

A STUDY PERFORMED BY
USA.


# Survey of Texas Small Businesses Report: Identifying the Barriers to Success 

## Prepared for Office of the Texas Governor

This study was performed by the University of Texas at San Antonio through a collaborative effort between the Statistical Consulting Center (SCC) and the Institute for Economic Development's Center for Community and Business Research (CCBR) with funding from the Office of the Texas Governor. Any findings, conclusions or opinions are those of the authors and not necessarily those reflected by the University of Texas at San Antonio or the Office of the Texas Governor.

## SCC Team:

Dan Sass, Ph.D.
Tom Schmitt, Ph.D.
Raydel Tullous, Ph.D.
Data analyst: Gregory T. Zapata, Bianca Miller, Amit Bhatia, Biswash Bhusal, Raul Rivera, James Walters

## CCBR Team:

Thomas Tunstall, Ph.D.
Sheryllynn Roberts, Ph.D.
Amanda Martinez, Michael Brennan M.A., Sean Greszler
Technical Staff: Lisa Knecht, Karina Juarez, Joshua Ramirez, Alizain Ali, Ruthvik Goud Sara, Anandsai Chinthamreddy, Gaurav Pippalla, Jessica Lindquist and Emily Stone, Ph.D.


# Survey of Texas Small Businesses Study: Identifying the Barriers to Success 

\author{

1. Key takeaways
}

- The cost and complexity of health care appears one of greatest concerns of small businesses and is perceived as a major barrier to their financial growth and ability to hire more employees.
- The high cost of property, sales, and franchise taxes are major concerns of small businesses, especially those with extremely low profit margins.
- Most Texas businesses do not find it too difficult to hire qualified employees; however, they would like to see greater investments in education at the State level.
- It appears that most business owners found mentoring/coaching programs extremely useful, so it follows that greater services in these areas would be of value for small businesses. Specifically, they would like assistance in the areas of government regulations, sound boarding for business development, how to grow their business, and networking with other organizations.
- Greater effort is needed to get organizations (e.g., Chamber of Commerce, Governor's Office of Small Business Assistance, Texas Workforce Commission, Small Business Development Centers) working more closely with small businesses.
- Most respondents stated that the Texas political environment has limited impact on the success of their company; however, they would prefer a reduction in government interference and simplification of regulations.
- Respondents indicated that the most useful methods of communication from the Office of the Governor would be by email/newsletter or blogs (34\%), followed by website (17\%), and meetings/conferences or workshops (11\%).


## 2. Executive summary

## Overview

Small and historically underutilized businesses ${ }^{1}$ (HUBs) are undoubtedly an integral part of Texas' efforts to compete in the global marketplace. As a result, it is critical to identify those factors associated with their successes and failures, while also examining those variables that impede their development (e.g., limited capital and access to other resources, lack of education, training, and mentoring, use of business management tools). The purpose of this study was to collect data from Texas businesses to determine the factors and barriers that affect the development and growth of their business.

## Summary of Methodology

Survey Development. Survey items were developed based on the Office of the Governor's (OOG) objectives and then piloted with several content experts and business owners. After the survey was finalized, an email survey (see link²) and a phone survey (see link $^{3}$ ) were created for data collection. The phone survey was slightly shorter. Content deemed of least interest by the OOG was removed to reduce the amount of time needed to complete the survey over the phone and included a script to make data collection more consistent across interviewers. Regardless of whether the survey was completed over the phone or online, the goal was for the survey to take no longer than 10-15 minutes to administer.

Online survey. We obtained a sample of 659,755 unique email addresses; however, a large number ( $\mathrm{n}=65,535$ ) of the emails were invalid and many others ( $\mathrm{n}=$ 268,101 ) represented multiple email addresses within the same organization [e.g., there may have been an email address per owner or the owner(s) provided more than one email address (e.g., a work and personal email address)]. In the end, an estimate of about 326,119 were unique businesses. To increase the response rate, the email survey was sent out four times and 3,332 businesses completed the survey.

Phone Survey. As with all online/email surveys, it is difficult to ascertain why certain businesses completed the survey whereas others did not. To partially understand the potential reasons, 10,000 businesses were randomly sampled for calling by the CCBR staff. 7,938 businesses were called by the nine staff members between October 27, 2016

[^0]and December 8, 2016. Voicemails were left regarding the survey purpose, along with a callback number, giving the organization an opportunity to participate in the survey if they chose. Of the businesses called, only $1.35 \%(n=107)$ completed the survey.

## Summary of Results

- The cost and complexity of health care appears one of greatest concerns of small businesses and is perceived as a major barrier to their financial growth and their ability to hire more employees.
- The high cost of property, sales, and franchise taxes are perceived as major concerns of small businesses, especially those with extremely low profit-margins.
- Most Texas businesses do not find it too difficult to hire qualified employees; however, they would like to see greater investments in education at the State level.
- It appears that most business owners found mentoring/coaching programs extremely useful, so it follows that greater services in these areas would be of value to small businesses. Specifically, they would like assistance in the areas of government regulations, sound boarding for business development, guidance in business growth, and networking with other organizations.
- Greater effort is needed to get organizations (e.g., Chamber of Commerce, Governor's Office of Small Business Assistance, Texas Workforce Commission, Small Business Development Centers) working more closely with small businesses.
- Most respondents stated that the Texas political environment has limited impact on the success of their company; however, they would prefer a reduction in government interference and a simplification of regulations.
- Respondents indicated that the most useful methods of communication with the Office of the Governor would be by email/newsletter or blogs (34\%) followed by website (17\%) and meetings/conferences or workshops (11\%).
- Based upon the number of full-time employees, $69 \%$ of the businesses surveyed were classified as "Small" (i.e., between 0 and 9 full-time employees), $27 \%$ as "Medium" (i.e., between 10 and 99 full-time employees), and $4 \%$ as "Large" (i.e., 100 or more full-time employees).
- Around $32 \%$ of businesses indicated that inadequate capital was somewhat or a moderate barrier for their business, with only $15 \%$ indicating it was an extreme barrier to the prosperity of their company.
- Thirty-four percent of respondents specified that they had little to no trouble hiring qualified employees, with $44 \%$ indicating that hiring qualified employees was somewhat or a moderate barrier for the success of their company.
- More than half (60\%) of respondents stated that the political environment in Texas poses either no or a minor barrier/impedance on the success of their company, with

31\% feeling it had a somewhat or moderate influence on their overall success. Only $10 \%$ perceived the political environment as being an extreme barrier.

- Forty percent of respondents felt that red tape and government regulations had a somewhat or moderate influence on their overall business success, with $29 \%$ reporting an extreme hindrance.
- The current regulations and laws associated with health care presented a fairly significant concern for businesses, with $50 \%$ of businesses indicating it was an extreme barrier to their success. Another $27 \%$ indicated it was a somewhat of a barrier or a moderate barrier to their company's success.
- Approximately $24 \%$ of the businesses surveyed specified that high taxes were either not a barrier or a minor barrier to the success of their business, with most (39\%) indicating high taxes were a moderate barrier and $23 \%$ indicating an extreme barrier.
- More than half (51\%) of all business reported that the Small Business Development Centers were not at all important to their businesses, while $32 \%$ indicated they were somewhat important.
- Concerning the Texas Workforce Commission, $45 \%$ of the respondents claimed that the Commission was not at all important to their business, whereas $36 \%$ and $19 \%$ said the organization was somewhat important and very important, respectively.
- Thirty-seven percent of businesses indicated that the Texas Secretary of State was not at all important for their business, with $42 \%$ stating it was somewhat important to their business. Roughly $22 \%$ indicated that the Secretary was very important.
- Half of businesses stated that the Governor's Office of Small Business Assistance was not at all important to their business, while $32 \%$ indicated it was somewhat important. Nearly 18\% reported that the Governor's Office of Small Business Assistance was very important.
- Twenty-eight percent of the respondents felt their elected officials were not at all important to their business success, whereas $34 \%$ and $38 \%$ indicated that they were somewhat or very important, respectively
- Of the $53 \%$ of businesses that responded, most ( $86 \%$ ) found at least some value in coaching/mentoring, and 47\% indicated coaching/mentoring was very or extremely important.
- The qualitative results revealed mentoring and coaching would be most useful in the areas of government regulations, sound boarding, and guidance in business growth, emotional support, and opening doors.
- The qualitative results suggested that the top key features making Texas a good place to do business are low taxes, low cost of living, strong economy, and less regulation.


## Conclusions

Texas is generally viewed as an attractive place to do business due to the strong economy, lower cost of living, absence of State income tax, and relatively low government involvement and regulation. Survey respondents represented more than 24 different industry sectors. ${ }^{4}$ The top five industry sectors for survey respondents were: 1) Professional, Scientific and Technical Services (20.5\%), 2) Health Care and Social Assistance (10.2\%), 3) Construction (9.1\%), 4) Finance and Insurance (8.5\%), and 5) Retail Trade (7.0\%). These representative industries accounted for more than half of all respondents (55.2\%). Nevertheless, there remains rather wide support for greater reductions and simplification in government involvement and the lowering of taxes, especially property and franchise taxes. Based on our data, $37 \%$ of small ( 0 to 9 full-time employees) and $47 \%$ of medium ( 10 to 99 full-time employees) size businesses indicated that taxes were an extreme barrier to their business success. Another major concern and barrier to business' success was the high cost of health care and the complexity of health care laws. For small and medium size businesses, $47 \%$ and $59 \%$, respectively, stated health care was a major concern and barrier to success. It is worth noting that these concerns associated with taxes, regulations, and health care were consistently documented in both the quantitative and qualitative data collected from this study.

With the exception of taxes, regulations, and health care costs, most (69\%) businesses indicated that the Texas political environment was a relatively minor barrier to their business success. With that said, many of the organizations designated to assist small businesses (e.g., Small Business Development Centers, Governor's Office of Small Business Assistance, U.S. Small Business Administration, National Federation of Independent Businesses, and U.S. Chamber of Commerce) were often not viewed as very beneficial. Instead, respondents tended to view elected officials and the Texas Comptroller of Public Accounts as having a larger role in their success.

Respondents generally had a positive attitude towards the direction of their company, management, leadership, corporate structure, and employee quality. With that said, these findings are somewhat expected given that most ( $83 \%$ ) respondents were the owner or CEO of the business. In any case, while most respondents felt their organizations were doing well internally, a common theme was the importance of employee education. Eighty-three percent of respondents thought education was very important to their business success.

While the results varied based on the type of services offered, those who received mentoring/coaching (53\%) often reported benefits that improved the effectiveness of their organization. The benefits of greatest importance included guidance in business growth, insight related to business practices, and creating opportunities and networking with other organizations. Despite these benefits, there is an issue with availability and accessibility to mentoring and coaching resources. From the qualitative data, other useful

[^1]factors include knowledge sharing, networking, sharing best practices, and providing emotional support and guidance.

In conclusion, this study highlighted many of the struggles and barriers businesses deal with on a daily basis, while also documenting those organizations and services businesses did not find particularly useful to their business success. While not the original study intent, this study also provided a comparison of these barriers across the different sizes, and interestingly, these concerns were often fairly consistent.

## Table of Contents

Introduction ..... 12
Methodology ..... 12
Survey Development. ..... 12
Piloting of Survey. ..... 13
Potential sample. ..... 13
Phone Survey ..... 14
Survey Results ..... 15
Graphical Interpretation ..... 16
Business and owner information ..... 18
Figure 1: CEO Gender ..... 18
Figure 2: CEO Ethnicity ..... 19
Figure 3: Owner status ..... 20
Figure 4: Respondent job title. ..... 21
Figure 5: Legal status ..... 22
Figure 6: Number of full-time in 2015 ..... 23
Figure 7: Number of part-time in 2015 ..... 24
Figure 8: Business revenue size ..... 25
Potential Barriers to Business Success ..... 26
Figure 9: Insufficient capital ..... 26
Figure 10: Ability to hire qualified employees ..... 27
Figure 11: Texas political environment ..... 28
Figure 12: Competition from other organizations ..... 29
Figure 13: Cost of running a business ..... 30
Figure 14: Red tape and government regulations ..... 31
Figure 15: Government financial support. ..... 32
Figure 16: Staff/employee training and education ..... 33
Figure 17: Health care laws and costs ..... 34
Figure 18: High taxes ..... 35
Figure 19: High start-up costs ..... 36
Figure 20: Limited access to large contracts ..... 37
Factors Influencing Business Growth and Success ..... 38
Figure 21: Business plan/strategy ..... 38
Figure 22: Market understanding ..... 39
Figure 23: Financial security ..... 40
Figure 24: Good employees ..... 41
Figure 24: Outstanding Leadership ..... 42
Figure 25: Corporate culture ..... 43
Figure 26: Organizational structure ..... 44
Figure 27: Decisive decision makers ..... 45
Figure 28: Networking with outside organizations ..... 46
Figure 29: Owners take responsibility for poor decisions ..... 47
Figure 30: Education and training ..... 48
Figure 31: Management ..... 49
Figure 32: Technical assistance ..... 50
Figure 33: Small business development centers ..... 51
Figure 34: Local business incubator/accelerator/co-working sites ..... 52
Figure 35: Local chamber of commerce ..... 53
Figure 36: Local economic development organizations ..... 54
Figure 37: Business magazines, books, and website ..... 55
Figure 38: Texas workforce commission ..... 56
Figure 39: Texas Secretary of State ..... 57
Figure 40: Governor's Office of Small Business Assistance ..... 58
Figure 41: U.S. Small Business Administration ..... 59
Figure 42: National Federation of Independent Businesses ..... 60
Figure 43: Better Business Bureau ..... 61
Figure 44: U.S. Chamber of Commerce ..... 62
Figure 45: Elected officials ..... 63
Figure 46: Texas Comptroller of Public Accounts ..... 64
Use of Financial Resources by Business ..... 65
Figure 47: Business is self-financed ..... 65
Figure 48: Funds from ownership in other companies ..... 66
Figure 49: Selling/pledging accounts receivable. ..... 67
Figure 50: Credit cards ..... 68
Figure 51: Payday loans ..... 69
Figure 52: Banks loan/revolving line of credit ..... 70
Figure 53: Private loans ..... 71
Figure 54: State/regional loans and incentive programs. ..... 72
Figure 55: Private placement of debt ..... 73
Figure 56: Private placement of stock ..... 74
Figure 57: Vendor credit ..... 75
Figure 58: SBA or other government loans/grants/incentives ..... 76
Mentoring and Coaching ..... 77
Figure 59: Received coaching or mentoring ..... 77
Figure 60: Significance of coaching or mentoring ..... 78
Figure 61: Guidance in business growth ..... 79
Figure 62: Insight related to business practices ..... 80
Figure 63: Emotional support related to business struggles. ..... 81
Figure 64: Navigating government regulations ..... 82
Figure 65: Creating opportunities and opening doors ..... 83
Exporting and Regulations ..... 84
Figure 66: Exporting of services or products ..... 84
Figure 67: Number of countries exporting to ..... 85
Figure 68: Useful forms of Government support ..... 86
Bigram, word cloud, and dendrogram analyses. ..... 89
Granular analyses and selective verbatim comments ..... 90
Text Mining Results ..... 91
Barriers to business in Texas ..... 91
Figure 72: Bigram analysis for Texas barriers ..... 91
Figure 73: Word cloud for Texas barriers. ..... 92
Figure 74: Dendrogram for Texas barriers ..... 92
Granular text analysis for Texas barriers ..... 93
Selective verbatim comments: Texas barriers.......... E Error! Bookmark not defined.
What making Texas a good place to do business? ..... 94
Figure 75: Bigram analysis for what makes Texas a good place to do business94
Figure 76: Word cloud for what makes Texas a good place to do business ..... 95
Figure 77: Dendrogram for what makes Texas a good place to do business ..... 95
Granular text analysis: What makes Texas a good place to do business? ..... 96
Selective respondent comments related to what makes Texas a good place to
do business Error! Bookmark not defined.
What makes Texas a bad place to do business? ..... 97
Figure 78: Bigram analysis for what makes Texas a bad place to do business. ..... 97
Figure 79: Word cloud for what makes Texas a bad place to do business ..... 98
Figure 80: Dendrogram analysis for what makes Texas a bad place to do business99
Granular Text analysis for what makes Texas a bad place to do business....Error! Bookmark not defined.
Selective respondent comments for what makes Texas a bad place to do business Error! Bookmark not defined.
Texas government policies influence on businesses ..... 99
Figure 81: Bigram analysis for Texas government policies influence on businesses ..... 100
Figure 82: Word cloud for Texas government policies influence on businesses101
Figure 83: Dendrogram analysis for Texas government policies influence on businesses ..... 101
Granular text analysis for Texas government policies influence on businesses ..... 102
Selective respondent comments related to Texas government policies influence on businesses. Error! Bookmark not defined.
Additional comments/suggestions concerning Texas government policies, regulations, and/or other activities ..... 103
Figure 84: Bigram analysis for additional comments/suggestions concerning Texas government policies, regulations, and/or other activities ..... 103

Figure 85: Word cloud for Texas government policies influence on businesses .104
Figure 86: Dendrogram analysis for Texas government policies influence on
$\qquad$
Granular text analysis for Texas government policies influence on businesses .105
Selective respondent comments related to Texas government policies influence on businesses. Error! Bookmark not defined.
Useful factors related to coaching/mentoring experiences....................................... 106
Figure 87: Bigram analysis for coaching/mentoring experiences ........................ 106
Figure 88: Word cloud analysis for coaching/mentoring experiences ............... 107
Figure 89: Dendrogram analysis for coaching/mentoring experiences ............. 107
Granular text analysis for coaching/mentoring experiences................................. 108
Selective respondent comments for coaching/mentoring experiences.........Error!
Bookmark not defined.
Other comments for the OOG office...............................Error! Bookmark not defined.
Figure 90: Bigram analysis for other comments for the OOG office...............Error!
Bookmark not defined.
Figure 91: Word cloud analysis for other comments for the OOG office........... 108
Figure 92: Dendrogram analysis for other comments for the OOG office......... 109
Granular Text Analysis based on extracted features ................................................ 109
Selective respondent comments for other comments for the OOG office ...Error! Bookmark not defined.
Appendix A.....................................................................................................
Appendix B .................................................................................................................................... 110

## 3. Full report

## Introduction

Small and historically underutilized businesses (HUBs) are an integral part of Texas' efforts to compete in the global marketplace. As a result, it is critical to identify those factors associated with their successes and failures, while also examining those variables that impede their development (e.g., limited capital and access to resources; lack of education, training, and mentoring; use of business management tools, etc.). The purpose of this study is to collect data from Texas businesses to determine those factors affecting development and growth. The Center for Community and Business Research (CCBR) and Statistical Consulting Center (SCC) at the University of Texas at San Antonio (UTSA) partnered to capitalize on the strengths of both organizations.

## Methodology

Survey Development. Based on a literature review, evaluation of past surveys, discussions with small businesses, and extensive expertise in the area of small business, a multistep process was used to create the survey. First, items were developed to create a paper and pencil version of the survey to receive feedback from content experts and small business owners. After three rounds of feedback, the revised survey was piloted two more times with small business owners and then piloted via a phone interview with ten more small businesses. It is important to note that the email survey (see link ${ }^{5}$ ) and phone survey (see link ${ }^{6}$ ) were slightly different. The telephone survey was slightly shorter (e.g., there were no questions on mentoring, exporting, and other content areas deemed less significant based on conversations with the OOG), and it had a script for the interviewer. Regardless, the objective was to select the best set of items and questions (open and close ended) to cover the domains of interest and identify the "best" survey design. While most of the survey items were quantitative in nature, several key qualitative items were incorporated to create a more complete picture of the system and to ensure organizations had the opportunity to express additional concerns and experiences associated with being a small business and/or HUB. The qualitative items assisted with discovering potential unknown indicators that impact small business in Texas using advanced and novel natural language processing statistical methods. It is important to note that content areas of greatest importance based on discussions with the OOG were placed earlier in the surveys (and included in both the phone and email versions) to ensure the highest response rates on those items.

[^2]Piloting of Survey. As indicated in the Survey Development section, the survey was piloted on a small sample of businesses $(n=13)$ to determine 1 ) if any important topics and/or items were omitted, 2) correct any confusing questions or instructions, and 3) estimate the time required to complete the survey. The latter was important, as there tends to be a negative correlation between survey length and response rate. A survey was created that could be completed in approximately 10 to 15 minutes. After piloting the survey and receiving feedback from the small businesses, the survey was reviewed and approved by the OOG after making several small changes.

Potential sample. Using data (e.g., business name, contact person, email address) from previous small business studies conducted at UTSA, the comptroller's website, and DatabaseUSA (see company email link), a sample of 659,755 unique email addresses ${ }^{7}$ were obtained. Of those, 65,535 were returned as invalid emails and only about 326,119 were unique businesses. This latter number is only an estimate because some businesses had several contacts within the same organization, some businesses may have been franchise, or several similar business names existed. As might be expected, the final response rate can be calculated differently depending on the definition. When defining the response rate as the percent of valid businesses emails that completed the survey, the response rate was only $0.58 \%\left(3,439^{8}\right.$ out of 594,220$)$. When defining the response rate as the percent of unique businesses that completed the survey, the response rate increased to $1.05 \%$ ( 3,439 out of 326,119 ). Lastly, when defining the response rate based on the number of people who actually opened the $\mathrm{OOG}^{9}$ email, the response rate increased to $9.74 \%$ ( 3,439 out of 35,316 ).

While the response rate is partially outside of the researcher's control, the initial goal was to obtain a response rate of about $30 \%$ of businesses by sending the email out four times; however, we fell short of that goal for a number of reasons. Some reasons from respondents and non-respondents were as follows: 1) Insufficient time due to the holidays (i.e., the survey was first sent out the Tuesday before Thanksgiving and the three times between Thanksgiving and Christmas), 2) Many emails were received asking whether it was a legitimate survey, thus it may be possible that many people had a similar concern and did not complete the survey or click on the link, 3) Many businesses indicated they did not want share any information with the government, 4) Others said there was nothing the government could do to help them, so they did not want to complete the survey, 5) A large number of emails likely went in the owners SPAM folder given that the email was unknown and the word "survey" was in the email, and 6) Many (although the number is currently unknown) of the businesses were not in Texas, were ineligible for the

[^3]study, or were no longer in business (see Phone Survey results below) and, therefore, did not complete the survey.

Phone Survey. As with all online/email surveys, it is difficult to ascertain why certain businesses completed the survey whereas others did not. To partially understand the potential reasons, 10,000 businesses were randomly sampled for calling by the CCBR staff. 7,938 businesses were called in the end. During these calls, staff attempted to 1) collect any missing demographic data, 2) have the business complete the phone survey, 3) ascertain why they were not interested in completing the survey, and/or 3) determine if the business was no longer in operation. At the end of the call, staff also encouraged businesses to complete the email survey if they did not complete the phone survey.

Over a six-week period (October 27, 2016, through December 8, 2016) nine staff members conducted the phone survey. Voicemails were left regarding the survey purpose along with a callback number if the organization wished to participate in the survey. The phone calls began before the initial email survey was sent as a means to pilot items, establish trust with a subsample of the businesses, and make businesses aware of the forthcoming survey. As expected, most businesses were unaware of the study and thus were very skeptical of the staff's intentions, which partially explains the low phone survey response rate ( $1.35 \%$, or 107 of 7,938 ).

The qualitative information collected from the calls is critical to not only understand why certain businesses did not want to complete the survey, but also give us a better understanding of the businesses in the data base. For example, of the 7,938 businesses called, 755 (or $9.51 \%$ ) of the businesses were found to be ineligible (e.g., they were churches, schools, government agencies, well-known franchises, large chain stores, or corporations) for survey purposes. In total, about $30 \%$ of the dataset was ineligible or had incorrect contact information for survey calling purposes. In addition to ineligible businesses, the dataset also had incorrect and outdated information. A large portion of organizations contacted had disconnected numbers or were private numbers. Organizations that did answer the phone, but not the survey were often too busy, not interested in participating, did not feel comfortable sharing information with the State of Texas, or requested an email survey.

## Survey Results

Below are the results from the 3,439 businesses that responded to the survey (either phone or email version). It is critical to note not all respondents completed the entire survey (e.g., some respondents simply asked to have their business information included in the directory and did not answer other questions, while other respondents selectively answered questions). The phone survey was shorter than the email survey, which resulted in some missing data; thus, not all responses will sum to 3,439 . The results below encompass the following nine sections: 1) Business and owner information, 2) Potential barriers to business success, 3) Factors that influence your business growth and success, 4) Owner demographics, 5) Use of financial resources by your business, 6) Mentoring and coaching, 7) Exporting and regulations, 8) Communication, and 9) Qualitative response.

As the map below indicates, these businesses represented most of Texas; although a much larger percentage were located in metropolitan areas: Houston ( $n=330,13.6 \%$ ), Austin ( $n=222,9.1 \%$ ), Dallas ( $n=207,8.5 \%$ ), San Antonio ( $n=153,6.3 \%$ ), Fort Worth ( $n$ $=76,3.1 \%$ ), Plano ( $n=52,2.1 \%$ ), El Paso ( $n=41,1.7 \%$ ), Richardson ( $n=38,1.6 \%$ ), Arlington ( $n=32,1.3 \%$ ), Spring ( $n=32,1.3 \%$ ), and Corpus Christi ( $n=29,1.2 \%$ ).


## Graphical Interpretation

Several graphical procedures could be employed to present the data. The graphical procedure selected here (see "Insufficient Working Capital/Access to Capital" graph below as an example) was used for several reasons.

First, the graph provides the percent of the full sample ( $n=3,439$ ) that responded to each response option, thus allowing the reader to draw quick conclusions about what is happening across business sizes (see Interpretation 1).

- Interpretation 1: The graph indicates that 33\% (see first bar) of Texas businesses, regardless of business size, have "No barriers" when it comes to access to working capital.

Second, this graphical procedure allows the reader to determine the number and percent of small ( 0 to 9 full-time employees), medium ( 10 to 99 full-time employees), large (more than 100 full-time employees), and unknown business sizes within each category. While the percent is useful to make comparisons within (see Interpretation 2) and across (see Interpretation 3) business sizes, the sample size (n) is useful to determine the legitimacy of the percent (see Interpretation 4).

- Interpretation 2: 58\% of large businesses indicated that insufficient working capital was "No barrier" to the success of their business which is much larger than the responses on the "Minor barrier" (15\%), "Somewhat of a barrier" (10\%), "Moderate barrier" (11\%), and "Extreme barrier" (6\%) response options.
- Interpretation 3: Large businesses reported that 58\% of the time insufficient working capital was "No barrier" to the success of their business, with this percent being much larger compared to small (30\%), medium (37\%), and unknown (24\%) business sizes.
- Interpretation 4: Due to the larger sample size ( $n=618$ ), one can feel fairly confident $30 \%$ of small businesses perceive insufficient working capital as being no barrier to the success of their business. However, one should be much less confident, due to the small sample size, that $6 \%(n=6)$ of large businesses feel insufficient working capital is an extreme barrier to their business success.
Third, using this data presentation easily allows readers to make statements across response categories and businesses sizes (see Interpretation 5) and allow readers to determine the percent of missing data within each graph (see Interpretation 6).
- Interpretation 5: Of the small and medium businesses sampled, 35\% ( $\mathrm{n}=910$ or 366 $+116+348+80$ ) of the sample ( $n=2,575$ or the sum each subcategory) reported that
insufficient working capital was either a moderate or extreme barrier to the success of their company.
- Interpretation 6: After summing the number of observations (i.e., sample size, which is $\mathrm{n}=2,575$ in this case) within each classification, it can be determine that $75 \%(2,575$ divided by 3,439 ) of the data was complete (i.e., the percent of respondents that answered the question) and $25 \%$ was missing.


Example graph: This graph corresponds to the "Graphical Interpretation" section.

## Important notes:

- Some of the graphs do NOT include the percent and sample sizes due to the narrow bar width. As a result, these numbers are typically provided in the text to preserve presentation quality.
- When discussing the graphical results, the following definitions will be used:
o small business is one with " 0 to 9 full-time employees",
o medium business is one with " 10 to 99 full-time employees",
0 large business is one with more than 99 full-time employees, and
o unknown business size is one where the respondent did not answer the question and is therefore unknown.
- It is worth noting that based on the data (i.e., when compiling responses across business sizes), it is suspected that many of these unknown business are likely small businesses.


## Business and owner information



Figure 1: CEO Gender
The results indicated that $72 \%$ and $28 \%$ of businesses are led by male and female CEOs, respectively, with the percent of male ownership increasing as the size of the business increases. Within these gender categories:
Males led:

- $91 \%$ of large businesses (i.e., those with more than 100 full-time employees);
- $78 \%$ of medium size businesses (i.e., between 10 and 99 full-time employees); and
- $69 \%$ of small businesses (i.e., those with nine or less employees).

Females led:

- $9 \%$ of large businesses (i.e., those with more than 100 full-time employees);
- $22 \%$ of medium businesses (i.e., between 10 and 99 full-time employees); and
- $31 \%$ small and unknown (39\%) businesses.

For comparison purposes, the SBA (SBA, 2014) indicated that

- $50 \%$ of the businesses were owned by only males;
- $28 \%$ by only females; and
- $19 \%$ had equal shared ownership between males and females.


Figure 2: CEO Ethnicity
The CEO ethnicity results indicated the most prominent ethnicity among business CEOs is Anglo/Caucasian78\%) followed by Hispanic/Latino (10\%). The percentage of Anglo/Caucasian business owners was fairly comparable across business sizes:

- small $(76 \%, \mathrm{n}=1,523)$;
- medium ( $83 \%, \mathrm{n}=640$ );
- large ( $88 \%, \mathrm{n}=83$ ); and
- unknown ( $74 \%$, $\mathrm{n}=107$ ).

When compared to the Texas population (40.0\% Anglo/Caucasian 38.4 \% Hispanic/Latino, 12.4\% African American/Black, 4.3\% Asian/Pacific Islander, and 4.9\% Other), there are clear differences in these business ownership statistics, as a much higher percent of business owners were Anglo/Caucasian.

- Connected with Figure 1,73\% of business owners where Anglo/Caucasian males.
- Individuals with multiple ethnicities were reported as "Other."


## Ownership Status



Figure 3: Owner status
More than half (56\%) of respondents indicated that they did NOT identify as a HUB (i.e., Women, Ethnic Minorities, and/or Disabled Veteran- owned business), with 54\% classifying themselves as a HUB. More specifically, these results suggest:

- Women ( $22 \%, \mathrm{n}=758$ ) and ethnic minority $(11 \%, \mathrm{n}=366)$ represent the majority of HUBs.
- A sizeable percent $(6 \%, n=204)$ classified themselves as ethnic minority women.
- The "Other" category (3\%) represent the following groups:
o Ethnic minority and Service Disabled Veteran ( $n=24$ );
o women and Service Disabled Veteran ( $\mathrm{n}=7$ ); and
o Ethnic minority, women, and Service Disabled Veteran ( $n=9$ ).
- For the larger categories, the distribution of HUB ownership differed considerably within the business sizes:
o Ethnicity minority: Small (12\%, $n=257$ ), medium (9\%, $n=78)$, large (14\%, $n=$ 16), and unknown ( $9 \%, \mathrm{n}=15$ ) business size.
o Women: Small $(24 \%, n=527)$, medium $(9 \%, n=78)$, large $(14 \%, n=16)$, and unknown ( $9 \%, \mathrm{n}=15$ ) business size.
o Ethnic minority women: Small (7\%, $n=150$ ), medium ( $4 \%, n=35$ ), large $(7 \%$, $\mathrm{n}=8$ ), and unknown ( $6 \%, \mathrm{n}=11$ ) business size.
o Not a HUB (i.e., a response of "No"): Small (53\%, n = 1,188), medium (65\%, n = $563)$, large ( $47 \%, \mathrm{n}=54$ ), and unknown ( $48 \%, \mathrm{n}=82$ ) business size.


Figure 4: Respondent job title
Most (83\%) respondents indicated they were the business owner and/or president/CEO. This large percentage is important to note as it indicates the opinions expressed are those of the owner (or someone high ranking) and not the employees.

Within the Owner/President category, the distribution of respondents differed considerably across business sizes:

- small ( $86 \%, \mathrm{n}=1,929$ );
- medium ( $78 \%, \mathrm{n}=676$ );
- large ( $62 \%, \mathrm{n}=73$ ); and
- unknown ( $81 \%, \mathrm{n}=137$ ).


Figure 5: Legal status

The legal status of most businesses was sole proprietorship (20\%), LLC (25\%), corporation (19\%), or S-corporation (27\%).

The legal status of small-sized companies comprised of:

- $26 \%$ sole proprietorship;
- 27\% LLC;
- $15 \%$ corporation;
- $25 \%$ S-corporation; and
- $8 \%$ either partnership or other.

The legal status of medium-sized companies was comprised of:

- $2 \%$ sole proprietorship;
- 22\% LLC;
- 31\% corporation;
- $35 \%$ S-corporation; and
- 5\% partnership or other.

The legal size status of large-sized companies was comprised of:

- 22\% LLC;
- $31 \%$ corporations;
- 30\% S-corporations;
- 7\% partnerships; and 12\%, other

Number of Full Time Employees


Figure 6: Number of full-time in 2015
Businesses were classified into the following groups based on the number of full-time employees:

- $69 \%$ small (i.e., between 0 and 9 full-time employees);
- $27 \%$ medium (i.e., between 10 to 99 full-time employees); and
- $4 \%$ large (more than 100 full-time employees).


Figure 7: Number of part-time in 2015
Results indicated that most businesses did not employ many part-time employees. The results were as follows:

- $90 \%(\mathrm{n}=2,121)$ employed between 0 and 9 part-time employees;
- $9 \%(\mathrm{n}=208)$ employed between 10 and 99 part-time employees; and
- $1 \%(n=28)$ employed more than 100 part-time employees.

Within the 0 to 9 part-time employee category:

- $96 \%(n=1486)$ were employed by small businesses;
- $81 \%(\mathrm{n}=479)$ were employed by medium size business; and
- $45 \%(\mathrm{n}=37)$ were employed by large businesses.

Unlike other smaller businesses, large businesses also employed a larger percent of parttime employees within the 10 to $99(34 \%, \mathrm{n}=28)$ and more than $100(22 \%, \mathrm{n}=18)$ categories.

## Total Gross Sales



Figure 8: Business revenue size

In 2015, most:

- small businesses $(62 \%, \mathrm{n}=583)$ tended to fall in the lower revenue brackets (i.e., making less than 1 million);
- medium businesses $(55 \%, \mathrm{n}=477)$ fall in the middle revenue brackets (i.e., between 1 million and 5 million); and
- large businesses $(91 \%, \mathrm{n}=105)$ fall in the upper revenue bracket (i.e., making more than 5 million).

It is interesting most $(88 \%, \mathrm{n}=137)$ businesses that did NOT report their number of employees tended to have revenue less than $\$ 500,000$. From these results, one could assume these are likely small businesses.

Regardless, most (66\%) businesses earned less than 1 million dollars in revenue during 2015.

## Potential Barriers to Business Success



Figure 9: Insufficient capital
These results indicate the degree to which insufficient working capital/access to capital was a barrier to their business. Of those who responded:

- $51 \%$ stated it was either no or a minor barrier;
- $32 \%$ indicated it was an was either somewhat or a moderate barrier; and
- $15 \%$ reported it was an extreme barrier.

In conjunction with the revenue results (see Figure 8), it is not surprising that larger businesses reported insufficient working capital was less of a barrier to the success of their company than small businesses.

Ability to hire Qualified Employees


Figure 10: Ability to hire qualified employees
With respect to being able to hire qualified employees to help in creating a successful business, the following results were obtained:

- $34 \%$ indicated they had little to no trouble hiring qualified employees;
- $44 \%$ stated they had somewhat or a moderate barrier; and
- $23 \%$ reported it was an extreme barrier.

One interesting trend is that hiring qualified employees appears to be a bigger issue as the company size increases; especially for medium and large size businesses.

Texas Political Environment


No Barrier

21\%


Minor Barrier


Somewhat of a barrier

Business Size
0 to 9 full-time employees 10 to 99 full-time employees
More than 100 full-time employees
Unknown business size


Moderate barrier Extreme barrier

Figure 11: Texas political environment
Respondents were asked how much the Texas political environment influenced the success of their business. The following results were obtained:

- $60 \%$ stated it has either no or a minor barrier;
- $31 \%$ felt it was either somewhat or a moderate barrier; and
- $10 \%$ perceived it as an extreme barrier.

Generally speaking, these percentages were relatively equal across the business size.

Competition from other organizations
Business Size 0 to 9 full-time employees 10 to 99 full-time employees More than 100 full-time employees Unknown business size

|  |  | 24\% | 25\% | 15\% |
| :---: | :---: | :---: | :---: | :---: |
|  | 22\% | 23\%, n= 491 | $24 \%, \mathrm{n}=510$ |  |
|  |  |  |  |  |
|  | 22\%, n= 477 |  |  |  |
| 14\% | $21 \%$ n = 175 | 26\%, n= 212 | 28\%, n = 230 | 16\%, n = 330 |
| 15\%, $\mathrm{n}=319$ |  | 27\%, n = 30 |  | 14\%, n = 118 |
| $\begin{gathered} 12 \%, n=96 \\ 4 \%, n=5 \end{gathered}$ | 25\%, n = 28 | 27\%, n = 30 | $31 \%, \mathrm{n}=35$ | 12\%, n= 14 |
| 17\%, n= 27 | 20\%, n = 31 | 24\%, n = 38 | 19\%, n = 30 | 19\%, n = 30 |

Figure 12: Competition from other organizations
Respondents had a wide range of responses when it came to how competition influenced the success of their business where:

- $36 \%$ specified that competition from other organizations was a minor barrier or no barrier to their success;
- $49 \%$ indicating that it was somewhat or a moderate barrier; and
- $15 \%$ indicated other competitors provide an extreme barrier to their company's success.

Within these response categories, the percentages were somewhat equal across business size. In general, these results are rather positive because competition with other organizations/businesses does not appear to be a major concern for most of the businesses sampled.

Cost of Running a Business

Business Size
0 to 9 full-time employees
10 to 99 full-time employees
More than 100 full-time employees
Unknown business size


No Barrier


Minor Barrier


Figure 13: Cost of running a business
The cost of running a business was often a significant barrier to business success. The following results were obtained:

- $23 \%$ claimed it was of little to no hindrance to their success;
- $54 \%$ felt it was either somewhat or a moderate barrier; and
- $23 \%$ stated it was an extreme barrier.

Interestingly, these concerns were relatively consistent across business sizes.

## Too Much Red Tape/Government Regulations



Figure 14: Red tape and government regulations
When asked how red tape or government regulations impacted the success of their businesses, the following results were obtained:

- $31 \%$ stated it had either no or a minor barrier/impedance;
- $40 \%$ felt it had somewhat or a moderate influence; and
- $29 \%$ indicated it was an extreme hindrance.

It is worth noting that the impact of regulations does not appear to be a function of business size, as these percentages were relatively consistent within each of the response categories.


Figure 15: Government financial support.
Most businesses indicated that not having enough government financial support was not a barrier to their business success. In fact,

- $41 \%$ stated it was no barrier where these percentages were relatively comparable for small (40\%) and medium (42\%) businesses, with larger businesses reporting it as less of a barrier ( $56 \%$ stated no barrier at all);
- $27 \%$ stated it was either somewhat or a moderate barrier; and
- $14 \%$ reported it was an extreme barrier.


Figure 16: Staff/employee training and education
The lack of adequate staff training/education was rarely a major barrier to the success of businesses. The following results were obtained:

- $58 \%$ specified it was not at all a barrier;
- $46 \%$ indicated it was somewhat or a moderate barrier; and
- $7 \%$ stated it was an extreme barrier.

The percentages were relatively consistent across business sizes, although it appeared to be a slightly larger concern for smaller businesses.

## Health Care Laws

Business Size
0 to 9 full-time employees
10 to 99 full-time employees
More than 100 full-time employees
Unknown business size


Figure 17: Health care laws and costs
Health care laws were a major concern and barrier to the success of most businesses. In fact, $50 \%$ of businesses indicated it was an extreme barrier.

- Within this category (i.e., extreme barrier), the percent of responses for small and large businesses were relatively, equally represented ( $47 \%, \mathrm{n}=936 \& 46 \%, \mathrm{n}=50$, respectively), with these concerns being slightly higher for medium size businesses (59\%, $n=489$ ).
- There was a sizeable percent $(16 \%, \mathrm{n}=936)$ that indicated it was no barrier to their business success; however, most of these were small businesses ( $20 \%, \mathrm{n}=389$ ) or an unknown $(25 \%, \mathrm{n}=37)$ business sizes. (Recall, the unknowns are likely smaller businesses (see Figure 8)).


## High Taxes

## Business Size

0 to 9 full-time employees
10 to 99 full-time employees
More than 100 full-time employees
Unknown business size


Figure 18: High taxes

High taxes tended to be a major barrier to business success, with most indicating it was either a moderate or an extreme barrier. More specifically, the following results were obtained:

- $24 \%$ stated it was either no barrier or a minor barrier;
- $38 \%$ reported it as somewhat or a moderate barrier; and
- $39 \%$ indicated it was an extreme barrier to their business success.

While no drastic differences emerged between the businesses' size categories, a somewhat lower percent of responses occurred for large businesses within the "Extreme barriers" category compared to small and medium size businesses. However, the percentage of responses within the moderate barrier category was higher for the large businesses compared to the other business sizes.

## High Start-Up Costs

Business Size 0 to 9 full-time employees 10 to 99 full-time employees More than 100 full-time employees Unknown business size


Figure 19: High start-up costs
Results to whether high start-up costs were a barrier to the success of their business produced a very wide, and nearly equally distributed, range of responses.

Notice, there appears to be a downward trend from no barriers (32\%) to extreme barriers (14\%) for large businesses, with the percentages being relatively comparable across the response options for small and medium size businesses.

## Limited Access to Large Contracts

Business Size 0 to 9 full-time employees 10 to 99 full-time employees More than 100 full-time employees Unknown business size


Figure 20: Limited access to large contracts
When asked whether limited access to large contracts was a barrier to their business success, a wide range of responses were given where:

- $39 \%$ stated it was either no or a minor barrier to their business success;
- $36 \%$ said it was somewhat or a moderate barrier to their business success; and
- $27 \%$ reported it as an extreme barrier to their success.

As might be expected, obtaining large contracts was a much larger concern for small, medium, and unknown business sizes, as $45 \%$ of large businesses indicated it was "No barrier" and only $12 \%$ stated it was an extreme barrier.

## Factors Influencing Business Growth and Success

## Having a Good Business Plan



Figure 21: Business plan/strategy.
When asked if their organization had a good business plan, most agreed with this statement. In fact, the majority $(81 \%, \mathrm{n}=2493)$ of respondents indicated that they have incorporated a good business plan. However, this certainly was less common for smaller businesses.

When examining the "Strongly agree" category of having selected a good business plan:

- large businesses had a higher percent $(46 \%, \mathrm{n}=46)$;
- followed by medium ( $31 \%, \mathrm{n}=246$ );
- small ( $24 \%, \mathrm{n}=478$ ); and
- unknown ( $25 \%, \mathrm{n}=39$ ).

Although, these numbers changed for the "Agree" category, with the following results:

- large ( $42 \%, \mathrm{n}=42$ );
- medium ( $58 \%, \mathrm{n}=453$ );
- small ( $58 \%, \mathrm{n}=453$ ); and
- unknown ( $46 \%, \mathrm{n}=71$ ).

Given that most ( $83 \%$, see Figure 4) of those who responded were the business owners, it is not overly surprising that they felt that they selected the best business plan/strategy for their business.

## Good Understanding of our Market

Business Size
0 to 9 full-time employees
10 to 99 full-time employees
More than 100 full-time employees
Unknown business size


Figure 22: Market understanding

Most (93\%) respondents felt their organization had a good understanding of the market. This is largely expected given that the business owner completed the majority (84\%) of the surveys.

Within the "Agree" and "Strongly agree" categories, the numbers were as follows for each business size:

- small ( $54 \%, \mathrm{n}=1,089 \& 39 \%, \mathrm{n}=788$, respectively);
- medium ( $47 \%, \mathrm{n}=373$ \& 49\%, n = 386, respectively);
- large ( $32 \%, \mathrm{n}=32 \& 63 \%, \mathrm{n}=62$, respectively); and
- unknown (53\%, n = $81 \& 39 \%, \mathrm{n}=60$, respectively).


## Have Financial Security

Business Size
0 to 9 full-time employees
10 to 99 full-time employees
More than 100 full-time employees
Unknown business size


Figure 23: Financial security
When it came to whether they felt their business had financial security, respondents were not always as inclined to agree with this statement.

- $57 \%$ either agreed or strongly agreed with this statement, thus suggesting their business enjoys financial security;
- $22 \%$ neither agreed or disagreed with this statement, thus implying a more neutral level of financial security; and
- $21 \%$ indicating they do not have financial security (i.e., responded with strongly disagree and disagree).

Within the "Agree" and "Strongly Agree" categories, the numbers were as follows for each business size:

- small ( $36 \%, \mathrm{n}=736$ \& $15 \%, \mathrm{n}=299$, respectively);
- medium ( $51 \%, \mathrm{n}=398 \& 21 \%, \mathrm{n}=163$, respectively);
- large ( $45 \%, \mathrm{n}=45 \& 34 \%, \mathrm{n}=34$, respectively); and
- unknown ( $28 \%, \mathrm{n}=43 \& 16 \%, \mathrm{n}=24$, respectively).


## Good Employees

Business Size
0 to 9 full-time employees
10 to 99 full-time employees
More than 100 full-time employees
Unknown business size



Figure 24: Good employees
When inquiring about whether their business had good employees:

- most ( $82 \%$ ) respondents tended to agree with this statement;
- $14 \%$ reported a neutral response to their employees; and
- very few (3\%) perceived their employees in a negative light.

When comparing the results across business size, these percentages did differ within the "Strongly agree" category:

- small ( $36 \%, \mathrm{n}=736$ );
- medium ( $42 \%, \mathrm{n}=334$ );
- large ( $49 \%, \mathrm{n}=48$ ); and
- unknown ( $34 \%, \mathrm{n}=50$ ).

These percentages were more comparable within the "Agree" category across business size:

- small ( $43 \%, \mathrm{n}=865$ );
- medium $(49 \%, \mathrm{n}=388)$;
- large ( $45 \%, \mathrm{n}=44$ ); and
- unknown ( $43 \%, \mathrm{n}=64$ ).


## Outstanding Leadership

## Business Size

0 to 9 full-time employees
10 to 99 full-time employees
More than 100 full-time employees
Unknown business size


Figure 24: Outstanding Leadership
Most (83\%) respondents felt that the leadership of their business was outstanding. More specifically, the following results were obtained:

- $15 \%$ provided a neutral response of "Neither agree or disagree;"
- $48 \%$ agreed they had outstanding leadership; and
- $35 \%$ strongly agreed they had outstanding leadership.

Given that most ( $83 \%$, see Figure 4) respondents were owners, it is not overly surprising that respondents felt their company has outstanding leadership. Within each agreement category, the proportions of businesses were not equal across the business sizes.

- Large businesses ( $53 \%, \mathrm{n}=52$ ) provided a response of "Strongly agree" more often than small ( $34 \%, \mathrm{n}=685$ ), medium ( $36 \%$, $\mathrm{n}=282$ ), and unknown ( $32 \% \mathrm{n}=50$ ) business sizes.
- Conversely, the percent of "Agree" responses was slightly larger for medium (52\%, $\mathrm{n}=412$ ) size businesses compared to small $(47 \%, \mathrm{n}=956)$, large $(34 \%, \mathrm{n}=34)$, and unknown ( $45 \%, \mathrm{n}=69$ ) business sizes.


## A Healthy Corporate Culture



Figure 25: Corporate culture
A rather large percent of businesses felt they had a healthy corporate culture, which aided in their business growth and success. The following results were obtained:

- $73 \%$ of the respondents felt that their business enjoyed a healthy corporate culture;
- $23 \%$ provided a more neutral response (i.e., neither agree nor disagree); and
- $3 \%$ indicated an unhealthy corporate culture.

Within each business size, these numbers were fairly comparable for the "Agree" and "Strongly Agree" categories:

- small ( $42 \%, \mathrm{n}=854$ \& $27 \%, \mathrm{n}=540$, respectively);
- medium ( $53 \%, \mathrm{n}=419 \& 31 \%, \mathrm{n}=244$, respectively);
- large ( $43 \%, \mathrm{n}=43 \& 38 \%, \mathrm{n}=38$, respectively); and
- unknown ( $33 \%, \mathrm{n}=49 \& 27 \%, \mathrm{n}=40$, respectively).


## A Good Organizational Structure

## Business Size

0 to 9 full-time employees
10 to 99 full-time employees
More than 100 full-time employees
Unknown business size


Figure 26: Organizational structure

Most (79\%) respondents agreed that they have a good organizational structure, with 18\% providing a more neutral opinion.

Additionally, large businesses $(44 \%, n=44)$ provided a response of "Strongly agree" more often than small ( $26 \%, \mathrm{n}=528$ ), medium ( $28 \%$, $\mathrm{n}=223$ ), and unknown ( $28 \%, \mathrm{n}=42$ ) business sizes.

Conversely, the percent of "Agree" responses was slightly larger for medium (58\%, $\mathrm{n}=$ $453)$ size businesses compared to small ( $50 \%, n=1,017$ ), large ( $43 \%, n=43$ ), and unknown (49\%, $n=75$ ) business sizes.

## Decisive Decision Makers

## Business Size

0 to 9 full-time employees
10 to 99 full-time employees
More than 100 full-time employees
Unknown business size


Figure 27: Decisive decision makers
Most (89\%) businesses expressed that the company leaders are decisive decision makers, while only $9 \%$ provided a response of neither agree or disagree related to the decisive leadership
question.

- Large businesses ( $48 \%, \mathrm{n}=48$ ) provided a response of "Strongly Agree" more often than small $(37 \%, \mathrm{n}=750)$, medium ( $40 \%, \mathrm{n}=310$ ), and unknown $(34 \%, \mathrm{n}=51)$ business sizes.
- The percent of "Agree" responses was slightly larger for medium ( $51 \%, \mathrm{n}=400$ ) size businesses compared to small ( $51 \%, \mathrm{n}=1,038$ ), large ( $39 \%, \mathrm{n}=39$ ), and unknown ( $52 \%, \mathrm{n}=51$ ) business sizes.


## Effective Networking with Outside Organizations

Business Size
0 to 9 full-time employees
10 to 99 full-time employees
More than 100 full-time employees
Unknown business size


Figure 28: Networking with outside organizations
Respondents tended to have mixed feelings when it comes to their ability to effectively network with outside organizations. The following results were obtained:

- $60 \%$ agreed they were able to effectively network with outside organizations;
- $27 \%$ stated they neither agree nor disagree with the statement about being effective networkers; and
- $13 \%$ disagreed that they were effective at networking with outside organizations.

The percentages within each response category were relatively comparable across business sizes.

Owners That Take Responsibility for Poor Decisions

Business Size
0 to 9 full-time employees
10 to 99 full-time employees
More than 100 full-time employees
Unknown business size


Figure 29: Owners take responsibility for poor decisions

Most (92\%) respondents felt that owners took responsibility for poor decisions, which again is not surprising given that $83 \%$ (see Figure 4) of respondents were owners.

In general, the percentages within each response category were very comparable across businesses and, thus, not provided here.


Figure 30: Education and training
Most (83\%) survey respondents indicated that education and training were very important factors to their business success, while $15 \%$ reported that training is only somewhat important.

The proportion of responses within each business size category was very comparable.

## Management

Business Size
0 to 9 full-time employees
10 to 99 full-time employees
More than 100 full-time employees
Unknown business size


Figure 31: Management
In regards to management:

- most ( $89 \%$ ) businesses reported that management was a very important factor to their business;
- compared to $11 \%$ stating that management was only somewhat important to their business.

While not drastically different, the percent of "Very Important" responses was slightly higher for the medium ( $94 \%, \mathrm{n}=735$ ) and large ( $99 \%, \mathrm{n}=96$ ) business when compared to those classified as small $(86 \%, \mathrm{n}=1,714)$ and unknown $(84 \%, \mathrm{n}=122)$ business sizes.

Technical Assistance


Figure 32: Technical assistance
In regards to technical assistance,

- $61 \%$ said that technical assistance was "Very important" to their business;
- $34 \%$ stated that technical assistance was "Somewhat important;" and
- $5 \%$ indicated that technical assistance was not at all important.

Small $(62 \%, n=1,218)$ and unknown ( $63 \%, \mathrm{n}=92$ ) business sizes tended to report "Very important" more often than medium ( $58 \%$, $\mathrm{n}=444$ ) and large ( $57 \%$, $\mathrm{n}=55$ ) size businesses. Recall (see Figure 8), most of the unknown businesses are likely small businesses.


Figure 33: Small business development centers
To understand the impact that small business development centers have on Texas businesses, respondents were asked to indicate how important these organizations were to their success. The following results were obtained:

- $51 \%$ reported they were "Not at all important" to their businesses success;
- $32 \%$ stated they were "Somewhat importance" to their businesses success; and
- $17 \%$ indicated they were "Very important" to their businesses success.

However, these percentages were not comparable across business sizes within each response category.

- Small and unknown business sizes indicated that small business development centers were "Not at all important" less often than medium and large size businesses:
o small $(47 \%, \mathrm{n}=840)$;
o medium ( $60 \%, \mathrm{n}=425$ );
o large ( $73 \%, \mathrm{n}=59$ ); and
o unknown ( $42 \%, \mathrm{n}=56$ ).
- Concerning is that so few businesses found these organizations very important:
o small ( $20 \%, \mathrm{n}=336$ );
o medium ( $11 \%, \mathrm{n}=80$ );
o large ( $4 \%, \mathrm{n}=3$ ); and
o unknown ( $23 \%$, $\mathrm{n}=31$ ).


Figure 34: Local business incubator/accelerator/co-working sites

When exploring the impact of local business incubator/accelerator on businesses, respondents tended to associate limited importance to their business success where:

- $15 \%$ stated they were "Very important;"
- $29 \%$ stated they were "Somewhat important;" and
- $56 \%$ stated they were "Not at all important" - these percentages were somewhat lower for small and medium size businesses.


Figure 35: Local chamber of commerce
When evaluating the importance of local Chamber of Commerce on business success, results were rather mixed:

- $45 \%$ stated these chambers were "Not at all important;"
- $38 \%$ indicated these chambers were "Somewhat important;" and
- $16 \%$ stated these chambers were "Very important."

It is very interesting to note that the importance of their local Chamber of Commerce was relatively comparable across small, medium, large, and unknown businesses sizes.


Figure 36: Local economic development organizations
Local economic development organizations displayed a wide range of responses when it came to their importance to local businesses. With generally consistent findings across business sizes:

- $40 \%$ reported they were "Not at all important" to their business;
- $36 \%$ indicated they were "Somewhat important" to their business; and
- $24 \%$ stating they were "Very important" to the success of their businesses.


Figure 37: Business magazines, books, and website

Reading material tended to vary in importance for businesses, with these percentages being fairly consistent across business sizes. For the overall sample, the following results were reported:

- 22\% "Not at all important;"
- $47 \%$ "Somewhat important;" and
- 31\% "Very important."

Texas Workforce Commission
Business Size
0 to 9 full-time employees
45\%
$48 \%, \mathrm{n}=899$ 0 to 99 full-time employees More than 100 full-time employees Unknown business size


Not at all important


Somewhat important

19\%
$17 \%$, n = 313
$21 \%, n=164$
$28 \%, n=27$
$22 \%, n=29$

Very important

Figure 38: Texas Workforce Commission

Concerning the Texas Workforce Commission, most (81\%) businesses felt it was not at all important or only somewhat important to the success of their business. Other responses show:

- $45 \%$ claimed that the commission was "Not at all important," with these percentages being higher for small and unknown business sizes;
- $36 \%$ said the organization was "Somewhat important," with these percentages being slightly higher for medium and large business sizes; and
- $19 \%$ stated it was "Very important," with this percentage being much lower for the small businesses.

Texas Secretary of State

|  | 42\% | Business Size <br> 0 to 9 full-time employees 10 to 99 full-time employees |
| :---: | :---: | :---: |
| 37\% | 40\%, n = 758 | More than 100 full-time employees Unknown business size |
| $38 \%$, $\mathrm{n}=711$ | 45\%, n = 335 |  |
| $35 \%$, $\mathrm{n}=259$ | 46\%, $n=42$ | 22\% |
|  | 46\%, n = 42 | 22\%, $\mathrm{n}=415$ |
| 39\%, n = 36 |  | 21\%, n = 154 |
| 30\%, n = 39 | 46\%, n = 60 | 15\%, n = 14 |
|  |  | 24\%, n = 31 |
| Not at all important | Somewhat important | Very important |

Figure 39: Texas Secretary of State
When considering the importance of the Texas Secretary of State on businesses success, results were generally mixed. However, these percentages across business sizes were relatively consistent:

- $37 \%$ indicated this agency was "Not at all important;"
- $42 \%$ said this agency was "Somewhat important;" and
- $22 \%$ reported this agency as "Very important."

Governor's Office of Small Business Assistance

| 50\% |  | Business Size <br> 0 to 9 full-time employees |
| :---: | :---: | :---: |
| 49\%, n = 896 |  | 10 to 99 full-time employees More than 100 full-time employees Unknown business size |
| $53 \%, n=375$ |  |  |
|  | 32\% |  |
|  | $32 \%$, $\mathrm{n}=581$ |  |
| 66\%, n = 57 |  |  |
|  | $33 \%$, n = 237 | 18\% |
|  |  | 19\%, $\mathrm{n}=342$ |
|  | 26\%, n = 22 | 14\%, $\mathrm{n}=101$ |
| $43 \%, n=55$ | 30\%, n = 39 | $\begin{array}{rl} 8 \% & n=7 \\ 27 \%, n & =35 \end{array}$ |
| Not at all important | Somewhat important | Very important |

Figure 40: Governor's Office of Small Business Assistance

To understand the importance that the Governor's Office of Small Business Assistance has on Texas businesses, respondents were asked to rate how important these organizations were to their success. The following results were obtained:

- $50 \%$ stated it was "Not at all important," with a lower percentage (49\%) of small businesses finding this agency not at all important;
- $32 \%$ indicated it was "Somewhat important," with these percentages being relatively comparable across business sizes; and
- $18 \%$ reported that it was "Very important, with higher percentage (19\%) of small businesses finding this agency very important.


Figure 41: U.S. Small Business Administration
Most respondents felt that the U.S. Small Business Administration was not important to their business success. Specifically, the following results were obtained:

- $53 \%$ stated it was "Not at all important" - $69 \%$ of larger businesses perceived this organization as not at all important, with this percentage being the smaller for small (52\%) and medium (55\%) size businesses;
- $29 \%$ said it was "Somewhat important" - this percent was much lower (19\%) among large businesses; and
- $18 \%$ indicated it was "Very important" - unfortunately, these percentages were only slightly higher for small (19\%) and unknown (29\%) business sizes.


Figure 42: National Federation of Independent Businesses
When asked about the importance of the National Federation of Independent Businesses on their business success, most respondents did not find this organization very important. The following results were obtained:

- $63 \%$ indicated it was "Not at all important;"
- $26 \%$ stated it was "Somewhat important;" and
- $11 \%$ reported it was "Very important."

While the results were fairly consistent across business sizes, the unknown businesses tended to find it slightly more important.


Figure 43: Better Business Bureau

When it came to helping their business success, the impact of the Better Business Bureau (BBB) was fairly consistent across business sizes. These overall results were as follows:

- $53 \%$ said the BBB was "Not at all important;"
- $32 \%$ reported the BBB was "Somewhat important;" and
- $15 \%$ stated the BBB was "Very important."


Figure 44: U.S. Chamber of Commerce
Most (65\%) respondents indicated that the U.S. Chamber of Commerce was "Not at all important" to their business success. Other responses were as follows:

- $26 \%$ stated it was "Somewhat important," and
- $9 \%$ indicated it was "Very important."

The percentages were very comparable within each of these business sizes, although the percent was slightly lower for the unknown (57\%) within the "Not at all important" category compared to;

- small (66\%);
- medium (63\%); and
- large (66\%) business sizes.


## Elected Officials



Figure 45: Elected officials
There was a wide range of opinions when asked about how elected officials influenced the success of their business, with these responses appearing to differ by business size:

- $28 \%$ stated they were "Not at all important" - a slightly higher percent of small (30\%) and unknown (31\%) business sizes indicated they were not at all important;
- $34 \%$ reported they were "Somewhat important" - a lower percent of unknown (26\%) business sizes indicated they were somewhat important; and
- $38 \%$ indicated they were "Very important" - the percentages were fairly comparable across business sizes for the "Very important" response option.

Texas Comptroller of Public Accounts


Figure 46: Texas Comptroller of Public Accounts
The importance of the Texas Comptroller of Public Accounts was fairly mixed when asked how it impacted the success of their business; however, these percentages did not differ significantly based on business size:

- $29 \%$ stated it was "Not at all important;"
- $40 \%$ reported it was "Somewhat important;" and
- $30 \%$ indicated it was "Very important."


## Use of Financial Resources by Business

The Business is Self-Financed/Recapitalization


Figure 47: Business is self-financed
When asked how frequently their business is self-financed/recapitalized, the results were fairly mixed; although, these percentages were rather consistent across business sizes:

- $24 \%$ said they do not use self-financing;
- $22 \%$ stated they self-finance weekly;
- $22 \%$ reported they self-finance monthly; and
- $32 \%$ indicated they self-finance yearly.


## Use of Funds from Ownership in Other Companies

Business Size


Do not use



Figure 48: Funds from ownership in other companies

A large percent (90\%) of businesses do not use funds from their other companies to fund another one of their businesses, with these percentages being relatively equal across business sizes:

- small ( $91 \%, \mathrm{n}=1,732$ );
- medium ( $88 \%, \mathrm{n}=644$ );
- large ( $86 \%, \mathrm{n}=76$ ); and
- unknown (91\%, $\mathrm{n}=126$ ).


## Selling/Pledging Accounts Receivable



Figure 49: Selling/pledging accounts receivable.
Ninety-one percent of the respondents stated that they do not utilize funds from selling or pledging accounts, with these percentages being relatively equal across business sizes:

- small ( $92 \%, \mathrm{n}=1,734$ );
- medium ( $88 \%, \mathrm{n}=641$ );
- large ( $89 \%, \mathrm{n}=80$ ); and
- unknown ( $90 \%$, $\mathrm{n}=123$ ).

Credit Cards


Do not use


Weekly

Business Size
0 to 9 full-time employees 10 to 99 full-time employees More than 100 full-time employees Unknown business size


Figure 50: Credit cards
Credit cards appeared to be used to wide degrees across businesses:

- $38 \%$ indicated they do not use credit cards;
- $32 \%$ stated they use credit cards weekly;
- $26 \%$ reported they use credit cards monthly; and
- $4 \%$ said they use credit cards yearly.

However, the percent of responses differed slightly based on business size, as there was a larger percent of large businesses ( $53 \%, \mathrm{n}=48$ ) that did not use credit cards as compared to:

- small ( $37 \%, \mathrm{n}=705$ );
- medium ( $37 \%, \mathrm{n}=269$ ); and
- unknown $(40 \%, \mathrm{n}=56)$ business sizes.

The responses for the weekly and monthly use by business size were as follows:

- small $(30 \%, \mathrm{n}=580 \& 28 \%, \mathrm{n}=527$, respectively);
- medium ( $36 \%, \mathrm{n}=266$ \& $24 \%, \mathrm{n}=173$, respectively);
- large $(30 \%, \mathrm{n}=27 \& 14 \%, \mathrm{n}=13$, respectively); and
- unknown ( $30 \%, \mathrm{n}=42 \& 27 \%, \mathrm{n}=38$, respectively).


Figure 51: Payday loans
Nearly 99\% of the respondents stated that they do not use payday loans, with these percentages being nearly identical across business sizes.


Figure 52: Banks loan/revolving line of credit
Most (58\%) businesses indicated they do not use bank loans as a source of funding; however, these percentages differed greatly across business size:

- small ( $66 \%, \mathrm{n}=1,255$ );
- medium ( $38 \%, \mathrm{n}=283$ );
- large ( $32 \%, \mathrm{n}=29$ ); and
- unknown ( $74 \%, \mathrm{n}=103$ ).

Within the next two larger response categories (i.e., Monthly and Yearly), the monthly and yearly percentages were as follows by business group:

- small ( $12 \%, \mathrm{n}=231 \& 19 \%, \mathrm{n}=368$, respectively);
- medium ( $19 \%, \mathrm{n}=142 \& 34 \%, \mathrm{n}=248$, respectively);
- large $(24 \%, \mathrm{n}=22 \& 29 \%, \mathrm{n}=26$, respectively); and
- unknown ( $9 \%, \mathrm{n}=13 \& 14 \%, \mathrm{n}=20$, respectively).


Figure 53: Private loans
Most (85\%) businesses surveyed claimed that they do not use private loans from friends/family as a source of funding, with $11 \%$ stating that they utilize this source of funding yearly.

Within the "Do not use" category, the percentages across business size was fairly stable:

- small ( $84 \%, \mathrm{n}=1,594$ );
- medium $(87 \%, \mathrm{n}=632)$;
- large ( $94 \%, \mathrm{n}=85$ ); and
- unknown ( $78 \%$, $\mathrm{n}=109$ ).

State/Regional Loan and Incentive Programs


Figure 54: State/regional loans and incentive programs.
About 99\% of the businesses surveyed reported that they "Do not use" state or regional loans and incentive programs.


Figure 55: Private placement of debt
Regarding private placement of debt, $95 \%$ of the respondents indicated that they "Do not use" private placement of debt as a source of funding. These percentages were comparable across business size:

- small ( $96 \%, \mathrm{n}=1,805$ );
- medium $(93 \%, \mathrm{n}=676)$;
- large ( $97 \%, \mathrm{n}=134$ ); and
- unknown ( $97 \%, \mathrm{n}=134$ ).


Figure 56: Private placement of stock
Most respondents (97\%) indicated that they do not use private placement of stock as a financial resource in their business. These percentages within the "Do not use" category were slightly larger for small and unknown business size:

- small ( $98 \%, \mathrm{n}=1,848$ );
- medium $(95 \%, \mathrm{n}=693)$;
- large ( $90 \%, \mathrm{n}=81$ ); and
- unknown ( $99 \%, \mathrm{n}=137$ ).


Figure 57: Vendor credit
Many (65\%) businesses reported that they do not use (or were unable take advantage of) vendor credit, while a sizeable number of businesses used vendor credit weekly (14\%) and monthly (19\%).

From these results, it appears that medium and large businesses are more likely to use vendor credit when compared to small and unknown business size. The percent of companies that do not use vendor credit are:

- small ( $69 \%, \mathrm{n}=1,298$ );
- medium ( $54 \%, \mathrm{n}=391$ );
- large ( $56 \%, \mathrm{n}=50$ ); and
- unknown ( $80 \%, \mathrm{n}=109$ ).


Figure 58: SBA or other government loans/grants/incentives
Most respondents (95\%) indicated they do not use SBA or other government loans/grants/incentives. These percentages were generally comparable across business sizes within this category:

- small ( $96 \%, \mathrm{n}=1,802$ );
- medium $(90 \%, \mathrm{n}=654)$;
- large ( $94 \%, \mathrm{n}=85$ ); and
- unknown ( $97 \%, \mathrm{n}=132$ ).


## Mentoring and Coaching



Figure 59: Received coaching or mentoring
Slightly more than half (53\%) of the respondents indicated that they have received coaching/mentoring, with these percentages being relatively comparable across business sizes.

Importance of Coaching/Mentoring to Business


Figure 60: Significance of coaching or mentoring
For those businesses that received mentoring/coaching, their experience was rather mixed, although consistent across businesses sizes:

- $30 \%$ stated it was either "Not at all important" or "Slightly important;"
- $24 \%$ reported it was "Moderately important;" and
- $47 \%$ indicated it was either "Very important" or "Extremely important."


## Guidance in Growing my Business

Business Size
0 to 9 full-time employees
10 to 99 full-time employees
More than 100 full-time employees
Unknown business size
$14 \%$
$13 \%, n=241$
$16 \%, n=116$
$15 \%, n=13$
$17 \%, n=23$

Not at all important

14\%




Moderately important


Figure 61: Guidance in business growth
Businesses who had mentors/coaches reported great variety in how much their mentor or coach influenced their business success, with these responses being rather consistent across business sizes:

- $28 \%$ said their mentor/coach was "Not at all important" or "Slightly important;"
- $22 \%$ indicated their mentor/coach was "Moderately important;" and
- $50 \%$ reported their mentor/coach was "Very important" or "Extremely important."


Figure 62: Insight related to business practices
Mentors/coaches did not always provide significant insight into business practices, as these percentages differed considerably across response options. However, they were consistent across business sizes:

- $28 \%$ stated their mentor/coach was "Not at all important" or "Slightly important;"
- $22 \%$ indicated their mentor/coach was "Moderately important;" and
- $49 \%$ reported their mentor/coach was "Very important" or "Extremely important."


Figure 63: Emotional support related to business struggles.
Mentors/coaches tended to be slightly less effective when it comes to providing emotional support related to business struggles, with these responses being consistent across business sizes:

- $49 \%$ stated that their mentor/coach was either "Not at all important" or "Slightly important;"
- $20 \%$ indicated their mentor/coach was "Moderately important;" and
- $31 \%$ reported their mentor/coach was either "Very important" or "Extremely important."


## Navigating Government Regulations

Business Size 0 to 9 full-time employees 10 to 99 full-time employees More than 100 full-time employees Unknown business size


Figure 64: Navigating government regulations

Respondents had very mixed experiences when it came to their mentor/coach helping them navigate government regulations:

- $34 \%$ stated that their mentor/coach was either "Not at all important" or "Slightly important;"
- $24 \%$ indicated their mentor/coach was "Moderately important;" and
- $41 \%$ reported their mentor/coach was either "Very important" or "Extremely important."

While the results differed slightly for larger businesses, this could be a result of the much smaller sample size within each response category.

## Creating Opportunities and Opening Doors



Figure 65: Creating opportunities and opening doors
Many respondents reported that their mentor/coach was effective in creating opportunities for their business and opening doors, with these benefits being rather consistent across business sizes:

- $22 \%$ stated that their mentor/coach was either "Not at all important" or "Slightly important;"
- $20 \%$ indicated their mentor/coach was "Moderately important;" and
- $59 \%$ reported their mentor/coach was either "Very important" or "Extremely important."


## Exporting and Regulations



Figure 66: Exporting of services or products
Of those that responded to this question ( $n=2,909$ ), only $12 \%(n=338)$ of businesses reported that they export services/products, with medium and large businesses being more likely to export than small and unknown business sizes:

- small $(10 \%, \mathrm{n}=189)$;
- medium ( $16 \%, \mathrm{n}=121$ );
- large ( $20 \%, \mathrm{n}=18$ ); and
- unknown ( $7 \%, \mathrm{n}=10$ ).

To how many countries does your business export?


Figure 67: Number of countries exporting to

Of those businesses that said they exported and reported the number of businesses they exported to, they provided the following results:

- $61 \%$ exported to between 1 to 5 countries;
- $17 \%$ exported between 6 and 10 countries; and
- $32 \%$ exported to more than 11 countries.

As expected, smaller businesses tended to export to fewer countries than larger companies.

## What are the most useful forms of Texas Government Support?



Form of Support
Figure 68: Useful forms of Government support
When asked to select all those topics/areas (i.e., those ten options provided in Figure 68) that would be useful to their business success, the four most selected were as follows:

- tax incentives for small exports (20\%)
- in-country documentation assistance (13\%)
- assistance in protecting intellectual property ( $13 \%$ )
- stronger representation on U.S. Trade Representative Office (12\%).


## Methods of Communicating with the Office of the Governor



Prefered Mediums
Figure 69: Forms of communication with the Texas government

When asked to indicate the most useful methods of communication (allowing respondents to select all that apply) with the Office of the Governor, the preferred methods/mediums are as follows:

- email/newsletter or blogs (34\%)
- website (17\%)
- meetings/conferences or workshops (11\%)
- webinars (10\%)


## Social Media Used to Reach Customers



Figure 70: Forms to advertise or communicate with customers

When asked to select all the forms of social media they use to advertise and/or communication with their clients, the most common methods were:

- website (24\%)
- email/e-newsletters (20\%)
- Facebook (16\%)
- LinkedIn (12\%)


## Qualitative Data Analysis

To better understand the quantitative data above and allow respondents to express additional concerns to the OOG, several open-ended questions were included in the online survey and the phone survey. Although the actual responses are included in the data file, below various text mining analysis procedures were used to succinctly express common themes from respondents' comments. Survey respondents represented over 24 different industry sectors. The top five industry sectors for survey respondents were: 1) Professional, Scientific and Technical Services (20.5\%), 2) Health Care and Social Assistance (10.2\%), 3) Construction (9.1\%), 4) Finance and Insurance (8.5\%) and 5) Retail Trade (7.0\%). These representative industries accounted for more than half of all respondents (55.2\%). These industry representations provide context for the text mining results. It should also be noted that text mining cannot parse certain subtleties of meaning reflected in respondents' comments. For each qualitative question, bigrams (i.e., two-word phrases), dendrograms, and word clouds were used to identify the key features of the text and provide insights from the text for each question. There is also a document provided by a business who wished to share their experience included in the appendix (see Appendix A).

Below is a brief introduction to Bigram, word cloud, and dendrogram analyses. While not an exact outline of our methodology, this link ${ }^{10}$ provides an excellent introduction into text mining using $R$.

## Bigram, word cloud, and dendrogram analyses

Word cloud (for more information see Appendix B) is the common technique in text mining to extract the prominent words from the text, with the bigram bar charts providing the frequency to which those terms/words occur. The cloud gives prominence to the words that frequently appear in the text. Larger word font size tends to indicate higher word occurrences and greater importance.

There are various methods of constructing word clouds as it can be done using a single word selection method, two words at a time, phrases, and so on. Two word clouds and bar charts are used to provide some context and avoid single words with limited meaning (e.g., rather than having the word "taxes" the words "high taxes" might be highlighted). However, frequent word counts can mask useful insights of the text, thus these dendrogram analyses can sometimes provide better understanding of how the words used in the context are related. More specifically, the dendrogram, which is a branching diagram, can then be used to show the connections/relationships between terms/words.

[^4]
## Granular analyses and selective verbatim comments

To supplement the text mining analyses, granular analyses and selective verbatim text from respondents are included to provide additional context. Based on the keywords extracted from the text mining analyses, the text associated with the most frequently occurring themes/words were read and summarized (see Granular analyses). For example, in the first section (What are the barriers to doing business in Texas?), the bigram graph (Figure 72) indicated that the number one barrier was health care. Therefore, comments/text that captured the word "health care" were summarized and included in the granular analysis sections. From all these comments, certain verbatim comments were selected and shared in the section labeled "Selective verbatim comments for..."

## Text Mining Results

## Barriers to business in Texas



Figure 72: Bigram analysis for Texas barriers

Qualitative results revealed that the most commonly perceived barriers for Texas businesses were health care, taxes (property and franchise tax), real estate, and red tape.


Figure 73: Word cloud for Texas barriers


Figure 74: Dendrogram for Texas barriers

These results show the connection between comment words provided in the written text related to barriers doing work in Texas. As seen here, the largest concerns are taxes related to property, sales, and franchise, along with the costs related to health insurance.

## Granular text analysis for Texas barriers

Based on the extracted features/key words, comments from the respondents were analyzed for the key features. The points below indicate the commonly perceived barriers to business.

- Franchise tax methodology: Some respondents expressed concern about franchise tax methodology being calculated using gross sales.
- High property tax and existing property valuation: Respondents expressed concern with increased property taxes and the present valuing system.
- Complex and non-uniform sales tax across products, labor, and high inventory tax.
o Businesses expressed concern over the costs for hiring tax consultants and missed productivity for small staff.
o Some respondents also expressed concern about the many taxing agencies and filings required for a small business (i.e. TWC Unemployment, Texas Sales Tax, Property Tax, Federal Income Tax, SSA, etc.).
- Oil and Gas (challenging economic environment): Some respondents expressed concern over economic slowdown, especially in the oil and gas sector as it impacted the entire value chain.
- High cost of general liability insurance: Some respondents expressed their concern on the steady 5-year increase in liability insurance requirements.
- The high cost and complexity of hiring and processing payroll: Business have to match Federal Insurance Contributions Act (FICA) and pay health care costs. Some respondents noted difficulty in hiring more employees due to training cost.
- In real estate, concerns are high taxes, legal constraints, and government bureaucracy.
- Paperwork and complex reporting requirement: Some respondents expressed concern over paperwork and reporting requirement. They wanted the government to streamline these requirements and make them consistent from agency to agency depending on size of work.
- Inability to hire well qualified employees due to high employee cost which is was attributed to a high employee insurance cost.
- Too specific qualification criteria in Response for Proposals (RFPs): Some respondents expressed concern with RFPs' qualifications criteria as sometimes being so specific that it is difficult for them to qualify.
- Lack of skilled labor: Some respondents indicated that they are unable to find skilled labor due to rapidly developing technology.
- Lack of infrastructure and transportation: Some respondents expressed concern with poor infrastructure, lack of public transportation and no access to rapid transport between population centers (e.g., fast trains). Comments related to
concern over the lack of government investment for urban infrastructure such as transportation options (rail, light rail, bus rapid transit).
- Competition with unlicensed companies: Some respondents expressed concern about unlicensed companies being able to operate and compete with licensed companies.


## What making Texas a good place to do business?

Bigram for what makes Texas Good place for Business


Bigrams
Figure 75: Bigram analysis for what makes Texas a good place to do business
These results demonstrate the most frequent factors that respondents identified as making Texas a good place to do business: low taxes, low cost of living, right to work, good economy/strong economy, and less regulation.


Figure 76: Word cloud for what makes Texas a good place to do business


Figure 77: Dendrogram for what makes Texas a good place to do business
According to respondents, the major points that make Texas a good place to do business are connected to: 1) climate, 2) large and growing and population, 3) steady economic growth, 4) no state income taxes.

## Granular text analysis: What makes Texas a good place to do business?

Based on the extracted features respondents' comments were analyzed for key factors. Below points indicate these key factors that make Texas a good place to do business.

- Low Taxes: Most respondents perceived that relatively low taxes make Texas a good place to do business.
- Lower overall cost of living compared to other states. Some respondents also noted affordable housing.
- Right to work state with many opportunities in many fields: Some respondents mentioned that Texas' business climate is welcoming and is not "choked down" with regulations.
- Robust stable economy overall and a good place to do business.
- A can-do attitude and a climate that favors entrepreneurs.


## What makes Texas a bad place to do business?

Bigram for what makes Texas Bad place for Business


Figure 78: Bigram analysis for what makes Texas a bad place to do business
From the Bigram table, the most common topics that appeared in respondents' comments included: high taxes (including property taxes), oil and gas, red tape, real estate, franchise tax, and public education.


Figure 79: Word cloud for what makes Texas a bad place to do business


Figure 80: Dendrogram analysis for what makes Texas a bad place to do business

Most respondents' comments mentioned the cost of health insurance, public education costs, franchise taxes, property and sales taxes, government regulation, and business insurance as concerns that make Texas a bad place to do business.
Texas government policies influence on businesses

Bigram for Government Policies that Influenced Business


Bigrams

Figure 81: Bigram analysis for Texas government policies influence on businesses

These results indicated that property taxes, tort reform, government regulations, and health care were the most common government policies that influence business.


Figure 82: Word cloud for Texas government policies influence on businesses


Figure 83: Dendrogram analysis for Texas government policies influence on businesses

Polices and requirements related to health care, taxes (specifically property and franchise), and insurance were commonly connected to the success and growth of small businesses.

## Granular text analysis for Texas government policies influence on businesses

Based on the extracted features, respondents' comments were analyzed for the key features. Below points indicates the key government policies influence business.

- Property tax rates: Respondents indicate the desire for greater transparency regarding property taxes as they can sometimes feel disproportionately and indiscriminately applied.
- Health care cost- The associated complexities with providing healthcare to employees can lead to confusion, leading business owners to delay increasing their employee base.
- Government policies: Policies viewed as pro-business and pro-development were acknowledged and encouraged. One example of a positive change was the increased threshold related to the franchise tax

Additional comments/suggestions concerning Texas government policies, regulations, and/or other activities

Bigram for Concern on Government policies, Regulations and Rules


Bigrams

Figure 84: Bigram analysis for additional comments/suggestions concerning Texas government policies, regulations, and/or other activities

The Bigram analysis revealed that health insurance, rules and regulations, property taxes, government regulations, and red tape were the most frequent topics.


Figure 85: Word cloud for Texas government policies influence on businesses


Figure 86: Dendrogram analysis for Texas government policies influence on businesses

The majority of comments centered on the perceived complexity of processes associated with small businesses such as those related to healthcare, the role of the federal government, taxes, and the regulatory environment.

## Granular text analysis for Texas government policies influence on businesses

Based on the extracted features respondents' comments were analyzed for key features. The points below indicate other key comments or suggestions on Texas government policies, regulations, rules and/or other activities mentioned by respondents.

- Health care/health insurance: Many respondents felt that health insurance should not be tied to one's employment.
- Property tax: While many agreed property tax was relatively lower in Texas, rates are perceived as too high, generating support for property tax reform.
- Franchise tax: In general, the franchise tax is viewed as complex, prompting a desire for increased transparency and understanding.
- Red Tape and regulation: Respondents mentioned that less red tape and government regulation would be helpful.


## Useful factors related to coaching/mentoring experiences

Bigram for Comments related to Coaching/Mentoring Experience


Figure 87: Bigram analysis for coaching/mentoring experiences
These results revealed that mentoring and coaching assist in the areas of government regulations, sound boarding, guidance in business growth, emotional support, and opening doors.


Figure 88: Word cloud analysis for coaching/mentoring experiences


Figure 89: Dendrogram analysis for coaching/mentoring experiences

Respondents appreciated the advice for company through mentoring and coaching facilities. They indicated their mentoring experience helped them get knowledge about the industry and the advice helped them within the industry

## Granular text analysis for coaching/mentoring experiences

Based on the extracted features respondents' comments were analyzed for key features. The points below indicate other key comments or suggestions on coaching and mentoring activities mentioned by respondents.

- Assistance navigating and understanding government regulations and requirements
- Benefits derived from working with someone with similar background and/or experience
- Receiving emotional support directly affects ability to succeed
- Close knowledge gap on cash flow and budgeting
- Referenced the Goldman Sachs 10,000 Small Business Program as an example of what works


Figure 91: Word cloud analysis for other comments for the OOG office


Figure 92: Dendrogram analysis for other comments for the OOG
Respondents were appreciative of the opportunity to have their voices heard and expressed approval for the Governor's Office and the support it provides.

## Granular Text Analysis based on extracted features

Based on the extracted features we analyzed comments from the respondents for the key features. Below points indicate the other key comments or suggestions to OOG.

- Governor's job/Governor's Office: Most respondents applauded the efforts of the Governor and Governor's office and were grateful for the opportunity to share their opinions and concerns.
- Health and Dental Care: There seems to be confusion related to health care laws and requirements, often leading to frustration with the current process.
- Public Education/Education for Poor: Respondents expressed strong support for increased state-level investment in the education and training of the workforce.


## Appendix A

## Pros and cons of word cloud:

## The pros:

Word cloud is the best way to visually represent the interests of respondents. Word cloud is the best way to understand the results of research that doesn't require an understanding of the technicalities. Key words in the text or document always float on the surface in word cloud which reveals the essential information. Word clouds are the fastest way to develop the themes from research. Word cloud provides emotional connections of reactions by respondents.

## The Cons:

Although word cloud is designed to focus on the key words (often based on the frequency of occurrence), others factors affect the visual orientation of the data from the observer's perspective. Size represent the importance of words, but itself along is not sufficient to draw the concrete theme from the text. Therefore, sometimes it could be misleading to the readers, as some of the more frequent words may not plotted (or at least as large as their frequency) in the word cloud due to scale and alignment issue. Therefore, the features extracted from word cloud and bigram may not be exactly same.


[^0]:    ${ }^{1}$ A HUB is defined here as "a business that is at least $51 \%$ owned by an ethnic minority (e.g., Asian Pacific American, Black American, Hispanic American, or Native American), woman, and/or Service Disabled Veteran (i.e., see link for definition)."
    ${ }^{2}$ http://www.texasoogsurvey.org/
    ${ }^{3}$ https://utsa.az1.qualtrics.com/jfe/form/SV_1SLGR1rx2XG9QnH

[^1]:    ${ }^{4}$ According to the North American Industry Classification System. http://www.census.gov/eos/www/naics/

[^2]:    ${ }^{5}$ https://texasoogsurvey.org/
    ${ }^{6}$ https://utsa.az1.qualtrics.com/jfe/form/SV_1SLGR1rx2XG9QnH

[^3]:    ${ }^{7}$ It is important to note that while this study was intended for small businesses and HUBs, there was no method to determine their organizational status until after the data were collected. Therefore, all businesses were sampled and the results were separated by business size for comparative purposes. 8 The 3,439 is composed of 3,332 respondents from the email survey and 107 from the phone survey. ${ }^{9}$ It is important to indicate that these numbers are based on the November data, as these numbers were unavailable for the December data.

[^4]:    ${ }^{10} \mathrm{https}$ ://eight2late.wordpress.com/2015/05/27/a-gentle-introduction-to-text-mining-using-r/

