

The Annual Survey of Entrepreneurs: An Introduction

Lucia Foster and Aneta Eride (US Census Bureau)

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by

Lucia Foster U.S. Census Bureau

Patrice Norman U.S. Census Bureau

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Abstract

The Census Bureau continually seeks to improve its measures of the U.S. economy as part of its mission. In some cases this means expanding or updating the content of its existing surveys, expanding the use of administrative data, and/or exploring the use of privately collected data. When these options cannot provide the needed data, the Census Bureau may consider fielding a new survey to fill the gap. This paper describes one such new survey, the Annual Survey of Entrepreneurs (ASE). Innovations in content, format, and process are designed to provide high-quality, timely, frequent information on the activities of one of the important drivers of economic growth: entrepreneurship. The ASE is collected through a partnership of the Census Bureau with the Kauffman Foundation and the Minority Business Development Agency. The first wave of the ASE collection started in fall of 2015 (for reference period 2014). Results from the 2014 ASE are tentatively planned for release in summer 2016. Qualified researchers on approved projects will be able to access micro data from the ASE through the Federal Statistical Research Data Center (FSRDC) network starting in early 2016.

^{*} Corresponding author information: Foster: Center for Economic Studies, Bureau of the Census, Washington, DC 20233. Any opinions and conclusions expressed herein are those of the authors and do not necessarily represent the views of the U.S. Census Bureau . All results have been reviewed to ensure that no confidential information is disclosed. We thank Christopher Goetz, John Haltiwanger, Cynthia Hollingsworth, Henry Hyatt, Ron Jarmin, C.J. Krizan, Javier Miranda, and Scott Ohlmacher for helpful comments.

1. Introduction

As part of its mission, the Census Bureau continually seeks to improve its measures of the U.S. economy. In some cases this means expanding or updating the content of its existing surveys, expanding the use of administrative data, and/or exploring the use of privately collected data. When these options cannot provide the needed data, the Census Bureau may consider fielding a new survey. This paper describes one such new survey, the Annual Survey of Entrepreneurs (ASE).¹ Through innovations in content, format, and process, the ASE is designed to provide high-quality, timely, frequent information on the activities of one of the important drivers of economic growth: entrepreneurship.

Starting with reference year 2014, the ASE will collect annual information from a sample of about 290,000 firms with paid employees over the entire private non-agricultural U.S. economy. Acting as the annual supplement to the quinquennial Survey of Business Owners (SBO), the ASE collects information on up to four owners of sampled firms and characteristics of these firms. The owner-specific questions cover age, sex, educational attainment, citizenship, ethnicity, race, and veteran status. Firm specific questions concern the year the business was established, funding, workers, customers, digital presence, global presence, and business operations (for example, seasonality of work). There are also questions on firm owners' motivations for starting the firm, aspirations for the firm, financial challenges, and profitability.

As a firm-level survey with a focus on young firms and the experiences of firm owners (entrepreneurs), the ASE attempts to provide information on one of the most dynamic parts of the U.S. economy, business startups.² Understanding business startups is critical for developing a deeper understanding of job flows and productivity dynamics. Decker et al. (2014) find that "[b]usiness startups account for about 20 percent of US gross (total) job creation while high-growth businesses (which are disproportionately young) account for almost 50 percent of gross job creation (p.4)." Not only do these startups impact job creation, but they also play a large role in innovation and productivity dynamics in the U.S. The reallocation of economic activity from less productive to more productive businesses is an important driver of economic growth. The contribution of entering and exiting businesses is especially important in some sectors of the

¹ The official documentation for the ASE can be found at: <u>https://www.census.gov/econ/ase/</u>. More precisely, the ASE is a supplement to an existing survey.

² The forthcoming NBER-CRIW volume "Measuring Entrepreneurial Businesses: Current Knowledge and Challenges" eds. Haltiwanger, Hurt, Miranda, Schoar provides many examples of research into entrepreneurship and captures many of the challenges of measuring entrepreneurial activities.

economy. In retail trade, for example, Foster, Haltiwanger, and Krizan (2006) find that entry and exit of establishments accounts for virtually all of the labor productivity in the sector. New establishments of new firms play an important role in this entry (new establishments of existing firms dominate this process).³

Further, as Jarmin and Krizan (2010) point out, understanding differences in the *demographics* of business startups is critical since startups (and self-employment) can be an important mechanism for ensuring the mobility of economically disadvantaged groups.⁴ The SBO data have proven instrumental is increasing our understanding of firm owner demographics and the dynamics of the U.S. economy. For example, the preliminary 2012 SBO data showed that while the numbers of both Women and Minority-Owned firms were growing, the characteristics of these firms (smaller in terms of both revenue and employment) suggested that these types of firms continued to face challenges.⁵ Jarmin and Krizan (2010) examine the relationship between past experience and future success using the SBO and find differences across demographic groups of owners in their start-up histories: "Asian-owned firms are less likely than white-owned firms to have started-out as nonemployers but firms owned by all other minority groups, as well as women-owned firms, are more likely to start-out without employees." Using an earlier incarnation of the SBO, Fairlie and Robb (2009) examined gender differences in business performance in an attempt to understand the lower survival rates, profits, employment, and sales in female-owned businesses.

Results from the 2014 ASE are tentatively planned for release in the summer of 2016 in a tabular format similar to that of the SBO. For research questions that require more detailed information, qualified researchers on approved projects will be able to access micro data from the ASE through the Federal Statistical Research Data Center (FSRDC) network starting in early 2016.

The ASE is collected through a partnership of the Census Bureau with the Kauffman Foundation and the Minority Business Development Agency (MBDA). This partnership is intended to draw from the experience and expertise of each partner. The Kauffman Foundation is

³ Foster, Haltwanger, and Krizan (2001) find similar dynamics at the *establishment* level for one industry in the service sector (auto repair shops) and a large but not quite as dominant role for entry and exit in the manufacturing sector. Jarmin, Klimek, and Miranda (2004) find that *firm* entry and exit rates are substantially larger in retail trade than in manufacturing (but note they include diversification in their definition of firm entry).

⁴ They note that this point is made by Fairlie and Robb (2009).

⁵ See for example:

Pew Research Center: http://www.pewresearch.org/fact-tank/2015/09/01/businesses-owned-by-women-minorities-lag-in-revenue-share/

New York Times: http://www.nytimes.com/aponline/2015/08/24/us/ap-us-smallbiz-get-started.html.

a non-profit institution whose mission is "To help individuals attain economic independence by advancing educational achievement and entrepreneurial success, consistent with the aspirations of our founder, Ewing Marion Kauffman."⁶ The Kauffman Foundation has produced its own firm survey (the Kauffman Firm Survey), sponsored other surveys, and sponsored research on firm dynamics (including for the Census Bureau's Business Dynamics Statistics).⁷ The mission of the Minority Business Development Agency "is to foster the growth and global competitiveness of U.S. businesses that are minority-owned."⁸ As such, the MBDA is an active policy user of business data. The Census Bureau contributes its expertise in data collection and the protection of our respondents' confidentiality. While the Census Bureau partners with various entities, the Census Bureau maintains control over all micro-level data and provides access only under strict security protocols.⁹

In the next section, we provide background on the motivation for the creation of the ASE. In Section 3 we describe the sample and collection of the ASE. Section 4 describes the content of the core instrument and Section 5 describes the use of a modular approach for special inquiries. The final section of this paper provides some discussion of anticipated future work related to the ASE.

2. Context and Motivation

To understand the importance of the contribution of the ASE, it is helpful to review the existing survey and administrative data on owners and young businesses. To summarize briefly, these include: a survey with a large sample that provides detailed information less frequently, administrative datasets that provide limited information on the universe of firms, and surveys with small samples that provide detailed information (some annually, some infrequently). The ASE is intended to fill the resulting data gap by collecting detailed questions from a large sample annually.

Starting with the large sample survey that provides detailed information less frequently, the SBO collects information on the demographics of business owners and characteristics of their

⁶ http://www.kauffman.org/who-we-are/vision-mission-approach.

⁷ Kauffman is a sponsor of the Panel Study of Entrepreneurial Dynamics (PSED); other sponsors of the PSED include the Small Business Administration and the National Science Foundation.

⁸ www.mbda.gov/pressroom/speechesremarks/listing?page=3

⁹ The ASE data are protected under Title 13 of the United States Code which governs the use and access of the micro-level data and ensures the confidentiality of respondents.

 $http://www.census.gov/about/policies/privacy/data_protection/title_13_protection_of_confidential_information.html$

firms for close to 2 million firms as part of the five-year Economic Census. The SBO "provides the only comprehensive, regularly collected source of information on selected economic and demographic characteristics for businesses and business owners by gender, ethnicity, race, and veteran status."¹⁰ While the ASE focuses on employer firms, the SBO collects information on both businesses with employees and nonemployer businesses. In a typical collection period, approximately 80 percent of businesses in the SBO are nonemployer businesses reflecting the shares in the universe of businesses in the U.S. economy. However, while most firms are nonemployers, they contribute only a small fraction of the overall revenue of the economy. ¹¹ The SBO and its related predecessors have been collected under different names every 5 years since 1972. ¹² For each firm in the sample, the SBO collects information on the characteristics of up to four of the firm's owners as well as information on the firm itself. The owner section includes questions on sex, age, education, citizenship, race, ethnicity, veteran status, and role in the business. The firm section includes questions on the types of customers, the types of workers, and its operating schedule.

The Census Bureau provides related complementary information on businesses through a number of data products developed through innovative uses of administrative records data (sometimes combined with Economic Census and/or survey data). Examples of these include the Business Dynamics Statistics (BDS), County Business Patterns (CBP), Nonemployer Statistics, Quarterly Workforce Indicators (QWI), and Statistics of U.S. Businesses (SUSB).¹³ Table 1 briefly summarizes these Census Bureau public data products and the confidential micro-level datasets from which they are built.¹⁴ These provide information on businesses in the U.S. but do not provide as detailed information about the demographics of businesses' owners. However,

https://www.census.gov/history/www/programs/economic/economic_surveys_in_the_economic_census.html. ¹³ Household surveys can also be used to study entrepreneurship. See Table 1 of Goetz et al. (2015).

¹⁰ http://www.census.gov/econ/sbo/about.html

¹¹ Davis et al. (2009) find that while there were almost three times as many nonemployer businesses as employer businesses (5.4 million employer versus 15.5 million nonemployer businesses), nonemployer businesses only accounted for about 4% of aggregate U.S. business revenue in 2000 (p. 300).

¹² The SBO "is an amalgamation of two prior surveys: the Survey of Minority- and Women-Owned Business Enterprises (SMOBE/SWOBE), and the Characteristics of Business Owners (CBO) survey, which had been discontinued in 1992. The [SMOBE] was initiated in 1969 as a special study of data from the 1967 economic census. In 1972, the survey became part of the economic census itself; it was sent out to almost every business owner enumerated that year. The [SWOBE] began in 1977, providing the same demographic information for female business owners that SMOBE provided for minorities. The Census Bureau combined the two surveys with parts of the [CBO] in 2002, creating the [SBO]." See www.census.gov/econ/sbo/about.html.

¹⁴ The Bureau of Labor Statistics (BLS) has business datasets that provide information on business dynamics similar to the BDS and the LBD. In particular, the Business Employment Dynamics is used to provide information about entrepreneurship but focuses more on establishments. See the BLS webpage on Entrepreneurship at http://www.bls.gov/bdm/entrepreneurship/entrepreneurship.htm.

there is a research project aimed at enhancing the Business Dynamics Statistics (BDS) with worker and business owner demographic information. If successful, the resulting product would complement the ASE by providing greater scope for coverage (though without the level of detail provided by the ASE). In addition, other research at CES is focused on developing publicly available statistics on the flows of workers between employers. The "Job-to-Job Flows" product will be especially useful in studying the dynamics of workflows at new businesses.¹⁵ This use of complementary products is consistent with the Census Bureau's strategy to use administrative data wherever possible supplemented with survey data where needed.

Underlying these publicly available data products are the micro-level datasets from which they are derived. There are three micro-level datasets that are particularly useful in understanding entrepreneurship: the Longitudinal Business Database (LBD), the Integrated Longitudinal Business Database (ILBD), and the Longitudinal Employer-Household Dynamics (LEHD) data. For example, research using the LBD showed that job creation at young businesses was disproportionately impacted by the Great Recession. ¹⁶ Other research papers use the LBD and LEHD data to describe a potentially troubling *secular* decline in dynamism in the U.S. economy. ¹⁷ While there have been hypotheses for the cause(s) of this decline, more research (and more data) is needed. A joint research project at CES with the Federal Reserve Banks is developing more timely metrics (possibly quarterly) on the universe of business startups and the pool of potential entrepreneurs using administrative data.

Finally, there are a number of smaller sample surveys that collect information related to entrepreneurship (both regularly and on an occasional basis). These surveys are not collected by the Census Bureau but are complementary to the ASE (and in some cases inspired content on the ASE). These include the Kauffman Firm Survey (KFS), the Panel Study of Entrepreneurial Dynamics (PSED), and the Survey of Small Business Finances (SSBF). The KFS was collected from 2004 to 2011 and followed a cohort of about 5,000 firms over time. The KFS covered topics such as "the background of the founders, the sources and amounts of financing, firm strategies and innovations, and outcomes such as sales, profits, and survival."¹⁸ The PSED is

¹⁵ Goetz at al. (2015) provide a detailed discussion of Job-to-Job Flows and how it could be used.

¹⁶ See Fort et al. (2013). Foster et al. (2015) supplement the LBD with other Census Bureau micro-level data in order to be able to measure total factor productivity. Researchers have also used micro data from non-Census sources to examine the impact of the Great Recession on young firms. See for example, Zarutskie and Yang (2015) who use the KFS.

¹⁷ See Davis et al. (2007), Decker et al. (2015, 2014), and Hyatt and Spletzer (2013).

¹⁸ http://www.kauffman.org/what-we-do/research/kauffman-firm-survey-series/an-overview-of-the-kauffman-firm-survey-results-from-2011-business-activities.

part of a research program at the Institute for Social Research at the University of Michigan designed to advance knowledge about entrepreneurship. The PSED is a panel instrument that has been collected in two waves of cohorts (of about 1000 firms each). The collection "includes data on the nature of those active as nascent entrepreneurs, the activities undertaken during the start-up process, and the characteristics of start-up efforts that become new firms."¹⁹ While it is not specifically about entrepreneurship, the SSBF, sponsored by the Federal Reserve Board on an occasional basis (1987, 1993, 1998, 2003) contains some topics of overlap. The SSBF collected information on items including "[o]wner characteristics, firm size, use of financial services, and the income and balance sheets of the firm."²⁰ The 2003 SSBF final sample was approximately 4,000 firms.²¹ All of these datasets provide information on some aspects of entrepreneurship.

Clearly there are a substantial number of efforts, both within Census and elsewhere, to capture information about entrepreneurship; nevertheless, important gaps remain. The need for the ASE has been communicated through many stakeholders and users of Census Bureau data. Most recently, it became apparent that more *frequent* and more *timely* data were needed on entrepreneurship during the Great Recession. Given the timing of the Great Recession and the SBO reference period, questions about the differential impacts of the Great Recession on business owners with different demographic characteristics were unanswerable in real time. Some of these questions can be answered with the release of the 2012 SBO, but others related to the business cycle are not answerable with a 5-year survey. Policymakers were interested, for example, in whether minority and female owned businesses were disproportionately impacted by the tightening credit associated with the Great Recession. Key stakeholders including the Minority Business Development Agency (MBDA), the Small Business Administration (SBA), and the National Women's Business Council (NWBC) need this information for their programs designed to facilitate entrepreneurship.

From a global perspective, the Census Bureau's ASE is consistent with some of the goals communicated by the United Nations Evidence and Data for Gender Equality project (UN EDGE). "The EDGE project seeks to accelerate existing efforts to have comparable gender indicators on health, education, employment, entrepreneurship and asset ownership."²² At the

¹⁹ PSEDI had a cohort of 830 from an initial screening in 1998-2000 followed by three follow-up interviews; PSEDII had a cohort of 1214 from an initial screening in 2005-2006 followed by six yearly follow-up interviews. See http://www.psed.isr.umich.edu/psed/home.

²⁰ http://www.federalreserve.gov/pubs/oss/oss3/nssbftoc.htm.

²¹ See page 7 of <u>http://www.federalreserve.gov/pubs/oss/oss3/ssbf03/methodology/method_report.pdf</u>

²² See <u>http://unstats.un.org/unsd/gender/EDGE/Events/2014/Japan/Final_Report.pdf</u>

December 2013 Technical Meeting of the EDGE, current efforts by the Census Bureau at measuring entrepreneurship by gender were presented.²³ A common recommendation of participants was to collect data more frequently (preferably annually) and to add questions concerning owner aspirations and challenges.²⁴

More formally, the National Academy of Sciences (NAS) Panel on "Understanding Business Dynamics" explicitly recommended that the Census Bureau develop an annual version of the SBO: "The Census Bureau's SBO should be conducted on an annual basis. The survey should include both a longitudinal component and a flexible, modular design that allows survey content to change over time. In addition, the Census Bureau should explore the possibility of creating a public-use (anonymized) SBO or restricted access version of the data file."²⁵ The NAS recommendation was especially useful since the panel took into account all of the existing Census Bureau related-products and the current gaps in the Federal Statistical System's various products in making their recommendation. The complete text of the NAS recommendation is shown in Appendix A. In addition to adopting the recommendation to have an annual version of the SBO, the Census Bureau has also adopted the NAS panel recommendations that the resulting survey have a "longitudinal component" and a "flexible, modular designs." We turn to these components in the sections that follow.

3. Sample and Collection

The ASE sample is designed to provide both more frequent and more timely information on entrepreneurship with sufficient coverage to allow for tabulations at detailed geographic levels. In this section we describe the properties of the sample and collection that help the ASE achieve these goals.

As noted earlier, the sample for the ASE is approximately 290,000 employer firms over the entire private non-agricultural U.S economy.²⁶ Census Bureau business surveys are conducted at the firm level (for example, the SBO), the establishment level (for example, the Annual Survey of Manufactures), or some other reporting level (for example, the Monthly Retail Trade Survey is partly collected at the Employer Identification Number level). When focusing on

²³ Presentation available at: <u>http://unstats.un.org/unsd/gender/Events/5-6</u> Dec 2013/Session 6_United States.ppt

²⁴ The Global Entrepreneurship Monitor (GEM) is another global effort see <u>https://www.gem.consortium.org</u>

²⁵ Haltiwanger, Lynch, Mackie (2007), pp. 99-100.

²⁶ Responses to the ASE are mandatory under Title 13 of the United States Code.

entrepreneurship, the most relevant unit of collection is the firm rather than the establishment. As Decker et al. (2014) point out "New establishments of existing firms can take many forms, including simply replacing outdated existing establishments, thus new establishments often do not conform to standard notions of entrepreneurial behavior. For this reason, entrepreneurial research should focus on startups and young firms (p. 5)." The sample is of employer firms rather than of all firms to allow for the release of more *timely* data.²⁷

Given the focus on entrepreneurship and business dynamics, the ASE was designed to provide information intended to help understand the impact young firms have on the economy. Approximately 47% of firms selected from the business frame for employer firms have been in business less than 10 years.

The ASE sample has a longitudinal component which is important because many startups follow an "up or out" trajectory that is only measurable with data on the same businesses over at least a few years.²⁸ The NAS panel recommendation concerning the sample was for it to include a longitudinal component: "The survey could be modified to include panel elements as well, perhaps in a manner similar to what is done in the Annual Survey of Manufactures. This would facilitate measurement of the transitions that young and small firms make over their lifetimes."²⁹ The ASE sample will keep the majority of respondents from year to year and include a certain number of births for the current survey year.

The ASE sample was designed using multiple sources of information to estimate the probability that a business was minority- or women-owned. These sources include survey data, decennial data, administrative data, and commercial data. In terms of Census survey data, the sample uses information from the 2012 SBO in two ways. First, data on demographic characteristics of business owner by industry and geography from the SBO are used. Second, text strings in the company name indicating possible minority ownership are derived from 2012 SBO responses. Data from the 2010 Decennial Census used include demographic characteristics for various ZIP Codes. One source of administrative data is the Social Security Administration. Finally, lists of minority- and women-owned businesses published in syndicated magazines, on the Internet, or disseminated by trade or special interest groups are used to identify minority- or women-owned firms. These probabilities were then used to place each firm in the ASE universe in one of nine frames for sampling: American Indian, Asian, Black or African American,

 ²⁷ Nonemployer data required to draw the sample is not available as quickly as the employer firm data.
 ²⁸ In this respect, the ASE is similar to the KFS and PSED which also have longitudinal components.

²⁹ Haltiwanger, Lynch, Mackie (2007), pp. 99-100.

Hispanic, Non-Hispanic white men, Native Hawaiian and Other Pacific Islander, Other (a different race was supplied as a write-in to another source), Publicly owned³⁰, and Women.

The ASE universe was stratified by metropolitan statistical area (MSA), frame, and age of business. Large companies, including those operating in more than one state, were selected with certainty based on volume of sales, payroll, or number of paid employees. All certainty cases were sure to be selected and represented only themselves (i.e., had a selection probability of one and a sampling weight of one). The certainty cutoffs varied by sampling stratum, and each stratum was sampled at varying rates, depending on the number of firms in a particular stratum. The remaining universe was subjected to stratified systematic random sampling.

In keeping in line with the Census Bureau's commitment to produce timely data while respecting respondent burden, the ASE is collected solely through an electronic instrument. The first step in the collection of the 2014 ASE (the year is the reference year collected) was the mailout of the instructions which took place on September 30, 2015. Electronic responses will be collected through January 2016. Letters reminding respondents who have not yet responded will be sent during November with another follow-up letter mailing in December if needed.

3.1 Special Case: 2013 Data

The SBO collected data on 2012 and the ASE collections start with reference period 2014. Thus there is the potential for an important data gap in 2013. To address this data gap, the Census Bureau partnered with the MBDA to produce modeled estimates for employer and nonemployer firms for 2013. The employer statistics alone would be insufficient for the needs of many data users (in particular the MBDA), because the nonemployer segment comprises almost 80 percent of the universe of firms. Moreover, for many demographic groups, the percentage ownership of businesses without paid employees is substantially higher than the percentage of businesses with payroll. In lieu of collected data, modeled estimates will be released for reference year 2013.

4. Content of the Core Instrument

The content of the core instrument has two main sections: owner(s) specific

³⁰ Publicly owned also refers to firms that cannot be classified. The full category is 'Publicly held and other firms not classifiable by gender, ethnicity, race, and veteran status.'

characteristics and firm specific characteristics. The content of the instrument is summarized in Table 2 and the worksheet for the content is in Appendix B. Since much of the content is similar to SBO content, Table 2 also provides information for the relevant concepts in the SBO when there is overlap. The ASE begins by asking for information about ownership of the firm. It then follows up with questions specific to up to four owners of the firm on their demographics (sex, age, educational attainment, citizenship, ethnicity, race, and veteran status). Business specific questions concern the year the business was established and detailed questions on funding, workers, customers, digital presence (website, e-commerce), global presence, and other business operations questions (for example, seasonality of work).

Reflecting the focus on the entrepreneurial experience, there are also a number of questions that appear on the ASE that are not on the SBO. These questions are designed to collect information on the challenges and goals of entrepreneurs. Understanding these challenges and goals will help us better understand business dynamics in the U.S. economy. Broadly speaking, there are three topics covered by these new questions: motivations/aspirations, financial challenges, and profitability. New content for the ASE was tested and finalized based on the results of cognitive interviews conducted under the Census Bureau's generic clearance for Questionnaire Pretesting Research. Additionally, the Census Bureau collaborated with the Kauffman Foundation, the MBDA, and other agencies to incorporate changes to the new content.

The first topic, motivations and goals of the entrepreneur, is important in predicting future growth and survival of businesses. Schoar (2010) describes two different types of entrepreneur: "subsistence" and "transformational."³¹ Simply put, subsistence entrepreneurs are motivated as a form of employment and do not plan to have rapid growth of the business; while transformational entrepreneurs are motivated by an opportunity to innovate over some dimension and do plan for rapid growth of the business. Supporting this view of heterogeneity of business startups, Decker et al (2014) find that "Most business startups exit within their first ten years, and most surviving young businesses do not grow but remain small. However, a small fraction of young firms exhibit very high growth and contribute substantially to job creation. These high-growth firms make up for nearly all the job losses associated with shrinking and exiting firms within their cohort (p.4)." Participants at the UN EDGE technical meeting noted that motivation for ownership can be important when considering female entrepreneurship as some evidence

 $^{^{31}}$ While Schoar (2010) is focused on developing economies, she notes other research shows similar results for the U.S.

suggests there are differential motivations across the sexes.

The first question on the motivations/aspirations topic is *owner*-specific and asks about the importance of possible reasons for owning the business. Some of the reasons are related to work-life balance (for example, "balance work and family"³²), supply push ("couldn't find a job/unable to find employment"), demand pull ("best avenue for my ideas/goods/services"³³), or other (a write-in response). A question similar to this one was asked on the 1992 CBO and the 2013 Microbusiness Innovation Science and Technology (MIST) Survey. Specifically, the 1992 CBO asked "Which of the following most closely matches your reason for becoming an owner of this business?" The responses included primary/secondary source of income, freedom to meet family responsibilities, and bring a new idea to the market place. Fairlie and Robb (2009) find that the top three reasons cited are: primary income source, secondary income source, and to be one's own boss. While they did not find large differences in motivation overall by gender, the motivation with the largest difference by gender was freedom to meet family responsibilities.³⁴ Hurst and Pugsley (2011) using the PSED find that "nonpecuniary benefits (being one's own boss, having flexibility of hours, and the like) play a first-order role in the business formation decision (p. 73)."

The second question on the motivations/aspirations topic is *business*-specific and asks about the aspirations of the owner(s) of the business: where would the owner(s) like this business to be in five years in terms of profits and sales relative to the current state. This question is related to a similar question on the MIST (but which asks about size in terms of number of employees and has as a potential outcome company being purchased by another company). The aspirations of the owners are important for reasons related to the Schoar (2010) distinction between subsistence and transformational entrepreneurs. Using the PSED, Hurst and Pugsley (2011) find that "most small businesses do not want to grow or innovate" and thus conclude "it is often inappropriate for researchers to use the universe of small business (or self-employment) data to test standard theories of entrepreneurship (p.76)."

The second topic focuses on financial challenges of entrepreneurship. The questions in this topic essentially replace and expand upon the financial question in the SBO (question 65 in

³² The other related work-life balance responses are: "wanted to be my own boss", "flexible hours", and "working for someone else didn't appeal to me".

³³ Other demand-pull types of responses are: "opportunity for greater income/wanted to build wealth," "always wanted to start my own business," and "an entrepreneurial friend or family member was a role model."

³⁴ Fairlie and Robb (2009) report that slightly more than 12% of female owners reported this which is twice that of what male owners reported.

2012 SBO).³⁵ The financial challenges faced by business start-ups can play an important role in business dynamics. One line of inquiry following the Great Recession concerns the slowdown of job creation especially at young businesses where it is hypothesized that credit constraints played a large role (see Fort et al. (2013) and Foster et al. (2015)). These questions were developed using expertise based upon the experience of fielding the KFS.³⁶ Five of the financial questions concern the sources of capital funding (and their amounts). Some of these questions concerning the funding used at start-up and some of the questions concern the funding in the reference year. One question concerns new funding relationships. Finally, two questions focus on challenges with obtaining funding. Specifically, the questions ask whether the business needed additional funding but decided not to seek it (and if so, why).

The final topic concerns profits which are an important metric for understanding the growth and dynamics of a business. The Kauffman Firm Survey (KFS) included some limited questions on profits at firms. The ASE includes a general question about whether the business had profits, losses, or broke even. However, the ASE digs deeper into the challenges facing businesses concerning their profitability by asking a follow-up question concerning nine categories of potential reasons the profitability of the business was negatively impacted (for example, "Changes or updates in technology").

5. Special Inquiries: a Modular Approach

Given the dynamic nature of the U.S. economy it is critical that Census Bureau collections be flexible and adapt content quickly to remain relevant. The modular approach to surveying is intended to give the instrument the stability of having core content and the flexibility of adaptable modules. The NAS panel recommended that the proposed new survey should "allow for flexibility in the type of questions asked over time by incorporating survey modules that differ with respect to content. For example, to minimize burden, one could create modules on business finance, investment, and workforce training, among others, and cycle through them so that each is conducted periodically."³⁷ In each year, the ASE will have a

³⁵ The ASE continues to ask the question about funding from the owners that also appears on the SBO (question 64 on SBO2012).

³⁶ Section F of the KFS concerns "Business Finances" and asks 31 questions on the subject.

http://www.mathematica-mpr.com/~/media/publications/PDFs/labor/KFS_baseline_questionnaire.pdf

³⁷ Haltiwanger, Lynch, Mackie (2007), pp. 99-100.

module consisting of about ten questions on a specific special topic of interest concerning entrepreneurs.

5.1 Module in 2014 ASE

Given the importance of entrepreneurs in innovative activities, the first module for the ASE concerns "Innovation and Research and Development Activity." In this respect, the ASE is similar to the KFS and PSEDII which also include questions about innovation. While entrepreneurs are an important source of innovation, most small businesses and most business start-ups do not engage in traditionally defined innovative activities (such as patenting, or undertaking research and development).³⁸ Thus, the challenge is to identify those relatively few businesses that are innovators in these areas and to also capture other forms of innovation. Operationally, the sample for the 2014 ASE was drawn with the innovation module as part of its requirements. Specifically, for responses to the innovation and research and development module, approximately 3.8% of firms selected are classified in a high-tech industry. The prevalence of innovation and research and development activities in selected industries is discussed in National Science Board (2014, especially Chapter 6).

The module was developed in partnership with the Kauffman Foundation and with expert input from staff at the National Science Foundation (NSF). The expertise of NSF staff was critical as the module is based upon NSF's MIST.³⁹ The MIST is designed to collect information on R&D and innovation activities from small businesses⁴⁰ and consists of 46 questions over the following categories: "Overall Company Information," "Financial Information," "Innovation," "Intellectual Property," "Scientific and Engineering Research and Development," "Your Company Strategies," and "About the Owner."

The ASE incorporates eight questions derived from the MIST. These questions are summarized in the lower panel of Table 2. Broadly speaking the questions concern process and product innovations over the last three years and current R&D activities. For product innovation, data are collected on topics such as whether the business has sold a new good or service that is completely new to the market or is new to the business. Process innovation questions focus on

³⁸ Hurst and Pugsley (2011) find that "most surviving small businesses do not innovate along any observable margin. Very few report spending resources on research and development, getting a patent, or even obtaining copyright or trademark protection for something related to the business… Furthermore, between one-third and half of all new businesses report providing an existing good or service to an existing market (p.74)."

³⁹ For more information on the MIST, see http://www.nsf.gov/statistics/srvymist/overview.htm.

⁴⁰ Defined as "all independently owned corporations, partnerships, and sole proprietorships in the United States with fewer than five employees." Source: see http://www.nsf.gov/statistics/srvymist/overview.htm.

the nature of the innovation (for example, a new way to make purchases or a new way to deliver goods or services). In keeping with the discussion above, note that the module has an expanded view of innovative activities. For example, a firm may be innovating even if its product or process is not new. This is in line with an ongoing discussion about what constitutes innovative activities for firms. Haltiwanger, Haskel, and Robb (2010) argue for the inclusion of intangible capital measures and note that these were included in the KFS. In terms of R&D activities, information is collected on the types of activities, their cost and funding, and the number of employees engaged in them.

5.2 Module in the 2015 ASE

At the time of this writing, the 2015 ASE module has not yet been finalized. However, the topic is likely to be management practices. The module will have approximately ten questions and will cover such topics as the use of targets and key performance indicators, recordkeeping, and personnel practices (the use of incentives, the use of leased/contractor and other forms of employment). The Census Bureau has recently started collecting data on management practices, through the Management and Organizational Practices Survey (MOPS), in recognition of the pivotal role they play in determining firm and establishment dynamics and productivity growth. The MOPS is an occasional supplement to the Annual Survey of Manufactures (ASM) and as such, its collection is focused solely on manufacturing plants.⁴¹ Initial results from the MOPS suggest that more structured management practices are associated with economic outcomes such as productivity and growth.⁴²

The first six questions on the proposed 2015 ASE management module are derived from similar questions on the MOPS, edited to be more appropriate for firm-level collection and for smaller businesses covering the entire economy. These questions are supplemented by questions concerning the use of workers other than regular paid-employees and the record-keeping practices of the firm. The core ASE has a question on types of workers (see the ASE worksheet in Appendix B) and the proposed module has two follow-up questions related to prevalence of different types of workers and the type of tasks they perform. As businesses start to use more and more of these other types of workers, it is critical that we understand their use. The last two questions in the module concern record-keeping practices, their format, and their use in decision-

 ⁴¹ For more information on the MOPS, see www.census.gov/mcd/mops.
 ⁴² See Bloom et al. (2013).

making.43

6. Dissemination and Future Work

Dissemination of information from the ASE follows the Census Bureau's multidimensional strategy for providing information to data users over multiple modes. Businesses, policy-makers, the media, and researchers will be able to use tabulated information from the ASE (tentatively planned for release in the summer of 2016). For those research questions that require more detailed information, qualified researchers on approved projects will be able to access micro data from the ASE through the Federal Statistical Research Data Center (FSRDC) network starting in early 2016.

Research undertaken through the FSRDC network increases the usefulness of the Census Bureau's data and through a continual feedback loop the quality of the data. Some research questions can only be answered with access to micro-level data. In these instances, qualified researchers can submit a proposal to use the ASE data at one of the secure sites located throughout the country. Proposals are reviewed for, among other things, scientific merit, benefits to the Census Bureau, the need for micro-data, and feasibility. Researchers must go through an extensive background check and are subject to penalties if they violate their oath to protect respondent confidentiality.⁴⁴

In addition, it will be possible for researchers to link micro-level data from the ASE to other Census Bureau collected micro data to answer research questions that require multiple datasets. For example, researchers interested in understanding more about the distinction between subsistence and transformational entrepreneurs as determined by their responses on the 2014 ASE could use the ILBD to see whether there are systematic differences in those who transition from nonemployer to employer status (the so-called "Migrant" category in Davis et al. (2009)). In addition, the FSRDC system is expanding to host the micro-level data from other participating federal statistical agencies (including for example, the Bureau of Labor Statistics).

⁴³ The questions on record-keeping are related to those asked by McKenzie and Woodruff in their survey of business practices of small firms in developing countries. See McKenzie and Woodruff (2015).

⁴⁴ "All RDC researchers must obtain Census Bureau Special Sworn Status – passing a moderate risk background check and swearing to protect respondent confidentiality for life, facing significant financial and legal penalties under Title 13 and Title 26 for failure to do so." http://www.census.gov/about/adrm/fsrdc/about/secure_rdc.html.

Future work on the ASE instrument includes developing modules for upcoming survey years. Proposed future module topics include technological advances, Internet usage, business practices, export practices, and globalization. As always the intent is to support the Census Bureau's mission "to serve as the leading source of quality data about the nation's people and economy."

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Table 1: Census Bureau Products Complementary to the ASE

Name	Purpose	Scope	Available	Years
Business Dynamics Statistics (BDS) ¹	Firm and establishment dynamics	Economy-wide, employers	Public	1976-2013
County Business Patterns (CBP),Zip Code Business Patterns (ZCBP), Business Information Tracking Series (BITS) ²	Statistics of U.S. businesses by geography	Economy-wide, employers	Public	1998-2013
Integrated Longitudinal Business Database (ILBD) ³	Research on nonemployers	Economy- wide, nonemployers	Restricted	1977, 982, 1987, 1992 1994-2010
Longitudinal Employer- Household Dynamics (LEHD) ⁴	Research on workers	Economy-wide UI participants	Restricted	Varies by state
Longitudinal Business Database (LBD) ⁵	Research on employer businesses	Economy- wide, employers	Restricted	1976-2013
Nonemployer Statistics ⁶	Statistics on U.S. businesses without paid employees by geography	Economy-wide, nonemployers	Public	1997-2013
Quarterly Workforce Indicators (QWI) ⁷	Statistics of employment flows	Economy-wide, UI participants	Public	Varies by state
Statistics of U.S. Businesses (SUSB) ⁸	Statistics on employment and payroll	Economy-wide, employers	Public	1988-2012
Survey of Business Owners (SBO) ⁹	Demographic characteristics of business owners	Economy-wide, all businesses	Public	1992, 1997, 2002, 2007, 2012

Sources:

1.

2. htthttp://www.census.gov/ces/dataproducts/bds/p://www.census.gov/econ/cbp/.

3. https://www.census.gov/ces/dataproducts/economicdata.html

4. http://lehd.ces.census.gov/

5. <u>https://www.census.gov/ces/dataproducts/datasets/lbd.html</u>

6. <u>http://www.census.gov/econ/nonemployer/historical.htm</u>

7. http://lehd.ces.census.gov/data/qwi_national_beta.html

8. <u>http://www.census.gov/econ/susb/historical_data.html</u>

9. <u>https://www.census.gov/history/www/programs/economic/economic surveys in the economic census.ht ml.</u>

Concept	ASE^1	SBO ²
Ownership Information	1-5	1-5
Owner Specific ³		
Acquiring the business	6-7	7-8
Responsibilities	8-11	9-12
Demographics of Owner	12-18	13-19
Reasons for owning the business	19	
Business Specific		
Family owned	20	6
Aspirations	21	
Owner funding	22	
Year established	23	62
Franchise	24	63
Capital funding	25	64
Sources and challenges for funding	26-32	65
Profitability	33	
Negative impacts on profitability	34	
Types of customers	35	66
Customer location	36	
Global presence and outsourcing	37-39	67-69
Language	40	70
Workers (types of workers, benefits provided)	41-42	71-72
Digital presence (website, e-commerce)	43-44	73-74
Home operation	45	75
Intellectual property	46	76
Business activity over the calendar year	47	77
Current operating status	56	78 A
If ceased operation, reason	57	78 B
Research and Development Module ⁴		
Product innovation over the last three years	48	
Process innovation over the last year years	49	
R&D activities	50	
Total R&D cost	51	
Purchased R&D costs	52	
Business R&D costs	53	
Funding sources for R&D activities	54	
Number of R&D employees	55	

1/ Source: ASE Worksheet (questions are not explicitly numbered in worksheet).

2/ Source: 2012 SBO Worksheet for the long form.

3/ The ASE and SBO each repeat the Owner Specific questions for up to four owners.

4/ Questions are derived from the MIST.

Appendix A: Full-Text of Recommendation

"The primary shortcoming of the SBO, in terms of its value for producing statistics on business dynamics, is that it is carried out infrequently – once every five years. Because many new businesses emerge then fail quickly, this kind of information needs to be collected on a more frequent basis.

Recommendation 5: The Census Bureau's SBO should be conducted on an annual basis. The survey should include both a longitudinal component and a flexible, modular design that allows survey content to change over time. In addition, the Census Bureau should explore the possibility of creating a public-use (anonymized) SBO or restricted access version of the data file.

The survey could be modified to include panel elements as well, perhaps in a manner similar to what is done in the Annual Survey of Manufactures. This would facilitate measurement of the transitions that young and small firms make over their lifetimes. Finally, it would allow for flexibility in the type of questions asked over time by incorporating survey modules that differ with respect to content. For example, to minimize burden, one could create modules on business finance, investment, and workforce training, among others, and cycle through them so that each is conducted periodically. The net result of such a program would be more detailed statistics about young small firms, provided on a more consistent basis, with overall better coverage than is currently available."⁴⁵

⁴⁵ Haltiwanger, Lynch, Mackie (2007), pp. 99-100.

Welcome to the 2014 Annual Survey of Entrepreneurs

DO NOT use this worksheet to respond to the survey, it is intended to assist you with gathering and preparing your data prior to reporting online. Please view the online report for specific instructions.

Return to <u>https://econhelp.census.gov/ase</u> when you are ready to report online.

CONTACT INFORMATION

Please enter the first and last name of the person who is filling out this survey. We request a telephone number so we can contact you if there is a question.

Contact Name:

Phone:

NUMBER OF OWNERS

In 2014, how many people owned this business?

- Do not combine two or more owners to create one
- Count spouses and partners as separate owners
 - 1 person Skip to 10 percent or more ownership

2-4 people – Skip to 10 percent or more ownership

5-10 people – Skip to 10 percent or more ownership

11 or more people

Business is owned by a parent company, estate, trust, or other entity

Don't know

GOVERNMENT OR TRIBAL ENTITY OWNERSHIP

In 2014, was this business owned by a government or tribal entity?

🗌 Yes 🥅 No

10 PERCENT or MORE OWNERSHIP

In 2014, did any one person own 10% or more of this business?

Yes
No

PERCENT OWNERSHIP

For the person(s) owning the largest percentage(s) in this business in 2014, please list the percentage owned by each person and his or her name.

- Do not report percentages owned by parent companies, estates, trusts, or other entities
- If more than 4 people owned this business equally, select any 4 people
- Round percentages to whole numbers. For example, report 1/3 ownership as 33.0%.

	Percentage Owned (Estimates are acceptable)	Name
Owner 1:		
Owner 2:		
Owner 3:		
Owner 4:		

<u>OWNER 1</u>

INITIAL ACQUISITION How did *Owner1* initially acquire ownership of this business? **Select all that apply.** Founded or started Purchased Inherited Received transfer of ownership or gift INITIAL ACQUISITION YEAR In what year did Owner 1 acquire ownership of this business? Don't Know Year **JOB FUNCTION(S)** In 2014, which of the following were *Owner* 1's function(s) in this business? **Select all that apply.** Managing day-to-day operations Providing services and/or producing goods Financial control with the authority to sign loans, leases, and contracts None of these functions AVERAGE NUMBER OF HOURS WORKED In 2014, what was the average number of hours per week that Owner 1 spent managing or working in this business? None 了 40 hours Less than 20 hours 41-59 hours 20-39 hours 60 hours or more PRIMARY INCOME SOURCE In 2014, did this business provide Owner 1's primary source of personal income? Yes

_____No

PRIOR BUSINESS OWNERSHIP

Prior to establishing, purchasing, or acquiring this business, had Owner 1 ever owned a business?

	Yes
\square	No

EDUCATION

What was the highest degree or level of school *Owner 1* completed **prior** to establishing, purchasing, or acquiring this business? **Select ONE box only.**

Less than high school graduate

High school graduate - Diploma or GED

Technical, trade, or vocational school

Some college, but no degree

Associate Degree

Bachelor's Degree

Master's, Doctorate, or Professional Degree

SEX

What	ic t	he	cργ	of	Owner	17
vviiat	15 נ	.ne	SEX	U	Owner	1:

	Male
--	------

Female

AGE

What was the age of Owner 1 as of December 31, 2014

🗌 Under 25	45-54
25-34	55-64
35-44	🗌 65 or ov

65 or over

US CITIZENSHIP

Was Owner 1 born a citizen of the United States?

Yes
No

ETHNICITY

Is Owner 1 of Hispanic, Latino, or Spanish origin?

No, not of Hispanic, Latino, or Spanish origin

Yes, Mexican, Mexican American, Chicano

🗌 Yes, Puerto Rican

Yes, Cuban

Yes, another Hispanic, Latino, or Spanish origin - please enter origin below. For example, Argentinean, Colombian, Dominican, Nicaraguan, Salvadoran, Spaniard, and so on. C

RACE

Asian Indian	Japanese	Native Hawaiian
Chinese	🗌 Korean	🔲 Guamanian or Chamorro
Filipino	Vietnamese	Samoan
		example, Fijian, Tongan, and so on. C

MILITARY SERVICE

Has *Owner 1* ever served in any branch of the U.S. Armed Forces, including the Coast Guard, the National Guard, or Reserve component of any service branch?

🗌 Yes

No – Skip to Reasons for Owning the Business

(If yes) Do any of the following characteristics describe Owner 1's military service? Select all that apply.

- Served on active duty military service, not including training for the Reserves or National Guard
- Disabled as the result of illness or injury incurred or aggravated during military service
- Served on active duty military service after September 11, 2001
- Served on active duty military service in 2014

Served in the National Guard or as a reservist of any branch of the U.S. Armed Forces in 2014

None of the above

REASONS FOR OWNING THE BUSINESS

How important to *Owner 1* are each of the following reasons for owning this business? (Select one for each row.)

Not	Somewhat	Very	
Important	Important	Important	

OWNER 2 - If applicable, if not skip to page 14

INITIAL ACQUISITION

How did Owner 2 initially acquire ownership of this business? Select all that apply.

Founded or started

Purchased

🗌 Inherited

Received transfer of ownership or gift

INITIAL ACQUISITION YEAR

Year

In what year did Owner 2 acquire ownership of this business?

Don't Know

JOB FUNCTION(S)

In 2014, which of the following were Owner 2's function(s) in this business? Select all that apply.

Managing day-to-day operations

Providing services and/or producing goods

Financial control with the authority to sign loans, leases, and contracts

None of these functions

AVERAGE NUMBER OF HOURS WORKED

In 2014, what was the average number of hours per week that Owner 2 spent managing or working in this business?

None None	40 hours
Less than 20 hours	41-59 hours
20-39 hours	60 hours or more

PRIMARY INCOME SOURCE

In 2014, did this business provide Owner 2's primary source of personal income?

Yes

No No

PRIOR BUSINESS OWNERSHIP

Prior to establishing, purchasing, or acquiring this business, had Owner 2 ever owned a business?

- Yes
- 🗌 No

EDUCATION

What was the highest degree or level of school *Owner 2* completed **prior** to establishing, purchasing, or acquiring this

business? Select ONE box only.

- Less than high school graduate
- High school graduate- Diploma or GED
- Technical, trade, or vocational school
- Some college, but no degree
- Associate Degree
- Bachelor's Degree
- Master's, Doctorate, or Professional Degree

SEX

What	is	the	sex	of	Owner	22
vviiai	15	LITE	267	UI.	OWNER	∠:

- 🗌 Male
 - Female

AGE

What was the age of Owner 2 as of December 31, 2	2014?
--	-------

Under 25	45-54
25-34	55-64

65 or over

US CITIZENSHIP

35-44

Was Owner 2 born a citizen of the United States?

Yes
No

ETHNICITY

Is Owner 2 of Hispanic, Latino, or Spanish origin?

No, not of Hispanic, Latino, or Spanish origin

Yes, Mexican, Mexican American, Chicano

Yes, Puerto Rican

🗌 Yes, Cuban

Yes, another Hispanic, Latino, or Spanish origin- please enter origin below. For example, Argentinean, Colombian, Dominican, Nicaraguan, Salvadoran, Spaniard, and so on. C

RACE

Asian Indian	Japanese	Native Hawaiian
Chinese	🔄 Korean	Guamanian or Chamorro
Filipino	Vietnamese	🗌 Samoan
		Hmong, Laotian, Thai, Pakistani, Cambodian, and

MILITARY SERVICE

Has *Owner 2* ever served in any branch of the U.S. Armed Forces, including the Coast Guard, the National Guard, or Reserve component of any service branch?

|--|

No – Skip to Reasons for Owning the Business

(If yes) Do any of the following characteristics describe Owner 2's military service? Select all that apply.

- Served on active duty military service, not including training for the Reserves or National Guard
- Disabled as the result of illness or injury incurred or aggravated during military service
- Served on active duty military service after September 11, 2001
- Served on active duty military service in 2014

Served in the National Guard or as a reservist of any branch of the U.S. Armed Forces in 2014

None of the above

REASONS FOR OWNING THE BUSINESS

How important to Owner 2 are each of the following reasons for owning this business? (Select one for each row.)

	Not Important	Somewhat Important	Very Important	
Wanted to be my own boss				
Flexible hours				
Balance work and family				
Opportunity for greater income/Wanted to build wealth				
Best avenue for my ideas/goods/services				
Couldn't find a job/Unable to find employment				
Working for someone else didn't appeal to me				
Always wanted to start my own business				
An entrepreneurial friend or family member was a role model				
Other (Specify) C				

OWNER 3 - If applicable, if not skip to page 14

INITIAL ACQUISITION

How did Owner 3 initially acquire ownership of this business? Select all that apply.

Founded or started

Purchased

🗌 Inherited

Received transfer of ownership or gift

INITIAL ACQUISITION YEAR

In what year did Owner 3 acquire ownership of this business?

Year	Don't Know

JOB FUNCTION(S)

In 2014, which of the following were Owner 3's function(s) in this business? Select all that apply.

Managing day-to-day operations

Providing services and/or producing goods

Financial control with the authority to sign loans, leases, and contracts

None of these functions

AVERAGE NUMBER OF HOURS WORKED

In 2014, what was the average number of hours per week that Owner 3 spent managing or working in this business?

None None	40 hours
Less than 20 hours	41-59 hours
20-39 hours	🗌 60 hours or more

PRIMARY INCOME SOURCE

In 2014, did this business provide Owner 3's primary source of personal income?

Yes
No

PRIOR BUSINESS OWNERSHIP

Prior to establishing, purchasing, or acquiring this business, had Owner 3 ever owned a business?

Yes
No

EDUCATION

What was the highest degree or level of school *Owner 3* completed **prior** to establishing, purchasing, or acquiring this business? **Select ONE box only.**

Less than high school graduate

High school graduate - Diploma or GED

Technical, trade, or vocational school

Some college, but no degree

Associate Degree

Bachelor's Degree

Master's, Doctorate, or Professional Degree

SEX

What	is the		of	Owne	r 27
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Female

AGE

What was the age of Owner.	3 as of December 31, 2014?
----------------------------	----------------------------

Under 25	45-54
25-34	55-64

65 or over

US CITIZENSHIP

35-44

Was Owner 3 born a citizen of the United States?

Yes
No

ETHNICITY

Is Owner 3 of Hispanic, Latino, or Spanish origin?

No, not of Hispanic, Latino, or Spanish origin

Yes, Mexican, Mexican American, Chicano

Yes, Puerto Rican

Yes, Cuban

Yes, another Hispanic, Latino, or Spanish origin - please enter origin below. For example, Argentinean, Colombian, Dominican, Nicaraguan, Salvadoran, Spaniard, and so on. C

RACE

<u> </u>	White		ins are not races. Select all that apply. Black or African American of enrolled or principal tribe below C 	
	Asian Indian Chinese	Japanese	Native Hawaiian	-
_	Filipino	Vietnamese	Samoan	
	Other Asian - please e	nter race below. For example,	Hmong, Laotian, Thai, Pakistani, Cambodian,	and so or -
	Other Pacific Islander	- please enter race below. For	example, Fijian, Tongan, and so on. C	
<u> </u>				

MILITARY SERVICE

Has *Owner 3* ever served in any branch of the U.S. Armed Forces, including the Coast Guard, the National Guard, or Reserve component of any service branch?

Yes

No – Skip to Reasons for Owning the Business

(If yes) Do any of the following characteristics describe Owner 3's military service? Select all that apply.

Served on active duty military service, not including training for the Reserves or National Guard

Disabled as the result of illness or injury incurred or aggravated during military service

Served on active duty military service after September 11, 2001

Served on active duty military service in 2014

Served in the National Guard or as a reservist of any branch of the U.S. Armed Forces in 2014

None of the above

REASONS FOR OWNING THE BUSINESS

How important to Owner 3 are each of the following reasons for owning this business? (Select one for each row.)

	Not	Somewhat	Very	
	Important	Important	Important	
Wanted to be my own boss				
Flexible hours				
Balance work and family				
Opportunity for greater income/Wanted to build				
wealth Best avenue for my ideas/goods/services				
Couldn't find a job/Unable to find employment				
Working for someone else didn't appeal to me				
Always wanted to start my own business				
An entrepreneurial friend or family member was a role model				
Other (Specify) C				

OWNER 4 - If applicable, if not skip to page 14

INITIAL ACQUISITION

How did Owner 4 initially acquire ownership of this business? Select all that apply.

Purchased

Inherited

Received transfer of ownership or gift

INITIAL ACQUISITION YEAR

In what year did Owner 4 acquire ownership of this business?

Year

Don't Know

JOB FUNCTION(S)

In 2014, which of the following were Owner 4's function(s) in this business? Select all that apply.

Managing day-to-day operations

Providing services and/or producing goods

Financial control with the authority to sign loans, leases, and contracts

None of these functions

AVERAGE NUMBER OF HOURS WORKED

In 2014, what was the average number of hours per week that Owner 4 spent managing or working in this business?

None None	40 hours
Less than 20 hours	41-59 hours
20-39 hours	60 hours or more

PRIMARY INCOME SOURCE

In 2014, did this business provide Owner 4's primary source of personal income?

Yes
No

PRIOR BUSINESS OWNERSHIP

Prior to establishing, purchasing, or acquiring this business, had Owner 4 ever owned a business?

🗌 No

EDUCATION

What was the highest degree or level of school *Owner 4* completed **prior** to establishing, purchasing, or acquiring this business? **Select ONE box only.**

Less than high school graduate

High school graduate - Diploma or GED

Technical, trade, or vocational school

Some college, but no degree

Associate Degree

Bachelor's Degree

Master's, Doctorate, or Professional Degree

SEX

What	t is	the	sex	of	Own	pr	47
vviiai	ເເວ	une	Sex	UL.	Own	er	4!

- Male
 - Female

AGE

What was the	age of Own	er 4 as of De	cember 31	2014?
vvnat wastne	age of Own	21 4 as 01 De	cenner 31,	2014:

Under 25	45-54
25-34	55-64

☐ 35-44 ☐ 65 or over

US CITIZENSHIP

Was Owner 4 born a citizen of the United States?

Yes
No

ETHNICITY

Is Owner 4 of Hispanic, Latino, or Spanish origin?

No, not of Hispanic, Latino, or Spanish origin

Yes, Mexican, Mexican American, Chicano

Yes, Puerto Rican

Yes, Cuban

Yes, another Hispanic, Latino, or Spanish origin - please enter origin below. For example, Argentinean, Colombian, Dominican, Nicaraguan, Salvadoran, Spaniard, and so on. C

RACE

Asian Indian	Japanese	Native Hawaiian
Chinese	🗌 Korean	Guamanian or Chamorro
Filipino	Vietnamese	🗌 Samoan

MILITARY SERVICE

Has *Owner 4* ever served in any branch of the U.S. Armed Forces, including the Coast Guard, the National Guard, or Reserve component of any service branch?

Yes

□ No – Skip to Reasons for Owning the Business

(If yes) Do any of the following characteristics describe Owner 4's military service? Select all that apply.

Served on active duty military service, not including training for the Reserves or National Guard

Disabled as the result of illness or injury incurred or aggravated during military service

Served on active duty military service after September 11, 2001

Served on active duty military service in 2014

Served in the National Guard or as a reservist of any branch of the U.S. Armed Forces in 2014

☐ None of the above

REASONS FOR OWNING THE BUSINESS

How important to *Owner 4* are each of the following reasons for owning this business? (Select one for each row.)

	Not	Somewhat	Very	
Manual shares and shares	Important	Important	Important	
Wanted to be my own boss				
Flexible hours				
Balance work and family				
Opportunity for greater income/Wanted to build wealth				
Best avenue for my ideas/goods/services				
Couldn't find a job/Unable to find employment				
Working for someone else didn't appeal to me				
Always wanted to start my own business				
An entrepreneurial friend or family member was a role model				
Other (Specify) C				

Business Specific Questions

The next questions apply to the entire business and only require one response from the respondent regardless of how many owners were entered.

ONE FAMILY MAJORITY OWNERSHIP

In 2014, did two or more members of one family own the majority of this business? (Family refers to spouses, parents/guardians, children, siblings, or close relatives.)

Yes
No – Skip to Business Aspirations

(If Yes) Did spouses jointly own this business?

Yes

□ No – Skip to Business Aspirations

(If Yes) Was this business operated equally by both spouses?

Yes, equally operated by spouses

No, primarily operated by **Owner 1**

No, primarily operated by **Owner 2**

BUSINESS ASPIRATIONS

Where would the owner(s) like this business to be in five years? (Select one)

- Larger in terms of sales or profits
- About the same amount of sales or profits
- Smaller in terms of sales or profits

Other (specify) C

FUNDING FROM OWNER(S)

For 2014, what was the total amount of money that the owner(s) personally put into the business? Your best estimate is fine. Please report in thousands.

Include:

- Investments from personal savings
- Personal retirement accounts
- Home equity loans
- Personally borrowed funds

\$,000

YEAR OF BUSINESS ESTABLISHMENT

In what year was this business originally established?

Don'	t	kr	างพ	

FRANCHISE OPERATION

In 2014, did all or part of this business operate as a franchise?

- 🗌 Yes
- 🗌 No

CAPITAL FUNDING

For the owners reported, what was the source(s) of capital used to start or initially acquire this business? If you did n	ot
report any owners skip to Amount of Capital Needed to Start or Initially Acquire Business. Select all that apply.	

	Personal/family savings of owner(s)
	Personal/family assets other than savings of owner(s)
	Personal/family home equity loan
	Personal credit card(s) carrying balances
	Business credit card(s) carrying balances
	Government-guaranteed business loan from a bank or financial institutions, including SBA-guaranteed loans
	Business loan from a bank or financial institution
	Business loan from a federal, state, or local government
	Business loan/investment from family/friend(s)
	Investment by venture capitalist(s)
	Grants
	Other source(s) of capital
	Don't know
	None needed – Skip to Family, Friends, and Employees
	owners you reported, what was the total amount of capital used to start or initially acquire this business?
(Capita	lincludes savings, other assets, and borrowed funds of owner(s).)
	Less than \$5,000

S5,000 - \$9,999	🔲 \$250,000 - \$999,999
☐ \$10,000 - \$24,999	🔲 \$1,000,000-\$2,999,999
🔲 \$25,000 - \$49,999	🔲 \$3,000,000 or more
🔲 \$50,000 - \$99,999	Don't know

FUNDING FROM FAMILY, FRIENDS, AND EMPLOYEES

For 2014, what was the amount of money this business received from family, friends, and employees? *Your best estimate is fine. Please report in thousands.*

\$_____,000

FUNDING FROM BANKS OR OTHER FINANCIAL INSTITUTIONS

For 2014, what was the total amount of money this business borrowed from a bank or other financial institutions, including business loans, a business credit card carrying a balance, or a business line of credit? *Include all draws on a business line of credit, even if paid off during the year. Your best estimate is fine. Please report in thousands.*

\$_____,000

FUNDING FROM OUTSIDE INVESTORS

For 2014, what was the total amount of money this business received from angel investors, venture capitalists, or other businesses in return for a share of ownership in this business? *Your best estimate is fine*. *Please report in thousands*. (An "angel investor" is an affluent individual who provides capital for a business start-up, usually in exchange for convertible debt or ownership equity.)

\$_____,000

APPENDIX B: Content of the 2014 ASE

FUNDING FROM GOVERNMENT GRANTS

For 2014, what was the total amount of money this business received from government grants (such as the Small Business Innovation Research (SBIR) and/or Small Business Technology Transfer (STTR) programs)? *Your best estimate is fine. Please report in thousands.*

\$_____,000

NEW FUNDING RELATIONSHIPS

In 2014, did this business attempt to establish any **new funding relationships** (for example, loans, investments, or gifts) with any of the following sources? (Select one for each row)

	No	Yes, received <u>total</u> <u>am</u> <u>ount of the</u>	Yes, but <u>did</u> <u>not</u> <u>receive the</u> <u>total amount</u> requ
Other owner(s) (if applicable)		funding equested	ested
Family, friends, or employees			
Banks, credit unions, or other financial institutions			
Home equity loans in name of business owners			
Credit cards			
Trade credit (for example, buy now, pay later)			
AngelInvestors			
Venture capitalists			
Other investor businesses			
Crowdfunding platform (for example, Prosper, Kickstarter, etc.)			
Grants (for example, Federal government's Small Business Technology Transfer Program (STTR) or Small Business Innovation Research Program (SBIR)			
Other (Specify) C			

AVOIDANCE OF ADDITIONAL FINANCING

At any time during 2014, did this business need additional financing and the owner(s) chose not to apply?

🗌 Yes

No - Skip to Profitability

AVOIDANCE OF ADDITIONAL FINANCING CONTINUED

Why did this business choose not to apply for additional financing? (Select all that apply)
Did not think business would be approved by lender
Did not want to accrue debt
Decided the financing costs would be too high
Preferred to reinvest the business profits instead
Felt the loan search/application process would be too timing consuming
Decided the additional financing was no longer needed
Decided to wait until funding conditions improved
Decided to wait until company hit milestones to be in stronger position to raise funds
Other (Specify) C

PROFITABILITY

For 2014, did this business have profits, losses, or break even? (Select one)

	Profits
_	

Losses Break even

NEGATIVE IMPACT ON PROFITABILITY

For 2014, did each of the following negatively impact the profitability of this business? (Select one in each row)

	Yes	No
Access to financial capital		
Cost of financial capital		
Finding qualified labor		
Taxes		
Slow business or lost sales		
Customers or clients not making payments or paying late		
The unpredictability of business conditions		
Changes or updates in technology		
Other (Specify) C		

TYPES OF CUSTOMERS

In 2014, which of the following types of customers accounted for 10% or more of this business's total sales of goods and/or services? **Select all that apply.**

Federal government

State and local government, including school districts, transportation authorities, etc.

Other businesses and/or organizations, including distributors of your product(s)

Individuals

REPORT ONLINE - DO NOT RETURN

CUSTOMER LOCATIONS

During 2014, where were this business's customers or clients located? Round to the nearest whole percent. Your best estimate is fine. If none, report "0."

Total	100%
Outside the United States (International)	%
Outside of the region but within U.S. (Domestic)	%
Same region as the business	%

SALES OR EXPORTS OUTSIDE THE UNITED STATES

In 2014, what percent of the business's total sales of goods and/or services consisted of **exports outside the United States**?

know

.0%	None None	🗌 Don't
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OPERATIONS OUTSIDE THE UNITED STATES

In 2014, did this business have operations outside the United States?

	Yes
_	

No No

OUTSOURCING OR TRANSFERS OUTSIDE THE UNITED STATES

In 2014, did this business outsource or transfer any business function and/or service to another company outside the United States?

Y	e	S

_ No

LANGUAGE

In 2014, which language(s) did this business conduct transactions with its customers? Select all that apply.

English	🔄 German	Portuguese
African language(s)	🔲 Hindi/Urdu	🗌 Russian
Arabic	🔲 Italian	Spanish
Chinese	Japanese	Tagalog
French	🔲 Korean	Uietnamese
French Creole	Polish	🗖 Other

TYPES OF WORKERS

In 2014, which of the following types of workers were used by this business? Select all that apply.

- Full-time paid employees
- Part-time paid employees
- Paid by day laborers

Temporary staffing obtained from a temporary help service

Leased employees from a leasing service or a professional employer organization

- Contractors, subcontractors, independent contractors, or outside consultants
- None of the above

EMPLOYEE BENEFITS

In 2014, which of the following employee benefits were paid totally or partly by this business? Select all that apply.

- Health insurance
 - Contributions to retirement plans, including 401(k), Keogh, etc.
- Profit sharing and/or stock options
- Paid holidays, vacation, and/or sick leave
- Tuition assistance and/or reimbursement
- None of the above

WEBSITE

In 2014, did this business have a website?

- | Yes
- □ No

E-COMMERCE

In 2014, did this business have any e-commerce sales? (E-commerce sales are sales of goods and/or services where an order is placed by the buyer or price and terms of the sale are negotiated over the Internet, extranet, EDI network, electronic mail, or other online system. Payment may or may not be made online.)

Yes

□ No – Skip to Home Operation

(If yes) In 2014, what percent of this business's total sales of goods and/or services were e-commerce sales?

🗌 Less than 1%	🔲 20% - 49%
☐ 1% - 4%	50% - 99%
5% - 9%	100%
🔲 10% - 19%	🗌 Don't know

HOME OPERATION

In 2014, did this business operate primarily from somebody's home?

- Yes
- 🗌 No

COPYRIGHTS, TRADEMARKS, AND PATENTS

In 2014, did this business own one or more of the following? Select all that apply.

Patent (granted)

- Copyright
- Trademark

- l None
- Patent (pending)

BUSINESS ACTIVITY

In 2014, did any of the following characteristics describe the activity of this business? Select all that apply.

- Operated less than 40 hours per week on average
- Operated less than 12 months
- Seasonal business (for example, fireworks sales or tax preparer)
- Operated occasionally (for example, event organizer or guest speaker)
- None of the above

PRODUCT INNOVATION

During the last three years (2012, 2013, 2014) did this business do each of the following regarding the goods or services it offers? **(Select one for each row)**

• Do not include adaptation or customization of a good or service for a specific customer's needs.

Sold a new good or service that no other business has ever offered before	Yes	No
Sold a new good or service that this business has never offered before		
Improved a good or service's performance by making changes in materials, equipment, software or other components		
Developed a new use for a good or service		
Added a new feature to a good or service		
Made it easier for customers to use a good or service		

PROCESS IMPROVEMENT

During the last three years (2012, 2013, 2014), did this business do each of the following regarding the goods or services it offers? **(Select one for each row)**

Applied a new way of purchasing, accounting, computing, maintenance, inventory control, or other support activity	Yes	No
Reduced costs by changing the way a good or service was distributed		
Upgraded a technique, equipment, or software to significantly improve a good or service		
Made a significant improvement in a technique or process by increasing automation, decreasing energy consumption, or using better software		
Decreased production costs by improving the materials, software, or other components		
Changed a delivery method to be faster or more reliable		

RESEARCH AND DEVELOPMENT ACTIVITY

In 2014, did this business do any of the following research and development (R&D) activities? (Select one for each row) If No to ALL – Skip to Currently Operating

• Include R&D activities that this business performed, others paid this business to do, or this business paid others to do.

Conducted work that might lead to a patent	Yes	No
Developed and tested prototypes that were derived from scientific research or technical findings		
Produced findings that could be published in academic journals or presented at scientific conferences		
Applied scientific or technical knowledge in a way that has never been done before		
Created new scientific research or technical solutions that can be generalized to other situations		
Conducted work to discover previously unknown scientific facts, structures, or relationships		
Conducted work to extend the understanding of scientific facts, relationships or principles in a way that could be useful to others		

TOTAL R&D COST

In 2014, what was this business's **total cost** for R&D activities? Include:

- Labor paid for employees, temporary staffing, contractors, independent contractors, or outside consultants
- Materials, equipment, software, or other supplies purchased
- Money spent for rent, utilities or other overhead

\$_____,000

PURCHASED R&D COSTS

In 2014, of the total R&D costs, what was the **amount used to purchase** R&D services from others? Include labor paid for:

- Employees
- Temporary staff
- Contractors
- Independent contractors
- Outside consultants

\$_____,000

BUSINESS R&D COSTS

In 2014, what percent of the costs of R&D services **performed by this business** consisted of the following purchase? Note: To calculate R&D services performed by this business, subtract the Purchased R&D costs from the Total R&D costs. *Round to the nearest whole percent. Your best estimate is fine. If none, report "0."*

Total	100%
Other R&D expenses	%
Software and licensing purchases	%
Equipment purchases	%
Employee payroll	%

FUNDING SOURCES FOR R&D ACTIVITIES

In 2014, what percent of the costs of R&D services **performed by this business** was paid by the following sources? Note: To calculate R&D services performed by this business, subtract the Purchased R&D costs from the Total R&D costs. *Round to the nearest whole percent. Your best estimate is fine. If none. report "0."*

Total	100%
%	
% Other (specify)	
U.S. state or local government (Do not include public schools)	
U.S. federal government (Include R&D grants)	%
U.S. nonprofit organization	%
U.S. college or university	%
Another U.S. business	%
This business	%
to the nearest whole percent. Your best estimate is jine. If none, repo	n U.

NUMBER OF R&D EMPLOYEES

For the pay period including March 12, 2014, how many of each type of the following workers worked on R&D activities?

	Number of workers
Owner(s) Paid Employees Other Paid Workers - Include labor paid for temporary staff, contractors, independent contractors, and outside consultants. Unpaid Workers/Interns	
DERATING	

CURRENTLY OPERATING

Is this business currently operating?

Yes – Skip to Remarks

🗌 No

CEASE OPERATION

 Did the operations cease for any of the following reasons? Select all that apply.

 Owner's military deployment
 Lack of business loans/credit

 Owner's illness or injury
 Lack of personal loans/credit

 Owner(s) retired
 Started another business

 Owner(s) deceased
 Sold this business

 Operated for a specific or one-time event
 Other

 Inadequate cash flow or low sales
 Other

APPENDIX B: Content of the 2014 ASE

REMARKS

Please use this space for any explanations that may be essential in understanding your reported data.

THANK YOU