Gender gaps in the gig economy: Consequences for entrepreneurship in the 21st century

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Abstract Although the gender gap in entrepreneurship has been well-documented, we still know little about gender differences in gig work and freelancing activities, which continue to grow in importance. Using liberal and feminist theories, we hypothesize that gender differences will be smaller in the gig economy than in entrepreneurship. The primary reason is because the gig economy provides flexibility, which women find especially attractive relative to men. Using data from the Entrepreneurship in the Population survey, we find partial support for our hypotheses—relative to business ownership and nascent entrepreneurship, the gender gap is smaller for gig work but similar for freelancing. Moreover, if women do own a business or engage in freelancing, they are equally likely as men to remain entrepreneurs. Thus, the gender gap exists in entry but not exit. Our descriptive evidence suggests non-binary individuals are more likely than men and women to use gig work as their primary job and more likely to remain business owners, but the regression results do not support these findings. We therefore find evidence of a gender gap in entrepreneurship between men and women but not between non-binary individuals, men, and women.

Keywords: entrepreneurship; freelance; gender identity; gender gap; gig economy

JEL codes: J16, L26, M13

1. Introduction

It is well-established that women are less likely than men to be entrepreneurs (Brush et al., 2008; Coleman and Robb, 2009; Fossen, 2012; Guzman and Kacperczyk, 2019). Factors responsible for this gender gap include women's disproportionate responsibility in child-rearing and household production (Boden, 1999; Craig et al., 2012; Parker, 2018; Thébaud, 2015), societal norms that prioritize a work-life balance over financial success and innovation for women (Carter et al., 2003; Murray and Graham, 2007; Rønsen, 2014; Shane, 2008; Thébaud, 2016), perceptions about entrepreneurship (Tonoyan et al., 2020), and psychological factors like self-efficacy, fear of failure, and networks (Simmons et al., 2019).

However, our understanding of the gender gap in entrepreneurship has at least three limitations. First, studies have examined the gender gap in entrepreneurship with an emphasis on nascent entrepreneurship and business ownership (Brush et al., 2008; Coleman and Robb, 2009; Fossen, 2012; Minniti and Nardone, 2007; Simmons et al., 2019). In contrast, we have a limited understanding of gender differences in the gig economy with activities like gig work and freelance entrepreneurship. These activities have gained traction in recent years—a trend likely to continue (Burke et al., 2020; Burke and Cowling, 2020a). It is therefore important to understand whether gender differences exist not just with nascent entrepreneurship or business ownership, but also in the gig economy. If gender differences are smaller, policy makers might consider encouraging women to participate in gig work and freelance entrepreneurship to counteract the gender gap in business ownership and nascent entrepreneurship. If gender differences remain or are larger, it becomes important to understand why. Second, few studies examine gender and entrepreneurship beyond the binary spectrum of men and women to include other gender identities (Marlow and Martinez Dy, 2018; Orser et al., 2020; Sharma and Sahni, 2020). Our study bridges this gap. We

examine the gender gap in various forms of entrepreneurship between non-binary individuals, women, and men. Lastly, the literature has focused on the gender gap in entry and has tended to overlook exit. Although structural barriers that obstruct entry can result in gender disparities (Coleman and Robb, 2009; Constantinidis et al., 2006; Fairlie and Robb, 2009; Guzman and Kacperczyk, 2019), our knowledge about the nature of the gender gap in exit is limited. Entrepreneurship is a process, and examining the gender gap throughout this process is critical (Guzman and Kacperczyk, 2019).

In light of the above, the objective of our study is to examine the gender gap with a particular emphasis on entrepreneurial exit, the gig economy, and inclusive of non-binary individuals. Using data from the recent Entrepreneurship in the Population (EPOP) survey, we find women are less likely than men to engage in the gig economy (i.e., gig work and freelancing) as well as traditional entrepreneurship (i.e., nascent entrepreneurship and business ownership). Nevertheless, once they become business owners or freelancers, women are equally likely as men to remain entrepreneurs, suggesting that the gender gap exists in entry but not exit. Furthermore, the magnitude of the gender gap varies depending on the type of activity. women are 12 percentage points less likely than men to use gig work as their primary job, while they are 44 percentage points less likely to have ever owned a business. Our descriptive evidence suggests non-binary individuals are more likely than men to use gig work as their primary job and more likely to remain as business owners. The regression results, however, do not support these findings. Therefore, we find evidence of a gender gap between men and women but not between non-binary individuals, men, and women.

Our study contributes to the literature in several ways. First, our results demonstrate women are less likely than men to be entrepreneurs—a finding consistent with a gender gap in

entrepreneurship (Caliendo et al., 2015; Fossen, 2012; Guzman and Kacperczyk, 2019). Specifically, we find a gender gap for gig work and freelance entrepreneurship, both of which have been largely overlooked in the gender gap in entrepreneurship literature. We also uncover a gender gap in nascent entrepreneurship and business ownership. However, we do not find a gender gap in exit, suggesting that the gender gap is not an issue of women being less successful in entrepreneurship but rather one of women being less likely to enter into entrepreneurship. By documenting evidence of a gender gap in entry, but not exit, our study extends the literature to provide a more complete view of the gender gap in entrepreneurship.

Second, our study addresses calls in the literature to "continue to monitor and report on women entrepreneurship, especially in the light of ongoing demographic and technological changes which have a bearing on it" (Parker, 2018, p. 327). Our study responds to this call by examining the gender gap in gig work and freelance entrepreneurship, both of which have increased in importance due to demographic and technological shifts. Because the platform economy has democratized entrepreneurship and enabled women to start up online ventures (Parker, 2018), it is important to consider whether the gender gap occurs in these forms of "everyday" entrepreneurship (Aldrich and Ruef, 2018; Audretsch et al., 2015; Welter et al., 2017), or if the gender gap only appears in growth-oriented entrepreneurship. Our study thus increases our knowledge of the gender gap in entrepreneurship for gig work and freelance entrepreneurship.

Third, we extend the gender and entrepreneurship literature by including non-binary individuals in our analysis. This is an unfortunate oversight, one that is primarily due to limitations in past surveys. By including non-binary individuals in our analysis, our study contributes to the recent literature on "inclusive entrepreneurship" (Bakker and McMullen, 2023; Tonoyan and Boudreaux, 2023; van den Groenendaal et al., 2023) and responds to calls to explore LGBTQIA

individuals' engagement in entrepreneurship (Marlow and Martinez Dy, 2018). Our analysis therefore provides a more complete picture of the gender gap in entrepreneurship—one that extends beyond the binary spectrum. Our descriptive evidence suggests non-binary individuals are more likely than men and women to use gig work as their primary job and are more likely to remain business owners, our regression results do not support these findings. We therefore conclude there is evidence of a gender gap in entrepreneurship between men and women but not between non-binary individuals, men, and women.

Lastly, our study has important policy implications. If the gender gap in entrepreneurship reflects discrimination or structural barriers (Fischer et al., 1993; Robb and Watson, 2012), policymakers should consider removing these barriers to attenuate the gender gap. For instance, barriers like childcare and domestic responsibilities disproportionately affect women and may discourage entry into some forms of entrepreneurship. Thus, policymakers should not only focus on the quantity of entrepreneurship but also on addressing barriers that hinder the quality of entrepreneurship. However, if the gender gap in entrepreneurship reflects different tastes and preferences between genders rather than discrimination (Black, 2019; Klapper and Parker, 2011; Robb and Watson, 2012), the policy implications are less clear. We urge policymakers to consider both perspectives when deciding whether or how to alleviate the gender gap in entrepreneurship.

2. Theoretical and conceptual background

2.1. Past research

There is a vast literature on the gender gap in entrepreneurship (Brush et al., 2008; Coleman and Robb, 2009; Guzman and Kacperczyk, 2019; Robb and Watson, 2012; Thébaud, 2015). Studies have shown that a lower proportion of women than men engage in entrepreneurship in almost all developed countries (Parker, 2018). For instance, female self-employment rates range

from 20% in the UK, Ireland, and Sweden to 40% in Belgium and Portugal (Cowling, 2000). In a comparison of 30 OECD countries, Fossen (2012) found the self-employment share was lower for women than men across all countries except Turkey, Mexico, and Switzerland. Similarly, a study of 27 EU countries by the OECD (2014) revealed that only 25% of business owners with employees were women, and women accounted for 20-40% of sole-proprietorships. Across countries, Minniti (2009) found that 50% more men than women were engaged in early stage venturing activity, with no countries showing significantly more activity by women than men. However, despite these findings, our knowledge of the gender gap remains limited in several ways.

First, although studies have examined the gender gap in entrepreneurship, it has mainly focused on nascent entrepreneurship and business ownership. However, we currently know little about gender differences in other activities such as the gig economy (e.g., gig work and freelance entrepreneurship). It is important to examine gender differences in these activities because they have grown in importance in recent years, and this trend is likely to continue (Burke et al., 2020; Burke and Cowling, 2020a). There is considerable overlap between these activities and entrepreneurship, but they are not exactly the same. Therefore, it is important to for both theory and practice to examine whether gender differences exist and if so, how they differ from nascent entrepreneurship and business ownership. Second, despite recent calls to explore LGBTQIA individuals' engagement in entrepreneurship (Marlow and Martinez Dy, 2018), few studies have examined the gender gap in entrepreneurship beyond the binary spectrum of male and female. Rather than being an oversight, this is primarily due to data limitations. Thus, our knowledge remains incomplete on differences between non-binary individuals, men, and women. Lastly, despite the extensive research on the gender gap in entry (Caliendo et al., 2015; Fossen, 2012; Guzman and Kacperczyk, 2019), we know much less about the gender gap in exit. Although it is

well-documented that structural barriers that impede entry lead to gender disparities (Coleman and Robb, 2009; Constantinidis et al., 2006; Fairlie and Robb, 2009; Guzman and Kacperczyk, 2019), little is known about the nature of the gender gap in exit. If gender differences in exit exist, it becomes important to understand the reasons and to assess if any policies are necessary.

In the sections below, we shift the focus to examine the gender gap in the gig economy, exit, and for non-binary individuals. We use liberal and feminist theories to propose that women and men will select into different forms of gig work, freelancing, and entrepreneurship. Specifically, we expect gendered processes to increase the appeal of flexible work-life arrangements for women, relative to men. As a result, we expect women to pursue gig work and freelance entrepreneurship at greater rates than men, and we expect men to pursue nascent entrepreneurship and business ownership at greater rates than women. These gendered processes imply the gender gap decreases with flexibility and entry costs. Therefore, we predict the gender gap is (a) smaller in the gig economy and (b) larger in measures of entrepreneurship like business ownership and nascent entrepreneurship.

2.2. Liberal and social feminist theory

2.2.1. Liberal feminist theory

Liberal feminist theory (Fischer and Arnold, 1994; Fischer et al., 1993) stresses the structural barriers that women face in society. These barriers prevent women from gaining the necessary experience to access resources. The liberal feminist perspective explains how discrimination affects the gender gap. In particular, men and women use finance differently (Ahl, 2006; Robb and Watson, 2012). Compared to men, women use smaller amounts of external finance and rely on larger amounts of self-finance (Carter and Rosa, 1998; Coleman and Robb, 2009;

Constantinidis et al., 2006; Fairlie and Robb, 2009). In a meta-analysis, Geiger (2020) finds that women receive lower funding amounts for their venture but with greater success.

However, some have concluded that there is weaker evidence of lending discrimination, at least in developed countries (Parker, 2018; Robb and Watson, 2012). For instance, studies have found negligible differences in the ways bank loan officers respond to gender for business loan applications (Carter et al., 2007; Wilson et al., 2007), and women-owned small businesses tend to have similar access as men to line-of-credit loans from banks (Haynes and Haynes, 1999). Furthermore, anti-discrimination legislation has been established for decades (Ladd, 1982). Because there is weak evidence to support lending discrimination, other more salient explanations of the gender gap in entrepreneurship have emerged in recent years. Specifically, social feminist theory has replaced liberal feminist theory as the primary explanation of the gender gap.

2.2.2. Social feminist theory

Social feminist theory contends women possess different perspectives, goals, and choices than men. That is, "men and women are inherently different by nature and these differences (rather than discrimination) will cause them to operate their ventures differently" (Robb and Watson, 2012, p. 546). Studies have found women take fewer risks than men (Caliendo et al., 2015; Carter and Rosa, 1998; Fossen, 2012; Robb and Watson, 2012). Other studies have found that female nascent entrepreneurs tend to rate financial success and innovation as less important than male nascent entrepreneurs (Carter et al., 2003; DeMartino and Barbato, 2003). Women therefore tend to value entrepreneurship for work-life balance reasons rather than for career aspirations (Parker, 2018; Shane, 2008).

One implication of social feminist theory is that entrepreneurship is a gendered process—societal norms and pressures to attain a work-life balance influence women's decision-making. To

achieve this balance, women tend to gravitate toward different college majors and degrees than men. A number of studies suggest that female entrepreneurs are less likely than male entrepreneurs to have degrees in business or STEM and are more likely to study health and education (Leoni and Falk, 2010; Marvel et al., 2015; Menzies et al., 2004). This affects the gender industry composition (Klapper and Parker, 2011). Furthermore, domestic household production and child-rearing disproportionately affects women, even when both partners work (Boden, 1999; Craig et al., 2012). Indeed, the "flexibility hypothesis"—entrepreneurship offers the flexibility to combine childcare and other domestic duties with a work schedule (Parker, 2018; Shane, 2008)—has garnered large support in the literature (Carr, 1996; Evans and Leighton, 1989; Kepler and Shane, 2007; Rønsen, 2014; Thébaud, 2016). In particular, having young children (e.g., under the age of 6) has the greatest impact on female self-employment (Boden, 1999, 1996; Connelly, 1992; Edwards and Field-Hendrey, 2002; Wellington, 2006). In fact, when employers provide paid sick leave and subsidized child care, entrepreneurship becomes less attractive for women, thus making the gender gap larger in entrepreneurship (Thébaud, 2015).

In the sections that follow, we apply the liberal and feminist perspectives to extend the gender gap in entrepreneurship to the gender gap in the gig economy. We also examine how gender differences emerge for non-binary individuals and in entrepreneurial exit.

2.3. Hypotheses development

2.3.1. The gender gap in the gig economy

In this section, we contend that the gender gap in gig work and freelance entrepreneurship will be smaller than in other forms of entrepreneurship like nascent entrepreneurship or business ownership for two primary reasons: gig work and freelance entrepreneurship provides greater flexibility and lower entry barriers. Social feminist theory proposes that gender disparities reflect

different tastes and preferences, rather than discrimination (Klapper and Parker, 2011; Robb and Watson, 2012). A number of studies have found women prefer entrepreneurship for its flexibility and men prefer entrepreneurship for its autonomy (Parker, 2018; Shane, 2008). Because gig workers and freelance entrepreneurship provides highly flexible schedules (Burke et al., 2020; Burke and Cowling, 2020a), women should find these activities attractive, even more so than men. Moreover, studies have found that women are more likely than men to work on a part-time basis (Thompson et al., 2009), and gig work and freelance entrepreneurship accommodates a flexible schedule of working part-time (Burke et al., 2020; Burke and Cowling, 2020a). Accordingly, women should find gig work and freelance attractive. On the other hand, men are less interested in flexibility. Instead, they tend to pursue entrepreneurship to gain greater autonomy. For example, surveys have found that men are more likely to be interested in entrepreneurship for autonomy rather than for flexibility (Parker, 2018; Shane, 2008). Thus, while gig work provides both flexibility and autonomy, it accommodates more flexibility when compared to entrepreneurship and business ownership. Consequently, gig work should be relatively more attractive to women than men, which decreases the gender gap in gig work relative to nascent entrepreneurship and business ownership.

In addition to providing greater flexibility, gig work and freelance entrepreneurship have lower entry barriers when compared to business ownership and nascent entrepreneurship. For example, business ownership can require substantial capital outlays, depending on the sector (Cole and Sokolyk, 2018; Robb and Robinson, 2014), and it is well-documented that women use smaller amounts of external finance and rely on larger amounts of self-finance than men (Carter and Rosa, 1998; Coleman and Robb, 2009; Constantinidis et al., 2006; Fairlie and Robb, 2009). Hence, from a liberal feminist perspective, discrimination in the capital market will deter business ownership

to a greater extent for women than men. This suggests the structural barriers that impede entrepreneurial activity will be greater for business ownership relative to gig work and freelance entrepreneurship. All else equal, we expect these greater entry barriers to be more of an obstacle for women than men. In turn, this will encourage greater rates of gig work and freelance entrepreneurship for women. However, men do not face these same entry barriers. They do not confront discrimination in the capital market like women, and as a result, men will be discouraged less by business ownership and nascent entrepreneurship. Thus, gig work and freelance entrepreneurship will be relatively less appealing to men than women.

In sum, we propose that women will pursue gig work and freelance entrepreneurship at greater rates than men because gig work and freelance entrepreneurship is more flexible and has lower entry barriers than business ownership and nascent entrepreneurship. Therefore, we predict the gender gap is smaller in the gig economy and larger in business ownership and nascent entrepreneurship. Based on this reasoning, we propose the following hypothesis:

Hypothesis 1: The gender gap between men and women will be smaller for the gig economy than in entrepreneurship.

2.3.2. The gender gap in exit

Although it is well-documented that nascent entrepreneurship rates and business ownership rates are lower among women than men, the focus in the literature has been on entrepreneurial entry rather than exit (Delmar and Davidsson, 2000; Reynolds et al., 2004; Tonoyan et al., 2020). However, there are fewer reasons to expect the gender gap to be larger for entrepreneurial exit.

From a liberal feminist perspective, women face lending discrimination and structural barriers that inhibit entrepreneurship. Yet, these factors tend to deter entry rather than exit. Studies

have found the proportion of men and women in nascent entrepreneurship is similar to the proportion of men and women in established businesses (Delmar and Davidsson, 2000). Because the proportions are similar between nascent entrepreneurship and established businesses, this implies the gender gap occurs in entry rather than exit. For the gender gap to be larger in exit, there should be a larger proportion of men than women to be established business owners relative to nascent entrepreneurship, suggesting the gender gap grows throughout the entrepreneurship process and thus widens through exit. However, studies have found the gender gap is largest in the start-up phase (Brown et al., 2019; Tonoyan et al., 2020), due to start-up perceptions and capital constraints. For these reasons, we expect the gender gap to be smaller in exit than in entry.

From a social feminist perspective, the gender gap reflects differences in tastes and preferences rather than discrimination (Klapper and Parker, 2011; Robb and Watson, 2012). This also includes social norms and pressures that result in biased gendered roles and perceptions. For example, women bear a disproportionate responsibility for the family and children (Boden, 1999; Craig et al., 2012), and studies have found that having young children (e.g., under the age of 6) has the greatest impact on female self-employment (Boden, 1999, 1996; Connelly, 1992; Edwards and Field-Hendrey, 2002; Wellington, 2006). Furthermore, due to different tastes, preferences, and societal and cultural norms, women tend to gravitate toward different college majors and degrees, which affects the gender industry composition (Leoni and Falk, 2010; Marvel et al., 2015; Menzies et al., 2004). However, we contend these influences are more likely to affect entry than exit.

In sum, both the liberal and social feminist perspectives provide explanations for the gender gap in entry. These mechanisms, however, are less applicable to exit. Because there exist barriers to entry that inhibit women's entrepreneurship, once women surpass these barriers, there is less reason to believe the gender gap will continue to grow through exit. Therefore, we predict the

gender gap is larger in entry and smaller in exit. Based on this reasoning, we propose the following hypothesis:

Hypothesis 2: The gender gap between men and women will be smaller for exit than for entry.

3. Data and Methods

3.1. Sample and data description

To examine the gender gaps, we use data from the recent Entrepreneurship in the Population Survey (EPOP). The goal of the EPOP is to "better understand experiences with entrepreneurial activity in the U.S population through survey data collection" (EPOP, 2022). The EPOP survey includes several measures of entrepreneurial behavior at the local level and provides policymakers and researchers with new information on the experiences and perceptions of entrepreneurs in their local community (EPOP, 2022). The EPOP Survey uses a nationally representative sample to measure current and former business ownership, the extent to which individuals have taken or are currently taking steps toward business formation, the engagement in freelance work, and engagement with the gig economy. The EPOP survey uses a stratified sampling design: States without a top 50 MSA (Metropolitan Statistical Area) constitute a primary sampling stratum. For states with one or more of the top 50 MSAs, each MSA and the rest of the state outside MSAs comprise a primary sampling stratum. MSAs comprised of counties from multiple states are divided into multiple primary sampling strata, one for each state. For more details on the sampling design, see the EPOP user guide (EPOP, 2022). The EPOP sample comprises 32,021 observations, though the sample size differs depending on the measure. EPOP plans to introduce annual data over the next several years.

3.2. Variables

3.2.1. Dependent variables

We analyze entrepreneurship measures in three categories: gig work, freelance entrepreneurship, and business ownership. Except for latent entrepreneurship (i.e., interest in starting a business), all measures are binary coded (1=yes; 0=no). Within the category gig work, we examine three measures: *Main Job Gig Work, Second Job Gig Work,* and *Outside Gig Work.* Outside Gig Work refers to gig work outside of the forms of employment the respondent already mentioned. In the category freelance entrepreneurship, we examine three measures: *Ever Freelancer*, *Still Freelancer*, and *Ever Owned a Business Excluding Freelance.* In the category business ownership, we examine five measures: *Ever Owned a Business, Still Own a Business, Nascent Business, Withdrawn Business,* and *Latent Entrepreneurship.* This last variable is on a scale from 1 to 5 where 1 indicates "Not at all Interested" and 5 indicates "Extremely Interested". Table 1 provides definitions for these variables.

[Insert Table 1 Here]

3.2.2. Independent variables

Our focal explanatory variable is the respondent's gender (i.e., Man, Woman, or Non-Binary). Each variable is binary coded (1=yes; 0=no). Approximately 42.6% of the sample are Men, 56.9% are Women, and 0.5% are Non-Binary.

3.2.3. Control variables

We include several control variables in our regression models. Because entrepreneurship rates vary by Metro area (Glaeser et al., 2010), we include *Urban* (1=yes; 0=no). We also include the respondent's *Age*. Studies have found that entrepreneurship entry increases with age often at a diminishing marginal rate (Azoulay et al., 2020; Boudreaux and Nikolaev, 2019; Lévesque and

Minniti, 2011, 2006; Zhang and Acs, 2018) The EPOP survey provides the ages of the respondent in five bins: 18-29, 30-39, 40-49, 50-64, and 65+. Next, we include the respondent's race/ethnicity. Studies have found entrepreneurship varies by race and ethnicity (Fairlie, 1999; Fairlie et al., 2022; Robb and Fairlie, 2007). We include the following categories: *Black*, *Hispanic*, and *Other.* Each is binary coded (1=yes; 0=no) with White being the reference category. Next, we include an individual's education. Studies have found education is related to entrepreneurial entry (Elert et al., 2015; Oosterbeek et al., 2010; Van Der Sluis et al., 2008). The EPOP survey includes four categories for education: *Less than College, Associate's Degree or Some College, Bachelor's Degree*, and *Graduate Degree*. Next, we include the respondent's marital status. Studies have documented that married men are more likely to be entrepreneurs (Parker, 2018; Shane, 2008). The EPOP survey includes five categories for marital status: *Single, Married, Widowed, Divorced,* and *Live with Partner.* Next, we include a respondent's military status. Little work has been done on this topic, but Heinz et al. (2017) found that veterans were twice as likely to be self-employed compared with non-veterans. This includes *Non-military*, *Active Duty*, and *Veteran.* Several studies have found that immigrants are more likely to be entrepreneurs (Dabić et al., 2020; Kerr and Kerr, 2020; Levie, 2007; Lofstrom and Bean, 2002; Malki et al., 2022). We therefore include citizenship. *US Citizen* is binary coded (1=yes; 0=no). We also include the respondent's number of children as a measure of family size. This speaks to the literature on family composition (Aldrich and Cliff, 2003). The EPOP survey includes four categories: *No Children, One Child, Two Children*, and *Three or More Children.* Lastly, we also include four indicators for the region of the country: *Northeast, Midwest, South,* and *West.* We include these regional fixed effects to account for geographical differences in entrepreneurship in the US.

3.3. Methods

We use several methods to test our hypotheses. First, we test for statistically significant differences in group means among gender for entrepreneurship. We also Illustrate these differences to ease interpretation. Second, we estimate logistic regression models for all measures of entrepreneurship except *latent entrepreneurship.* We use logistic regression because these entrepreneurship measures are binary response variables. We use ordered logistic regression for the model with the dependent variable, *latent entrepreneurship,* because it is ordered on a scale from 1 to 5 (i.e., from "little interest" to "extremely interested in starting a business"). We include the full set of control variables in all models and use robust standard errors.

3.3.1. Descriptive analysis

Table 2 reports the descriptive statistics for the EPOP sample. In Panel A of Table 2, 23% of individuals were involved in gig work as the main job, 59% were involved in gig work as a second job, and 14% were involved in outside gig work. On average, 34% of individuals were ever involved in freelance entrepreneurship. Conditional on having ever been involved in freelance entrepreneurship, 38% remained. Similarly, 20% of individuals responded they have ever owned a business, and conditional on having been a business owner, 36% remained a business owner. For early-stage entrepreneurship activity, 20% of individuals have been nascent business owners and 18% are withdrawn entrepreneurs. The average response for interest in starting a business is 3.3. For reference, a value of three on this scale denotes "somewhat interested."

[Insert Table 2 Here]

Although informative, these descriptions report sample averages that mask heterogeneity by gender. To better capture this heterogeneity, we report the descriptive statistics by gender for Women (Panel B), Non-Binary (Panel C), and Men (Panel D). Table 2 also reports a t-test

comparing each gender against men. For example, 23% of individuals use gig work as their main job, on average, but this ranges from 22% for women to 24% to men. For freelance entrepreneurship, 34% of individuals have ever been a freelancer, on average, but this ranges from 29% for women to 42% for men. For business ownership, 20% have ever owned a business, on average, but this ranges from 17% for women to 25% for men.

There are also large differences between men and women for gig work as a second job and nascent entrepreneurship. For instance, 63% of men use gig work as a second job, but only 56% of women use gig work as a second job. For nascent entrepreneurship, 19% of women are nascent entrepreneurs and 23% of men are nascent entrepreneurs. In contrast, there are only miniscule differences between men and women for those who remain as business owners and freelance entrepreneurs. For example, 36.2% of women and 35.6% of men remain as business owners, and 37% of women and 39% of men remain as freelance entrepreneurs.

We also observe differences between non-binary individuals and others. Strikingly, non-binary individuals are almost twice as likely to remain business owners compared to men and women (65% vs. 36%). Compared to men and women, non-binary individuals are also more likely to remain freelance entrepreneurs, to participate in outside gig work, and to be a nascent or withdrawn entrepreneur.

[Insert Figure 1 Here]

To ease comparisons, we illustrate the differences in the entrepreneurship rates by gender for gig work (Figure 1), freelance entrepreneurship (Figure 2), and business ownership (Figure 3). Women are less likely than men to use gig work, but non-binary individuals are more likely to use gig work as their primary job and for outside employment. Figure 2 reports women are less likely than men to use freelance work. Non-binary individuals are less likely than men to ever use

freelance or have a business excluding freelance. However, they are more likely to remain in freelance entrepreneurship compared to men and women.

[Insert Figure 2 Here]

Figure 3 indicates women are less likely to have ever owned a business and to be a nascent or withdrawn entrepreneur compared to men. However, women are equally likely as men to remain business owners. Strikingly, non-binary individuals are almost twice as likely to remain business owners compared to men and women. They are also more likely to be nascent or withdrawn entrepreneurs but less likely to have ever been business owners.

[Insert Figure 3 Here]

3.3.2. Regression analysis

Our descriptive analysis reports sizable differences between men, women, and non-binary individuals in various forms of entrepreneurship, including gig work, freelancing, nascent entrepreneurship, withdrawn entrepreneurship, and business ownership. This section analyzes whether these differences persist after adjusting for other observable individual traits. To examine the differences in entrepreneurship among gender, we estimate logistic regression models. Consider the following latent variable model:

$$E_i^* = \alpha + \beta G_i + X'\delta + \varepsilon_i \quad (1)$$

where *i* denotes individuals. *G* and *X* are the vectors of gender and controls, respectively. E_i^* is the latent propensity of the decision to become an entrepreneur or not, but we do not observe E_i^*. Rather, we observe E_i, which is a binary indicator of whether an individual is an entrepreneur or not. It equals one if $E_i^* > 0$ and zero if $E_i^* \leq 0$. Assuming $\varepsilon \sim N(0,1)$, the logit model is:

$$Prob\,(E_i = 1) = ln\left(\frac{p}{1-p}\right) = \Phi(\alpha + \beta G_i + X'\delta + \varepsilon_i) \quad (2)$$

where Φ is the cumulative distribution function of the standard normal distribution.

4. Results

4.1. Regression analysis of gender and entrepreneurship

Table 3 presents the results for gig work and freelance entrepreneurship by gender. We use logistic regression because our dependent variables are binary, and we report coefficient estimates as odds ratios (e^{β})[1]. Overall, women are less likely than men to become gig workers or to engage in freelance entrepreneurship. Compared to men, women are 11.5% (p = 0.011) less likely to use gig work as their primary job, 27.5% (p = 0.000) less likely to use gig work as a second job, and 19.3% (p = 0.000) less likely to use gig work outside of normal employment. For freelance entrepreneurship, women are 43.5% (p = 0.000) less likely to have ever been a freelance entrepreneur, 12.9% (p = 0.007) less likely to remain a freelancer, and 38.5% (p = 0.000) less likely to have ever owned a business outside of freelance work. Except for gig work as their primary job, non-binary individuals do not have any difference in entrepreneurship compared to men. Besides gig work as their primary job, the odds ratios for non-binary are below one with large standard errors. This is due to the small sample size for non-binary individuals.

[Insert Table 3 here]

Table 4 presents the business ownership results by gender. We use logistic regression for models 1-4. Because EPOP measures latent entrepreneurship on a scale from 1 "Not at all interested" to 5 "Extremely Interested", we use ordered logistic regression for model 5. Like before, we report coefficient estimates as odds ratios (e^{β}). Except for remaining a business owner, women are less likely than men to own a business and less likely to be nascent, withdrawn, or

[1] Odds ratio (OR) are interpreted by differencing from 1. OR > 1 indicate a higher likelihood and OR < 1 indicate a lower likelihood.

latent entrepreneurs. Specifically, compared to men, women are 35.8% (p = 0.000) less likely to have ever owned a business, 1.9% (p = 0.000) *more* likely to still own a business, 29.8% (p = 0.000) less likely to be a nascent entrepreneur, 18% (p = 0.000) *less* likely to be a withdrawn entrepreneur, and 1.6% (p = 0.847) less likely to be a latent entrepreneur. These findings suggest there is a gender gap in entry but not exit. Except for withdrawn entrepreneurs, we observe no difference in entrepreneurship between non-binary individuals, men, and women. However, the odds ratio is large and unreliable due to its small sample size.

[Insert Table 4 here]

4.2. Predictive Margins

Although logistic regression provides coefficient estimates β (or odds ratios, e^{β}), we cannot interpret these as marginal effects. To facilitate a more meaningful interpretation of the effect size, we report the predictive margins for the various entrepreneurship forms by gender. The predictive margins arise from marginal effects' estimation and use robust standard errors to derive 95% confidence intervals. We plot the predicted margins to ease the interpretation.

Figure 4 illustrates the predictive margins for the measures of gig work and business ownership excluding freelance work. The results indicate that men are more likely than women to engage in gig work as their primary job, second job, and outside work. Specifically, the predicted probability of gig work as the primary job for men and women is 24% and 22%, respectively. This is a two-percentage point difference. For gig work as a second job, men and women's predicted probability is 63% and 56%, respectively. This is a seven-percentage point difference. For outside gig work, men and women's predicted probability is 15% and 13%, respectively. This is a two-percentage point difference. Lastly, men and women's predicted probability of business ownership, excluding freelance, is 42% and 32%, respectively—a ten-percentage point difference.

Non-binary individuals are present in only two of the four measures (i.e., primary job and outside gig work). The predicted probability of gig work as the primary job is higher for non-binary individuals than men and women, but the predicted probability of outside gig work is lower for non-binary individuals than men and women. However, due to the wide confidence intervals, we conclude no difference in gig work between non-binary individuals and others.

[Insert Figure 4 here]

Figure 5 reports the predictive margins for freelance entrepreneurship and business ownership by gender. Women are less likely than men to be freelancers, business owners, and nascent or withdrawn entrepreneurs. Specifically, men and women have a 41% and 29% predicted probability of ever being a freelance entrepreneur. This is a 12-percentage point difference. Men and women have a 24% and 17% predicted probability of ever owning a business—a seven-percentage point difference. Men and women also have a 23% and 18% predicted probability of being a nascent entrepreneur. This is a seven-percentage point difference. There is a gender gap in entrepreneurship, at least for entry.

Despite the gender gap in entry, there is only a modest or negligible gender gap in exit. We measure exit as those who remain as freelancers or entrepreneurs. Conditional on being a freelance entrepreneur, men and women have a 40% and 37% predicted probability of remaining a freelance entrepreneur—a three-percentage point difference. Conditional on owning a business, men and women have a 35.1% and 35.5% predicted probability of remaining as a business owner—a 0.4 percentage point difference *favoring* women. There is therefore a gender gap in entry but not exit.

In addition, there is only a negligible difference in the predicted probabilities of freelance entrepreneurship for non-binary individuals, men, and women. Non-binary individuals, however, have higher predicted probabilities of withdrawn entrepreneurship than men and women. Like

before, the wide confidence intervals indicate statistically insignificant differences between genders. This suggests negligible differences between non-binary individuals, men, and women for freelance, nascent, and withdrawn entrepreneurship.

[Insert Figure 5 here]

In sum, our findings indicate women are less likely than men to enter—not exit—entrepreneurship. Furthermore, the magnitude of the gender gap varies depending on the type of entrepreneurship. For measures like ever being a freelance entrepreneur or owning a business excluding freelance, women are 12 and 10 percentage points less likely to enter entrepreneurship than men, respectively. For measures of exit, women are only three-percentage points less likely than men to remain in freelance entrepreneurship and 0.4 percentage points *more likely* than men to remain as a business owner. Women are also only two-percentage points less likely than men to use gig work as their primary job.

5. Discussion

Our study's objective was to examine the gender gap in entry and exit by focusing on the differences between male, female, and non-binary entrepreneurs. Our analysis of the Entrepreneurship in the Population Survey (EPOP) revealed sizeable differences between genders. To summarize our findings: Women are less likely than men to be gig workers, freelancers, nascent entrepreneurs, and business owners; However, if women do own a business or engage in freelancing, they are equally likely as men to remain entrepreneurs; Furthermore, the magnitude of the gender gap varies depending on the form of entrepreneurship; Women are 12 percentage points less likely than men to use gig work as their primary job but 44 percentage points less likely to have ever owned a business; Our descriptive evidence suggests non-binary individuals are more

likely than men to use gig work as their primary job and more likely to remain as business owners, but the regression results do not support the findings for non-binary individuals.

5.1. Contributions to and implications for the entrepreneurship literature

Our findings extend entrepreneurship literature in several ways. First, building on a number of studies exploring the gender gap in entrepreneurship (Caliendo et al., 2015; Coleman and Robb, 2009; Fairlie and Robb, 2009; Fossen, 2012; Guzman and Kacperczyk, 2019), we find support for the result that women are less involved in entrepreneurship than men. However, our results shed new light on the gender gap in entrepreneurship literature by revealing a gender gap for gig work, freelance, nascent entrepreneurship, and business ownership. Nevertheless, we also find that if women do own a business or engage in freelancing, they are equally likely as men to remain entrepreneurs. Therefore, our findings suggest that there is a gender gap in entry but not exit, providing a more nuanced picture of the gender gap in entrepreneurship than previously believed. Future studies might consider exploring the lack of a gender gap in exit in more detail: Are women discouraged from entrepreneurial entry but not exit? Or, perhaps different risk-considerations and career aspirations lead women and men to be equally likely to remain entrepreneurs. For example, Robb and Watson (2012) found that, once risk-adjustments were made, women and men had only minor differences in performance.

Second, by including non-binary individuals in our analysis of the gender gap, our study contributes to the growing literature on inclusive entrepreneurship (Bakker and McMullen, 2023; Tonoyan and Boudreaux, 2023; van den Groenendaal et al., 2023). Our descriptive evidence suggests non-binary individuals are more likely than men and women to use gig work as their primary job and more likely to remain business owners. Conditional on basic regression controls, however, we observe few differences between non-binary individuals and men and women.

Therefore, we conclude that there is evidence of a gender gap in entrepreneurship between men and women but not between non-binary individuals, men, and women. Future research might consider examining gender and entrepreneurship for non-binary individuals in more detail. From a liberal feminist perspective (Fischer and Arnold, 1994; Fischer et al., 1993), non-binary individuals might face discrimination and structural barriers that reduce their propensity to engage in entrepreneurship. From a social feminist perspective, however, non-binary individuals might value entrepreneurship due to different tastes and preferences. Thus, we currently know little about how non-binary individuals participate in entrepreneurship.

Lastly, our findings also contribute to the emerging literature on gig work and freelance entrepreneurship (Burke et al., 2020; Burke and Cowling, 2020a, 2020b; van den Groenendaal et al., 2023). Although scholars have traditionally viewed freelance and gig work as a substitute for employment, there is a growing recognition that freelance and gig work is now a direct provider of entrepreneurship (Burke, 2012; Burke et al., 2020; Burke and Cowling, 2015). However, scholars have overlooked the role that gender plays in gig work and freelance entrepreneurship, most likely because of data limitations that, until recently, have been difficult to overcome. Nevertheless, the recent EPOP survey provides an excellent avenue to explore these questions as it asks many questions related to gig work and freelance entrepreneurship. Our finding that gig work and freelance entrepreneurship rates are lower for women than men addresses the call for scholars to refrain from focusing solely on restrictive definitions of entrepreneurship (e.g., gazelles, unicorns, high-growth oriented) and instead focus on a broader more inclusive definition of entrepreneurship (Aldrich and Ruef, 2018; Audretsch et al., 2015; Welter et al., 2017). Future research might consider exploring how gender relates to gig work and freelance entrepreneurship. Because gig work and freelance entrepreneurship provide flexibility, we expected the rates of gig

work and freelance entrepreneurship would be higher for women than men. However, we found the opposite result. Furthermore, we found descriptive evidence that non-binary individuals are more likely to engage in gig work as their primary job.

5.2. Limitations and suggested directions

Like any scientific inquiry, our study has some limitations that warrant attention in future research. One limitation is the small sample size of non-binary individuals in the EPOP survey. Non-binary individuals constitute less than 0.5% of the sample, a rate similar to other recent studies (Sharma and Sahni, 2020). Consequently, the statistical precision of our non-binary estimates is low, reflected in wide confidence intervals, due to the large variability in responses. To better understand the entrepreneurial engagement of non-binary individuals, future research should consider targeted sampling methods or over-sampling non-binary individuals in surveys, possibly using survey weights to correct for non-random selection. While this entails additional costs and complexities, it could enhance our understanding of non-binary individuals' entrepreneurship experiences.

Another limitation of our study is that we do not establish causality between gender and entrepreneurship activity. Specifically, we do not ask forward causal questions, such as "If gender changed, how much would we expect the entrepreneurship rate to change?" While gender is less likely to be endogenous than other explanatory variables, we acknowledge that the absence of causal evidence restricts the scope of our findings. To overcome this limitation, future studies might consider different identification strategies, such as laboratory or field experiments that randomly manipulate gender along with other treatments. For instance, past research has shown that ethnic or gender-based names affect interview callbacks or resume evaluations (Bertrand and Mullainathan, 2004; Darolia et al., 2016; Edo et al., 2019), suggesting that gender may also

influence entrepreneurship outcomes. Alternatively, more sophisticated identification techniques, such as difference-in-differences, regression discontinuity, instrumental variables, or matching algorithms, may offer more robust estimates of the causal effects of gender on entrepreneurship (King et al., 2021). By addressing the forward causal questions, future studies may shed more light on the role of gender in shaping entrepreneurial opportunities and outcomes.

6. Conclusion

Using data from the Entrepreneurship in the Population Survey (EPOP), we examined the gender gap in entrepreneurship. Women are less likely than men to be gig workers, freelancers, nascent entrepreneurs, and business owners. Conditional on owning a business or freelancing, however, women are equally likely to remain entrepreneurs. Thus, the gender gap exists in entry but not exit. Furthermore, the magnitude of the gender gap depends on the form of entrepreneurship. Women are 12 percentage points less likely than men to use gig work as their primary job, while they are 44 percentage points less likely to have ever owned a business. Our descriptive evidence suggests non-binary individuals are more likely than men and women to use gig work as their primary job and more likely to remain business owners. However, the regression results do not support these findings for non-binary individuals. We therefore find evidence of a gender gap in entrepreneurship between men and women but not between non-binary individuals, men, and women.

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FIGURES AND TABLES

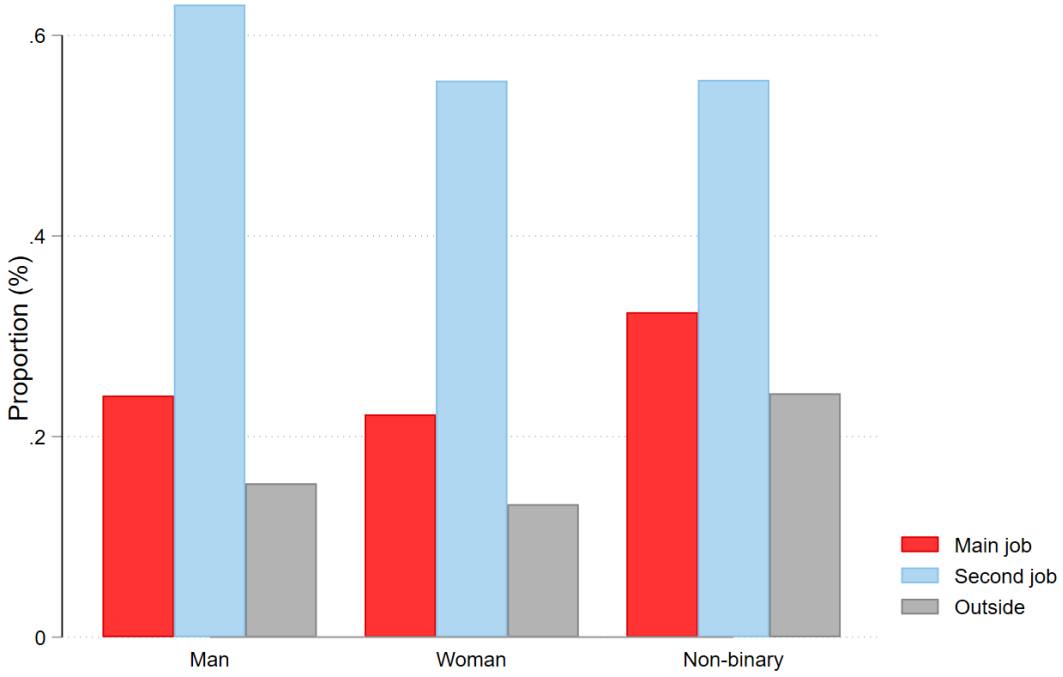

Figure 1. Gig work by gender

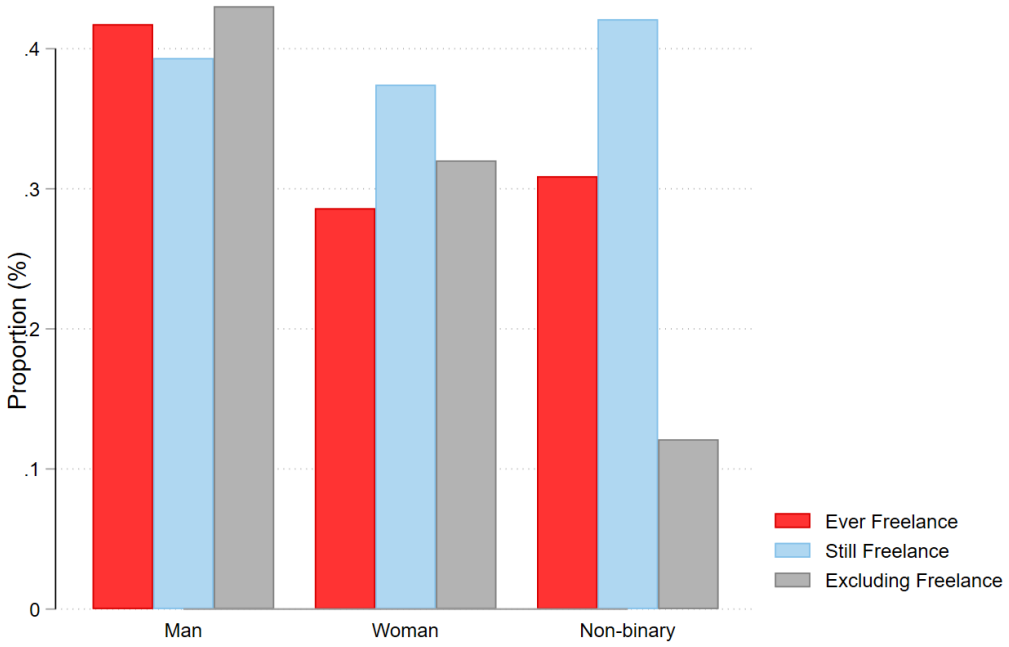

Figure 2. Freelance work by gender

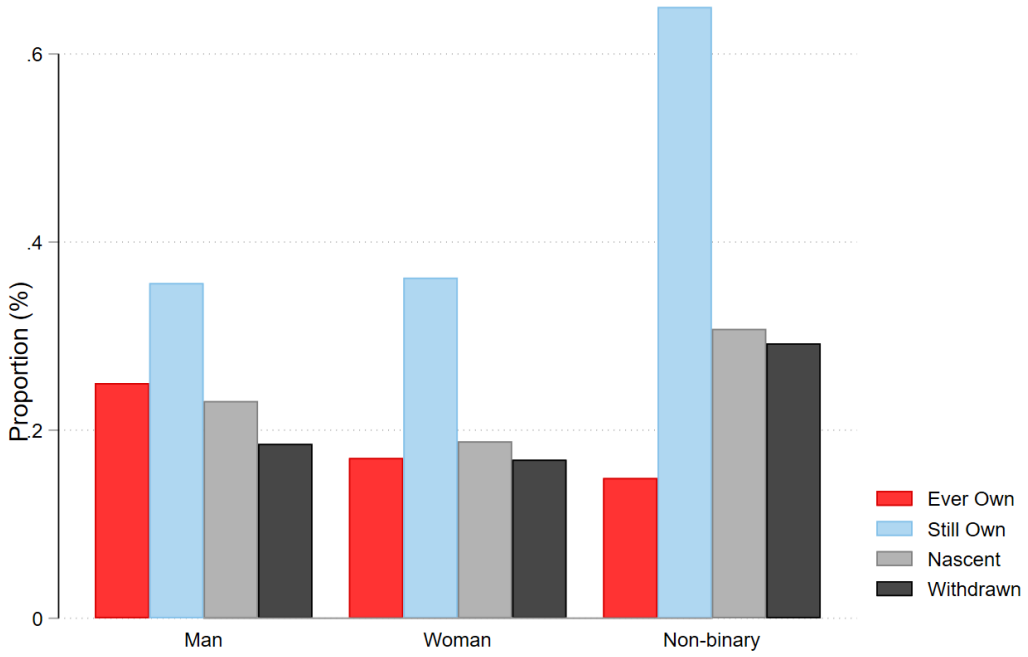

Figure 3. Business ownership by gender

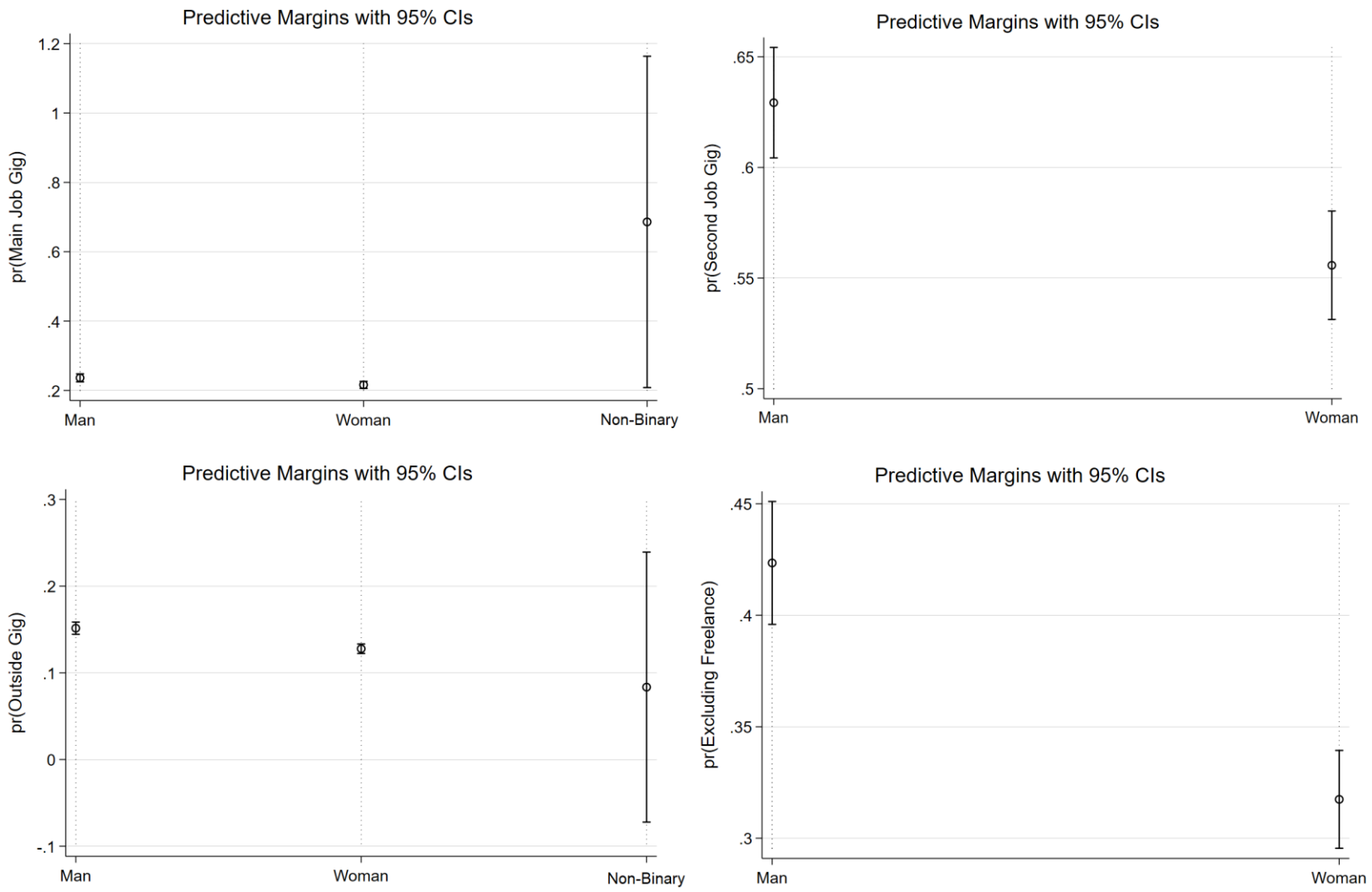

Figure 4. Predicted probabilities for gig work and business ownership by gender.
Notes. These figures report the predictive margins (with 95% confidence intervals) following the regression models reported in Tables 2 and 3.

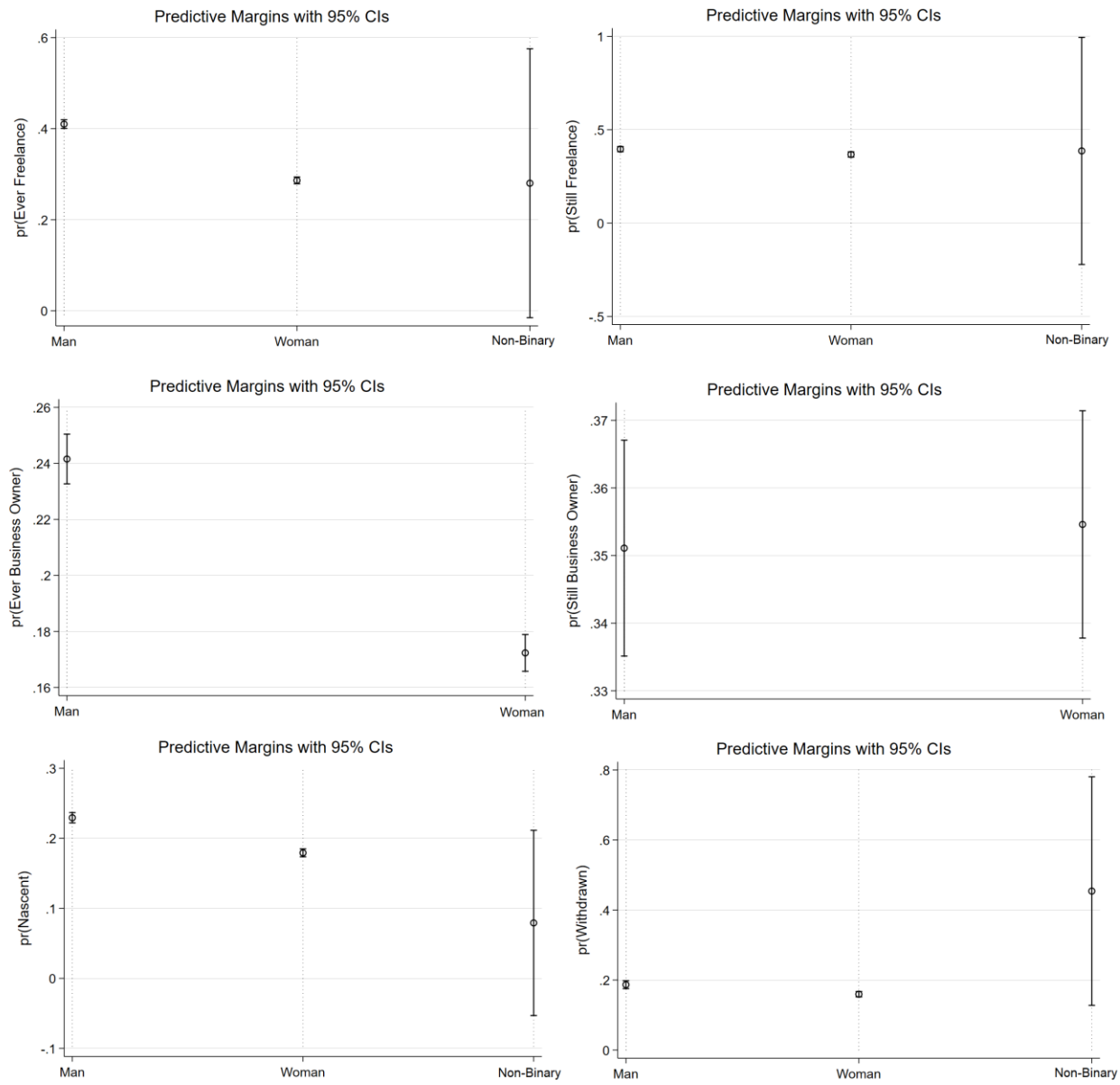

Figure 5. Predicted probabilities for freelance entrepreneurship and business ownership by gender.

Notes. These figures report the predictive margins (with 95% confidence intervals) following the regression models reported in Tables 2 and 3.

Table 1. Variable descriptions from EPOP Survey.

Codebook	Variable	Description
S_GIGCHECK_1	Gig work main job	Some people earn money through short, paid tasks or jobs online or in-person that are conducted through companies that coordinate payment for the service. This is sometimes referred to as "gig work." Is your main job or work arrangement gig work? These tasks might include driving for Uber or Lyft, selling goods through Etsy, completing online tasks on Mechanical Turk, providing graphic design, music, or other services via Fiverr or Upwork, or other activities. (Yes/No).
S_GIGCHECK_2	Gig work second job	Some people earn money through short, paid tasks or jobs online or in-person that are conducted through companies that coordinate payment for the service. This is sometimes referred to as "gig work." Is your second job/work arrangement gig work? These tasks might include driving for Uber or Lyft, selling goods through Etsy, completing online tasks on Mechanical Turk, providing graphic design, music, or other services via Fiverr or Upwork, or other activities. (Yes/No).
S_GIGCHECK_3	Gig work outside employment	Some people earn money through short, paid tasks or jobs online or in-person that are conducted through companies that coordinate payment for the service. This is sometimes referred to as "gig work." Outside of the forms of employment you have already mentioned, in the last 6 months have you been paid for any gig work? These tasks might include driving for Uber or Lyft, selling goods through Etsy, completing online tasks on Mechanical Turk, providing graphic design, music, or other services via Fiverr or Upwork, or other activities. (Yes/No).
S_FORMFREE_1	Ever freelancer	Have you ever worked for yourself as a freelancer, consultant, or independent contractor either full-time or part-time? (Yes/No).
S_FORMFREE_STAT_1	Still freelancer	Are you still working for yourself as a freelancer, consultant, or independent contractor either full-time or part-time? 1. Yes, I am still working for myself as a freelancer, consultant, or independent contractor 2. No, I stopped working as a freelancer, consultant, or independent contractor within the last 5 years 3. No, I stopped working as a freelancer, consultant, or independent contractor more than 5 years ago. We recoded the variable (Yes/No).
S_FORMBIZ_2	Ever own a business excluding freelance work	You reported you are currently working as a self-employed consultant, freelancer, or independent contractor. Outside of this work activity, have you ever owned a business? (Yes/No).
S_FORMBIZ_1	Ever own a business	Have you ever owned a business? (Yes/No).
S_FORMBIZ_STAT_1	Still own a business	Do you still own a business? (Yes/No).
S_NASCENT_1	Nascent entrepreneur	Are you, alone or with others, currently trying to start a new business, including any form of self-employment, freelancing, consulting, or independent contracting, or selling any goods or services to others? (Yes/No).
S_WITHDRAW_1	Withdrawn entrepreneur	Have you, alone or with others, ever considered starting a new business, including any form of self-employment, freelancing, consulting, or independent contracting, or selling any goods or services to others but decided to wait or change your mind? (Yes/No).
S_INTEREST_2	Latent entrepreneur	How interested were you in starting your own business or working for yourself? (1. Not at all interested, 2. Slightly interested, 3. Somewhat interested, 4. Very interested, 5. Extremely interested).

Table 2: Descriptive Statistics

	Panel A: Overall Sample			Panel B: Women				Panel C: Non-Binary				Panel D: Men		
Variable	N	Mean	SD	N	Mean	SD	Diff t-stat	N	Mean	SD	Diff t-stat	N	Mean	SD
Main Job Gig Work	13,146	.231	.422	7,118	.222	.416	*2.54****	71	.324	.471	*1.63*	5,948	.241	.428
Second Job Gig Work	3,532	.591	.492	1,831	.555	.497	*4.56****	27	.556	.506	*0.80*	1,670	.631	.483
Outside Gig Work	26,698	.142	.349	15,338	.132	.339	*4.81****	107	.243	.431	*2.56***	11,235	.153	.36
Ever Freelancer	28,179	.342	.474	16,074	.286	.452	*23.15****	123	.309	.464	*2.43***	11,962	.417	.493
Still Freelancer	9,603	.384	.486	4,582	.374	.484	*1.92**	38	.421	.5	*0.35*	4,975	.393	.489
Ever Owned a Business Excluding	3,431	.366	.482	1,917	.32	.467	*6.63****	33	.121	.331	*3.57****	1,478	.43	.495
Ever Owned a Business	25,934	.203	.403	15,051	.17	.376	*15.73****	114	.149	.358	*2.48***	10,751	.25	.433
Still Own a Business	6,451	.36	.48	3,139	.362	.481	*0.48*	20	.65	.489	*2.73****	3,288	.356	.479
Nascent entrepreneur	31,876	.207	.405	18,113	.188	.391	*9.34****	156	.308	.463	*2.26***	13,584	.231	.421
Withdrawn entrepreneur	15,118	.175	.38	9,506	.169	.374	*2.62***	65	.292	.458	*2.20***	5,538	.185	.389
Latent entrepreneur	2,645	3.295	1.025	1,599	3.308	1.021	*0.69*	19	3.105	1.15	*0.73*	1,027	3.279	1.03
White	31,902	.721	.448	18,155	.709	.454	*5.88****	124	.702	.459	*0.93*	13,600	.738	.439
Black	31,902	.112	.316	18,155	.124	.33	*7.75****	124	.016	.126	*3.03****	13,600	.097	.295
Hispanic	31,902	.091	.288	18,155	.092	.289	*0.80*	124	.218	.414	*4.97****	13,600	.089	.285
Other	31,902	.075	.264	18,155	.075	.264	*0.15*	124	.065	.247	*0.46*	13,600	.076	.264
Urban	30,537	.819	.385	17,309	.802	.398	*9.07****	139	.82	.385	*0.72*	13,065	.842	.364
18-29	31,959	.143	.35	18,195	.157	.364	*9.09****	104	.654	.478	*16.52****	13,638	.121	.326
30-39	31,959	.203	.402	18,195	.202	.401	*0.52*	104	.298	.46	*2.37***	13,638	.204	.403
40-49	31,959	.169	.375	18,195	.168	.374	*0.87*	104	.01	.098	*4.38****	13,638	.172	.377
50-64	31,959	.238	.426	18,195	.244	.43	*2.84****	104	.029	.168	*4.88****	13,638	.231	.421
AD or Some College	30,704	.341	.474	17,568	.359	.48	*7.78****	82	.476	.502	*3.09****	13,034	.316	.465
Bachelor's Degree	30,704	.249	.433	17,568	.237	.425	*6.01****	82	.037	.189	*4.72****	13,034	.267	.443
Graduate Degree	30,704	.163	.369	17,568	.142	.349	*11.73****	82	.024	.155	*3.84****	13,034	.192	.394
Married	30,660	.494	.5	17,556	.445	.497	*20.10****	54	.185	.392	*5.55****	13,030	.56	.496
Widowed	30,660	.046	.209	17,556	.061	.239	*14.42****	54	0	0	*1.20*	13,030	.026	.159
Divorced	30,660	.145	.352	17,556	.177	.381	*18.13****	54	0	0	*2.49****	13,030	.103	.304
Live with Partner	30,660	.08	.271	17,556	.093	.29	*10.02****	54	.278	.452	*6.58****	13,030	.061	.24
US Citizen	31,534	.985	.123	17,900	.984	.124	*0.67*	153	.954	.21	*3.14****	13,458	.985	.12
Active Duty	31,355	.035	.183	17,831	.023	.15	*13.29****	140	.007	.085	*2.35***	13,361	.051	.22
Veteran	31,355	.081	.273	17,831	.022	.145	*46.11****	140	.057	.233	*3.34****	13,361	.161	.368
One Child	31,398	.116	.32	17,800	.128	.334	*7.88****	151	.093	.291	*0.27*	13,424	.099	.299
Two Children	31,398	.099	.298	17,800	.101	.301	*1.33*	151	.06	.238	*1.53*	13,424	.096	.295
Three or More Children	31,398	.062	.242	17,800	.073	.26	*8.95****	151	.053	.225	*0.26*	13,424	.048	.215
Northeast	32,021	.168	.374	18,197	.164	.37	*2.46***	158	.203	.403	*0.93*	13,642	.174	.379
Midwest	32,021	.221	.415	18,197	.223	.416	*0.92*	158	.247	.433	*0.85*	13,642	.219	.413
South	32,021	.392	.488	18,197	.409	.492	*7.08****	158	.361	.482	*0.23*	13,642	.37	.483
West	32,021	.219	.413	18,197	.204	.403	*7.06****	158	.19	.393	*1.40*	13,642	.238	.426

Notes. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$ (two-tailed test). Diff t-stat refers to difference between gender and the baseline: men.

Table 3 - Logistic Regression Results for Gig Work and Freelance Measures of Entrepreneurship

	Gig Work			Freelance		
	Main Job	Second Job	Outside	Ever	Still	Excluding Freelance
	(1)	(2)	(3)	(4)	(5)	(6)
Woman	0.885**	0.725***	0.807***	0.565***	0.871***	0.615***
	(0.011)	(0.000)	(0.000)	(0.000)	(0.007)	(0.000)
Non-Binary	7.992*	--	0.486	0.547	0.955	--
	(0.082)		(0.511)	(0.437)	(0.975)	
Black	1.458***	1.016	1.599***	1.285***	1.807***	1.288*
	(0.000)	(0.901)	(0.000)	(0.000)	(0.000)	(0.064)
Hispanic	1.486***	1.060	1.356***	1.177***	1.362***	0.962
	(0.000)	(0.639)	(0.000)	(0.003)	(0.000)	(0.783)
Other	0.837*	1.096	0.982	0.900*	0.871	1.299*
	(0.063)	(0.547)	(0.823)	(0.088)	(0.175)	(0.089)
Urban	1.053	1.435***	1.087	0.981	0.925	0.933
	(0.432)	(0.001)	(0.124)	(0.610)	(0.241)	(0.529)
18-29	2.144***	1.957***	8.040***	1.399***	5.344***	0.401***
	(0.000)	(0.002)	(0.000)	(0.000)	(0.000)	(0.000)
30-39	1.797***	2.265***	6.960***	1.632***	5.269***	0.581***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.001)
40-49	1.469***	1.815***	5.003***	1.416***	4.075***	0.603***
	(0.000)	(0.004)	(0.000)	(0.000)	(0.000)	(0.001)
50-64	0.929	1.011	2.553***	1.262***	2.289***	0.888
	(0.484)	(0.957)	(0.000)	(0.000)	(0.000)	(0.422)
AD or Some College	0.804***	0.969	0.967	1.435***	0.833***	1.149
	(0.000)	(0.783)	(0.522)	(0.000)	(0.010)	(0.196)
Bachelor's Degree	0.622***	0.732***	0.977	1.712***	0.937	1.198
	(0.000)	(0.009)	(0.688)	(0.000)	(0.375)	(0.127)
Graduate Degree	0.990	0.900	1.295***	2.547***	1.410***	1.238
	(0.890)	(0.419)	(0.000)	(0.000)	(0.000)	(0.115)
Married	1.042	1.217*	1.103*	1.169***	1.185**	1.576***
	(0.526)	(0.066)	(0.081)	(0.000)	(0.016)	(0.000)
Widowed	1.411*	1.699	1.180	1.215**	0.889	2.088***
	(0.053)	(0.106)	(0.231)	(0.012)	(0.464)	(0.006)
Divorced	1.102	1.102	1.192**	1.412***	0.978	1.480***
	(0.267)	(0.506)	(0.019)	(0.000)	(0.813)	(0.005)
Live with Partner	1.133	1.263	1.217***	1.291***	0.923	1.485***
	(0.135)	(0.109)	(0.008)	(0.000)	(0.428)	(0.006)
US Citizen	1.257	0.910	0.884	0.906	1.233	0.581
	(0.261)	(0.782)	(0.417)	(0.415)	(0.293)	(0.122)
Active Duty	3.210***	1.921***	3.463***	2.277***	2.127***	3.350***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Veteran	1.277**	1.020	1.360***	1.150***	1.083	1.518**
	(0.019)	(0.913)	(0.000)	(0.006)	(0.341)	(0.022)
One Child	1.317***	1.027	1.247***	1.118**	1.140*	1.158
	(0.000)	(0.810)	(0.000)	(0.017)	(0.084)	(0.208)
Two Children	1.400***	1.474***	1.059	1.156***	1.403***	1.197
	(0.000)	(0.001)	(0.382)	(0.004)	(0.000)	(0.176)
Three or More Children	1.237**	1.144	1.042	1.173***	1.118	1.072
	(0.016)	(0.351)	(0.601)	(0.009)	(0.250)	(0.660)
Observations	11,467	3,002	23,504	24,733	8,359	2,951
Log-likelihood	-5828.3	-1944.0	-8531.5	-15117.3	-5020.2	-1824.5
Degrees of freedom	26	25	26	26	26	25
Pseudo R^2	0.0474	0.0429	0.0933	0.0457	0.0971	0.0562

Notes. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$ (two-tailed test). Odds ratios reported with p-values in parentheses. Models estimated using logistic regression with robust standard errors. Regional dummies (FE) included in all models.

Table 4 – Logistic Regression Results for Business Ownership Measures of Entrepreneurship

Variables	Ever owned a business (1)	Still own a business (2)	Nascent entrepreneur (3)	Withdrawn entrepreneur (4)	Latent entrepreneur (5)
Woman	0.642***	1.019	0.702***	0.820***	0.984
	(0.000)	(0.773)	(0.000)	(0.000)	(0.847)
Non-Binary	--	--	0.252	3.961*	0.600
			(0.192)	(0.054)	(0.635)
Black	1.247***	1.823***	2.283***	1.328***	1.496***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.002)
Hispanic	0.989	1.310**	1.744***	1.100	1.269*
	(0.883)	(0.028)	(0.000)	(0.288)	(0.098)
Other/Mixed	1.119	1.231*	1.257***	1.150	1.066
	(0.124)	(0.088)	(0.000)	(0.142)	(0.673)
Urban	0.897**	0.965	1.095**	1.000	0.841*
	(0.014)	(0.677)	(0.041)	(0.998)	(0.084)
18-29	0.489***	8.831***	11.30***	4.381***	1.569***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.005)
30-39	0.596***	8.814***	11.03***	3.725***	2.201***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
40-49	0.697***	5.190***	8.215***	3.169***	1.708***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
50-64	0.821***	2.162***	4.123***	2.480***	1.629***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
AD or Some College	1.552***	0.833**	1.254***	1.469***	1.079
	(0.000)	(0.049)	(0.000)	(0.000)	(0.453)
Bachelor's Degree	1.601***	1.110	1.201***	1.425***	0.693***
	(0.000)	(0.286)	(0.000)	(0.000)	(0.001)
Graduate Degree	1.894***	1.632***	1.698***	1.541***	0.747**
	(0.000)	(0.000)	(0.000)	(0.000)	(0.031)
Married	1.675***	0.867	1.194***	1.048	0.719***
	(0.000)	(0.140)	(0.000)	(0.483)	(0.002)
Widowed	1.913***	0.645**	1.564***	0.912	0.768
	(0.000)	(0.020)	(0.000)	(0.545)	(0.327)
Divorced	1.817***	0.778**	1.338***	1.128	0.845
	(0.000)	(0.031)	(0.000)	(0.166)	(0.236)
Live with partner	1.541***	0.691***	1.273***	1.160*	1.026
	(0.000)	(0.007)	(0.000)	(0.100)	(0.860)
US Citizen	1.122**	1.140	1.301***	1.040	1.099
	(0.046)	(0.234)	(0.000)	(0.700)	(0.572)
Active Duty	1.044	1.090	1.256*	0.993	0.786
	(0.779)	(0.746)	(0.075)	(0.972)	(0.448)
Veteran	2.544***	1.821***	3.323***	1.172	0.608*
	(0.000)	(0.000)	(0.000)	(0.350)	(0.061)
One Child	1.114*	1.212*	1.284***	1.201**	1.303**
	(0.072)	(0.055)	(0.000)	(0.015)	(0.026)
Two Children	1.237***	1.350***	1.366***	1.129	1.317**
	(0.001)	(0.005)	(0.000)	(0.144)	(0.036)
Three or More Children	1.268***	0.798*	1.442***	1.092	1.200
	(0.003)	(0.085)	(0.000)	(0.394)	(0.268)
Observations	22,774	5,598	27,909	13,363	2,259
Log-likelihood	-10881.8	-3054.8	-12112.9	-5784.2	-3136.3
Degrees of Freedom	25	25	26	26	26
Pseudo R^2	0.0494	0.159	0.133	0.0481	0.0220

Notes. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$ (two-tailed test). Odds ratios reported with p-values in parentheses. Models estimated using logistic regression with robust standard errors in 1-4 and ordered logistic regression in 5. Regional FE incl.