A STUDY OF ENTREPRENEURIAL ECOSYSTEMS IN TEXAS

THE GOVERNOR'S OFFICE OF
ECONOMIC DEVELOPMENT
AND TOURISM

2017

STUDY
PERFORMED BY

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1. EXECUTIVE SUMMARY

This report, created by Thomas P. Miller & Associates (TPMA), is intended to inform the Office of the Governor of the status and outlook of the entrepreneurial ecosystems in Texas. The contents of the report include a description of survey and interview research and results, economic impact study processes and results, benchmarking study results, recommendations based on research findings, and related appendices.

To begin the research, a survey was distributed to startups or entrepreneurs, startup resource providers, and startup investors or funders within the state of Texas. Thousands of responses were received. Startup respondents were concerned with a number of issues related to small businesses, ranging from profitability and the cost and quality of workers to taxes and government relations, with startups in rural areas tending to be more concerned than their urban counterparts about all business-related issues. Far more than three-fourths of respondents to the survey indicated that access to funding – including initial startup capital, access to credit or loans, and access to equity funding – is the biggest challenge that startups and entrepreneurs face. Far more than half of startup respondents reported having received some type of external funding, with the percentages of respondents having received equity and loan funding relatively similar. Slightly less than one-fourth of respondents felt their community is able to help find funding. Based on large percentages of startup respondents selecting neutral or unsure responses, startups may be unaware of many of the resources that their communities offer for small businesses or startups. Compared with responses from startups, far greater than half of resource providers indicated offering networking, business coaching, and mentoring, with urban resource providers more likely than rural ones to offer multiple services.

In addition to responses to the survey, detailed information was also gathered through direct interviews with entrepreneurs, resource providers, and experts in entrepreneurialism. These interviews found that Texas has uniquely collaborative entrepreneurial ecosystems, with hubs around major population centers, that are facilitating relationships that are vital to startup success. Concerns expressed include startups seeking funding from the coasts rather than at home, and difficulty forming partnerships between resource providers and local economic developers.

An Economic Impact Study was also completed, measure the direct, indirect, and induced impacts of startup funding and investments in the state. It is estimated through this study that roughly 3.04 million jobs are directly supported by startup funding. These jobs create income for Texas residents, amounting to $154 million in direct earnings. That income, in turn, is spent elsewhere. Startup funding is ultimately responsible for an estimated $740 million in spending in the state of Texas. A multiplier effect of 1.85 indicates that for every $1 invested by individuals, angels, banks, or government creates an additional 85 cents, which is then spent by the startups, other support businesses, and employees.

Research for this report also included a comparison of the entrepreneurial ecosystems in Texas with those of California, New York, Massachusetts, Washington, and North Carolina. This benchmarking found that while California continues to lead the nation in entrepreneurial activity, Texas has worked its way closer to the top in recent years. Among the states included in the comparison, Texas has the highest startup density and share of scaleups and the second highest rate of startup growth and new entrepreneurs.

An analysis of the data from the benchmarking, survey, and interview processes generated a number of recommendations to assist the Office of the Governor in improving the entrepreneurial ecosystems in the

state of Texas. Recommendations include simplifying policies and processes, helping connect research and reality, evaluating effectiveness, strengthening existing industries and hubs, facilitating connectivity, reinvesting in the state, and avoiding picking winners and losers.

2. SURVEY & INTERVIEW RESEARCH

SUMMARY OF INTERVIEWS

Thirteen (13) people with insight into startups in Texas were interviewed during the course of this project. The names of these individuals are included in Appendix C. Each interviewee brought his or her own unique perspective that together have served to enrich this analysis. There were a number of common themes that were mentioned by multiple participants, described as follows.

Texas is noted by experts for having a very collaborative startup culture. Multiple participants previously lived in Silicon Valley and have experience in the tech industry. By comparison, these individuals claim that entrepreneurs in Texas are generally far more willing to help each other succeed.

For large equity deals entrepreneurs typically go to "the coasts" including such places as California and New York. Though there are certainly equity investors in Texas, many of them are not as willing or able to cut the larger checks that are required during series A, B, and C funding stages.[1] Several interviewees mentioned an interest in the state offering some form of incentive for public and private investment in Texas companies, such as a matching fund from a state entity or tax-favored innovation zones.

Relationships with successful previous entrepreneurs are central to the success of startups. These relationships are valuable for many reasons including providing encouragement, vision, coaching, and finding funding. Not only is this critical for entrepreneurs but also for funders, as many potential funders are nervous about giving their money to individuals who lack business experience. Multiple entrepreneurs praised their startup networks as having very strong mentorship models.

The various population centers throughout the state have their own unique cultures and assets that should be leveraged for development. For example, Austin is well-known for its strong startup infrastructure, including incubators and accelerators. Other cities have growing tech sectors and some of their own assets. For example, San Antonio has a significant population of veterans, Houston has a large population of high net worth individuals connected to the oil and gas industry, and West Texas has less population but utilizes its University incubators as sources of innovation.

Some in the resource provider ecosystem find it difficult to partner with local economic developers. Resource providers includes all organizations that provide physical or financial resources, such as small business development centers, coworking spaces, accelerators, incubators, etc. From the perspective of some within these groups, economic developers are less interested in helping startups and more interested in attracting large businesses in the retail and manufacturing sectors. Nevertheless, some of these resource providers do want to partner with economic developers because they have access to resources state and local government resources that entrepreneurs should know about.

SURVEY BACKGROUND

Between November 12 and December 1, 2017, Thomas P. Miller & Associates (TPMA) fielded an electronic survey of resource providers, startups and entrepreneurs (startups), and investors and funders (investors) across the state of Texas. The intent of the survey was to gather insight on key research questions and, in particular, on issues related to startup funding. TPMA is indebted to the staff of Office of the Governor for their diligent work in promoting the survey via social media, email, and direct networks. TPMA also

[1] For definition of these and other terms, please refer to Appendix A.

publicized the survey via its own social media channels and distributed it directly to individuals and organizations in Texas by direct email and telephone calls. Due to the combined efforts of both the staff of the Office of the Governor and TPMA, the survey collected a total of three-thousand and nine (3,009) responses.

RESPONDENT LOCATIONS

The survey targeted three audiences within the startup ecosystem. The distribution of responses by ZIP code for each of the three audiences— resources, startups, and investors— are shown in Figures 2.1 through 2.3.

Figure 2.1: Location of Startup Resources Respondents by ZIP Code

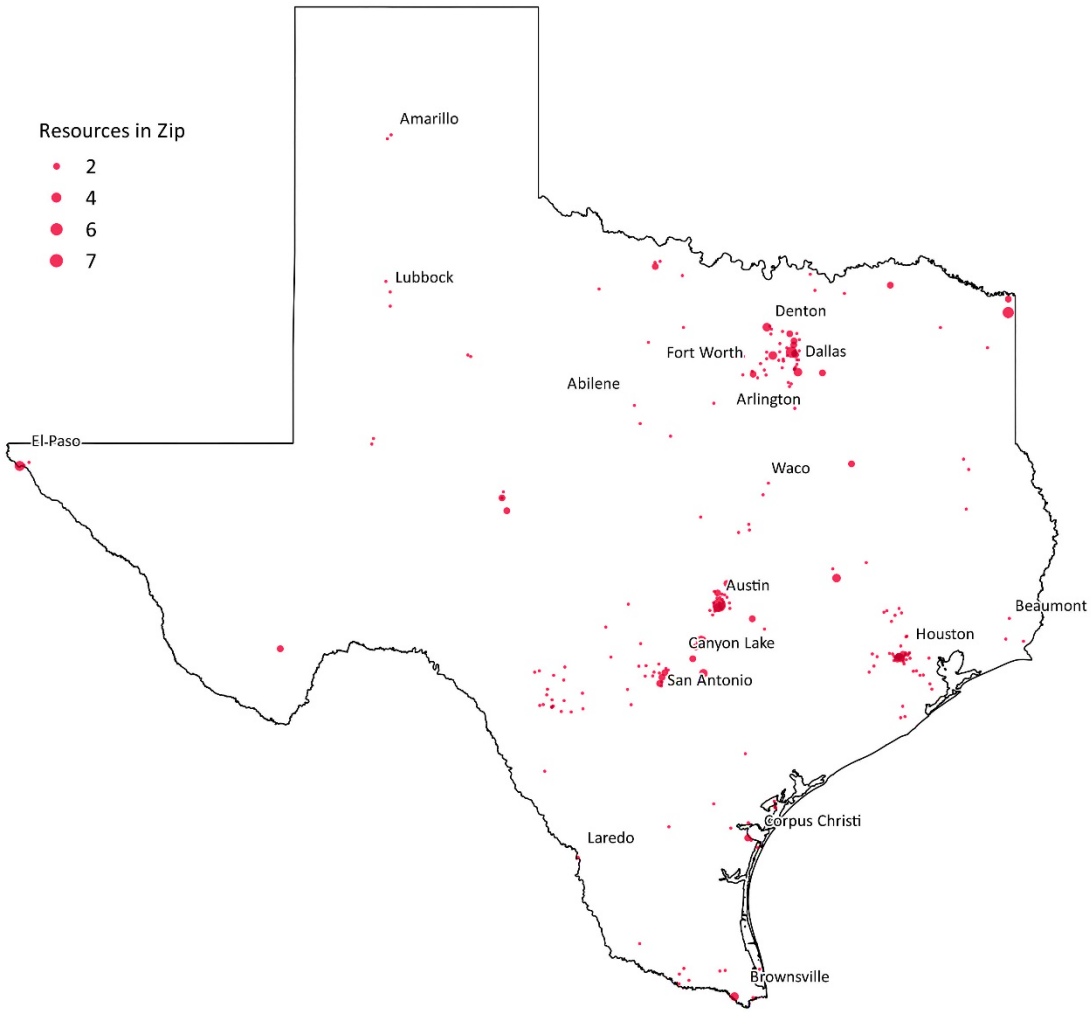
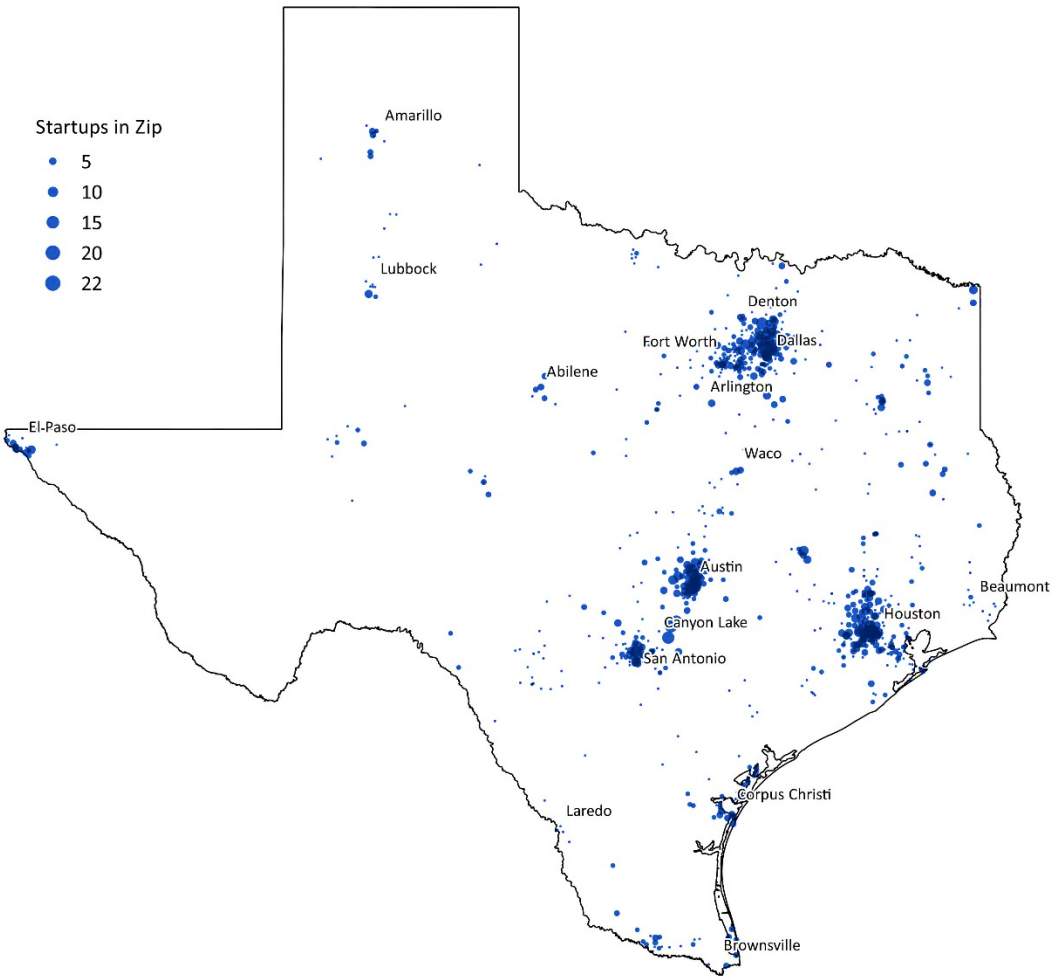


Figure 2.2: Location of Startup Respondents by ZIP Code

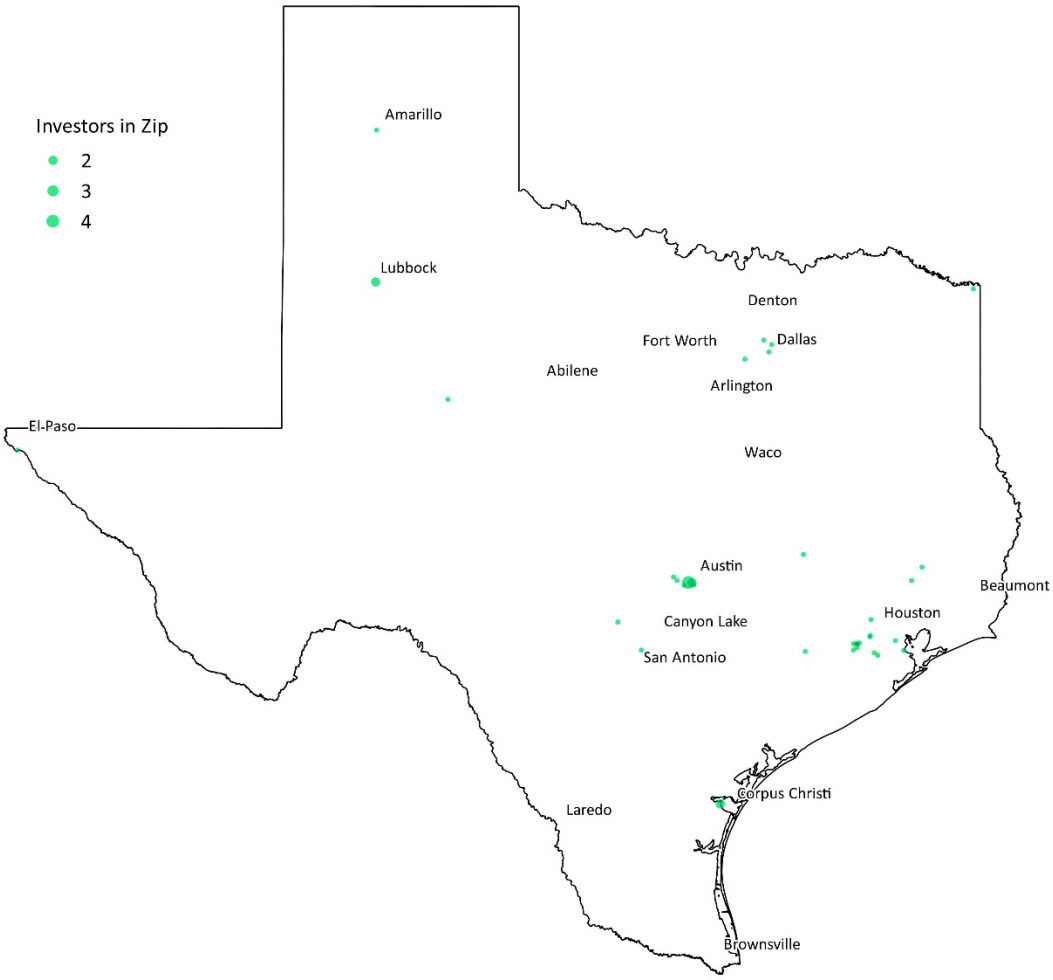


Frequently, startups discovered the survey via resource providers and not surprisingly, the geographic distribution of resource providers closely mirrors that of the startups. In both cases, there are strong concentrations within the Texas triangle (the areas including and between San Antonio, Houston and Dallas-Fort Worth). The survey was taken by some startup representatives in some small to mid-sized towns as well, such as San Angelo, Midland, and Texarkana. The number of responses from investors was decidedly smaller. Likewise, the responses were concentrated in the largest cities, with only a few respondents in cities such as Amarillo, Lubbock, and Corpus Christi.

RESPONDENT DEMOGRAPHICS

Fifty-eight percent (58%) of respondents for the startup survey (n=1,706) are small, with fewer than six (6) employees. Over three-quarters are located in urban areas. Contrary to the expectations of some, the entrepreneurial field is not all about tech companies; in fact, only Thirty-two percent (32%) would consider their businesses to be high-tech. Survey respondents also represented a wide variety of industries, with nineteen percent (19%) from industries such as the Professional, Scientific, and Technical Services category and nine percent (9%) in Construction. Most startup respondents were in relatively early stages of development— forty-two percent (42%) of respondents described their businesses as past the early stage but without outside funding and twenty-five percent (25%) were still in the early stage.

Figure 2.3: Location of Startup Respondents by ZIP Code



Of respondents to the resource providers survey (n=240), seventy-four percent (74%) have been in existence for ten or more years. While nearly half (47%) serve only fifty (50) or fewer registered entrepreneurs, a smaller subset serves very large audiences (with 13% serving over 1,000). Seventy-one percent of respondents serve urban areas. In terms of services offered, sixty-nine percent (69%) of resource providers offer networking; sixty-eight percent (68%) offer coaching; and sixty percent (60%) offer mentoring services. The majority of resource providers offer multiple services— twenty percent (20%) of resource providers offer just one resource, while twenty-three percent (23%) offer two, twenty-four percent (24%) offer three, and thirty-three percent (33%) offer four or five.

Of respondents to the investor survey (n=34), thirty-five (35%) of respondents are angel, seed, or individual investors, while twenty-one percent (21%) are private equity investors and eighteen percent (18%) are economic development groups.

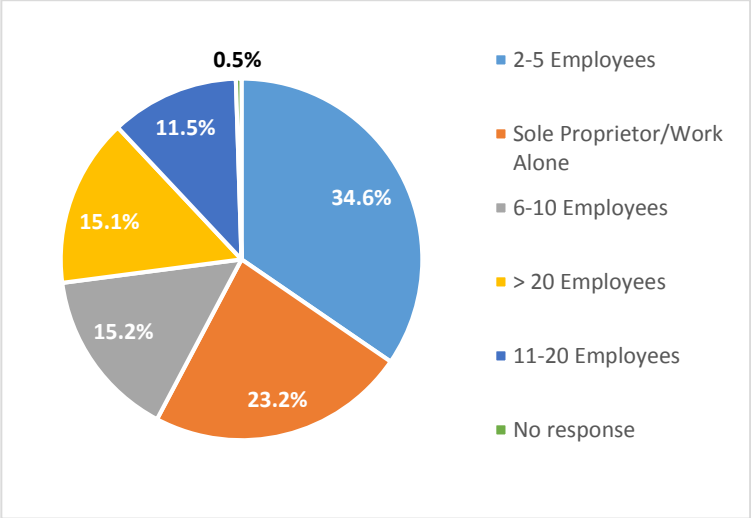
STARTUP SURVEY RESULTS

Demographics

Size

The majority of startup respondents are fairly small, with fifty-eight percent (58%) having fewer than six employees. Representative of that number, nearly one-quarter of total respondents are the only employee of the company, while another thirty-five percent (35%) have 2-5 employees.

Figure 2.4: Number of Employees



Location

Just over three-quarters (76%) of respondents indicated that they are located in urban areas (population of 50,000 or more). Nineteen percent (19%) reported their location as rural (population less than 50,000). Five percent (5%) indicated that they were unsure of whether their location is urban or rural, and 0.6% did not respond.

High-Tech Classification

Sixty-two percent (62%) of respondents indicated that they would not consider their business to be high-tech. Thirty-two percent (32%) noted that they would consider their business to be high-tech, and six percent (6%) were unsure.

Industry Classification

Respondents indicated their businesses fell into a wide variety of categories. The most commonly selected industry classification was Professional, Scientific, and Technical Services (including Legal, Accounting, Engineering, etc.), with nineteen percent (19%) of respondents selecting this industry. The second most common was Construction, with nine percent (9%) selecting.

Table 2.1: Industry Classification by Startup Respondents

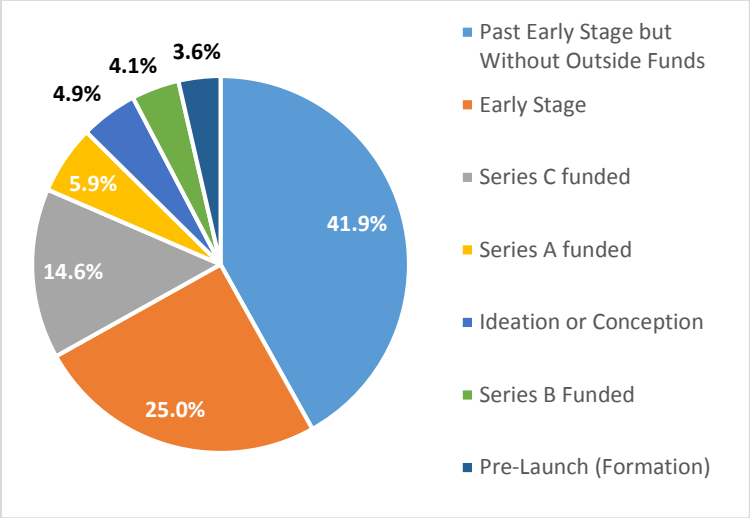
Industry Classification	% of Respondents
Professional, Scientific, and Technical Services (incl. Legal, Accounting, Engineering, etc.)	19.1%
Construction	8.9%
Retail Trade	8.6%
Health Care and Social Assistance (incl. Hospital, Nursing, Relief Services, etc.)	8.0%
Other Services (incl. Auto and Commercial Goods Repair, Religious or Advocacy Org., etc.)	6.8%
Manufacturing	6.6%

Real Estate and Rental/Leasing (incl. Property, Auto, Goods, etc.)	5.9%
Food Services and Drinking Places	5.9%
Information (incl. Publishing, Broadcasting, Telecommunications, etc.)	5.7%
Arts, Entertainment, and Recreation (incl. Sports, Museums, Zoos, etc.)	5.5%
Finance and Insurance (incl. Securities, Commodity Contracts, etc.)	4.7%
Wholesale Trade	2.4%
Educational Services (incl. Schools, Colleges, Universities, etc.)	2.2%
Transportation and Warehousing (incl. Federal Government Enterprises)	2.1%
Mgmt. of Companies/Enterprises	1.7%
Admin. and Waste Mgmt. Services (incl. Employment Services, Business Support Services, Security, etc.)	1.5%
Agriculture, Forestry, Fishing, and Hunting	1.5%
Mining and Support Activities (incl. Oil and Gas Extraction)	1.3%
Accommodation (incl. Hotels, etc.)	0.9%
Households (incl. Postal Service and Private Households)	0.4%
Utilities (incl. Federal Government Enterprises)	0.4%

Stage of Development

Slightly more than four in ten respondents (42%) indicated that their company was past the early stage of development but did not yet have outside funds (i.e. self-funded), and one-quarter responded that their company is still in the early stage. Under one quarter of respondents had received Series A, B, or C funds.

Figure 2.5:
Reported Stage of Development



Funding Sources

External Funding

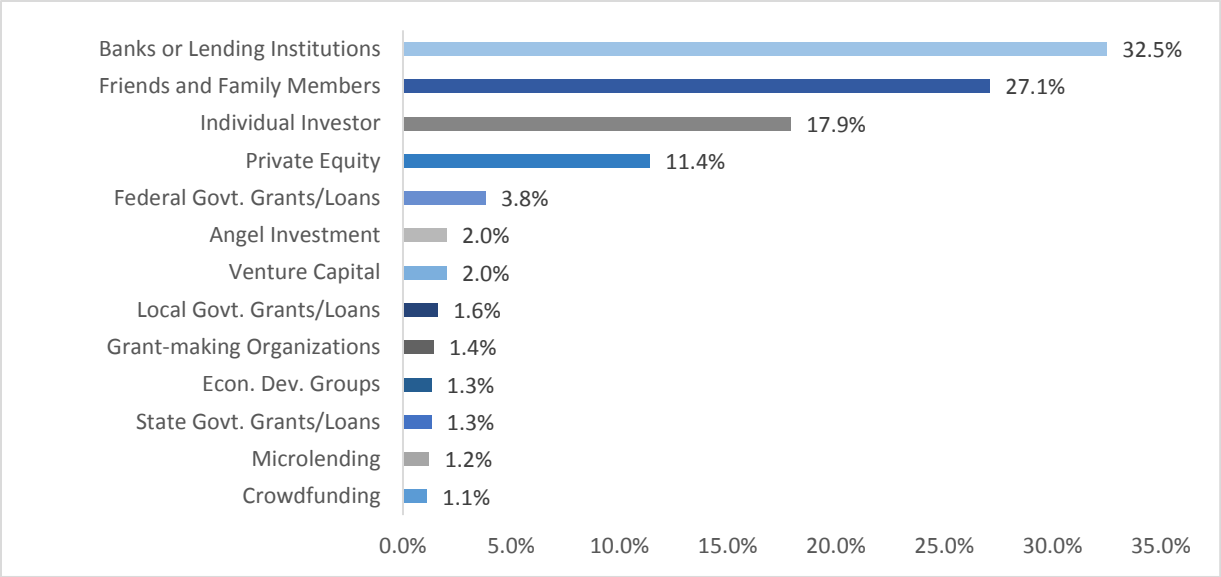
Sixty-nine percent (69%) of respondents reported receiving any type of listed external funding source; seven-hundred and eighty-seven (787) respondents (46% of all respondents) indicated receiving only one type of listed funding

source, with two-hundred and forty-four (244) (14%) listing two funding sources, and one-hundred and forty-two (142) (8%) listing three or more funding sources.

How Funding Works

Every business will require some form of financial investment to get started and grow. The amount and timing of that investment will vary. Some businesses require significant amounts of research and development before being able to build or launch. To fund this initial stage, a business may raise **seed capital**, most often from angel investors or venture capital firms. Once a product or service has been developed, the startup can be launched. Some businesses may need additional funding to get started, and acquire **small business loans** through a bank or other financial institution. Once the seed startup is up and running, the business may need to modify the product or service or otherwise improve to become more profitable. Funding for this early-stage development and growth can come through **Series A funding**, generally from venture capital firms. When startups are successful and ready to move out of a development stage, scale up, and expand, they will seek **Series B funding** to grow the business. After the business has shown continued growth and success, it could consider expansion of products and services into new markets, possibly through mergers with or acquisitions of other businesses. To fund this later-stage activity, businesses may seek **Series C funding** from additional investors, which could include venture capital firms, investment banks, private equity firms, hedge funds, and a host of other groups.

Figure 2.6: External Funding Sources- Startup Survey[2]



The most common type of funding source was banks or lending institutions, with just under one-third of respondents selected. Twenty-seven percent (27%) indicated receiving funding from friends or family members. Fewer than two percent (2%) of respondents selected local government grants or loans, grant-making organizations, economic development groups, state government grants/loans, microlending, or crowdfunding.

Businesses in the ideation/conception phase, pre-launch businesses, and early stages were most commonly funded by friends or family members (31%, 23%, and 33%, respectively). Those past the early stage (including stages equivalent to Series A, B, or C), were mostly commonly funded by banks or lending institutions (41%, 47%, and 54%, respectively).

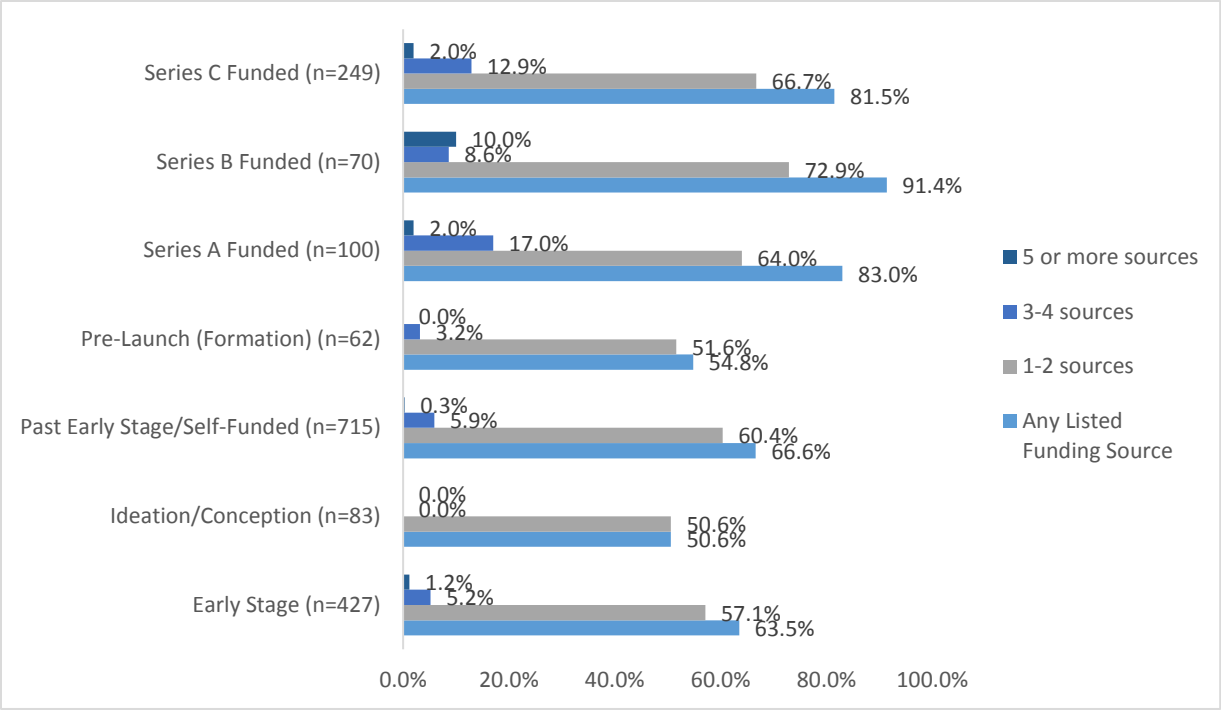
[2] Respondents could select multiple funding sources or no funding sources; as such, percentages do not equal 100. There were 29% respondents who selected "other" and wrote in a response. However, "other" responses are not included because 72% of those selecting "other" wrote in "self-funded", and another 23% wrote in "none of the above" or "no funding."

Table 2.2: External Funding Source by Stage of Development- Startup Survey

Category	Early Stage (n=427)	Ideation/ Conception (n=83)	Past Early Stage/Self-Funded (n=715)	Pre-Launch (Formation) (n=62)	Series A-funded (n=100)	Series B-funded (n=70)	Series C-funded (n=249)
Federal Govt.	2.6%	0.0%	2.2%	0.0%	8.0%	10.0%	9.2%
State Govt.	1.4%	0.0%	0.8%	1.6%	2.0%	2.9%	2.0%
Local Govt.	2.1%	0.0%	1.7%	0.0%	2.0%	2.9%	0.8%
Econ. Dev. Groups	1.2%	0.0%	0.6%	0.0%	4.0%	7.1%	1.6%
Banks or Lending Institutions	15.9%	7.2%	37.9%	6.5%	41.0%	47.1%	54.2%
Venture Capital	1.6%	1.2%	1.0%	1.6%	5.0%	8.6%	2.8%
Private Equity	11.9%	7.2%	8.5%	12.9%	17.0%	21.4%	14.9%
Angel Investment	3.3%	0.0%	1.0%	1.6%	4.0%	2.9%	2.4%
Crowdfunding	1.6%	0.0%	0.4%	0.0%	3.0%	4.3%	0.8%
Microlending	0.9%	1.2%	1.0%	4.8%	2.0%	0.0%	1.6%
Individual Investors	15.5%	8.4%	15.0%	19.4%	30.0%	30.0%	25.3%
Grantmaking Orgs.	1.6%	0.0%	0.6%	0.0%	4.0%	7.1%	2.0%
Friends or Family Members	33.3%	31.3%	24.2%	22.6%	37.0%	32.9%	20.9%

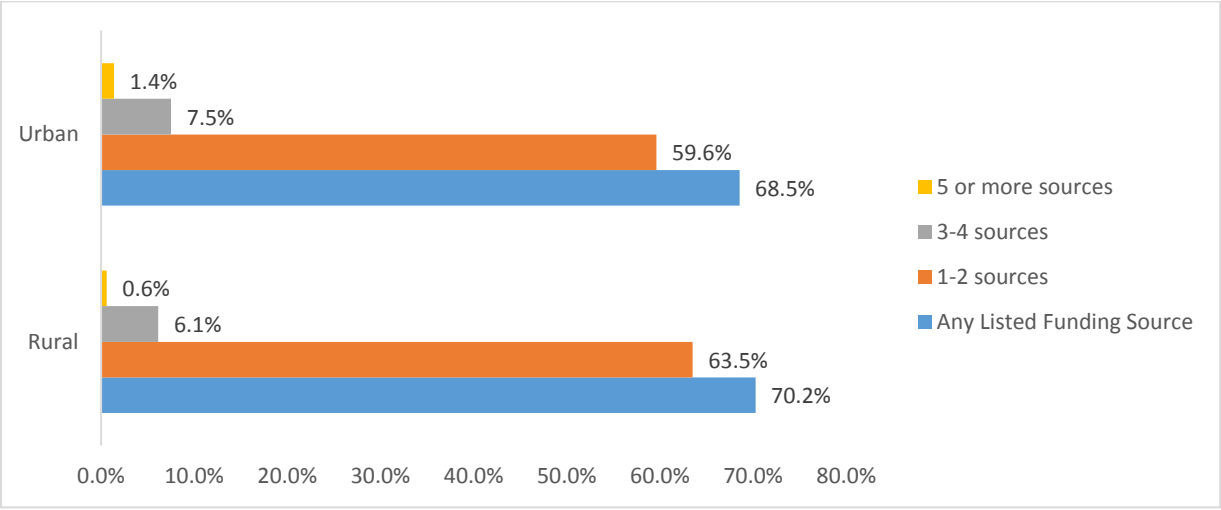
As shown in Figure 2.7, over ninety percent (90%) of Series B-funded businesses selected one or more of the listed funding sources, with eighty-three (83%) of Series A-funded selecting one or more, and eighty-two percent (82%) of Series C-funded selecting one or more. These types of businesses also were more likely to report getting funding from three or more listed sources. Unsurprisingly, smaller percentages of businesses in the ideation/conception phases (51%), pre-launch phases (55%), or early stages (63.5%) selected at least one type of external funding.

Figure 2.7: Number of Funding Sources by Stage of Development



Access to funding sources was relatively similar for both urban and rural businesses. Interestingly, slightly more rural businesses reported having received at least one funding source listed (70% vs. 68.5%). However, urban businesses were slightly more likely to have received funding from multiple sources.

Figure 2.8: Number of Funding Sources by Business Location



Equity vs. Loan Funding

Thirty percent (30%) of respondents reported receiving no loan funding, and twenty-seven (27%) reported receiving no equity funding; three-hundred and eighteen (318) respondents, or nineteen (19%), reported receiving neither equity nor loan funding. Although slightly higher percentages of respondents reported receiving larger loan funding than equity funding, the percentages were relatively similar. To illustrate, while seven-and-a-half percent (7.5%) of respondents reported receiving more than one-million dollars ($1,000,000) in loan funding, there was less than one percentage point difference in those reporting more than one-million dollars ($1,000,000) in equity funding (6.7%). The largest difference across funding amounts was in the less than twenty-thousand dollar ($20,000) category, where thirty percent (30%) of respondents reported receiving less than twenty-thousand dollars ($20,000) in equity funding, compared to twenty-six percent (26%) receiving less than twenty-thousand dollars ($20,000) in loan funding

Figure 2.9: Amount of Loan and Equity Funding Received

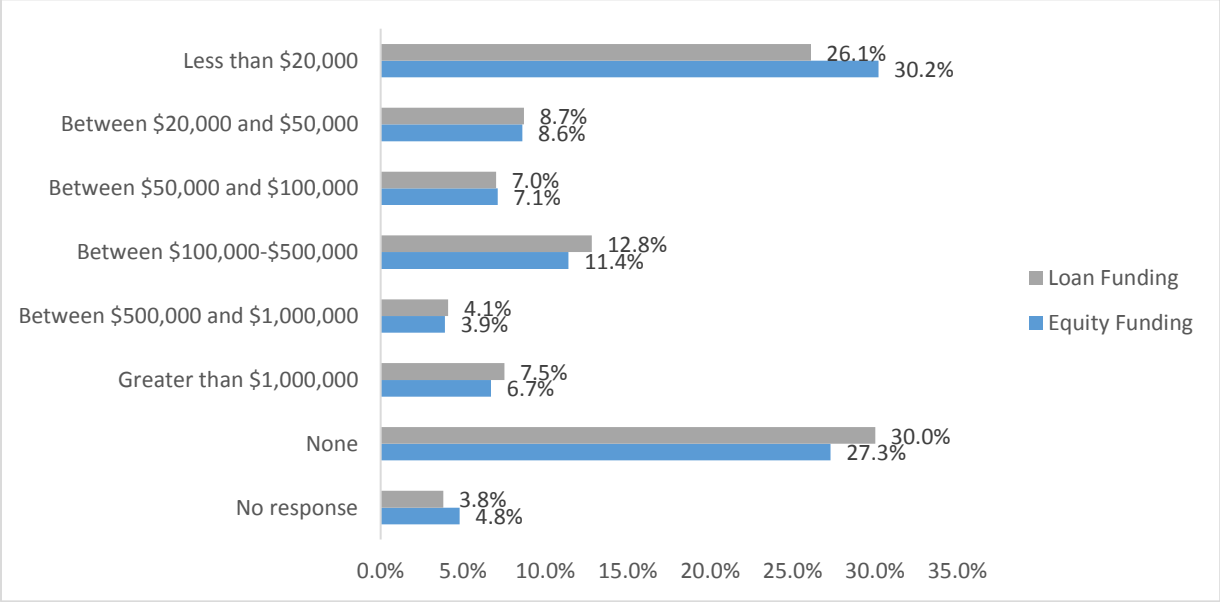


Table 2.3: External Funding Source by Stage of Development

Amount	Equity vs. Loan	Early Stage (n=427)	Ideation/ Conception (n=83)	Past Early Stage/Self-Funded (n=715)	Pre-Launch (Formation) (n=62)	Series A-funded (n=100)	Series B-funded (n=70)	Series C-funded (n=249)
<$20,000	Equity	41.5%	56.6%	18.5%	41.9%	36.0%	24.3%	32.1%
	Loan	38.6%	45.8%	14.4%	35.5%	34.0%	24.3%	26.9%
$20,000-$50,000	Equity	6.8%	2.4%	10.1%	9.7%	8.0%	11.4%	8.8%
	Loan	7.5%	0.0%	10.5%	4.8%	9.0%	8.6%	9.6%
	Equity	6.1%	0.0%	8.5%	6.5%	3.0%	7.1%	8.8%

$50,000-$100,000	Loan	4.0%	0.0%	7.8%	0.0%	8.0%	15.7%	11.2%
$100,00-$500,000	Equity	7.7%	3.6%	10.9%	6.5%	17.0%	25.7%	16.9%
	Loan	5.2%	4.8%	15.4%	1.6%	17.0%	27.1%	18.1%
$500,00-$1 Million	Equity	1.6%	0.0%	3.9%	1.6%	7.0%	8.6%	7.2%
	Loan	1.4%	0.0%	4.5%	0.0%	6.0%	4.3%	9.2%
>$1 Million	Equity	4.7%	0.0%	4.3%	3.2%	17.0%	17.1%	12.9%
	Loan	3.0%	1.2%	6.2%	1.6%	14.0%	12.9%	18.5%
None	Equity	24.4%	34.9%	41.0%	27.4%	6.0%	4.3%	5.2%
	Loan	33.5%	41.0%	39.4%	51.6%	8.0%	7.1%	2.8%

When reviewing equity and loan funding by stage of business development, not surprisingly, the differences among business stages stand out. Series A-, B-, and C-funded businesses are more likely to have received larger amounts of equity funding than those in the other categories. To illustrate, businesses in Series A, B, or C were six (6) to twenty-two (22) percentage points more likely to report equity funding of one-hundred-thousand dollars ($100,000) to five-hundred-thousand dollars ($500,000). They were three (3) to nine (9) percentage points more likely to report equity funding of five-hundred-thousand dollars ($500,000) to one-million dollars ($1,000,000) and eight (8) to seventeen (17) percentage points more likely to report equity funding in excess of one-million dollars ($1,000,000). In contrast, businesses in the early stage, ideation/conception stages, past the early stage but self-funded, and in the pre-launch phase were far more likely to report receiving no equity funding compared to Series A-, B-, and C-funded businesses. While businesses in the early stage, ideation/conception stage, and pre-launch (formation) were more likely than Series A-, B-, or C-funded businesses to report equity funds of less than twenty-thousand dollars ($20,000), those in the past early stage/self-funded were most likely to report no equity funding at all.

Businesses further along in equity fundraising are also more likely to leverage loans, indicated by the fact that higher amounts of loan funding were also more likely to be reported by Series A-, B-, or C-funded businesses, with between thirteen percent (13%) to eighteen-and-a-half percent (18.5%) reporting loans of more than $1 million (compared to 1%-6% for the other types of businesses), and four percent (4%) to nine percent (9%) reporting loans of five-hundred-thousand dollars ($500,000) to one-million dollars ($1,000,000), compared to zero percent (0%) to four-and-a-half percent (4.5%) of the other types of businesses.

Equity Funding: Rural and Urban Businesses

While about the same percentages of businesses located in rural areas and those located in urban areas reported not having received equity funding or loan funding, twenty-seven percent (27%) reported no equity funds and twenty-eight percent (28%) no loan funds in rural areas, compared to twenty-six percent (26%) reporting no equity funding and twenty-nine percent (29%) no loan funding in urban areas, businesses in urban areas were more likely to report receiving funding of greater than one-million dollars

($1,000,000). Seven-and-a-half percent (7.5%) of urban businesses reported equity funds of more than one-million dollars ($1,000,000), and eight percent (8%) reported loan funds of greater than one-million dollars ($1,000,000), compared to five percent (5%) reporting equity funding and six percent (6%) reporting loan funding in this amount in rural areas.

Figure 2.10: Rural Businesses: Equity vs. Loan Funding

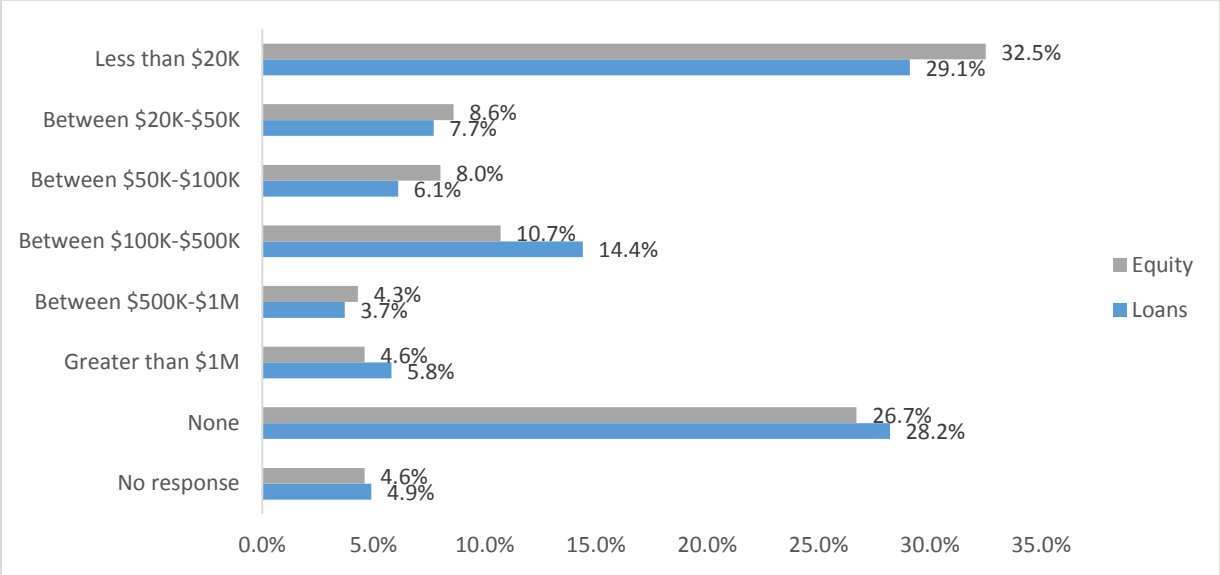
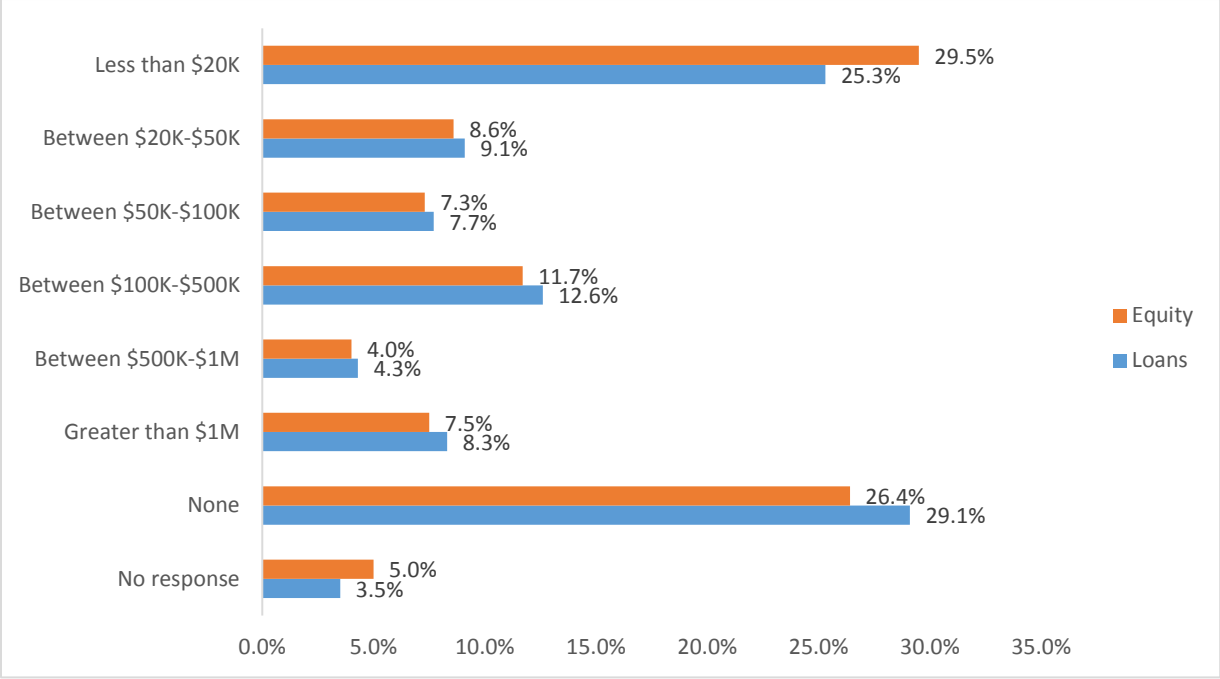


Figure 2.11: Urban Businesses: Equity vs. Loan Funding



Origin of Equity Funding

Fifty-two percent (52%) of respondents have received equity funding from inside Texas, while thirty-eight (38%) of respondents indicated that the question was either not applicable or they were not sure. When

eliminating respondents who reported "unsure/not applicable" from the denominator, eighty-three (83%) of equity funding came from inside of Texas.

Figure 2.12: Equity Funding Origin – All Respondents

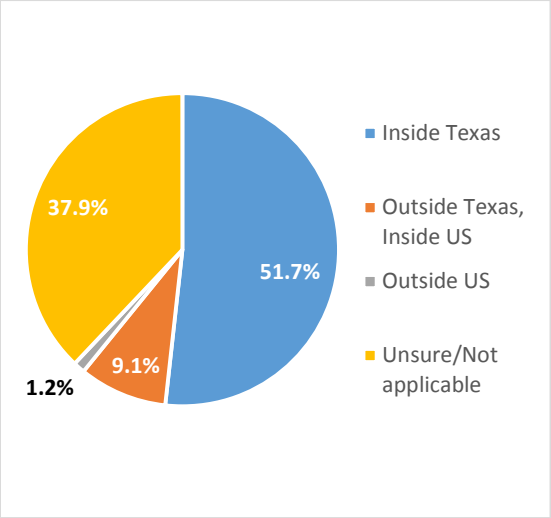
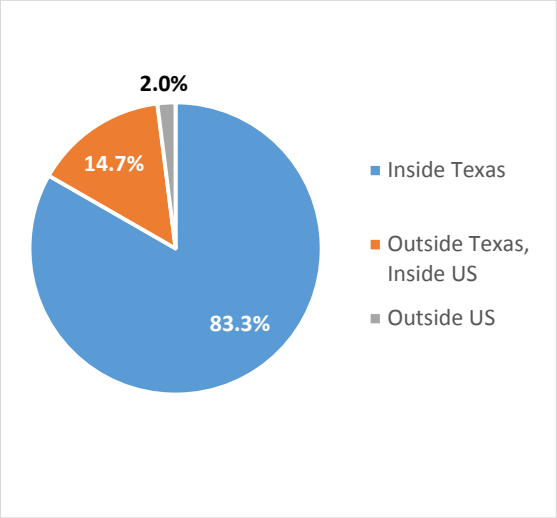
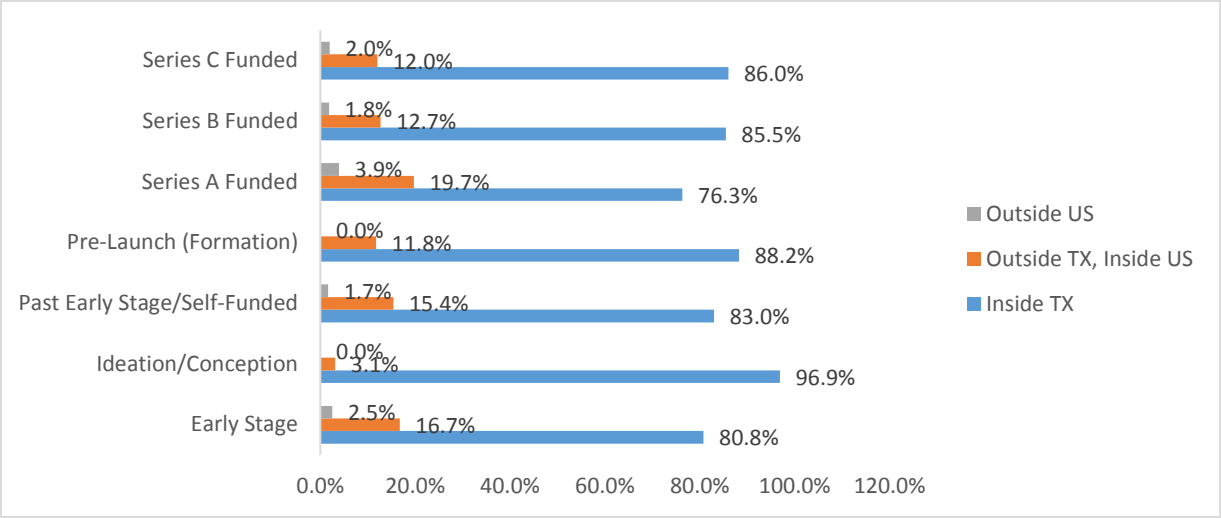


Figure 2.13: Equity Funding –Applicable Respondents



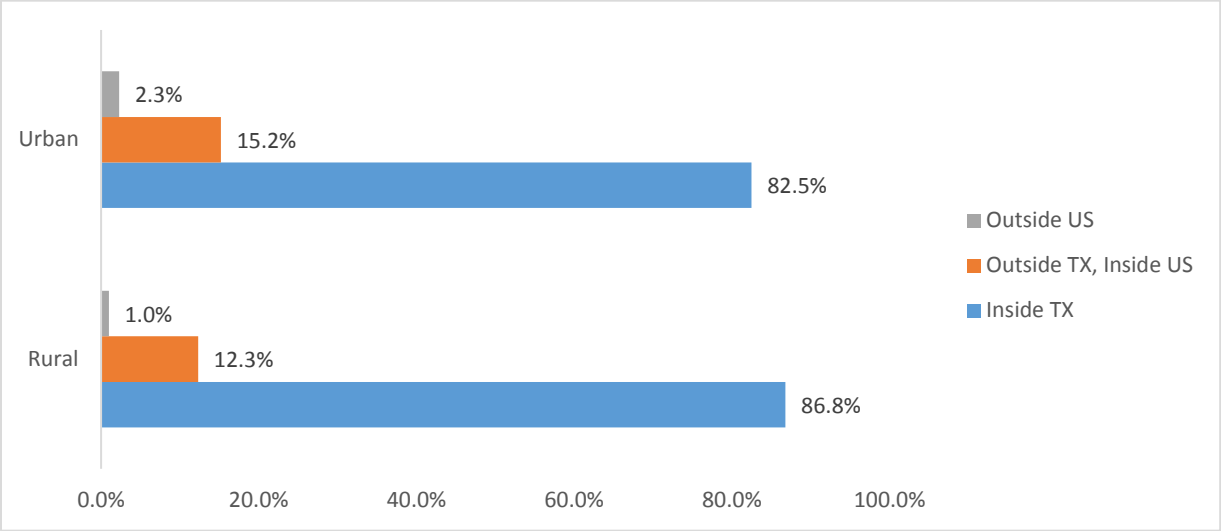
For those businesses that have received equity funding (eliminating those that responded "unsure/not applicable" from the denominator), the percentage of those in the ideation/conception phase receiving their equity funding from inside of Texas was disproportionately high, with ninety-seven percent (97%) reporting funding originating in Texas. More than eight percent (80%) of all other company types reported receiving equity funds from inside Texas, with the exception of Series A-funded businesses. Twenty percent (20%) of these businesses reported receiving funds from outside of Texas but within the US. Seventeen percent (17%) of those in the early stage, and fifteen percent (15%) of those past the early stage but self-funded, reported receiving funds from outside of Texas.

Figure 2.14: Origin of Equity Funding – By Stage of Business Development



Comparing by location (urban/rural) and eliminating those respondents who said "unsure/not applicable"), rural businesses are slightly overrepresented in terms of equity funding coming from inside Texas. Compared to the state as a whole, eighty-three percent (83%) reported funding from inside Texas, with eighty-seven (87%) of rural businesses and eighty-two-and-a-half percent (82.5%) of urban businesses reporting equity funding from inside Texas.

Figure 2.15: Origin of Equity Funding – by Business Location



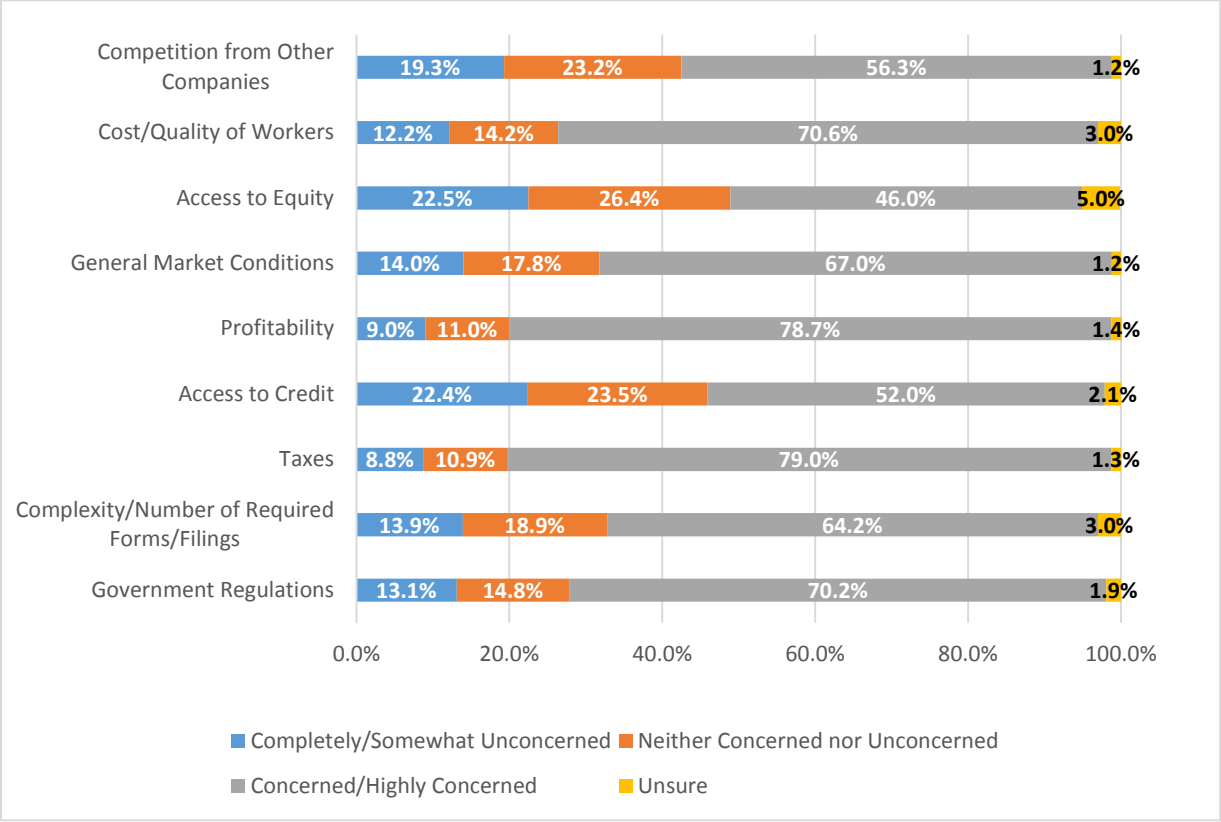
Largest Business Concerns

Respondents were asked to rate their levels of concern with certain issues that may impact startups. Other than access to equity, a majority of respondents expressed that they were concerned or highly concerned with all issues listed. Taxes was the issue of greatest concern, with seventy-nine percent (79%) of respondents indicating they were at least somewhat concerned, fifty-one percent (51%) indicated being highly concerned about taxes. Profitability was also an area of great concern, with seventy-nine percent (79%) concerned and forty-seven percent (47%) highly concerned. Government regulations, at seventy

percent (70%), and cost/quality of workers at seventy-one percent (71%), rounded out the top four. Forty-two percent (42%) of respondents were "highly concerned" about government regulations, with thirty-nine percent (39%) highly concerned about the cost and quality of workers.

Based on stage of business development, concerns vary somewhat. While overall, the percentage of respondents concerned or very concerned about access to equity was less than half, at or nearly sixty percent (60%) of businesses in the early stage, ideation or conception stage, or pre-launch stages were concerned or very concerned about access to equity. This, coupled with data in Table 2.3 showing that smaller percentages of these types of businesses had received equity funding, may suggest that they have more difficulty in accessing equity funding. Similarly, larger percentages of early stage, ideation or conception stage, and pre-launch companies were concerned or very concerned about access to credit. Again, Table 2.3 shows that companies in these phases tend to be less likely to report having received loan funding, which may suggest challenges in obtaining credit at these stages.

Figure 2.16: Level of Concern with Business-Related Issues[3]



While the percentage of companies concerned about competition and complexity/number of required forms and filings was also lower than some other areas, Series C-funded businesses (64%) and Series A-funded businesses (60%) tended to be more concerned about competition than other types of businesses. Businesses in the ideation or conception, pre-launch, and past early stage but self-funded tended to be more concerned about the complexity and number of required forms than other types of businesses (70%, 68%, and 67%, respectively). This may be because companies at this stage of their business development

[3] Excludes blank responses.

may be in the process of completing and submitting required forms to support startup or other requirements.

Series C-funded businesses and those past the early stage but without outside funding were more concerned about government regulations than other types of businesses (75% and 73%, respectively). These two types of businesses were also much more concerned about taxes—85% of Series C-funded companies reported being concerned or very concerned about taxes, and 84% of past early stage but self-funded companies were concerned or very concerned.

Series B- and C-funded companies were more likely to be concerned about the quality and cost of workers (79% for both), which may be in part because these types of companies are more likely than the others to have more than 10 employees (46% of Series B and 50% of Series C reported having more than 10 employees).

Table 2.4: Percent Concerned/Highly Concerned about Issues by Stage of Business Development[4]

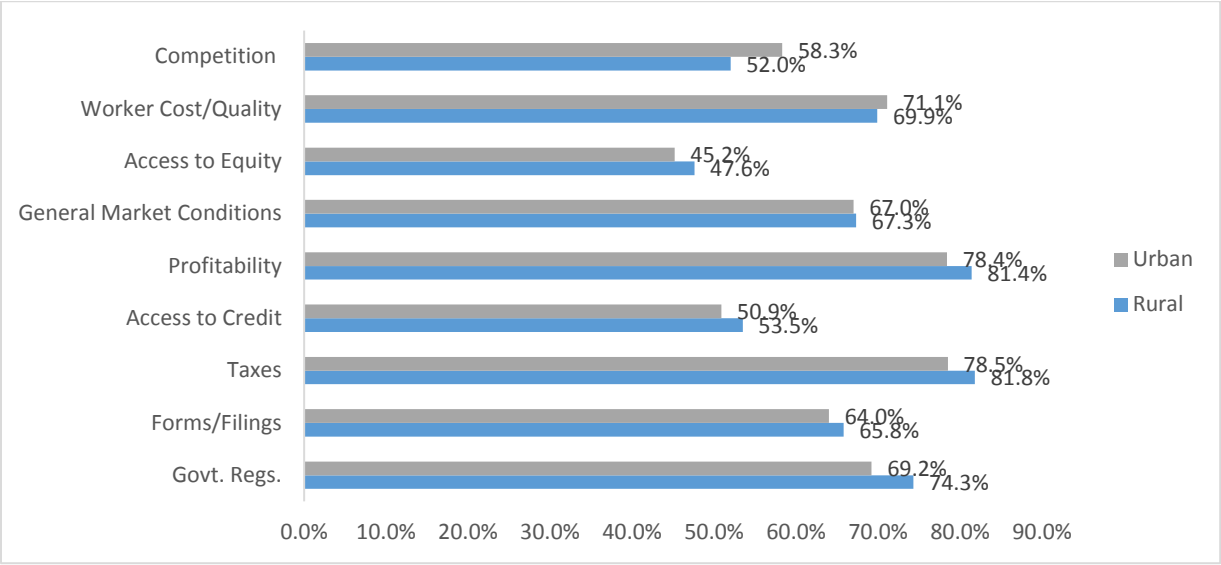
Category	Early Stage	Ideation/ Conception	Past Early Stage/Self-Funded	Pre-Launch	Series A-funded	Series B-funded	Series C-funded
Govt. Regulations	63.9%	70.3%	73.2%	62.0%	68.5%	69.6%	74.8%
Forms/Filings	61.3%	70.3%	66.8%	68.0%	52.8%	62.5%	64.1%
Taxes	73.1%	73.4%	83.6%	68.0%	69.7%	76.8%	85.0%
Access to Credit	63.6%	62.5%	47.9%	58.0%	48.3%	48.2%	42.2%
Profitability	80.5%	81.3%	79.6%	68.0%	68.5%	80.4%	78.6%
General Market Conditions	65.3%	68.8%	69.0%	60.0%	59.6%	64.3%	68.9%
Access to Equity	58.5%	59.4%	39.7%	60.0%	43.8%	51.8%	35.0%
Worker Cost/Quality	63.0%	60.9%	73.4%	66.0%	66.3%	78.6%	78.6%
Competition	55.9%	57.8%	54.6%	44.0%	59.6%	51.8%	64.1%

Other than in the areas of competition and the cost and quality of workers, businesses in rural areas tended to be more concerned or highly concerned about each issue than those in urban areas. The percentage of rural respondents concerned or highly concerned about government regulations was five percentage points more than those in urban areas, and those in rural areas concerned or highly concerned about taxes was three percentage points more than urban areas. Concerns about profitability, access to credit, and access to equity also were two to three percentage points higher for rural businesses than urban. While concerns about worker cost/quality and general market conditions were about the same for

[4] Excludes blank responses.

rural and urban businesses, urban businesses were more than six percentage points more likely to be concerned about competition than rural businesses. This may be due to urban areas having more concentrated areas of similar businesses than in rural areas.

Figure 2.17: Percent Concerned/Highly Concerned about Issues by Location



Perceptions of Local Entrepreneur/Startup Community

Respondents were asked to rate their levels of agreement with several statements to describe their perceptions of their local entrepreneur/startup community. With each category, there was neither a majority of respondents agreeing nor disagreeing with the statements. Interestingly, for each statement, between twenty-two-and-a-half percent (22.5%) and twenty-eight-and-a-half percent (28.5%) reported neutrality (neither agree nor disagree), and between eleven percent (11%) to fourteen percent (14%) indicated being unsure.[5] As such, this may suggest that respondents are not as familiar with their local entrepreneur or startup communities. This estimation may be supported especially when looking at "unsure" responses by stage of business development—businesses in the ideation or conception phase were the most likely to select "unsure", with between sixteen percent (16%) to twenty-two percent (22%) of respondents selecting "unsure" across categories.

Just under forty percent (40%) of respondents reported that they feel their community has a collaborative culture, and thirty-eight percent (38%) indicated that their community connects them with other professionals conducting similar work. Under one-quarter indicated that they feel their community can help them find funding, which could be perceived as a barrier to growing one's business. In this category, one-third of respondents disagreed or strongly disagreed that their community helps them find funding, which was the largest percentage of disagreement for all categories. Thirty percent (30%) reported that

[5] Comparatively, for questions in the previous section (asking about level of concern on issues), between 11%-26% reported neutrality (neither concerned nor unconcerned), with most issues falling below 20% of respondents reporting neutrality, and less than three percent reported being unsure in any given issue category (with the exception of access to equity, with 5% reporting being unsure).

they agreed that their community offers experienced mentors, while another thirty (30%) disagreed with this statement.

Figure 2.18: Respondents' Perceptions of Local Entrepreneur/Startup Community

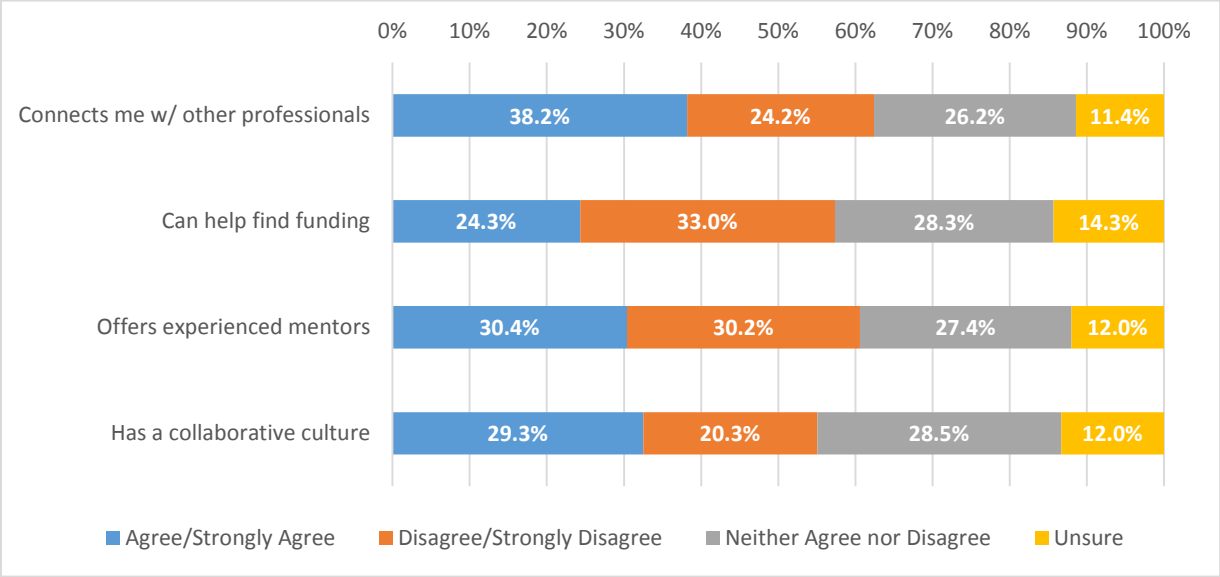


Table 2.5 reports community perceptions by stage of development, with the percentage of respondents agreeing (SA/A) or disagreeing (D/SD) with each statement. There are some marked differences in responses based on stage of business development.

While half or just over half of Series B and pre-launch businesses believe their community has a collaborative culture, only thirty-four percent (34%) and thirty-six percent (36%) of Series C and past early stage businesses feel this way. However, these groups also had a high level of neutrality on this question, with thirty-two percent (32%) of past early stage respondents and thirty-two percent (32%) of Series C respondents indicating they neither agreed nor disagreed. Series A-funded respondents had the highest level of disagreement on this question, though less than one-quarter disagreed. Neutral and unsure responses for this question ranged from twenty-seven percent (27%) (Series B-funded) to forty-six percent (46%) (Series C-funded).

Businesses in the ideation or conception phase were the least likely to agree that their communities offer experienced mentors; however, they were also the most likely to be unsure or neutral on this question (thirty-three percent (33%) neither agreed nor disagreed, and twenty-two (22%) were unsure). As previously noted, this may be due to a lack of knowledge of their entrepreneurial communities for companies at this stage. They may have interacted less within the community or may have less information that companies at later stages of development. Series C, Series A, and businesses in the past early stage were most likely to disagree that their communities offer mentors, although disagreement still amounted to less than one-third of respondents in each of the categories. Companies in the pre-launch stage were most likely to agree (44%) and least likely to be neutral or unsure, suggesting that businesses in this phase may be the most aware of these mentoring resources and the most likely to be accessing them.

Companies in the past early stage were least likely to agree that their communities can help them find funding; again, however, this group also had the highest percentage of neutral or unsure responses (thirty-one percent (31%) neutral and fifteen percent (15%) unsure). Businesses in the pre-launch and Series B-funded phases were mostly likely to agree with this statement (both at thirty-six percent (36%)). For five groups (all but pre-launch and Series B), "unsure" responses were twelve percent (12%) or higher (between twelve percent (12%) to nineteen percent (19%)), suggesting that businesses may not be aware of funding opportunities in their communities.

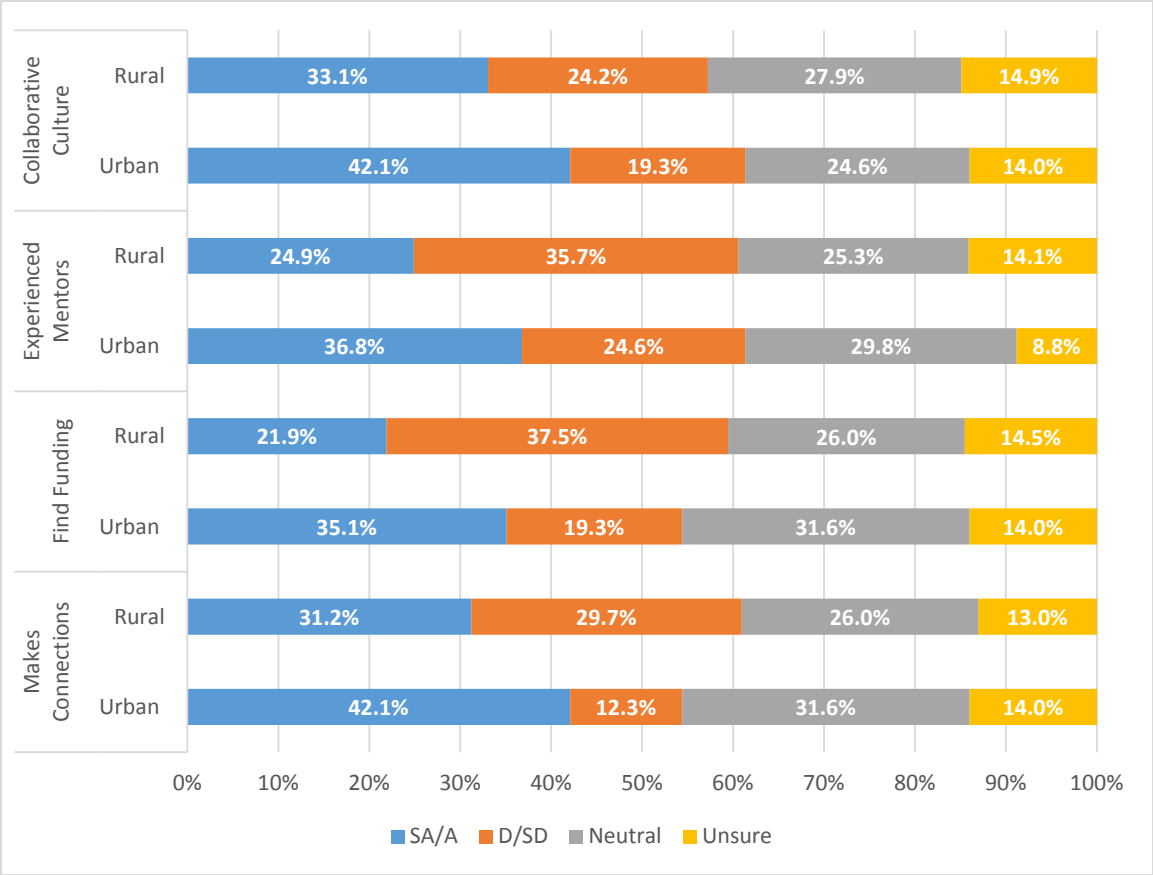
Table 2.5: Community Perceptions by Stage of Development[6]

Category	Response	Early Stage	Ideation/ Conception	Past Early Stage	Pre-Launch (Formation)	Series A-funded	Series B-funded	Series C-funded
Collaborative Culture	SA/A	44.1%	45.3%	35.7%	50.0%	38.2%	51.8%	34.0%
	D/SD	21.5%	18.8%	19.4%	20.0%	22.5%	21.4%	19.9%
	N/DK	34.4%	35.9%	44.9%	30.0%	39.3%	26.8%	46.1%
Offers Experienced Mentors	SA/A	37.2%	20.3%	28.3%	44.0%	27.0%	26.8%	27.2%
	D/SD	27.5%	25.0%	31.8%	28.0%	31.5%	28.6%	32.0%
	N/DK	35.2%	54.7%	39.9%	28.0%	41.6%	44.6%	40.8%
Can Help Find Funding	SA/A	26.9%	32.8%	19.9%	36.0%	24.7%	35.7%	23.8%
	D/SD	35.2%	23.4%	34.5%	28.0%	40.4%	30.4%	26.7%
	N/DK	37.8%	43.8%	45.6%	36.0%	34.8%	33.9%	49.5%
Connects Me w/ Other Professionals	SA/A	45.3%	29.7%	35.3%	42.0%	42.7%	37.5%	34.5%
	D/SD	24.4%	20.3%	25.6%	18.0%	24.7%	28.6%	20.9%
	N/DK	30.4%	50.0%	39.0%	40.0%	32.6%	33.9%	44.7%

Finally, while over forty percent (40%) of respondents in the early stage, pre-launch, and Series A-funded groups agreed that their communities connect them with other professionals, only thirty percent (30%) of those in the ideation/conception phase agreed. However, this group also had the highest level of neutrality or unsureness (twenty-two percent (22%) unsure and twenty-eight percent (28%) neutral), again suggesting that businesses particularly at this phase may be unaware of opportunities to connect within their communities.

[6] Excludes blank responses. SA/A = strongly agree or agree; D/SD = disagree/strongly disagree; N/DK = neutral or do not know/unsure.

Figure 2.19: Perception of Community Resources by Business Location



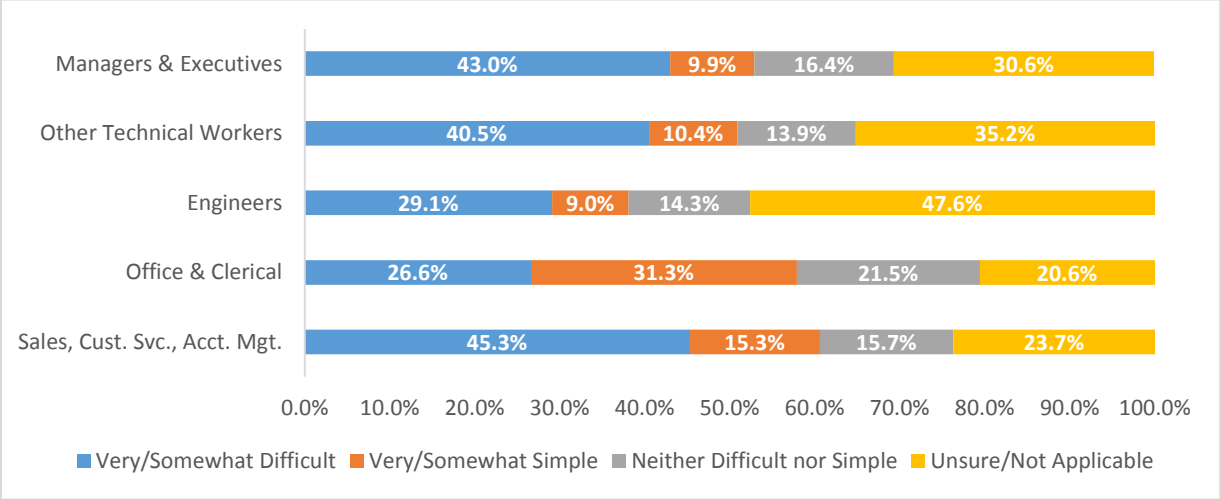
When examining rural vs. urban businesses, there are some interesting differences in community perceptions. Across all questions, rural businesses were less likely to agree with statements than urban communities and generally were more likely to disagree with all of the statements. The responses suggest that across the board, rural businesses find fewer opportunities for support within their communities.

The most pronounced differences in levels of agreement were in finding funding to grow the business (a thirteen (13) percentage point difference between urban and rural) and having access to experienced mentors (a twelve (12) percentage point difference. Lack of access to mentors in rural areas is supported by data from the Resource survey, where only forty-six percent (46%) of resource providers indicated offering mentoring, compared to sixty-four percent (64%) of resource providers in urban areas. Rural businesses were eighteen (18) percentage points higher in disagreeing that their communities can help them find funding, and seventeen-and-a-half (17.5) percentage points higher in disagreeing that their communities can help them connect to other professionals. Challenges in obtaining funding were also noted by resource providers (see the Resource section), with eighty-five-and-a-half percent (88.5%) of resource providers in rural areas noting that finding and accessing funding is one of the greatest challenges that startups and entrepreneurs face. However, funding is also an issue in urban areas—eighty-five percent (85%) of urban resource providers noted this as one of the three biggest challenges that businesses face. Finally, rural startup businesses were five percentage points more likely to be unsure of whether their community offers access to experienced mentors, which may suggest a lack of knowledge of such resources in their areas.

Workforce & Compensation

Experiences Finding Workers

Figure 2.20: Experiences Finding Workers (All Responses)[7]



Respondents were asked about their experiences finding workers in certain areas. Respondents had the option of selecting very difficult, somewhat difficult, neither difficult nor simple, somewhat simple, or very simple, as well as selecting unsure or not applicable. Figure 2.20 demonstrates the results for each position, including "unsure or not applicable" responses. However, because certain positions (especially other technical workers, such as programmers and technicians; engineers; and managers and executives) tended to have fairly high percentages of "unsure or not applicable" responses (suggesting, in this case, that these positions were not applicable to the respondents), further analyses in this section eliminate "unsure or not applicable" respondents from the denominator.

[7] Excludes blank responses

Table 2.6: Experiences Finding Workers (Excluding "Unsure/Not Applicable" Responses)[8]

Worker Category	Very/Somewhat Difficult	Very/Somewhat Simple	Neither Difficult nor Simple
Sales, Customer Service, Account Management	59.3%	20.1%	20.6%
Office & Clerical	33.5%	39.4%	27.0%
Engineers	55.5%	17.2%	27.3%
Other Technical Workers	62.5%	16.1%	21.4%
Managers & Executives	62.0%	14.3%	23.7%

When excluding "unsure or not applicable" responses, it is clearer to see that technical worker positions are the most difficult to fill, followed by managers and executives, and then sales, customer service, and account management positions. Office and clerical workers likely have the least amount of education and/or educational requirements for jobs and therefore are likely the easiest to fill. For those that described their business as high-tech, the most difficult role to fill was in the other technical workers category (sixty-six percent (66%) indicating difficult or very difficult), followed by the engineering category, at sixty-three prevent (63%). Sixty percent (60%) of high-tech respondents noted difficulty filling manager and executive roles, followed by fifty-seven percent (57%) of respondents noting difficulty in filling sales, customer service, or account management positions.

As shown in Table 2.7, when looking at stage of business development, companies that were past the early stage, or Series A-, B-, or C-funded businesses, tended to report the most difficulty finding employees. This is likely because these companies tend to employ more people than those in the ideation/conception, early stage, or pre-launch phases. Eighty-six percent (86%) of pre-launch companies reported having five (5) or fewer employees; eighty-one percent (81%) of those in ideation or conception had five or fewer; and seventy-seven-and-a-half percent (77.5%) of those in early stage reported five (5) or fewer. In fact, sixty-one percent (61%) of those in the ideation or conception phase reported working alone, as did forty percent (40%) of those in pre-launch and thirty-five percent (35%) of those in early stage.

Disaggregation by stage of business development for this section should be viewed with caution, as between thirty-seven (37%) to forty-four percent (44%) of businesses reporting only one employee (themselves) still answered the questions about difficulty filling positions and may have been speculating about difficulty rather than basing responses on actual experiences. This is particularly the case for businesses in the early stage, pre-launch, and ideation and conception phases. This may also in part explain the relatively high percentages of "neither difficult nor simple" responses, as, when blank and not applicable responses are removed, businesses that employ only one person tended to have the highest percentages of "neither difficult nor simple" responses. This indicates that those who responded may have been using the neutral response as a "do not know" or "not applicable" response. Due to these

[8] Excludes blank responses.

caveats, the analysis below focuses on companies in the past early stage and Series A-, B-, and C-funded companies.

Table 2.7: Experiences Finding Workers by Stage of Business Development[9]

Worker Category	Response Category [10]	Early Stage	Ideation/ Conception	Past Early Stage	Pre-Launch (Formation)	Series A-funded	Series B-funded	Series C-funded
Sales, Customer Service, Account Mgmt.	VD/D	51.6%	53.5%	61.5%	42.9%	64.3%	64.7%	66.1%
	VS/S	25.6%	18.6%	19.0%	37.1%	18.6%	15.7%	13.6%
	NDNS	22.8%	27.9%	19.5%	20.0%	17.1%	19.6%	20.3%
Office & Clerical	VD/D	26.5%	24.4%	36.7%	20.0%	34.6%	41.2%	37.7%
	VS/S	44.2%	48.9%	36.0%	57.1%	37.2%	31.4%	38.8%
	NDNS	29.2%	26.7%	27.3%	22.9%	28.2%	27.5%	23.5%
Engineers	VD/D	52.5%	50.0%	58.9%	44.1%	59.6%	54.3%	56.6%
	VS/S	20.7%	13.2%	13.8%	23.5%	12.8%	14.3%	21.7%
	NDNS	26.8%	36.8%	27.3%	32.4%	27.7%	31.4%	21.7%
Other Technical Workers	VD/D	55.0%	56.1%	67.6%	50.0%	61.7%	63.4%	67.2%
	VS/S	21.3%	17.1%	12.5%	32.4%	18.3%	12.2%	12.2%
	NDNS	23.8%	26.8%	19.9%	17.6%	20.0%	24.4%	20.6%
Managers & Executives	VD/D	52.5%	55.3%	65.1%	38.2%	70.3%	70.2%	69.7%
	VS/S	19.2%	15.8%	12.2%	29.4%	14.1%	8.5%	10.3%
	NDNS	28.3%	28.9%	22.7%	32.4%	15.6%	21.3%	20.0%

For Series A-, B-, and C-funded businesses, hiring managers and executives was the most difficult. For Series A- and B-funded businesses, hiring sales, customer service, and account management was the second most difficult, followed by other technical workers. For Series C-funded businesses, difficulty hiring other technical workers slightly edged out difficulty hiring sales, customer service, and account management professionals. For those past the early stage, hiring other technical workers was reported as the most difficult to hire, followed by managers and executives and then sales, customer service, and account management professionals.

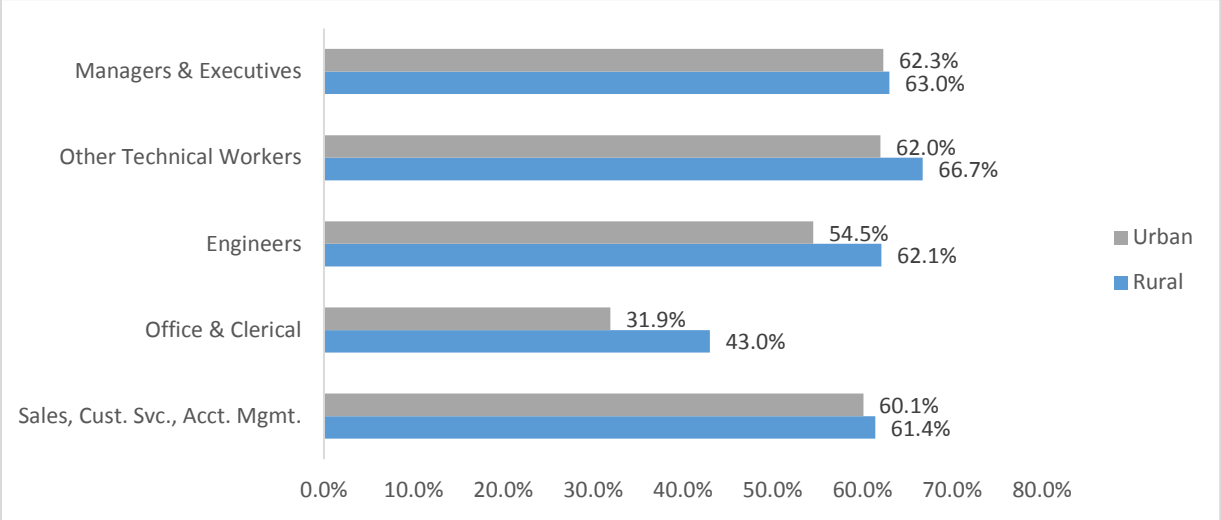
When looking by location, both urban and rural businesses reported that hiring managers and executives and other technical workers tended to be the most difficult. However, rural businesses reported more difficulty in hiring all positions across the board. This is likely due to urban areas having a larger population

[9] Excludes blank responses and "unsure/not applicable" responses. VD/D = very difficult or difficult; VS/S = very simple or simple; NDNS = neither difficult nor simple (AKA neutral).

[10] VD/D = very difficult or difficult, VS/S = very simple or simple, and NDNS = neither difficult nor simple.

of skilled workers from which to choose. The difference in hiring difficulty between urban and rural businesses was especially pronounced in the areas of engineers and office and clerical staff. As indicated in the Resources section, while thirty-eight-and-a-half percent (38.5%) of rural resource providers noted that finding skilled, qualified workers is a challenge for the entrepreneurs and starts-ups they serve, only twenty-three percent (23%) of urban resource providers noted this as one of the top three challenges.

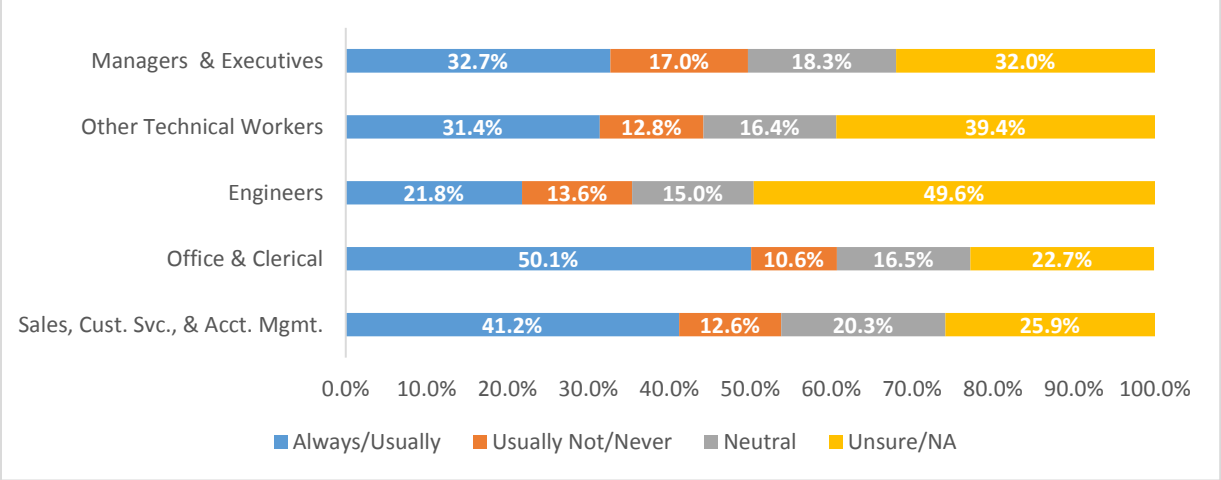
Figure 2.21: Difficulty Hiring by Location (Percentages Indicate Those Noting Very Difficult/Difficult)



Competitive Compensation

Respondents were asked to indicate the extent to which they can provide competitive compensation in various employment categories. Figure 2.22 provides the percentage of responses in each category including those who reported unsure or not applicable. However, as noted in the previous section further analyses on compensation focuses solely on those respondents who selected always, usually, neutral (sometimes yes and sometimes no), usually not, or never responses.

Figure 2.22: Ability to Provide Compensation (All Responses)



When excluding "unsure or not applicable" responses, less than half of respondents indicated that they can always or usually provide competitive compensation for engineers, at forty-three percent (43%), and managers and executives, at forty-eight percent (48%). Twenty-seven percent (27%) of respondents noted that they struggle to provide competitive compensation to engineers, and one-quarter said they can usually not or never competitively compensate managers and executives. Office and clerical workers are the easiest group to competitively compensate, with nearly two-thirds indicating they can do so. Given that workers in this category likely require less education and/or training than workers in other categories, these results are unsurprising.

Table 2.8: Ability to Provide Compensation (Excluding "Unsure/Not Applicable" Responses)[11]

Worker Category	Always/Usually	Usually Not/Never	Neutral
Sales, Customer Service, Account Mgmt.	55.6%	17.0%	27.4%
Office & Clerical	64.9%	13.8%	21.4%
Engineers	43.2%	27.0%	29.8%
Other Technical Workers	51.8%	21.2%	27.0%
Managers & Executives	48.1%	25.0%	26.9%

When looking at compensation by stage of business development, Series C-funded businesses tended to be the most likely to indicate they could provide competitive funds for all employment categories, exceeding sixty percent (60%) in all occupation types. Series B-funded exceeded fifty-five percent (55%) in all categories, and Series A were at or above fifty percent (50%) in all categories except managers and executives. Managers and executives and engineers were the two occupational categories that Series A-, B-, and C-funded businesses had the most difficulty offering competitive compensation, followed by other technical workers. However, for the most part, Series A-, B-, and C-funded companies reported that they were generally able to offer competitive wages for all occupational categories, with less than one-quarter reporting that they could never or not usually offer competitive wages in any category. Companies past the early stage tended to report more difficulty in offering competitive wages than Series A, B, and C companies. However, it should be noted that for past early stages and Series A/B-funded companies, in particular, the percentage of neutral responses for each occupational category was relatively high. This could mean that these companies sometimes have difficulties and it depends on the person being hired, or it could mean that the companies were using the neutral response as a proxy for not knowing or speculating.

[11] Excludes blank responses.

Table 2.9: Ability to Provide Competitive Compensation by Stage of Business Development[12]

Worker Category	Response Category	Early Stage	Ideation/ Conception	Past Early Stage	Pre-Launch (Formation)	Series A-funded	Series B-funded	Series C-funded
Sales, Cust. Svc., Acct. Mgt.	A/U	49.8%	41.0%	54.9%	50.0%	65.2%	68.6%	62.2%
	NU/N	20.9%	17.9%	17.6%	21.9%	11.6%	3.9%	15.1%
	SYSN	29.3%	41.0%	27.5%	28.1%	23.2%	27.5%	22.7%
Office & Clerical	A/U	59.0%	56.1%	65.2%	53.1%	63.0%	75.0%	74.3%
	NU/N	20.3%	19.5%	12.8%	18.8%	15.1%	4.2%	7.1%
	SYSN	20.7%	24.4%	22.1%	28.1%	21.9%	20.8%	18.6%
Engineers	A/U	33.9%	33.3%	41.3%	40.0%	50.0%	57.1%	62.6%
	NU/N	31.7%	36.4%	28.5%	30.0%	22.7%	17.1%	15.2%
	SYSN	34.4%	30.3%	30.2%	30.0%	27.3%	25.7%	22.2%
Other Technical Workers	A/U	42.2%	40.5%	51.3%	44.8%	55.8%	67.5%	68.2%
	NU/N	24.9%	37.8%	24.2%	20.7%	15.4%	5.0%	9.3%
	SYSN	32.9%	21.6%	24.5%	34.5%	28.8%	27.5%	22.5%
Managers & Executives	A/U	38.6%	51.4%	46.3%	50.0%	45.5%	56.5%	63.9%
	NU/N	30.7%	21.6%	27.8%	26.7%	24.2%	13.0%	13.9%
	SYSN	30.7%	27.0%	25.8%	23.3%	30.3%	30.4%	22.2%

When looking by locality, businesses in urban areas were, across the board, more likely to report that they could competitively compensate in all areas. The biggest differences were in managers and executives and office and clerical, although rural businesses reported that they were least often able to competitively compensate engineers. Urban businesses were also less likely to report that they could not usually or never competitively compensate in each occupational category than rural businesses. To illustrate, while thirty-three percent (33%) of rural businesses indicated that they could never or not usually competitively compensate engineers, only twenty-six percent (26%) of urban businesses reported this. Twenty-four percent (24%) of rural businesses reported that they could never or not usually competitively compensate other technical workers, compared to twenty percent (20%) of urban businesses.

[12] Excludes blank responses and "unsure/not applicable" responses. A/U = always/usually; NU/N= not usually or never; SYSN = sometimes yes, sometimes no (AKA neutral).

Figure 2.23: Ability to Competitively Compensate by Location (Those Reporting Always/Usually)

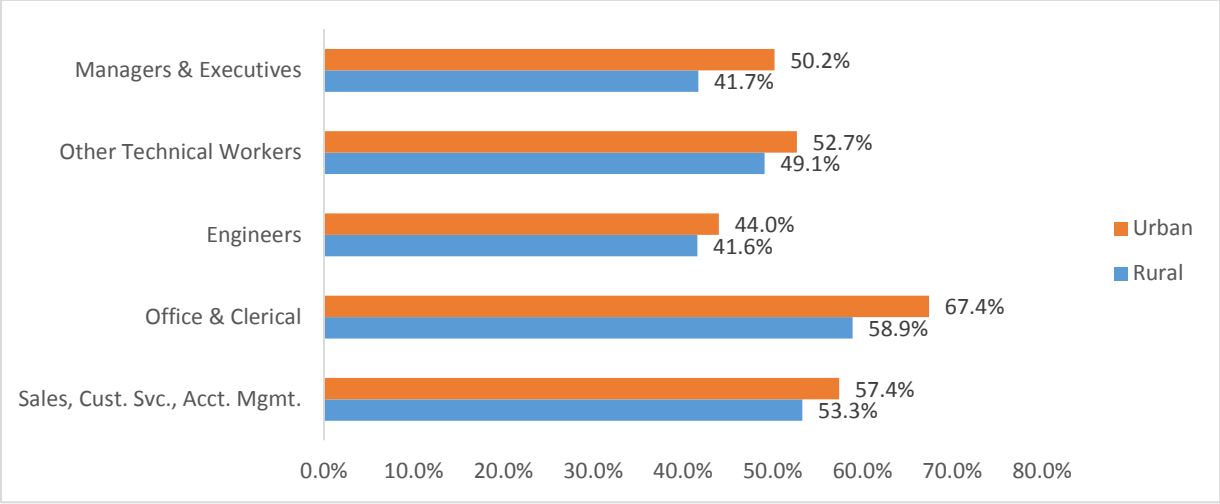
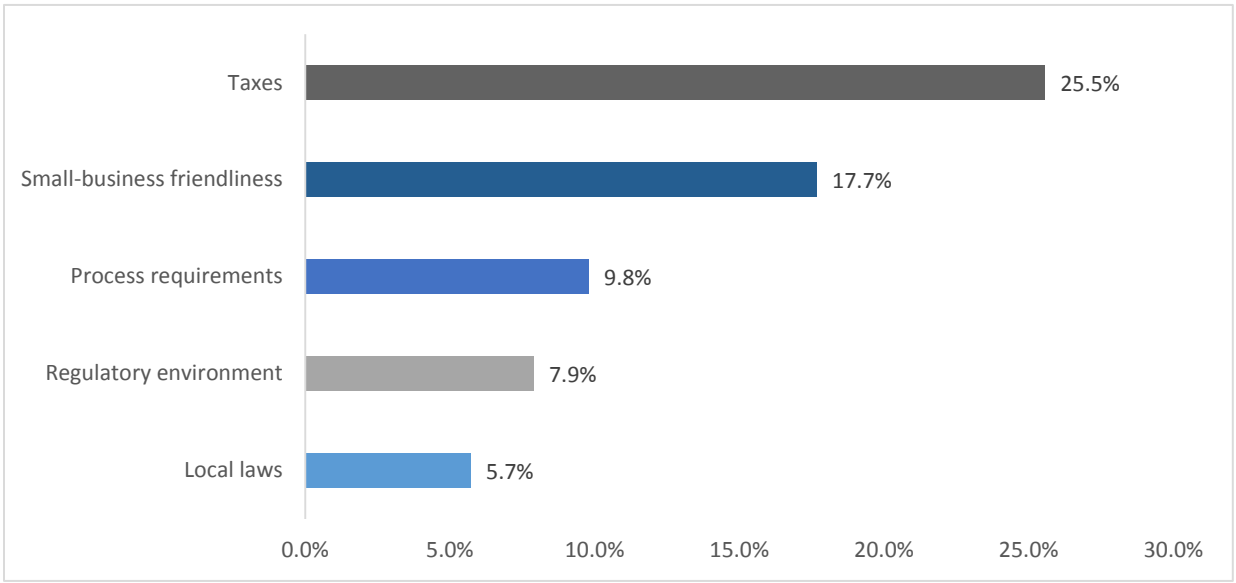


Figure 2.24: Percentage of Start-Ups Identifying Challenges in Each Category



RESOURCE PROVIDERS SURVEY RESULTS

Two-hundred forty organizations responded to a survey about the types of resources available to startups and entrepreneurs, as well as the types of challenges that these businesses might face.

Provider Demographics

Of the two-hundred and forty (240) respondents, seventy-one (71%) serve urban areas; twenty-two (22%) serve rural areas, and seven (7%) reported that they do not know the classification of the area they serve. Just under three-quarters (74%) have been in existence ten (10) years or more; only three (3%) have been open less than one year. Just under half (47%) of providers reported having fifty (50) or fewer registered entrepreneurs, while 13% had more than 1,000 registered.

Figure 2.25:
Number of Years in Existence

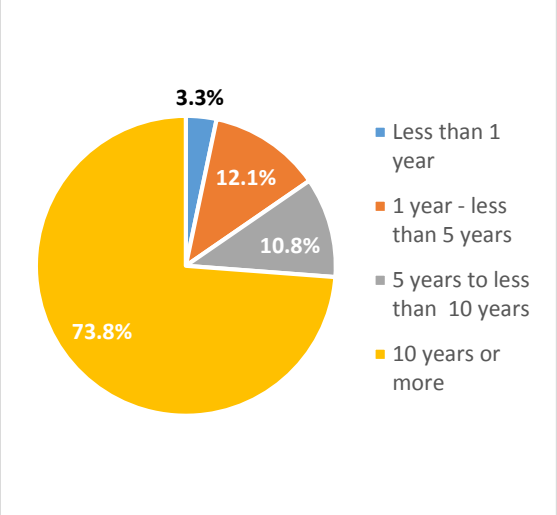
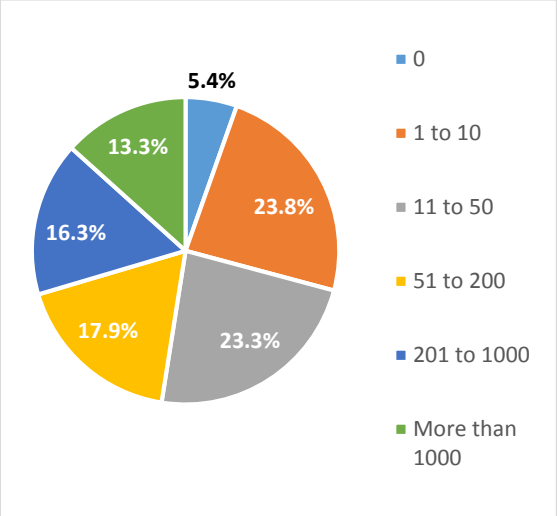
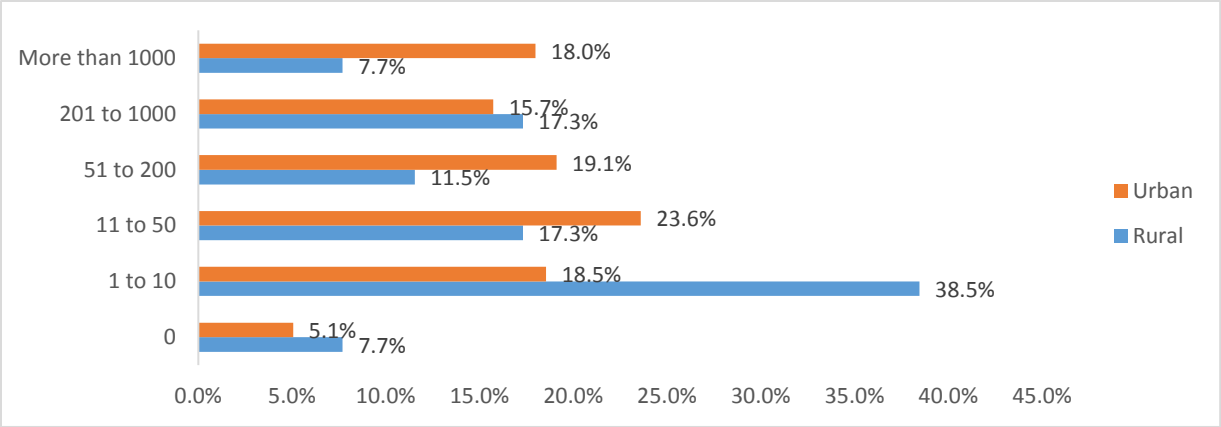


Figure 2.26:
Number of Registered Entrepreneurs



Not surprisingly given that urban areas have higher populations, providers in urban areas were more likely to serve larger numbers of entrepreneurs. While 34% of resource providers in urban areas noted having 200 or more registered entrepreneurs, only 25% of providers in rural areas did.

Figure 2.27: Number of Registered Entrepreneurs by Provider Market

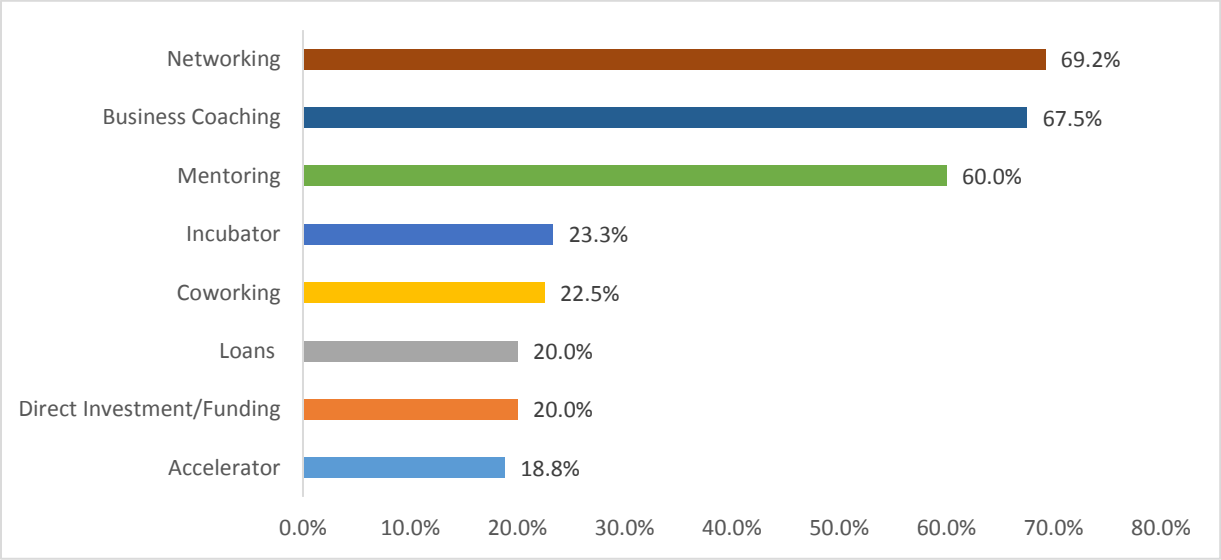


Resources Offered

Of the two-hundred and forty (240) respondents, sixty-nine percent (69%) indicated that they offer networking resources, while sixty-seven and a half percent (67.5%) offer business coaching and sixty percent (60%) offer mentoring. As noted in the next section (Startup Challenges), resource providers indicated that two of the top three areas in which entrepreneurs and startups struggle are in business development, such as creating marketing plans and identifying the market, and business process knowledge, such as creating business plans, navigating legal and accounting requirements, etc. As such, resource providers try to meet these needs through connecting startups with each other and offering training, coaching, and mentoring.

Respondents were also given the opportunity to identify any other services offered (in addition to the ones listed in Figure 2.28). Other services listed included education and training; assistance with business development (such as business strategy and marketing); assistance with initial business set-up (such as legal or accounting advice, business plan creation, identifying facilities and technology); and assistance with talent acquisition.

Figure 2.28: Types of Resources Offered



The majority of respondents offered one, two, or three of the listed resources, with twenty percent (20%) offering one, twenty-two percent (22.5%) offering two, and twenty-four percent (24%) offering three.

Startups and entrepreneurs in urban areas are more likely to have access to a wider variety of services. Just over half (52%) of resource providers in rural areas offer one or two services, compared to forty percent (40%) of those in urban areas. In contrast, twenty-one percent (21%) of providers in urban areas offer five or more services, compared to just eleven and a half percent (11.5%) in urban areas.

Figure 2.29: Number of Resources Offered

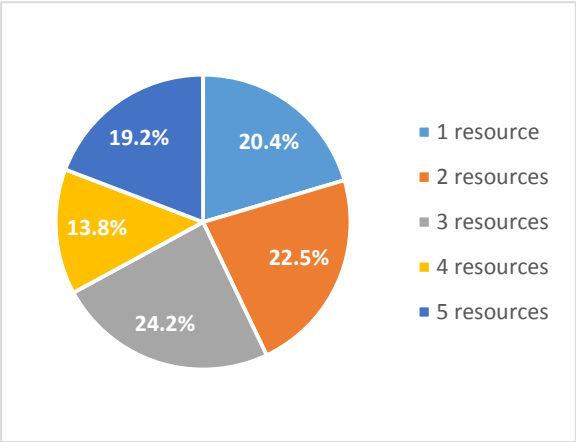
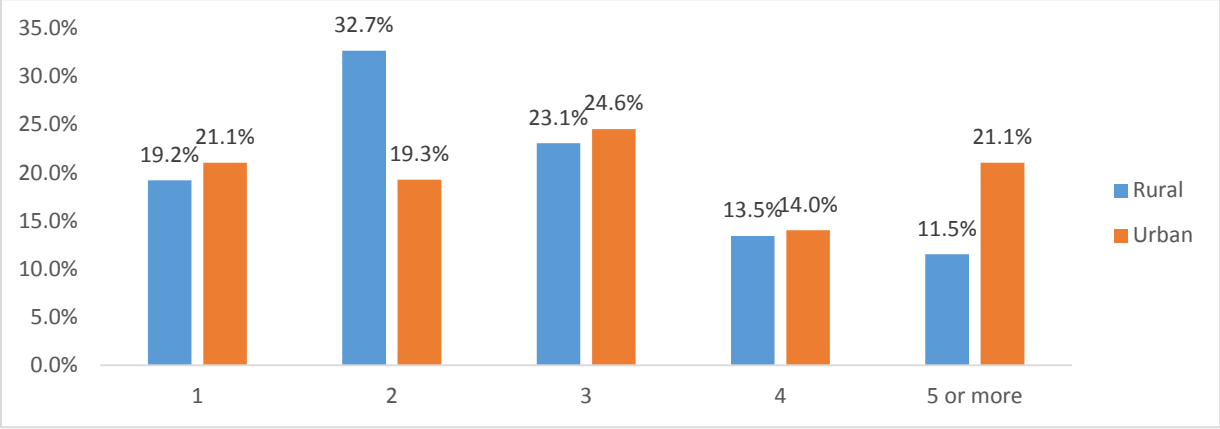


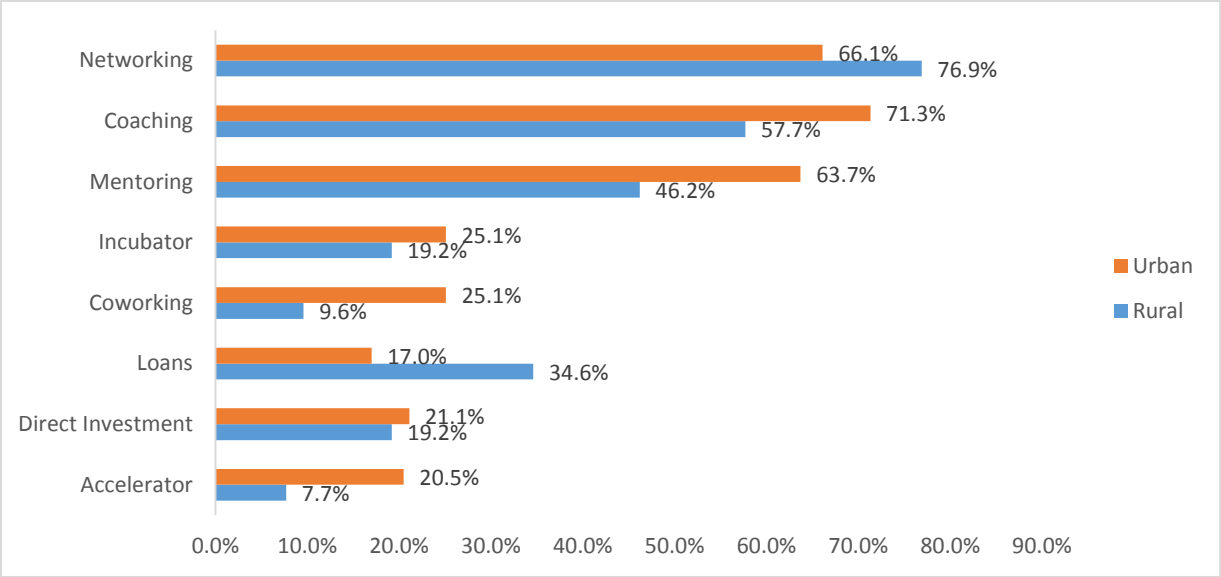
Figure 2.30:
Number of Resources Offered by Location



In most cases, resources offered were more prominent in urban than rural areas, with the exception of networking and loans. Resource providers in urban areas were far more likely than in rural areas to offer mentoring, at seventeen and a half (17.5) percentage points higher; coworking, at fifteen and a half (15.5) percentage points higher; coaching, at fourteen (14) percentage points higher; and accelerators, at thirteen (13) percentage points higher.

Interestingly, resource providers in rural areas were far more likely to offer loans (including microloans), eighteen percent (18%) more likely, and networking, at eleven percent (11%) more likely. Less than ten percent (10%) of resource providers in rural areas offered coworking or accelerator resources, suggesting that startup businesses in rural areas may struggle to access these services. Indeed, as noted in the next section, seventeen percent (17%) of resource providers in rural areas noted accessing affordable facilities as one of the top three challenges faced by startups and entrepreneurs, compared to just ten and a half percent (10.5%) of resource providers in urban areas.

Figure 2.31: Types of Resources Offered by Location



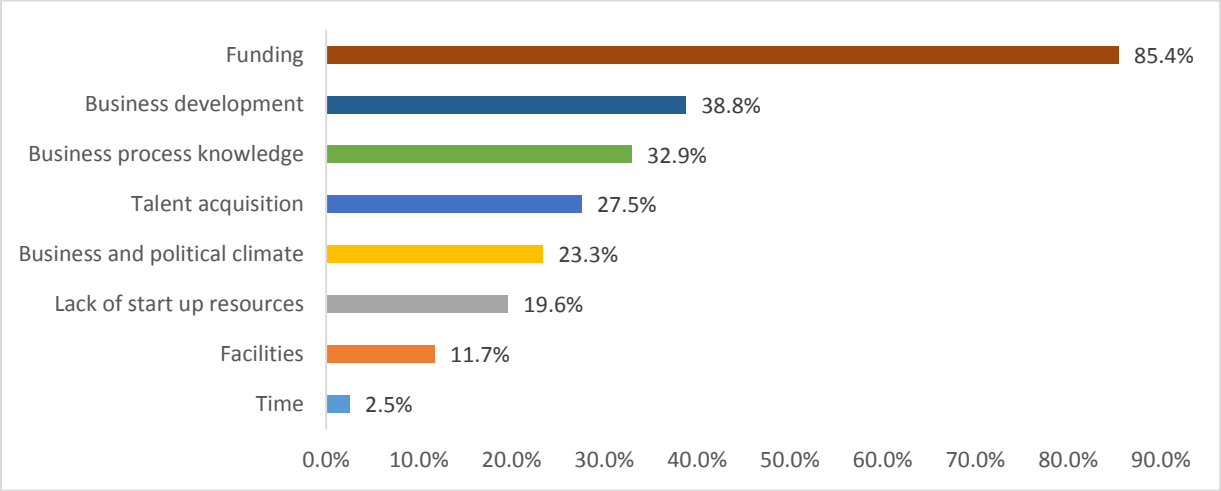
Startup Challenges

Respondents were asked to name the three biggest challenges that entrepreneurs and startups they work with typically identify. There were eight main themes that arose, as follows:

- Funding: respondents particularly identified access to initial startup capital, access to credit or loans, and access to equity funding as challenges.
- Business development: respondents noted challenges in creating and implementing marketing plans, identifying the appropriate market/niche for the business, and creating a business strategy and focus.
- Business process knowledge: respondents noted that entrepreneurs and startups typically have challenges in creating (or knowing how to create) business plans, and in navigating legal, accounting, and human resources requirements.
- Talent acquisition: respondents indicated that those they support face challenge in acquiring skilled and qualified labor that is reliable and stable.
- Business/political climate: respondents noted that laws and regulations, such as taxes, zoning regulations, paperwork, etc., are challenges. Others mentioned a lack of incentives or governmental support for startups.
- Resources for startups: the lack of non-financial resources for startups and entrepreneurs, such as mentoring, training, and networking opportunities can create challenges in knowing how to get started, as well as in growing the business.
- Facilities: access to affordable facilities, such as coworking spaces or low-cost rent opportunities, can create challenges for startups and entrepreneurs.
- Time: respondents indicated that lack of time and capacity can be challenges.

Figure 2.32 identifies the percentage of respondents that identified each theme. Note that respondents could select up to three themes; as such, percentages do not equal one-hundred percent (100%).

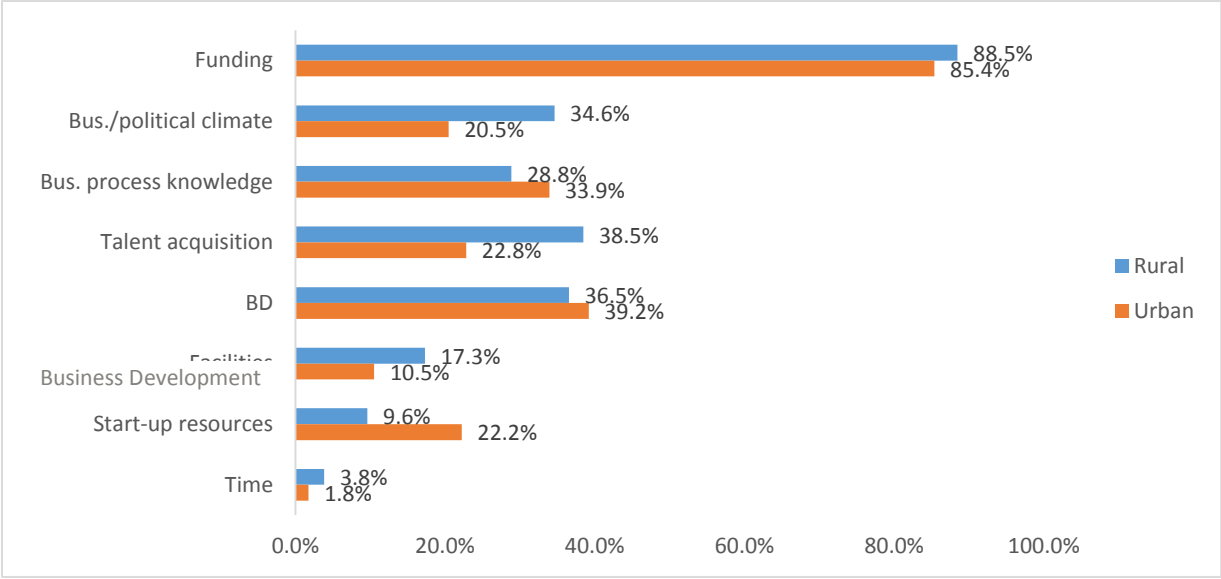
Figure 2.32: Top Challenges for Startups and Entrepreneurs



Resource providers in urban and rural areas had different perceptions on which issues were the most pressing, although over eighty-five percent (85%) of respondents in both rural and urban areas agreed that funding, including access to capital, equity funding, and loans and credit was a challenge. The most notable differences were in talent acquisition, business and political climate, and access to non-financial startup resources.

Rural resource providers were more likely than urban to report that talent acquisition was a challenge. In addition, rural resource providers were more likely to note that the business and political climate was a challenge, particularly taxes and regulations. Interestingly, urban providers were more likely to note that access to startup resources was a challenge, particularly networking opportunities. Given that fewer urban providers than rural providers noted that they offer networking services, this may be an area where there is opportunity for growth among urban providers.

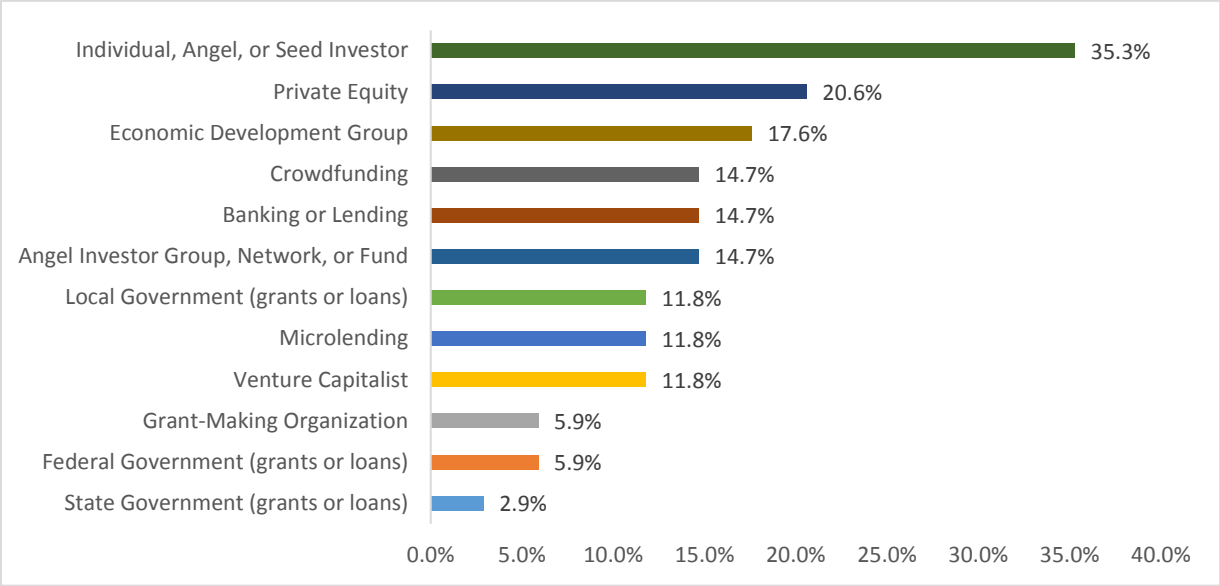
Figure 2.33: Top Challenges by Provider Location



INVESTOR SURVEY RESULTS

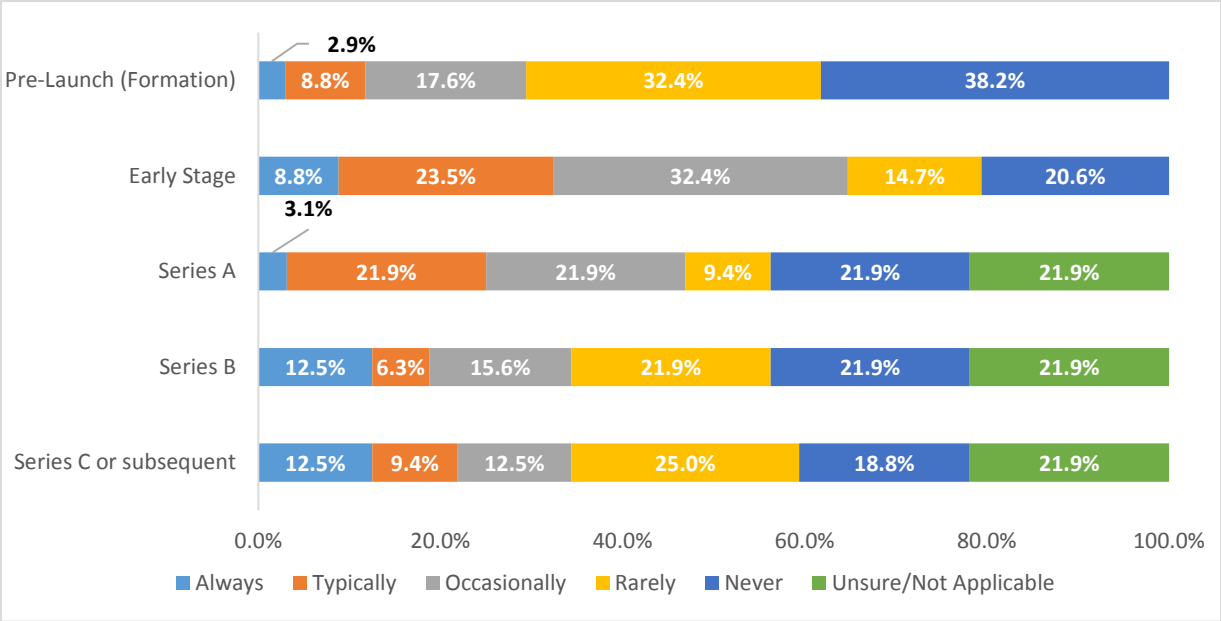
Thirty-four investors responded to a survey asking about types, amounts, and frequency of investment and/or funding offered, as well as reasons they may not be investing. The most common type of investment or fund represented was an individual, angel, or seed investor, with thirty-five percent (35%) in this category.[13] Federal and state government funding represented the smallest categories, at six percent (6%) and three percent (3%), respectively.

Figure 2.34: Type of Investment or Funding Source Offered



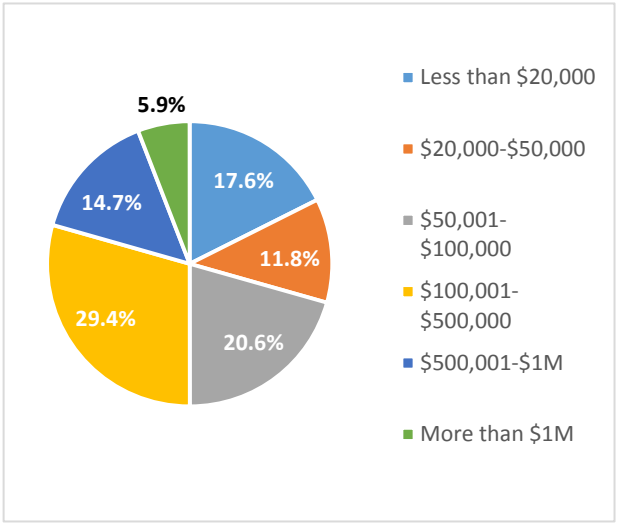
[13] Individual, angel or seed investors are individuals who invest their own money in startups in exchange or partial ownership (or equity). A more detailed explanation of this and other terms is provided in Appendix A.

Figure 2.35: Frequency of Investment Based on Development Stage



Investors were mostly likely to report that they "Always" or "Typically" fund companies that are at the early stage, thirty-two percent (32%), followed by Series A companies, twenty-five percent (25%). Only twelve percent (12%) of investors reported that they "Always" or "Typically" fund companies at the pre-launch (formation) phase. Seventy-one percent of investors reported they "Rarely" or "Never" fund companies at this phase. Figure 2.35 shows results with all responses included (including "Unsure" or "Not Applicable" responses).

Figure 2.36: Average Funding Amounts

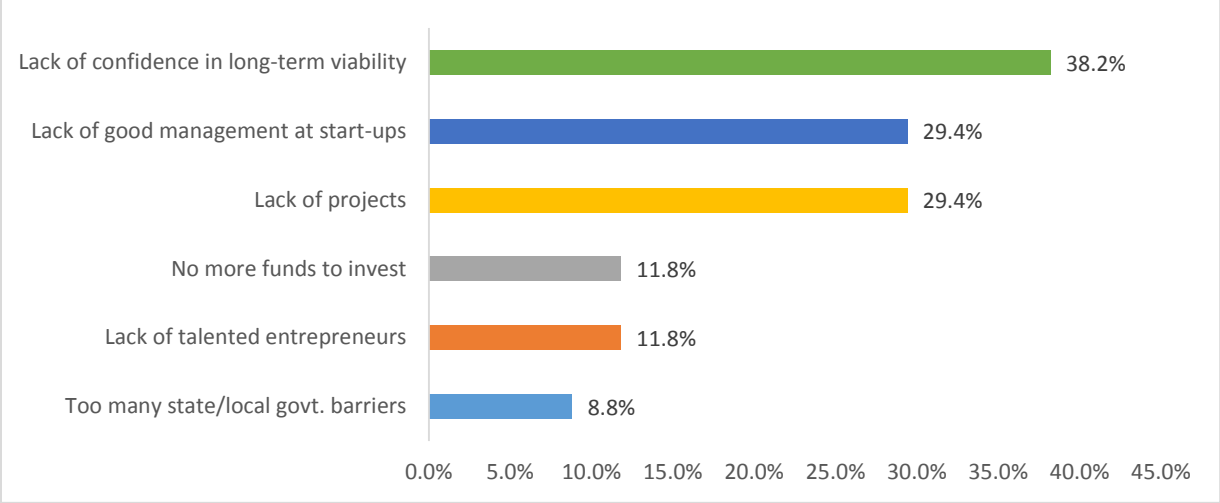


When "Unsure" or "Not Applicable" responses are excluded, forty-four percent (44%) of investors "Always" or "Typically" fund Series B companies; forty percent (40%) "Always" or "Typically" fund Series C companies; and thirty-two percent (32%) "Always" or "Typically" fund Series A companies.

When asked what the average amount of funding investors typically provided to startups, half of the respondents indicated that funding amounts were between fifty thousand and one dollars ($50,001) and five hundred thousand dollars ($500,000). Twenty-nine percent (29%) of respondents were between one hundred thousand and one dollars ($100,001) and five hundred thousand dollars ($500,000), followed by twenty-one percent (21%) between fifty thousand and one dollars ($50,001) and one hundred thousand dollars ($100,000).

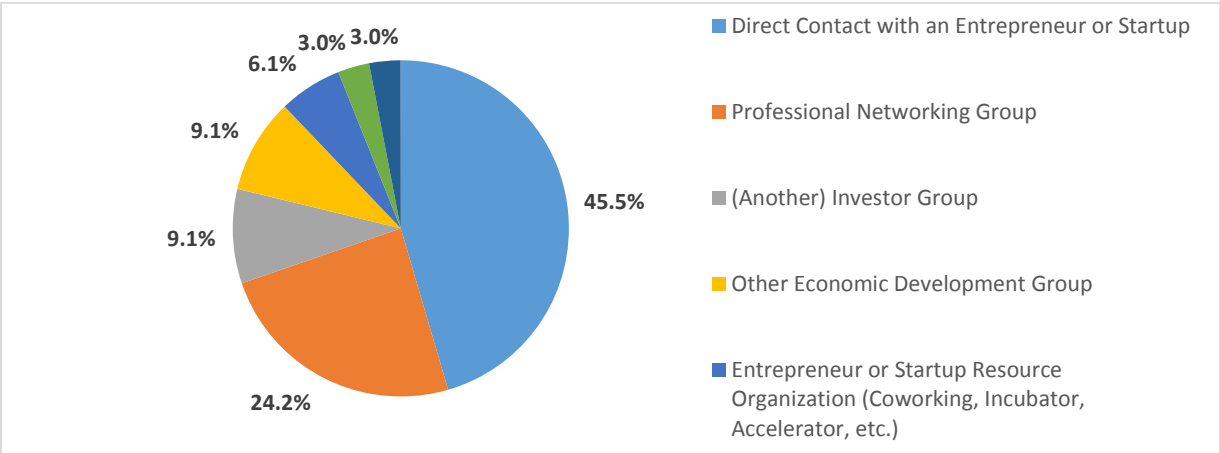
Investors were asked to select from reasons why they may not be investing in more entrepreneurs in Texas. The most common response selected was a lack of confidence in the long-term viability of the businesses, followed by a sense that startups lack good management or lack projects. Investors also were asked what type of information they share with entrepreneurs or startups that they are not able to invest in or fund. Those providing responses indicated that they typically offer as extensive feedback as they can, especially related to ways in which the entrepreneurs could improve their business plans or models, or ways in which they could improve their "sales pitch." Others indicated that they often refer the entrepreneurs to other potential sources of funding, including Small Business Administration (SBA) and Small Business Development Center (SBDC), Tax Increment Reinvestment Zone funding, angel networks, or banks.

Figure 2.37: Reasons for Not Investing in More Entrepreneurs in Texas



Finally, investors were asked how they typical find or get connected with investment opportunities in Texas. Just under half (fort-five and a half percent (45.5%)) noted that they had direct contact with an entrepreneur or startup, and twenty-four percent (24%) indicated that the contact came through a professional networking group.

Figure 2.38: Ways of Finding or Getting Connected



3. ECONOMIC IMPACT OF STARTUP FUNDING

ECONOMIC IMPACT EXPLANATION

One of the challenges of performing an economic impact analysis on the startup economy is in defining the term "startup[14]." There is no universally agreed upon definition of startup, and as such our business survey was not able to narrow in on a specific cohort of businesses that represent startups. However, when a business representative chooses to respond to a survey on the topic of startups, it is a clear indication that they consider their own businesses to be a startup. Based on this and the fact that the business survey gathered input from a large sample of representatives, it is assumed that the respondents to the business survey provide a representative glimpse into the startup world. Furthermore, the funding patterns observed among this group of businesses can be assumed to apply to startup businesses within the state, in general.

The intent of any economic impact analysis is to measure not just the dollars and jobs created by a particular business, but to isolate the extent of that activity that could not have happened "but for" that activity. In other words, we want to know to what extent that business provides a "net new" impact on the economy that would not have otherwise been generated. When it comes to startup enterprises, according to our research findings, most entrepreneurs have tapped all existing resources at their own disposal (savings accounts, family members, even in some cases credit cards and 401k's). As such it is easy to make the claim that, in the short-run, without the funding received from banks, angel investors, crowdfunding and all other sources, startups would not be able to continue functioning as a business. As such, TPMA has elected to count all forms of funding, both equity and debt, as stimulants of net new economic activity to the state.

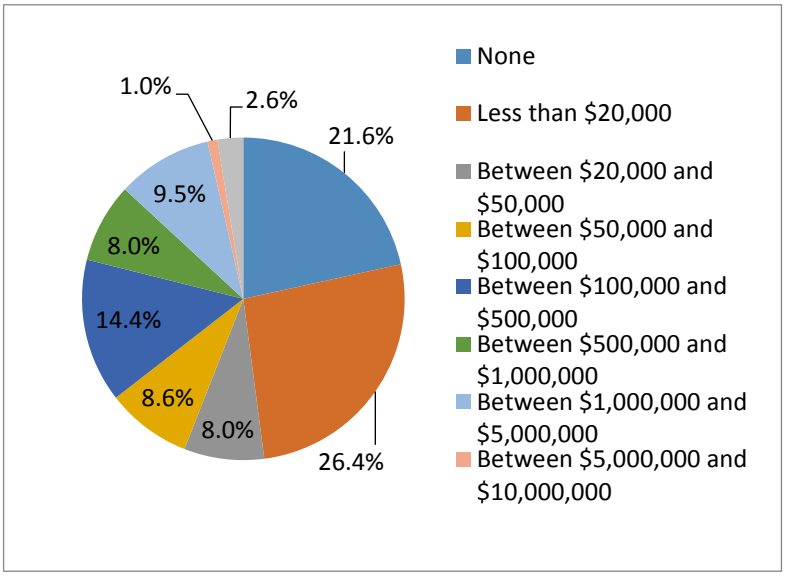
Another key feature of economic impact analysis is that it looks beyond the direct impact of a particular business and quantifies all the economic consequences of a business's increased activity. This category of effects is sometimes termed economic "ripple effects." As an example, for a startup business, this could mean that thanks to a fifty-five thousand dollar ($55,000) equity investment and a twenty-five thousand dollar ($25,000) bank loan, a physical therapy center is able to purchase office and exercise equipment, pay for rent and utilities, and employ staff members who will then in turn spend money on other items, such as groceries, mortgages, etc.

[14] A fuller definition of startups is offered in Appendix A of this report.

SURVEY DATA USED IN IMPACT ANALYSIS

A fuller explanation of how TPMA translated survey results into economic impacts is included in Appendix B of this report. In short, TPMA used the relatively large sample of responses to extrapolate trends that can also be assumed for the Texas economy at large. The direct economic impacts by industry were then synthesized based the assumed total number of startup employees (and sole proprietors) in the state and their distribution by industry.

Figure 3.1: Funding Received by Survey Respondents by Amount



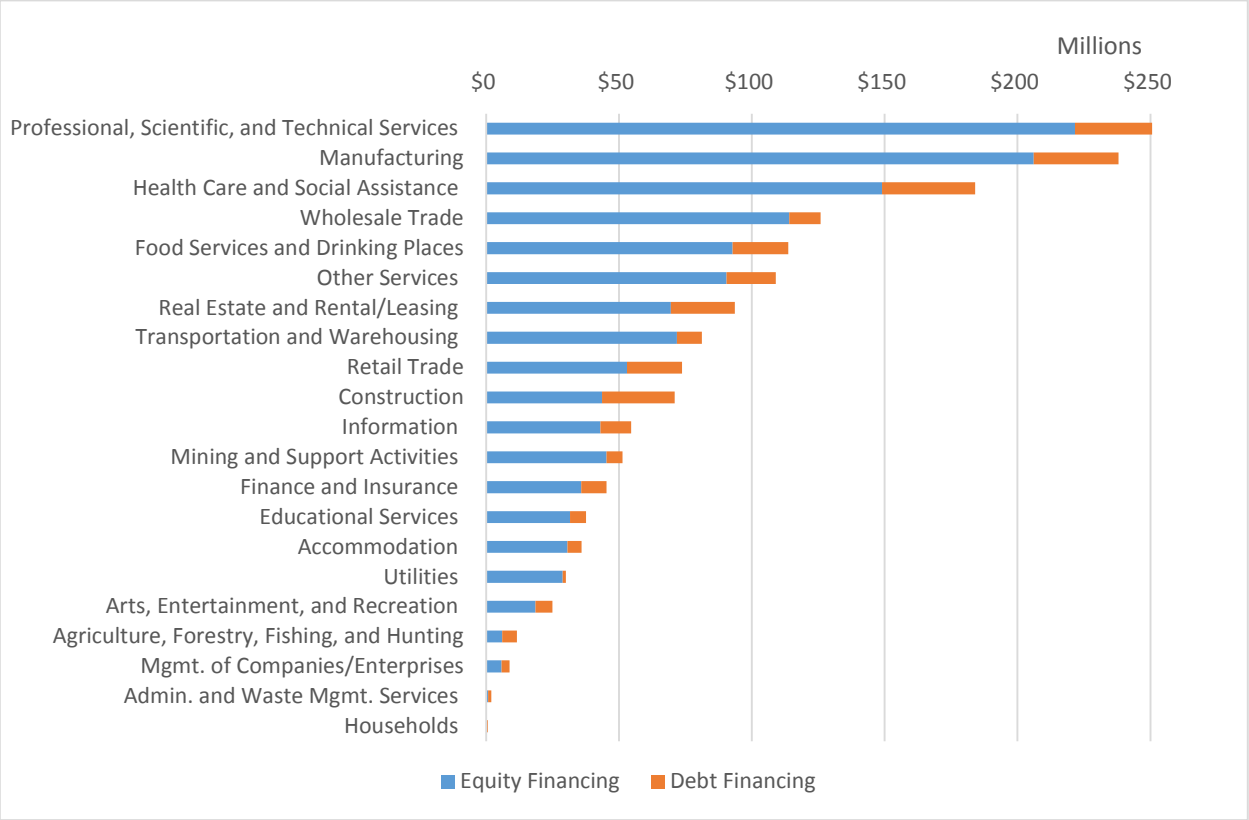
In TPMA's survey entrepreneurs were asked to respond to a series of funding questions, related to both debt and equity financing.[15] Responses to both of these questions were aggregated to arrive at the following charts and tables. As indicated in Figure 3.1, the vast majority of entrepreneurs have received some type of funding (seventy-eight percent (78%) of all companies in the sample). For those who did received some level of funding the largest individual category is "Less than twenty thousand dollars ($20,000)." Yet, a considerable proportion of the sample received a large degree of funding; more specifically, thirteen percent (13%) of the sample received one million dollars ($1,000,000) or more.

Companies receiving small amounts of funding (less than twenty thousand dollars ($20,000)) are much more likely than the sample at large to be involved in Professional, Scientific & Technical Services (nearly ten percentage points higher), as well as Arts, Entertainment, and Recreation. These companies are also primarily at early stages of development (i.e. Ideation or Conception; Early Stage; or Past Early Stage but Without Outside Funds).

Not surprisingly, the majority of companies that received a large degree of funding are at later stages of the entrepreneurial cycle; fifty-two percent (52%) of companies in this category at Series A, B or C funding stages. Companies receiving large degrees of funding were slightly less likely that the population overall to be in Professional, Scientific & Technical Services and slightly more likely to be involved in Real Estate and Rental/Leasing; Construction; or Retail Trade.

[15] For those unfamiliar with financial terminology, debt financing is when an organization gets a loan that needs to be paid back, with interest. Equity financing is when an organization gives up a proportion of it's business to co-owners in exchange for cash.

Figure 3.2 Source of Funding by Industry



Funding can also be examined by industry to indicate which industries are most likely to receive funders' attention, and if there are any discernable patterns in method of funding (debt vs. equity) by industry. As indicated in Figure 3.2, industries that lead in terms of total funding received include Professional, Scientific, and Technical Services at sixteen percent (16%); Manufacturing at fourteen percent (14%); Health Care & Social Assistance at eleven percent (11%) and Wholesale Trade at eight percent (8%). Across all but a handful of industries, equity is a much more common method to receive financing. Among industries that received a significant amount of financing, of fifty-five million dollars ($55,000) or more, the following industries had a higher than average proportion of debt financing— Construction; Retail Trade; Real Estate and Rental/Leasing. Conversely, Wholesale Trade is unusually highly dependent upon equity financing.

ECONOMIC IMPACT RESULTS

Startup funding delivers a substantive economic impact to the state of Texas in terms of jobs, earnings and economic output. TPMA estimates that three million forty thousand (3,040,000) jobs are directly supported by startup funding. As startups spend those dollars, the full impact increased to five million forty thousand (5,040,000) jobs created or supported, which is equivalent to thirty-eight and seven tenths percent (38.7%) of all jobs in the state. These jobs also create income for Texas residents, amounting to one hundred fifty-four million dollars ($154,000,000) in direct earnings and two hundred sixty-two million dollars ($262,000,000) in total earnings.

The broadest measure of impact estimated by TPMA is economic output, which captures the value of increased economic transactions. According to this measure, startup funding is responsible for nearly forty

percent (40%) of all economic transactions in the state, totaling seven hundred forty million dollars ($740,000,000) in spending. The multiplier effect of 1.85 indicates that for every one dollar ($1) invested by individuals, angels, banks and government entities, an *additional* eighty-five cents ($0.85) is spent by the startups and other businesses and employees supported by those startups.

Table 3.1: Economic Impact of Startup Funding in Texas

	Jobs	Earnings ($Millions)	Economic Output ($ Millions)
Direct Impact	3,036,645	$153,965	$399,341
Total Impact	5,036,971	$261,699	$740,179
Multiplier Effects	1.66	1.70	1.85
Percentage of Total	38.7%	36.3%	39.9%

To some, these numbers may seem unrealistically large. For context, is helpful to keep in mind that many startups are in the small company range, of twenty (20) employees or less Within the state of Texas, companies of this size compose over thirty percent (30%) of all employment in the state. Additionally, as indicated by TPMA's survey, many companies in the twenty (20) to one hundred (100) employee range can also be considered startups, a classification that accounts for an additional sixteen percent (16%) of jobs within the state. Another essential characteristic of startups is that they are relatively young. Within the state of Texas in 2016, companies fewer than five years old accounted for forty-two percent (42%) of all job creation.[16] Furthermore, as survey results indicate, the vast majority of companies of this size are receiving some form of funding assistance. In summary, all discernable factors that define startup business activity, including business size and age, indicate that this portion of the economy is substantially large. Those back-of-the envelope calculations are done prior to even considering the full impact of startups, inclusive of multiplier effects.

Due to the industrial diversity of startups, the impact is vastly spread across the economic spectrum. Table 3.2 indicates the total number of jobs supported by industry sector. Some industries, such as Retail Trade, are not among the industries that are commonly directly funded but they still appear high on this list because employees of startups shop at retail trade businesses. On the other hand, industries such as Professional, Scientific & Technical Services are high on this list both due to employee spending and the large amount of direct funding that they receive.

[16] Bureau of Labor Statistics, Business Employment Dynamics, *Table 1-A-E: Annual gross job gains and gross job losses by age and average size of establishment*, https://www.bls.gov/bdm/business-employment-dynamics-data-by-age-and-size-texas.htm.

Table 3.2: Economic Impact of Startup Funding in Texas

Industry	Jobs Supported by Startup Funding	Percent of Total Economic Impact
Health Care and Social Assistance	617,372	12.3%
Retail Trade	589,594	11.7%
Accommodation and Food Services	489,936	9.7%
Professional, Scientific, and Technical Services	416,078	8.3%
Administrative and Support and Waste Management and Remediation Services	391,034	7.8%
Other Services (except Public Administration)	349,517	6.9%
Finance and Insurance	301,144	6.0%
Real Estate and Rental and Leasing	275,690	5.5%
Construction	260,224	5.2%
Transportation and Warehousing	239,747	4.8%
Wholesale Trade	223,015	4.4%
Manufacturing	195,855	3.9%
Government	187,818	3.7%
Educational Services	112,528	2.2%
Arts, Entertainment, and Recreation	108,389	2.2%
Information	78,031	1.5%
Mining, Quarrying, and Oil and Gas Extraction	65,212	1.3%
Management of Companies and Enterprises	59,711	1.2%
Agriculture, Forestry, Fishing and Hunting	58,387	1.2%
Utilities	17,690	0.4%

APPENDIX A: GLOSSARY OF TERMS

The startup world is rife with terminology that can often be confusing to those operating outside the entrepreneurial ecosystems. The following are definitions of some of the terms utilized throughout this report.

Angel Investor- Angel investors are individuals who provide funding for startups in exchange for a portion of ownership of those businesses. Angel investors are often connected to entrepreneurs through family, personal relationships or industry relationships. Unlike venture capitalists, angel investors often invest for reasons beyond profitability. Angel investors are also sometimes referred to as seed investors.

Resource Providers— Organizations that provide physical, personal or intellectual assistance to startups. A few examples of common resource providers include accelerators, coworking spaces, business parks, chambers of commerce, and small business development centers, among others.

Series A, B and C Funding— Series A funding is generally from venture capital firms. When startups are successful and ready to move out of a development stage, scale up, and expand, they will seek Series B funding to grow the business. After the business has shown continued growth and success, it could consider expansion of products and services into new markets, possibly through mergers with or acquisitions of other businesses. To fund this later-stage activity, businesses may seek Series C funding from additional investors, which could include venture capital firms, investment banks, private equity firms, hedge funds, and a host of other groups.

Startup- There is no standard definition for the term “startup.” Likewise, TPMA did not seek to overly codify the term in this study. Startups can exist in any location and in any industry. Essential characteristics of startup businesses are that they are relatively small in size (typically smaller than 100 employees), fairly new (typically less than three years), and carry the potential for outstanding growth. Another common, but not essential characteristic is that startups tend to get funding from outside entities (whether banks, angel investors, private equity, or other sources).

APPENDIX B: ECONOMIC IMPACT METHODOLOGY

TPMA used data from our own survey as well as information from the US Census Bureau and Economic Modeling Specialists, International (Emsi), to complete the economic impact assessment. TPMA used responses from startups on the type and level of funding that they received. With over 1,700 responses to the startup survey it was deemed that the sample is large enough to extrapolate trends to startup companies at large.

TPMA used our survey data to determine the division of startups according to industry classification and company size. Data from the US Census Bureau's County Business Patterns were then used to determine the total employment in Texas according to those company size criteria. Once the total employment for companies of startup size was determined, TPMA made several adjustments in order to estimate dollar values for direct inputs:

- Using jobs to sales ratios for 2-digit industry sectors, jobs were translated into economic output;
- Regional purchase coefficients (RPCs) were applied to estimated economic output to discount direct inputs by the degree that businesses spend money out of state to acquire goods and services required to do business;
- Direct inputs were adjusted downward to account for the percent of businesses in the sample that received no degree of outside funding.

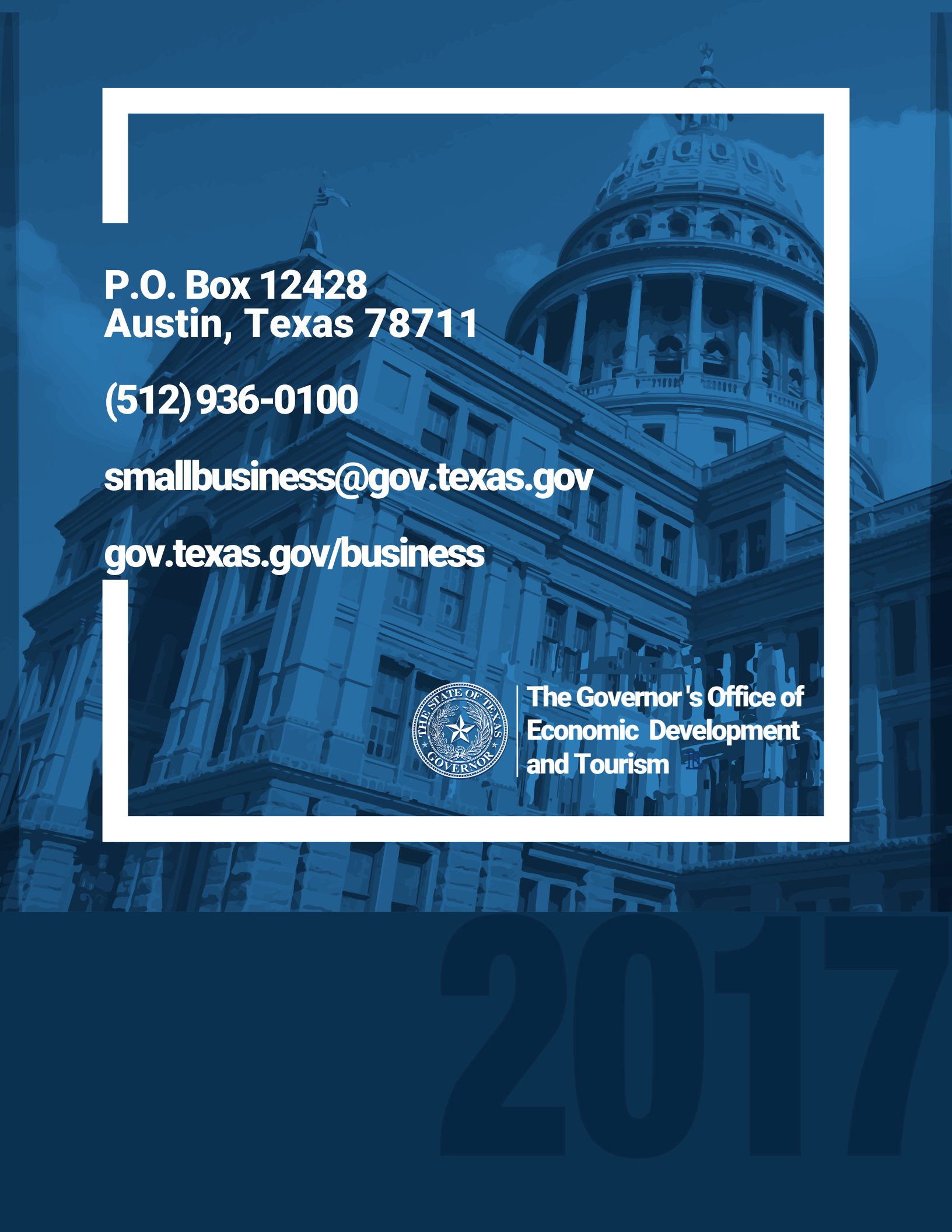
Once all adjustments were completed, TPMA entered direct inputs for 277 unique 6-digit industry classifications into Emsi's input-output model. This model generates total impact values according to interindustry and consumer purchasing patterns in Texas. The results generated by this model were then adjusted downward based on employment totals from the Texas LMI Tracer tool from the Texas Workforce Commission. This adjustment was necessary because Emsi's economic impact tool, by default, contains employment categories that are excluded from conventional employment estimates, that cause employment estimates to be 28% higher. Without adjusting impact numbers downward to meet with published state figures the impact assessment would be artificially high.

APPENDIX C: INTERVIEW PARTICIPANTS

TPMA is grateful for the insight and participation of the following individuals, who aided our research by taking time to reflect on their direct experiences in the world of startups, resources, and investments. While the details of individual interviews are not publicly available, general trends and themes are provided in the Summary of Interviews section of this report.

- Arlo Gilbert, Serial Entrepreneur and Investor, CEO and Co-Founder of Meta SaaS
- Carina Boston Pinales, Founder and Co-Owner at Splash Coworking LLC
- David Altounian, Entrepreneur, Funder and Associate Professor at St. Edwards University
- Charles Woodin, Business Development Manager at Geekdom
- Carolyn Rodz, Founder of helloalice.com
- Gordon Daughtery, Investor, Partner at the Capital Factory
- Grover Bynum, Senior Advisor with the Austin Technology Council
- Deebee Hancock & Bradley Griggs, Director of Public Affairs and Director of Tax Credits & Incentives at WeWork
- Verena Kalloff, Manager, Health CoLab at Dell Medical School at the University of Texas at Austin
- Trevonna Hayle, Acceleration Operations Manager at Houston Exponential

Kevin Koym & Craig Carlson, Cofounder of Tech Ranch Austin and Mentor/Ambassador for Tech Ranch Austin



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