

A Comparison of Firm Age in the Survey of Business Owners and the Longitudinal Business Database

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Relevant Datasets: CBO, SBO, LBD

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Technical Note: A Comparison of Firm Age in the Survey of Business Owners and the Longitudinal Business Database*

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Abstract

In this note, we use restricted-access data from the 1992 Characteristics of Business Owners (CBO) and the 2002 and 2007 Surveys of Business Owners (SBO) that are linked to the Longitudinal Business Database (LBD) and compare how firm age is reported across sources. Our analysis shows considerable agreement between administrative and survey measures. However, we also find meaningful discrepancies. The SBO measures generally suggest an earlier date of founding than is revealed in the LBD. For researchers, caution should be taken when using these sources in studies that rely on a particular interpretation of the firm age measure.

*All authors are affiliated with the Department of Economics at the University of Georgia. Lastrapes: last@uga.edu. Schmutte: schmutte@uga.edu. Watson: jacob.watson25@uga.edu. Any views expressed are those of the authors and not those of the U.S. Census Bureau. The Census Bureau's Disclosure Review Board and Disclosure Avoidance Officers have reviewed this information product for unauthorized disclosure of confidential information and have approved the disclosure avoidance practices applied to this release. This research was performed at a Federal Statistical Research Data Center under FSRDC Project Number 1085 (CBDRB-FY20-P1085-R8420, CBDRB-FY20-P1085-R8419, CBDRB-FY20-P1085-R8404, CBDRB-FY19-P1085-R8394, CBDRB-FY19-P1085-R8295, and CBDRB-FY19-P1085-R8175). Funding for this research was provided by the Bonbright Center for the Study of Regulation at the University of Georgia.

1 Introduction

The growth of small and young firms accounts for a large part of the dynamics of productivity and employment. To study why size and age seem so instrumental to business dynamics it is necessary to accurately measure these basic characteristics. Measuring firm size is conceptually straightforward, since counting jobs, say, or valuing revenues are tangible and verifiable measures. Measuring the age of a business is a harder task.

There are two basic approaches to measuring the age of a firm. One is to survey business owners and ask when their firm was founded or acquired. A second is to use administrative records to determine the date of founding. Both approaches produce information on how long the business has been in operation, but it is not guaranteed that they will always be the same.

In this note, we use restricted-access survey data from the 1992, 2002 and 2007 Surveys of Business Owners (SBO) that are linked to the Longitudinal Business Database (LBD) and compare how firm age is reported across sources.¹ If the sources agree on firm age most of the time, then in certain contexts, like the one we consider here, missing survey responses could be replaced with administrative record information, thereby improving the quality of survey data. In addition, if administrative records effectively measure age for all businesses, questions on this topic could be removed from surveys to reduce the burden on respondents. However, if the two sources disagree in important ways, then statistical agencies may want to alter data collection to align measurement concepts. Researchers, too, need to understand and correct for differences in how variables are measured.

Our analysis shows a considerable amount of agreement between administrative and survey measures of firm age, but we also find meaningful discrepancies. In the SBO, business owners are asked distinct questions about the year a firm was founded and the year it was acquired. As expected, the reported date of acquisition is generally in the same period, or after, the reported date of founding. In the administrative data, the administrative birth year generally falls in or shortly after the reported year of founding. We rarely observe that the administrative birth year comes before the year of founding. The same pattern holds for the relationship between the administrative year of birth and the reported year of acquisition, though it is somewhat noisier.

Taken together, these findings suggest that firm owners are generally accurate when reporting the year of founding. However their reports of the date of founding often come well before tax records were filed that cause a firm to show up in the LBD as an employer business. The observed differences in measurement concepts should not come as a surprise, but the extent of these discrepancies and their sources may be of interest in future redesigns of the SBO. They are also of interest for researchers. Depending on the project, the way firm age is measured in the SBO or LBD may not map perfectly into the concept the researcher wants to analyze. We consider these issues further in the conclusion.

2 Data

The Longitudinal Business Database (LBD) comprises data on the entry, exit, and employment dynamics of U.S. non-farm business establishments. The primary source for the LBD is the Business Register, which is the frame for the Census Bureau's establishment and firm surveys. The LBD program uses information from other administrative and survey records to link establishment

¹For ease of exposition, we will use the acronym SBO to refer to all three survey waves, even though the survey was called the Characteristics of Business Owners (CBO) in 1992.

records across years to be able to follow each establishment over time. See Jarmin and Miranda (2002) for a comprehensive description of the LBD. The LBD measures establishment or firm age as the number of years between the first time the establishment appears (entry) and the current year. Data on firm age are left-censored in 1975, which has some implications for our analysis of the 1992 CBO.

We link the LBD to data from the 1992 CBO and the 2002 and 2007 waves of the SBO. The SBO and CBO are surveys that “provide basic economic, demographic, and sociological data on the characteristics of minority, women, and non-minority male business owners and their business activities” (Bureau, 1992). They are collected every five years alongside the Economic Census. The CBO and SBO changed considerably between waves in terms of topical coverage and sampling design, which is reflected both in the descriptive statistics and in our comparison of firm age measures.²

Fairlie and Robb (2008) demonstrate the feasibility of using the restricted CBO and SBO to examine changes over time in certain characteristics of owners and their businesses. However, the way in which owners were asked about the founding and acquisition of their businesses changed over time. In 1992, owners were separately asked about the year the business was founded and the year it was acquired by the current owner. The 1992 CBO also asked whether the owner was also the founder or acquired it through other means. In 2002, the SBO asked a combined question about the period in which the business was either acquired or established and did not report whether a current owner was the founder. In 2007, the SBO once again asked whether the current owner was the founder, the year the owner acquired the business, and, separately, the year the business was founded.

The SBO asks respondents to report the years of founding and acquisition in bins. For example, in 2007, the owner reports whether the year of acquisition occurred in one of the following windows:

- Pre-1980
- 1980-1989
- 1990-1999
- 2000-2004
- 2005
- 2006
- 2007

There are slightly different groupings for the year of founding. These bins therefore change across tables and we label them clearly in all cases. The LBD records the firm’s year of birth directly, and we collapse the LBD birth year into categories that are conformable with the SBO.

Our data preparation is similar to Jarmin and Krizan (2010), who linked the LBD to the 2002 SBO using an employer establishment identifier common to both sources. We restrict our analysis of firm age to single-unit firms we find in both the LBD and the SBO year. Table 1 reports average characteristics of the SBO firms, weighted using the SBO weights. Our estimates of the

²Comparability over time in the sample is addressed in technical documentation provided by the Census Bureau (Bureau, 1992, 2006) and summarized in Appendix A of Fairlie and Robb (2008). The 1997 SBO did not ask respondents to report their founding or acquisition dates, so is not included here.

characteristics of the linked 2002 SBO firms are quite close to those reported by Jarmin and Krizan (2010), which we reproduce for convenience as Table 2.

3 Comparison of firm age measures: 2007 SBO

The 2007 SBO data linked to the LBD provide a useful starting point for our discussion. The 2007 data are easy to interpret, and we can then discuss the 2002 and 1992 data with reference to the ways in which they deviate from 2007. In the 2007 data, the survey information on founding dates are distinct from the dates of acquisition. We can therefore compare the administrative year of birth to both measures.

3.1 SBO measures: date of founding and date of acquisition

We first compare two different business age measures in the 2007 SBO. In that year, the SBO asks each owner whether they acquired the firm by founding it or if they acquired it after founding. Each owner also reports the year they acquired the business. Separately, the form also asks “in what year was the business originally established”. A key question is whether owners who did not found the firm nevertheless provide accurate information about its founding. Table 3 shows that when owners report having founded the firm, they almost always report a category for year of founding that is consistent with their reported year of acquisition. Looking at the “diagonal” entries, 96.49 percent of firms acquired before 1980 were also reported as founded before 1980. The comparable figures are 96.6 and 97.08 for firms acquired between 1980-1989 and 1990-1999. In all cells, deviations are always concentrated in the adjacent bins. For example, of firms acquired by their founders in 2005, 2.44 percent were founded in 2004 and 1.17 in 2006-2007. These minor deviations are presumably related to simple reporting errors in the survey.

Table 4 compares the same two survey measures but for cases where the owner is not the firm’s founder. The patterns are quite different, but seem to reflect information consistent with the measurement concepts. The statistics in Table 4 largely conform to a logical pattern in which the reported date of acquisition always occurs in the same year as founding or later. Among firms acquired pre-1980, 96.71 percent are reported to have been established pre-1980. The pattern is more informative for firms acquired in the period 2000-2004. Of these, 26.10 percent were reported to be founded in 2000-2002, 9.68 percent in 2003 and 11.78 percent in 2004. The remaining 51.78 percent were founded earlier: 13.48 percent in the 1990s, 11.85 percent in the 1980s, and 26.45 percent before 1980. The same pattern holds across years of acquisition, with between 40 to 50 percent of firms being acquired in the same period they were founded, and most of the balance founded in an earlier period. A small, but non-trivial share of firms — generally less than two percent — are reported as having been established in the period immediately following acquisition. Altogether, the data reveal reporting patterns that are consistent across years, and consistent, in particular, with a relatively uniform distribution of firm founding dates in the periods prior to acquisition.

3.2 Comparison across sources

Table 5 reports our comparison of the SBO founding period and the date of administrative birth reported in the LBD. We note three patterns. First, between 40 and 50 percent of firms have an administrative date of birth in the year of founding. Second, there are errors in both directions: firms appear to be born in the LBD both before and after their SBO founding date. Third, it is

much more common to see the LBD birth date occur after the SBO reported date of founding than before.

We focus first on the years 2003–2007 where the SBO data record the exact year of founding (except in the case of 2006–2007 which are bundled together). The LBD year of birth agrees with the SBO year of founding for 39.51 percent, 42.32 percent, and 48.28 percent of SBO firms founded in 2003, 2004, and 2005 respectively. In each of these years, we see between 6 and 8 percent of firms having an LBD birth year prior to the SBO date of founding. The vast majority of these cases have the LBD birth in the year prior to founding, which may be attributable to recall error or the timing of tax filing relative to the start of actual business operations. Still, for firms founded in 2005 and 2006–2007 we observe around 1 percent have a reported birth year between 2 and 4 years prior, which is difficult to reconcile with recall error. These cases could reflect situations where the firm was acquired after founding and the new owner is not aware of the exact date of founding.

It is far more common for firms to have the LBD year of birth come after the reported year of founding. Once again, the most straightforward comparisons are across 2003–2005 where the SBO reports founding dates separately by year. Among firms founded in 2003, 53.01 percent have an LBD birth year after 2003: the LBD birth year is 2004 for 24.98 percent of observations, 2005 for 12.67 percent, and 2006–2007 for 15.36 percent. Among firms founded in 2004, 48.03 percent have later LBD birth years. For firms founded in 2005, the comparable figure is 43.42 percent.

It is clear that the reported year of founding measures something distinct from the LBD year of birth. Furthermore, these discrepancies are not concentrated in such a way that the LBD birth year is usually near the SBO founding year. Rather, while the LBD birth year could be used to predict the SBO founding year, it would not on its own be an extremely accurate predictor.

Perhaps the LBD birth year corresponds more clearly to the date the firm was acquired. Table 6 compares the SBO date of acquisition against the LBD birth year. Relative to Table 5, we do see slightly a higher percentage of firms with an LBD birth year that agrees with the SBO acquisition date. However, there are also more firms with an LBD birth year earlier than the acquisition year. The latter fact is consistent with some acquisitions of existing employer businesses not showing up as new firm births in the LBD. It also implies that the LBD birth year does not map precisely onto either the SBO founding date or the acquisition date.

4 Comparison of firm age measures: 2002 SBO

The data in 2002 only allow us to compare the LBD birth year to the SBO date of acquisition. Furthermore, the 2002 SBO question does not neatly distinguish between founding and acquisition. Hence, the results in Table 7 are not direct analogues to either of the tables comparing the SBO and LBD for 2007. Nevertheless, the patterns are quite similar to those in Table 6.

We get the cleanest comparison for the years 1997–2002. For these years, the percentage of firms with an LBD birth year identical to the SBO acquisition year are 35.63, 38.62, 40.76, 44.83, 52.73 and 82.75 respectively. It is thus much more likely that a firm acquired in 2002 has a matching birth year than a firm acquired in 1997. This fact seems to indicate some selectivity. The share of firms with earlier birth years appears to be constant — around two percent per year — and slightly higher in the year just before founding. Once again, the pattern is consistent with the firm’s administrative birth in the LBD occurring after founding. Using LBD birth as a proxy for certain analyses of firm age, like entrepreneurial experience, could potentially be misleading.

5 Comparison of firm age measures: 1992 CBO

The questions regarding the dates of firm founding and acquisition in the 1992 CBO appear similar to the 2007 SBO. In particular, respondents were asked separately to report the date of acquisition and the date of founding. They were also asked to describe whether they founded the firm themselves or acquired it without having founded it. However, as we show in Tables 8 and 9, founding dates and acquisition dates seem to have been edited to match exactly. At least in the version of the data we used, these questions contain identical values. However, comparing the column of totals in each table, it is clear that the reported year of founding among firms acquired after founding was earlier than among firms acquired at founding. It therefore seems reasonable to interpret these values as measuring the year of founding rather than the year of acquisition.

Table 10 presents our comparison of the CBO date of founding with the LBD year of birth. The LBD does not allow us to look at dates of birth prior to 1970, so the age categories do not quite match up. However, the overall pattern of results is roughly comparable to what we see in the 2002 and 2007 SBO. A majority, but not a plurality, of firms have LBD birth dates that fall in the same range of years as the CBO founding date. A relatively small number of firms have birth dates prior to their founding date, on the order of a few percent per year. The vast majority of these classification disparities show firms with LBD birth dates that occur years, and sometimes decades, after founding.

For firms with founding dates prior to 1970, 25.04 percent of firms have an LBD year of birth after 1985. For firms founded between 1970–1979, 28 percent are born in the LBD after 1985. By contrast, for firms founded between 1986–1989, just 7.82 percent are born in the LBD before 1986, and for firms founded between 1990–1992, the figure is 7.96 percent. Once again, these patterns seem consistent with a small amount of disagreement that arises from firm owners occasionally reporting a later date than the actual founding date. More problematic are the large number of cases where firms are reported to have been founded before they were born in the LBD.

6 Discussion

This brief note documents differences in how firm age is measured in the LBD and the 1992, 2002, and 2007 CBO/SBO. We showed that within the SBO survey, there are some discrepancies in how firm owners report dates of founding relative to dates of acquisition. Owners generally report a founding date, but in some cases what is reported as a founding date might actually be an acquisition date depending both on what data were collected and how they were processed.

In general, the LBD date of birth is an upper bound on the founding date. Given that LBD birth is associated with new employer business tax filings that generally occur when a business begins to take on employees, this relationship makes sense. However, it is a bit surprising that many businesses have an LBD birth many years after their SBO founding, which could reflect firm owners reporting their founding as non-employer businesses or another date at which business planning began.

The LBD birth year seems to be a strong predictor of the founding year, and could be a useful input for imputing missing values of this information. However, the LBD birth year seems to measure something quite different than what is captured in the SBO founding and acquisition dates. It would not be possible to stop collecting these variables without losing valuable information. In fact, it may be valuable to do focus testing to discern more clearly how firm owners answer these questions.

For researchers, our findings suggest some caution in analyses that rely on a measure of firm age. If the analysis is focused on how long a particular firm has been participating in formal market activity, the LBD value may be the preferred measure. If the analysis is focused on how long the firm's owners and managers have been working together and accumulating firm-specific experience, the SBO measure seems more accurate. In light of the non-trivial differences revealed in our study, we recommend researchers give serious consideration to the possible effects of measurement error.

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Tables and Figures

Table 1: CBO and SBO Summary Statistics

Characteristic	1992 CBO	2002 CBO	2007 CBO
Owner Age			
Below 35	10.91	5.8	1.82
Between 35-54	60.93	57.9	48.64
Above 54	28.16	36.3	49.55
Owner Race			
Asian	4.69	5.36	5.23
Hispanic	3.43	0.09	0.2
Black(Non-Hispanic)	2.19	1.44	1.34
White(Non-Hispanic)	88.75	92.39	92.3
Other	0.93	0.71	0.93
Owner Gender			
Female	20.03	20.61	20.67
Male	79.97	79.39	79.33
Owner Education			
Some High School	9.34	4.05	3.55
High School	28.48	19.78	18.79
Some College	25.18	27.71	25.88
College	13.24	23.92	25.54
Post College	23.75	24.54	26.24
Loan Use			
Home Loan	5.04	<i>N/A</i>	6.77
Non-home Loan	43.71	<i>N/A</i>	31.32
Any Loan	48.75	<i>N/A</i>	38.09
No Loan	51.25	<i>N/A</i>	61.91
Firm Characteristics			
Franchise	3.84	3.38	3.06
Exporter	0.61	1.77	2.73
Non-Employer History	58.66	13.32	5.11
Region of Domicile			
Midwest	16.65	20.75	21.89
Northeast	25.34	24.38	24.21
South	32.41	32.65	32.87
West	25.59	22.22	21.03
Industry Sector			
AFFM	3.75	3.27	3.33
Construction	14.06	14.08	13.68
Manufacturing	3.87	5.95	6.07
TCEGS	3.01	3.45	3.37
Wholesale Trade	3.75	6.77	7.18
Retail Trade	23.6	17.4	15.99
FIRE	5.52	8.29	8.3
Services	42.44	40.78	42.08
Tradable Sector			
Tradable	3.76	6.25	6.43
Non-tradable	26.08	21.94	20.84
Ambiguous	70.16	71.81	72.72
N(Weighted Count)	1,172,000	2,225,000	1,130,000

Note: Weighted mean percentages for SBO-LBD linked, single-unit firms not missing information on any of the characteristic variables. Owner characteristics are based on the primary owner. "N/A" indicates that variable was not available.

Table 2: 2002 SBO Summary Statistics Jarmin and Krizan (2010)

Characteristic	Percent
Age	
Below 25	0.2
Between 25-54	64.0
Above 54	35.8
Race	
Asian	5.5
Black	1.5
Islander and Native American	0.4
White	91.3
Sex	
Equal	13.9
Female	17.1
Male	68.3
Education	
Some High School	4.3
High School Graduate	20.7
Some College	28.7
College Graduate	23.6
Post College	22.7
Franchise	
No	96.3
Yes	3.7
Exporter	
No	97.9
Yes	2.1
NE History	
No	76.4
Yes	23.6

Table 3: Comparison of Establishment and Acquisition Years: Firms Acquired At Founding (2007)

Year Established (2007 SBO)	Year of Acquisition (2007 SBO)									
	Pre-1980	1980-1989	1990-1999	2000-2004	2005	2006	2007	total		
Pre-1980	96.49	1.36	0.5	0.39	0.33	0.28	0.34	11.83		
1980-1989	2.54	96.6	1.51	0.57	0.46	0.4	0.48	18.82		
1990-1999	0.71	1.71	97.08	1.82	0.96	0.88	1.08	29.15		
2000-2002	0.12	0.14	0.65	52.74	0.58	0.58	0.55	13.29		
2003	0.02	0.05	0.09	19.69	0.46	0.32	0.29	4.94		
2004	0.05	0.06	0.07	23.83	2.44	0.44	0.46	6.09		
2005	0.02	0.03	0.05	0.73	93.59	2.24	0.57	6.23		
2006-2007	0.04	0.05	0.06	0.22	1.17	94.85	96.24	9.65		
Total	100	100	100	100	100	100	100	100		

Note: The columns represent the reported year of acquisition in the 2007 Survey of Business Owners (SBO), while the rows represent the reported year the firm was originally established in the 2007 SBO. An individual cell represents the percentage of firms out of its column. The sample is restricted to single-unit firms primarily owned by a founding owner at the time of the 2007 SBO. Year ranges are limited by the discrete choices provided within the SBO and Census disclosure requirements.

Table 4: Comparison of Establishment and Acquisition Years: Firms Acquired After Founding (2007)

Year Established (2007 SBO)	Year of Acquisition (2007 SBO)									
	Pre-1980	1980-1989	1990-1999	2000-2004	2005	2006	2007	Total		
Pre-1980	96.71	49.86	38.89	26.45	21.34	20.99	19.82	42.43		
1980-1989	1.67	47.37	14.01	11.85	10.82	10.76	10.74	17.18		
1990-1999	0.78	2.32	46.18	13.48	11.68	12.75	13.23	18.3		
2000-2002	0.21	0.22	0.6	26.1	6.02	6.55	5.53	7.36		
2003	0.02	0.05	0.1	9.68	2.66	2.16	1.86	2.68		
2004	0.09	0.05	0.06	11.78	3.93	2.69	2.9	3.34		
2005	0.08	0.06	0.07	0.36	42.16	2.75	2.98	3.22		
2006-2007	0.13	0.09	0.09	0.3	1.38	41.36	42.93	5.49		
Total	100	100	100	100	100	100	100	100		

Note: The columns represent the reported year of acquisition in the 2007 Survey of Business Owners (SBO), while the rows represent the reported year the firm was originally established in the 2007 SBO. An individual cell represents the percentage of firms out of its column. The sample is restricted to single-unit firms primarily owned by a non-founding owner at the time of the 2007 SBO. Year ranges are limited by the discrete choices provided within the SBO and Census disclosure requirements.

Table 5: Comparison of SBO Founding and LBD Birth Years (2007)

	Year Founded (2007 SBO)										
	Pre-1980	1980-1989	1990-1999	2000-2002	2003	2004	2005	2006-2007	Total		
Pre-1980	42.93	2.17	0.57	0.31	0.23	0.16	0.12	0.26	9.15		
1980-1989	22.54	47.97	2.00	0.61	0.57	0.47	0.34	0.52	14.03		
1990-1999	17.68	30	62.51	4.09	1.87	1.78	1.15	1.41	26.31		
2000-2002	6.1	7.29	16.21	52.89	4.81	2.88	1.24	1.05	13.53		
2003	2.12	2.81	4.35	14.09	39.51	4.35	1.44	0.61	5.81		
2004	2.2	2.61	3.9	9.31	24.98	42.32	4.01	0.91	6.68		
2005	2.36	2.63	3.91	7.63	12.67	26.58	48.28	3.02	7.73		
2006-2007	4.09	4.51	6.55	11.08	15.36	21.45	43.42	92.22	16.77		
Total	100	100	100	100	100	100	100	100	100		

Note: The columns represent the reported year the firm was originally founded according to the 2007 Survey of Business Owners (SBO), while the rows represent the birth year assigned in the Longitudinal Business Database (LBD). An individual cell represents the percentage of firms out of its column. The sample is restricted to SBO-LBD linked, single-unit firms. Year ranges are limited by the discrete choices provided within the SBO and Census disclosure requirements.

Table 6: Comparison of SBO Acquisition and LBD Birth Years (2007)

	Year of Acquisition (2007 SBO)									
	Pre-1980	1980-1989	1990-1999	2000-2004	2005	2006	2007	Total		
Pre-1980	47.66	6.77	3.91	2.24	1.45	1.75	2.23	8.94		
1980-1989	24.33	49.08	3.95	2.13	1.58	1.91	2.46	13.79		
1990-1999	15.44	28.16	61.99	5.1	2.74	3.33	4.48	26.28		
2000-2002	4.95	6.24	14.73	30.28	2.09	2.09	2.67	13.63		
2003	1.59	2.24	3.81	16.17	1.81	1.02	1.32	5.84		
2004	1.63	2.19	3.26	19.7	4.34	1.56	1.36	6.74		
2005	1.5	1.95	3.25	12.01	48.35	4.58	2.17	7.86		
2006-2007	2.9	3.37	5.11	12.38	37.64	83.76	83.32	16.92		
Total	100	100	100	100	100	100	100	100		

Year of Birth
(LBD)

Note: The columns represent the reported year of acquisition in the 2007 Survey of Business Owners (SBO), while the rows represent the birth year assigned in the Longitudinal Business Database (LBD). An individual cell represents the percentage of firms out of its column. The sample is restricted to SBO-LBD linked, single-unit firms. Year ranges are limited by the discrete choices provided within the SBO and Census disclosure requirements.

Table 7: Comparison of Acquisition and Birth Years (2002)

Year of Birth (LBD)	Year of Acquisition (2002 SBO)											
	Pre-1980	1980-1989	1990-1996	1997	1998	1998	2000	2001	2002	total		
Pre-1980	52.35	6.99	4.32	4.08	3.11	2.95	2.81	2.36	2.64	13.12		
1980-1989	24.76	54.29	4.87	3.56	3.78	2.45	2.62	2.45	2.76	19.45		
1990-1996	11.79	23.01	59.8	8.21	5.75	4.48	3.44	3.21	4.04	24.05		
1997	1.54	2.36	7.52	35.63	2.83	1.42	0.71	0.7	0.87	4.86		
1998	1.63	2.45	5.57	19.35	38.62	3.2	1.27	0.83	1.02	5.56		
1999	1.46	2.36	4.53	8.97	20.76	40.76	2.75	1.09	1.03	6.11		
2000	1.55	2.29	3.94	6.87	9.43	23.24	44.83	3.64	1.59	7.15		
2001	1.48	2.01	3.56	5.77	7.44	11.01	26.97	52.73	3.29	8.06		
2002	3.44	4.24	5.9	7.54	8.29	10.51	14.59	32.99	82.76	11.64		
Total	100	100	100	100	100	100	100	100	100	100		

Note: The columns represent the reported year of acquisition in the 2002 Survey of Business Owners (SBO), while the rows represent the birth year assigned in the Longitudinal Business Database (LBD). An individual cell represents the percentage of firms out of its column. The sample is restricted to SBO-LBD linked, single-unit firms. Year ranges are limited by the discrete choices provided within the SBO and Census disclosure requirements.

Table 8: Comparison of Founding and Acquisition Years: Firms Acquired At Founding (1992)

	Year of Acquisition (1992 CBO)								Total
	Pre-1970	1970-1979	1980-1985	1986-1989	1990-1992				
Pre-1970	100	0	0	0	0	0	0	0	14.65
1970-1979	0	100	0	0	0	0	0	0	21.9
1980-1985	0	0	100	0	0	0	0	0	24.71
1986-1989	0	0	0	100	0	0	0	0	25.72
1990-1992	0	0	0	0	100	0	0	100	13.01
Total	100	100	100	100	100	100	100	100	100

Note: The columns represent the reported year of acquisition in the 1992 Characteristics of Business Owners (CBO), while the rows represent the reported year the firm was originally founded according to the 1992 CBO. An individual cell represents the percentage of firms out of its column. The sample is restricted to single-unit firms primarily owned by a founding owner at the time of the 1992 CBO. Year ranges are limited by the discrete choices provided within the CBO and Census disclosure requirements.

Table 9: Comparison of Founding and Acquisition Years: Firms Acquired After Founding (1992)

	Year of Acquisition (1992 CBO)								Total
	Pre-1970	1970-1979	1980-1985	1986-1989	1990-1992			Total	
Pre-1970	100	0	0	0	0			40.53	
1970-1979	0	100	0	0	0			19.54	
1980-1985	0	0	100	0	0			18.6	
1986-1989	0	0	0	100	0			14.11	
1990-1992	0	0	0	0	100			7.23	
Total	100	100	100	100	100			100	

Note: The columns represent the reported year of acquisition in the 1992 Characteristics of Business Owners (CBO), while the rows represent the reported year the firm was originally founded in the 1992 CBO. An individual cell represents the percentage of firms out of its column. The sample is restricted to single-unit firms primarily owned by a non-founding owner at the time of the 1992 CBO. Year ranges are limited by the discrete choices provided within the CBO and Census disclosure requirements.

Table 10: Comparison of CBO Founding and LBD Birth Years (1992)

Year of Birth (LBD)	Year Founded (1992 CBO)								Total
	Pre-1970	1970-1979	1980-1985	1986-1989	1990-1992	Total			
Pre-1980	56.58	46.22	6.8	1.66	0.88	25.58			
1980-1985	19.38	25.78	45.31	6.26	3.28	22			
1986-1989	14.97	19.26	29.46	55.44	3.8	26.51			
1990-1992	9.07	8.74	18.43	36.64	92.03	25.91			
Total	100	100	100	100	100	100			

Note: The columns represent the reported year the firm was originally founded according to the 1992 Characteristics of Business Owners (CBO), while the rows represent the birth year assigned in the Longitudinal Business Database (LBD). An individual cell represents the percentage of firms out of its column. The sample is restricted to CBO-LBD linked, single-unit firms. Year ranges are limited by the discrete choices provided within the CBO and Census disclosure requirements.