

Business Ownership vs. Self-Employment

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Abstract: Contributors to the “economics of entrepreneurship” literature have continually treated self-employment as a synonym for business ownership and a proxy for entrepreneurship. While previous studies have questioned whether the self-employed are necessarily entrepreneurs, we ask a different question: Do the self-employed always view themselves as business owners, and do business owners necessarily classify their jobs as self-employment? Using new data from the 1979 National Longitudinal Survey of Youth, we find that 68% of jobs classified as self-employment are *not* independently reported as self-owned businesses, and that 16% of self-owned businesses are *not* independently classified as self-employment. Those businesses that are not deemed by their owners to be self-employment tend to be associated with additional signs of entrepreneurship such as self-identification as an entrepreneur, verbatim job descriptions that speak to owning the business or having a managerial role, and high individual levels of skill and assets. At the other extreme, self-employed jobs that are *not* independently classified as self-owned businesses are associated with low levels of skill and assets, and are dominated by contact work and home-based, single-person pursuits. Our evidence suggests that self-employment should not be viewed as a synonym for business ownership.

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I. Introduction

A noteworthy feature of the “economics of entrepreneurship” literature is the lack of consensus on how to conceptualize and measure entrepreneurship. At a theoretical level, Knight (1921), Schumpeter (1934), Lucas (1978), Kihlstrom and Laffont (1979), and Lazear (2005) are among the many studies that offer alternative definitions of entrepreneurship. In the empirical literature, analysts have argued that the two most widely-used proxies for entrepreneurship—business ownership and self-employment—are problematic because they potentially exclude nascent entrepreneurs while including activities that do not necessarily entail risk, growth, and innovation (Carland *et al.* 1984; Parker 2009; Hurst and Pugsley 2013, Levine and Rubinstein 2013; Henrekson and Sanandaji 2014). Despite this definitional debate, self-employment is the proxy of choice for entrepreneurship because it is widely available in microdata—and examples abound of analysts using the terms self-employment, business ownership, and entrepreneurship interchangeably.¹

In this study we focus on an overlooked, but important, part of the puzzle by asking whether analysts are justified in assuming that self-employment and business ownership are synonymous. To answer this question, we use new data from the 1979 National Longitudinal Survey of Youth (NLSY79) to determine whether survey respondents who identify their jobs as self-employment *independently* classify those same jobs as self-owned businesses, and vice versa. Over the 36 years that the NLSY79 has been in progress, respondents have contemporaneously identified virtually every job held as self-employment (or not) by answering standard “class of worker” questions. In 2010, respondents identified each business owned since age 18, and most of their reported businesses were subsequently linked by survey staff to previously- or contemporaneously-reported jobs.² This unique feature of the data allows us to assess the level of “agreement” between self-employment and business ownership.

Among workers observed from (approximately) age 18 to 50, we find that (a) self-employed jobs outnumber self-owned businesses by a factor of 2.3; (b) 16% of businesses are *not* classified as self-employment; (c) an astounding 68% of self-employment is *not* identified as business

¹For example, in the abstract of his seminal article based on an analysis of self-employed workers, Hamilton (2000) writes (*italics added*): “The empirical results suggest that the nonpecuniary benefits of *self-employment* are substantial: Most *entrepreneurs* enter and persist in *business* despite the fact that they have both lower initial earnings and lower earnings growth than in paid employment...” Other analysts who use self-employment, business ownership and/or entrepreneurship interchangeably include Evans and Jovanovic (1989), Evans and Leighton (1989), Blanchflower and Oswald (1998), Dunn and Holtz-Eakin (2000), Fairlie (2002), Ekelund *et al.* (2005), Ahn (2010), and Levine and Rubinstein (2013).

²The fact that businesses reported in 2010 are successfully linked to jobs reported as far back as 1978—plus the fact that business ownership is a significant event that should be easily recalled after many years—suggests that recall bias is not an important issue. We pursue this issue in sections III-IV.

ownership; and (d) even among the *incorporated* self-employed (labelled “entrepreneurial business owners” by Levine and Rubinstein (2013)), 30% of jobs are associated with neither business ownership nor reported business income.

In addition to assessing the level of “agreement” between independent reports of self-employment and business ownership, we exploit a rare opportunity to view verbatim descriptions of the work performed on each job. We use this information to characterize subsamples of jobs classified as “only” self-employment, “only” a self-owned business, or both self-employment and a business. We find that owners of businesses *not* identified as self-employment are more likely than others (even the incorporated self-employed) to use such terms as “I own the business” or “I run the business” when describing the type of work they perform. Incorporated business owners also have higher skill levels and asset levels than do any other “type,” including the incorporated self-employed. At the other extreme, we find that self-employment not identified as businesses ownership often entails contract work (including sales, substitute teaching, acting, and even working as a church pastor) and home-based, one-person pursuits such as baby-sitting, dog-walking, and handyman work.

Our analysis demonstrates that survey respondents do not view self-employment and business ownership as synonyms. Before referring to the self-employed as business owners (or to business owners as self-employed), analysts should be aware of these striking discrepancies in self-classification. Entrepreneurship is an elusive construct, but the evidence suggests that it is more likely to be found among individuals who explicitly claim to be business owners than among those who identify their jobs as self-employment.

II. Background

A number of analysts have questioned whether business ownership or self-employment is a suitable proxy for entrepreneurship. Carland *et al.* (1984) advocate distinguishing between owners of *small* businesses and entrepreneurs. Following Schumpeter (1934), they define entrepreneurship (p. 354) as the act of carrying out “new combinations of means of production.” They argue that small businesses are not always innovative, growth-oriented, or otherwise entrepreneurial, while *large* business owners are likely to qualify as entrepreneurs. In a similar vein, Henrekson and Sanandaji (2014) argue that small business owners (whom they equate with the self-employed) should not be viewed as entrepreneurs because they rarely introduce innovations, hire employees, or grow their businesses. Hurst and Pugsley (2013) provide a wealth of original evidence suggesting that small businesses rarely conform to notions of entrepreneurship. For example, they demonstrate that relatively few small business owners claim to have started their business to offer a new product or service, or express an expectation of or desire for growth and innovation.

Turning to self-employment, Berglann *et al.* (2011) claim (p. 180) that “a self-employed person is obviously an entrepreneur” insofar as he/she works for the firm (unlike an investor) while bearing considerable income risk (unlike a wage employee). Nonetheless, they object to equating sole proprietorship with entrepreneurship on the grounds that the definition of entrepreneurship should be *expanded* to include employed owners of limited liability companies who, like the self-employed, work for their own firms while bearing income risk. In a different vein, Levine and Rubinstein (2013) advocate restricting the proxy for entrepreneurship to a *subset* of the self-employed—*viz.*, those who report their status as incorporated. They argue that this is a means of honing in on skilled, innovative, growth-oriented business owners who come closer to meeting accepted definitions of entrepreneurship.

Parker (2009) summarizes many of the preceding arguments about how best to proxy entrepreneurship, while also considering the distinction between business ownership and self-employment. He defines self-employed workers as individuals who do not earn a regular wage or salary, but instead run their own business at their own risk. While many self-employed workers are sole proprietors (owners of an unincorporated business owned by one person), self-employment also includes partners of unincorporated businesses and, potentially, owners of incorporated businesses. As Parker notes, self-employment and business ownership need not correspond if (a) individuals who own a business as a sideline are classified as regular, “wage” employees on the basis of their primary job; (b) incorporated business owners identify themselves as wage employees of their own business, rather than as self-employed; and (c) “casual” self-employed workers are not identified as business owners.

Parker also describes a number of ways in which self-employed workers might be misclassified. Given that we rely on individual-level survey data in the current study, the most relevant of his arguments are that (a) respondents’ propensities to classify themselves as self-employed depend on whether they consider their tax status or legal status, which are often at odds; (b) surveys might classify workers as “wage” employees if their self-employed venture does not generate income, or is not their primary source of income; and (c) certain types of workers, including free-lancers, contract workers, independent salespeople, employees of a family business, and workers with a high degree of autonomy might be classified as self-employed when, in fact, they are wage employees.

We can reinforce Parker’s (2009) arguments by noting that survey respondents can interpret the questions posed to them as they choose, and can potentially have very different views of self-employment and business ownership than what was intended by survey designers or is ultimately assumed by data analysts. In III.C, we describe the precise questions asked in the NLSY79 to identify self-employment and business ownership. These questions appear to be reasonably explicit and clear, yet some of the “disagreement” between self-employment and business

ownership might be due to respondents viewing these terms in unanticipated (but not incorrect) ways. In particular, jobs that can be characterized as home-based, independent, one-person, and/or informal dominate the self-employment category, yet individuals who hold these jobs tend not to view themselves as business owners.

III. Data

A. NLSY79 Data Collection

We use data from the 1979 National Longitudinal Survey of Youth (NLSY79), which began in 1979 with a sample of 12,686 respondents (6,403 men and 6,283 women) born in 1957-64. Respondents were interviewed annually from 1979 to 1994, and biennially thereafter. We use data collected from 1979 through 2012, which is the latest round for which data are publicly available. In this subsection, we describe how (and when) data on self-employment and business ownership were collected; precise question wordings and variable definitions are deferred to III.C.

NLSY79 respondents have identified virtually every job held over the course of the survey, and have answered standard questions (drawn from the Current Population Survey) on “class of worker” and “type of work” (used to code industry and occupation) about every job satisfying duration and weekly hours cutoffs. Aside from minor changes in the hours cutoffs and “class of worker” question wording (which appear not to affect the incidence of self-employment or our findings), self-employment has been identified consistently and *contemporaneously* for most jobs. The same is true of “type of work” descriptions, which we were able to access for all jobs reported from 1994 to 2010.

Business ownership was not directly identified until 2010, when respondents were asked whether they had ever owned a business since age 18. Anyone responding “yes” was asked several questions about each business, including its name and the dates of ownership.³ Respondents not interviewed in 2010 were asked the one-time, retrospective business ownership questions in 2012. Respondents interviewed in both 2010 and 2012 were asked about any new or ongoing businesses in 2012.

After the 2010 interviews were completed, survey staff used reported start/stop dates and company names to link “old” businesses reported in 2010 to previously-reported jobs; businesses that were in progress in 2010 were automatically linked to jobs as part of the questionnaire design. In cases where links for “old” businesses were not found or were ambiguous, respondents were asked during the 2012 interview to provide verification or additional information. A similar process (without follow-up questions) was used to link “old” businesses reported in 2012 by

³As part of the business ownership module all respondents, regardless of whether they reported business ownership, were asked a set of general questions, including whether they consider themselves to be entrepreneurs, and whether any family members owned businesses.

respondents not interviewed in 2010. This process resulted in almost 90% of businesses being linked to a job—a remarkably high linkage rate that speaks to the accuracy with which respondents were able to report information about their businesses. As our analysis demonstrates, however, many businesses are linked to a job for which “class of worker” is not coded as “self-employment” and, conversely, many jobs for which “class of worker” is self-employment are not linked to a business.

Because businesses were reported retrospectively in 2010-12, we must consider whether the lack of agreement between self-employment and business ownership is the result of recall error. We address this issue in detail in section IV.B. For now, we note that recall bias is unlikely to be an important issue because (a) business ownership is a salient life event that can typically be recalled 10, 20, or even 30 years later; (b) extensive survey expertise was brought to bear in designing and testing the NLSY79 retrospective business ownership module; and (c) the success of the linkage process described above indicates that “old” businesses were reported with considerable accuracy.

B. Sample Selection

We apply two criteria to determine which respondents contribute data to the samples used for our analysis. First, we confine our attention to 7,818 respondents who were interviewed in 2010 and/or 2012, in order to have both self-employment and business ownership information for each sample member. Second, we keep only those respondents who reported at least one job or business between their career start date (which we define as the start of the first nonenrollment spell lasting at least 12 months) and their last (2010 or 2012) interview, at which time respondents were ages 46-55.⁴ This second criterion eliminates only 41 individuals, leaving us with a sample of 7,777 individuals (3,809 men and 3,968 women).

Next, we form a sample of jobs reported by these 7,777 individuals. NLSY79 respondents have identified virtually every job held over the course of the survey. We keep any job if (a) it began after the career start date or, for jobs that “spanned” the start date, if at least half the observed duration followed the career start date; and (b) class of worker (private sector, government, self-employed, *etc.*) is identified. Select job characteristics, including class of worker, were only asked if a job lasted at least nine weeks and hours worked met a threshold level (20 hours from 1979 to 1985 and 10 hours thereafter), so the latter criterion causes a number of short-term and/or part-time jobs to be dropped.⁵ After imposing these selection rules, we are left with a sample of 68,012 jobs held by 7,777 individuals.

⁴See Light (1998) and Light and McGee (2015) for justification of this career start date and discussion of alternative definitions.

⁵ See the NLSY79 Topical Guide at <https://www.nlsinfo.org/> for details.

We form a sample of businesses owned by these 7,777 individuals by selecting every business reported in 2010 and/or 2012 for which ownership began after the career start date; in the rare case where a business was in progress at the start of the career, we require that at least half the reported ownership period exceed the career start date. Our 7,777 sample members reported a total of 2,350 businesses in 2010-12, and 2,287 of these businesses (97%) were owned after the career start date. Most of these 2,287 businesses correspond to one of the 68,012 jobs in our sample: 1,394 businesses were owned at the 2010 or 2012 interview date and, as a result, reported by respondents in a way that tied them automatically to a contemporaneously-reported job; 610 of the remaining 893 businesses (all of which were no longer owned at the time of the 2010 or 2012 interview), have been linked to a previously-reported job as described in III.A. Combining our sample of 68,012 jobs (2,004 of which are linked to businesses) and 2,350 businesses (only 283 of which are not linked to jobs), we have a sample of 68,295 unique jobs and businesses. We summarize this sample size information by sex in table 1.

C. Potential Indicators of Entrepreneurship

The primary goal of our analysis is to determine how often jobs classified as self-employment are independently identified as self-owned business and vice versa. To augment this analysis, we also consider alternative (potential) indicators of entrepreneurial activity: incorporation status of both self-employed jobs and owned businesses, self-identification as an entrepreneur, earned business income, and verbatim job descriptions. In this subsection, we describe each of these key indicators.

Self-employment: From 1979 to 1993, the class of worker question posed to respondents (along with a hand-card) was worded as follows:

Are/Were you an employee of a private company, business, or individual for wages, salary, or commission; a government employee; self-employed in own business, professional practice or farm; working without pay in family business or farm?

From 1994 onward, hand-cards were eliminated to facilitate telephone interviews and the question was changed to:

*Are/Were you employed by government; by a private company; by a non-profit organization; or are/were you self-employed?*⁶

We classify a job as self-employment if the respondent answered either “self-employed” or “working...in family business or farm” in the early regime, and if he/she answered “self-

⁶From 2002 to 2012, respondents were assigned “self-employed” as their class of worker if they answered “yes” to any of a series of screener questions designed to identify self-employed and free-lance workers for a special set of wage questions—*e.g.*, if they said they owned at least 50% of a business or had a title of CEO or managing partner. Very few respondents were classified as self-employed as a result of these screener questions, and the secular trend in self-employment rate did not change relative to earlier years.

employed” in the later regime.⁷ Class of worker was reported multiple times for jobs that were in progress long enough to span multiple interviews. To assign each job a single, time-invariant indicator, we use the modal response; when the mode is non-unique, we use “self-employment” if it was reported as often as any other response.

Business ownership: Prior to identifying all in-progress and past businesses as part of their 2010 and 2012 interviews, respondents were first read the following explanation of what type of businesses were of interest:

*By business, we mean any activity operated with **regularity** for the purpose of generating **income or profit**. We are interested in all incorporated companies and partnerships in which you had any ownership share, as well as unincorporated businesses that you may have operated as a sole proprietor, independent contractor, consultant, or free-lancer. This even includes informal businesses such as cleaning services, gardening services, and the selling of goods out of your home, as long as they generated income and were operated on a regular basis. The only businesses we are not interested in are those operated on a highly sporadic basis, those carried out purely as a hobby, and those in which you were merely a shareholder or investor with no role in the operation of the company.*

Since you were 18 years old, have you ever owned a business that would be of interest to us according to this description?

As noted in III.B, we use any business reported in this fashion as long as it was owned after the start of the career. We refer to a business as “linked” to a job if it corresponds to a previously-reported or contemporaneously-reported job, regardless of whether that job is self-employment.

Incorporation status: Whenever class of worker was given as “self-employed,” the respondent received the following follow-up question about the same job: *Is/Was your business incorporated or unincorporated?* “Don’t know” was an allowable response, and one that was chosen for about 5% of self-employed jobs. The question—which, along with the class of worker question, was taken from the Current Population Survey—clearly presumes that “self-employment” and “business ownership” are interchangeable.

For each self-owned business reported in 2010 and 2012, respondents were asked a series of questions about the business, including the following:

What (is/was) the legal form of this business? (Is/Was) it a sole proprietorship; partnership or limited liability partnership; limited liability corporation; sub-chapter S corporation; general corporation; nonprofit organization; or other.

We consider each business to be incorporated if the respondent gave any response other than “sole proprietorship,” “nonprofit,” or “other.”

⁷The response of “working...in family business or farm” accounts for only 3% of self-employed jobs held by men and 5% held by women. Our findings are not sensitive to whether we include this category among the self-employed. We do so under the assumption that respondents with family businesses/farms are likely to classify themselves as self-employed in years when this is not offered as a separate category.

Self-identification as entrepreneur: As part of the retrospective business ownership module administered in 2010 or 2012, respondents were asked:

Do you consider yourself to be an entrepreneur?

If respondents betrayed confusion or asked for clarification, interviewers were instructed to explain that “an entrepreneur is someone who launches a business enterprise, usually with considerable initiative and risk.” This question was asked of all respondents, regardless of whether they reported having owned any businesses since age 18.

Business income: In every interview round, respondents were asked to identify their income in the last calendar year (as well as their spouse’s or partner’s income) from a variety of sources, including military service, wages, salary, commissions or tips from all jobs, and unemployment compensation. This set of questions includes the following:

Excluding any income you already have mentioned, during [relevant calendar year] did you receive any money in income from your own farm? ...from your own non-farm business, partnership, or professional practice?

Respondents answering “yes” to either question were then asked to report the amount. We reduce this information to a yes/no indicator of whether any business or farm income was reported during any calendar year in which each business and self-employed job was in progress.

Verbatim job descriptions: For every job that qualified for the “class of worker” question described above, respondents were asked the following questions (also taken from the Current Population Survey) for the purpose of coding industry and occupation:

What kind of work do/did you do for [employer]?

What are/were some of your main activities or duties?

What kind of business or industry is/was this? (What do/did they make or do?)

Verbatim responses to these three questions (the wording of which changed slightly over time) are not available for public use, but we had a unique opportunity to access them for all jobs reported from 1994 through 2010. We used this information to create a number of job descriptors for every jobs classified as self-employment and/or business ownership during this timeframe.

Although the questions were designed to elicit information about occupation and industry, many respondents explicitly referred to an ownership, managerial, or employee role at their place of employment. Based on the language used, we coded the following, mutually-exclusive indicators of the individual’s role at each reported job:

<u>ROLE</u>	<u>Description</u>
<i>Own</i>	Explicitly claimed to own the business by using such terms as <i>own</i> , <i>co-own</i> , <i>owner</i> , <i>proprietor</i> , <i>president</i> , or <i>CEO</i> . While presidents and CEOs need not own their companies, on jobs already classified as self-employment and/or self-owned (small) businesses, we believe each term indicates business ownership.
<i>Run</i>	Explicitly claimed to run the business by using such terms as

director, officer, or I run the business. While these individuals might also own the business, their status is less clear than in cases coded as “owns” or “self-employed” (see below).

<i>Manage</i>	Explicitly claimed a managerial or executive role by using such terms as <i>boss, manager, supervisor, executive, CFO, or vice president.</i> It is unclear whether these individuals own the business, or simply manage it.
<i>Self-employed</i>	Explicitly used the term <i>self-employed.</i>
<i>Independent</i>	Used such terms as <i>free-lance, independent, or contractor,</i> or described the work in a way that clearly indicated he/she was an independent distributor or salesperson.
<i>Does all the work</i>	Did not use any terms referred to above, but suggested that he/she did all the work for the business either by describing an extensive list of tasks (<i>e.g., cleaning, maintenance, clerking and accounting while working in a motel</i>) or explicitly using such terms as <i>I do everything.</i>
<i>Does some of the work</i>	Did not use the terms referred to above, but suggested that he/she only did some of the work for a business; <i>e.g., described installing dry-wall for a construction company, or doing sales for a manufacturing company.</i>
<i>Employee</i>	Described an employee role, either by making reference to following a boss’s or manager’s direction, or by using such terms as <i>secretary, book-keeper, cashier, waitress, assistant manager, account manager, or apprentice.</i>
<i>Unknown</i>	All remaining jobs. With few exceptions, these are jobs for which the verbatims are extremely short and vague.

We defined an additional, independent variable, “*works at home,*” when the verbatim responses strongly indicated employment based in the respondent’s home, car, or boat, or at a client’s home. This variable identifies in-home baby-sitters and care-givers, handymen, home-based writers, artists, *etc.,* and entertainers who perform at bars and private parties; it excludes farmers.

We defined a third set of variables that are essentially aggregated occupational classifications based on the verbatim responses. We defined the categories described below after determining what type of work is most commonly described by the self-employed and business owners. Baby-sitting, housekeeping, construction, landscaping, and truck driving are reported often enough to merit their own categories, although we include similar but less-common types of work in each category (*e.g., pet-sitting with baby-sitting*). Other categories are comprised of a variety of jobs that are each reported only a handful of times, but that are similar in nature. “Solo” work, for example, includes numerous jobs that are typically performed (by the self-employed) as individuals, often from home.

<u>WORK</u>	<u>Description</u>
<i>Care-giver</i>	Baby-sitter; care-giver; personal assistant; pet-sitter; tutor
<i>Cleaner</i>	Cleans houses, offices, or cars
<i>Beauty worker</i>	Hair stylist; barber; cosmetologist; manicurist
<i>Solo work</i>	Artist; photographer; musician; actor; writer; editor; graphic designer; caterer; umpire; clergyman; substitute teacher; masseuse; personal trainer; medical transcriber
<i>Construction</i>	Builds, repairs, or installs materials in houses, cars, or boats; includes handy-man work
<i>Yard work</i>	Landscaping; lawn care; tree care; pest control; fire-wood supplier
<i>Transportation</i>	Drives trucks or snow plows; delivers, including couriers, newspaper delivery
<i>Practitioner</i>	Doctor; lawyer; CPA; tax preparer; architect; counselor (professional practices)
<i>REI</i>	Real estate or insurance agent; mortgage loan officer; property manager
<i>Consultant</i>	Consulting (not as part of broader job)
<i>Retail</i>	Works in restaurant, bar, or store; street vendor
<i>Other</i>	None of the above

D. Additional Variables

In the final step of our analysis, we disaggregate the sample of jobs into those classified as self-employment but not businesses, those classified as businesses but not self-employment, and those classified as both—and, for comparison, we also disaggregate all self-employed jobs and all businesses by incorporation status. We then characterize differences across job “type” with respect to job characteristics (described in III.C) based on verbatim job descriptions, and a number of personal characteristics. Specifically, we consider race (black vs. nonblack), ethnicity (Hispanic vs. non-Hispanic), highest grade completed at the career start date, percentile scores on the Armed Forces Qualification Test (AFQT), scores for the Rotter Locus of Control, and age and cumulative labor market experience at the job’s outset.⁸

We also analyze two variables identified in the literature as potentially key determinants of entry into self-employment or business ownership: assets (Evans and Jovanovic 1989; Dunn and Holtz-Eakin 2000; Hurst and Lusardi 2004; Disney 2009; Fairlie and Krashinsky 2012) and risk preference (Cramer *et al.* 2002; Ekelund *et al.* 2005; Johansson *et al.* 2005; Ahn, 2010). We construct our *assets* measure by adding all asset values reported for a variety of sources (housing,

⁸AFQT scores are based on scores for the Armed Services Vocational Aptitude Battery (ASVAB), which was administered to NLSY79 respondents in 1980. We use Rotter scores from scales administered in 1979. All scores are adjusted for the age at which the test was administered.

savings, stocks/bonds, retirement funds, *etc.*) in select interview years, running person-specific regressions of total assets on a polynomial in age, and using the estimated coefficients to compute expected assets at each job start date. Assets are then deflated by the CPI-U, and expressed in 2000 dollars. Our *risk preference* measure is based on a series of questions (asked in 1993, 2002, 2004, and 2006) about the respondent's willingness to accept large-scale income gambles. Following Barsky *et al.* (1997) and Light and Ahn (2010), we use time-varying categorical responses to these questions to model the Arrow-Pratt coefficient of risk tolerance, by sex, as a function of a quadratic in age, race (black vs. non-black), ethnicity (Hispanic vs. non-Hispanic), and a measurement error term.

IV. Findings

A. Comparisons of Alternative Entrepreneurship Indicators

We begin our discussion by comparing “long-term” indicators of (potential) entrepreneurship. Specifically, in table 2 we compare the fraction of respondents who hold at least one self-employed job, own at least one business, and/or report any business income between their career start date and last (2010 or 2012) interview date. We also assess the fraction of respondents who report that they consider themselves to be entrepreneurs.

The evidence in table 2 is noteworthy for a number of reasons. First, workers are far more likely to be self-employed over the first 30 or so years of their careers than to be business owners. Among men, 43% hold at least one self-employed job, while only 29% own at least one business. Women are considerably less likely to experience either outcome, but their 16 percentage-point gap between rates of self-employment and business ownership is similar to the 14 percentage-point gap seen for men.⁹ Second, for both men and women the incidence of reporting business income lies roughly halfway between the incidences of business ownership and self-employment. While we view business income as an outcome of interest, it can understate the incidence of business ownership and self-employment if respondents report their income as wage/salary income or do not draw personal income from their business. Third, while 53% of men and 41% of women experience at least one of these potentially entrepreneurial outcomes, a far smaller percentage (25% of men and 13% of women) identifies as entrepreneurs. Fourth, the incidence of each outcome is substantially higher among self-identified entrepreneurs than among the overall sample. For example, women entrepreneurs are almost twice as likely as all women to hold at least one self-employed job (0.64 vs. 0.33), 3.3 times more likely to own at least one business (0.57 vs. 0.17), and more than twice as likely to report business income (0.48 vs. 0.23). Fifth, the “gap” between self-employment and business ownership is significantly lower among self-identified

⁹ This long-term evidence is consistent with table 1, which shows that men (women) report 2.1 (2.6) times as many self-employed jobs as businesses.

entrepreneurs than among the full sample. Whereas men (women) are 14 (16) percentage points more likely to be self-employed than to be business owners in the full sample, these gaps fall to 5-7 percentage points in the subsample of entrepreneurs. Overall, these findings are consistent with the notion that many self-employed jobs are not considered to be self-owned businesses, perhaps because they are informal and/ or independent, free-lance pursuits—and that self-identified entrepreneurs are less likely than others to hold these informal jobs.

We now turn from a sample of individuals to samples of jobs and businesses, and introduce another dimension of potential entrepreneurial activity: incorporation status. In table 3 we see that, unsurprisingly, a large majority of self-employed jobs (75% for men, 80% for women) are unincorporated. Incorporation status is unknown for 5-6% of self-employed jobs, leaving the remaining jobs (20% for men and 14% for women) to be classified as incorporated. The majority of owned businesses are also classified as unincorporated (*i.e.*, sole proprietorships), although the percentages (54% for men, 60% for women) are not nearly as large as for self-employment. As noted in III.C, business owners can also classify their business as a partnership or limited liability partnership, limited liability corporation, sub-chapter S corporation, or general corporation. Table 3 reveals that 34% of men’s businesses and 23% of women’s businesses fall into one of these categories, which we collectively refer to as incorporated.

Unsurprisingly, table 3 shows a slight shift from unincorporated to incorporated self-employment when we focus on self-identified entrepreneurs. Among women, for example, the percent of self-employed jobs that are unincorporated falls by seven points (from 80 to 73), while the percent that are incorporated increases by a similar amount (from 14 to 21). Interestingly, a smaller shift is seen for businesses: men’s and women’s businesses are 1-2 percentage points less likely to be sole proprietorships when we focus on entrepreneurs than we consider the full sample, and 3-4 percentage points more likely to be corporations.

B. Business Ownership vs. Self-Employment

Next, we consider the extent of job-specific “agreement” between self-employment, business ownership, and business income. In table 4, we decompose the sample of 5,176 self-employed jobs by sex and incorporation status, and assess how often each type of self-employed job links to an owned business and/or business income. A self-employed job and business are linked if the process described in III.A indicates they are the same job. Jobs and business income are linked if the respondent reported income from a business during a calendar year when the job was in progress.

Table 4 reveals that for men, only 35% of self-employed jobs link to a business—that is, for 65% of jobs classified as self-employment, the individual does *not* report a business that corresponds to the self-employed job (and, in many cases, does not report *any* business ownership). The linkage rate with business income is higher, yet for 55% of jobs classified as self-employment,

the individual never claims to receive income from a business while the job is in progress. Only 18% of self-employed jobs link to both a business and business income, leaving 38% that link to neither.¹⁰ Linkage rates are even lower for self-employed jobs held by women, with the majority of jobs (51%) linking to neither a business nor business income.

Table 4 indicates that linkage rates are higher for incorporated self-employed jobs than for unincorporated self-employed jobs, and exceedingly low when the job's incorporation status is unknown. Among men, for example, only 27% of incorporated self-employment links to neither a business nor business income, while 75% of "unknown" self-employed jobs are unlinked. Linkage rates are higher for self-employed jobs held by self-identified entrepreneurs although, interestingly, the gain in linkage rates is more pronounced for women than for men. For example, the fraction of unincorporated (incorporated) jobs that link to a business increases from 0.27 to 0.44 (0.47 to 0.66) when we switch from the "all women" sample to the subset of entrepreneurs. The finding that incorporated self-employed jobs—especially those held by entrepreneurs—are considerably more likely than other self-employed jobs to coincide with business ownership and business income suggest that these are more likely to be "formal" entrepreneurial pursuits.

Table 5 is similar to table 4, but now we use the sample of 2,004 owned businesses that link to a job (not necessarily to a self-employment job) and ask how often each business corresponds to other indicators of entrepreneurial activity. The linkage rates for businesses differ from those for self-employed jobs in three important respects: First, the fraction of businesses that link in some fashion is *much* higher than what we saw for self-employment. Using the "all businesses for all men" column for illustration, table 5 reveals that 83% of businesses link to a self-employed job while, per table 4, only 35% of self-employed jobs link to a business. Similarly, 51% of businesses link to business income (vs. 45% of self-employed jobs), and only 10% of businesses have no link to self-employment or business income (vs. 38% of self-employed jobs). Second, in contrast to what was seen in table 4, table 5 shows very little difference in linkage rates between the full samples and the subsamples of entrepreneurs. Third, table 5 shows that *unincorporated* businesses are 8-14 percentage points *more* likely to link to self-employment than are incorporated businesses. This is an unsurprising finding, given that many owners of incorporated businesses are not classified as self-employed for tax purposes, and are likely to classify themselves as wage employees (of their own business) when answering "class of worker" questions. While the lack of "agreement" between self-employment and incorporated business ownership is understandable, it is surprising to find that about 12% of *unincorporated* businesses do not link to a self-employed job.

¹⁰ Categories a-c are not mutually exclusive, but we can "back out" that 17% of jobs link *only* to a business and 27% link *only* to business income, while the remaining 18% link to both.

An obvious concern is that the discrepancy in job classification reflects recall bias, given that respondents did not recount their business ownership until 2010-12, when the median individual was 50 years old. We believe recall error is unlikely to be an important factor for three reasons: First, as noted earlier, business ownership is a salient life event, and individuals should be able to report the (approximate) names and dates of their own businesses long after ownership ended. Indeed, NLSY79 staff brought survey expertise to bear in deciding to collect this information retrospectively, and would not have succeeded in linking almost 90% of businesses to jobs if names and dates were not reported with reasonable accuracy. Second, table 4 reveals that 32% of self-employed jobs (pooling men and women) correspond to business ownership, and that only 40% of those same jobs are associated with the receipt of business income. If recall error accounts for discrepancies between self-employment and business ownership classification, we would expect a *much* higher rate of agreement between self-employment and business income because both are reported contemporaneously.¹¹ Third, table 1 reveals that self-employed jobs outnumber businesses by a factor of 2.3; for recall error to account for all the “missing” businesses, respondents would have had to neglect to report more than half their businesses.

In fact, given the tremendous “excess supply” of self-employed jobs, the fraction of self-employed jobs that link to businesses *has* to be low. We cannot determine how often respondents erroneously reported a regular “wage job” as self-employment or how many owned businesses they neglect to report (although we suspect both error types are quite small), but we *can* assess whether the bias due to “too many” self-employed jobs declines over time, which would be consistent with recall bias. To illustrate, we note that men reported 111 self-employed jobs and 30 self-owned business that began in 1990; each of these self-employed job was reported contemporaneously, while each business was reported in 2010 or 2012. Under the null hypothesis that all reported businesses link to a self-employed job (*i.e.*, that the only source of disagreement is the “excess supply” of self-employment), the expected linkage rate for 1990 is 30/111, or 0.27. The actual linkage rate for self-employed jobs in 1990 is 0.23, so the “bias” for 1990 (*i.e.*, the difference between expected and actual linkage rates) is 0.04. To assess the role of recall error, we ask whether this year-specific measure of reporting bias declines over time as the lag between ownership date and reporting date diminishes.

In figure 1, we report the bias for every year from 1980 to 2012. We see some of the smallest biases (0.04 or smaller) in 2009-2012, but also in 1984, 1985, 1990, and 1993. Conversely, the

¹¹Among men, only 45% of self-employed jobs and 51% of businesses are associated with reported business income, so by no means do we view “business income” as an accurate indication of business ownership. Our argument is simply that self-employment classifications do not “agree” with this alternative potential proxy for entrepreneurship significantly better than they “agree” with business ownership, even though business income is reported contemporaneously.

biggest biases (0.10 and larger) are seen in 1981-83, but also in 2005 and 2007. It is undoubtedly the case that some self-employed jobs and some businesses were reported incorrectly, but we see no evidence in figure 1 that the bias due to this misreporting is more pronounced in the early years when recall error is potentially greater. This evidence is consistent with our conjecture that business ownership is a sufficiently “key” event that basic characteristics (name, approximate dates) needed to link businesses to previously-reported jobs can be reported accurately many years after ownership has ended.

C. Characteristics of Alternative Job “Types”

The preceding discussion highlighted considerable discrepancy between our alternative indicators of potential entrepreneurial activity. In the remainder of this subsection, we ask the following question: After disaggregating our sample of jobs into “self-employment only,” “business ownership only,” both self-employment *and* business ownership, and neither self-employment nor business ownership—and, for comparison, disaggregating all self-employment and all businesses by incorporation status—how do different types of jobs differ with respect to individual and job characteristics? We want to determine whether jobs deemed to be “self-employment only” or, alternatively, “business ownership only” are systematically different than jobs identified by their holders to be both self-employment and businesses—a task that is enhanced by our unique opportunity to glean information from the verbatim job descriptions provided by respondents. In addition, given recent evidence that the *incorporated* self-employed are relatively high-skilled and risk tolerant and, therefore, likely to represent “entrepreneurial business owners” (Levine and Rubinstein 2013), we want to compare this group to individuals who explicitly identify themselves as (incorporated) business owners. Summary statistics for each job type appear in tables 6a-7a for men and tables 6b-7b for women.

Tables 6a-b reveal that individuals with *incorporated* self-employed jobs or businesses have higher mean skill levels (as measured by highest grade completed and AFQT scores), lower mean Rotter scores (*i.e.*, a more internal locus of control), and higher mean asset levels than their *unincorporated* counterparts; they also tend to be slightly older, on average, and have accumulated more work experience. Our comparison of incorporated and unincorporated self-employed jobs corroborates evidence reported by Levine and Rubinstein (2013), with one exception: using an index of illicit activity, they argue that the incorporated self-employed are risk-takers relative to their unincorporated counterparts; using direct measures of risk preference, we find negligible (and, in the case of men, wrong-signed) differences in the level of risk tolerance. Moreover, by bringing direct measures of business ownership into our analysis, we find substantially larger incorporated-unincorporated gaps in schooling, skill, and assets among business owners than among the self-employed, but *smaller* gaps in age and experience. This comparison suggests that incorporation status identifies the skilled and affluent (and potentially entrepreneurial) more

cleanly among business owners than among the self-employed.

A more surprising pattern emerges when we compare all columns of tables 6a-b: these metrics (schooling, skill, internal locus of control, assets, age, experience) tend to be highest for individuals with incorporated businesses *and* businesses not identified as self-employment (which we subdivide into businesses unlinked to any job vs. businesses linked to wage jobs), and lowest (by far) for individuals with wage jobs followed by those with unincorporated and self-employed jobs not identified as businesses.¹² Although differences in sample means are not always (or often) significantly different from zero across subsamples, the pattern seen in tables 6a-b is consistent with a conjecture made earlier: self-employed jobs that are *not identified as businesses* tend to be held by the same young, less-skilled individuals who hold unincorporated self-employed jobs, while businesses that are *not identified as self-employed* jobs tend to be held by the older, highly-skilled individuals who have incorporated businesses.

To gain more insight into how these types of jobs and businesses differ, in tables 7a-b we summarize the three variables (*role*, *works at home*, and *work*) that we coded on the basis of verbatim responses to questions about the work performed at each job. As noted in III.C, these verbatims (which are elicited to code industry and occupation) are not publicly available for analysis, but were made available to us for jobs/businesses reported from 1994 to 2010. We have no verbatim responses for businesses that do not link to a (self-employed or wage) job, and we did not code responses for the tens of thousands of wage jobs that do not link to a business.

There is no expectation that self-employed workers or business owners will explicitly say “I own the business” or “I am the proprietor” in describing the work they perform, but in doing so they provide corroborative evidence of business ownership. Table 7a reveals that men make a response in this vein in reference to 27% of incorporated businesses and, at the other extreme, only 10-14% of unincorporated and unlinked (self-employed only) self-employed jobs. Table 7b shows that women are less likely than men to have their role coded as “own,” but follow the same qualitative pattern as men. The roles of both men and women are coded “run” (*e.g.*, “I run the business,”) “manage” (*e.g.*, “I’m the boss,” or “I’m the manager”), or “self-employed” (for explicit use of that term) far less often than “own,” but both “run” and “manage” are assigned to incorporated businesses more often than to other types of jobs. When we combine “own,” “run,” “manage,” and “self-employed,” incorporated businesses are far more likely than other jobs to be assigned one of these codes, while unincorporated and unlinked self-employment are the least likely to be described in these terms.

¹² The only deviation from this pattern is that age and experience are also high among men and women with self-employed jobs that link to businesses. Other measures of skill and “stability” that we have at our disposal but do not summarize in tables 6a-b (*e.g.*, mother’s highest grade completed, marital status, the presence of children, job duration) substantiate these patterns.

While relatively few respondents explicitly describe their jobs as involving independent, free-lance, or contract work, this category is illuminating because when such language *is* used, it identifies independent salespeople and distributors, free-lance medical transcribers, writers, and graphic designers, and a wide variety of workers (*e.g.*, actors, musicians, church pastors, and seasonal baseball umpires) who work for an employer but are paid as contractors. Tables 7a-b reveal that this type of language—which leads us to code jobs as “independent”—is evenly distributed among the incorporated and unincorporated self-employed, but heavily concentrated among the self-employed not independently identified as business owners. Specifically, for 11% of jobs classified as “self-employment only” by men and women, respondents *explicitly* describe themselves as independent salespeople, free-lancers, and contract workers, while only 3% of men and 6% of women classified as both self-employed *and* business owners do so. Assuming a relatively small subset of independent, free-lance, and contract workers use the explicit language that allows us to code them as such, we have gained valuable insight into what leads so many jobs to be “self-employed only”: Respondents correctly regard themselves as self-employed on the basis of their tax status, but they do not view themselves as business owners because they work for an employer or, in the case of actors, musicians, free-lance writers and others, for a large number of different employers.

Moving on to the other categories summarized in tables 7a-b, for all job types but incorporated businesses, responses that refer to performing “all the work” are the most common, especially among women. In particular, women’s roles are coded as “does all the work” for 57% of unincorporated self-employed jobs, 51% of unlinked self-employed jobs, and 51% of unincorporated businesses, suggesting that these tend to be one-person operations. Moreover, the job descriptions indicate that women work at home on 38% of unincorporated self-employed jobs, 36% of unlinked self-employed jobs, and 23% of unincorporated businesses, versus only 6% of incorporated self-employed jobs and businesses; a similar pattern is seen for men, although “works at home” is coded for, at most, 15% of jobs of any given type. Overall, the verbatims indicate quite clearly that women who hold unincorporated and/or “self-employment only” self-employed jobs tend to “do it all,” work at home, work as care-givers (most often, baby-sitters), and perform various types of “solo” work (*e.g.*, home-based medical transcription, editing, and art). For men, construction-related jobs (general contracting, carpentry, auto-repair, *etc.*) are the most common occupations for all job categories, which presumably is why the unincorporated and unlinked self-employed are less likely than their female counterparts to be home-based and/or doing “all the work.”

V. Concluding Comments

Previous studies have considered the extent to which self-employment and business ownership

(terms that are often used interchangeably) conform to accepted definitions of entrepreneurship. We focus on a different question: are self-employment and business ownership the same and, if not, how do they differ? We are able to address these questions because the NLSY79 independently classifies jobs as self-employment and self-owned businesses, while also identifying the incorporation status of those jobs, receipt of business income while those jobs are in progress, and job-holders' self-assessment of whether they are entrepreneurs; in addition, we have access to verbatim descriptions of the work and tasks performed on each job. By exploiting this unique combination of information, we have determined the extent to which alternative indicators of entrepreneurial activity are in agreement, and gained new insights into the nature of these jobs. Our findings can be summarized as follows:

1. Self-employment is far more common than business ownership. Over a roughly 30-year window, self-employed jobs outnumber self-owned businesses by 2.3 to one.
2. Given the “excess supply” of self-employed jobs reported by respondents, a large majority of self-employed jobs (65% for men and 71% for women) are *not* identified by the respondent as a self-owned business. The level of “disagreement” falls to about 35% for self-employed jobs that are both incorporated and held by self-identified entrepreneurs.
3. In contrast, most businesses reported by respondents are also identified as self-employment: the level of “disagreement” is only 17% for men and 14% for women. In contrast to what is seen for self-employment, incorporated businesses are *less* likely than unincorporated businesses to link to self-employment, presumably because incorporated business owners often (correctly) classify themselves as wage employees of their business.
4. In light of arguments made in the literature that entrepreneurs are likely to be found among individuals with high levels of schooling, skill, and assets, we demonstrate that owners of incorporated business *and* businesses not independently identified as self-employment outdistance all others (including the incorporated self-employed) in each of these dimensions, while those working at self-employed jobs not independently identified as businesses (along with “regular” wage workers) have lowest levels by far.
5. Incorporated business owners are considerably more likely than others to state explicitly that they own their business in the process of describing their jobs. For example, 27% of men with incorporated businesses refer to owning the business, and 47% use a broader set of terms that suggest they own, run, or manage the business. Comparable numbers for men with incorporated self-employed jobs are 21% and 35%.
6. At the other extreme, holders of self-employed jobs that do not link to business ownership are far more likely than others to describe their jobs as independent, free-lance, and/or contract work. A range of workers, including salespeople, actors, musicians, free-lance writers, and even church pastors appear to identify as self-employed but not business owners because they

have well-defined employers. “Self-employed only” workers are also more likely than others to claim to do “all the work,” work at home, and perform “solo” work. This category overlaps with independent/free-lance work insofar as it includes home-based writers, medical transcribers, artists, *etc.*—but it is dominated by baby-sitters, dog-walkers, handymen, and other types of unskilled, home-based, informal work.

While any sample of jobs—including those classified as self-employment, self-owned businesses, incorporated businesses, *etc.*—consists of a range of pursuits that defy unambiguous characterization, we have compiled enough evidence to paint a reasonably clear picture. Self-employed jobs outnumber owned businesses by a wide margin, are rarely considered to be businesses, and often entail independent, free-lance, contract work and/or home-based, one-person pursuits. Other analysts (Parker 2009; Levine and Rubenstein 2013) have argued that the self-employed are not necessarily entrepreneurs. We argue that it is a mistake to view the self-employed as business owners.

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Figure 1: Linkage Bias (Expected Minus Actual Fraction of Self-Employed Jobs that Link to a Business) by Year

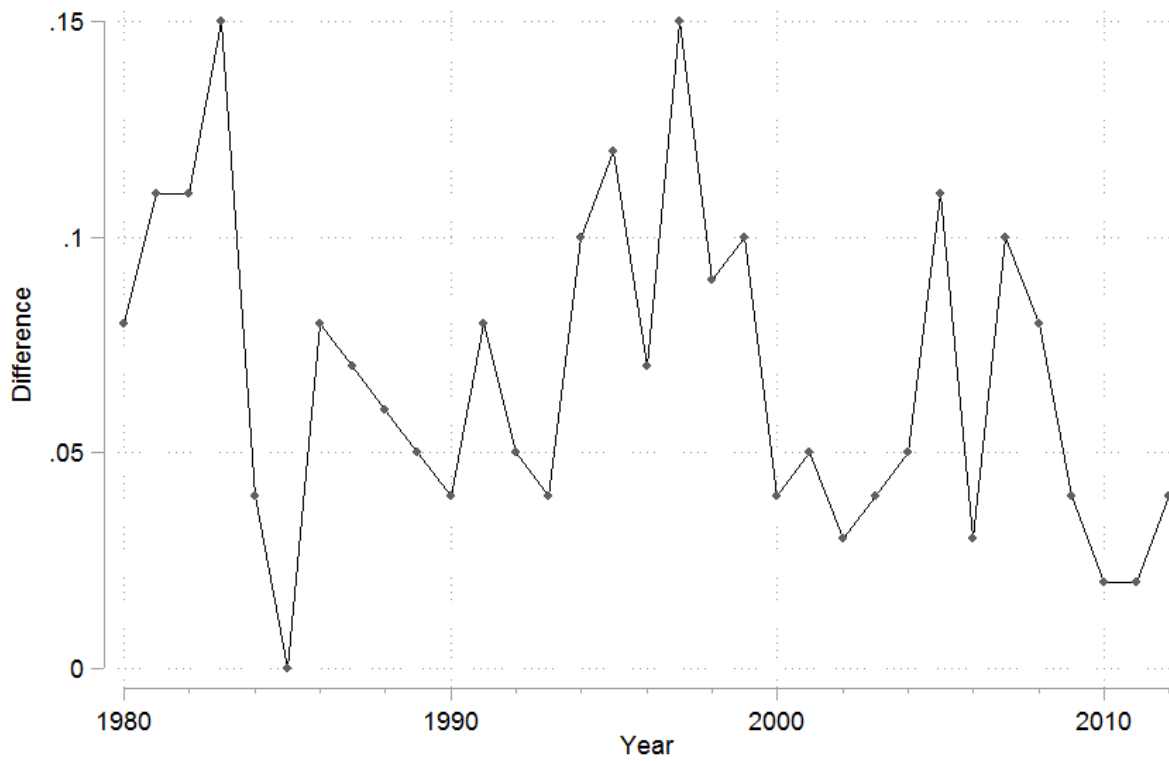


Table 1: Number of Respondents, Jobs, and Businesses, by Sex

Outcome	Men	Women	All
Respondents	3,809	3,968	7,777
Wage Jobs	32,237	30,599	62,836
(Fraction of all jobs)	(.92)	(.93)	(.92)
Self-employed jobs ^a	2,930	2,246	5,176
(Fraction of all jobs)	(.08)	(.07)	(0.8)
All jobs	35,167	32,845	68,012
Linked businesses ^b	1,247	757	2,004
(Fraction of all businesses)	(.88)	(.87)	(.88)
Unlinked businesses	173	110	283
(Fraction of all businesses)	(.12)	(.13)	(0.12)
All businesses	1,420	867	2,287

^aClass of worker is “self-employed” or “working for a family business”; the latter accounts for 3% (5%) of jobs in this category for men (women).

^bRespondent-owned businesses reported in 2010 or 2012 that link (using name and start/stop dates) to previously- or currently-held jobs.

Table 2: Fraction of Individuals with Each Entrepreneurial Outcome,
by Entrepreneurship Status and Sex

Entrepreneurial Outcome^a	All		Entrepreneurs	
	Men	Women	Men	Women
Holds at least one self-employed job	.43	.33	.71	.64
Owens at least one business	.29	.17	.66	.57
Owens at least on linked business	.27	.15	.62	.53
Reports at least one year of business income	.38	.23	.62	.48
Any of the above	.53	.41	.81	.70
Considers him/herself an entrepreneur	.25	.13	1.00	1.00
Number of individuals	3,809	3,968	952	529

^aFraction encountering the given outcome at least once between the career start date and 2010 or 2012 interview date.

Table 3: Fraction of Self-Employed Jobs and Businesses with Each Legal Structure, by Entrepreneurship Status and Sex

Legal Structure	All		Entrepreneurs	
	Men	Women	Men	Women
Self-Employed Jobs				
Unincorporated	.75	.80	.71	.73
Incorporated	.20	.14	.25	.21
Unknown	.05	.06	.04	.06
Number of self-employed jobs	2,930	2,246	1,390	688
Businesses				
Sole proprietorship (unincorp.) ^a	.54	.60	.53	.58
Corporation	.26	.16	.29	.20
Partnership	.08	.07	.07	.07
	.34	.23	.36	.27
Sum of above 2 rows (incorp.) ^a				
Other	.06	.10	.05	.07
Type of business unknown	.06	.07	.06	.08
Number of businesses	1,420	867	852	417

^aIn the ensuing analysis, we refer to sole proprietorships as unincorporated businesses, and combine corporations and partnerships into an aggregated “incorporated” category of businesses.

Table 4: Fraction of Self-Employed Jobs Linked to Business Ownership and/or Business Income by Entrepreneurship Status, Sex, and Legal Structure

Linkage	All Men and Women							
	Men				Women			
	Uninc.	Inc.	Unk.	All	Uninc.	Inc.	Unk.	All
a) Owned business	.32	.53	.13	.35	.27	.47	.13	.29
b) Business income	.47	.45	.16	.45	.36	.40	.10	.35
c) Both	.18	.25	.04	.18	.14	.24	.04	.15
d) Neither	.39	.27	.75	.38	.51	.36	.81	.51
Number of jobs	2,198	574	158	2,930	1,797	314	135	2,246
Linkage	Entrepreneurs							
	Men				Women			
	Uninc.	Inc.	Unk.	All	Uninc.	Inc.	Unk.	All
a) Owned business	.42	.61	.22	.46	.44	.66	.19	.47
b) Business income	.51	.44	.31	.49	.45	.45	.14	.43
c) Both	.23	.30	.10	.24	.24	.33	.10	.25
d) Neither	.31	.24	.57	.30	.35	.21	.76	.35
Number of jobs	991	350	49	1,390	503	143	42	688

Note: The sample consists of all self-employed jobs identified in table 1. Among these self-employed jobs, row a identifies links (by name and start date) to businesses; row b identifies links to business income (meaning the job is in progress during at least one calendar year in which business income is reported); row c identifies links to both a business and business income; row d identifies links to neither a business nor business income. Rows a-c are not mutually exclusive.

Table 5: Fraction of Businesses Linked to Self-Employed Jobs and/or Business Income, by Entrepreneurship Status, Sex, and Legal Structure

Linkage	All Men and Women							
	Men				Women			
	Uninc.	Inc.	Unk.	All	Uninc.	Inc.	Unk.	All
a) Self-employed job	.88	.74	.81	.83	.88	.78	.87	.86
b) Business income	.57	.45	.35	.51	.52	.48	.32	.47
c) Both	.51	.35	.27	.53	.49	.38	.30	.43
d) Neither	.06	.15	.12	.10	.09	.12	.11	.10
Number of businesses	696	395	156	1,247	458	162	137	757
Linkage	Entrepreneurs							
	Men				Women			
	Uninc.	Inc.	Unk.	All	Uninc.	Inc.	Unk.	All
a) Self-employed job	.89	.79	.79	.85	.89	.81	.88	.87
b) Business income	.60	.47	.30	.52	.57	.47	.33	.51
c) Both	.54	.37	.23	.45	.53	.36	.32	.46
d) Neither	.05	.12	.14	.08	.07	.08	.11	.08
Number of businesses	410	251	91	752	219	99	57	375

Note: The sample is restricted to businesses reported in 2010 or 2012 that link (using names and dates) to a previously- or currently-held job. Among these linked businesses, row a identifies links to self-employed jobs; row b identifies links to business income (meaning the business is in progress during at least one calendar year in which business income is reported); row c identifies links to both a self-employed job and business income; row d identifies businesses that link to a non-self-employed (wage) job only. Rows a-c are not mutually exclusive.

Table 6a: Individual Characteristics by Type of Job or Business (Men)

Variable	Self-employed jobs								
	Owned Businesses				Wage jobs				
	Incorp.	Uninc.	SE only	SE + Business	Incorp.	Uninc	Unlinked	Business + Wage	Wage
1 if black	.27	.28	.30	.26	.20	.27	.28	.16	.34
1 if Hispanic	.16	.18	.18	.16	.13	.18	.14	.19	.20
Highest grade completed ^a	12.87 (2.62)	12.01 (2.38)	11.92 (2.42)	12.60 (2.47)	13.41 (2.47)	12.32 (2.39)	13.26 (2.58)	12.80 (2.49)	11.87 (2.23)
Percentile AFQT score ^b	46.83 (29.07)	41.21 (29.38)	39.74 (29.00)	46.39 (29.61)	56.61 (28.44)	43.53 (28.97)	53.80 (28.56)	51.66 (29.90)	37.02 (28.32)
Rotter locus of control ^b	9.04 (2.30)	9.18 (2.35)	9.28 (2.35)	8.97 (2.30)	8.62 (2.24)	9.05 (2.29)	8.78 (2.41)	8.86 (2.22)	9.39 (2.35)
Risk tolerance ^a	1.40 (1.02)	1.43 (1.02)	1.46 (1.04)	1.38 (1.02)	1.28 (.94)	1.38 (.99)	1.24 (.73)	1.31 (1.06)	1.40 (1.01)
Assets (\$10,000s) ^c	20.84 (63.21)	4.93 (49.74)	5.73 (42.26)	12.88 (66.76)	27.39 (64.60)	6.02 (62.13)	25.80 (57.56)	22.31 (59.84)	1.61 (36.17)
Age	35.17 (9.14)	31.95 (8.81)	30.67 (8.17)	37.20 (9.28)	37.01 (8.91)	35.93 (9.35)	37.32 (8.89)	34.17 (9.52)	29.22 (8.70)
Cum. experience (years) ^d	12.55 (8.27)	9.50 (7.27)	8.28 (6.60)	14.03 (8.15)	14.53 (8.07)	12.77 (7.97)	13.94 (7.83)	12.63 (8.36)	7.19 (6.98)
1 if ever self-employed	1.00	1.00	1.00	1.00	.82	.92	.56	.60	.47
1 if ever owns business	.78	.65	.48	1.00	1.00	1.00	1.00	1.00	.28
1 if family owns bus.	.37	.29	.27	.36	.39	.35	.38	.39	.26
1 if entrepreneur	.61	.45	.40	.62	.63	.59	.58	.53	.25
No. jobs/businesses	574	2,198	1,898	1,032	484	773	173	215	32,202

^aMeasured at the career start date. A higher risk value means the person is more risk tolerant.

^bAdjusted for age at which the test/scale was administered. A higher Rotter score means the person is more externally focused.

^cPredicted assets at the start of the job or business, in CPI-U deflated 2000 dollars; see text for details.

^dCumulative number of weeks worked at least 20 hours since the career start date, divided by 52.

Table 6b: Individual Characteristics by Type of Job or Business (Women)

Variable	— Self-employed jobs —								
	— Owned Businesses —					— Wage jobs —			
	Incorp.	Uninc.	SE only	SE + Business	Incorp.	Uninc.	Business only	Business +Wage	Wage
1 if black	.18	.22	.22	.21	.13	.20	.21	.16	.31
1 if Hispanic	.21	.17	.18	.18	.14	.17	.14	.18	.18
Highest grade completed ^a	13.11 (2.54)	12.42 (2.32)	12.33 (2.24)	12.98 (2.59)	13.63 (2.41)	12.76 (2.52)	13.15 (2.43)	12.70 (2.11)	12.29 (2.16)
Percentile AFQT score ^b	46.03 (27.77)	43.18 (28.19)	41.00 (27.50)	49.28 (28.40)	54.45 (26.15)	48.74 (27.70)	51.93 (27.33)	47.35 (24.68)	39.42 (27.19)
Rotter locus of control ^b	9.16 (2.37)	9.34 (2.44)	9.44 (2.44)	9.07 (2.36)	8.82 (2.33)	9.05 (2.30)	8.80 (2.32)	8.89 (2.42)	9.49 (2.33)
Risk tolerance ^a	1.04 (.63)	0.99 (.59)	.99 (.59)	1.03 (.62)	1.00 (.65)	1.01 (.60)	.91 (.49)	.98 (.64)	.99 (.61)
Assets (\$10,000s) ^c	19.41 (51.06)	6.75 (33.07)	6.08 (35.01)	15.68 (40.49)	25.41 (59.28)	12.56 (28.81)	20.05 (56.17)	15.95 (29.81)	2.47 (38.51)
Age	35.79 (8.21)	32.78 (8.41)	31.61 (7.87)	38.58 (8.49)	36.93 (8.50)	37.05 (8.64)	36.73 (9.06)	34.94 (9.04)	29.73 (8.90)
Cum. experience (years) ^d	11.18 (7.67)	7.65 (6.65)	6.73 (6.12)	12.42 (7.44)	12.30 (7.39)	11.37 (7.20)	11.66 (7.78)	10.97 (7.71)	6.24 (6.47)
1 if ever self-employed	1.00	1.00	1.00	1.00	.82	.93	.49	.61	.37
1 if ever owns business	.66	.52	.34	1.00	1.00	1.00	1.00	1.00	.18
1 if family owns bus.	.49	.38	.40	.40	.49	.40	.45	.47	.29
1 if entrepreneur	.45	.28	.23	.50	.57	.47	.38	.47	.15
No. jobs/businesses	314	1,797	1,594	652	196	518	110	105	30,494

^aMeasured at the career start date. A higher risk value means the person is more risk tolerant.

^bAdjusted for age at which the test/scale was administered. A higher Rotter score means the person is more externally focused.

^cPredicted assets at the start of the job or business, in CPI-U deflated 2000 dollars; see text for details.

^dCumulative number of weeks worked at least 20 hours since the career start date, divided by 52.

Table 7a: Job Characteristics by Type of Job or Business (Men)

Variable	Self-employed jobs								
	Owned Businesses				Wage jobs				
	Incorp.	Uninc.	SE only	SE + Business	Incorp.	Uninc	Business only	Business + Wage	Wage
1 if links to business inc.	.45	.47	.41	.52	.43	.55	.31	.42	.07
1 if Role = ^a									
Own	.21	.14	.10	.22	.27	.19		.14	
Run	.01	.01	.01	.02	.06	.01		.06	
Manage	.12	.03	.05	.06	.13	.04		.13	
Self-employed	.01	.03	.04	.01	.01	.02		.01	
(Sum of above)	(.35)	(.21)	(.20)	(.31)	(.47)	(.26)		(.34)	
Independent	.07	.08	.11	.03	.05	.05		.05	
Does all the work	.24	.31	.26	.32	.25	.32		.15	
Does some of the work	.09	.06	.06	.08	.10	.07		.08	
Employee	.05	.03	.07	.01	.02	.02		.10	
Unknown	.20	.31	.33	.21	.11	.25		.25	
1 if works at home ^a	.04	.14	.15	.07	.03	.08		.02	
1 if Work = ^{ab}									
Cleaner	.02	.04	.04	.04	.04	.05		.09	
Solo work	.07	.11	.09	.09	.05	.10		.03	
Construction	.23	.35	.31	.33	.28	.38		.32	
Yard work	.02	.10	.10	.06	.03	.07		.08	
Transportation	.11	.07	.09	.08	.05	.10		.05	
REI	.11	.04	.05	.06	.08	.05		.03	
Consultant	.09	.05	.06	.05	.07	.04		.04	
Retail	.08	.05	.06	.06	.11	.04		.07	
No. jobs/businesses (No. from 1994-2010)	574 (301)	2,198 (945)	1,898 (703)	1,032 (634)	484 (218)	773 (425)	173	215 (83)	32,202

^aCoded on the basis of verbatim responses to questions about type of work and business for jobs observed from 1994 to 2010; see text for details.

^bWe report only those categories held by at least 8% of jobs in at least one subsample; see text for additional categories.

Table 7b: Job Characteristics by Type of Job or Business (Women)

Variable	Self-employed jobs				Owned Businesses			Wage jobs	
	Incorp.	Uninc.	SE only	SE + Business	Incorp.	Uninc	Business only	Business + Wage	Wage
	1 if links to business inc.	.40	.36	.28	.50	.42	.50	.25	.32
1 if Role = ^a									
Own	.16	.10	.05	.19	.23	.17		.13	
Run	.01	.01	.01	.02	.02	.01		.04	
Manage	.08	.02	.03	.03	.11	.02		.07	
Self-employed	.01	.02	.02	.01	.01	.01		.00	
(Sum of above)	(.26)	(.15)	(.11)	(.25)	(.37)	(.21)		(.24)	
Independent	.09	.09	.11	.06	.03	.04		.04	
Does all the work	.27	.57	.51	.48	.22	.51		.23	
Does some of the work	.10	.04	.05	.06	.11	.08		.13	
Employee	.19	.05	.12	.05	.20	.04		.27	
Unknown	.09	.10	.11	.09	.07	.09		.13	
1 if works at home ^a	.06	.38	.36	.22	.06	.23		.06	
1 if Work = ^{ab}									
Care-giver	.10	.33	.34	.18	.05	.19		.09	
Cleaner	.03	.11	.10	.09	.04	.11		.02	
Solo work	.11	.18	.13	.21	.09	.22		.09	
Construction	.09	.02	.03	.05	.13	.05		.11	
Practitioner	.07	.03	.04	.04	.06	.03		.04	
REI	.08	.04	.05	.06	.05	.06		.09	
Consultant	.08	.06	.04	.09	.09	.09		.05	
Retail	.13	.05	.05	.08	.18	.09		.20	
No. jobs/businesses	314	1,797	1,594	652	196	518	110	105	30,494
(No. from 1994-2010)	(215)	(826)	(686)	(437)	(109)	(294)		(56)	

^aCoded on the basis of verbatim responses to questions about type of work and business for jobs observed from 1994 to 2010; see text for details.

^bWe report only those categories held by at least 8% of jobs in at least one subsample; see text for additional categories.