ECONOMIC RESEARCH CENTER
DISCUSSION PAPER

E-Series

No. E16-2

Gender Gap in Start-up Activities

by

Takanori Adachi
Takanori Hisada

February 2016

ECONOMIC RESEARCH CENTER
GRADUATE SCHOOL OF ECONOMICS
NAGOYA UNIVERSITY

Gender Gap in Start-up Activities*

Takanori Adachi† Takanori Hisada‡

January 26, 2016

Abstract

This study examines the gender gap in start-up activities to determine whether household status or employment status is responsible for creating the observed gender gap. We consider entrepreneurship and intrapreneurship as two different forms of start-up activities: while intrapreneurship is conducted within an existing organization, entrepreneurship is solely an independent activity. This study focuses on this fundamental distinction to help us identify parameters of our double selection model. Using representative U.S. data, augmented by other sources, we find that the counterfactual rate of entrepreneurial activities by women who have the same (in the distributional sense) characteristics as men is lower than the actual rate for men. A similar result is obtained for intrapreneurial activities. More importantly, our Blinder–Oaxaca decomposition results suggest that for both entrepreneurship and intrapreneurship, women's employment status is more significant than their household status in explaining the gender gap in start-up activities. This is more apparent in the group of whites, college graduates, and those who work for a large firm.

JEL classification: J15; J16; L26; M13.

*We are grateful to Taehyun Ahn, Andrew Ching, Yuji Honjo, Hiroaki Ino, Masa Kato, Mizuki Komura, Eiji Mangyo, Hikaru Ogawa, Atsushi Ohyama, Hiroyuki Okamuro, Lars Osberg, Koji Shirai, Taiki Susa, Hidenori Takahashi, Masa Tsubuku, Shintaro Yamaguchi, Weina Zhou, and seminar and conference participants at Chuo, Dalhousie, Hitotsubashi, Kwansei Gakuin, Sogang, the 42nd Annual Conference of the Eupean Association for Research in Industrial Economics, and the Kansai Research Group for Econometrics for helpful comments on earlier versions of the paper. Special thanks are also due to Rebecca McBee for helping us to construct our data. Adachi acknowledges Grants-in-Aid for Scientific Research (A) (23243049) and (C) (15K03425) from the Japanese Ministry of Education, Science, Sports, and Culture. Any remaining errors are our own.

†School of Economics, Nagoya University, 1 Furo-cho, Chikusa, Nagoya 464-8601, Japan. E-mail: adachi.t@soec.nagoya-u.ac.jp

‡Graduate School of Economics, Osaka University, 1-7 Machikaneyama, Toyonaka, Osaka 560-0043, Japan. E-mail: pge023ht@student.econ.osaka-u.ac.jp

1 Introduction

Entrepreneurship is often promoted as an opportunity for women to improve their working life, which might not be easily achieved in the labor market. For instance, the Small Business Agency (SBA) in the U.S. has an Office of Women's Business Ownership to promote female entrepreneurs.[1] There are a number of reasons for this. First, women have higher rates of unemployment than men (Azmat, Göell and Manning (2006)). In addition, they may encounter the proverbial glass ceiling in a workplace (Elliott and Smith (2004)). It is also known that women experience wage gaps relative to white men (Blau and Kahn (1992)). However, *intrapreneurship*[2] also provides women with opportunities to engage in a start-up activity within an established organization.[3] Do gender differences also matter in intrapreneurship? While gender differences in entrepreneurship have been extensively studied (see the next section), little is known about how gender is related to intrapreneurship. In this study, we examine how gender leads to differences in the determinants of intrapreneurship as well as those of entrepreneurship.

Our main findings are summarized as follows. First, we find that the counterfactual rate of entrepreneurial activities by women, who acquire the same (in the distributional sense) observed characteristics as men, is lower than the actual rate of men's entrepreneurial activities. Similarly, the counterfactual rate of intrapreneurial activities by women, who have the same characteristics as men, is also lower than the actual rate of men's intrapreneurial activities. These two results suggest that women may be in a disadvantageous position when becoming entrapreneurs and intrapreneurs. More importantly, our Blinder–Oaxaca decomposition results suggest that for both entrepreneurship and intrapreneurship, women's employment status

[1] See https://www.sba.gov/offices/headquarters/wbo.

[2] Intrapreneurship is sometimes called "corporate entrepreneurship." In this study, we use "intrapreneurship" and "intrapreneurs" throughout.

[3] For example, Parker (2009, p.31) states that "[d]ependent spinoffs are ventures formed in collaboration with an incumbent firm (sometimes termed 'intrapreneurship'), whereas independent spin-offs are pursued entirely separately from an incumbent ('entrepreneurship')." See also Miller (1983), Pinchot (1985), Rule and Irwin (1988), Hisrich (1990), Covin and Slevin (1991), Lumpkin and Dess (1996), Morris and Sexton (1996), Antoncic and Hisrich (2001), Antoncic and Hisrich (2003), Hellmann (2007), and Baruah and Ward (2015) for this distinction.

is more important than their household status to the gender gap in start-up activities. This is more apparent in the group of whites, college graduates, and those who work for a large firm. An interesting difference between entrepreneurship and intrapreneurship is that while the female characteristics favor entrepreneurship, they do not favor intarepreneurship, although these two results are not statistically significant.

In our conceptual framework, one first chooses whether to work independently. If they do, they are called an *entrepreneur*. Entrepreneurship here is a broad concept: it includes both self-employment and business ownership. If one does not choose to be an entrepreneur, they may become an *intrapreneur*.[4] To formalize this conceptual framework, we employ a double selection model, and estimate it by using an individual-level survey that is representative of the United States (Panel Study of Entrepreneurial Dynamics, II (PSED II)). Our double selection model is superior to a nested multinomial logit model because the unobserved variable in the selection of entrepreneurship and that in the selection of intrapreneurship is found to be negatively corellated (with statistical significance). We can deal with such an asymmetry relationship in the triangularity of entrepreneurship, intrapreneurship, and else (i.e., not being involved in a start-up); this is not taken into account in a nested multinomial logit model.

In conceptual frameworks of existing studies such as those by Parker (2011), Tietz and Parker (2012), and Martiarena (2013), an individual first chooses whether to engage in a start-up activity and then *conditional on* the choice of start-up activity, he becomes either an entrepreneur or an intrapreneur (Parker (2011), Tietz and Parker (2012)), or he faces the two alternatives equally (Martiarrena (2013)).

[4]In this study, we do not describe the details of this organizational decision process. In our conceptual framework proposed in Section 5, we assume that an individual chooses one of the three alternatives that give them the best utility. If an individual who wants to be an intrapreneur cannot become an intrapreneur because of limited capacities, he does not always choose his best alternative. We do not model such frictions mainly because of data limitations. In some cases, a worker may be "ordered" to be an intrapreneur within a company against his will. However, De Clercq, Castañer and Belausteguigoitia (2011) argue that being selected as an intrapreneur is usually financially rewarding. Thus, we would not lose much validity even if we assume that an individual chooses the alternative that gives him the highest level of utility.

Thus, in these frameworks, individuals do not distinguish between entrepreneurship and intrapreneurship; in the former concept, a distinction is made based on whether an individual has a start-up plan in mind, and in the latter, no special distinction is made among the three alternatives. However, a decision on whether an individual works independently would be as important as whether he engages in a start-up activity. In this study, we stress on this fundamental difference between entrepreneurship as an outside-organization activity and intrapreneurship as a within-organization activity.

In Parker's (2011) framework of double selection, a distinction is made between start-up activities (both entrepreneurship and intrapreneurship) and doing something else. Parker (2011) argues that this decision is affected by family status. This is because start-up activities are presumed to be more intensive, and thus an individual would care about his family status when choosing whether to work for a start-up. However, once he decides to engage in start-up activity, family status no longer matters to the choice between entrepreneurship or intrapreneurship. In contrast, we view entrepreneurship and intrapreneurship as economically different modes. As Douglas and Fitzsimmon (2013) and Martiarena (2013) suggest, risk aversion would probably matter to the distinction between entrepreneurship and intrapreneurship. Although we are not able to directly link between gender and risk aversion owning to a lack of data, many experimental studies have found that, controlling for other demographic characteristics such as age, educational attainment, occupation, and cultural background, women are on average more risk averse than men (see the survey by Croson and Gneezy (2009)). In addition, many empirical studies find that credit would probably matter to one's decision to be involved in an entrepreneurial work (see footnote 6 below). Thus, an important economic distinction between entrepreneurship and intrapreneurship is the differences in risk sharing: in entrepreneurship, entrepreneurs are fully responsible for failures, whereas in intrapreneurship, almost all the financial burden is on established organizations, although, as Martiarena (2013) and Kacperczyk (2015) point out, intrapreneurs are incentivized because if they fail, it would become difficult for them to be promoted or rewarded financially.

Thus, to complement Parker's (2011) conceptual framework, we employ a framework where an employed individual first makes a choice to remain in or move out of the organization; if he decides to remain, he then chooses whether to become an intrapreneur. To estimate this framework, individuals in the second stage, who are either intrapreneurs or workers, must have the same covariates. The follow-up part of PSED II has detailed information, such as Parker's (2011) 'employer size', on entrepreneurs and intrapreneurs only. The disadvantage of employing our conceptual framework is that we are not able to use the follow-up part.[5] Thus, we focus on the decisions by those who are currently employed, whereas in Parker's (2011) framework it is possible to include non-employed individuals in the initial stage. This assumption excludes the non-employed from our sample. To control for the size of the organization that the individual works for, we match the 2005 March version of the Current Population Survey (CPS) with PSED II because it has information on firm size for each individual currently employed. One could view Parker's (2011) framework as relatively long-term decision-making, whereas our framework would be viewed as focusing on relatively short-term decision-making. In this sense, our use of latent entrepreneurship and latent intrapreneurship could be justified. This difference would explain our overall finding that work status is more important than family status in the determination of the gender gap in entrepreneurship and intrapreneurship.

The rest of the paper is organized as follows. Section 2 briefly discusses studies most closely related to our study. In Section 3, we introduce the theoretical background, and after describing the data used for this study in Section 4, we present the empirical analysis in Section 5. We not only provide parameter estimates of the alternative models but also compute the actual and counterfactual probabilities of becoming an entrepreneur or an intrapreneur, focusing on gender differences. Section 6 concludes the paper.

[5]However, our main results do not change significantly even if we use the follow-up part, although the sample size is smaller. The details are available upon request.

2 Related Literature

This study departs from the many of the existing studies on start-up activities in that we consider both entrepreneurship and intrapreneurship as two different forms of start-up activities.[6,7] In a closely related paper, Parker (2011) studies the factors that are associated with intrapreneurship and those with entrepreneurship. In the analysis presented below, we use Parker's (2011) definition of (nascent) intrapreneurs: intrapreneurs are those considering starting a business *for their employer*. Parker (2011) then investigates what determines whether a new start-up is commercialized via entrepreneurship or intrapreneurship and finds that conditional on engaging in a start-up activity, younger and older individuals are more likely to become intrapreneurs, and that the role of (general) human capital is more prominent in nascent entrepreneurship than in nascent intrapreneurship. Parker (2011) also finds that African–Americans are equally likely to choose intrapreneurship as they are to choose entrepreneurship. This is an interesting finding because one would expect that they are less likely to engage in intrapreneurship because it involves more relations with others, there is a greater potential for discrimination to occur. Our study produces a similar finding.

Similarly, Tietz and Parker (2012) consider a conceptual framework in which intrapreneurship and entrepreneurship are tied as start-up activities. They study, in particular, differences in motivation in entrepreneurship and intrapreneurship. They find, for example, that if a business starter is financially motivated, he is more likely to become an *intra*preneur, whereas one's motive for independence makes it more

[6]One of the important issues is entry into entrepreneurship. Evans and Leighton (1989a, b) are among the first to study entrepreneurial entry, but there are many other published and unpublished papers. See Evans and Jovanovic (1989), Holtz-Eakin, Joulfaian, and Rosen (1994a, b), Hamilton (2000), Parker (2000), Kawaguchi (2003), Hurst and Lusardi (2004), Kan and Tsai (2006), Buera (2009), Mondragón-Vélez (2009), Malchow-Møller, Markusen, and Skaksen (2010), Fairlie and Krashinsky (2012), and McCann and Folta (2012). Rybczynski (2009) examines an issue similar to the one central to this study and finds that a gender gap in self-employment earnings can mostly be ascribed to liquidity constraints.

[7]For other studies that compare different groups of start-up participants, see Sardy and Alon (2007) on franchise and nascent entrepreneurs, Renko (2013) on social and conventional entrepreneurs, Kim, Longest and Lippman (2015) on leisure-based and conventional entrepreneurs, and Parker (2014) on serial and portfolio entrepreneurs.

likely for him to become an *entre*preneur. Again, Tietz and Parker (2012) assume, as in Parker (2011), that becoming an intrapreneur is contingent on the individual's willingness to engage in a start-up activity. However, it may not be so obvious that all intrapreneurs recognize themselves as business starters because their activity is more or less "protected" within an existing organization. Instead, individuals may see more clearly the difference between working independently and working for an established organization. Thus, in this study, we aim to complement Parker (2011) and Tietz and Parker (2012) by considering this possibility.

On the other hand, like us, Douglas and Fitzsimmons (2013) focus on the in-between nature of intrapreneurship; while it is an organizational activity, it is also a start-up activity. Douglas and Fitzsimmons (2013) study how an individual forms his intention to behave entrepreneurially as an independent entrepreneur or a corporate intrapreneur, and find important cognitive differences between intrapreneurs and entrepreneurs. Intrapreneurs have less self-efficacy and greater risk aversion. This paper aims to complement Douglas and Fitzsimmons (2013) by focusing on demographic characteristics rather than intrinsic motivation.

Martiarena (2013) also studies the determinants of intrapreneurship, and contrasts intrapreneurship with entrepreneurship. In particular, Maritiarena (2013) studies whether intrapreneurs resemble entrepreneurs or wage workers and argues that among intrapreneurs, there exist what Maritiarena (2013) calls "engaged" intrapreneurs, that is, those who eventually leave the company to create their own business. Martiarena (2013) shows that intrapreneurs resemble wage workers rather than entrepreneurs and particularly finds personal characteristics of intrapreneurs as compared with entrepreneurs. Intrapreneurs are more risk-averse than entrepreneurs, prefer lower but less uncertain rewards, and are less confident in their entrepreneurial skills.[8] In contrast, we focus on how gender matters differ-

[8]In a different vein, Renko, Tarabishy, Carsrud and Bränback (2015) define an entrepreneurial leadership style as constituting encouragement to break the status quo and to experiment and learn for a higher goal. In contrast, we study a broader class of start-up participants, and focus on how they play differently in a start-up. As explained above, Douglas and Fitzsimmons (2013) study cognitive differences in entrepreneurial and intrapreneurial intentions (see Honig (2001), Monsen, Patzelt, and Saxton (2010), and Zhang and Bartol (2010) for psychological studies of intrapreneurship.). Douglas and Fitzsimmons (2013) find that intrapreneurs, in comparison with entrepreneurs,

ently to entrepreneurship and intrapreneurship.

Lastly, Kacperczyk (2015) studies gender differences in intrapreneurship, choosing the mutual fund industry to compare entrepreneurship and intrapreneurship. Kacperczyk (2015) finds that women are more likely to pursue intrapreneurship than entrepreneurship, presumably because female intrapreneurs can make use of maternity benefits, such as maternity leave, within the firm, and at the same time, they are financially rewarded: this balance may not be easily attained when women pursue entrepreneurship. In contrast, this paper, by using nationally representative data and additional information to control for firm size, suggests that women would find it more difficult to become intrapreneurs than entrepreneurs, implying that women may be facing a "glass ceiling" even with respect to intrapreneurship.

3 Theoretical Background

How do gender differences matter to the choice between entrepreneurship and intrapreneurship? Although entrepreneurship and intrapreneurship are both start-up activities, they are fundamentally different. Most importantly, entrepreneurship entails uncertainty: as Knight (1921, p.299) claims, "the entrepreneur ... takes over all the uncertainty of the business along with control over it." Existing empirical studies show that individuals with lower risk aversion are more likely to become entrepreneurs (Ahn (2010), Caliendo, Fossen and Kritikos (2009), Ekelund, Johansson, Järvelin and Lichtermann (2005)). On the other hand, a part of the risk of intrapreneurship is shared by the organization to which the intrapreneur belongs.

As for the relationships between risk/uncertainty aversion[9] and gender, exist-

have less entrepreneurial self-efficacy and are more risk-averse. Finally, Moriano, Molero, Topa, and Lévy Mangin (2014) examine how managerial leadership styles affect intrapreneurial behavior and find that transformative leadership, in which, for example, a mission is shared, mentoring is provided, and innovative thinking is encouraged, is more effective to intrapreneurship than transactional leadership, in which, for example, employees are extrinsically incentivized, and job scopes are predetermined.

[9]In this paper, we do not distinguish between risk aversion and uncertainty aversion. Skeptical views about this distinction can be found in Schultz (1980), LeRoy and Singell (1987), and Demsetz (1988). Runde (1998) studies the wordings of Knight's (1921) exposition.

ing studies in experimental economics have repeatedly found strong evidence that women are more risk averse than men both in the laboratory (usually, in the context of lottery choices) and in the field (usually, in the context of investment decisions).[10] In particular, Johnson and Powell (1994) find that gender differences with respect to risk attitudes are quite small in the managerial subsample, whereas in the non-managerial subsample, women show more risk aversion than men. At the same time, however, entrepreneurship gives women great autonomy, and this especially benefits them, depending on their family structure (Edwards and Field-Hendrey (2002) and Lombard (2001)). Moreover, employers and co-workers may discriminate against female workers (Becker (1957)). Employers may also have prejudices against female workers that they are less capable or less reliable on average than male or white workers (Phelps (1972)). Thus, they may face disadvantages in the labor market.

Hypothesis 1 (Gender and Entrepreneurship). Women are more likely to become entrepreneurs if they highly value the greater autonomy and flexibility that entrepreneurship offers. They are less likely to become entrepreneurs if they strongly avoid the greater risk that entrepreneurship entails or they face more severe challenges that make it difficult for them to become entrepreneurs, such as credit constraints or discrimination.

We expect that women are *less* likely to become intrapreneurs. First, intrapreneurship still entails greater risk than wage work does. In addition, intrapreneurs may have to spend more time for the organization. Becker (1985) argues that married women invest less in their human capital than married men do even when they work for the same number of hours, because women are mainly responsible for childcare and other household activities. In addition, women may be treated unequally in the workplace (Cotter, Hermsen, Ovadia and Vanneman (2001) and Elliott and Smith (2004)). It may also be that men are in a more advantageous position for intrapreneurship. For all these reasons, we have the following

[10] Croson and Gneezy (2009) point out the following three reasons for these gender differences: (i) emotions (according to psychological studies, women react to uncertain situations more emotionally and fear adverse outcomes more than men do), (ii) overconfidence (men are more overconfident than women), and (iii) perception of risk as challenges or threats.

hypothesis:

Hypothesis 2 (Gender and Intrapreneurship). Women who work for an established organization are less likely to become intrapreneurs.

Lastly, one can think of the two problems as interrelated. In the model below, we consider this possibility by allowing correlation between unobserved factors in the choice of entrepreneurship and those in the choice of intrapreneurship. These unobserved factors would conceivably be related to "entrepreneurial skills/talents" (Lucas (1978)) in general.

4 Data

4.1 Sample Construction

The data for this study is constructed from the Panel Study of Entrepreneurial Dynamics II (PSED II), provided by the Survey Research Center at the University of Michigan.[11] Intended to be nationally representative, PSED II is a longitudinal dataset that comprises individuals in the process of business formation (i.e., nascent entrepreneurs), and is an improved version of PSED I. From September 2005 to February 2006, an initial screening was conducted to identify a cohort, and in total, 31,845 individuals were selected. Their age is recorded as a categorical variable, ranging from "18 to 20" and "75 and up". Then, follow-up interviews were conducted for these nascent entrepreneurs once a year until 2010. Thus, in total, there were six waves: 2005, 2006, 2007, 2008, 2009, and 2010.

For our empirical analysis, we use data from the initial screening for PSED II." Originally, it had 31,845 individuals, including those who are currently business owners (that is, those who answer "yes" to the question, "Are you, alone or with others, currently the owner of a business you help manage, including self-employment

[11] PSED II is freely downloadable at http://www.psed.isr.umich.edu/. For general references for PSED II, see Reynolds and Curtin (2009), Davidsson and Gordon (2012), and Gartner and Shaver (2012).

or selling any goods or services to others?" (QFF1c)). They represent 14.4% of the total or 4,573 individuals. Because our conceptual framework (presented in the next section) targets those who are currently working for an established organization, we exclude current business owners, other races, retirees, and the non-employed. That leaves us with 13,724 individuals. To help us define *nascent entrepreneurs* and *nascent intrapreneurs*, we use the following two questions:

1. "Are you, alone or with others, currently trying to start a new business, including any self-employment or selling any goods or services to others?" (QFF1a)

2. "Are you, alone or with others, currently trying to start a new business or a new venture for your employer, an effort that is part of your normal work?" (QFF1b)

If a respondent answers "yes" to QFF1a and "no" to QFF1b, then he is deemed a nascent entrepreneur (see Table 1). Nascent intrapreneurs are those who answer "yes" to QFF1b. If a respondent answers "no" to both questions, he is neither a nascent entrepreneur nor an intrapreneur. Thus, we have three categories: (i) a *nascent entrepreneur* (631 individuals), (ii) a *nascent intrapreneur* (622 individuals), and (iii) not involved in a start-up (12,471 individuals).

Table 1: Types of Start-up Participants

Answer to		QFF1b	
		Yes	No
QFF1a	Yes	Nascent Intrapreneurs (197)	Nascent Entrepreneurs (631)
	No	Nascent Intrapreneurs (425)	Not involved (12,471)

Furthermore, among these nascent entrepreneurs, only those who answer positively to the following two questions are deemed real *nascent entrepreneurs*: (i) "Over the past 12 months, have you done anything to help start a new business, such as looking for equipment or a location, organizing a start-up team, working on a business plan, beginning to save money, or any other activity that would help

launch a business?" (QFF2) *and* (ii) "Will you personally own all, part, or none of this new business?" (QFF3). The number of *nascent entrepreneurs* is 380. The rest (251 individuals) are categorized as *not being involved in a start-up*.

Next, among those initially categorized as potential intrapreneurs, only those who answer positively to QFF2 above are deemed real *nascent intrapreneurs*. They do not necessarily have to own a part of the new business. The number of such individuals is 370 and the rest (252 individuals) are categorized as *not being not involved in a start-up*. The final sample size is 13,724. Unfortunately, in the screening process to determine nascent business starters (entrepreneurs in PSEDII language), information on work experience is not collected. Thus, age is interpreted as a rough measure of work experience. As for income, we transform categorical values into continuous values, ranging from \$10,000 to \$125,000. We then take the logarithm of these values.[12]

Unfortunately, PSED II also misses the size of the firm for which an individual works. This is important because the meaning of intrapreneurship will change, depending on the firm size. Thus, we use the method of propensity score matching to merge the data with the March 2005 version of the Current Population Survey (CPS) to add these two variables to our constructed sample.[13] We also add another important piece of information, which is whether the respondent is US-born. This is because, race, which would presumably be an important factor in the context of entrepreneurship and intrapreneurship, would matter differently if we do or do not control for whether English is the individual's first language.

4.2 Summary Statistics

Table 2 shows the summary statistics of all 13,724 individuals in the entire sample for each (exclusive) occupational mode. All variables are dummy variables (taking

[12]More specifically, these values take \$10,000, \$20,000, \$27,500, \$32,500, \$37,500, \$45,000, \$55,000, \$67,500, \$87,500 and \$125,000.

[13]This method of 'data fusion' is justifiably strengthened by the fact that PSED II uses the 2005 March CPS to compute the weight variable, "WT_SCRN" (see page 2 of http://www.psed.isr.umich.edu/psed/download_node/157).

0 or 1) except "household size" and "income" (as well as "unemployment rate", "homestead exemption", "median home price," and three tax rates; we will explain these variables when we discuss identification of our model in the next section). As explained above, age is used as a categorical variable in the original screening part of PSED II, and its categorization is arranged in the same manner as Parker (2011).

[Table 2]

Notably, the ratios of women are smaller for both the entrepreneurship and intrapreneurship groups. The ratios of black individuals are higher in the entrepreneurship and intrapreneurship groups than in the no-involvement group. This is also true for Hispanic individuals. In the no-involvement group, 37% are aged 18 to 34, whereas 45% of the nascent entrepreneurs and 49% of the nascent intrapreneurs are 18 to 34 years old. On the other hand, 14% of those not engaged in start-up activities are aged 55 or older, whereas the percentages are 6% for the entrepreneurs and 8% for the intrapreneurs. These numbers imply that the groups of business starters consist of younger individuals.

Regarding education, the ratio of individuals with some college education is particularly high for entrepreneurship. Both in the no-involvement and the intrapreneurship groups, college graduates (including those with postgraduate degrees) account for about 40%. Regarding work status, the ratio of full-time workers is higher for the intrapreneurship group. Interestingly, in each group, 30%–35% work for organizations of less than 25 workers, and another 35–40% work for organizations of 1,000 workers or more. Note also that 40–50% work for organizations of 100 workers or less in each group.

As for household variables, the number of household members is the highest for the entrepreneurship group. The ratio of child presence (under age 11) is also higher in the entrepreneurship and intrapreneurship groups. Recall that these two groups consist of young individuals, although the ratio of married individuals is the highest and the family size is the lowest in the no-involvement group. The mean income is the highest among nascent intrapreneurs ($66,800), followed by non business starters

($65,700) and the nascent entrepreneurs ($64,700).

Table 3 presents the means of variables for each gender.[14] The average household income of male interviewees ($67,800) is higher than that of female interviewees ($63,700). While the ratios of entrepreneurship and intrapreneurship are similar for males (4.1% and 4.3%, respectively), the ratio of female entrepreneurship (2%) is higher than that of female intrapreneurship (1.8%). The ratio of women with a college degree or more among all women (43%) is higher than the corresponding ratio for men (37%). The ratio of women working part-time (24%) is much higher than that of men (13%).

[Table 3]

5 Empirical Analysis

In this section, we first explain the double selection model. After reporting the estimates of the model, we allow interactions of gender with other control variables and show the estimates of the alternative models. Finally, we show the results from the Blinder–Oaxaca decomposition.

5.1 Estimates of the Double Selection Model

We now propose and estimate a selection model based on the following conceptual framework. First, an individual chooses whether to work independently. If he chooses this option, he is called an *entrepreneur*.[15] If he does not become an entrepreneur, then he chooses whether to become an *intrapreneur*. The individual chooses one of the three alternatives that gives him the best utility (see footnote 3 above).

[14] The reason for statistical significances in the age groups can be ascribed to the fact that on average women live longer than men do.

[15] In line with our conceptual framework described above, our empirical analysis does not make a clear distinction between the self-employed and business owners, and treats them as entrepreneurs. In addition, the qualification "nascent" is dropped for simpler expressions.

More formally, let $d_i \in \{0, 1\}$, where $d_i = 1$ indicates individual i choosing to opt out from working independently, and $d_i = 0$ indicates i becoming an *entrepreneur*, and let $l_i \in \{0, 1\}$ denote whether individual i, *conditional on* $d_i = 1$, becomes an *intrapreneur* ($l_i = 1$) or not ($l_i = 0$). If individual i chooses $d_i = 0$, then his utility is written as

$$u_i = \alpha_0 + \alpha_1 female_i + \mathbf{x}_i'\boldsymbol{\alpha} + \epsilon_{1i}, \tag{1}$$

where $female_i$ is a dummy variable that indicates individual i's gender, and $\mathbf{x}_i$ and ϵ_{1i} include other control variables and all unobservable factors, respectively. Similarly, individual i's utility as an intrapreneur is written as

$$v_i = \beta_0 + \beta_1 female_i + \mathbf{z}_i'\boldsymbol{\beta} + \epsilon_{2i}, \tag{2}$$

where $\mathbf{z}_i$ indicates control variables, and ϵ_{2i} collects all unobserved factors, while he obtains (normalized) zero utility from $l_i = 0$. Thus, individual i, *conditional on* $d_i = 1$, becomes an intrapreneur (i.e., $l_i = 1$) if and only if $v_i \geq 0$. Knowing this order structure, individual i first chooses entrepreneurship (i.e., $d_i = 0$) if and only if $u_i \geq v_i$.

For identification of the parameters, it must be that $\mathbf{x}_i \neq \mathbf{z}_i$ (i.e., the exclusion restriction). In this study, we assume that $\mathbf{z}_i \subset \mathbf{x}_i$ and that $(\mathbf{x}_i - \mathbf{z}_i)$ contains variables that are considered related to individual i's *personal wealth*. In particular, "bankruptcy exemption in 2005" and "median home value in 2005" are included in $(\mathbf{x}_i - \mathbf{z}_i)$. These two variables vary across states, and are assumed to provide exogenous variations. The existing studies stress that capital constraints would prevent potential entrepreneurs from starting up activities.[16] However, capital constraints would be much less relevant when an individual does not work independently. This is the economic justification for excluding these two variables from $\mathbf{z}_i$. Additionally, we also include the 2005 annually averaged state-specific unemployment rate, as well as taxes for individual income, corporate income, and sales. See Appendix A1 for more details on these variables.

[16] See the references in footnote 4, as well as Fan and White (2003), Berkowitz and White (2004), Paik (2013), Rohlin and Ross (2016), and Cerqueiro and Penas (2014) for bankruptcy exemption and entrepreneurship, and Blanchflower and Oswald (1998), Taylor (2001), Schmalz, Sraer, and Thesmar (2013), and Adlino, Schoar, and Severino (2015) for housing and entrepreneurship.

We further assume that $(\epsilon_{1i}, \epsilon_{2i})$ is distributed identically and independently across individuals, and is independent of $(female_i,\ \mathbf{x}_i)$ and $(female_i,\ \mathbf{z}_i)$.[17] The distribution is bivariate normal with mean $(0, 0)$, and we allow for correlation between ϵ_{1i} and ϵ_{2i}, with the correlation coefficient denoted by ρ. Then, the parameters of equations (1) and (2) are jointly obtained by the maximum likelihood estimation. In the estimation, observations that have a missing answer are dropped.

5.1.1 Selection Equation (1)

The estimation results of the selection equation (1) are presented in Table 4 (Table A2.1 in Appendix A2 shows the parameter estimates). The difference between Specifications 1 and 2 is that in Specification 2, gender and race are interacted.

First, Specification 1 shows that the coefficients for women are positive with 1% statistical significance, meaning that women are, *ceteris paribus*, *less* likely to become entrepreneurs. This result supports the idea in Hypothesis 1 that women are eager to avoid entrepreneurial risk or face more severe credit constraints or discrimination. In other words, the benefits from autonomy and flexibility do not outweigh these costs and the inefficiency losses. In contrast with our prior expectation, marriage, household size, and the presence of children have no such significant effects. This also contradicts Noseleit's (2014) study that uses data from European countries and finds that having a child raises women's probability of becoming self-employed, whereas self-employment itself does not induce fertility.[18]

[Tables 4 and 5]

Regarding other control variables, middle-aged individuals are more likely to become entrepreneurs. The relationship between age and entrepreneurship is known as

[17] We do not use household income as an explanatory variable in fear of its possible correlation with ϵ_{1i} or ϵ_{2i}. Furthermore, to consider possible correlations between the covariates and the unobservables, we also conduct a propensity score matching estimation of equations (1) and (2). Overall, the results do not change substantially. Estimation results are available upon request.

[18] See Okamuro and Ikeuchi (2012) for a study of the relationship between women's self-employment and work-life balance. Interestingly, Rybczynski (2015) finds that the number of children is the most important factor that determines the continuation of women's self-employment.

an inverse U-shape (Lévesque and Minniti (2006) and Kautonen, Down and Minniti (2014)). Here the inverse U-shape relationship is also found in Table 4: starting from "age 18 to 24" (the baseline is "age 55 or higher"), the highest absolute value of the coefficient is achieved at "age 55 or higher," and a lower value is observed for "age 45 to 54" in each specification (see also the corresponding estimates in Table A2.1). Now, turning to education, we find that the coefficients for the education variables (the baseline is "high- school dropout") are all positive, and individuals with post-graduate education are less likely to choose entrepreneurship than the high-school dropout, and this difference is 5% statistically significant.

Regarding work status, part-time workers are *more* likely to choose entrepreneurship, and the estimates are 10% statistically significant. The coefficient for internet usage works positively for entrepreneurship in all the models, with 1% statistical significance. This finding is consistent with Fairlie (2006), who argues that computer use is positively related to entrepreneurship not only for those who work in the IT industry but also for others in general. The coefficients of homestead exemption and median home value are negative with 10% statistical significance. However, unemployment rate and tax rates have no significant effects.

Recall that Specification 2 includes dummies for interactions of gender and race such as "white-female", "black-male" and so on (with the baseline being "white-male"). It is shown that the estimated coefficient for "white-female" is positive (i.e, negative for entrepreneurship) and is 1% statistically significant, and "Hispanic-female" also have positive signs. On the other hand, "black-male" has a negative coefficient with 1% statistical significance (the estimate for "Hispanic-male" is also negative). Thus, statistical significance indicates that among white individuals, women are less likely to choose entrepreneurship, whereas among black individuals, males are more likely to do so. These results imply that women are more risk averse and thus are likely to stay in the wage sector.

5.1.2 Selection Equation (2)

In specification 1 in Table 5 (Table A2.2 in Appendix A2 shows the parameter estimates), the negative coefficients for females are 1% statistically significant, implying that women who work for an existing organization are, *ceteris paribus*, *less* likely to become intrapreneurs, remaining as employees. This finding supports Hypothesis 2. It suggests that women may not only be risk averse but also be in a disadvantageous position in the workplace. Next, marriage has no significant effects as in entrepreneurship. Moreover, the estimated coefficients for the household size and the presence of children under age 11 are not statistically significant. This result, together with the estimated coefficients for household variables such as marriage on entrepreneurship, implies that household variables are not significantly related to entrepreneurship or intrapreneurship.

Regarding the age effects, young workers are more likely to become intrapreneurs than older workers, as opposed to the case of entrepreneurship. Thus, up to age 55, the U-shape relationship holds for intrapreneurship. Next, individuals who use the internet are *more* likely to become intrapreneurs. This may imply that computer skills would be useful for both entrepreneurship and intrapreneurship. We also find that part-time workers are less likely to choose intrapreneurship.

In Specification 2, which takes into account the interactions of gender and race, we find that the estimated coefficients for "white-female" are negative with 1% statistical significance, and that "black-female" and "Hispanic-female" also have negative signs. In contrast, the estimated coefficients for "black-male" and "Hispanic-male" are positive, but not statistical significant. These results imply that gender is still an issue that puts women in a disadvantageous position in the workplace, whereas race matters less.

Notice that under all of the six specifications, the estimated correlation coefficients between the unobservables (ϵ_{1i} in equation (1) and ϵ_{2i} in equation (2)) are close to 0.9 and statistically significant. Recall that in our double selection model (i.e., equations (1) and (2)). a *low* value of ϵ_{1i} favors entreprenuership, and a high value of ϵ_{2i} favors intrapreneurship. That is, our positive estimates for ρ suggest that what

Lucas (1978) calls (unobserved) "entrepreneurial skills/talents," are *negatively* related to (unobserved) "intrapreneurial skills/talents." If one ignores this correlation (i.e., estimating each of the equations independently, or treating the three alternatives equally as in a multinominal logit model), the parameter estimates would be biased, and predicted rates of entrepreneurship and intrapreneurship under counterfactual scenarios would be imprecise. As in Parker (2011), this justifies our double selection model. Notice also that Specification 1 yields a smaller value of Akaike's Information Criterion (AIC; see Table A2.2 in Appendix A2). Thus, Specification 1 is preferred.[19]

5.2 Interactions of Gender with Control Variables

The coefficients for controls such as human capital variables may differ across genders. To consider this possibility, we interact gender with these variables.

5.2.1 Selection Equation (1)

Table 6 presents the estimation results of selection equation (1) in consideration of gender and family-related variables (Table A2.3 in Appendix A2 shows the parameter estimates). Table 8, on the other hand, considers the interactions of gender and education (Specification 5), and gender and financial environments (Specification 6). Table A2.5 in Appendix A2 shows the corresponding parameter estimates.

[Tables 6, 7, 8, and 9]

Table 6 shows, again, that the presence of children and the size of the household do not matter to the choice of entrepreneurship across genders. On the other hand, Specification 5 in Table 8 shows that women are, as they acquire higher education,

[19]To consider the possibility that intrapreneurship may mean different things across firm sizes, we estimate the two equations with a subsample of those who work for a firm with less than 100 workers, and with a subsample of the others. We also conduct the same exercise by dividing the sample into those who work for a firm with less than 25 workers (this is the minimum number for the firm-size categorization) and others. We find that overall, the parameter estimates (available upon request) are similar across the subsamples.

more likely to choose entrepreneurship. This result is consistent with, among others, Macpherson (1988), Evans and Leighton (1989a, b), Devine (1994), Bates (1995), and Carr (1996). This finding might indicate that women may be at a disadvantage in their workplace, so those with higher education may be more inclined toward entrepreneurship than intrapreneurship. It could also imply that there are few gender differences among individuals with high education in attitude toward risk, as suggested by Johnson and Powell (1994).

5.2.2 Selection Equation (2)

Table 7 shows the estimation results of the outcome equation (2) (Table A2.4 in Appendix A2 shows the parameter estimates). As in the case of entrepreneurship, the presence of young children and the size of the household do not show statistical significance in differences in the choice of intrapreneurship across genders. In Specification 5 in Table 9 (the corresponding parameter estimates are shown in Table A2.6 in Appendix A2), the interaction terms of gender and education are no longer statistically significant. That is, it is not necessarily the case that as women become more educated they are more likely to become intrapreneurs. Notice also that Specification 1 yields the lowest value of AIC. Thus, we use Specification 1 for the counterfactual experiments and the Blinder–Oaxaca decomposition below.

In summary, we find that women are *less* likely to choose entrepreneurship mainly because of their aversion to risk, credit constraints or discrimination, sacrificing autonomy and flexibility. However, women with higher education are *more* likely to become entrepreneurs. We also find that women who work in established organizations are *less* likely to become intrapreneurs. Interestingly, education does not matter much to intrapraneurship. It could be inferred that women may face more difficulty in the workplace than in the marketplace. Lastly, we find that household status is not strongly related to entrepreneurship or intrapreneurship.

5.3 Counterfactual Experiments and the Blinder–Oaxaca Decompositions

To consider further the interactions of gender and start-up activities, we compute the women's actual and predicted probabilities of becoming entrepreneurs and intrapreneurs when they become the average men (i.e., in each simulation, each woman's covariates are drawn from the estimated distribution of the covariates for men). We also show the results from the Blinder–Oaxaca decomposition (Blinder (1973), Oaxaca (1973), Oaxaca and Ramson (1994), Fairlie (2005), and Fortin, Lemiuex, and Firpo (2011)). It decomposes the gender differences in the average rate of becoming an entrepreneur or intrapreneur into the characteristics' effect and the coefficients' effect as given below:

$$\begin{aligned}\overline{Y_m} - \overline{Y_f} &= \underbrace{\overline{\Pr}(\hat{\beta}^*, X_m) - \overline{\Pr}(\hat{\beta}^*, X_f)}_{\text{characteristics' effect}} \\ &\quad + \underbrace{\overline{\Pr}(\hat{\beta_m}, X^*) - \overline{\Pr}(\hat{\beta}_f, X^*)}_{\text{coefficients' effect}},\end{aligned}$$

where $\overline{Y_m} - \overline{Y_f}$ expresses the gender gap in entrepreneurship or intrapreneurship, $\overline{\Pr}$ denotes the average predicted probability, $\hat{\beta}^* = \Omega\hat{\beta_m} + (I - \Omega)\hat{\beta}_f$, with Ω being a weighting matrix, $\hat{\beta_m}$ and $\hat{\beta}_f$ being he parameter estimates in the male sample, and female sample, respectively, and finally, $X^* = (I - \Omega)X_m + \Omega X_f$, with X_m and X_f representing the observed characteristics of men and women, respectively.

5.3.1 Entrepreneurship

First, Panel A of Table 10 displays the actual probabilities of choosing entrepreneurship by gender in the diagonal cells and the counterfactual probabilities in the non-diagonal cells. As shown in the table, if the distribution of men's characteristics is identical to that of women's, then the predicted chance of becoming an entrepreneur is 3.8%, whereas the actual chance is 3.6%, although this difference is not statistically significant. On the other hand, if the distribution of women's characteristics are identical to that of men's, they are *less* likely to choose entrepreneurship by 0.2% points (this is not statistically significant, either). These two counterfactual scenar-

ios suggest that the female characteristics favor entrepreneurship. However, column "male" shows that even if the distribution of women's characteristics $\mathbf{x}_i$ is identical to that of men's (except $female_i$), women are *less* likely to become entrepreneurs than men, and this difference (1.6%) is 1% statistically significant. Column "male" also shows a similar result if the distribution of men's characteristics becomes identical to that of women's. These two results show that women are less likely to choose entrepreneurship precisely because they are women, suggesting that women may be in a disadvantageous position when becoming entrepreneurs. In this sense, policies for promoting entrepreneurship with an emphasis on women would be justified, as the U.S. SBA currently emphasizes (see the first paragraph of Introduction). For example, if the mismatching of nascent entrepreneurs and start-up assistance programs is, as found by Yusuf (2010), serious, policies would be better off focusing on female entrepreneurship.

[Table 10]

Hundley (2000) finds that women's earnings from self-employment are affected by family size and composition, and argues that women will choose to be self-employed to devote more time to housework. However, in our study, we do not find that family size and composition matter to female entrepreneurship or female intrapreneurship.[20] This result is also apparent in the results from the Blinder–Oaxaca decomposition (see Tables 11, 12, and 13). According to Table 11, column "total," the observed characteristics works to *reduce* the observed gender gap in entrepreneurship (1.4%) by 20.3%. The characteristics effect has a negative contribution, suggesting that the observed characteristics of women are more likely to become entrepreneurship than the observed characteristics of men. Thus, the observed gender gap in entrepreneurship increase from 1.4% to 1.68% $(1.4 - (-0.28))$ if men have the same characteristics as women. The effect of the gender difference in part-time work itself contributes 9.2% of these countervailing effects. These two

[20]For other studies on gender differences in entrepreneurship, see Fairlie and Robb (2009), Leoni and Falk (2010), and Bönte and Piegeler (2013).

findings are more apparent in the higher education group. However, a similar effect is not found in the lower education group. Compared with the effects from part-time work, family-related variables have more modest effects. This would suggest that women's employment status is much more important to the gender gap in entrepreneurial activities.

Table 12 shows that a similar result is obtained for both the higher education group and the white group. Interestingly, the opposite result is found for the black group; the part-time difference contributes positively to the gender gap. In the Hispanic group, the observed characteristics explain 67% of the gender gap, and the family related variables are more important than the part-time variables in explaining the gender gap. Table 13 shows that in the smaller firm-size group, the difference in the variable for high-school graduate works to reduce the gender gap. On the other hand, in the larger firm-size group, the part-time variable reduces the gender gap by 61.7% of all the included variables ($= (-14.9)/(-24.0)$).

[Tables 11, 12, and 13]

5.3.2 Intrapreneurship

Now, we look at intrapreneurship. Panel B of Table 10 depicts the gender differences in the actual and the counterfactual probabilities of becoming an intrapreneur. Importantly, if a woman has the same characteristics as men's, her likelihood of becoming an intrapreneur would be 1.7%, higher than the actual rate of 1.6%, although this difference is not statistically significant. On the other hand, the opposite is true for men (see row "male"). These two counterfactual scenarios suggest that, in contrast to entrepreneurship, the female characteristics do not favor intrapreneurship. More importantly, both columns "male" and "female" suggest that women may also be in a disadvantageous position when becoming intrapreneurs. The male–female difference is 2.2% points if he distribution of women's characteristics $\mathbf{x}_i$ is identical to that of men's (except $female_i$), and this difference is 1% statistically significant.

Comparison within column "female" gives a similar result.[21]

Lastly, Tables 14, 15, and 16 show the results from the Blinder–Oaxaca decomposition. Table 14 shows that the part-time variable contributes to the gender gap in intrapreneurship more in the higher education group. Family-related variables have, again, small effects, suggesting that women's employment status is much more important to the gender gap in intrapreneurial activities as well. Table 15 indicates that in the black and the Hispanic groups, the age variables have large effects. In the Hispanic group, the presence of children explain a large part of the gender gap, possibly implying a characteristic feature of Hispanic intrapreneurship because this is not observed either in the white or in the Hispanic group. Finally, it is interesting to see the contrast between the large firm-size group and the small firm-size group in Table 16. In the larger firm-size group, most of the explained differences are because of the part-time difference. This is in contrast with the smaller firm-size group. In both groups, family-related variables are not dominant in these explained differences.

[Tables 14, 15, and 16]

6 Concluding Remarks

This study examines how gender matters to entrepreneurship and intrapreneurship. Our counterfactual experiments suggest that the rate of entrepreneurial activities

[21] Notice that it is possible to compute the actual and counterfactual (when all women acquire the same chanaracteristics as men) rates of the non-involved for men and for women in the following way:

		Actual (%)	Counterfactual (%)
Entrepreneurs	Male	3.56	
	Female	2.16	1.99
Intrapreneurs	Male	3.85	
	Female	1.62	1.67
Non-involved	Male	42.59	
	Female	46.21	46.34

However, it is not possible to predict how the three rates for men would change because we do not model interactions among individuals.

by women, who acquire the same (in the disributional sense) characteristics as men, is lower than the rate of men's entrepreneurial activities. Similarly, the rate of intrapreneurial activities by women with the same characteristics as men will be lower than the rate of men's intrapreneurial activities. These two findings suggest that women may be in a disadvantageous position when becoming entrapreneurs and intrapreneurs. In addition, our Blinder–Oaxaca decomposition results suggest that for both entrepreneurship and intrapreneurship, women's employment status is much more important than their household status to the gender gap in start-up activities. This is more apparent in the group of whites, college graduates, and those who work for a large firm. An interesting difference between entrepreneurship and intrapreneurship is that while the female characteristics favor entrepreneurship, they do not favor intarepreneurship, although these two results are not statistically significant.

If the government aims to reduce the gender gap in start-up activities, our results would imply that the government should focus on improving workplace conditions for women, rather than implementing family-related policies. However, one should be very careful about deriving policy implications from our results because we are silent on the performances of start-up activities. In particular, it would be difficult to measure the performances of intrapreneurial activities: the process and the performance of an intrapreneurial activity should be recorded, and a sufficient number of such observations should be available to researchers.

To measure the performance of start-up activities, it would be interesting to study how gender matters to the duration of intrapreneurship. In the context of racial differences in entrepreneurship, Fairlie (1999) finds that blacks are more likely to exit self-employment than whites. Ahn (2011) also finds that the reason the duration of minority self-employment is shorter than that for white self-employment is mainly the lack of work experience prior to entry into self-employment. Is there a gender gap in terms of the duration of intrapreneurship? This and other important issues await future research to deepen our understanding of start-up activities in a broader sense.

Appendix

A1. Variables of the Financial Environment

Since the PSED II was conducted from September 2005 to February 2006, we set 2005 as the base year. To measure state-varying bankruptcy exemptions, we use homestead exemptions in 2005, and this information is based on Table 1 of Corradin, Gropp, Huizinga, and Laeven (2016). To capture the local housing market, we use the median value of owner-occupied housing units in 2005, and this variable comes directly from the 2005 American Community Survey (Variable B25077; owner-occupied housing units). The state-specific unemployment rate is the annual average in 2005 (available at the Webpage of the U.S. Bureau of Labor Statistics[22]). Finally, we consider three tax rates: individual income, corporate income, and sales taxes in 2005. The information is taken from the Tax Foundation's Webpage (http://taxfoundation.org/tax-topics/state-taxes). Following Rohlin and Ross (2016), we use the highest marginal rate for individual income and corporate income taxes.

Table A1 presents the state-level data for the financial environment. All these variables have sufficient variations. Table A2 shows that the correlations among these variables are weak, except for the one between individual income tax and corporate income tax. There are seven states that do not set an exemption level. In Table A1, such a state is deemed "unlimited," and in the empirical analysis below we impute $500,000, the maximum amount from the rest of the states, for these states' exemption level. The federal level of exemption in 2005 was $36,900, and for states that had a lower amount but allowed their residents to opt out for the federal level, the amount is set at $36,900. However, 17 states continued to have a lower amount than $36,900. In particular, there are two states (Delaware and Maryland) that did not permit any homestead exemption.[23]

[Tables A1 and A2]

[22]The URL is http://www.bls.gov/news.release/archives/srgune_03012006.pdf.
[23]However, in 2006, Delaware set $50,000 for its homestead exemption.

A2. Parameter Estimates

In the main text, we present the estimates of the avergage (marginal for continuous variables) effects for each equation under each of the six specifications. Below, we show the original parameter estimates.

[Tables A2.1-A2.6]

References

Ahn, Taehyun. 2010. "Attitudes toward Risk and Self-Employment of Young Workers." *Labour Economics*, **17**(2), 434-442.

—, 2011. "Racial Differences in Self-Employment Exits." *Small Business Economics*, **36**(2), 169-186.

Antoncic, Bostjan, and Robert D. Hisrich. 2001. "Intrapreneurship: Construct Refinement and Cross-Cultural Validation." *Journal of Business Venturing*, **16**(5), 495-527.

—, and —. 2003. "Clarifying the Intrapreneurship Concept." *Journal of Small Business and Enterprise Development*, **10**(1), 7-24.

Azmat, Ghazala, Maia Göell, and Alan Manning. 2006. "Gender Gaps in Unemployment Rates in OECD Countries." *Journal of Labor Economics*, **24**(1), 1-37.

Baruah, Bidyut, and Anthony Ward. 2015. "Metamorphosis of Intrapreneurship as an Effective Organizational Strategy." *International Entrepreneurship and Management Journal*, **11**(4), 811-822.

Bates, Timothy. 1995. "Self-Employment Entry across Industry Groups." *Journal of Business Venturing*, **10**(2), 143-156.

Becker, Gery S. 1957. *The Economics of Discrimination*, Chicago: University of Chicago Press.

—. 1985. "Human Capital, Effort, and the Sexual Division of Labor." *Journal of Labor Economics*, **3**(1), 33-58.

Berkowitz, Jeremy, and Michelle J. White. 2004. "Bankruptcy and Small Firms' Access to Cresdit." *RAND Journal of Economics*, **35**(1), 69-84.

Blau, Francine D., and Lawrence M. Kahn. 1992. "Race and Gender Pay Differentials." NBER Working Paper, No. 4120.

Blinder, Alan S. 1973. "Wage Discrimination: Reduced Form and Structural Estimates." *Journal of Human Resources*, **8**(4), 436-455.

Bönte, Werner, and Monika Piegeler. 2013. "Gender Gap in Latent and Nascent Entrepreneurship: Driven by Competitiveness." *Small Business Economics*, **41**(4), 961-987.

Buera, Francisco J. 2009. "A Dynamic Model of Entrepreneurship with Borrowing Constraints: Theory and Evidence." *Annals of Finance*, **5**(3-4), 443–464.

Caliendo, Marco, Frank M. Fossen, and Alexander S. Kritikos. 2009. "Risk Attitudes of Nascent Entrepreneurs-New Evidence from an Experimentally Validated Survey." *Small Business Economics*, **32**(2), 153-167.

Carr, Deborah. 1996. "Two Paths to Self-Employment? Women's and Men's Self-Employment in the United States, 1980." *Work and Occupations*, **23**(1), 26-53.

Cerqueiro, Geraldo, and María Fabiana Penas. 2014. "How Does Personal Bankruptcy Law Affect Start-Ups?" Unpublished manuscript.

Corradin, Stefano, Reint Gropp, Harry Huizinga, and Luc Laeven. 2016. "The Effect of Personal Bankruptcy Exemptions on Investment in Home Equity." *Journal of Financial Intermediation*, Forthcoming.

Cotter, David A., Joan M. Hermsen, Seth Ovadia, and Reeve Vanneman. 2001. "The Glass Ceiling Effect." *Social Forces*, **80**(2), 655-681.

Covin, Jeffrey G., and Dennis P. Slevin. 1991. "A Conceptual Model of Entrepreneurship as Firm Behevior." *Entrepreneurship Theory and Practice*, **16**(1), 7-25.

Croson, Rachel, and Uri Gneezy. 2009. "Gender Differences in Preferences." *Journal of Economic Literature,* **47**(2), 448-474.

Davidsson, Per, and Scott R. Gordon. 2012. "Panel Studies of New Venture Creation: A Methods-Focused Review and Suggestions for Future Research." *Small Business Economics*, **39**(4), 853-876.

De Clercq, Dirk, Xavier Castañer, and Imanol Belausteguigoitia. 2011. "Entrepreneurial Initiative Selling within Organizations: Towards a More Comprehensive Motivational Framework." *Journal of Management Studies*, **48**(6), 1269-1290.

Demsetz, Harold. 1988. "Profit as a Functional Return: Reconsidering Knight's Views." In Harold Demsetz, *Ownership, Control, and the Firm.* Oxford: Basil Blackwell, 236-247.

Devine, Therresa J. 1994. "Characteristics of Self-Employed Women in the United States." *Monthly Labor Review*, **117**(3), 20-34.

Douglas. Evan J., and Jason R. Fitzsimmons. 2013. "Intrapreneurial Intentions versus Entrepreneurial Intentions: Distinct Constructs with Different Antecedents." *Small Business Economics*, **41**(1), 115-132.

Edwards, Linda N., and Elizabeth Field-Hendrey. 2002. "Home-Based Work and Women's Labor Force Decisions." *Journal of Labor Economics*, **20**(1), 170-200.

Ekelund, Jesper, Edvard Johansson, Marjo-Riitta Järvelin, Dirk Lichtermann. 2005. "Self-Employment and Risk Aversion—Evidence from Psychological Test Data." *Labour Economics*, **12**(5), 649-659.

Elliott, James R., and Ryan A. Smith. 2004. "Race, Gender, and Workplace Power." *American Sociological Review*, **69**(3), 365-386.

Evans, David S., and Boyan Jovanovic. 1989. "An Estimated Model of Entrepreneurial Choice under Liquidity Constraints." *Journal of Political Economy*, **97**(4), 808-827.

—, and Linda S. Leighton. 1989a. "The Determinants of Changes in U.S. Self-Employment, 1968-1987." *Small Business Economics*, **1**(2), 111-119.

—, and —. 1989b. "Some Empirical Aspects of Entrepreneurship." *American Economic Review*, **79**(3), 519–535.

Fairlie, Robert W. 1999. "The Absence of the African-American Owned Business: An Analysis of the Dynamics of Self-Employment." *Journal of Labor Economics*, **17**(1), 80-108.

—. 2005. "An Extension of the Blinder–Oaxaca Decomposition Technique to Logit and Probit Models." *Journal of Economic and Social Measurement*, **30**(4), 305-316.

—. 2006. "The Personal Computer and Entrepreneurship." *Managemant Science*, **52**(2), 187-203.

—, and Harry A. Krashinsky. 2012. "Liquidity Constraints, Household Wealth, and Entrepreneurship Revisited." *Review of Income and Wealth*, **58**(2), 279-306.

—, and Alicia M. Robb. 2009. "Gender Differences in Business Performance: Evidence from the Characteristics of Business Owners Survey." *Small Business Economics*, **33**(4), 375-395.

Fan, Wei, and Michelle J. White. 2003. "Personal Bankruptcy and the Level of Entrepreneurial Activity." *Journal of Law and Economics*, **97**(4), 808-827.

Fortin, Nicole, Thomas Lemiuex, and Sergio Firpo. 2011. "Decomposition Methods in Economics." In Orley Ashenfelter and David Card, eds. *Handbook of Labor Economics*, Volume 4A, Amsterdam: North-Holland, 1–102.

Gartner, William B., and Kelly G. Shaver. 2012. "Nascent Entrepreneurship Panel Studies: Progress and Challenges." *Small Business Economics*, **39**(3), 659-665.

Hamilton, Barton H. 2000. "Does Entrepreneurship Pay? An Empirical Analysis of the Returns ot Self-Employment." *Journal of Political Economy*, **108**(3), 604–631.

Hellmann, Thomas. 2007. "When Do Employees Become Entrepreneurs?" *Management Science*, **53**(6), 919-933

Hisrich, Robert D. 1990. "Entrepreneurship/Intrapreneurship." *American Psychologist*, **45**(2), 209-222.

Holtz-Eakin, Douglas, David Joulfaian, and Harvey S. Rosen. 1994a. "Entrepreneurial Decisions and Liquidity Constraints." *RAND Journal of Economics*, **25**(2), 334–347.

—, —, and —. 1994b. "Sticking It Out: Entrepreneurial Survival and Liquidity Constraints." *Journal of Political Economy*, **102**(1), 53–75.

Honig, Benson. 2001. "Learning Strategies and Resources of Entrepreneurs and Intrapreneurs." *Entrepreneurship Theory and Practice*, **26**(1), 21-35.

Hundley, Greg. 2000. "Male/Female Earnings Differences in Self-Employment: The Effects of Marriage, Children, and the Household Division of Labor." *Industrial and Labor Relations Review*, **54**(1), 95-114.

Hurst, Erik, and Annamaria Lusardi. 2004. "Liquidity Constraints, Household Wealth, and Entrepreneurship." *Journal of Political Economy*, **112**(2), 319–347.

Johnson, J.E.V., and P.L. Powell. 1994. "Decision Making, Risk and Gender: Are Managers Different?" *British Journal of Management*, **5**(2), 123-138.

Kacperczyk, Aleksandra. 2015. "Female Entrepreneurship and Alternative Opportunities Inside an Established Firm." Unpublished manuscript.

Kan, Kamhon, and Wei-Der, Tsai. 2006. "Entrepreneurship and Risk Aversion." *Small Business Economics*, **26**(5), 465-474.

Kautonen, Teemu, Simon Down, and Maria Minniti. 2014. "Ageing and Entrepreneurial Activities." *Small Business Economics*, **42**(3), 579-594.

Kawaguchi, Daiji. 2003. "Human Capital Accumulation of Salaried and Self-Employed Workers." *Labour Economics*, **10**(1), 55–71.

Kim, Phillip H., Kyle C. Longest, and Stephen Lippmann. 2015. "The Tortoise versus the Hare: Progress and Business Viability Differences between Conventional and Leisure-Based Founders." *Journal of Business Venturing*, Forthcoming.

Knight, Frank H. 1921. *Risk, Uncertainty and Profit.* Houghton Mifflin Company.

Leoni, Thomas, and Martin Falk. 2010. "Gender and Field of Study as Determinants of Self-Employment." *Small Business Economics*, **34**(2), 167-185.

LeRoy, Stephen F., and Larry D. Singell, Jr. 1987 "Knight on Risk and Uncertainty." *Journal of Political Economy*, **95**(2), 394-406.

Lévesque, Moren, and Maria Minniti. 2006 "The Effect of Aging on Entrepreneurial Behavior. " *Journal of Business Venturing*, **21**(2), 177-194.

Lombard, Karen V. 2001. "Female Self-Employment and Demand for Flexible, Nonstandard Work Schedules." *Economic Inqury*, **39**(2), 214-237.

Lucas, Robert E., Jr. 1978. "On the Size Distribution of Business Firms." *Bell Journal of Economics*, **9** (2), 508–523.

Lumpkin, G. T., and Gregory G. Dess. 1996. "Clarifying the Entrepreneurial Orientation Construct and Linking It to Performance." *The Academy of Management Review*, **21**(1), 135-172.

Macpherson, David A. 1988. "Self-Employment and Married Women." *Economics Letters*, **28**(3), 281–284.

Malchow-Møller, Nikolaj, James R. Markusen, and Jan R. Skaksen. 2010. "Labor Market Institutions, Learning and Self-Employment." *Small Business Economics*, **35**(1), 36–52.

Martiarena Aloña. 2013. "What's so Entrepreneurial about Intrapreneurs?" *Small Business Ecoomics*, **40**(1), 27-39.

McCann, Brian T., and Timothy B. Folta. 2012. "Entrepreneurial Entry Thresholds." *Journal of Economic Behavior & Organization*, **84**(3), 782–800.

Miller, Danny. 1983. "The Correlates of Entrepreneurship in Three Types of Firms." *Management Science*, **29**(7), 770-791.

Mondragón-Vélez, Camilo. 2009. "The Probability of Transition to Entrepreneurship Revisited: Wealth, Education and Age" *Annals of Finance*, **5**(3-4), 421-441.

Monsen, Erik, Holger Patzelt, and Todd Saxton. 2010. "Beyond Simple Utility: Incentive Design and Trade-offs for Corporate Employee-Entrepreneurs." *Entrepreneurship Theory and Practice*, **34**(1), 105-130.

Moriano, Juan A., Fernando Molero, Gabriela Topa, and Jean-Pierre Lévy Mangin. 2014. "The Influence of Transformational Leadership and Organizational Identification on Intrapreneurship" *International Entrepreneurship and Management Journal*, **10**(1), 103-119.

Morris, Michael H., and Donald L. Sexton. 1996. "The Concept of Entrepreneurial Intensity: Implications for Company Performance." *Journal of Business Research*, **36**(1), 5-13.

Oaxaca, Ronald. 1973. "Male-Female Wage Differentials in Urban Labor Markets." *International Economic Review*, **14**(3), 693-709.

—, and Michael Ransom. 1994. "On Discrimination and the Decomposition of Wage Differentials." *Journal of Econometrics*, **61**(1), 5-21.

Okamuro, Hiroyuki, and Kenta Ikeuchi. 2012. "Work-Life Balance and Gender Differences in Self-Employment Income during the Start-up Stage in Japan." Unpublished manuscript.

Paik, Yongwook. 2013. "The Bankruptcy Reform Act of 2005 and Entrepreneurial Activity." *Journal of Economics & Management Strategy*, 22(2), 259-280.

Parker, Simon C. 2000. "Saving to Overcome Borrowing Constraints: Implications for Small Business Entry and Exit." *Small Business Economics*, **15**(3), 223-232.

—. 2009. *The Economics of Entrepreneurship*. Cambridge University Press.

—. 2011. "Intrapreneurship or Entrepreneurship?" *Journal of Business Venturing*, **26**(1), 19-34.

—. 2014. "Who Become Serial and Portfolio Entrepreneurs?" *Small Business Economics*, **43**(4), 887-898.

Phelps, Edmund S. 1972. "The Statistical Theory of Racism and Sexism." *American Economic Review*, **62**(4), 659-661.

Pinchot, Gifford, III. 1985. *Intrapreneuring: Why You Don't Have to Leave the Corporation to Become an Entrepreneur*. Harper & Row.

Renko, Maija. 2013. "Early Challenges of Nascent Social Entrepreneurs." *Entrepreneurship Theory and Practice*, **37**(5), 1045-1069.

—, Ayman El Tarabishy, Alan L. Carsrud and Malin Bränback. 2015. "Understanding and Measuring Entrepreneurial Leadership Style." *Journal of Small Business Management*, **53**(1), 54-74.

Reynolds, Paul D., and Richard T. Curtin. 2009. *Business Creation in the United States: Initial Explorations with the PSED II Data Set*, Springer.

Rohlin, Shawn M., and Amanda Ross. 2016. "Does Bankruptcy Law Affect Business Turnover? Evidence from New and Existing Business." *Economic Inquiry*, **54**(1), 361-374.

Rybczynski, Kate. 2009. "Are Liquidity Constraints Holding Women Back? An Analysis of Gender in Self-Employment Earnings." *Journal of Economic Asymmetries*, **6**(1), 141–165.

—. 2015. "What Drives Self-Employment Survival for Women and Men? Evidence from Canada." *Journal of Labor Research*, **36**(1), 27-43.

Rule, Erik G., and Donald W. Irwin. 1988. "Fostering Intrapreneurship: The New Competitive Edge." *Journal of Business Strategy*, **9**(3), 44-47.

Runde, Jochen. 1998. "Clarifying Frank Knight's Discussion of the Meaning of Risk and Uncertainty." *Cambridge Journal of Economics*, **22**(5), 539-546.

Sardy, Marc, and Ilan Alon. 2007. "Exploring the Differences between Franchisee Entrepreneurs and Nascent Entrepreneurs." *International Entrepreneurship and Management Journal*, **3**(4), 403-418.

Schmalz, Martin C., David A. Sraer, and David Thesmar. 2013. "Housing Collateral and Entrepreneurship." NBER Working Paper No. 19680.

Schultz, Theodore. W. 1980. "Investment in Entrepreneurial Ability." *Scandinavian Journal of Economics*, **82**(4), 437-448.

Taylor, Mark P. 2001. "Self-Employment and Windfall Gains in Britain: Evidence from Panel Data." *Economica*, **68**(272), 539-565.

Tietz, Matthias A., and Simon C. Parker. 2012. "How Do Intrapreneurs and Entrepreneurs Differ in Their Motivation to Start a New Venture?" *Frontiers of Entrepreneurship Research*, **32**(4), Article 4. http://digitalknowledge.babson.edu/fer/vol32/iss4/4

Yusuf, Juita-Elena. 2010. "Meeting Entrepreneurs' Support Needs: Are Assistance Programs Effective?" *Journal of Small Business and Enterprise Development*, **17**(2), 294-307.

Zhang, Xiaomeng, and Kathryn M. Bartol. 2010. "Linking Empowering Leadership and Employee Creativity: The Influence of Psychological Empowerment, Intrinsic Motivation, and Creative Process Engagement." *The Academy of Management Journal*, **53**(1), 107-128.

Table 2: Summary Statistics: Across Modes

	Not involved		*Entrepreneurs*		*Intrapreneurs*	
	Mean	*N*	*Mean*	*N*	*Mean*	*N*
Female	0.512	12,974	0.331***	380	0.297***	370
Race						
White	0.750	12,631	0.643***	368	0.633***	353
Black	0.117	12,631	0.204***	368	0.174***	353
Hispanic	0.133	12,631	0.154	368	0.194***	353
Foreign born	0.120	10,510	0.098	324	0.153	311
Age						
18 to 24	0.137	12,813	0.172*	374	0.212***	366
25 to 34	0.229	12,813	0.277**	374	0.281**	366
35 to 44	0.256	12,813	0.278	374	0.256	366
45 to 54	0.237	12,813	0.210	374	0.176***	366
55 to 64	0.110	12,813	0.054***	374	0.070***	366
65 and more	0.031	12,813	0.009***	374	0.007***	366
Education						
HS dropout	0.057	12,837	0.083*	377	0.102***	363
HS graduate	0.270	12,837	0.205***	377	0.258	363
Some college	0.269	12,837	0.366***	377	0.248	363
Bachelor	0.258	12,837	0.241	377	0.233	363
Postgraduate	0.146	12,837	0.105***	377	0.159	363
Internet	0.834	12,891	0.913***	378	0.867*	366
Employment Status						
Full time	0.816	12,974	0.819	380	0.849*	370
Part time	0.184	12,974	0.181	380	0.151*	370
Firm size						
Under firm size 24	0.312	10,510	0.348	324	0.335	311
Firm size 25 to 99	0.124	10,510	0.140	324	0.096*	311
Firm size 100 to 499	0.125	10,510	0.095*	324	0.111	311
Firm size 500 to 999	0.062	10,510	0.049	324	0.054	311
Firm size 1000 and more	0.378	10,510	0.368	324	0.404	311
Household						
Married	0.598	12,827	0.545**	378	0.530***	364
Children under age 11	0.332	12,806	0.418***	377	0.386**	362
Size	3.006	12,829	3.296***	377	3.167**	364
Income	65744.689	10,742	64705.431	336	66787.562	323
Non-metro area	0.226	12,974	0.207	380	0.207	370
Unemployment rate	5.074	12,974	4.983**	380	5.098	370
Homestead exemption	129.770	12,974	159.730***	380	146.421*	370
Median home value	203.731	12,974	205.834	380	206.447	370
Maximum personal income tax rate	5.558	12,974	5.202**	380	5.395	370
Maximum corporate income tax rate	6.686	12,974	6.444	380	6.761	370
Sales tax rate	5.321	12,974	5.292	380	5.417	370

Notes: Sample weights are used to calculate the means. The unit is $1,000 for Homestead exemption and Median home value. The three tax rates are in percentage terms.

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$ when compared with Not Involved.

Table 3: Summary Statistics: Across Genders

	Male		*Female*	
	Mean	*N*	*Mean*	*N*
Not involved	0.916	7,213	0.962***	6,511
Intrapreneurs	0.043	7,213	0.018***	6,511
Entrepreneurs	0.041	7,213	0.020***	6,511
Race				
White	0.744	7,002	0.743	6,350
Black	0.102	7,002	0.141***	6,350
Hispanic	0.154	7,002	0.117***	6,350
Foreign born	0.118	5,891	0.122	5,254
Age				
18 to 24	0.153	7,137	0.128***	6,416
25 to 34	0.225	7,137	0.240*	6,416
35 to 44	0.269	7,137	0.244***	6,416
45 to 54	0.223	7,137	0.246***	6,416
55 to 64	0.106	7,137	0.109	6,416
65 and more	0.024	7,137	0.034***	6,416
Education				
HS dropout	0.072	7,130	0.046***	6,447
HS graduate	0.286	7,130	0.249***	6,447
Some college	0.268	7,130	0.275	6,447
Bachelor	0.242	7,130	0.271***	6,447
Postgraduate	0.132	7,130	0.159***	6,447
Internet	0.818	7,163	0.856***	6,472
Employment Status				
Full time	0.873	7,213	0.760***	6,511
Part time	0.127	7,213	0.240***	6,511
Firm size				
Under firm size 24	0.315	5,891	0.312	5,254
Firm size 25 to 99	0.129	5,891	0.118*	5,254
Firm size 100 to 499	0.114	5,891	0.133***	5,254
Firm size 500 to 999	0.059	5,891	0.063	5,254
Firm size 1000 and more	0.383	5,891	0.373	5,254
Household				
Married	0.604	7,140	0.585**	6,429
Children under age 11	0.341	7,120	0.331	6,425
Size	3.070	7,136	2.970***	6,434
Income	67841.541	6,029	63653.488***	5,372
Non-metro area	0.232	7,213	0.217**	6,511
Unemployment rate	5.079	7,213	5.066	6,511
Homestead exemption	130.743	7,213	131.632	6,511
Median home value	201.510	7,213	206.245**	6,511
Maximum personal income tax rate	5.489	7,213	5.595**	6,511
Maximum corporate income tax rate	6.672	7,213	6.691	6,511
Sales tax rate	5.362	7,213	5.283***	6,511

Notes: Sample weights are used to calculate the means. The unit is $1,000 for Homestead exemption and Median home value. The three tax rates are in percentage terms.

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$ when compared with Male.

Table 4: Average/Marginal Effects in Equation (1)

	Specification 1		*Specification 2*	
Dependent variable:				
1 = Staying in				
0 = Going out (Entrepreneurship)				
Female	0.016***	(0.003)		
Race: Ref = white				
Black	−0.025***	(0.005)		
Hispanic	−0.004	(0.006)		
Race: Ref = white male				
White female			0.015***	(0.004)
Black male			−0.029***	(0.007)
Black female			−0.005	(0.007)
Hispanic male			−0.003	(0.007)
Hispanic female			0.010	(0.010)
Foreign born	0.014**	(0.006)	0.014**	(0.006)
Age: Ref = 55 and more				
18 to 24	−0.002	(0.007)	−0.002	(0.007)
25 to 34	−0.014**	(0.006)	−0.014**	(0.006)
35 to 44	−0.014**	(0.006)	−0.014**	(0.006)
45 to 54	−0.012**	(0.005)	−0.012**	(0.005)
Education: Ref = HS dropout				
HS graduate	0.023***	(0.007)	0.023***	(0.007)
Some college	0.009	(0.007)	0.009	(0.007)
Bachelor	0.018**	(0.007)	0.018**	(0.007)
Postgraduate	0.018**	(0.008)	0.018**	(0.008)
Internet	−0.023***	(0.005)	−0.023***	(0.005)
Employment Status: Ref = full time				
Part time	−0.008*	(0.005)	−0.008*	(0.005)
Firm size: Ref = under firm size 24				
Firm size 25 to 99 ($\times 10^2$)	0.043	(0.511)	0.037	(0.511)
Firm size 100 to 499	0.006	(0.006)	0.006	(0.006)
Firm size 500 to 999	−0.002	(0.007)	−0.002	(0.007)
Firm size 1000 and more	0.003	(0.004)	0.003	(0.004)
Household				
Married	0.006	(0.004)	0.006	(0.004)
Children under age 11	−0.004	(0.004)	−0.004	(0.004)
Size	−0.002	(0.001)	−0.002	(0.001)
Non-metro area	−0.001	(0.004)	−0.001	(0.004)
Unemployment rate ($\times 10^2$)	−0.009	(0.210)	−0.013	(0.209)
Homestead exemption ($\times 10^2$)	−0.002*	(−0.002)	−0.002*	(0.001)
Median home value ($\times 10^2$)	−0.003*	(0.002)	−0.003*	(0.002)
Maximum personal income tax rate	0.001	(0.001)	0.001	(0.001)
Maximum corporate income tax rate ($\times 10^2$)	0.033	(0.074)	0.033	(0.074)
Sales tax rate	0.002	(0.001)	0.002	(0.001)
N	11,113		11,113	

Notes: Average (for discrete variables) and marginal (for continuous variables) effects;
Robust standard errors are in parentheses.
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Table 5: Average/Marginal Effects in Equation (2)

	Specification 1		*Specification 2*	
Dependent variable:				
1 = Intrapreneurship				
0 = Else				
Female	-0.023^{***}	(0.003)		
Race: Ref = white				
Black	0.014^{***}	(0.005)		
Hispanic	0.009^{*}	(0.005)		
Race: Ref = white male				
White female			-0.022^{***}	(0.004)
Black male			0.017^{**}	(0.007)
Black female			-0.013	(0.008)
Hispanic male			0.010	(0.006)
Hispanic female			-0.014	(0.010)
Foreign born	0.006	(0.005)	0.005	(0.005)
Age: Ref = 55 and more				
18 to 24	0.025^{***}	(0.007)	0.025^{***}	(0.007)
25 to 34	0.016^{***}	(0.006)	0.016^{***}	(0.006)
35 to 44	0.009	(0.006)	0.009	(0.006)
45 to 54	0.009^{*}	(0.005)	0.009^{*}	(0.005)
Education: Ref = HS dropout				
HS graduate	-0.008	(0.007)	-0.008	(0.007)
Some college	-0.007	(0.007)	-0.007	(0.007)
Bachelor	-0.008	(0.007)	-0.008	(0.007)
Postgraduate	0.025	(0.750)	0.036	(0.750)
Internet	0.010^{**}	(0.005)	0.010^{**}	(0.005)
Employment Status: Ref = full time				
Part time	-0.009^{*}	(0.005)	-0.010^{*}	(0.005)
Firm size: Ref = under firm size 24				
Firm size 25 to 99	-0.018^{***}	(0.006)	-0.018^{***}	(0.006)
Firm size 100 to 499	-0.007	(0.005)	-0.007	(0.005)
Firm size 500 to 999	-0.008	(0.007)	-0.007	(0.007)
Firm size 1000 and more	-0.007^{*}	(0.004)	-0.007^{*}	(0.004)
Household				
Married	-0.006	(0.004)	-0.006^{*}	(0.004)
Children under age 11	0.004	(0.004)	0.004	(0.004)
Size	0.001	(0.001)	0.001	(0.001)
N	11,113		11,113	

Notes: Average (for discrete variables) and marginal (for continuous variables) effects;

Robust standard errors are in parentheses.

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Table 6: Average/Marginal Effects in Equation (1)

	Specification 3		*Specification 4*	
Dependent variable:				
1 = Staying in				
0 = Going out (Entrepreneurship)				
Female	0.018***	(0.004)	0.020***	(0.007)
Race: Ref = white				
Black	−0.025***	(0.005)	−0.025***	(0.005)
Hispanic	−0.004	(0.006)	−0.004	(0.006)
Foreign born	0.014**	(0.006)	0.014**	(0.006)
Age: Ref = 55 and more				
Age 18 to 24	−0.002	(0.007)	−0.002	(0.007)
Age 25 to 34	−0.013**	(0.006)	−0.013**	(0.006)
Age 35 to 44	−0.014**	(0.006)	−0.014**	(0.006)
Age 45 to 54	−0.012**	(0.005)	−0.012**	(0.005)
Education: Ref = HS dropout				
HS graduate	0.023***	(0.007)	0.023***	(0.007)
Some college	0.009	(0.007)	0.009	(0.007)
Bachelor	0.018**	(0.007)	0.018**	(0.007)
Postgraduate	0.018**	(0.008)	0.018**	(0.008)
Internet	−0.023***	(0.005)	−0.023***	(0.005)
Employment Status: Ref = full time				
Part time	−0.008*	(0.005)	−0.008*	(0.005)
Firm size: Ref = under firm size 24				
Firm size 25 to 99 ($\times 10^2$)	0.042	(0.511)	0.037	(0.511)
Firm size 100 to 499	0.006	(0.006)	0.006	(0.006)
Firm size 500 to 999	−0.002	(0.007)	−0.002	(0.007)
Firm size 1000 and more	0.003	(0.004)	0.003	(0.004)
Household				
Married	0.005	(0.004)	0.005	(0.004)
Children under age 11	−0.002	(0.005)	−0.004	(0.004)
Children under age 11 × Female	−0.003	(0.007)		
Size	−0.002	(0.001)	−0.001	(0.002)
Size × Female			−0.001	(0.002)
Non-metro area	−0.001	(0.004)	−0.001	(0.004)
Unemployment rate ($\times 10^2$)	−0.008	(0.210)	−0.009	(0.210)
Homestead exemption ($\times 10^2$)	−0.002*	(0.001)	−0.002*	(0.001)
Median home value ($\times 10^2$)	−0.003*	(0.002)	−0.003*	(0.002)
Maximum personal income tax rate	0.001	(0.001)	0.001	(0.001)
Maximum corporate income tax rate ($\times 10^2$)	0.033	(0.074)	0.033	(0.074)
Sales tax rate	0.002	(0.001)	0.002	(0.001)
N	11,113		11,113	

Notes: Average (for discrete variables) and marginal (for continuous variables) effects;
Robust standard errors are in parentheses.
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Table 7: Average/Marginal Effects in Equation (2)

	Specification 3		*Specification 4*	
Dependent variable:				
1 = Intrapreneurship				
0 = Else				
Female	-0.021^{***}	(0.004)	-0.021^{***}	(0.007)
Race: Ref = white				
Black	0.014^{***}	(0.005)	0.014^{***}	(0.005)
Hispanic	0.009^{*}	(0.005)	0.009^{*}	(0.005)
Foreign born	0.006	(0.005)	0.006	(0.005)
Age: Ref = 55 and more				
Age 18 to 24	0.025^{***}	(0.007)	0.025^{***}	(0.007)
Age 25 to 34	0.017^{***}	(0.006)	0.017^{***}	(0.006)
Age 35 to 44	0.009	(0.006)	0.009	(0.006)
Age 45 to 54	0.009^{*}	(0.005)	0.009^{*}	(0.005)
Education: Ref = HS dropout				
HS graduate	−0.008	(0.007)	−0.008	(0.007)
Some college	−0.007	(0.007)	−0.007	(0.007)
Bachelor	−0.007	(0.007)	−0.008	(0.007)
Postgraduate	0.000	(0.007)	0.000	(0.008)
Internet	0.010^{**}	(0.005)	0.010^{**}	(0.005)
Employment Status: Ref = full time				
Part time	-0.009^{*}	(0.005)	-0.009^{*}	(0.005)
Firm size: Ref = under firm size 24				
Firm size 25 to 99	-0.018^{***}	(0.006)	-0.018^{***}	(0.006)
Firm size 100 to 499	−0.007	(0.005)	−0.007	(0.005)
Firm size 500 to 999	−0.007	(0.007)	−0.008	(0.007)
Firm size 1000 and more	-0.007^{*}	(0.004)	-0.007^{*}	(0.004)
Household				
Married	-0.006^{*}	(0.004)	−0.006	(0.004)
Children under age 11	0.005	(0.005)	0.004	(0.004)
Children under age 11 × Female	−0.005	(0.007)		
Size	0.001	(0.001)	0.001	(0.001)
Size × Female			−0.001	(0.002)
N	11,113		11,113	

Notes: Average (for discrete variables) and marginal (for continuous variables) effects;
Robust standard errors are in parentheses.
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Table 8: Average/Marginal Effects in Equation (1)

	Specification 5		*Specification 6*	
Dependent variable:				
1 = Staying in				
0 = Going out (Entrepreneurship)				
Female	0.048***	(0.016)	0.023***	(0.008)
Race: Ref = white				
Black	−0.025***	(0.005)	−0.026***	(0.005)
Hispanic	−0.004	(0.006)	−0.004	(0.006)
Foreign born	0.014**	(0.006)	0.014**	(0.006)
Age: Ref = 55 and more				
Age 18 to 24	−0.002	(0.007)	−0.002	(0.007)
Age 25 to 34	−0.013**	(0.006)	−0.014**	(0.006)
Age 35 to 44	−0.014**	(0.006)	−0.014**	(0.006)
Age 45 to 54	−0.012**	(0.005)	−0.012**	(0.005)
Education: Ref = HS dropout				
HS graduate	0.034***	(0.008)	0.023***	(0.007)
Some college	0.014*	(0.008)	0.009	(0.007)
Bachelor	0.026***	(0.009)	0.018**	(0.007)
Postgraduate	0.026***	(0.009)	0.018**	(0.008)
HS graduate × Female	−0.040**	(0.017)		
Some colleage × Female	−0.029*	(0.017)		
Bachelor × Female	−0.034**	(0.017)		
Postgraduate × Female	−0.034*	(0.018)		
Internet	−0.023***	(0.006)	−0.023***	(0.005)
Employment Status: Ref = full time				
Part time	−0.008*	(0.005)	−0.008*	(0.005)
Firm size: Ref = under firm size 24				
Firm size 25 to 99 ($\times 10^2$)	0.041	(0.512)	0.023	(0.510)
Firm size 100 to 499	0.007	(0.006)	0.006	(0.006)
Firm size 500 to 999	−0.002	(0.007)	−0.002	(0.007)
Firm size 1000 and more	0.003	(0.004)	0.003	(0.004)
Household				
Married	0.006	(0.004)	0.005	(0.004)
Children under age 11	−0.004	(0.004)	−0.004	(0.004)
Size	−0.002	(0.001)	−0.002	(0.001)
Non-metro area	−0.001	(0.004)	−0.001	(0.004)
Unemployment rate ($\times 10^2$)	−0.015	(0.211)	−0.006	(0.210)
Homestead exemption ($\times 10^3$)	−0.017*	(0.010)	−0.004	(0.012)
Homestead exemption × Female ($\times 10^2$)			−0.003*	(0.002)
Median home value ($\times 10^2$)	−0.003*	(0.002)	−0.002	(0.002)
Median home value × Female ($\times 10^2$)			−0.001	(0.003)
Maximum personal income tax rate	0.001	(0.001)	0.001	(0.001)
Maximum corporate income tax rate ($\times 10^2$)	0.031	(0.074)	0.037	(0.074)
Sales tax rate	0.002	(0.001)	0.002	(0.001)
N	11,113		11,113	

Notes: Average (for discrete variables) and marginal (for continuous variables) effects;
Robust standard errors are in parentheses.
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Table 9: Average/Marginal Effects in Equation (2)

	Specification 5		*Specification 6*	
Dependent variable:				
1 = Intrapreneurship				
0 = Else				
Female	-0.030^{**}	(0.014)	-0.023^{***}	(0.003)
Race: Ref = white				
Black	0.014^{***}	(0.005)	0.014^{***}	(0.005)
Hispanic	0.009^{*}	(0.005)	0.009^{*}	(0.005)
Foreign born	0.006	(0.005)	0.006	(0.005)
Age: Ref = 55 and more				
Age 18 to 24	0.024^{***}	(0.007)	0.025^{***}	(0.007)
Age 25 to 34	0.016^{***}	(0.006)	0.016^{***}	(0.006)
Age 35 to 44	0.008	(0.006)	0.009	(0.006)
Age 45 to 54	0.009^{*}	(0.005)	0.009^{*}	(0.005)
Education: Ref = HS dropout				
HS graduate	−0.009	(0.008)	−0.008	(0.007)
Some college	−0.008	(0.008)	−0.007	(0.007)
Bachelor	−0.011	(0.008)	−0.007	(0.007)
Postgraduate ($\times 10^1$)	−0.028	(0.087)	0.003	(0.075)
HS graduate × Female	0.004	(0.016)		
Some colleage × Female	0.006	(0.016)		
Bachelor × Female	0.012	(0.016)		
Postgraduate × Female	0.011	(0.016)		
Internet	0.010^{**}	(0.005)	0.010^{**}	(0.005)
Employment Status: Ref = full time				
Part time	-0.009^{*}	(0.005)	-0.009^{*}	(0.005)
Firm size: Ref = under firm size 24				
Firm size 25 to 99	-0.018^{***}	(0.006)	-0.018^{***}	(0.006)
Firm size 100 to 499	−0.007	(0.005)	−0.007	(0.005)
Firm size 500 to 999	−0.007	(0.007)	−0.008	(0.007)
Firm size 1000 and more	-0.007^{*}	(0.004)	-0.007^{*}	(0.004)
Household				
Married	−0.006	(0.004)	−0.006	(0.004)
Children under age 11	0.004	(0.004)	0.004	(0.004)
Size	0.001	(0.001)	0.001	(0.001)
N	11,113		11,113	

Notes: Average (for discrete variables) and marginal (for continuous variables) effects;
Robust standard errors are in parentheses.
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Table 10: Actual and Counterfactual Rates of Start-Up Activities

Gender \ Char	Male	Female	Difference
Panel A: Pr(Entrepreneur)			
Male	3.56%	3.83%	0.27%
	(0.0024)	(0.0003)	
Female	1.99%	2.16%	−0.16%
	(0.0002)	(0.0020)	
Difference	−1.57%***	1.67%***	
Panel B: Pr(Intraperneur)			
Male	3.85%	3.75%	−0.09%
	(0.0025)	(0.0002)	
Female	1.67%	1.62%	0.05%
	(0.0001)	(0.0017)	
Difference	−2.18%***	2.13%***	

Notes: Standard errors in parentheses. Diagonal cells are actual rates, and nondiagonal cells are counterfactual rates. For example, the (male, female) cell in Panel A means that if all men's characteristics are drawn from the distribution of covariates for women, 3.83% of men would be engaged in entrepreneurial activities, a higher number than the actual rate, 3,56%.

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Table 11: Decompositon of Gender Gap in Entreperneurship: Across Educational Attainments

	Total		Bachelor or More		Some College or Less	
Male mean (%)	3.56		3.29		3.72	
Female mean (%)	2.16		2.26		2.17	
Male − Female gap (%)	1.40		1.03		1.55	
Contributions from gender differences in:						
Black	−0.0009766	−6.98%	−0.0011176	−10.84%	−0.0009787	−6.30%
Hispanic	0.0000848	0.61%	0.0001494	1.45%	−0.0002022	−1.30%
Foreign born	0.0000771	0.55%	0.0000405	0.39%	0.0000717	0.46%
Age 18 to 24	0.0000660	0.47%	−0.0001039	−1.01%	0.0004668	3.01%
Age 25 to 34	0.0000569	0.41%	0.0001696	1.65%	0.0009404	6.06%
Age 35 to 44	0.0006996	5.00%	0.0003778	3.66%	0.0009349	6.02%
Age 45 to 54	−0.0005886	−4.20%	−0.0000975	−0.95%	−0.0012276	−7.91%
HS graduate	−0.0008346	−5.96%			−0.0006838	−4.40%
Some college	0.0001464	1.05%			0.0005426	3.49%
Bachelor	0.0005923	4.23%				
Postgraduate	0.0001902	1.36%	0.0000006	0.01%		
Internet	−0.0010313	−7.37%	−0.0027611	−26.79%	−0.0011653	−7.51%
Part time	−0.0012970	−9.27%	−0.0016377	−15.89%	−0.0011066	−7.13%
Firm size 25 to 99	−0.0000121	−0.09%	0.0001666	1.62%	−0.0001332	−0.86%
Firm size 100 to 499	0.0001656	1.18%	0.0007333	7.11%	0.0000010	0.01%
Firm size 500 to 999	0.0000004	0.00%	−0.0000210	−0.20%	−0.0000264	−0.17%
Firm size 1000 and more	−0.0000080	−0.06%	−0.0002781	−2.70%	0.0000554	0.36%
Married	−0.0003621	−2.59%	−0.0010912	−10.59%	−0.0000435	−0.28%
Children under age 11 0.0001582	1.13%	0.0002557	2.48%	0.0000849	0.55%	
Household size	0.0003445	2.46%	0.0000457	0.44%	0.0003671	2.36%
Non-metro area	0.0000126	0.09%	0.0000523	0.51%	0.0000490	0.32%
Unemployment rate	−0.0000003	0.00%	−0.0000451	−0.44%	−0.0000222	−0.14%
Homestead exemption	−0.0000827	−0.59%	−0.0001683	−1.63%	−0.0000072	−0.05%
Median home value	−0.0001228	−0.88%	−0.0001552	−1.51%	−0.0000580	−0.37%
Maximum personal income tax rate	0.0000683	0.49%	−0.0000380	−0.37%	0.0000370	0.24%
Maximum corporate income tax rate	−0.0000088	−0.06%	−0.0000017	−0.02%	−0.0000103	−0.07%
Sales tax rate	−0.0001582	−1.13%	−0.0001569	−1.52%	−0.0000867	−0.56%
All included variables	−0.0028201	−20.15%	−0.0056817	−55.12%	−0.0022006	−14.17%
N	11,113		4,258		6,748	

Note: Blinder-Oaxaca decomposition is based on analyses of a pooled sample of male and female.

Table 12: Decompositon of Gender Gap in Entreprenuership: Across Races

	White Group		Black Group		Hispanic Group	
Male mean (%)	3.20		9.14		5.24	
Female mean (%)	1.93		5.20		8.26	
Male − Female gap (%)	1.28		3.94		−3.02	
Contributions from gender differences in:						
Foreign born	0.0001325	1.04%	−0.0062241	−15.80%	0.0029146	−9.65%
Age 18 to 24	−0.0000215	−0.17%	−0.0006488	−1.65%	−0.0000659	0.22%
Age 25 to 34	0.0000583	0.46%	0.0000887	0.23%	−0.0011036	3.65%
Age 35 to 44	0.0007372	5.78%	0.0007155	1.82%	0.0194980	−64.52%
Age 45 to 54	−0.0004320	−3.39%	−0.0001083	−0.27%	−0.0125884	41.66%
HS graduate	−0.0010587	−8.30%	0.0017886	4.54%	0.0019754	−6.54%
Some college	0.0003237	2.54%	0.0103573	26.29%	0.0017104	−5.66%
Bachelor	0.0007531	5.90%	−0.0038762	−9.84%	−0.0094734	31.35%
Postgraduate	0.0001083	0.85%	−0.0118908	−30.18%	−0.0157497	52.12%
Internet	−0.0008377	−6.56%	−0.0025292	−6.42%	−0.0018801	6.22%
Part time	−0.0020245	−15.86%	0.0006942	1.76%	−0.0001171	0.39%
Firm size 25 to 99	−0.0000536	−0.42%	0.0000677	0.17%	0.0029293	−9.69%
Firm size 100 to 499	0.0002329	1.82%	−0.0003412	−0.87%	−0.0081340	26.92%
Firm size 500 to 999	0.0000475	0.37%	0.0005867	1.49%	−0.0043290	14.33%
Firm size 1000 and more	−0.0000202	−0.16%	−0.0011942	−3.03%	0.0001571	−0.52%
Married	−0.0003153	−2.47%	0.0020109	5.10%	−0.0030299	10.03%
Children under age 11	0.0000465	0.36%	0.0003981	1.01%	0.0022911	−7.58%
Household size	0.0003541	2.78%	−0.0002007	−0.51%	0.0026918	−8.91%
Non-metro area	0.0000465	0.36%	−0.0005253	−1.33%	0.0001712	−0.57%
Unemployment rate	0.0000043	0.03%	0.0003089	0.78%	−0.0004883	1.62%
Homestead exemption	−0.0001120	−0.88%	0.0004814	1.22%	−0.0004835	1.60%
Median home value	−0.0001726	−1.35%	0.0000653	0.17%	0.0007982	−2.64%
Maximum personal income tax rate	0.0000364	0.29%	−0.0006869	−1.74%	0.0042837	−14.18%
Maximum corporate income tax rate	−0.0000175	−0.14%	0.0001114	0.28%	−0.0028776	9.52%
Sales tax rate	−0.0000797	−0.62%	−0.0008001	−2.03%	0.0010885	−3.60%
All included variables	−0.0022643	−17.74%	−0.0113511	−28.81%	−0.0198113	65.56%
N	9,446		683		473	

Note: Blinder-Oaxaca decomposition is based on analyses of a pooled sample of male and female.

Table 13: Decompositon of Gender Gap in Entrepreneurship: Across Firm Sizes

	Firm size 99 or Less		Firm Size 100 or More	
Male mean (%)	3.81		3.36	
Female mean (%)	2.21		2.11	
Male − Female gap (%)	1.60		1.24	
Contributions from gender differences in:				
Black	−0.0004563	−2.86%	−0.0014572	−11.73%
Hispanic	0.0001757	1.10%	0.0000104	0.08%
Foreign born	0.0000527	0.33%	0.0000848	0.68%
Age 18 to 24	0.0007618	4.77%	−0.0003522	−2.83%
Age 25 to 34	−0.0004493	−2.82%	−0.0000305	−0.25%
Age 35 to 44	0.0013760	8.62%	0.0002578	2.07%
Age 45 to 54	−0.0014240	−8.93%	−0.0000536	−0.43%
HS graduate	−0.0024155	−15.14%	0.0001441	1.16%
Some college	0.0003369	2.11%	−0.0000524	−0.42%
Bachelor	0.0006624	4.15%	0.0004244	3.41%
Postgraduate	0.0001997	1.25%	0.0001296	1.04%
Internet	−0.0013857	−8.68%	−0.0006581	−5.30%
Part time	−0.0005168	−3.24%	−0.0018560	−14.94%
Firm size 25 to 99	−0.0000429	−0.27%		
Firm size 500 to 999			0.0000404	0.33%
Firm size 1000 and more			0.0001103	0.89%
Married	−0.0000714	−0.45%	−0.0005887	−4.74%
Children under age 11	−0.0000698	−0.44%	0.0003908	3.14%
Household size	0.0001064	0.67%	0.0005939	4.78%
Non-metro area	0.0000017	0.01%	0.0000632	0.51%
Unemployment rate	−0.0000009	−0.01%	−0.0000025	−0.02%
Homestead exemption	−0.0000807	−0.51%	−0.0000264	−0.21%
Median home value	−0.0000805	−0.50%	−0.0001447	−1.16%
Maximum personal income tax rate	−0.0000102	−0.06%	0.0001028	0.83%
Maximum corporate income tax rate	0.0000188	0.12%	−0.0000186	−0.15%
Sales tax rate	−0.0002729	−1.71%	−0.0000616	−0.50%
All included variables	−0.0035848	−22.47%	−0.0029503	−23.74%
N	4,885		6,228	

Note: Blinder-Oaxaca decomposition is based on analyses of a pooled sample of male and female.

Table 14: Decompositon of Gender Gap in Intrapreneurship: Across Educational Attainments

	Total		Bachelor or More		Some College or Less	
Male mean (%)	2.95		3.20		2.79	
Female mean (%)	0.91		1.18		0.98	
Male − Female gap (%)	2.03		2.02		1.81	
Contributions from gender differences in:						
Black	−0.0002371	−1.17%	−0.0001972	−0.98%	−0.0002453	−1.35%
Hispanic	0.0001359	0.67%	0.0000187	0.09%	0.0001910	1.05%
Foreign born	−0.0000519	−0.26%	−0.0000349	−0.17%	−0.0000484	−0.27%
Age 18 to 24	0.0006564	3.23%	0.0006470	3.20%	0.0010566	5.83%
Age 25 to 34	0.0000097	0.05%	−0.0005715	−2.83%	0.0002719	1.50%
Age 35 to 44	0.0002524	1.24%	0.0001626	0.81%	0.0003210	1.77%
Age 45 to 54	−0.0003022	−1.49%	−0.0003453	−1.71%	−0.0002504	−1.38%
HS graduate	−0.0001689	−0.83%			−0.0000954	−0.53%
Some college	0.0000997	0.49%			0.0001856	1.02%
Bachelor	0.0001317	0.65%				
Postgraduate	−0.0000211	−0.10%	−0.0000042	−0.02%		
Internet	−0.0002623	−1.29%	−0.0001581	−0.78%	−0.0002504	−1.38%
Part time	0.0014489	7.13%	0.0018420	9.12%	0.0011952	6.60%
Firm size 25 to 99	−0.0003675	−1.81%	−0.0004124	−2.04%	−0.0002713	−1.50%
Firm size 100 to 499	0.0001083	0.53%	−0.0000745	−0.37%	0.0000079	0.04%
Firm size 500 to 999	0.0000004	0.00%	0.0000755	0.37%	−0.0000163	−0.09%
Firm size 1000 and more	−0.0000214	−0.11%	0.0000930	0.46%	0.0003646	2.01%
Married	−0.0002715	−1.34%	0.0005477	2.71%	−0.0002992	−1.65%
Children under age 11	0.0000841	0.41%	−0.0001659	−0.82%	0.0001511	0.83%
Household size	0.0000122	0.06%	−0.0002440	−1.21%	0.0000350	0.19%
All included variables	0.0012359	6.08%	0.0011786	5.84%	0.0023031	12.71%
N	10,791		4,170		6,545	

Note: Blinder-Oaxaca decomposition is based on analyses of a pooled sample of male and female.

Table 15: Decompositon of Gender Gap in Intrapreneurship: Across Races

	White Group		Black Group		Hispanic Group	
Male mean (%)	2.79		8.58		6.88	
Female mean (%)	0.91		1.69		4.84	
Male − Female gap (%)	1.88		6.89		2.05	
Contributions from gender differences in:						
Foreign born	−0.0000616	−0.33%	0.0005280	0.77%	0.0011069	5.41%
Age 18 to 24	0.0005812	3.10%	0.0255306	37.05%	0.0023292	11.38%
Age 25 to 34	0.0000104	0.06%	−0.0185742	−26.96%	0.0085679	41.87%
Age 35 to 44	0.0002619	1.40%	0.0101990	14.80%	0.0009041	4.42%
Age 45 to 54	−0.0002755	−1.47%	−0.0158373	−22.98%	−0.0042963	−20.99%
HS graduate	0.0000256	0.14%	−0.0065773	−9.55%	−0.0000804	−0.39%
Some college	−0.0000676	−0.36%	−0.0033060	−4.80%	0.0004977	2.43%
Bachelor	−0.0000537	−0.29%	0.0015259	2.21%	0.0014626	7.15%
Postgraduate	−0.0000354	−0.19%	0.0037822	5.49%	0.0002006	0.98%
Internet	−0.0003245	−1.73%	−0.0035293	−5.12%	−0.0000035	−0.02%
Part time	0.0017484	9.32%	−0.0004029	−0.58%	0.0000467	0.23%
Firm size 25 to 99	−0.0004582	−2.44%	0.0000583	0.08%	0.0019070	9.32%
Firm size 100 to 499	0.0001150	0.61%	0.0042730	6.20%	−0.0001350	−0.66%
Firm size 500 to 999	−0.0000708	−0.38%	0.0007591	1.10%	0.0008734	4.27%
Firm size 1000 and more	−0.0000679	−0.36%	0.0000518	0.08%	−0.0006294	−3.08%
Married	−0.0001020	−0.54%	−0.0026100	−3.79%	0.0003493	1.71%
Children under age 11	0.0001074	0.57%	0.0000921	0.13%	0.0039902	19.50%
Household size	−0.0000457	−0.24%	0.0004343	0.63%	0.0014428	7.05%
All included variables	0.0012872	6.86%	−0.0036027	−5.23%	0.0185340	90.56%
N	9,200		692		621	

Note: Blinder-Oaxaca decomposition is based on analyses of a pooled sample of male and female.

Table 16: Decompositon of Gender Gap in Intrapreneurship: Across Firm Sizes

	Firm size 99 or Less		Firm Size 100 or More	
Male mean (%)	3.00		3.24	
Female mean (%)	1.25		1.20	
Male − Female gap mean (%)	1.74		2.04	
Contributions from gender differences in:				
Black	−0.0000371	−0.21%	−0.0004540	−2.22%
Hispanic	−0.0000103	−0.06%	0.0001553	0.76%
Foreign born	−0.0000117	−0.07%	−0.0000196	−0.10%
Age 18 to 24	0.0001216	0.70%	0.0004864	2.38%
Age 25 to 34	−0.0000064	−0.04%	0.0002826	1.38%
Age 35 to 44	−0.0000338	−0.19%	0.0003838	1.88%
Age 45 to 54	−0.0000342	−0.20%	−0.0003432	−1.68%
HS graduate	−0.0001737	−1.00%	0.0000279	0.14%
Some college	0.0000833	0.48%	−0.0000177	−0.09%
Bachelor	0.0001135	0.65%	0.0000340	0.17%
Postgraduate	0.0000188	0.11%	−0.0000170	−0.08%
Internet	−0.0001536	−0.88%	−0.0001292	−0.63%
Part time	0.0000940	0.54%	0.0012374	6.05%
Firm size 25 to 99	−0.0001364	−0.78%		
Firm size 500 to 999			−0.0000039	−0.02%
Firm size 1000 and more			0.0000005	0.00%
Married	−0.0000335	−0.19%	−0.0001417	−0.69%
Children under age 11	0.0000090	0.05%	0.0001383	0.68%
Household size	0.0000337	0.19%	−0.0002320	−1.13%
All included variables	−0.0001571	−0.90%	0.0013880	6.79%
N	4,735		6,056	

Note: Blinder-Oaxaca decomposition is based on analyses of a pooled sample of male and female.

Table A1: State-Level Data

State	Homestead Exemption ($)	Median Home Value ($)	Unemployment Rate (%)	Individual Income Tax Rate (%)	Corporate Income Tax Rate (%)	Sales Tax Rate (%)
Alabama	10,000	97,500	4	5	6.5	4
Arizona	150,000	185,400	4.7	5.04	6.97	5.6
Arkansas	Unlimited	87,400	4.9	7	6.5	6
California	75,000	477,700	5.4	9.3	8.84	6.25
Colorado	90,000	223,300	5	4.63	4.63	2.9
Conneticut	150,000	271,500	4.9	5	7.5	6
Delaware	0	203,800	4.2	5.95	8.7	0
D.C.	36,900	384,400	6.5	9	9.98	5.75
Florida	Unlimited	189,500	3.8	0	5.5	6
Georgia	20,000	147,500	5.3	6	6	4
Idaho	50,000	134,900	3.8	7.8	7.6	6
Illinois	15,000	183,900	5.7	3	7.3	6.25
Indiana	15,000	114,400	5.4	3.4	8.5	6
Iowa	Unlimited	106,600	4.6	8.98	12	5
Kansas	Unlimited	107,800	5.1	6.45	4	5.3
Kentucky	10,000	103,900	6.1	6	8.25	6
Louisiana	25,000	101,700	7.1	6	8	4
Maine	70,000	155,300	4.8	8.5	8.93	5
Maryland	0	280,200	4.1	4.75	7	5
Massachusetts	500,000	361,500	4.8	5.3	9.5	5
Michigan	36,900	149,300	6.7	3.9	1.9	6
Minnesota	200,000	198,800	4	7.85	9.8	6.5
Mississippi	150,000	82,700	7.9	5	5	7
Missouri	15,000	123,100	5.4	6	6.25	4.225
Montana	200,000	131,600	4	11	6.75	0
Nebraska	12,500	113,200	3.8	6.84	7.81	5.5
Nevada	200,000	283,400	4.1	0	0	6.5
New Hampshire	200,000	240,100	3.6	5	9.25	0
New Jersey	36,900	333,900	4.4	8.97	9	6
New Mexico	60,000	125,500	5.3	6.8	7.6	5
New York	20,000	258,900	5	7.7	7.5	4
North Carolina	10,000	127,600	5.2	8.25	6.9	4.5
North Dakota	80,000	88,600	3.4	5.54	7	5
Ohio	10,000	129,600	5.9	7.5	8.5	6
Oklahoma	Unlimited	89,100	4.4	6.65	6	4.5
Oregon	33,000	201,200	6.1	9	6.6	0
Pennsylvania	36,900	131,900	5	3.07	9.99	6
Rhode Island	200,000	281,300	5	9.9	9	7
South Carolina	36,900	113,100	6.8	7	5	5
South Dakota	Unlimited	101,700	3.9	0	0	4
Tennessee	7,500	114,000	5.6	6	6.5	7
Texas	Unlimited	106,000	5.3	0	0	6.25
Utah	40,000	167,200	4.3	7	5	4.75
Vermont	150,000	173,400	3.5	9.5	9.75	6
Virginia	10,000	212,300	3.5	5.75	6	4
Washington	40,000	227,700	5.5	0	0	6.5
West Virginia	50,000	84,400	5	6.5	9	6
Wisconsin	40,000	152,600	4.7	6.75	7.9	5
Wyoming	20,000	135,000	3.6	0	0	4
Mean	74,107[a]	175,416	4.9	5.8	6.7	4.9
Median	40,000	147,500	4.9	6	7	5.3
Std. Dev.	93,558	87,561	1.01	2.81	2.89	1.76

Source: Corradin, Gropp, Huizinga and Laeven (2016) (Homestead exemptions); 2005 Amercan Community Survey (Median home values); Bureau of Labor Statistics (Unemployment rates); Tax Foundation (Taxes)

Note: Araska and Hawaii are not included because the PSED II does not included individulas living in these states.

[a]: States with "Unlimited" are excluded.

Table A2: Correlations between Institutional Variables

	Exemp	Home	Unemp	Ind In	Corp Inc	Sales
Exemp	-	−0.08	−0.20	−0.19	−0.17	0.07
Home	-	-	−0.06	0.14	0.19	0.03
Unemp	-	-	-	0.08	−0.02	0.23
Ind Inc	-	-	-	-	0.71	−0.17
Corp Inc	-	-	-	-	-	−0.04
Sales	-	-	-	-	-	-

Table A2.1: Parameter Estimates in Equation (1)

	Specification 1		*Specification 2*	
Dependent variable:				
1 = Staying in				
0 = Going out (Entrepreneurship)				
Female	0.256***	(0.053)		
Race: Ref = white				
Black	−0.402***	(0.080)		
Hispanic	−0.062	(0.092)		
Race: Ref = white male				
White female			0.241***	(0.059)
Black male			−0.461***	(0.105)
Black female			−0.089	(0.115)
Hispanic male			−0.053	(0.112)
Hispanic female			0.159	(0.151)
Foreign born	0.226**	(0.090)	0.228**	(0.090)
Age: Ref = 55 and more				
18 to 24	−0.030	(0.116)	−0.030	(0.116)
25 to 34	−0.213**	(0.095)	−0.214**	(0.094)
35 to 44	−0.225**	(0.090)	−0.225**	(0.089)
45 to 54	−0.184**	(0.083)	−0.184**	(0.083)
Education: Ref = HS dropout				
HS graduate	0.369***	(0.110)	0.371***	(0.110)
Some college	0.138	(0.109)	0.139	(0.109)
Bachelor	0.288**	(0.114)	0.290**	(0.114)
Postgraduate	0.289**	(0.123)	0.289**	(0.123)
Internet	−0.361***	(0.086)	−0.361***	(0.086)
Employment Status:Ref = full time				
Part time	−0.128*	(0.073)	−0.124*	(0.073)
Firm size: Ref = under firm size 24				
Firm size 25 to 99	0.006	(0.080)	0.005	(0.080)
Firm size 100 to 499	0.101	(0.088)	0.101	(0.088)
Firm size 500 to 999	−0.030	(0.107)	−0.032	(0.107)
Firm size 1000 and more	0.040	(0.059)	0.039	(0.059)
Household				
Married	0.087	(0.058)	0.090	(0.058)
Children under age 11	−0.061	(0.067)	−0.062	(0.067)
Size	−0.030	(0.022)	−0.030	(0.022)
Non-metro area	−0.018	(0.059)	−0.017	(0.059)
Unemployment rate	−0.003	(0.033)	−0.004	(0.033)
Homestead exemption ($\times 10^2$)	−0.027*	(0.015)	−0.027*	(0.015)
Median home value ($\times 10^2$)	−0.045*	(0.026)	−0.045*	(0.026)
Maximum personal income tax rate	0.013	(0.013)	0.013	(0.013)
Maximum corporate income tax rate	0.004	(0.012)	0.004	(0.012)
Sales tax rate	0.029	(0.019)	0.029	(0.019)
Constant	1.989***	(0.239)	1.996***	(0.239)
N	11,113		11,113	

Note: Robust standard errors are in parentheses.

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Table A2.2: Parameter Estimates in Equation (2)

	Specification 1		*Specification 2*	
Dependent variable:				
1 = Intrapreneurship				
0 = Else				
Female	-0.367^{***}	(0.054)		
Race: Ref = white				
Black	0.222^{***}	(0.084)		
Hispanic	0.151^{*}	(0.088)		
Race: Ref = white male				
White female			-0.348^{***}	(0.060)
Black male			0.274^{**}	(0.107)
Black female			-0.207	(0.129)
Hispanic male			0.163	(0.102)
Hispanic female			-0.223	(0.156)
Foreign born	0.090	(0.079)	0.089	(0.079)
Age: Ref = 55 and more				
18 to 24	0.396^{***}	(0.108)	0.397^{***}	(0.108)
25 to 34	0.265^{***}	(0.095)	0.264^{***}	(0.095)
35 to 44	0.141	(0.091)	0.142	(0.090)
45 to 54	0.148^{*}	(0.083)	0.148^{*}	(0.083)
Education: Ref = HS dropout				
HS graduate	-0.137	(0.110)	-0.137	(0.110)
Some college	-0.112	(0.111)	-0.113	(0.111)
Bachelor	-0.121	(0.114)	-0.122	(0.114)
Postgraduate	0.004	(0.121)	0.006	(0.121)
Internet	0.167^{**}	(0.078)	0.167^{**}	(0.078)
Employment Status:Ref = full time				
Part time	-0.151^{*}	(0.081)	-0.154^{*}	(0.081)
Firm size: Ref = under firm size 24				
Firm size 25 to 99	-0.296^{***}	(0.092)	-0.295^{***}	(0.092)
Firm size 100 to 499	-0.108	(0.083)	-0.107	(0.083)
Firm size 500 to 999	-0.121	(0.113)	-0.119	(0.113)
Firm size 1000 and more	-0.110^{*}	(0.058)	-0.109^{*}	(0.058)
Household				
Married	-0.095	(0.059)	-0.097^{*}	(0.059)
Children under age 11	0.060	(0.070)	0.062	(0.070)
Size	0.008	(0.022)	0.008	(0.022)
ρ	0.895^{***}	(0.019)	0.867^{***}	(0.025)
Constant	-1.908^{***}	(0.136)	-1.913^{***}	(0.136)
LL	-2739.717		-2738.989	
AIC	5583.435		5589.978	
N	11,113		11,113	

Notes: Robust standard errors are in parentheses. LL stands for Log Likelihood, and AIC for Akaike's Information Criterion.
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Table A2.3: Parameter Estimates in Equation (1)

	Specification 3		*Specification 4*	
Dependent variable:				
1 = Staying in				
0 = Going out (Entrepreneurship)				
Female	0.274***	(0.064)	0.319***	(0.116)
Race: Ref = white				
Black	−0.402***	(0.080)	−0.402***	(0.080)
Hispanic	−0.063	(0.092)	−0.061	(0.092)
Foreign born	0.226**	(0.090)	0.226**	(0.090)
Age: Ref = 55 and more				
Age 18 to 24	−0.030	(0.116)	−0.032	(0.116)
Age 25 to 34	−0.212**	(0.095)	−0.211**	(0.095)
Age 35 to 44	−0.225**	(0.090)	−0.224**	(0.090)
Age 45 to 54	−0.184**	(0.083)	−0.183**	(0.083)
Education: Ref = HS dropout				
HS graduate	0.370***	(0.110)	0.369***	(0.110)
Some college	0.140	(0.109)	0.138	(0.109)
Bachelor	0.289**	(0.114)	0.288**	(0.114)
Postgraduate	0.289**	(0.123)	0.287**	(0.123)
Internet	−0.362***	(0.086)	−0.361***	(0.086)
Employment Status: Ref = full time				
Part time	−0.126*	(0.073)	−0.126*	(0.073)
Firm size: Ref = under firm size 24				
Firm size 25 to 99	0.006	(0.080)	0.005	(0.080)
Firm size 100 to 499	0.101	(0.088)	0.100	(0.088)
Firm size 500 to 999	−0.030	(0.107)	−0.030	(0.107)
Firm size 1000 and more	0.039	(0.059)	0.039	(0.059)
Household				
Married	0.086	(0.058)	0.087	(0.058)
Children under age 11	−0.041	(0.078)	−0.062	(0.067)
Children under age 11 × Female	−0.051	(0.107)		
Household size	−0.030	(0.022)	−0.022	(0.026)
Size × Female			−0.021	(0.034)
Non-metro area	−0.018	(0.059)	−0.018	(0.059)
Unemployment rate ($\times 10^2$)	−0.003	(0.033)	−0.003	(0.033)
Homestead exemption ($\times 10^2$)	−0.027*	(0.015)	−0.027*	(0.015)
Median home value	−0.045*	(0.026)	−0.045*	(0.026)
Maximum personal income tax rate	0.013	(0.013)	0.012	(0.013)
Maximum corporate income tax rate	0.004	(0.012)	0.004	(0.012)
Sales tax rate	0.029	(0.019)	0.029	(0.019)
Constant	1.984***	(0.240)	1.968***	(0.243)
N	11,113		11,113	

Note: Robust standard errors are in parentheses.

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Table A2.4: Parameter Estimates in Equation (2)

	Specification 3		*Specification 4*	
Dependent variable:				
1 = Intrapreneurship				
0 = Else				
Female	-0.342^{***}	(0.065)	-0.333^{***}	(0.119)
Black	0.224^{***}	(0.084)	0.222^{***}	(0.084)
Hispanic	0.150^{*}	(0.088)	0.151^{*}	(0.088)
Foreign born	0.090	(0.079)	0.090	(0.079)
Age 18 to 24	0.397^{***}	(0.108)	0.396^{***}	(0.108)
Age 25 to 34	0.267^{***}	(0.095)	0.267^{***}	(0.095)
Age 35 to 44	0.141	(0.091)	0.143	(0.091)
Age 45 to 54	0.148^{*}	(0.083)	0.149^{*}	(0.083)
HS graduate	-0.135	(0.110)	-0.137	(0.110)
Some college	-0.110	(0.111)	-0.112	(0.111)
Bachelor	-0.119	(0.114)	-0.121	(0.114)
Postgraduate	0.006	(0.121)	0.004	(0.121)
Internet	0.165^{**}	(0.078)	0.166^{**}	(0.078)
Part time	-0.147^{*}	(0.081)	-0.149^{*}	(0.081)
Firm size 25 to 99	-0.297^{***}	(0.092)	-0.297^{***}	(0.092)
Firm size 100 to 499	-0.107	(0.083)	-0.108	(0.083)
Firm size 500 to 999	-0.121	(0.113)	-0.122	(0.112)
Firm size 1000 and more	-0.110^{*}	(0.058)	-0.110^{*}	(0.058)
Married	-0.097^{*}	(0.059)	-0.095	(0.059)
Children under age 11	0.085	(0.079)	0.059	(0.070)
Children under age 11 × Female	-0.076	(0.114)		
Household size	0.008	(0.022)	0.012	(0.024)
Household size × Female			-0.012	(0.037)
ρ	0.859^{***}	(0.023)	0.847^{***}	(0.024)
Constant	-1.916^{***}	(0.137)	-1.919^{***}	(0.141)
LL	-2739.393		-2739.492	
AIC	5586.785		5586.985	
N	11,113		11,113	

Notes: Robust standard errors are in parentheses. LL stands for Log Likelihood, and AIC for Akaike's Information Criterion.
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Table A2.5: Parameter Estimates in Equation (1)

	Specification 5		*Specification 6*	
Dependent variable:				
1 = Staying in				
0 = Going out (Entrepreneurship)				
Female	0.756***	(0.245)	0.368***	(0.118)
Race: Ref = white				
Black	−0.404***	(0.080)	−0.408***	(0.080)
Hispanic	−0.062	(0.092)	−0.064	(0.092)
Foreign born	0.229**	(0.091)	0.226**	(0.090)
Age: Ref = 55 and more				
Age 18 to 24	−0.028	(0.117)	−0.035	(0.117)
Age 25 to 34	−0.212**	(0.095)	−0.215**	(0.095)
Age 35 to 44	−0.228**	(0.090)	−0.228**	(0.090)
Age 45 to 54	−0.185**	(0.083)	−0.186**	(0.083)
Education: Ref = HS dropout				
HS graduate	0.532***	(0.130)	0.371***	(0.110)
Some college	0.228*	(0.125)	0.139	(0.109)
Bachelor	0.412***	(0.133)	0.290**	(0.115)
Postgraduate	0.411***	(0.144)	0.291**	(0.123)
HS graduate × Female	−0.635**	(0.269)		
Some colleage × Female	−0.447*	(0.260)		
Bachelor × Female	−0.533**	(0.266)		
Postgraduate × Female	−0.529*	(0.280)		
Internet	−0.359***	(0.086)	−0.359***	(0.086)
Employment Status: Ref = full time				
Part time	−0.128*	(0.072)	−0.130*	(0.073)
Firm size: Ref = under firm size 24				
Firm size 25 to 99	0.005	(0.081)	0.002	(0.080)
Firm size 100 to 499	0.106	(0.088)	0.098	(0.088)
Firm size 500 to 999	−0.033	(0.107)	−0.036	(0.107)
Firm size 1000 and more	0.045	(0.059)	0.039	(0.059)
Household				
Married	0.091	(0.058)	0.084	(0.058)
Children under age 11	−0.060	(0.068)	−0.062	(0.067)
Size	−0.032	(0.022)	−0.029	(0.022)
Non-metro area	−0.018	(0.060)	−0.015	(0.059)
Unemployment rate	−0.004	(0.033)	−0.002	(0.033)
Homestead exemption ($\times 10^2$)	−0.027*	(0.015)	−0.005	(0.019)
Homestead exemption × Female ($\times 10^2$)			−0.052*	(0.027)
Median home value ($\times 10^2$)	−0.045*	(0.027)	−0.038	(0.033)
Median home value × Female ($\times 10^2$)			−0.017	(0.046)
Maximum personal income tax rate	0.013	(0.013)	0.012	(0.013)
Maximum corporate income tax rate	0.004	(0.012)	0.005	(0.012)
Sales tax rate	0.030	(0.019)	0.029	(0.019)
Constant	1.875***	(0.244)	1.943***	(0.245)
N	11,113		11,113	

Note: Robust standard errors are in parentheses.

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Table A2.6: Parameter Estimates in Equation (2)

	Specification 5		*Specification 6*	
Dependent variable:				
1 = Intrapreneurship				
0 = Else				
Female	−0.487**	(0.228)	−0.367***	(0.054)
Race: Ref = white				
Black	0.223***	(0.084)	0.222***	(0.084)
Hispanic	0.150*	(0.088)	0.151*	(0.088)
Foreign born	0.091	(0.079)	0.090	(0.079)
Age: Ref = 55 and more				
Age 18 to 24	0.388***	(0.109)	0.396***	(0.108)
Age 25 to 34	0.258***	(0.094)	0.265***	(0.095)
Age 35 to 44	0.136	(0.091)	0.141	(0.091)
Age 45 to 54	0.146*	(0.083)	0.148*	(0.083)
Education: Ref = HS dropout				
HS graduate	−0.144	(0.127)	−0.137	(0.110)
Some college	−0.128	(0.128)	−0.112	(0.111)
Bachelor	−0.176	(0.135)	−0.121	(0.114)
Postgraduate	−0.046	(0.141)	0.004	(0.121)
HS graduate × Female	0.057	(0.253)		
Some colleage × Female	0.089	(0.251)		
Bachelor × Female	0.198	(0.252)		
Postgraduate × Female	0.186	(0.262)		
Internet	0.169**	(0.078)	0.167**	(0.078)
Employment Status: Ref = full time				
Part time	−0.147*	(0.081)	−0.151*	(0.081)
Firm size: Ref = under firm size 24				
Firm size 25 to 99	−0.295***	(0.092)	−0.296***	(0.092)
Firm size 100 to 499	−0.109	(0.083)	−0.108	(0.083)
Firm size 500 to 999	−0.121	(0.113)	−0.121	(0.113)
Firm size 1000 and more	−0.108*	(0.058)	−0.110*	(0.058)
Household				
Married	−0.095	(0.059)	−0.095	(0.059)
Children under age 11	0.061	(0.070)	0.060	(0.070)
Size	0.009	(0.022)	0.008	(0.022)
ρ	0.907***	(0.053)	0.899***	(0.020)
Constant	−1.883***	(0.147)	−1.908***	(0.136)
LL	−2735.725		−2737.844	
AIC	5591.451		5583.689	
N	11,113		11,113	

Notes: Robust standard errors are in parentheses. LL stands for Log Likelihood, and AIC for Akaike's Information Criterion.
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$