my job and then when I graduated college and I saw no reason to move because at that time I was just working on my own and I love being close to Bloomington …the proximity of these two schools … I think I would be hard pressed to find another city that is within an hour drive of two Big Ten schools, both of them with well-thought-of ------------- programs." (FIRM 16)

The geographic location of Indianapolis is noted as an advantage, such as for logistics or access to proximal markets. One interviewee stated that close to 80 percent of the North American population can be reached within eight hours by truck, creating a significant advantage in terms of logistics. Another interviewee noted that Indianapolis presents good, centralized opportunities for transportation. Not surprisingly, this did not come across as important in the interviews with representations from companies not engaged in shipping. Another interviewee said the "central location of the city, the airport, the access to transportation is all a factor for us" because it enables access to east and west (FIRM 3).

An interesting trend emerged that could have positive implications for both the volume of new firms and the level of talent in the region overall. Several interviewees described a "boomerang" type effect about their own experiences, noting that they returned to Indiana for personal reasons (e.g., to raise children or be near family) after spending time away. The advantages of this kind of effect could be a type of cross-pollination of professional experience, giving these returnees a wide range of skills, as well as exposure to other geographical or industry markets. This gives them access to other markets and networks when they start their own firms in Indiana.

Given the identification of this boomerang effect in the interviews, we take a deeper look at the demographic picture in the region using data from the American Community Survey (ACS) for 2007–2011 (detailed methodological notes and analysis are provided in Appendix B). The overall outflow of people (62,880) is significantly larger than overall inflow (41,159) in the region. However, a closer look reveals some interesting trends with implications about the composition of the labor force:

- People with less education (less than high school to some college) are more likely to move out than people with higher education (such as bachelor's, master's, and doctoral degrees).

6. The other, as discussed earlier in this report, was small business.

A consistent finding from the interviews is that high-growth companies in Indianapolis tend to be connected to larger (national) markets, and relationships with other companies are not concentrated in the immediate region.

- People with spouses tend to stay in the area, more than single, never-married, divorced, or separated people.
- The greater Indianapolis region is both gaining and losing when it comes to high-skill occupations. There are more inflows than outflows of physicians, computer software developers, health technologists, chief executives, operating engineers of construction equipment, and mechanical and civil engineers. However, there are more outflows of accountants and computer system analysts.
- The region loses people to Phoenix and other Indiana areas with colleges, such as Bloomington, Lafayette, and Muncie, but gains people from places like Chicago, Los Angeles, Washington, D.C., and Houston.

These demographic trends echo the boomerang effect we identified through the interviews. Indianapolis appears to have an edge in attracting certain types of talent.

4.3.2. Relationships with vendors, customers, and competitors

A consistent finding from the interviews is that high-growth companies in Indianapolis tend to be connected to larger (national) markets, and relationships with other companies are not concentrated in the immediate region. Interviewees reported working with vendors across the United States or in other countries, such as India. Only one interviewee said local partnerships and use of local vendors was deliberate, part of a desire to "invest in the city" (FIRM 5). Another interviewee noted that local vendors provide some components for product, and some convenient local business services (accounting and legal services) come from other companies. However, most interviewees indicated that local partnerships with other vendors or companies in the supply chain are not deliberate and may be mostly based on convenience:

> "So, we try to partner locally where we can and, if not, we'll just partner with anybody that's got the technology and the services that we need." (FIRM 17)

> "We do so much of our work in-house, that we don't really outsource a whole lot. And, really, when we do outsource, it's outside of central Indiana. So there really isn't any large vendor relationship within central Indiana…" (FIRM 1)

Interestingly, one interviewee indicated that partnering in the Indianapolis area, especially with small firms, is not particularly helpful for the company. Although the interviewee noted "…we do kind of help each other out … where you share knowledge" among local businesses, he/she pointed out that "these are two weak links; it doesn't amount to a lot," and explained:

> "This is the truth, it sounds bad, but at the end of the day, I've never met a small business that can help another small business. You got two beggars trying to help each other. So that always ends up becoming an adversarial relationship ultimately. Right? Because the market is only this big, so you are competing. So for the most part, we haven't overly jumped in, in that way of probably partnership

> with other Indianapolis-based companies. We only really partner with the large firms…" (FIRM 4)

An interesting finding from the interviews is that customer profile also is *not* necessarily regional—in fact, most interviewees reported not having a strong local customer base in the Indianapolis/Carmel region; although, some interviewees reported greater customer presence in the state of Indiana. For example, one interviewee noted that his/her company does 98 percent of work remotely, while one interviewee estimated that less than 5 percent of customers were located in Indianapolis. Another interviewee noted less than 2 percent of customers were located in the state of Indiana. This could be because companies operating on a business-to-business model, which describes many companies included in this study, rather than a business-to-customer model, do not need to rely on local markets. In addition, the nature of technology-intensive businesses is such that much of the work can be done remotely. One interviewee reported that although the majority of business was local (in Indiana), a "crossover event" in the near future is likely, where new national business would exceed new local business (FIRM 5). One company conducts close to 95 percent of its business throughout the state of Indiana, and another company sees about 30 percent of business originating in the region, with the rest largely on the east and west coasts. One interviewee noted that about a quarter to a third of business is in Indiana. Overall, however, most interviewees reported having clusters of customers in larger markets, including larger cities such as New York City, Washington, D.C., and other "tier two" cities. Similarly, interviewees reported having few direct competitors in Indianapolis:

> "As the company's evolved, we've become a more specific niche, so we don't really have specific competitors in this marketplace. I mean, there's a lot of intersecting circles and some overlap of services, especially professional services related to pharma and biotech, various support services, but in our -------- niche, most of our competitors now are national…" (FIRM 12)

4.4. Overall ecosystem

Despite most companies not actually serving or primarily drawing upon the Indianapolis market, as noted in the previous section, most interviewees still highlighted the advantages of locating in a city with strong established companies, particularly in the pharmaceutical sector. One interviewee commented about the tradeoffs in the region, noting, in particular, the contribution of large grounding companies in a key sector (e.g., Lilly) and of state partnerships or university-industry partnerships to the ecosystem:

> "…Indianapolis is a second-tier market. We always say, 'the best thing about Indianapolis is it's not Chicago and the worst thing about Indianapolis is it's not Chicago.' So, I think with … the BioCrossroads, strong infrastructure and focus and concentration around life sciences certainly helps.…" (FIRM 12).

Another interviewee praised the overall environment in multiple dimensions, stating that:

> "Yeah, I think it's fabulous. If I were to recreate this … I would 100 percent recreate it in the Midwest. Given, and where we are in Indianapolis, given the climate of acceptance, given the support from the governmental entities, and given the talent pipelines, all kind of under the umbrella of fantastic cost of living. To me, there's no better place to launch." (FIRM 8)

Findings on the role of government and policy support for companies were mixed but more positive overall. Several interviewees explicitly stated the policy environment was positive and played some role in their ability to grow. One interviewee credited the city and the state with tremendous support, from a financial perspective. Another interviewee said: "when we've had to interact with the city… with the state… whether it be on taxation issues…or whether it be on permitting or whether it be for services, I have no complaints." (FIRM 13) Another interviewee said, "Indiana is a business-friendly state," and that his/her company has taken advantage of support in the form of tax credits for employee training (FIRM 9). Another interviewee said that local government stays out of the way of businesses. Another interviewee points out that although "tax rates are onerous," the legal climate is "reasonably business friendly," and that Indiana has been among the most stable places he/she has done business, which "means a lot in business" (FIRM 3).

In contrast, one interviewee had strong words of caution about the environment in Indiana, despite growing a company successfully:

> "I mean, it's completely and utterly useless at every level for being an entrepreneur … it's useless in the level of the government support … it's useless on the level of kind of the cultural attitudes towards entrepreneurialism… it's useless on a level of talent that is, in terms of the young people starting out… I mean, Indiana just is not a good place to start a business …There's no money to be had. There's no support to be had. If someone were to come to me and say, I want to be an entrepreneur in Indiana, I would tell them to run as fast as their little legs would carry them. That's kind of a weird attitude, given that I've been successful. But I've been successful by happenstance." (FIRM 14)

The interviewee described the government as not "affirmatively pernicious" and cited ineffective policymakers and an embedded business community that is dominated by the same groups and the same people as a problem. The interviewee went on to clarify that taxes did not present a prohibitive burden for entrepreneurs in Indiana and that the government is basically unintrusive. It is worth noting that Indiana scores better on taxes in the Thumbtack assessment than on many other measures, going from a score of B+ in 2012 to A- by 2014.[7]

Another finding that came from the interviews is that Indianapolis is heavily networked.[8] One interviewee reported that "Hoosier Hospitality" is a base supporting a collaborative environment, and that companies can collaborate and learn from each other (FIRM 11). Another interviewee said "the technology community in Indy and surrounding areas is large in that there's a lot of us, but it's small in that we all know each other, and we regularly meet up" (FIRM 17). Several interviewees noted that Indianapolis is a networked environment, and that having the right connections and knowing people is important for business success. For example, one interviewee linked company growth with relationships stemming from a local university and previous family business ownership:

> "…the relationship that our founders had within ----- University and I, myself, had an undergraduate degree and graduate degree from ----- University, that helped. All really ---- being from central Indiana and having had several generations of varying businesses owned by their family … they had all the contacts necessary to grow a business rapidly, specifically within central Indiana." (FIRM 1)

> "There is definitely a who's who. There's definitely a little bit of the clubs and cliques.… It seems very networked to me in the Indianapolis business market." (FIRM 4)

The same interviewee connected the "smallness" of the Indianapolis business community to the importance of getting the right talent, which may create advantages with clients:

> "So within Indianapolis, one of the things that's kind of funny, is it's a very small world.

7. There has been significant variance in the score for Indiana's tax code. Although it improved significantly from B+ in 2012 to A- in 2014, it first worsened to a grade of D in 2013. Possible explanations could be that changes to tax code may initially be confusing, could induce uncertainty, or could need lag time before they can be interpreted.

8. Interestingly, the role of mentors did not come up in the interviews, in contrast to its importance in similar studies of other cities (Motoyama et al., 2013).

There is a delicate balancing between the advantages many interviewees point out as a traditional type of "Midwest" work ethic and an overall social environment which may not be as open as other parts of the country.

> We all know each other. If you work at ----, you get a reputation out there. So your goal is to attract the absolute [best] people. When you have the best people, your odds of closing the work are higher because odds are your client knows about this person. It's a very small community in a big city.… So I think we've done that really, really well in getting our name out there in that regard, of we truly do try to hire the best people. We try to pay the top salaries." (FIRM 4)

Our findings also indicate there is a delicate balancing between the advantages many interviewees point out as a traditional type of "Midwest" work ethic and an overall social environment which may not be as open as other parts of the country. On one hand, a consistent theme across the interviews is an appreciation for what broadly can be described as the "Midwestern work ethic." This was addressed directly or indirectly by several interviewees, who generally described a willingness to work hard, maintain values, and grow with a company. One interviewee noted a strong Midwestern work ethic, reflecting talent that is good, hardworking, and with a good mindset. Another described hearing from clients in California about frequent job changes, and went on to describe that this does not happen in the region:

> "Not in Indiana. You get a job, you stay for … you know, a long time. You just don't hop from job to job. It's not safe and everything. So, there is a difference in environment out in California … It's a great environment for new, creative ideas and everything. We'll never be Silicon Valley, but Silicon Valley will never be Indiana in actually doing production and sustainable type of work with solid employees." (FIRM 15)

Another interviewee described:

> "…sort of core things that we talk about from time to time, like just the general climate, the culture, the values, the work ethic, the kind of employees you tend to attract, the ethics, the honesty, straightforwardness, all of those kinds of adjectives pretty much apply here and we don't always find that in other parts of the country or other parts of the world … I've heard it called the Midwest mindset or culture. It's hard to describe because it's a concept, it's a soft thing, but it is real and we encounter it and ramifications of it every day." (FIRM 3)

On the other hand, several interviewees pointed out that the overall social environment in the region may not be the most attractive from a talent perspective. One interviewee noted that a hurdle in recruiting is "a little bit of stigma …that Indiana, Indianapolis, is behind," and this means the company has to convince people outside the area that it is livable: "…you do have to sell Indianapolis or Indiana—the advantages of being here. You know, the cost of living, you know, compared to California. There's [sic] really great places to raise families" (FIRM 9). Another interviewee noted that, while there are cost advantages, especially for college graduates in Indianapolis, this trades off with other disadvantages like reputation outside the region:

> "I would say the first factor being the cost of living is so reasonable in Indianapolis that it's another incentive for people who choose the city or for graduates to stay in the city because, while they're paying down maybe college loans or different kinds of debt, they're gonna be able to sock a little bit of …

> a few resources to play in the city and it's a fun city to play in … It's a pretty conservative state, trending to be more liberal, but that can be a turn off for especially college graduates, who move to a city who is not as progressively minded as other cities like Boston or San Francisco, for example." (FIRM 11)

One interviewee pointed out that Indiana is a great state "wanting to be a progressive environment from a tax perspective and the law of business and the business of business," but also that "we're so far removed from what the world looks like that I worry about our competitiveness kind of keeping up." (FIRM 5). He/she pointed out that young people are interested in things like mass transit, walkability, and restaurants. He/she further elaborated the struggle relates more to the overall cultural environment versus "telling a twenty-one-year-old that their 401K is really important:"

> "…just the competitiveness of cities like Indianapolis being able to articulate that they have what millennials want from a desirable living perspective. So you know, I'd say our big, I really, really mean this kind of outside of politics, but there's a big threat to our tech communities. I think it's just our legislature and the kinds of things we prioritize. So, we were very, very vocal about the gay marriage amendment and the negative impact it would have on companies like ---------. I mean, I've sat in interviews where they've told me, look, you know, I'm gay and there's absolutely no way I'm staying in this state. I meant, literally, what do you say to a kid when you're trying to recruit the world's best talent for something, and I can't tell them no, you shouldn't, you should absolutely stay. Right? I think if we put politics aside those are some big issues." (FIRM 5)

4.5. Future growth plans

Our findings indicate that high-growth firms in Indianapolis plan and expect to continue to grow (see Table A2 in Appendix A for a summary). The manner in which growth is being targeted varies—some interviewees named specific percentage targets, new business lines or domestic or international expansion, while others did not identify or did not feel comfortable identifying growth targets.

> "I am targeting very aggressive growth … This next year I am targeting probably 25 percent if not more … I feel pretty confident that we can manage 25 percent growth, and I expect that to continue for several years." (FIRM 16)

> "I never do projections … my ---- right next door, he does all this stuff for investors and everything … You've got to believe in yourself … as soon as you write them down, they're outdated … You know, I plan to grow…" (FIRM 15)

> "We want to be the leading authority in ---- by empowering the most talented team imaginable. So, under that, then, we set very specific five-year goals in terms of…. 30 percent annual growth…" (FIRM 12)

Overall, high-growth companies in Indianapolis are overwhelmingly positive about growth, particularly growth into new product areas and growth outside the region.

5. IMPLICATIONS AND DISCUSSION

We identify implications that come from our key findings in this section, which can be useful for entrepreneurs, entrepreneurship supporters, and policymakers. Here, we compare against recent findings from Kansas City (Motoyama et al., 2013), which suggested overall that less-known Midwestern cities have regional assets, and successful companies can take advantage of them. Then, we summarize implications as bullet points where appropriate.

High-growth companies did not receive institutional or external sources of capital at founding, but this did not stop them from being founded and from achieving impressive growth.

Capital

Our key finding about access to capital is that high-growth companies did not receive institutional or external sources of capital at founding, *but this did not stop them* from being founded and from achieving impressive growth. In fact, many of them did not even seek investor funds, large loans from banks, or corporate backers in the early stages of the company. At later stages, more external sources of funding were used, mostly banks or a mix of sources, and many companies also use business revenues to finance new activities. This is an interesting finding and suggests that, in line with what appears to be an unfolding trend, having "skin in the game" could be just as or more important than having significant financial support at the onset. This could be especially true for sectors that are less capital intensive. This finding is the same as what was found in Kansas City, another city conventionally not associated with the destination of venture capital or angel investment.

- Entrepreneurs should not be discouraged by what appear to be shortcomings in the financing environment for at least some sectors in Indianapolis.[9] In fact, they should be encouraged that high-growth companies have come about from early conditions of personal founder financing or bootstrapping.
- Policymakers and entrepreneurship supporters can work to improve the financing environment (as is already happening in some industries, such as life sciences) for new companies. The findings from our report show that initial financing amounts are fairly low, so this kind of policy attention could be low-cost and high-impact in terms of the number of potential companies that could be reached.

Talent

Our findings reflect that access to talent is a problem across high-growth companies in all sectors. At the overall regional level, the unemployment rate in the Indianapolis metropolitan area has been much lower than the Chicago area since the Great Recession. Economic recovery has provided more jobs, so there is greater competition among employers for talent, putting more pressure on high-growth companies to be creative and proactive in identifying, recruiting, and retaining their employees (see Appendix C for employment trends in Indiana). We find that high-growth companies have less difficulty attracting established/experienced talent and more difficulty with entry-level university graduates, despite the location of several strong universities in the state.

This is a contrast to the case of Kansas City where entrepreneurs mentioned recruiting a well-educated workforce from regional colleges (such as University of Missouri, University of Kansas, and Kansas State

9. It is possible that the findings on low angel investment and venture financing participation in new firms do not reflect the current financing environment for some very specific industries, namely those in the life sciences. The companies included in this study were those that appeared on *Inc.* Magazine's 500/5000 list between 2007–2012, many of which were established several years prior to the study period. A new study prepared by the Batelle Technology Partnership Practice (2014) for BioCrossroads found that between 2003–2013, gains in life sciences innovation funding in Indiana exceeded national gains. Specifically, angel investor funding reached $18.8 million and early-stage funding reached $59 million. The report also found that startups in Indiana raised more than $100 million by the year 2014. Analysis using Crunchbase similarly demonstrates that more than $112 million annually has been invested consistently in venture capital since 2009.

University, among others) and training them with specific technical skills. However, regardless of entry-level or experienced status, there does not appear to be a pattern of permanent brain drain in these Midwestern cities. They appear, in fact, to exhibit the power to attract certain kinds of skilled and experienced people, or the methods to train curious and intelligent workers.

- Entrepreneurs in Indianapolis can find ways to creatively attract entry-level talent, with an eye to long-term retention through special programs, conditions, and professional development.
- Policymakers and entrepreneurship supporters can try to find ways to bridge the gap between entry-level university graduates from Indiana educational institutions and companies. This could include designing special programs for current students to gain exposure to regional companies, such as by matching internships and mentors, or creating partnerships with companies to bring training, networking, and professional development opportunities to Indiana educational institutions.

Market size and geography of the market

We find that most high-growth firms in Indianapolis are not limited to the regional market; in fact, most reported having vendors, customers, and competitors outside of the immediate area. This could reflect two things. First, it could reflect that the relatively limited size of the region, approximately 1.8 million inhabitants, is not a constraint for companies to establish their market. High-growth companies can establish their base in Indianapolis, yet extend their markets in other major metropolitan areas, such as Chicago and both coastal areas. Additionally, this could reflect that some regional industries are still "growing up" and there is room for more new companies.

This finding is in contrast to the case of Kansas City, where a good number of high-growth firms had their strong market base locally or regionally. However, the underlying story appears to the same: with exception of Chicago, most Midwestern cities are relatively small in size with lower populations, but market size is not a constraint for the growth of businesses to achieve the scale of millions in annual revenue. Moreover, those firms can further establish inter-metropolitan connections to larger markets.

- Entrepreneurs could be encouraged by the potential to enter into promising industries that are in their infancy or in the early stages of growth, where there is significant potential as well as strong policy interest. One example is the life sciences industry (see Batelle Technology Partnership Practice, 2012, 2014).
- Policymakers and entrepreneurship supporters could work to strengthen access and market opportunities for high-growth companies based in Indiana to expand into other states, as well as internationally. In addition, policymakers and entrepreneurship supporters could view the linkages between Indiana high-growth companies and outside companies as a mechanism through which to deepen, enhance, and perhaps even attract some of those outside companies to Indiana.

Economic recovery has provided more jobs, so there is greater competition among employers for talent, putting more pressure on high-growth companies to be creative and proactive in identifying, recruiting, and retaining their employees.

Ecosystem

Our findings on the overall ecosystem are mixed. The general implication from the interviews is that the ecosystem is mostly positive, though not overwhelmingly so, and that it is easy to do business in Indiana from a community and transactional perspective.[10] Though there are problems related to accessing financing and recruiting/retaining talent, these are not unique to Indiana and have been found in other regions as well (Motoyama et al., 2013). Some advantages for the region already exist, but could be better harnessed in order to maximize their contributions: for example, the presence of leading educational institutions means there is a large potential supply of excellent talent for local companies, but the reports of difficulty recruiting and retaining talent suggest a filter between the universities and the companies. Closing this "gap" could be a worthwhile investment for the region. The region appears to offer some important advantages in terms of market size and location.

One important characteristic about the ecosystem is its attractiveness to returnees from other places. The boomerang effect that brings former Indiana residents back to the region results from an intangible set of qualities that respondents described broadly as a combination of several factors related to quality of life, Midwest values, environment for raising children, and cost of living. The boomerang effect could be quite valuable for two reasons. First, returnees who eventually start new firms could have advantages because of cross-pollination from other markets, as well as their professional networks and market access outside the region. This might present advantages for their firms as they grow. Second, the desirable lifestyle could give new firms a recruiting advantage when it comes to mid-level or experienced talent, because it could mean there is pool of talent already interested or inclined to live in Indiana. However, the boomerang effect also lines up well with the problems many interviewees noted about recruiting new graduates of entry-level talent and indicates that firms may continue facing this problem because this type of talent wants to leave and is not ready to "come home" yet.

This boomerang effect is interesting in light of existing perspectives on urban development and competitiveness. It implies there may be some nuances in who is interested in the amenities of "creative" cities, because interviewees in our study indicated that they returned to Indiana for a quieter, more family-friendly life. The difficulty in hiring entry-level university graduates could offer some support for Richard Florida's conceptualization of the desirable city, if they leave Indiana for the coasts for the amenities in technology-intensive, diverse cities. Our findings suggest that typical Midwestern cities like Indianapolis may simply have more to offer than current perspectives on urban competitiveness, which focus on making these cities more attractive as opposed to capitalizing on what they already offer. Gaining better understanding on who returns to Indiana, and why, could be important for policymakers and entrepreneurship supporters, and help them identify concrete programs or incentives to woo them back.

The findings from this study and from the Kansas City study indicate that people define "quality of life" in different ways. Not everyone prefers large cities or coastal areas, and could in fact be discouraged by high costs related to housing, commuting time, schooling, etc. In many smaller Midwestern cities, these quality of life conditions may be far more easily attainable. The boomerang effect could be further encouraged by family connections, especially for individuals who "come home" after having children of their own.

10. The difference between this finding and Noonan's (2014) finding that the regulatory environment is overly complex and disproportionately punishes microenterprises could be due in part to the nature of the businesses surveyed in both studies. Our focus here is on high-growth firms, and Noonan surveyed microenterprises. It is possible that the owners and managers of companies in our sample have greater access to resources to deal with the regulatory environment, or that our sample of successful companies may be in less-regulated business areas.

Future company growth

Our key finding about future plans of the founders and managers in high-growth firms indicates that, regardless of initial capital struggles and current/ongoing challenges in attracting the necessary talent, the companies are still expected and planning to grow significantly and rapidly. The key implication is that companies *already have achieved significant growth* and will work around regional and other conditions in order to continue or improve their growth trajectories.

6. CONCLUDING REMARKS

Our study focused on understanding the key conditions that can affect high-growth companies in Indianapolis. Our findings indicate the regional conditions in Indianapolis are generally positive for high-growth companies, and that limitations related to capital and talent are surmountable. Our findings indicate that high-growth companies in Indianapolis not only have a great deal to offer in terms of economic benefits, but also create connections between the region and domestic and international markets.

This further points to the need for context-specific research on smaller cities. The importance of high-growth companies for cities like Indianapolis also underscores the need for further research to identify the key determinants of their growth and to help identify policy measures that can be supportive.

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APPENDIX A

Industries represented by high-growth companies in the sample	
Sector	Revenue Growth Range in Three Years
Business services	72–4323%
Health	118–1246%
IT services	95–788%
Software	99–954%
Telecommunications	85–413%
Consumer products and services	86–499%

APPENDIX B

The American Community Survey (ACS) provides a microsample of the regional population. The microsample can be weighted and tabulated to draw out demographic characteristics in the region. The 2007–2011 ACS microsample provides 82,173 observations in the Indianapolis metropolitan area. This yields 1,818,714 people with person weights. We exclude the population aged over seventy-nine years and assumed they would be outside the scope of migration and occupation analysis. We included people who lived elsewhere at the current time, but moved out of the Indianapolis metropolitan area in the year previous to data collection.

Overall, the Indianapolis region lost more people (62,880) than it gained (41,159), and also had a high number of people moving *within* the region (227,193). However, more insight can be gained by looking at trends in the flows.

First, for all levels of education (Table B1), the ratio of Outflow/Inflow is greater than 1.0, indicating that more people are leaving than coming in. However, the ratio is substantially larger for people with lower levels of educational attainment (some college or less). The ratio is quite high, at 2.27, for those with a high school degree. For those holding bachelor's, master's, and doctoral degrees, the ratio is barely above 1.0, meaning that highly educated people are less likely to move out than less-educated people are, a good signal for the region. This is not the case for people with professional degrees, where the Outflow/Inflow ratio is higher at just above 1.5.

Table B1: Outflow/Inflow of People by Level of Education

	Moved within Indianapolis	Outflow	Inflow	Outflow/Inflow
Less than High School	80,417	14,176	9,881	1.43
High School	51,086	14,431	6,361	2.27
Some college	51,769	18,125	10,578	1.71
Bachelor's degree	25,638	9,721	9,002	1.08
Master's degree	5,135	2,754	2,404	1.15
Professional degree	1,905	1,087	721	1.51
Doctoral degree	382	672	652	1.03
N/A	10,861	1,914	1,560	1.23
Sub-total	**227,193**	**62,880**	**41,159**	**1.53**

Second, people with spouses are less likely to leave, compared to other groups, e.g., single/never married, divorced, separated, married with spouse absent (see Table B2). This supports the finding from interviews that a boomerang effect could be linked to family connections and children.

Table B2: Outflow/Inflow of People by Marital Status				
	Moved within Indianapolis	Outflow	Inflow	Outflow/Inflow
Married, spouse present	46,337	13,187	10,479	1.25
Married, spouse absent	5,372	2,597	1,386	1.87
Separated	6,709	1,455	915	1.59
Divorced	28,347	6,340	3,705	1.71
Widowed	4,534	831	798	1.04
Never married/single	135,894	38,470	23,876	1.61
Sub-total	**227,193**	**62,880**	**41,159**	**1.53**

Cross-tabulating by high-skill occupation reveals a mix of inflows and outflows (see Table B3). Net gains were seen in occupations such as chief executives, computer software developers, physicians, health technologists, and engineers of construction equipment. Net losses were seen in occupations like managers of medicine, heavy equipment mechanics, electrical engineers, computer systems analysts, and accountants and auditors. It is hard to make inferences about the nature of occupations involved in the boomerang effect identified in the interviews. It is clear, however, that Indianapolis does not lose all skilled people.

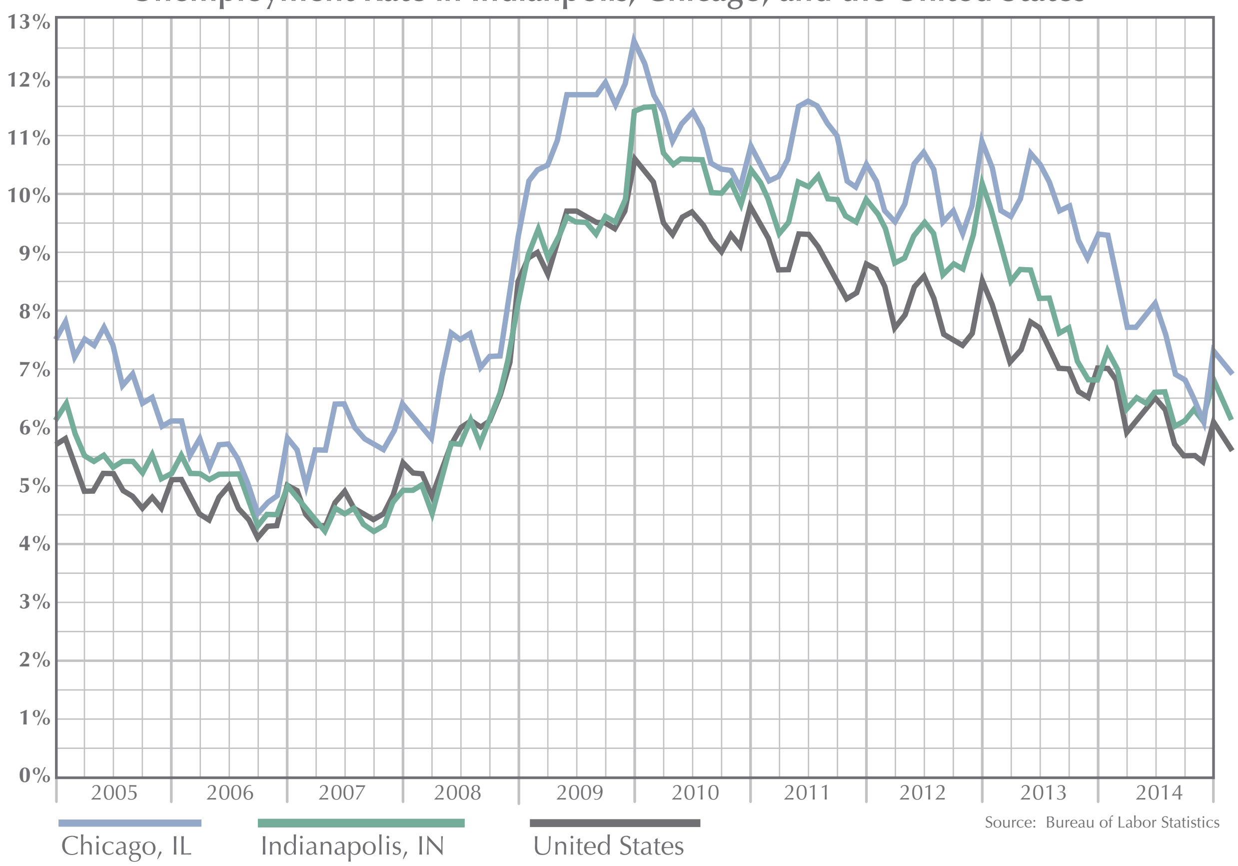
Table B3: Selected High-Skilled Occupations, Inflows and Outflows				
	Moved within Indianapolis	Inflow	Outflow	Net
Sample occupations: Net gain				
Engineers of construction equipment	318	160	14	146
Health technologists	457	234	98	136
Physicians	384	450	325	125
Computer software developers	518	237	197	40
Chief executives	474	163	128	35
Sample occupations: Net loss				
Managers of medicine and health	164	25	153	-128
Heavy equipment mechanics	177	42	153	-111
Electrical engineers	107	53	122	-69
Computer systems analysts	1,578	353	404	-51
Accountants and auditors	1,489	566	616	-50

Finally, we look at the areas receiving and sending people. Indianapolis loses people to several college towns in Indiana, such as Lafayette (Purdue), Bloomington (Indiana University), and Muncie (Ball State), but gains people from major and coastal areas, such as Chicago, Los Angeles, Washington, D.C., and Houston. This demonstrates that the notion Indianapolis is losing people to large cities or the coasts is not exactly true.

Table B4: Areas with Flows To or From Indianapolis			
Metro Areas	Inflow	Outflow	Net
Chicago-Gary-Lake, IL	4,356	3,912	444
Lafayette-W. Lafayette, IN	2,176	2,649	-473
Bloomington, IN	2,010	4,166	-2,156
Fort Wayne, IN	1,988	1,208	780
Muncie, IN	1,968	3,439	-1,471
Evansville, IN/KY	1,777	732	1,045
Kokomo, IN	1,692	838	854
South Bend-Mishawaka, IN	1,106	809	297
Terre Haute, IN	1,075	N/A	N/A
Louisville, KY/IN	1,073	867	206
Los Angeles-Long Beach, CA	1,027	440	587
Washington, DC/MD/VA	902	705	197
Columbus, OH	683	650	33
Houston-Brazoria, TX	660	355	305

APPENDIX C

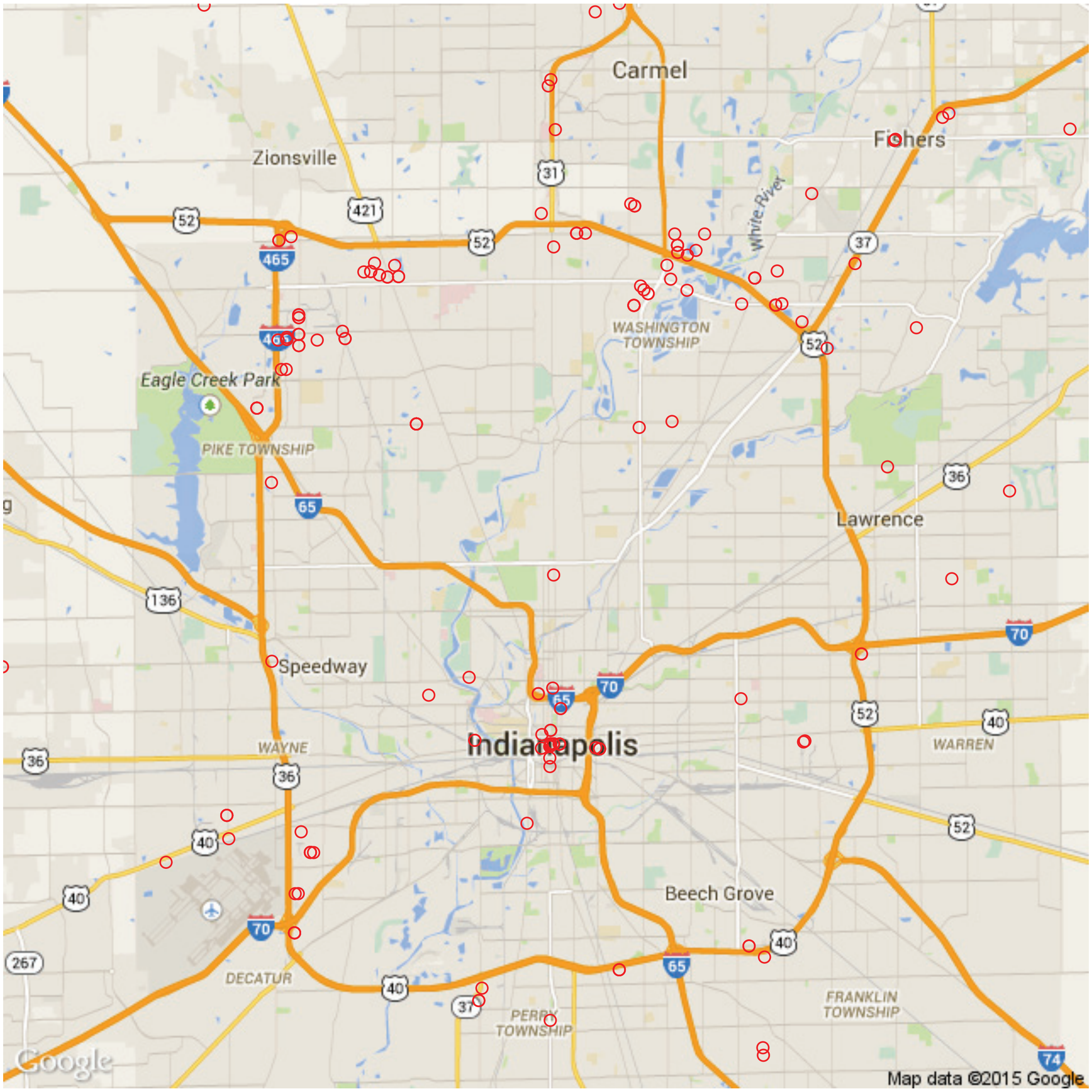
Unemployment Rate in Indianpolis, Chicago, and the United States



Source: Bureau of Labor Statistics

APPENDIX D

Locations of high-growth *Inc.* firms



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