

# SMALL BUSINESS RESEARCH SUMMARY

---

## Analyses of Business Dissolution by Demographic Category of Business Ownership

by Dr. Richard J. Boden, Jr.  
2001. [30] pages. The University of Toledo,  
Toledo, Ohio 43606-3390,  
under contract no. SBA-HQ-00-M-0497

---

### Purpose

This study combines data on all nonfarm businesses with demographic information about owners of businesses in order to examine how the survival prospects of businesses vary by demographic group, industry, and other characteristics. The project concentrates on the survival rate through 1996 of firms started in 1992 but also shows how the core database, the Business Information Tracking Series (BITS) microdata file, can be combined with other databases to answer a wide variety of questions.

For illustrative purposes, the report shows the survival rates for all businesses and for four demographic subgroups in all industries and two major industry groups: business services and eating and drinking places. The highest five survival rates by major industry group are shown for each of the demographic groups. In addition, the study uses proportional hazard models to calculate the risks of business dissolution relative to a control group for each demographic group.

Thus, the report serves both to begin to answer frequently asked questions about survival rates (overall, by industry, and by demographic group) and to demonstrate the feasibility of combining the BITS with other databases for research purposes.

### Scope and Methodology

The study combines records from the BITS and the Census Bureau's 1992 Survey of Minority-Owned Business Enterprises and Women-Owned Businesses

(SMOBE/WOB). The BITS is a database containing longitudinal data (specifically, annual data from 1989 through 1996 at the time the research was conducted) on virtually all nonfarm U.S. business establishments with paid employees. Establishments that are part of multi-location firms are linked to the firm. For each establishment, variables in the BITS include: employment (and firm employment if different), standard industrial classification (SIC) code, geographic identification codes, payroll, and start year. The BITS was created and is updated annually by the Census Bureau with funding from the Office of Advocacy.

The SMOBE and WOB are cross-sectional data series produced every five years as part of the Census Bureau's economic censuses. The 1992 SMOBE/WOB universe consists of sole proprietorships, partnerships, and S corporations, but not C corporations. These data series contain information on business owners' demographic characteristics: in 1992, race, ethnicity, and gender of the "majority" of each firm's owners was sought through a mail survey. The SMOBE/WOB also contain data on several firm characteristics, including industry, geographic location, employment, payroll, and receipts. The two files also contain weights that permit calculation of population estimates by demographic category of ownership.

Previously, Alicia Robb had matched SMOBE/WOB records that had employer identification numbers (EINs) to the BITS when she worked for the Office of Advocacy in 2000. About 3.1 million of the 17 million firms represented by the weighted SMOBE/WOB

files reported payrolls in 1992, meaning they were employer businesses like those in the BITS file; the remainder were sole owners without employees.

This research uses 44,707 unweighted matched SMOBE/WOB-BITS records of firms started in 1992 to find the probability that the firm survived through 1996. Owners were placed in one of four demographic groups: white non-Hispanic, black (Hispanic or not), white Hispanic, or Asian and other (Pacific Islander, American Indian, or Alaskan Native, Hispanic or not). Census rules governing disclosure limited publication of survival rates to the five “two-digit SIC code” industries with the highest survival rates for each demographic group, and to the survival rates for each demographic group for two very widespread industries, business services and eating and drinking places. In addition, regression-like proportional hazard models were specified and estimated to yield insight into the impact (all else being equal) of certain business, industry, and geographic characteristics on businesses’ risk of dissolution over the 1992-1996 time period.

## Highlights

- For businesses that first had payroll in 1992, the following table shows the percentages that survived at least to 1996.

Demographic Group of Majority of Owners	All Firms	Eating and Drinking Places	Business Services
White Non-Hispanic	49	46	48
Black	35	36	19
White Hispanic	45	41	49
Asian and Other	50	47	60
All	47	45	44

- The highest survival rates by two-digit SIC code for each demographic group were: white non-Hispanic, 82 percent for oil and gas extraction; black, 79 percent for legal services; white Hispanic, 66 percent for health services; Asian and other, 76 percent for health services.
- The proportional hazard modeling allows testing of a variety of hypotheses about factors affecting the risk of dissolution (firm closure) for firms started in 1992 by examining the hazard ratio—the likelihood of dissolution relative to a control group. For instance, relative to white non-Hispanic-owned firms, black-owned firms were 29 percent more likely to close by 1996; the hazard ratios for other groups relative to white non-Hispanics were not statistically significant. In contrast, relative to firms owned by white non-Hispanic women, firms owned

by black women were 16 percent less likely to close by 1996. Again, the hazard ratios for other groups were not statistically significant.

- Other hazard ratios are computed relative to a reference group within each demographic group. The differences in relative hazards can be striking. For instance, compared to firms in agricultural services and mining (the reference group), construction firms had higher (and statistically significant) risks of closure in the full sample and in three of the four demographic groups. (The hazard ratio was not statistically significant for white Hispanic owners in any industry group.) The risk of closure for black-owned construction firms was less than 10 percent higher than for the black-owned reference group, whereas for Asian and other construction firms, the risk was nearly double that of the Asian and other reference group.

## Conclusions

The BITS data have already proven to be a valuable resource for empirical analyses of business, establishment, and employment dynamics. The matched data open up even more dimensions for prospective empirical analyses by augmenting the BITS file with information on the racial/ethnic and gender classification of firms’ ownership. Beyond the uses in this study, the matched file can also be used to assess business employment change for various demographic classifications of business ownership.

## Ordering Information

The full text of this report is online at [www.sba.gov/advo/research/rs204tot.pdf](http://www.sba.gov/advo/research/rs204tot.pdf). Summaries of other studies performed under contract to the U.S. Small Business Administration’s Office of Advocacy are available on the Internet at [www.sba.gov/advo/research](http://www.sba.gov/advo/research).

Printed copies are available for purchase from:

National Technical Information Service  
 5285 Port Royal Road  
 Springfield, VA 22161  
 Tel. (800) 553-6847  
 TDD: (703) 487-4639  
**Order number:** PB 2001-104043  
**Price codes:** pending

The National Technical Information Service’s complete data base of federally funded business research is available on the Internet at [www.ntis.gov](http://www.ntis.gov).