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THREE ESSAYS ON THE GENDER GAP IN ENTREPRENEURSHIP / TRES ENSAYOS SOBRE LA BRECHA DE GÉNERO EN EL EMPRENDIMIENTO

EMINE IMGE KAYA SABANCI

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Three Essays on the Gender Gap in Entrepreneurship / Tres ensayos sobre la brecha de género en el emprendimiento

Emine Imge Kaya Sabanci

Doctoral Thesis Advisor: Rachida Justo

THREE ESSAYS ON THE GENDER GAP IN ENTREPRENEURSHIP

ABSTRACT

This dissertation examines the persistent gender gap in entrepreneurship and the mechanisms through which it is reproduced across multiple stages of the entrepreneurial journey, from access to resources and entry into entrepreneurship to longer-term career and family outcomes. It adopts an interdisciplinary perspective that integrates insights from entrepreneurship, social psychology, economics, and strategic human capital, and employs quantitative methods ranging from field and laboratory experiments to large-scale administrative and cross-national survey data. The first essay examines how trustworthiness signals shape investment decisions and whether these effects vary by the entrepreneur's gender. Using a field study and an online experiment, it shows that high trustworthiness increases investment willingness for male entrepreneurs but can disadvantage female entrepreneurs, revealing that signals commonly treated as uniformly positive are interpreted through gendered expectations. The second essay investigates how job insecurity affects transitions from wage employment to entrepreneurship. Drawing on Spanish linked employer-employee data and leveraging the 2012 labor market reform as an exogenous shock, it shows that reduced job security increases entrepreneurial entry, with stronger effects for men than for women. The third essay examines how entrepreneurship relates to short-term parenthood intentions. Using the Generations and Gender Survey across nine European countries, it finds that entrepreneurship is associated with higher short-term intentions to have a child among men but lower such intentions among women, relative to paid employees. Taken together, the three essays show that the gender gap in entrepreneurship does not stem from a single mechanism. Rather, it is reproduced through gendered perceptions, lived experiences, and structural constraints that shape who is supported, who enters, and how entrepreneurial careers interact with family life. By tracing these dynamics across distinct but connected stages, the dissertation contributes to a broader understanding of gender inequality in entrepreneurship and offers implications for research, practice, and policy.

TRES ENSAYOS SOBRE LA BRECHA DE GÉNERO EN EL EMPRENDIMIENTO

RESUMEN

Esta tesis doctoral examina la persistente brecha de género en el emprendimiento y los mecanismos a través de los cuales se reproduce en múltiples etapas de la trayectoria emprendedora, desde el acceso a recursos y la entrada en el emprendimiento hasta los resultados de más largo plazo en la carrera profesional y la vida familiar. Adopta una perspectiva interdisciplinar que integra aportaciones del emprendimiento, la psicología social, la economía y el capital humano estratégico, y emplea métodos cuantitativos que abarcan desde experimentos de campo y de laboratorio hasta datos administrativos a gran escala y encuestas transnacionales. El primer ensayo examina cómo las señales de confiabilidad influyen en las decisiones de inversión y si estos efectos varían según el género de la persona emprendedora. A partir de un estudio de campo y un experimento en línea, muestra que un alto nivel de confiabilidad aumenta la disposición a invertir en emprendedores varones, pero puede perjudicar a las mujeres emprendedoras, lo que revela que señales consideradas universalmente positivas se interpretan a través de expectativas de género. El segundo ensayo investiga cómo la inseguridad laboral afecta las transiciones desde el empleo asalariado hacia el emprendimiento. Basándose en datos vinculados de empresas y empleados en España y aprovechando la reforma laboral de 2012 como un shock exógeno, muestra que una menor seguridad laboral aumenta la entrada en el emprendimiento, con efectos más fuertes para los hombres que para las mujeres. El tercer ensayo examina cómo el emprendimiento se relaciona con las intenciones de tener un hijo en el corto plazo. Utilizando la Generations and Gender Survey en nueve países europeos, encuentra que el emprendimiento se asocia con mayores intenciones de tener un hijo en el corto plazo entre los hombres, pero con menores intenciones de este tipo entre las mujeres, en comparación con las personas asalariadas. En conjunto, los tres ensayos muestran que la brecha de género en el emprendimiento no se deriva de un único mecanismo. Más bien, se reproduce a través de percepciones condicionadas por el género, experiencias vividas y restricciones estructurales que configuran quién recibe apoyo, quién entra en el emprendimiento y cómo las trayectorias emprendedoras interactúan con la vida familiar. Al rastrear estas dinámicas a través de etapas distintas pero conectadas, esta tesis contribuye a una comprensión más amplia de la desigualdad de género en el emprendimiento y ofrece implicaciones para la investigación, la práctica y las políticas públicas.

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This dissertation is dedicated to **Halil, Deniz, Cello, and my grandfather**.

Imge Kaya Sabanci
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INTRODUCTION

Despite considerable efforts to encourage women's participation in entrepreneurship, a substantial gender gap persists, hindering economic progress and social mobility (Jennings & Brush, 2013; Kanze et al., 2018). The Global Entrepreneurship Monitor reports that only one in six women intend to start a business, compared to one in five men (GEM, 2023). Once businesses are founded, women lead only about 20% of new firms in California and Massachusetts (Guzman & Kacperczyk, 2019). This persistent disparity stands in contrast to broader labor market trends and underscores the unique nature of gender inequality in entrepreneurship, which remains stronger than in traditional wage employment (Goldin et al., 2006).

This gender gap has attracted significant attention from scholars and policymakers seeking to identify and mitigate the factors that discourage women from entrepreneurial activity. At the individual level, supply-side differences in educational preferences (Boudreau & Kaushik, 2020; Card & Payne, 2021), limited access to female mentors (Rocha & van Praag, 2020), disparities in technical training, and varying risk preferences between genders (Ewens & Townsend, 2020) all contribute to the presence and persistence of the gender gap in entrepreneurship. For instance, Bonin et al. (2007) highlight that risk preferences play a role in occupational choices, which can indirectly influence entrepreneurial participation. Beyond the individual level, more severe entry barriers (Castellaneta et al., 2020) and systemic evaluation biases and unequal access to venture financing (Jennings & Brush, 2013) also contribute to this gap. Studies show that gender-based discrimination by key stakeholders, such as investors, bank loan officers, and technology licensing officers, further exacerbates the disparity (Bigelow et al., 2014; Kanze et al., 2018; Marlow & Patton, 2005; Shane et al., 2012). These biases

not only limit funding opportunities but also perpetuate broader structural inequities, including restricted access to capital and advisory networks.

This dissertation examines the mechanisms that drive the persistent gender gap in entrepreneurship, with a particular focus on how gendered perceptions, lived experiences, and structural constraints shape entrepreneurial entry, access to resources, and long-term outcomes. It explores both demand-side (e.g., investor decision-making) and supply-side (e.g., entrepreneurs' resources, motivations, and constraints) factors. Conceptually, it adopts an interdisciplinary lens, integrating insights from entrepreneurship, social psychology, economics, and strategic human capital. Methodologically, it employs quantitative methods, ranging from panel data analysis to field and laboratory experiments.

Essay 1 examines whether trustworthiness, a signal long treated as uniformly positive, always benefits entrepreneurs, or whether its interpretation is gender contingent. Using two experiments, a field study with 284 investors and a replication with 586 general-population respondents, the essay shows that trustworthiness interacts with gender to shape investment willingness: men benefit from high trustworthiness, while women are penalized. These results advance research on trust, signaling theory, and entrepreneurial finance by challenging the assumption that trust signals are universally beneficial and by introducing a contextualized, gender-aware lens on signal interpretation. In doing so, the essay illuminates the hidden costs of benevolence and the potential dark side of trustworthiness for women entrepreneurs, with concrete implications for investment practice and for efforts to close funding gaps.

Essay 2 investigates how job insecurity differentially shapes men's and women's transition from wage employment to entrepreneurship, drawing on a Spanish linked

employer-employee dataset and leveraging the 2012 labor market reform as an exogenous shock. Integrating career-mobility and gender perspectives, the study shifts the focus from the conventional opportunity-driven narrative toward a supply-side view that links entrepreneurial entry to career trajectories. Using 2,942,582 person-year observations, the analysis finds that reduced job security increases entrepreneurial entry, with stronger effects for men due to gendered labor market experiences and dynamics. These findings contribute to career-path approaches to entrepreneurship and inform policy debates on labor market flexibility and its gendered consequences.

Essay 3 adopts a family-embeddedness perspective to study how entrepreneurial careers relate to short-term parenthood intentions. Using the Generations and Gender Survey across nine European countries and analyzing 26,768 economically active women and men of reproductive age, the essay shows that entrepreneurship is associated with higher intentions to have a child among men but lower intentions among women, with similar magnitudes for solo entrepreneurs and employer entrepreneurs. The results position entrepreneurship as a resource for men's family-expansion plans yet a constraint for women's, advancing reversed-arrow work on how entrepreneurial careers shape family decisions and extending gender and entrepreneurship scholarship on work-family trade-offs.

Taken together, the dissertation traces the gender gap across three stages: access to resources in investment decisions; entry into entrepreneurship via career transitions; and the intersection of entrepreneurial careers with family decisions. Theoretically, it bridges micro-level cognition with macro-level labor market dynamics to clarify when well-intentioned signals backfire, when institutional flexibility scales entry yet magnifies disparities, and how career choices reverberate into family life.

Methodologically, the combination of pre-registered experiments, linked administrative employer-employee datasets, and cross-national surveys enables both causal inference and generalizability. Beyond academia, the findings speak to investors designing fairer evaluation routines, policymakers calibrating labor market flexibility with gender consequences in mind, organizations building more inclusive entrepreneurial ecosystems that foster equitable and sustained growth, and individuals making better-informed decisions about entering entrepreneurship and scaling their ventures.

INTRODUCCIÓN

A pesar de los considerables esfuerzos por fomentar la participación de las mujeres en el emprendimiento, persiste una sustancial brecha de género que obstaculiza el progreso económico y la movilidad social (Jennings & Brush, 2013; Kanze et al., 2018). El Global Entrepreneurship Monitor informa que solo una de cada seis mujeres tiene la intención de iniciar un negocio, en comparación con uno de cada cinco hombres (GEM, 2023). Una vez fundadas las empresas, las mujeres lideran solo alrededor del 20% de las nuevas firmas en California y Massachusetts (Guzman & Kacperczyk, 2019). Esta persistente disparidad contrasta con tendencias más amplias del mercado laboral y subraya la naturaleza singular de la desigualdad de género en el emprendimiento, que sigue siendo más pronunciada que en el empleo asalariado tradicional (Goldin et al., 2006).

Esta brecha de género ha atraído una atención considerable por parte de académicos y responsables de políticas públicas que buscan identificar y mitigar los factores que desincentivan la actividad emprendedora de las mujeres. A nivel individual, las diferencias del lado de la oferta en las preferencias educativas (Boudreau & Kaushik, 2020; Card & Payne, 2021), el acceso limitado a mentoras, las disparidades en la formación técnica y las diferencias en las preferencias de riesgo entre géneros (Ewens & Townsend, 2020) contribuyen a la presencia y persistencia de la brecha de género en el emprendimiento. Por ejemplo, Bonin et al. (2007) destacan que las preferencias de riesgo desempeñan un papel en las decisiones ocupacionales, lo que puede influir indirectamente en la participación emprendedora. Más allá del nivel individual, barreras de entrada más severas (Castellaneta et al., 2020), así como sesgos sistémicos de evaluación y un acceso desigual al financiamiento de riesgo (Jennings &

Brush, 2013), también contribuyen a esta brecha. Los estudios muestran que la discriminación de género por parte de actores clave, como inversionistas, agentes de crédito bancario y responsables de licencias tecnológicas, agrava aún más esta disparidad (Bigelow et al., 2014; Kanze et al., 2018; Marlow & Patton, 2005; Shane et al., 2012). Estos sesgos no solo limitan las oportunidades de financiamiento, sino que también perpetúan inequidades estructurales más amplias, incluido el acceso restringido al capital y a las redes de asesoramiento.

Esta tesis doctoral examina los mecanismos que impulsan la persistente brecha de género en el emprendimiento, con un énfasis particular en cómo las percepciones condicionadas por el género, las experiencias vividas y las restricciones estructurales moldean la entrada en el emprendimiento, el acceso a recursos y los resultados de largo plazo. Explora tanto factores del lado de la demanda (por ejemplo, la toma de decisiones de los inversionistas) como del lado de la oferta (por ejemplo, los recursos, las motivaciones y las restricciones de las personas emprendedoras). En términos conceptuales, adopta una perspectiva interdisciplinar que integra aportaciones del emprendimiento, la psicología social, la economía y el capital humano estratégico. En términos metodológicos, emplea métodos cuantitativos que van desde el análisis de datos de panel hasta experimentos de campo y de laboratorio.

El Ensayo 1 examina si la confiabilidad, una señal tradicionalmente considerada universalmente positiva, beneficia siempre a las personas emprendedoras o si su interpretación depende del género. Mediante dos experimentos, un estudio de campo con 284 inversionistas y una replicación con 586 participantes de la población general, el ensayo muestra que la confiabilidad interactúa con el género para dar forma a la disposición a invertir: los hombres se benefician de niveles altos de confiabilidad,

mientras que las mujeres son penalizadas. Estos resultados contribuyen a la investigación sobre confianza, teoría de las señales y financiamiento emprendedor al cuestionar la suposición de que las señales de confianza son universalmente beneficiosas e introducir una perspectiva contextualizada y sensible al género sobre la interpretación de señales. Al hacerlo, el ensayo pone de relieve los costos ocultos de la benevolencia y el potencial lado oscuro de la confiabilidad para las mujeres emprendedoras, con implicaciones concretas para la práctica de inversión y para los esfuerzos destinados a cerrar las brechas de financiamiento.

El Ensayo 2 investiga cómo la inseguridad laboral moldea de manera diferenciada la transición de hombres y mujeres desde el empleo asalariado hacia el emprendimiento, basándose en un conjunto de datos vinculados de empresas y empleados en España y aprovechando la reforma laboral de 2012 como un shock exógeno. Al integrar perspectivas de movilidad de carrera y género, el estudio desplaza el foco desde la narrativa convencional centrada en las oportunidades hacia una visión del lado de la oferta que vincula la entrada en el emprendimiento con las trayectorias profesionales. Utilizando 2.942.582 observaciones persona-año, el análisis concluye que una menor seguridad laboral aumenta la entrada en el emprendimiento, con efectos más fuertes para los hombres debido a experiencias y dinámicas de género en el mercado laboral. Estos hallazgos contribuyen a los enfoques sobre trayectorias profesionales en el emprendimiento e informan los debates de política pública sobre la flexibilidad del mercado laboral y sus consecuencias de género.

El Ensayo 3 adopta una perspectiva de inserción familiar para estudiar cómo las carreras emprendedoras se relacionan con las intenciones de ser madre o padre en el corto plazo. Utilizando la Generations and Gender Survey en nueve países europeos y

analizando a 26.768 mujeres y hombres económicamente activos en edad reproductiva, el ensayo muestra que el emprendimiento se asocia con mayores intenciones de tener un hijo entre los hombres, pero con menores intenciones entre las mujeres, con magnitudes similares para emprendedores sin empleados y emprendedores con empleados. Los resultados sitúan al emprendimiento como un recurso para los planes de expansión familiar de los hombres y como una restricción para los de las mujeres, contribuyendo a la investigación de flecha invertida sobre cómo las carreras emprendedoras moldean las decisiones familiares y ampliando la literatura sobre género y emprendimiento en relación con las tensiones entre trabajo y familia.

En conjunto, la tesis traza la brecha de género a lo largo de tres etapas: el acceso a recursos en las decisiones de inversión; la entrada en el emprendimiento a través de transiciones de carrera; y la intersección entre las carreras emprendedoras y las decisiones familiares. En el plano teórico, conecta la cognición a nivel micro con las dinámicas del mercado laboral a nivel macro para aclarar cuándo señales bien intencionadas resultan contraproducentes, cuándo la flexibilidad institucional amplía la entrada pero magnifica las disparidades y cómo las decisiones de carrera repercuten en la vida familiar. En el plano metodológico, la combinación de experimentos preinscritos, datos administrativos vinculados de empleadores y empleados, y encuestas transnacionales permite tanto la inferencia causal como la generalización. Más allá del ámbito académico, los hallazgos son relevantes para inversionistas que diseñan rutinas de evaluación más justas, responsables de políticas públicas que calibran la flexibilidad del mercado laboral teniendo en cuenta sus consecuencias de género, organizaciones que construyen ecosistemas emprendedores más inclusivos que fomenten un crecimiento equitativo y sostenido, e individuos que toman decisiones

mejor informadas sobre la entrada en el emprendimiento y la expansión de sus proyectos.

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ESSAY 1: REVISITING THE ROLE OF TRUSTWORTHINESS IN NEW VENTURE INVESTING: A GENDERED-SIGNALING PERSPECTIVE[1][2]

ABSTRACT

This study examines how signals of trustworthiness shape entrepreneurial investment decisions and how these effects vary by the entrepreneur's gender. Building on signaling theory and stereotype research, we argue that trustworthiness signals, typically viewed as universally positive, are interpreted differently depending on gender. Specifically, while trustworthiness increases investment willingness for male entrepreneurs, for female entrepreneurs, this relationship takes an inverse U-shaped form: at high levels of trustworthiness, signal conflict between benevolence (intent) and ability (quality) triggers an evaluative discount. We test our hypotheses through two experiments: a field study with 284 investors and a replication with 586 general-population respondents. Consistent with our theorizing, male entrepreneurs benefit from signaling high trustworthiness, whereas female entrepreneurs are penalized at high levels of benevolence. Women sometimes reach parity or advantage at low or neutral trustworthiness, suggesting progress in baseline evaluations, yet this reverses when benevolence becomes salient. Supplementary analyses show that stereotype-driven penalties extend beyond investment decisions to assessments of the venture idea itself. These findings advance research on trust, signaling theory, and entrepreneurial finance by challenging the assumption that trust signals are universally beneficial and by introducing a gendered, contextualized view of signal interpretation. By illuminating how gender stereotypes reconfigure the meaning of otherwise positive signals, we reveal the hidden costs of benevolence and the dark side of trustworthiness for women entrepreneurs, while also producing important practical implications for entrepreneurial investment and efforts to close the gender gap.

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[2] This work was selected as a "Best Paper" by the Academy of Management's Entrepreneurship Division, published in the Frontiers of Entrepreneurship Research Proceedings, and awarded the "IE Sustainable Impact Research Award".

INTRODUCTION

Research on new venture funding and signaling theory indicates that information asymmetry between entrepreneurs and investors can often induce consequential amounts of friction in investment decisions (Bafera & Kleinert, 2023; Colombo, 2021; Connelly et al., 2011). Specifically, two types of information asymmetry play a critical role in such decisions: information about quality and information about intent (Stiglitz, 2000). The first pertains to situations in which one party lacks full knowledge of another party's characteristics (Connelly et al., 2011). The second involves uncertainty regarding the other party's behavior or behavioral intentions (Elitzur & Gavious, 2003). Because both types of information about entrepreneurs are difficult to observe before one has committed funds and parties begin working together, potential investors are at a disadvantage when deciding whether to invest in a venture. Indeed, information asymmetry imposes heightened transaction costs on investors (Spence, 1973). To minimize asymmetry, investors thus seek alternative observable information signals that might give them a better idea of key unobservables, such as entrepreneurs' ability, competence, intent, or motivation (Ahlers et al., 2015; Colombo, 2021; Maxwell et al., 2011).

Trustworthiness is one such signal (Maxwell & Lévesque, 2014). Mayer, Davis, and Schoorman's (1995) classic definition highlights three dimensions through which people form assessments of a person's trustworthiness: benevolence, ability, and integrity. Building on these distinctions, past studies have used perceptions of an entrepreneur's ability as a quality signal (Maxwell & Lévesque, 2014), while the benevolence dimension has been viewed as an intent signal (Johnson et al., 2018; Maxwell & Lévesque, 2014). Overall, existing theory conceptualizes high levels of

trustworthiness as a universally positive signal for "all" entrepreneurs, regardless of who they are, specifically their race, socioeconomic class, age, or gender, because it simultaneously and complementarily signals both high quality and good intent, thereby addressing information asymmetry and reducing transaction costs for investors.

Current adaptations of signaling theory in entrepreneurship research often assume that ability and benevolence signals are complementary, as they jointly address dual uncertainties regarding the entrepreneur's quality and intent (Bafera & Kleinert, 2023; Connelly et al., 2011). However, since benevolence is itself a gendered trait (Ahl, 2006; Cuddy et al., 2008), it may lead to complications in modeling trustworthiness signals. Recent work invites scholars to consider signal portfolios, particularly signal conflict (Bafera & Kleinert, 2023), and gendered interpretations of signals, which cast doubt on the assumption of signal complementarity that underlies much of the existing literature.

In this study, we relax the signal complementarity assumptions about trustworthiness signals, those related to quality (ability) and intent (benevolence), to examine whether high trustworthiness is processed as a universally positive signal or whether it might sometimes convey conflicting cues about quality and intent. Aligned with prior theory, we build on the baseline notion that signals which create a trustworthy impression of the entrepreneur are, on average, beneficial for attracting investment. However, drawing on the stereotypes literature, we conceptualize the complementarity of trustworthiness signals as a function of the entrepreneur's gender. Specifically, we argue that signals related to quality (ability) and intent (benevolence), while complementary for men, may act as conflicting for women at high levels of trustworthiness. In particular, high benevolence may offset the perceived quality signal for women entrepreneurs, as it activates the communal female stereotype. As a result,

women entrepreneurs who exhibit high benevolence may experience diminishing returns from trustworthiness, whereas male entrepreneurs do not face a similar evaluative discount when perceived as highly trustworthy by investors.

In summary, we hypothesize that trustworthiness is positively associated with investment decisions. However, for women entrepreneurs, this relationship takes an inverse U-shaped form: at high levels of trustworthiness, the ability and intent signals function in a conflicting way with each other rather than amplifying one another, as they do for men. Furthermore, we expect investor gender to moderate this relationship, such that male investors penalize women entrepreneurs more strongly than female investors, because male investors may be more susceptible to gender-stereotypical evaluations.

We test our hypotheses with a field experiment with 284 investors and a follow-up online experiment with 586 participants from the general population. Consistent with our theorizing, the results show that the effect of trustworthiness on investment evaluations depends on the gender of the entrepreneur. While male entrepreneurs benefit from being perceived as highly trustworthy, female entrepreneurs are penalized at high levels of trustworthiness. Although we do not find statistically significant support that this penalty is more pronounced among male investors, descriptive contrasts suggest such patterns may exist. In supplementary analyses, we also examined whether gender and trustworthiness affected how respondents evaluated the venture idea itself. The results show a similar inverse U-shaped pattern for women, which is statistically significant in Study 1 and directionally consistent in Study 2. At high levels of trustworthiness, ideas presented by women were evaluated less favorably than those presented by men, suggesting that stereotype-driven biases can shape not only investment decisions but also perceptions of idea quality.

Our theory and findings offer a more complete understanding of when and why trustworthiness may lead to different investment outcomes for women versus men. By challenging the assumption that high trustworthiness benefits "all" entrepreneurs equally, we introduce a more nuanced and gendered perspective on benevolence into the modeling of trustworthiness signals. We contribute to the growing body of research on gendered interpretations of signals in investment decisions, which often result in evaluative discounts for women entrepreneurs. In response to recent calls for greater attention to signal portfolios and signal conflict, we also advance signaling theory by demonstrating that two signals, typically considered complementary, can act as either amplifying or conflicting, depending on the gender of the signaler. Our findings show that cognitive biases can cause the same signal to either amplify or undermine the other. We also highlight the role of "non-signals." Whereas men benefit from providing benevolence signals, women benefit most from their absence. This highlights that the lack of a signal can be as consequential as its presence, a dimension largely overlooked in the signaling literature.

We also contribute to the vibrant stream of literature on trust by showing a novel interaction between the two dimensions of trustworthiness, ability and benevolence. These dimensions do not consistently align but can instead collide when interpreted under the effect of gender stereotypes. In doing so, we uncover the dark side of trust, showing that high benevolence trustworthiness, while advantageous for men, can be detrimental for women.

Finally, we contribute to the literature on gender gap in entrepreneurial finance. We find no overall disadvantage for women in funding allocations, suggesting that women may now reach baseline parity with men. In fact, in both studies women are evaluated

more favorably than men at low or neutral levels of trustworthiness, signaling meaningful progress. Yet this progress disappears when benevolence trustworthiness becomes salient: women are penalized while men are rewarded. In other words, women benefit until gender stereotypes are activated, at which point biases reemerge.

THEORETICAL BACKGROUND AND HYPOTHESES DEVELOPMENT

Venture Funding: A High-Information-Asymmetry Context

Access to finance is a key success factor for entrepreneurs, particularly in the start-up and growth phases (Cassar, 2004; Hellmann & Puri, 2000). In this capacity, investor–entrepreneur relationships and the drivers that make investors fund, or not fund, a venture have been of wide scholarly interest in management and economics (Amit et al., 1990; Ewens & Townsend, 2020; Martens et al., 2007; Maxwell et al., 2011; Petkova et al., 2012). One key aspect of the venture funding context is that it involves high information asymmetry, and new ventures face the central challenge of reducing these substantial information asymmetries with key stakeholders, such as prospective investors (Bafera & Kleinert, 2023; Hallen et al., 2020; Reuer & Ragozzino, 2012).

There are two broad categories of information that are important to investors yet not readily available: information about quality and information about intent (Stiglitz, 2000). Quality-related information asymmetries arise when one party lacks complete knowledge about the attributes or capabilities of another (Connelly et al., 2011), whereas intent-related asymmetries occur when there is uncertainty about the other party's likely behavior or underlying motives (Elitzur & Gavious, 2003). A common strategy for overcoming both forms of asymmetry is to employ signals, observable actions or characteristics that credibly convey information about quality and intent (Colombo, 2021). For these signals to be effective, they must be sufficiently costly or

difficult for low-quality ventures or those with undesirable intentions to replicate, thereby enabling resource providers to distinguish between ventures that differ in their underlying capabilities and motives (Ahlers et al., 2015; Bafera & Kleinert, 2023; Spence, 1973).

Trustworthiness: A Signal Addressing Quality and Intent

Among the various signals investors can use to assess quality- and intent-related information asymmetries, trustworthiness stands out as particularly critical, as it directly shapes investors' perceptions of both a venture's capabilities and the entrepreneur's underlying motives. There are two social actors involved in a trust relationship: a trusted partner (trustee), and a trusting partner (trustor). In their seminal work, Mayer, Davis, and Schoorman (1995) define trust as "the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party" (p.712). An exchange partner is trustworthy when it is worthy of the trust of others (Barney & Hansen, 1994).

Mayer et al.'s (1995) classic definition of trustworthiness is based on three characteristics of the trustee: benevolence, ability, and integrity. Benevolence refers to "the extent to which a trustee is believed to want to do good to the trustor, aside from an egocentric profit motive" (p.718). Ability is defined as the "group of skills, competencies, and characteristics that enable a party to have influence within some specific domain" (p.717). And integrity relates to "the trustor's perception that the trustee adheres to a set of principles that the trustor finds acceptable" (p.719).

In the context of entrepreneurial investment, perceptions of trustworthiness influence both whether potential investors believe the venture has the capabilities to

succeed -through perceptions of ability- and whether they expect the entrepreneur to act in ways aligned with their interests -through perceptions of benevolence. Ability has been conceptualized as a quality signal and benevolence as an intent signal (Johnson et al., 2018; Maxwell & Lévesque, 2014). Thus, trustworthiness signals simultaneously and complementarily address both quality- and intent-related concerns of investors. For this reason, the extent to which an entrepreneur is perceived as trustworthy can be a decisive factor in securing resources, given that investment decisions inherently involve uncertainty and a willingness to assume risk.

Consistent with this logic, prior research finds that trust is essential for, and a strong predictor of, obtaining capital from investors (Haines et al., 2003; Harrison et al., 1997; Kelly & Hay, 2003; Maxwell & Lévesque, 2014; Shepherd & Zacharakis, 2001). Investigating the criteria investors use when evaluating entrepreneurial opportunities and entrepreneurs, Sudek (2006) ranks trustworthiness first, while Van Osnabrugge (1998) and Van Osnabrugge and Robinson (2000) rank it second. Notably, some investors in Sudek's (2006) study stated that "a lack of trust would often cancel out any of the business idea's merits, growth potential, or ROI potential in the minds of the angel investors. The entrepreneur has to be trustworthy" (p. 95).

Overall, trustworthiness signals have been conceptualized as a positive antecedent of investment decisions, largely based on the premise that trust reduces the transaction costs and risks inherent in entrepreneurship (Harrison et al., 1997; Welter, 2012; Williamson, 1981), drawing on Granovetter's (1985) emphasis on the importance of trust and personal relationships for economic decisions. Because prospective investors, particularly angel investors, often commit substantial time and effort to their portfolio firms in addition to providing financial capital, an entrepreneur's behavioral intentions

become a pivotal consideration in investment decisions (Colombo, 2021). As a result, conveying signals that foster a positive and trustworthy image of the entrepreneur is crucial for alleviating uncertainty about the individual's intentions and likely future conduct, thereby reducing agency or relationship risk (Colombo, 2021). The more trustworthy the entrepreneur is perceived to be, the more willing investors are to commit capital (Maxwell & Lévesque, 2014). Thus, we formulate our baseline hypothesis as:

> ***Hypothesis 1 (baseline):*** *The trustworthiness of an entrepreneur positively impacts one's willingness to invest.*

Gender and Stereotypes: The Signaler

Although our baseline hypothesis reflects the prevailing view that trustworthiness is a universally positive signal for entrepreneurs, this assumption overlooks an important contingency: the social characteristics of the signaler. In particular, existing research on trustworthiness as a signal rarely considers that its interpretation may vary depending on the entrepreneur's gender. Because perceptions of ability and benevolence are socially constructed and often shaped by gender stereotypes, the same trustworthiness signal may not produce identical effects for all entrepreneurs. In the next section, we draw on the stereotypes literature to argue that gender moderates the relationship between trustworthiness and investment willingness, potentially transforming what is assumed to be a complementary signal into one that can generate conflicting impressions.

While trustworthiness can serve as a powerful signal to reduce both quality- and intent-related information asymmetries, its interpretation does not occur in a social vacuum. Investor judgments are embedded in broader social contexts and are subject to cognitive biases, including those shaped by gender stereotypes (Cliff et al., 2005;

Thébaud, 2015a). Signaling theory further emphasizes that the effectiveness of any signal depends not only on what is sent but also on how it is interpreted by the receiver (Connelly et al., 2011; Spence, 1973). This implies that even when entrepreneurs communicate signals intended to reduce uncertainty, the meaning and weight assigned to those signals can vary substantially across evaluators, shaped by their prior beliefs, expectations, and interpretive frames.

Existing research on trustworthiness as a signal has largely treated entrepreneurs as a homogeneous group, implicitly assuming that such signals are interpreted in the same way regardless of an entrepreneur's gender, race, age, or other social characteristics. In entrepreneurial investment contexts, where uncertainty is high and decisions are made under risk, social stereotypes are particularly likely to influence how signals are interpreted. The gender of the signaler can shape these interpretations, with similar characteristics being evaluated differently depending on whether the entrepreneur is a man or a woman (Alsos & Ljunggren, 2017a). Investors are especially prone to the influence of gender stereotypes (Alsos & Ljunggren, 2017a; Gupta et al., 2009), as such stereotypes are more likely to be salient in judgment and decision-making processes under conditions of uncertainty and risk (Ridgeway, 2011; Thébaud, 2015b). Consequently, trustworthiness signals may be processed differently for male and female entrepreneurs, with important implications for their effectiveness in attracting investment.

Building on this perspective, we propose that while trustworthiness has generally been modeled as a uniformly positive and complementary signal, simultaneously addressing both quality and intent concerns, its effects are not inherently universal. Because the interpretation of benevolence and ability is filtered through social

expectations, the same signal portfolio can be received in markedly different ways depending on the gender of the entrepreneur. In other words, the implicit assumption of complementarity between ability (quality) and benevolence (intent) signals may hold for some entrepreneurs but not for others. We argue that gender stereotypes systematically shape whether these signals amplify each other or conflict, making gender a critical moderator in the trustworthiness–investment relationship.

The male stereotype is strongly associated with high agency (Eagly et al., 2000). Agentic behavior expectations include achievement orientation and are linked to traits such as rationality, intelligence, competitiveness, and independence (Rudman & Kilianski, 2000), all of which are widely regarded as beneficial for business success. At the same time, the strong association between men and agency can also create perceptions of behavioral risk, as male entrepreneurs may be viewed as more likely to prioritize self-interest over investor interests.

Trustworthiness decreases this kind of risk and uncertainty, that is inherent in entrepreneurship (Fiet, 1995; Kelly & Hay, 2003). Coupled with the agentic aspect of male-stereotype -signaling quality through high ability-, perceived trustworthiness -signaling positive intent through high benevolence- would provoke a positive interpretation for men, decreasing information asymmetry both on quality and intent. For male entrepreneurs, therefore, high perceived trustworthiness amplifies the quality signal embedded in agency, jointly reinforcing the entrepreneur's attractiveness to potential investors, as portrayed by existing studies (Haines et al., 2003; Harrison et al., 1997; Kelly & Hay, 2003; Maxwell & Lévesque, 2014; Shepherd & Zacharakis, 2001). Consequently, investors would be more likely to invest in ventures of male entrepreneurs who are perceived to be highly trustworthy.

In contrast, the female stereotype is characterized by low agency (e.g., competence) and high communality (e.g., benevolence, warmth, and trustworthiness). In the absence of strong stereotypical signals triggered by high benevolence trustworthiness, we expect women to be evaluated more positively under the condition that they are highly competent, an unexpected counter-stereotypical but desirable trait (Jussim et al., 1987). In such cases, the competence signal can enhance perceptions of quality, potentially improving investment appeal.

However, when female entrepreneurs display high benevolence, a trait already strongly associated with the female stereotype, different dynamics emerge. Benevolence is a gendered trait linked to communal qualities such as warmth, empathy, and selflessness, which are stereotypically attributed to women (Ahl, 2006; Cuddy et al., 2008). These associations can have important implications for how benevolence signals are received and interpreted, particularly in contexts like entrepreneurship that are stereotypically masculine and linked to agentic qualities such as assertiveness, competitiveness, and risk-taking (Ahl, 2006; Gupta et al., 2009). As a result, benevolence signals, rather than always reinforcing perceptions of ability, may under certain conditions alter or even weaken the perceived quality signal, especially when exhibited by women entrepreneurs.

Moreover, people are generally more sensitive to warmth and trustworthiness and perceive it faster than competence information (Cuddy et al., 2008; Willis & Todorov, 2006). Thus, when investors quickly perceive high trustworthiness from women, the paternalistic default of the female stereotype may be triggered, leading them to see the entrepreneur as communal rather than agentic, low on capability despite good intentions. We therefore propose that for women entrepreneurs, high benevolence can

offset the competence signal, causing the quality and intent signals to function in conflict rather than in harmony. This conflict will lead investors to discount offerings from women entrepreneurs who exhibit high levels of trustworthiness.

> ***Hypothesis 2:*** *Entrepreneur's gender moderates the relationship between the trustworthiness of that entrepreneur and one's willingness to invest, such that for female entrepreneurs, trustworthiness has an inverse U-shaped effect on investors' willingness to invest (there is penalization at high trustworthy behavior).*

Gender and Stereotypes: The Receiver

While in Hypothesis 2, we theorize how trustworthiness signals are interpreted by receivers based on who the signaler is, it is equally important to consider who the receiver is, as these also influence how such signals are interpreted. Signaling theory emphasizes that a signal's impact depends not only on what it conveys and how credible it is, but also on whether the receiver detects it and the importance they assign to it (Colombo, 2021; Connelly et al., 2011). Even when a signal is clear and costly to imitate, its impact ultimately hinges on how it is processed by the decision-maker. If the receiver overlooks or devalues the signal, its potential is lost.

Receivers, however, are not neutral interpreters of information. Their judgments can be influenced by cognitive biases that distort the way they perceive and evaluate signals, which is referred to as receiver irrationality (Bafera & Kleinert, 2023). Receivers' prejudices and stereotypical judgments about the signaler can systematically distort interpretation, reducing the effectiveness of signals sent by members of certain social groups (E. Fischer & Reuber, 2007). In the context of entrepreneurial investment, this means that even well-crafted trustworthiness signals may fail to produce the

intended positive effects if they come from entrepreneurs who do not match the receiver's implicit prototype of a successful founder. For example, research shows that receivers evaluated economic signals sent by women or social signals sent by men as less credible (Yang et al., 2019) or perceived management experience as beneficial for male technology entrepreneurs but not equally beneficial for their female counterparts (Kleinert & Mochkabadi, 2022).

Importantly, research shows that such gender biases are particularly pronounced among male evaluators. Entrepreneurial investment studies demonstrate that male investors are more biased against female founders and show significantly lower interest in female entrepreneurs even when performance metrics are equivalent (Ewens & Townsend, 2020). Institutional and academic settings mirror this pattern; research indicates bias persists across contexts, with male evaluators less likely to recognize or acknowledge gender inequalities (García-González et al., 2019). This is consistent with broader social evidence showing that gender biases are salient among men (UNDP, 2023). As a result, male investors may be more likely to rely on stereotypical assumptions when evaluating entrepreneurs, especially under conditions of uncertainty and risk.

There are also differences in how women and men may interpret trustworthiness signals. For example, in a recent study, (Qiu et al., 2022) find that "women's interpersonal trust judgments are more sensitive than men's to others' benevolence" (p.2) and they value benevolence more in trust-related decisions. This means that, all else being equal, female investors may respond more favorably to benevolence-related trustworthiness cues than male investors do, particularly when evaluating female entrepreneurs.

Taken together, these patterns suggest that investor gender may systematically moderate the interaction between entrepreneur gender and trustworthiness in shaping willingness to invest. Specifically, because male investors are more susceptible to gender-stereotypical evaluations, we expect them to penalize women entrepreneurs more severely at high levels of trustworthiness than female investors would.

> ***Hypothesis 3:*** *The investor's (respondent's) gender moderates the interaction between the entrepreneur's gender and trustworthiness on one's willingness to invest, such that the curvilinearity of the trustworthiness-willingness relationship observed for female entrepreneurs becomes more pronounced (more negative) for male investors (respondents). In other words: for male investors, H2 becomes larger in absolute value.*

METHODS

To test our hypotheses, we first conducted a field experiment with 284 investors and then online experiments with 586 participants from general population. Throughout these studies, we presented participants with a text vignette describing an entrepreneur's venture and request for seed-stage funding, and we manipulated the entrepreneur's gender and signals of trustworthiness. We then asked participants a series of questions about their consideration of this entrepreneur and venture as a potential investment. Consistent with state-of-the-art standards, we preregistered our hypotheses with the Open Science Framework and obtained Ethics Board Approval for our study, prior to launching data collection.

STUDY 1: FIELD EXPERIMENT WITH INVESTORS

To draw on individuals with substantial and directly relevant experience of the phenomenon under investigation, we conducted an online field experiment with angel investors, seed-round investors, and other individuals with actual experience in new venture investment. We identified participants through business angel organizations and our personal and professional networks, using a snowball approach in which some participants referred additional qualified investors from their networks. We additionally used Prolific®'s database with specific sampling parameters to ensure investor backgrounds.

Sample

After excluding participants who failed attention, manipulation, and investor checks, the final sample comprised 284 participants[3]. The average participant age is 42.67 years (SD = 13.12), with 44% identifying as female. 92% hold a 4-year college degree or higher. Average investing experience is 10.50 years (SD = 8.14), 59% have prior entrepreneurial experience. Average work experience is 19.20 years (SD = 11.38).

[3] To enhance experimental realism (Wilson et al., 2010) and data quality, we implemented a series of checks to ensure participants' attention and diligence throughout their completion of the online survey. First, we incorporated questions that assess participants' attention, engagement with the material, as well as specific reading checks. Moreover, we carefully monitored the time that participants took to read the vignette and the total time they take to complete the survey. In addition, to ensure the validity of our investor sample, we incorporated a series of screening questions to confirm that participants were indeed active investors. As a post-hoc manipulation check, we also verified that they could correctly identify the gender of the entrepreneur in the vignette that they read.

The initial dataset included responses from 651 participants, from which we excluded responses from 367 participants because they failed at least one of eleven attention or manipulation checks or investor checks (362 of these (99%) failed more than one check). Our final sample thus counts responses from 284 participants, representing 44% of the initial set of responses.

Experimental Design and Data Collection Procedures

We test our hypotheses by means of a two (entrepreneur gender: female or male) by three (signals of trustworthiness: low, neutral, or high) between-subject experiment embedded in an online survey, where we randomly assigned participants to read one of six text vignettes, each featuring a brief description of an entrepreneur's venture and funding request. To augment the ecological validity of our findings, we based the venture description on a real B2B entrepreneurial start-up that leverages AI technologies to automate the services of commercial interior designers (see Appendix A). Although for research purposes, we masked the venture's details, manipulated the founder's gender, and created a completely hypothetical backstory regarding recent events and the specifics of its funding request, we first made sure that we had secured the real founder's approval to build on her venture description. We ended the survey with a debriefing statement thanking the founder for her collaboration, disclosing her venture's full details, and providing an HTML link to her venture's website for further information.

We created and hosted the survey on the Qualtrics platform, which also collected and stored the raw data prior to our analysis. Appendix A reports screenshot copies of our task instructions and venture description, and Appendix B reports our measures, showing how we operationalized our study's constructs and manipulations.

Manipulations

Gender Manipulation (Female and Male). We manipulated gender by using different first names and utilizing he/she pronouns in the vignettes: Emily (she/her/hers) and James (he/him/his). We selected these names for two reasons. First, they are among the most common in both the UK and the USA, thereby providing cultural relevance

and recognizability (UK Office for National Statistics, 2020; USA Administration - Social Security, 2020). Second, multiple sources confirm strong associations of these names with their respective genders (Gender API, 2024; Namsor, 2024).

Trustworthiness Manipulation (Low, Neutral, and High). To formulate realistic manipulations of trustworthiness, we conducted four in-depth interviews with angel investors and angel network managers to gain insights into the trust dynamics within entrepreneur-investor relationships. Building on the various anecdotes and experiences shared in these interviews, we articulated the scenarios for all three manipulations against the same general context: the presence of a stock option pool for key employees (a common feature of promising technology start-up that needs dedicated employees and equity funding to advance their development), which creates a backstory for eventual signals of trustworthiness. The following text thus appeared in all three manipulations:

> *"Emily (James) currently owns 54% of the company's shares and her (his) cofounder has 36%. They've also set aside 10% of the shares as a stock option pool for their key employees. The possibility to earn stock in the company serves as an additional bonus, which helps retain key employees and encourages their loyalty and motivation. In essence, this gives employees the option to own and sell their accrued shares at a future time, for instance, when the company is acquired or enters the stock market.*
>
> *Under current terms, all five initial employees can "earn" the right to a 0.15%-ownership stake at the end of each year of employment. This kind of arrangement is a common practice for start-ups like this."*

Building on the insights gained in our interviews, we then created sub-stories depicting the focal founder's response to a prior situation where one key employee was announcing their departure, albeit just before or after the time when their stock options had vested. For the "high" trustworthiness vignette, we built on (Maxwell & Lévesque,

2014) discussion of *trust-building behaviors* as exhibiting concerns about the well-being of others to include the following sentences (with the target manipulation emphasized in bold):

> *"A month ago, one of her(his) programmers left FurnAI for an opportunity at a Google R&D center. The employee left* ***just six weeks before*** *completing their first full year with the venture. However, Emily (James) decided to* ***let this person keep their options to own company stocks, recognizing the substantial efforts and valuable contributions that this employee had made to the company.****"*

By contrast, the "low" trustworthiness vignette replaced the above with the following sentences (with the target manipulation emphasized in bold):

> *"A month ago, one of her(his) programmers left FurnAI for an opportunity at a Google R&D center. The employee left* ***just six weeks after*** *completing the first full year with the venture. However, Emily (James)* ***refused to let this person keep their promised options to own company stocks, claiming that the programmer had reduced their efforts and contributions to the company while preparing to leave.****"*

This manipulation is consistent with (Maxwell & Lévesque, 2014)'s discussion of *trust-damaging behavior* as showing self-interest ahead of others' well-being.

To provide a baseline for testing whether either of these manipulations induced an effect beyond that of a vignette that did not include any information signals about the focal founder's trustworthiness (and alternatively, rule out that the potential effect of positive signal of trust-building behaviors was not simply driven by the manifest negativity of trust-damaging signals), we created a "neutral condition" sub-story with the following text of similar length (with the target manipulation emphasized in bold):

> *"A month ago, one of her (his) programmers left FurnAI for an opportunity at a Google R&D center. The employee left* ***just after*** *completing their first full year with the venture. Luckily, Emily (James)* ***was able to find a replacement with***

comparable experience. This person agreed to take the job for a similar salary. Emily (James) is now onboarding this new hire."

Though the choice to frame this neutral manipulation "after" the employee's stock options had vested differs from the other two manipulations, doing so became necessary to effectively "transform" the stock-option back-story into a non-issue, thus making the manipulation "neutral" from a trustworthiness standpoint.

Manipulation Checks. To ensure construct validity, we employed both ex-ante and post hoc manipulation checks (see Grégoire et al., 2019). First, we made an initial manipulation check with a sample of 102 general participants recruited from Prolific including an open-ended question asking what they thought about the entrepreneur they read about. Participants associated the high trustworthiness condition with attributes such as "trustworthiness", "fairness", and "caring about employees", among others. Conversely, the low trustworthiness condition was linked to expressions such as "would not/cannot trust him/her", "unfair", "selfish", and "not care about employees", among others.

With respect to the neutral condition, interestingly, comments about the vignette's founder also proved to be positively similar to the high trustworthiness condition: perhaps owing to their lack of familiarity with new ventures' funding dynamics and capitalization tables, "general population" respondents apparently seemed to associate the mere presence of a stock option pool with generally positive signals about the vignettes' focal founder. To assess whether this positive perception of the neutral scenario was an artifact of having presented that the venture already had a stock-option plan for employees, we conducted a separate pre-test with a modified neutral vignette that was 119 words shorter and excluded all information about the company's ownership structure and stock options. To our surprise, participants still rated the focal

founder's trustworthiness similarly in the shorter neutral and original neutral conditions (M = 4.17, SD = 1.31; M = 4.18, SD = 1.19, respectively). However, respondents assigned to the shorter vignette indicated that the information provided was not adequate for making investment decisions. In light of these, we decided to continue with the original neutral manipulation of length comparable to the "high" and "low" conditions.

To provide evidence of our trustworthiness manipulation in the main survey, we asked participants to answer (Mayer & Davis, 1999) five-item benevolence trust instrument, asking these questions just after the outcome variable questions. Consistent with our manipulation's intent, participants rated the perceived trustworthiness of the entrepreneur in the three scenarios differently, with the low trustworthiness being rated the lowest on a seven-point scale (M = 2.62, SD = 1.18), and the two other scenarios exhibiting higher ratings, with neutral (M = 4.18, SD = 1.19), and high trustworthiness (M = 4.77, SD = 1.29). Means-comparison Student's t-tests provide statistically significant evidence that participants perceived the vignettes as communicating different signals of trustworthiness, and in the manner how we had intended these manipulations to do ($p < .001$).

Dependent Variable

Willingness to Invest. Building on common practices among some angel groups, we asked participants to report what they might recommend their group to invest. Using a seven-point scale that follows a mathematical progression akin to a modified Fibonacci series ($F_n = F_{n-1} + F_{n-2}$), we defined the intermediate points to capture practically meaningful ranges of investment commitments. Starting from "1 = not investing at all", the scale includes the following points: "2 = Investing less than

$100,000," "3 = Investing between $100,000-$249,999," "4 = Investing between $250,000-$499,999," "5 = Investing between $500,000-$999,999," "6 = Investing between $1,000,000-$1,499,999," and "7 = Investing $1.5 million or more". Then we asked for a specific recommendation amount (open text box).

Independent, Moderating, and Control Variables.

To obtain unambiguous interpretations of the interaction terms in our analyses (Davis, 2010; Judd, C. M. et al., 2017) we used contrast and polynomial codes to operationalize our manipulated effects for analyses, as well as that of other relevant covariates in our analyses.

Gender of the Entrepreneur. We operationalized entrepreneur gender as taking the value of "-1" if the vignette's focal entrepreneur uses a "male" name and pronouns, and "1" if the vignette's entrepreneur uses "female" name and pronouns.

Trustworthiness of the Entrepreneur. Similarly, we operationalized the linear trend for trustworthiness with the codes "-1" for the low trustworthiness vignette, "0" for the neutral vignette, and "+1" for the high trustworthiness vignette. To assess the curvilinear trend, we coded the trustworthiness manipulations as "-1" for both low and high trustworthiness vignettes, and "2" for the neutral vignette (see Judd et al., 2017). With this operationalization, a positive coefficient would reflect that the data follows an inverse "U" shape.

Investor's Gender. Similar to the coding for "the gender of the entrepreneur", investor's gender takes the value of "-1" if the respondent identifies as "male" and "1" if "female". We use this operationalization to test H3.

Control variables. To rule out alternative explanations and isolate the specific effects of our trustworthiness manipulations, we controlled for the other two dimensions

of Mayer et al.'s (1995) integrative model of trust, namely i) perceived competence of the entrepreneur (using seven items adopted from (Bigelow et al., 2014), and ii) perceived integrity of the entrepreneur (Mayer & Davis, 1999). Additionally, we controlled for the possible effect of how respondents might perceive the inherent potential of the founder's project (as a third-person new-venture idea) by asking participants to assess the project in light of (Davidsson et al., 2021)'s venture idea assessment instrument. Within-measure item-total correlations statistics above .57 across all these measures and Cronbach's alpha values of .92, .97, and .89 for measures of perceived competence, integrity, and venture idea assessment (respectively) support these measures' validity and reliability. Confirmatory factor analyses (CFA) confirmed discriminant validity of these measures (see Appendix C). Lastly and consistent with related studies (Brush et al., 2014; Ewens & Townsend, 2020; Gafni et al., 2020; Johnson et al., 2018; Peng et al., 2007), we asked participants to report their gender, education level, work experience, investment experience, and entrepreneurial experience.

Analysis

We used OLS regression to test our hypotheses. To help with the interpretation of our results, we mean-centered all continuous measures (and used contrast and polynomial codes for categorical variables) prior to conducting our analyses.

Results

Table 1 presents descriptive statistics and correlations for the variables. Table 2 reports the results of our tests of H1 and H2. H1 predicts that an entrepreneur's trustworthiness positively affects willingness to invest. The findings support H1. The

coefficient in Model 1 indicates that investors are willing to invest $87,890 more when the entrepreneur is highly trustworthy ($p < .001$). When controls are included in Model 2, the effect remains significant, with investors willing to invest $51,880 more ($p < .05$).

Insert Table 1 and Table 2 about here

H2 predicts that entrepreneur's gender moderates the relationship between the trustworthiness of that entrepreneur and one's willingness to invest, such that for female entrepreneurs, trustworthiness has an inverse U-shaped effect on investors' willingness to invest, there is penalization at high levels of trustworthy behavior. The findings support H2.

The positive coefficients of "Trustworthiness^2 x Gender" in Model 3 ($p < .001$) and Model 4 ($p < .01$) indicate that the data follows an inverse U-shape for female entrepreneurs. To better understand the diverging effects of trustworthiness on investment decisions for female and male entrepreneurs, we compare the means of dependent variables for both groups. Figure 1 plots the differing effects of trustworthiness for women versus men on "willingness to invest". As expected, trustworthiness positively predicts investment decisions for male entrepreneurs; the willingness to invest increases with increasing levels of trustworthiness. However, for female entrepreneurs, there is an inverse U-shaped relationship between trustworthiness and investment amount such that no signals of trustworthiness positively affect the likelihood of getting investment, as opposed to both low and high levels of trustworthiness. Male entrepreneurs are rewarded for being highly trustworthy and allocated on average nearly $630,000 for investment recommendations. In contrast,

highly trustworthy female entrepreneurs are penalized, receiving less than $330,000 for investment recommendations on average.

Insert Figure 1 about here

H3 predicts that the investor's (respondent's) gender moderates the interaction between the entrepreneur's gender and trustworthiness on one's willingness to invest, such that the curvilinearity of the trustworthiness-willingness relationship observed for female entrepreneurs becomes more pronounced (more negative) for male investors (respondents). Table 3 reports the results of our tests of H3. The findings do not support H3. Figure 2 plots the differing effects for female and male investors. We observe a more severe penalty from male investors, though regression results are not significant.

Insert Table 3 and Figure 2 about here

STUDY 2: ONLINE EXPERIMENT WITH GENERAL POPULATION

To assess the generalizability of Study 1's investor-specific findings, we replicated the study with a second sample consisting of participants from the general population, recruited via the Prolific platform. The data collection procedures, research materials, and survey questions were identical across the two samples, except for minor wording changes to adapt sample-specific instructions (e.g., using "people" instead of "investors"). Importantly, rather than asking these participants to evaluate the scenarios as if they were angel investors themselves, a perspective that would likely not yield meaningful results given their lack of investment experience, we instructed them to assume the role of analysts at a well-established venture capital firm. This framing

allowed participants to engage with the decision task realistically while maintaining comparability across samples.

Sample

Working from Prolific's sampling parameters, we targeted general participants meeting the following criteria: residing in the USA or UK, nationals of the USA or UK, born in the USA or UK, native English speakers, and maintaining a Prolific approval rate of 98% or higher. We compensated qualified participants at rates commensurate with Prolific's policies. After excluding participants who failed attention and manipulation checks, the final sample comprised 586 participants[4]. The average participant age is 44.21 years (SD = 10.45), with 51% identifying as female. 74% hold a 4-year college degree or higher. 47% have prior investing experience and 19% have prior entrepreneurial experience. Most participants are working (83%), including 67% as paid employees and 16% self-employed. Average work experience is 21.17 years (SD = 10.78).

Results

Table 4 presents descriptive statistics and correlations for the variables. Table 5 reports the results of our tests of H1 and H2. H1 predicts that an entrepreneur's trustworthiness positively affects willingness to invest. The findings support H1. The coefficient in Model 1 indicates that investors are willing to invest $83,530 more when the entrepreneur is highly trustworthy ($p < .001$). When controls are included in Model 2, the effect remains significant, with investors willing to invest $52,470 more ($p < .01$).

[4] The initial dataset for Sample 2 included responses from 922 participants, from which we excluded responses from 336 participants because they failed at least one of eleven attention or manipulation checks (262 of these (78%) failed more than one check). Our final Sample 2 thus counts responses from 586 participants, representing 64% of the initial set of responses.

Insert Table 4 and Table 5 about here

H2 predicts that entrepreneur's gender moderates the relationship between the trustworthiness of that entrepreneur and one's willingness to invest, such that for female entrepreneurs, trustworthiness has an inverse U-shaped effect on investors' willingness to invest, there is penalization at high trustworthy behavior. Consistent with Study 1, the findings of the Study 2 support H2. The positive coefficients of "Trustworthiness^2 x Gender" in Model 3 ($p < .01$) and Model 4 ($p < .01$) indicate that the data follow an inverse U-shape for female entrepreneurs. To better understand the diverging effects of trustworthiness on investment decisions for female and male entrepreneurs, we compare the means of dependent variables for both groups. Figure 3 plots the differing effects of trustworthiness for women versus men on "willingness to invest". As expected, trustworthiness positively predicts investment decisions for male entrepreneurs; the willingness to invest variables increase with increasing levels of trustworthiness. However, for female entrepreneurs, there is an inverse U-shaped relationship between trustworthiness and investment amount such that no signals of trustworthiness positively affect the likelihood of getting investment, as opposed to both low and high levels of trustworthiness. Male entrepreneurs are rewarded for being highly trustworthy and allocated on average more than $530,000 for investment recommendations. In contrast, highly trustworthy female entrepreneurs are penalized, receiving less than $370,000 for investment recommendations on average.

Insert Figure 3 about here

H3 predicts that the investor's (respondent's) gender moderates the interaction between the entrepreneur's gender and trustworthiness on one's willingness to invest, such that the curvilinearity of the trustworthiness-willingness relationship observed for female entrepreneurs becomes more pronounced (more negative) for male investors (respondents). Table 6 reports the results of our tests of H3. The findings do not support H3. Figure 4 plots the differing effects for female and male investors. We observe a slightly greater penalty from male investors, though regression results are not significant.

Insert Table 6 and Figure 4 about here

SUPPLEMENTARY ANALYSES

Although we have not formulated formal hypotheses, we also examined whether respondents evaluated the venture idea differently depending on the entrepreneur's gender and trustworthiness. To this end, we conducted additional regression analyses using respondents' assessments of the venture idea as the dependent variable. This allowed us to examine whether gender and trustworthiness influenced how the idea itself was evaluated. These exploratory models help clarify whether respondents conflated the quality of the idea with their perceptions of the entrepreneur, especially in relation to their gender and trustworthiness.

Insert Table 7 and Figure 5 about here

Table 7 reports the results for the Study 1 and Study 2 samples. Like the results for willingness to invest, venture idea assessment also follows an inverse U-shape for female entrepreneurs. The quadratic interaction between trustworthiness and gender is

significant in Study 1 and directionally similar in Study 2, indicating that the curvature of the relationship differs by gender. At high levels of trustworthy behavior, the venture ideas presented by women are not assessed as favorably as those presented by men. This pattern suggests that it is not only investment decisions that are affected; when stereotypes are triggered, respondents also evaluate the ideas presented by women less favorably than those presented by men. Figure 5 plots the differing effects of trustworthiness for women versus men on venture idea assessment for the Study 1 and Study 2 samples.

GENERAL DISCUSSION

This study examines whether and how signals of entrepreneur trustworthiness shape investors' funding decisions, and whether these effects depend on the entrepreneur's gender. Across two experiments, a field study with investors and a replication with general-population respondents, we find robust evidence of a "trust penalty" for women entrepreneurs: while men benefit from signaling high benevolence trustworthiness, women are penalized, receiving lower investment evaluations when they display the same signal. Importantly, we also observe signs of progress at the baseline: women are sometimes evaluated as favorably as, indeed more favorably than, men at low and neutral levels of trustworthiness. They benefit the most when they do not display any benevolence signals. This progress reverses when benevolence becomes salient at high levels, suggesting that bias re-emerges once gender-congruent stereotypes are activated. These findings have important implications for signaling theory, research on gender and entrepreneurial finance, as well as the vibrant literature at the nexus of trust and entrepreneurship.

Theoretical Implications

Our research contributes to signaling theory in several ways. First, we relax the assumption that trustworthiness signals benefit all entrepreneurs equally. Prior work has generally modeled trustworthiness as a universally positive signal, complementarily addressing both quality- and intent-related information asymmetries. Our findings reveal that its effectiveness depends on the gender of the signaler: men benefit from signaling high benevolence, whereas women are penalized. This introduces a more nuanced, gendered perspective into the modeling of trustworthiness signals and extends recent work emphasizing signal interpretation (Clarke et al., 2019).

Second, we show that signals typically viewed as complementary can instead become conflicting depending on the gender of the signaler. For men, benevolence and ability signals reinforce one another; for women, benevolence undermines perceptions of ability. This demonstrates that signal complementarities are not stable but contingent on gender, thereby responding to calls to study signal complementarity and conflict (Bafera & Kleinert, 2023; Connelly et al., 2011) and paralleling Gray et al. (2024), who find that even positive signals such as credentials can backfire under biased interpretive frames.

Third, we highlight the role of "non-signals." While men benefit from providing benevolence signals, women often benefit most from their absence. This underscores that what is *not* signaled can be as consequential as what is signaled, a dimension often overlooked in the signaling literature. It echoes Janney and Folta's (2003) observation that silence itself conveys information and aligns with Colombo's (2021) call for greater attention to omitted or absent signals in entrepreneurial contexts.

Fourth, our findings point to the importance of considering receiver characteristics in signaling theory. Although our three-way interaction with investor gender was not statistically significant, descriptive contrasts suggest that male investors may penalize highly trustworthy female entrepreneurs more strongly. This aligns with calls to integrate receiver heterogeneity into signaling theory (Bafera et al., 2023; Colombo, 2021) and resonates with Engel et al. (2023), who show that gendered responses to entrepreneurial signals can sustain inequality in joiners' interest.

Finally, we advance the literature at the intersection of signaling theory and gender stereotypes by showing that signal interpretation is embedded in gender per se, independent of structural factors such as human or social capital. This complements Alsos & Ljunggren (2017b) and extends recent calls for research on how gender stereotypes shape the effectiveness of signals (Bafera et al., 2023).

Moreover, our supplementary analyses indicate that these stereotype-driven interpretations can extend beyond assessments of the entrepreneur to evaluations of the venture idea itself. At high levels of trustworthy behavior, the venture ideas presented by women are not assessed as favorably as those presented by men. This suggests that respondents may discount the quality of the idea when women display high trustworthiness. In contrast, for men, higher trustworthiness is associated with more favorable assessments of the idea, reinforcing rather than undermining perceptions of idea quality. This pattern, which emerges clearly in Study 1 and in a similar form in Study 2, shows that gendered stereotypes can shape not only judgments about the entrepreneur but also how the underlying ideas are perceived.

Taken together, our findings suggest that women may be disadvantaged across the full spectrum of signals, whether absent, discounted, or reinterpreted in stereotype-

consistent ways. This highlights the importance of moving beyond what is signaled to consider how signals are interpreted, and by whom.

Our study also advances research on trust in entrepreneurship. Although prior studies largely treat trustworthiness as a uniformly positive trait, our findings uncover its "dark side" (Nooteboom, 2002; Zahra et al., 2006). Specifically, we show that high benevolence-trustworthiness is advantageous for men but detrimental for women. In this way, our work reveals a novel interaction between trust dimensions that is triggered by gender stereotypes: benevolence cues activate stereotypes of warmth that, for women, undermine perceptions of ability. This extends Maxwell and Lévesque's (2014) theorizing on trustworthiness and complements Mayer, Davis, and Schoorman's (1995) integrative model by showing that trustworthiness is not always universally valued in the same way.

Our findings also contribute to broader debates about gender inequality in entrepreneurial finance (Brush et al., 2014; Kanze et al., 2018). We observed no main effect of entrepreneur gender on funding allocations, suggesting that women may now achieve baseline parity. In fact, in both studies we find evidence that women entrepreneurs are sometimes evaluated more favorably than men at lower and neutral levels of trustworthiness. This suggests real progress in reducing gender gaps in baseline access to finance. However, this progress reverses when benevolence trustworthiness signals become salient: at high levels of trustworthiness, women are penalized while men are rewarded. In other words, women benefit until stereotypes are activated, at which point bias reemerges.

Moreover, comparing our investor and general population samples reveals subtle differences. While both samples show the penalty for highly trustworthy women

entrepreneurs, investors exhibit sharper contrasts across conditions, suggesting that domain experience may amplify stereotype-driven interpretations. These differences highlight that gendered signal interpretation is robust across evaluator types, but may manifest with varying intensity.

More broadly, our results underline that entrepreneurship is a socially embedded process (Brush et al., 2009; Thébaud, 2015b; Welter & Smallbone, 2010). By bridging micro-level investor cognition with macro-level inequalities in entrepreneurial finance, our study highlights how everyday investment decisions reproduce structural inequities in who receives resources and representation in entrepreneurship.

Practical Implications

Understanding the gendered nature of trustworthiness-entrepreneurial investment is also of practical importance. Women own 42% of U.S. businesses (American Express, 2019), yet female-founded ventures received only 2.2% of U.S. VC in 2018 (PitchBook & National Venture Capital Association (NVCA), 2019), and just 2.7% of VC-backed firms have a female CEO (Brush et al., 2014). Because access to finance is crucial for venture performance (Cassar, 2004; Hellmann & Puri, 2000), this persistent gap illustrates the systemic disadvantage women face even in contexts where women's entrepreneurial participation is high (Bosma et al., 2020). Our study shows how trustworthiness, typically "good", can reproduce and exacerbate this gap.

For investors, our findings underscore the need to recognize and mitigate cognitive biases that distort evaluation. Structured decision-making processes, standardized evaluation rubrics, or bias-awareness training programs could help counteract biased signal interpretation. For entrepreneurs, signaling strategies must be gender-contingent. While men may gain from highlighting benevolence, women may be better served by

emphasizing competence and integrity signals and being strategic about when, or whether, to highlight benevolence.

At the ecosystem level, accelerators, incubators, and investor associations can play a role by revising screening procedures to reduce reliance on informal judgments that amplify bias. Policy makers and funding agencies may also consider interventions, such as anonymized pitch evaluations, to create more equitable conditions for women entrepreneurs. Finally, entrepreneurship education and training programs could prepare women founders to manage signal portfolios strategically, while simultaneously educating investors on how to avoid misinterpreting benevolence cues.

Limitations and Future Research

As with all research, our study has limitations that open opportunities for further inquiry. First, our vignette experiments maximize internal validity but limit external validity, as hypothetical funding recommendations do not fully capture real-world investment behavior. Second, although we used both a field sample of investors and a replication with general-population respondents, our findings may not generalize to other institutional contexts or cultural settings where gender norms differ. Third, our operationalization of benevolence trustworthiness -though grounded in investor interviews- captures only one form of benevolence, and future work should examine whether different expressions generate similar penalties.

This research opens several promising avenues. First, scholars could examine whether other positively valanced but stereotypically feminine signals (e.g., collaboration, empathy, communal leadership) also backfire for women while benefiting men. Such work would identify a broader class of gendered penalties for “good” signals. Second, future research could investigate boundary conditions under which

benevolence signals do not harm women, such as in other institutional settings (e.g., in managerial positions) or in cultural contexts with stronger gender equity norms. Comparative research across different contexts would clarify when benevolence is penalized versus rewarded. Third, while our experiments provide strong internal validity, field studies linking signals to actual funding outcomes would enhance external validity. Complementary qualitative research could illuminate the cognitive processes through which investors interpret benevolence. Finally, research could test interventions. Building on (Kanze et al., 2018), who showed that reframing interactions can reduce gender gaps, future studies might explore whether reframing benevolence as competence-enhancing (e.g., "benevolence that improves retention, execution reliability, and governance") offsets penalties for women. This would inform both theory and practice by identifying ways to mitigate bias in entrepreneurial finance.

CONCLUSION

Challenging the assumption that trustworthiness is universally beneficial for all entrepreneurs, this study was initiated with the question: How do trustworthiness signals shape investment evaluations, and do these effects differ for women versus men? Addressing the limitations of prior research that often treats trust signals as uniformly positive, we developed a framework that integrates gender as a key moderator of signal interpretation. Drawing on signaling theory, trust research, and gender literature, we theorize that benevolence trustworthiness signals can amplify or conflict with ability trustworthiness signals depending on the entrepreneur's gender, and that receiver characteristics further shape these dynamics. Across two experiments, a field study with investors and a replication with general-population respondents, we find robust evidence of a "trust penalty" for women entrepreneurs: while men are rewarded for

signaling high benevolence, women are penalized, even though they sometimes achieve parity or advantage at lower levels of trustworthiness. These findings facilitate a more nuanced understanding of signal interpretation, reveal the dark side of trustworthiness in entrepreneurial finance, and illuminate how gender stereotypes reconfigure the meaning of otherwise positive signals. Beyond their theoretical importance, our results have important practical implications for investors, entrepreneurs, and institutions seeking to mitigate bias in evaluation processes.

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TABLES AND FIGURES – ESSAY 1

TABLE 1: Study 1 - Descriptive Statistics and Correlation Matrix

		Mean	SD	1	2	3	4	5	6	7	8	9	10	11
1	Willingness to invest	380,378.51	304,038.85	1.00										
2	Trustworthiness	-0.01	0.83	.24***	1.00									
3	Gender of the entrepreneur	0.06	1.00	-0.04	0.08	1.00								
4	Perceived competence	4.83	1.17	.45***	.29***	-0.05	1.00							
5	Perceived integrity	4.64	1.49	.41***	.55***	-0.03	.79***	1.00						
6	Venture idea assessment	5.37	1.04	.43***	0.10	-0.05	.62***	.47***	1.00					
7	Investor (I.) gender	-0.08	1.04	0.07	0.06	0.05	.12*	0.11	0.10	1.00				
8	I. education	5.64	1.27	0.01	-0.07	-0.08	-0.02	-0.06	-0.06	0.07	1.00			
9	I. work experience	19.20	11.38	-0.09	0.11	0.08	-.12*	-0.02	-.13*	0.01	-.21***	1.00		
10	I. investment experience	18.43	120.28	-0.04	0.08	0.06	-0.08	-0.01	0.00	-0.06	-0.04	0.03736	1.00	
11	I. entrepreneurial experience	4.17	6.22	0.08	.13*	-0.08	0.03	0.12	-0.04	.15*	0.07	.33***	-0.01	1.00

* $p < .05$ ** $p < .01$ *** $p < .001$

TABLE 2: Study 1 – Linear Regressions (H1-H2)

	DV: Willingness to Invest ($1,000)			
	Model 1	**Model 2**	**Model 3**	**Model 4**
Constant	1.24 (17.55)	-30.61 (74.30)	14.18 (16.75)	-23.93 (72.10)
Trustworthiness	**87.89***** (21.12)	**51.88*** (23.97)	**103.34***** (20.21)	**62.36**** (23.43)
Gender			-16.13 (16.75)	-2.67 (15.53)
Trustworthiness x Gender			**-87.99***** **(20.21)**	**-75.73***** **(18.75)**
Trustworthiness^2			18.23 (12.02)	3.87 (11.46)
Trustworthiness^2 x Gender			**45.81***** (12.02)	**33.52**** (11.36)
Perceived competence		52.91* (25.52)		42.49 (24.81)
Perceived integrity		5.19 (20.65)		12.18 (20.17)
Venture idea assessment		80.40*** (19.59)		67.10** (19.29)
Investor (I.) gender		-1.69 (15.48)		-7.15 (15.08)
I. education		5.54 (12.87)		5.86 (12.49)
I. work experience		-1.90 (1.54)		-2.56 (1.51)
I. investment experience		-0.09 (0.13)		-0.04 (0.13)
I. entrepreneurial experience		4.35 (2.77)		5.60* (2.71)
Observations	284	284	284	284
Adjusted R^2	0.05	0.25	0.15	0.30

* p < .05 ** p < .01 *** p < .001

TABLE 3: Study 1 – Linear Regressions (H3)

	DV: Willingness to Invest ($1,000)	
	Model 1	**Model 2**
Constant	12.95	-62.13
	(17.06)	(73.82)
Trustworthiness	**110.68*** **	**72.53** **
	(20.72)	(23.95)
Gender	-10.50	3.65
	(17.06)	(15.79)
Trustworthiness x Gender	**-90.79*** **	**-82.00*** **
	(20.72)	(19.12)
Trustworthiness^2	20.31	7.15
	(12.17)	(11.62)
Trustworthiness^2 x Gender	**44.33*** **	**33.51** **
	(12.17)	(11.47)
Investor (I.) Gender	9.19	-7.53
	(17.06)	(15.76)
Trustworthiness x I. Gender	**26.47**	**27.08**
	(20.72)	(19.14)
Trustworthiness^2 x I. Gender	**-9.42**	**-10.84**
	(12.17)	(11.21)
Gender x I. Gender	21.66	20.00
	(17.06)	(15.65)
Trustworthiness x Gender x I. Gender	**-4.83**	**-14.30**
	(20.72)	(19.31)
Trustworthiness^2 x Gender x I. Gender	**-18.67**	**-15.50**
	(12.17)	(11.25)
Perceived Competence		39.90
		(24.88)
Perceived Integrity		11.49
		(20.33)
Venture Idea Assessment		66.83**
		(19.31)
I. education		12.30
		(12.78)
I. work experience		-2.55
		(1.53)
I. investment experience		-0.01
		(0.13)
I. entrepreneurial experience		6.68*
		(2.86)
Observations	284	284
Adjusted R^2	0.16	0.30

* p < .05 ** p < .01 *** p < .001

TABLE 4: Study 2 - Descriptive Statistics and Correlation Matrix

		Mean	SD	1	2	3	4	5	6	7	8	9	10	11
1	Willingness to invest	392,354.86	289,562.17	1.00										
2	Trustworthiness	0.00	0.82	0.24***	1.00									
3	Gender of the entrepreneur	-0.01	1.00	-0.01	0.00	1.00								
4	Perceived competence	4.70	1.11	0.43***	0.30***	0.03	1.00							
5	Perceived integrity	4.38	1.60	0.36***	0.67***	0.04	0.70***	1.00						
6	Venture idea assessment	5.15	1.04	0.42***	0.18***	0.05	0.60***	0.47***	1.00					
7	Investor (I.) gender	0.06	1.04	-0.02	0.02	0.09*	0.06	0.02	0.05	1.00				
8	I. education	4.85	1.12	-0.04	0.02	0.03	-0.04	-0.03	-0.05	0.05	1.00			
9	I. work experience	21.17	10.78	0.08*	0.01	0.00	0.09*	0.06	-0.03	-0.02	-0.11*	1.00		
10	I. investment experience	4.80	8.01	-0.04	-0.04	-0.12**	-0.05	-0.06	-0.01*	-0.28***	0.05	0.31***	1.00	
11	I. entrepreneurial experience	1.42	4.10	0.02	0.04	0.01	0.01	0.00	0.06	-0.04	0.02	0.20***	0.24***	1.00

* p < .05 ** p < .01 *** p < .001

TABLE 5: Study 2 – Linear Regressions (H1-H2)

	DV: Willingness to Invest ($1,000)			
	Model 1	**Model 2**	**Model 3**	**Model 4**
Constant	0.14 (11.63)	-21.88 (53.31)	1.56 (11.31)	-6.37 (52.81)
Trustworthiness	**83.53***** (14.20)	**52.47**** (18.47)	**84.11***** (13.80)	**61.35**** (18.49)
Gender			-1.09 (11.31)	-6.37 (10.40)
Trustworthiness x Gender			**-56.08***** **(13.80)**	**-43.21***** **(12.69)**
Trustworthiness^2			28.82*** (8.03)	20.90** (7.62)
Trustworthiness^2 x Gender			**25.49**** (8.03)	**19.18**** (7.35)
Perceived Competence		67.28*** (15.37)		61.97*** (15.16)
Perceived Integrity		-10.13 (12.76)		-14.59 (12.87)
Venture Idea Assessment		75.20*** (12.72)		73.98*** (12.53)
Investor (I.) gender		-17.65 (10.55)		-17.82 (10.38)
I. education		-3.08 (9.45)		-7.48 (9.40)
I. work experience		2.13* (1.05)		2.42* (1.04)
I. investment experience		-1.24 (1.47)		-1.13 (1.46)
I. entrepreneurial experience		-0.86 (2.67)		-0.71 (2.64)
Observations	586	586	586	586
Adjusted R^2	0.05	0.24	0.11	0.27

* p < .05 ** p < .01 *** p < .001

TABLE 6: Study 2 – Linear Regressions (H3)

	DV: Willingness to Invest ($1,000)	
	Model 1	**Model 2**
Constant	2.68	-4.95
	(11.39)	(53.19)
Trustworthiness	**85.46*** **	**62.20** **
	(13.89)	(18.56)
Gender	-0.08	-6.32
	(11.39)	(10.44)
Trustworthiness x Gender	**-54.73*** **	**-41.86** **
	(13.89)	(12.75)
Trustworthiness^2	30.09***	22.16**
	(8.09)	(7.69)
Trustworthiness^2 x Gender	**27.36** **	**20.66** **
	(8.09)	(7.42)
Investor (I.) Gender	-9.57	-17.59
	(10.97)	(10.41)
Trustworthiness x I. Gender	**-15.56**	**-12.54**
	(13.52)	(12.38)
Trustworthiness^2 x I. Gender	**-11.17**	**-8.94**
	(7.71)	(7.03)
Gender x I. Gender	-1.24	-0.66
	(10.97)	(9.99)
Trustworthiness x Gender x I. Gender	**-4.64**	**-4.76**
	(13.52)	(12.41)
Trustworthiness^2 x Gender x I. Gender	**-5.99**	**-6.64**
	(7.71)	(7.01)
Perceived Competence		60.40***
		(15.27)
Perceived Integrity		-14.07
		(12.95)
Venture Idea Assessment		74.56***
		(12.63)
I. education		-7.52
		(9.49)
I. work experience		2.40*
		(1.04)
I. investment experience		-1.19
		(1.46)
I. entrepreneurial experience		-0.88
		(2.65)
Observations	586	586
Adjusted R^2	0.11	0.26

* $p < .05$ ** $p < .01$ *** $p < .001$

TABLE 7: Venture Idea Assessment – Linear Regressions

	DV: Venture Idea Assessment (1-7)			
	Study 1		Study 2	
	Model 1	Model 2	Model 3	Model 4
Constant	0.03 (0.06)	0.32 (0.23)	0.00 (0.04)	0.28 (0.18)
Trustworthiness	0.16* (0.07)	-0.13 (0.07)	0.23*** (0.05)	-0.14* (0.06)
Gender	-0.05 (0.06)	-0.02 (0.07)	0.06 (0.04)	0.02 (0.03)
Trustworthiness x Gender	-0.14 (0.07)	-0.09 (0.06)	-0.10 (0.05)	-0.02 (0.04)
Trustworthiness^2	0.04 (0.04)	-0.07 (0.04)	0.06* (0.03)	-0.02 (0.03)
Trustworthiness^2 x Gender	**0.15**** (0.04)	**0.08*** (0.04)	**0.06*** (0.03)	**0.04** (0.02)
Perceived Competence		0.52*** (0.07)		0.46*** (0.05)
Perceived Integrity		0.06 (0.06)		0.13** (0.04)
Investor (I.) gender		0.04 (0.05)		0.01 (0.03)
I. education		-0.05 (0.04)		-0.02 (0.03)
I. work experience		-0.01 (0.00)		-0.01* (0.00)
I. investment experience		0.00 (0.00)		-0.01 (0.00)
I. entrepreneurial experience		0.00 (0.01)		0.02** (0.01)
Observations	284	284	586	586
Adjusted R^2	0.05	0.40	0.05	0.37

* p < .05 ** p < .01 *** p < .001

FIGURE 1: Study 1 - Trustworthiness Effects on "Willingness to Invest" by Gender of the Entrepreneur

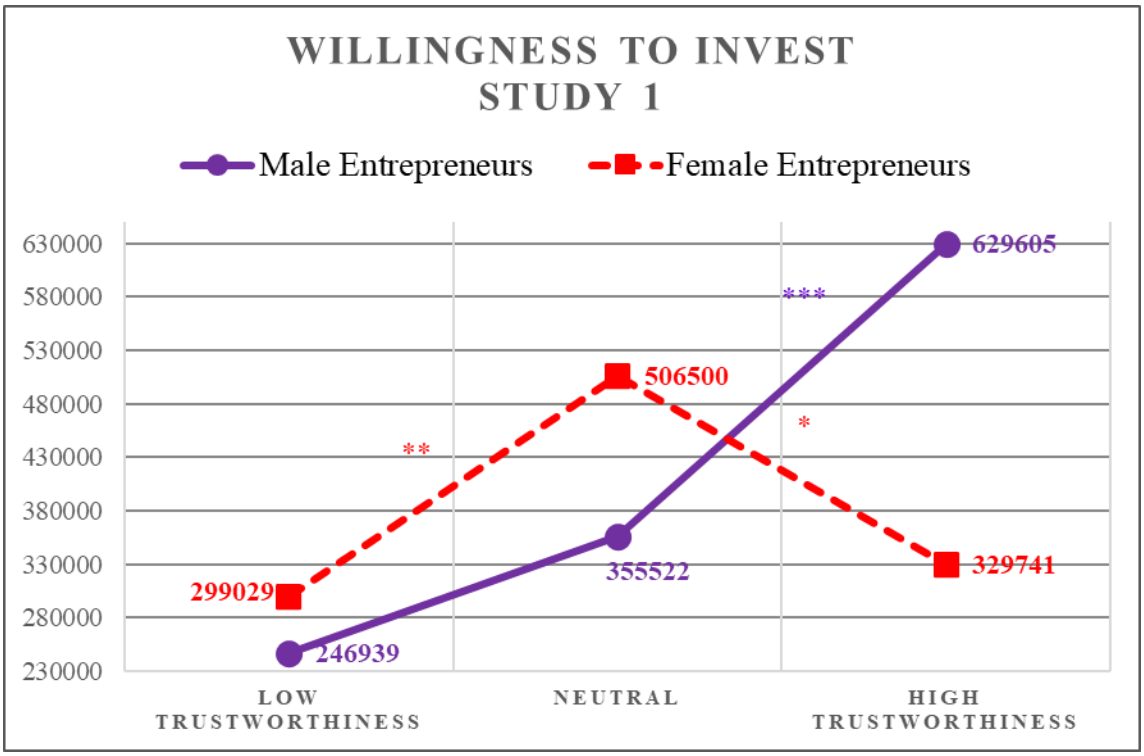


FIGURE 2: Study 1 - Trustworthiness Effects on "Willingness to Invest" by Gender of the Entrepreneur by Investor Gender

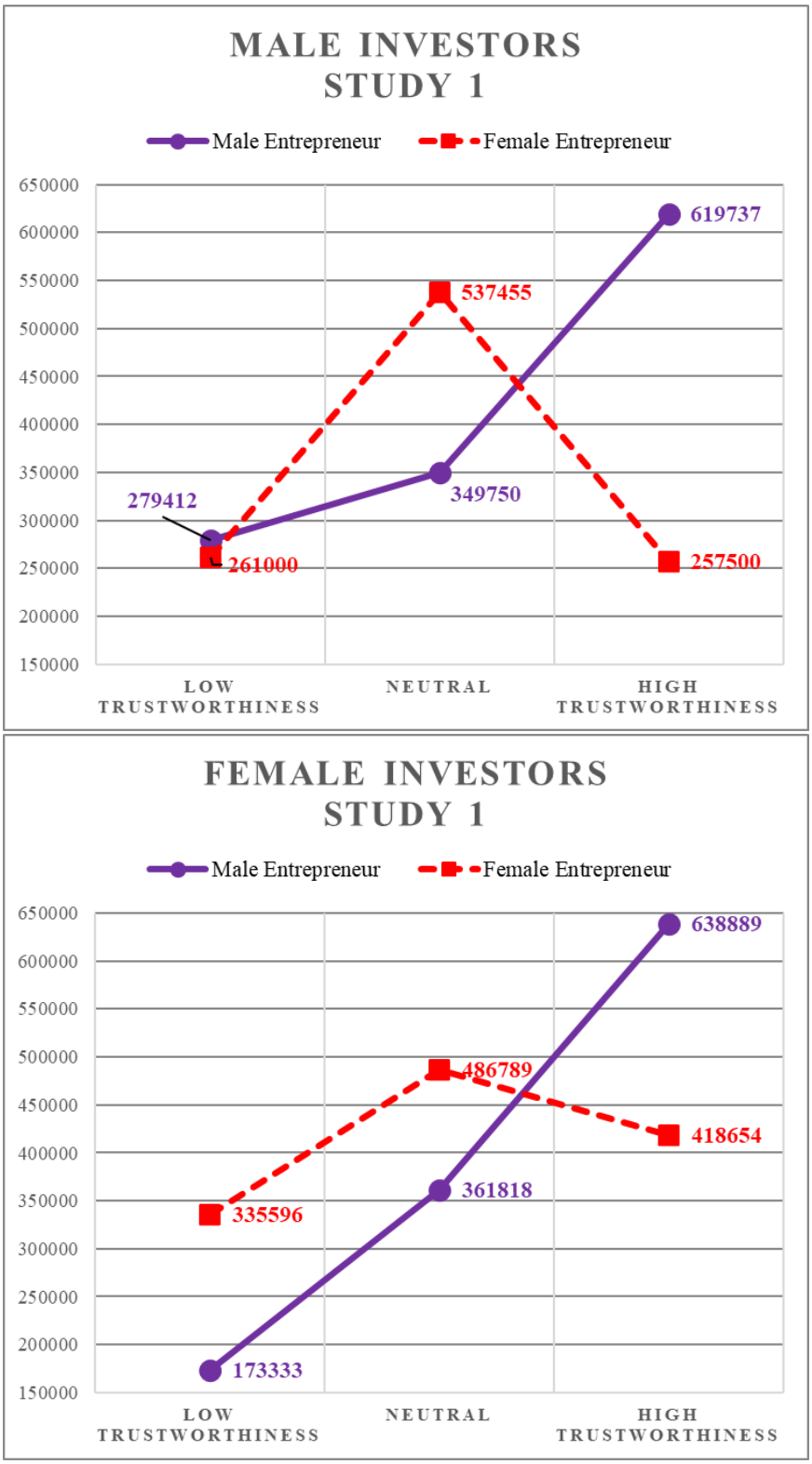


FIGURE 3: Study 2 - Trustworthiness Effects on "Willingness to Invest" by Gender of the Entrepreneur

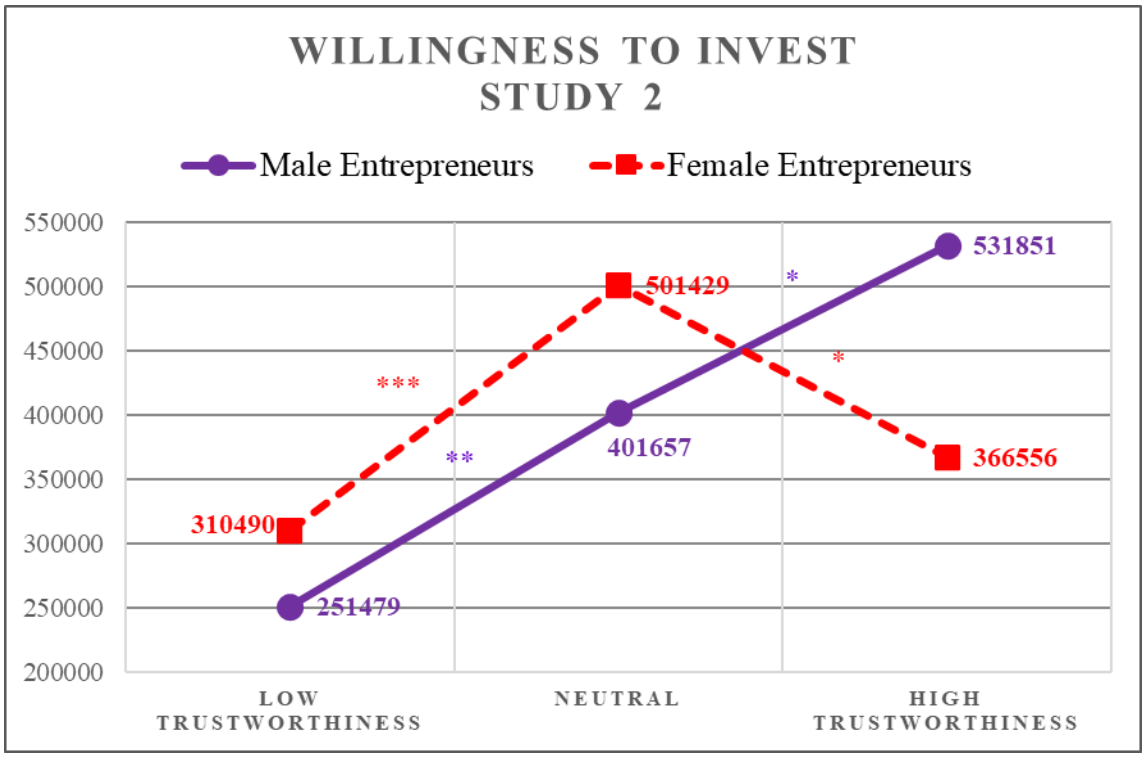


FIGURE 4: Study 2 - Trustworthiness Effects on "Willingness to Invest" by Gender of the Entrepreneur by Investor Gender

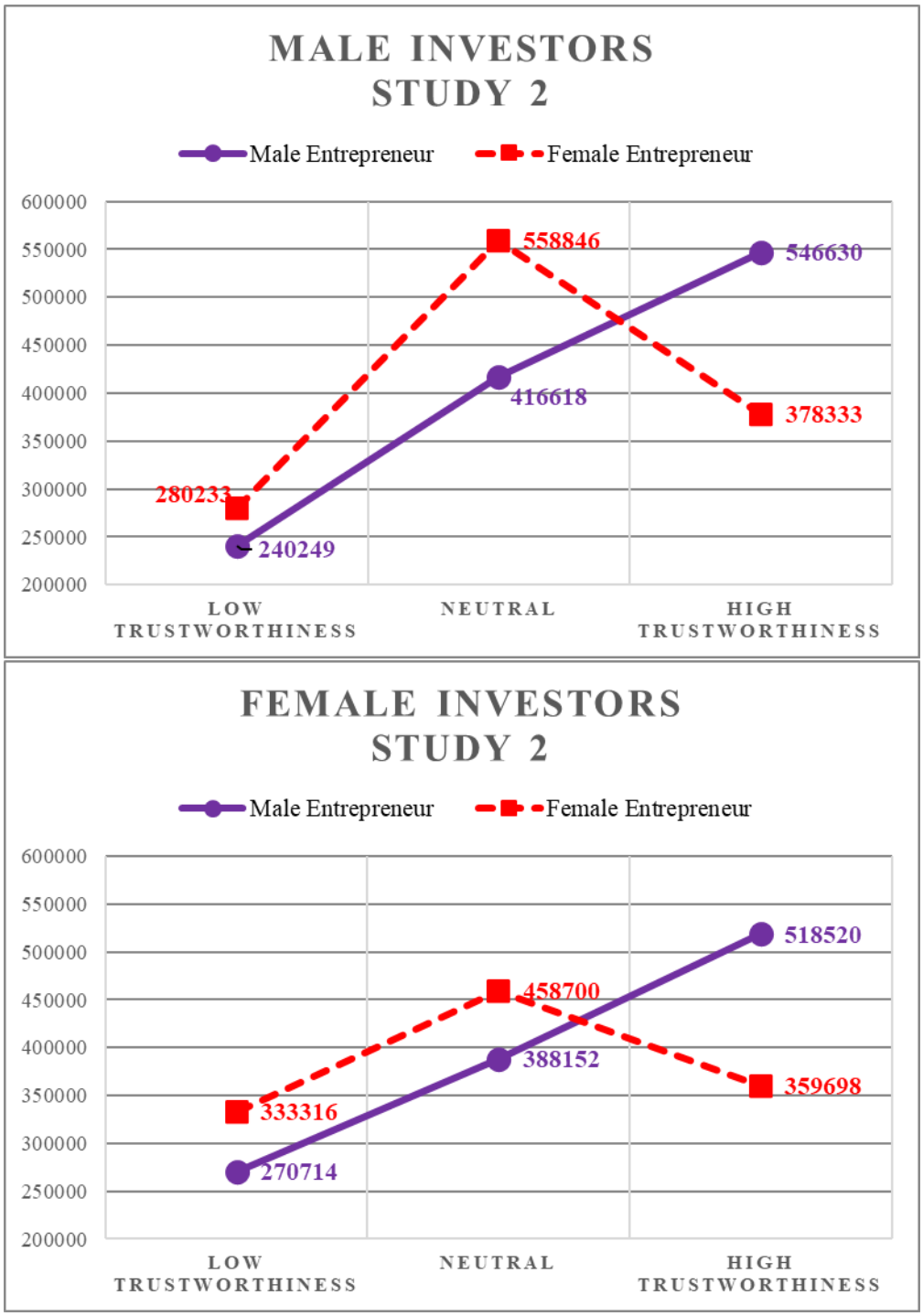
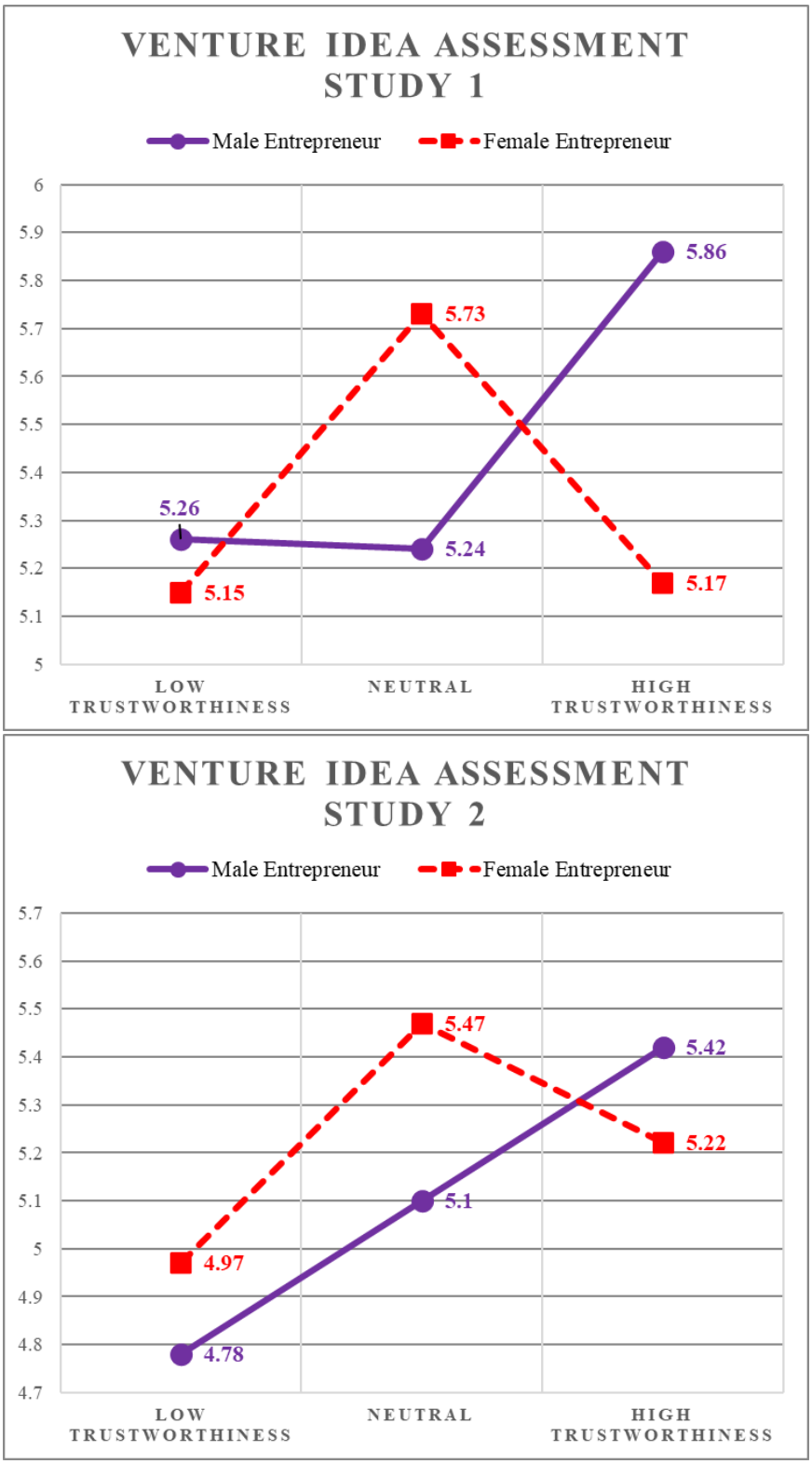
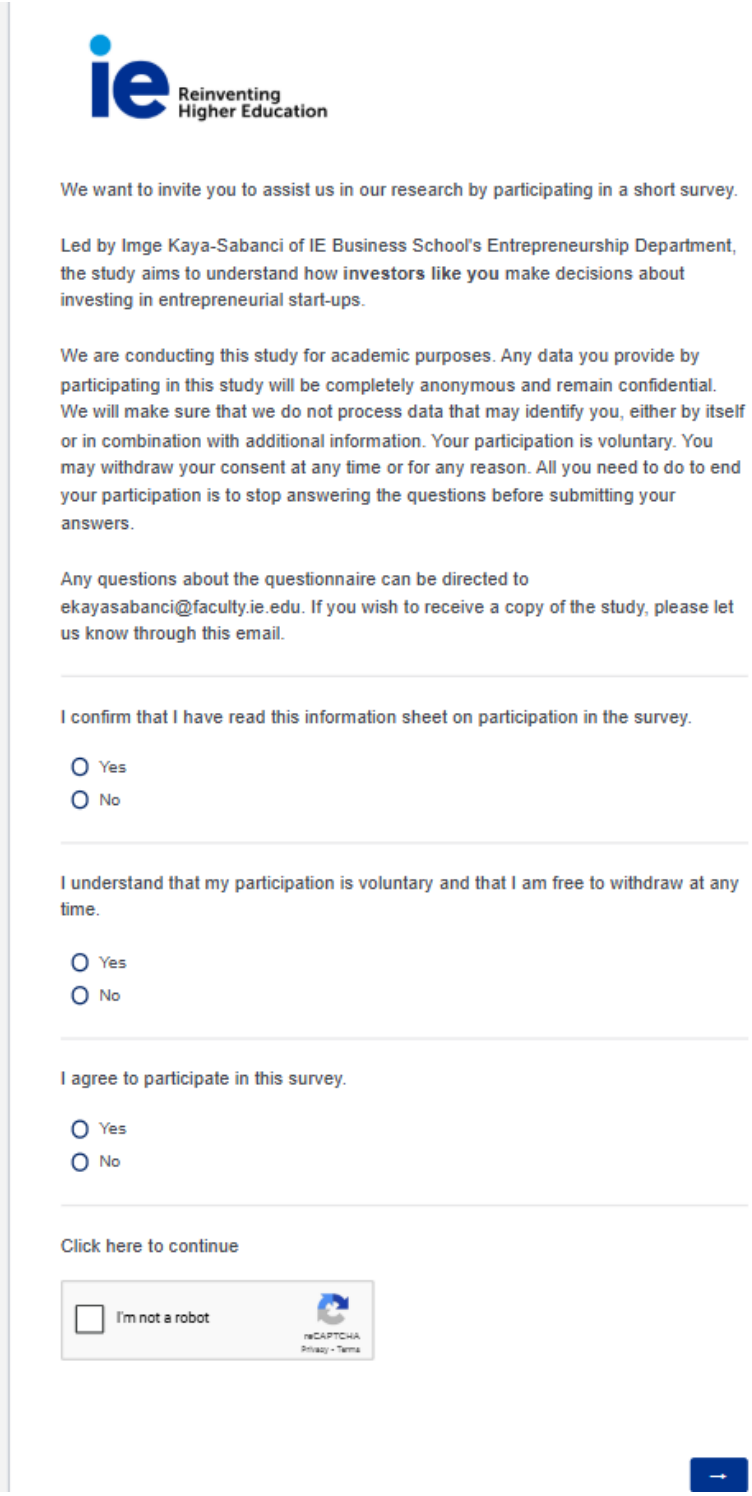


FIGURE 5: Trustworthiness Effects on "Venture Idea Assessment" by Gender of the Entrepreneur – Study 1 & Study 2



APPENDICES – ESSAY 1

APPENDIX A: The Screenshot Copies of Our Task Instructions and Venture Description



Reinventing Higher Education

We want to invite you to assist us in our research by participating in a short survey.

Led by Imge Kaya-Sabanci of IE Business School's Entrepreneurship Department, the study aims to understand how **investors like you** make decisions about investing in entrepreneurial start-ups.

We are conducting this study for academic purposes. Any data you provide by participating in this study will be completely anonymous and remain confidential. We will make sure that we do not process data that may identify you, either by itself or in combination with additional information. Your participation is voluntary. You may withdraw your consent at any time or for any reason. All you need to do to end your participation is to stop answering the questions before submitting your answers.

Any questions about the questionnaire can be directed to ekayasabanci@faculty.ie.edu. If you wish to receive a copy of the study, please let us know through this email.

I confirm that I have read this information sheet on participation in the survey.

- Yes
- No

I understand that my participation is voluntary and that I am free to withdraw at any time.

- Yes
- No

I agree to participate in this survey.

- Yes
- No

Click here to continue

I'm not a robot

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Privacy - Terms

→

Reinventing Higher Education

Thank you very much for your interest in participating in our research. :-)

Our study aims to examine how **investors like you** make decisions about investing in entrepreneurial start-ups. We acknowledge that you have experience in making such investments. As such, we very much value the unique insights that you can share with us by taking part in our short 8-minute survey.

In the following survey, we will ask you to read a short venture description, after which we will ask a few questions about what you think. To ensure that we learn as much as we can from your participation, it is critically important that you devote careful attention to reading the text and that **you answer all questions truthfully, reflecting your genuine opinions.** If you find that you do **not have an exact answer** to a question based on the information provided, **please select the option that most closely aligns with your overall impression.**

Please understand that some questions are designed to verify your understanding of the scenario and engagement with the material. We use these questions to ensure the quality of our research data.

When you are ready, please click the "arrow" at the bottom of the page to start the survey.

Thank you very much.

→

Reinventing Higher Education

As an **investor**, you frequently engage in evaluating new ventures for investment purposes, assessing their founding team, technology, business model, market entry strategy, and funding requirements—among other things.

Imagine that in this context, you are part of a well-established angel investment group and one of your associates brings to your attention the case of a new venture that aligns well with your group's investment criteria, notably in terms of business potential, industry relevance, geographical location, and development stage. **This person asks for your assessment and recommendation on whether you and a group of other partner angels should consider investing in this venture.**

Please carefully read the following text about this new venture and then answer a few key questions asking for your assessment and recommendation.

→

Reinventing Higher Education

Timing

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First Click	17.351 seconds
Last Click	26.912 seconds
Page Submit	0 seconds
Click Count	2 clicks

Emily is the founder of FurnAI – a start-up using AI to make it easier and cheaper for hospitality businesses like hotels and rental services to furnish their properties. Essentially, FurnAI uses technology to automate how properties choose and buy furniture.

Companies using FurnAI's online service can explore a wide range of design ideas and select their preferred styles and colors, such as a vintage-style living room with blue tones. Based on these selections, FurnAI recommends appropriate furniture sets, allowing clients to decide on the quantity of items needed, like sofas, tables, and lamps. FurnAI automatically handles the sourcing, delivery, and payment for these items.

FurnAI's technology has already been deployed in several successful pilots, and the venture has started to see a growing demand for its online service.

Emily has a university degree in fashion and marketing. Before launching FurnAI 18 months ago, she worked for 7 years for a prominent chain of boutique hotels—where she was handling remodeling projects for North American hotels. In addition to her co-founder and Chief Technology Officer with a PhD in computer engineering, **Emily** has 5 employees: 3 AI programmers, 1 chief stylist/designer, and 1 business development person.

Emily currently owns 54% of the company's shares and her cofounder has 36%. They've also set aside 10% of the shares as a stock option pool for their key employees. The possibility to earn stock in the company serves as an additional bonus, which helps retain key employees and encourages their loyalty and motivation. In essence, this gives employees the option to own and sell their accrued shares at a future time, for instance, when the company is acquired or enters the stock market.

Under current terms, all five initial employees can "earn" the right to a 0.15%-ownership stake at the end of each year of employment. This kind of arrangement is a common practice for start-ups like this.

A month ago, one of her programmers left FurnAI for an opportunity at a Google R&D center. The employee left just six weeks before completing their first full year with the venture. However, **Emily** decided to let this person keep their options to own company stocks, recognizing the substantive efforts and valuable contributions that this employee had made to the company.

Building on a series of successful pilot projects with two different boutique hotels, **Emily** now seeks to raise $1.5 million to ensure her platform's robustness and accelerate commercialization.

→

APPENDIX B: Measures

Willingness to Invest:

This entrepreneur is aiming to raise at least $1.5 million to improve the platform's robustness and accelerate commercialization, with the hope that around $500,000 of this might come from your angel investment group.

Considering your experience and the details previously outlined, what would be your general investment recommendation?

Note: You have complete freedom to recommend **any amount** ranging from "**$0** - *not to invest at all*" to "**$1.5 million** - *the total amount the entrepreneur hopes to raise*", or **even more**.

My recommendation is that **as a group**, we should consider

1. Not investing at all
2. Investing less than $100,000
3. Investing between $100,000 - $249,999
4. Investing between $250,000 - $499,999
5. Investing between $500,000 - $999,999
6. Investing between $1,000,000 - $1,499,999
7. Investing $1.5 million or more

Given the range you selected above, could you please enter the specific amount for your recommendation?

Perceived Trustworthiness of the Entrepreneur:

(Johnson et al., 2018; Mayer & Davis, 1999)

To what extent do you think that this entrepreneur…

1. Would be very concerned about your welfare
2. Would hold your needs and desires as very important to him/her
3. Would not knowingly do anything to hurt you
4. Would really look out for what is important to you
5. Would go out of his/her way to help you

Perceived Competence of the Entrepreneur:
(Bigelow et al., 2014; Johnson et al., 2018)

To what extent do you think that this entrepreneur…

1. Possesses the experience necessary to develop this idea into a successful company
2. Possesses the leadership ability necessary to develop this idea into a successful company
3. Will be positively seen by the public
4. Is capable of breaking a deadlock of an investor group if one should arise
5. Is able to be decisive in the face of unpopular decisions
6. Is able to resolve disputes that might arise in the management team
7. Will be effective in handling a crisis if one should arise

Perceived Integrity of the Entrepreneur:
(Mayer & Davis, 1999)

To what extent do you think that this entrepreneur…

1. Has a strong sense of justice
2. Ensures that you never doubt he/she will stick to his/her word
3. Tries hard to be fair in dealings with others
4. Exhibits actions and behaviors that are consistent
5. Has values that you like
6. Seems to have behavior guided by sound principles

Venture Idea Assessment:
(Davidsson et al., 2021)

Now that you've shared your impressions of the founders, the below four questions focus on the business idea in and of itself, independent of the entrepreneur's skills or qualities.
With this focus in mind, how confident are you that…

1. A person with the right knowledge and motivation should be encouraged to act on this idea
2. Someone could turn this idea into a successful business
3. This idea is a good business opportunity for the right person or team
4. If someone were to fail with this idea, it would be due to other factors than the idea itself

APPENDIX C: Confirmatory Factor Analysis: Factor Loadings for Perceived Competence, Perceived Integrity, and Venture Idean Assessment (VIA)

Observed Variables	Perceived Competence	Perceived Integrity	Venture Idea Assessment (VIA)
Competence Item 1	0.74***		
Competence Item 2	0.82***		
Competence Item 3	0.76***		
Competence Item 4	0.81***		
Competence Item 5	0.61***		
Competence Item 6	0.85***		
Competence Item 7	0.88***		
Integrity Item 1		0.88***	
Integrity Item 2		0.92***	
Integrity Item 3		0.96***	
Integrity Item 4		0.92***	
Integrity Item 5		0.95***	
Integrity Item 6		0.89***	
VIA Item 1			0.85***
VIA Item 2			0.94***
VIA Item 3			0.93***
VIA Item 4			0.59***

ESSAY 2: THE GENDERED IMPACT OF JOB INSECURITY ON ENTREPRENEURSHIP: EVIDENCE FROM SPAIN

ABSTRACT

This study examines the gendered effects of job insecurity on the transition from wage employment to entrepreneurship. Drawing on career-path approaches to entrepreneurship, we hypothesize that a decline in job security within wage employment increases entrepreneurial entry, with this effect being stronger for men than for women, thereby widening the gender gap in entrepreneurship. We test our hypotheses using Spanish linked employer-employee datasets and leverage the 2012 Spanish Labor Market Reform as an exogenous shock, as this regulatory change weakened job security for a segment of the labor market. Analyzing (N = 2,942,582) person-year observations (2009-2015), our findings support our hypotheses: reduced job security is associated with increased entrepreneurial engagement, and this effect is more pronounced for men. Post-hoc analyses reveal that men are more likely to transition into self-employment in response to job insecurity, whereas women are more inclined to seek stability in larger firms within wage employment, together exacerbating the gender gap in entrepreneurship. The study contributes to the discourse on career-path approaches to entrepreneurship and informs policy implications regarding labor market flexibility and its gendered entrepreneurial repercussions.

INTRODUCTION

Despite considerable scholarly and policy efforts aimed at encouraging women's participation in entrepreneurship, a substantial and persistent gender gap remains a defining feature of the entrepreneurial landscape, hindering broader economic progress and social mobility (Kanze et al., 2018; Guzman & Kacperczyk, 2019). Global data reveal that women report significantly lower entrepreneurial intentions than men (GEM, 2023), and women head merely 20% of new firms in developed entrepreneurial ecosystems (Guzman & Kacperczyk, 2019; Bao, 2024). To explain this gender gap in entrepreneurship, existing research has largely bifurcated into individual-level supply-side differences - such as human capital, educational preferences, and risk preferences (Card & Payne, 2021; Ewens & Townsend, 2020; Rocha & Van Praag, 2020) - and systemic demand-side barriers, including evaluation biases and unequal access to venture financing (Bigelow et al., 2014; Kanze et al., 2018; Marlow & Patton, 2005; Shane et al., 2012). However, much of this literature centers on individuals who have already formed entrepreneurial intentions or who already operate as founders (Thébaud, 2010). This emphasis directs attention away from how individuals evaluate entrepreneurship in relation to other career options, particularly how changes in job security within wage employment shape whether self-employment becomes a viable and attractive alternative (Burton et al., 2016).

In this study, we shift the analytical focus to how individuals make career decisions under changing job (in)security conditions during the transition from wage employment to entrepreneurship. Drawing on a careers perspective on entrepreneurship, we argue that entrepreneurial entry is inextricably linked to individual career mobility dynamics (Burton et al., 2002; Dobrev & Barnett, 2005; Sørensen & Fassiotto, 2011). Individuals

do not decide to start a venture in isolation; rather, they weigh the prospective rewards of self-employment against the stability and opportunity costs of their current wage employment (Sørensen & Sharkey, 2014; Stenard & Sauermann, 2016; Merluzzi & Burt, 2021). Because job security is a cornerstone of the employment contract, its erosion - manifesting as job insecurity - can reshape this career-path calculus by lowering the value of staying and increasing the relative attractiveness of outside options, including entrepreneurship (Carr & Chung, 2014).

The first leg of our theoretical argument establishes that a decrease in job security within wage employment directly increases the likelihood of entrepreneurial entry. We propose two main mechanisms for this relationship. First, job security is a primary determinant of the opportunity cost of leaving wage employment; as the perceived stability of traditional roles drops, the relative cost of exiting to pursue self-employment decreases, making the transition less daunting (Sørensen & Sharkey, 2014; Hamilton, 2000). Second, changes in employment conditions that simplify hiring and firing can lower the "adjustment costs" associated with starting and scaling young ventures (Kugler & Saint-Paul, 2004; Castellaneta et al., 2025). When termination costs fall, individuals anticipating the challenges of early hiring and rapid reconfiguration may view entrepreneurship as more feasible because experimentation becomes less costly (Castellaneta et al., 2025).

We also argue that the hypothesized effect of job insecurity on entrepreneurship is moderated by gender, ultimately widening the entrepreneurial gender gap. We anticipate that men respond more strongly to declines in job security because they are less likely to experience self-doubt about entrepreneurial efficacy and are more likely to interpret uncertain labor-market conditions as an impetus to pursue self-directed career moves

(Eagly et al., 2000; Heilman, 2001; Thébaud, 2010). Because the archetypal entrepreneur remains male-typed, women face implicit biases that can raise perceived costs of entrepreneurial risk-taking and reduce perceived fit, especially when the transition requires credibility in male-dominated domains (Ahl, 2006; Gupta et al., 2009; Thébaud, 2010). In addition, lower adjustment costs may disproportionately benefit individuals with high-growth ambitions - a group that is stereotypically dominated by men - who are better positioned to exploit the marginal value of labor market flexibility when early hiring for startups becomes easier to reverse (Cliff, 1998; Fischer et al., 1993; Thébaud, 2010). In contrast, women may exhibit lower growth aspirations in part due to evaluative biases and broader contextual constraints, leading them to seek stability in larger organizations rather than choosing the risky path of self-employment when faced with job insecurity (Cliff, 1998; Davis & Shaver, 2012; Devine et al., 2019).

Our empirical analysis leverages the 2012 Spanish Labor Market Reform as a quasi-natural experiment that generated a plausibly exogenous shock to job security by reducing dismissal costs and expanding employers' ability to adjust employment relationships, with differential relevance by firm size (OECD, 2013). We use a large linked employer-employee dataset from Spain's Social Security and tax records (N = 2,942,582 person-year observations) and implement a triple-difference (DDD) design to estimate the reform's effect on entrepreneurial entry and how that effect differs for women versus men.

By uncovering how wage-employment conditions shape entrepreneurial transitions, this study makes several theoretical contributions. First, it advances the careers perspective on entrepreneurship by demonstrating that entrepreneurial entry is not

driven by individual preferences in isolation, but by how individuals interpret wage-employment conditions when evaluating alternative career paths, including entrepreneurship (Merluzzi & Burt, 2021; Sørensen & Sharkey, 2014). Second, it contributes to research on gender inequality in entrepreneurship by showing how the same change in job security can lead women and men to make different career choices, even when the underlying policy is not explicitly gender-targeted (Castellaneta et al., 2020; Small & Pager, 2020). Third, by theorizing and testing opportunity-cost and adjustment-cost mechanisms alongside gendered fit and ambition dynamics, the study offers a more fine-grained account of when changing employment conditions increase entrepreneurial entry overall but widen gender disparities in who acts on that opportunity and under what conditions.

THEORETICAL BACKGROUND

A careers perspective places entrepreneurial entry within a broader set of career mobility choices and emphasizes that transitions into entrepreneurship often follow time spent in established organizations (Burton et al., 2002; Dobrev & Barnett, 2005; Sørensen & Fassiotto, 2011). From this view, entrepreneurial entry reflects an interdependent evaluation of competing career paths in which individuals compare self-employment with continued wage employment as an outside option (Merluzzi & Burt, 2021; Sørensen & Sharkey, 2014; Stenard & Sauermann, 2016).

Job (in)security is a particularly consequential feature of the employment relationship because it shapes the perceived value of staying in wage employment relative to outside options. Job insecurity captures workers' expectations about the continuity of employment and the likelihood of job loss, and it is therefore a salient signal about the stability of the wage-employment contract (Carr & Chung, 2014).

When job security erodes, the costs and benefits attached to distinct career paths can shift, making self-employment more or less attractive depending on how individuals perceive the relative value of stability, autonomy, and upside potential (Burton et al., 2002; Dobrev & Barnett, 2005; Sørensen & Fassiotto, 2011). This logic also motivates calls to examine the conditions under which entrepreneurship becomes a viable or attractive option for groups that face systematic barriers, including women (Merluzzi & Burt, 2021). Consistent with this framing, we ask: how does job (in)security affect transitions from wage employment to entrepreneurship; and do these effects differ for women versus men?

HYPOTHESIS DEVELOPMENT

We theorize that reductions in job security increase entrepreneurial entry by changing the relative attractiveness of self-employment versus wage employment. When job security erodes, individuals update the expected value of staying in their current job and the stability of the wage-employment outside option. As the expected stability and predictability of wage employment decline, the relative attractiveness of outside options - including entrepreneurship - increases, even if entrepreneurship remains uncertain (Carr & Chung, 2014).

A first mechanism operates through opportunity costs. Wage employment often constitutes a valuable outside option, and the opportunity cost of entrepreneurship can be high when employment is stable (Hamilton, 2000). When job security drops, the expected value of staying falls and the opportunity cost of leaving decreases. Under these conditions, individuals may evaluate the move into entrepreneurship as less daunting because it involves forgoing a less secure alternative (Sørensen & Sharkey, 2014). This mechanism does not require that entrepreneurship becomes objectively less

risky; rather, it requires that wage employment becomes comparatively less attractive as a baseline option.

A second mechanism operates through adjustment costs and perceived feasibility. Reductions in job security are frequently linked to institutional environments in which employers face lower termination costs and where hiring and firing procedures are simplified. These features can lower the adjustment costs associated with starting and scaling young ventures by reducing the perceived downside of early employment decisions (Kugler & Saint-Paul, 2004). When termination costs fall, early hiring can be treated more as experimentation because reversing employment decisions becomes less costly, which can increase the perceived feasibility of launching and scaling a venture. Relatedly, recent work emphasizes that labor-market flexibility can alter feasibility and returns to organizing and expanding young firms by reducing adjustment frictions connected to employment decisions (Castellaneta et al., 2025). Together, these arguments imply that declines in job security should increase entrepreneurial entry both by lowering the opportunity cost of leaving wage employment and by increasing the perceived feasibility of venturing under more flexible employment rules.

> ***Hypothesis 1:*** *A decrease in job security within wage employment will increase individuals' entry into entrepreneurship.*

While Hypothesis 1 predicts an overall positive relationship between job insecurity and entrepreneurial entry, we expect the magnitude of this effect to vary by gender. Importantly, our moderation logic is anchored in the same two baseline mechanisms: gender conditions (i) how strongly job insecurity reduces the effective opportunity cost of leaving wage employment and (ii) how strongly labor-market flexibility lowers perceived adjustment frictions and increases feasibility. Because entrepreneurship

remains culturally coded as a male-typed role, women and men may translate the same change in job security into entrepreneurial action at different rates, even when the underlying opportunity-cost and adjustment-cost logics are shared (Ahl, 2006; Gupta et al., 2009; Thébaud, 2010).

First, gender should moderate the opportunity-cost mechanism by shaping how strongly a decline in the value of wage employment translates into entrepreneurial entry. When job security falls, the opportunity cost of leaving decreases for both women and men in an economic sense (Hamilton, 2000; Sørensen & Sharkey, 2014). However, moving from "lower opportunity cost" to "actual entry" also depends on perceived efficacy and perceived fit. Men are less likely to experience self-doubt about entrepreneurial capability and may more readily interpret deteriorating job security as an impetus to pursue self-directed career moves (Eagly et al., 2000; Heilman, 2001; Thébaud, 2010). In contrast, because the archetypal entrepreneur remains male-typed, women face stronger fit-related frictions and anticipate greater scrutiny, which can increase perceived costs of entry (Ahl, 2006; Gupta et al., 2009). As a result, the same decline in job security can produce a weaker behavioral response for women because fit- and legitimacy-related frictions dampen the extent to which reduced opportunity costs translate into entrepreneurial action.

Second, gender should moderate the adjustment-cost mechanism because the marginal value of reduced adjustment frictions is higher for entrants who anticipate growth and early hiring. When flexibility lowers termination costs, the feasibility value of entrepreneurship increases by making early hiring and reconfiguration less costly (Kugler & Saint-Paul, 2004; Castellaneta et al., 2025). Yet this feasibility gain should matter more for individuals who expect to scale quickly and therefore anticipate early

hiring and rapid reconfiguration. Men are, on average, more inclined toward high-growth entrepreneurial strategies (Cliff, 1998; Fischer et al., 1993), and thus stand to benefit more from the option value embedded in flexibility when early employment decisions become easier to reverse. Women, even when they enter entrepreneurship, often report lower growth aspirations due to a combination of personal constraints and contextual factors including evaluative bias and discrimination, which can reduce expected returns to leveraging flexibility for rapid growth (Cliff, 1998; Davis & Shaver, 2012; Devine et al., 2019). Consequently, a reduction in adjustment frictions should translate more strongly into entrepreneurial entry for men than for women.

Taken together, gendered frictions make men more responsive than women to both the opportunity-cost and adjustment-cost channels triggered by job insecurity. Therefore, institutional declines in job security can increase entrepreneurship overall while simultaneously widening gender disparities in entrepreneurial entry.

> ***Hypothesis 2:*** *A decrease in job security within wage employment will widen the gender gap in entrepreneurship.*

METHODS AND FINDINGS

Empirical Setting and 2012 Spanish Labor Market Reform

To test our hypotheses about how individuals respond to changes in job security, we utilize Spanish linked employer-employee datasets and leverage the 2012 Spanish Labor Market Reform as an exogenous shock. This reform offers several advantages for our study. First, it represents a plausibly exogenous shock with respect to our dependent variable, entrepreneurship, thereby facilitating causal identification. Second, the legislation had differential impacts based on firm size. Specifically, it reduced job security for individuals working in firms with fewer than 50 employees by significantly

lowering the costs of firing in these firms. Since our fine-grained individual-level data allows us to identify the number of employees in each firm during the pre-reform years, we were able to establish appropriate treatment and control groups to analyze the changes in job security following the enactment of the reform.

The reform altered dismissal protection and employers' ability to adjust employment relationships through several complementary channels. Most centrally for our research design, the reform reduced dismissal costs and eased termination processes, which increased job insecurity in wage employment by lowering the expected value of continued employment, particularly in settings where separations became easier to execute. In addition, the reform introduced a new open-ended contract aimed at small firms, the Contract for Entrepreneurs *(Contrato de Apoyo a Emprendedores)*, which applied to firms below the 50-employee threshold and included a one-year trial period, thereby intensifying the salience of job insecurity for workers in small firms relative to workers in larger firms (OECD, 2013).

This empirical setting is particularly suitable for our theoretical argument because it allows us to examine how individuals respond to changes in job security in a context where the source of variation is plausibly exogenous to entrepreneurship itself. Although our theory focuses on how workers reassess career options when job security declines, the 2012 Spanish labor market reform provides a useful setting because it altered the employment conditions under which such decisions were made, especially for workers in smaller firms. The setting therefore enables us to link an individual-level argument about career choice to an exogenous change in job security that can be observed in a measurable and policy-relevant way.

Data

The foundational data for examining these mobility patterns is drawn from the Continuous Sample of Working Histories with Fiscal Data *(Muestra Continua de Vidas Laborales con Datos Fiscales)*, provided by Spain's Social Security Office. This dataset offers extensive labor market biographies, enabling us to track individual career trajectories over time, including employment spells and labor market status. To accurately determine the size of the workforce within the firms where individuals were employed prior to the reform, we integrated this data with fiscal records. This integration provided firm-specific information for each individual (including employer identifiers and income measures that are not top-coded), which is essential for defining treatment exposure and characterizing mobility paths. Consistent with our empirical approach, we additionally incorporate industry- and autonomous-community-level controls from official statistical sources *(e.g., Instituto Nacional de Estadística and the Ministry of Labor and Social Economy)* to capture time-varying local labor market conditions.

We restricted our sample to full-time employees who were active in the labor force in 2011, the year before the reform. The resulting full sample includes 2,942,582 person-year observations from 2009 to 2015, representing over 500,000 individuals. This administrative linked structure is particularly well-suited for our setting because it supports a clean mapping between (i) pre-reform firm size and employment context, (ii) exposure to a policy-induced shift in job security, and (iii) subsequent transitions into self-employment or alternative wage-employment matches.

Key Variables

In our main analyses reported in the proposal, we define entrepreneurship as self-employment, consistent with prior research on entrepreneurial entry (e.g., Burtch et al., 2018; Bao, 2024), while the additional analyses also distinguish different forms of entrepreneurship. The main independent variable is the interaction term *Treated* × *Post*, which captures the average treatment effect in our difference-in-differences framework. *Treated* is a binary indicator equal to 1 for individuals employed in firms with fewer than 50 employees in 2011 and 0 for those in firms with 51 or more employees. To avoid ambiguity at the policy threshold, we exclude firms with exactly 50 employees in our baseline coding and treat inclusion of that group as a sensitivity check. Post equals 0 for observations before the 2012 labor market reform and 1 otherwise. In the triple-difference models, the variable *Female* (coded as 1 for women and 0 for men) serves as the moderating factor, with the interaction term *Treated* × *Post* × *Female* estimating the differential impact of the reform on women compared to men.

Our models include several control variables at the individual and regional levels to account for factors that may influence career decisions. Individual-level controls include marital status, age, place of birth (native-born versus foreign-born), education levels, and total personal income in euros. To address broader contextual influences, we incorporate time-varying regional covariates, such as population growth and GDP growth, derived from autonomous community-level datasets provided by the Spanish National Statistics Institute. Additionally, all models account for year, industry, and region fixed effects to control for unobserved heterogeneity.

Empirical Strategy

To test our hypotheses regarding the impact of the 2012 labor market reform on entrepreneurship and the gender gap in entrepreneurial activity, we employ a triple-difference design. This approach allows us to estimate the relative difference in treatment effects on entrepreneurial entry between women and men. The main specification is expressed as follows:

$$Entrepreneurship_{ift} = f[\ \beta_1 Treated_f \times Post_t + \beta_2 Treated_f \times Female_i + \beta_3 Post_t \times Female_i + \beta_4 Treated_f \times Post_t \times Female_i + \epsilon_{ift}\ ]$$

where i indexes individuals; f indexes firms; t indexes year; and ϵ is the error term.

The first coefficient of interest, β1, captures the effect of decreased job security on entrepreneurship following the labor market reform. The second coefficient of interest, β4, represents the differential treatment effect between women and men, quantifying the reform's impact on the gender gap in entrepreneurship. A negative estimate for β4 would indicate that the reform encouraged fewer women than men to transition into entrepreneurship, thereby widening the gender gap.

In line with standard practice in difference-in-differences and triple-difference designs, we assess identifying assumptions by examining whether pre-reform trends in entrepreneurship evolve similarly across treated and control groups.

Main Results

The core regression results are presented in Table 1. Models 1 and 2 test the impact of decreased job security on entrepreneurship. Hypothesis 1 predicts that the interaction term Treated × Post will have a positive coefficient, indicating that the labor market reform is associated with increased entrepreneurial activity within the treatment group. While Model 1 includes only year fixed effects, Model 2 incorporates additional

controls and fixed effects, demonstrating that the positive relationship remains robust across specifications. In Models 3 and 4, the negative coefficient for the three-way interaction term (Treated × Post × Female) supports Hypothesis 2, suggesting that the labor market reform exacerbates the gender gap in entrepreneurship. These models indicate that the reform's positive impact on entrepreneurial transitions is weaker for women compared to men.

Overall, our difference-in-differences analysis highlights that the observed increase in entrepreneurial activity is concentrated among individuals in treatment firms, reflecting an environment with decreased job security. This finding supports our baseline hypothesis. Moreover, the moderation analysis reveals that the reform's positive effect on entrepreneurship is significantly weaker for women, reinforcing the predicted increase in the gender gap.

Insert Table 1 about here

Post-Hoc Analyses and Robustness Checks

To further probe the mechanisms and to assess robustness around the firm-size cutoff that structures treatment exposure, we conduct additional analyses that focus on individuals working near the 50-employee threshold. Specifically, the models reported in Table 2 restrict attention to firms closer to the cutoff by excluding very small and very large firms, and compare individuals employed in firms with 5 to 49 employees against those in firms with 51 to 100 employees. These "local" comparisons are conceptually similar to a regression-discontinuity-style strategy in that they leverage comparability in a narrow neighborhood of the threshold, while preserving the core identification logic of difference-in-differences through the Post dimension. The results

are consistent with the main findings: both the positive effect of the reform on entrepreneurship and the gender moderation effect persist in this reduced sample.

Insert Table 2 about here

In addition, we examine whether results are sensitive to the exact definition of "small firms" and to alternative bandwidth choices around the policy threshold. Concretely, we estimate models that expand or tighten the neighborhood around the cutoff and verify that conclusions are not driven by a particular window. To further rule out mechanical threshold artifacts, we also conduct placebo-threshold checks by re-estimating the triple-difference framework using alternative "pseudo-cutoffs" (e.g., shifting the cutoff to 40 or 60 employees) and testing whether estimated effects attenuate when treatment is defined at thresholds where the reform did not generate an analogous discontinuity in contracting incentives.

We next examine whether reduced job security is associated with different post-reform career responses for women and men within wage employment. As shown in Table 3, women in treated firms are more likely than comparable men to move to larger firms following the reform. At the same time, women are less likely than men to make inter-firm moves more generally. Taken together, these findings suggest that women's response to reduced job security is not characterized by greater mobility overall, but by more selective sorting into larger and potentially more secure employers. These patterns are consistent with the interpretation that when job security declines, women are more likely to seek relatively more secure alternatives within wage employment, whereas men are more likely to translate the same change into entrepreneurship.

Insert Table 3 about here

DISCUSSION AND CONCLUSION

Using Spanish administrative linked employer-employee data from 2009 to 2015, this study examines how job (in)security shapes transitions from wage employment to entrepreneurship, and how these effects differ for women and men. Conceptualizing entrepreneurial entry as a career-mobility decision, we argued that job insecurity changes the relative attractiveness of outside options by (i) lowering the opportunity cost of leaving wage employment and (ii) increasing the perceived feasibility of founding and scaling a venture when employment adjustment frictions decline. We further theorized that gender moderates these same baseline mechanisms: even when the economic logic of opportunity costs and feasibility applies to all workers, women and men translate identical institutional conditions into entrepreneurial entry at different rates because gendered frictions condition how strongly reduced opportunity costs and lower adjustment frictions convert into individual-level action. Consistent with these expectations, we find that reduced job security is positively associated with entrepreneurial engagement overall; however, the 2012 Spanish reform triggered a stronger entrepreneurial response among men than women, thereby widening the gender gap in entrepreneurship.

Theoretical Implications

These findings contribute to research on entrepreneurship as a career transition and to work on gender inequality in entrepreneurial entry. First, our results extend the careers perspective on entrepreneurship by demonstrating that entrepreneurial entry is

shaped by how individuals evaluate the value of staying in wage employment relative to outside options, rather than by preferences considered in isolation (Merluzzi & Burt, 2021; Sørensen & Sharkey, 2014). In this sense, the paper shifts attention from entrepreneurship as a purely preference-driven choice to entrepreneurship as a mobility decision made in relation to changing employment conditions and competing career options. This framing helps explain why entrepreneurship can rise in contexts of labor-market insecurity even when average venture risk remains high: the relevant comparison is not "entrepreneurship versus certainty," but "entrepreneurship versus a deteriorating wage-employment outside option" (Hamilton, 2000; Carr & Chung, 2014).

Second, our study contributes to the literature on gender and entrepreneurship by showing that the same change in job security can lead women and men to make different career choices. In our setting, reduced job security increases entrepreneurial entry overall, yet women's entry rises less than men's entry. This pattern suggests that women and men do not translate changing employment conditions into entrepreneurial action in the same way, because they face different frictions in converting lower opportunity costs and greater perceived feasibility into entry. These frictions are shaped by gendered expectations, perceived fit, and anticipated evaluation, which affect whether changing job conditions are experienced as an impetus toward entrepreneurship or as a reason to seek alternative forms of security within wage employment (Ahl, 2006; Gupta et al., 2009; Thébaud, 2010). In this sense, the reform matters not only because it changed employment conditions, but because it changed the decision context within which individuals evaluated entrepreneurship relative to other career options. More broadly, the findings suggest that changes in employment conditions do not simply alter

the volume of entrepreneurial entry; they also shape which groups perceive entrepreneurship as an actionable response to changing career prospects.

Third, the post-hoc mobility patterns provide additional traction on the mechanisms implied by our framework. While treated men disproportionately translate increased insecurity into moves toward self-employment, treated women are more likely to pursue alternative stability-restoring moves within wage employment, particularly by sorting into larger firms. Importantly, the supplementary analyses also indicate that women are less likely than men to make inter-firm moves more broadly, suggesting that the observed pattern does not reflect greater mobility overall but more selective mobility toward organizational contexts that may restore stability. This divergence is consistent with the idea that job insecurity triggers reassessment of outside options for everyone, but women face higher conversion frictions from "entrepreneurship becomes relatively more attractive" to "I enter entrepreneurship." These frictions include stronger fit concerns and anticipated scrutiny in male-typed entrepreneurial domains, as well as lower expected returns to exploiting labor-market flexibility for rapid scaling when growth ambitions and early hiring are less central to the contemplated entrepreneurial path (Cliff, 1998; Davis & Shaver, 2012; Devine et al., 2019). As a result, women may respond to the same increase in job insecurity by selecting into larger wage-employment organizations that restore security rather than by selecting into entrepreneurship, thereby amplifying the gender gap in entry.

Practical Implications

Beyond theory, the findings carry direct implications for how policymakers and other stakeholders think about labor-market flexibility and inclusive entrepreneurship. Policymakers often design reforms to increase labor-market dynamism, reduce

adjustment costs, and stimulate business formation. Our results suggest that reforms that weaken job security can indeed increase entrepreneurial entry on average, yet they can simultaneously widen gender disparities in who enters entrepreneurship and how workers re-sort across career paths. This implication aligns with broader research emphasizing that organizational and institutional practices can reproduce inequality without explicit discriminatory intent (Small & Pager, 2020). From an inclusion perspective, the policy lever that stimulates entrepreneurship overall may not be the same lever that equalizes entrepreneurial entry across genders. If labor-market flexibility increases entry primarily among those who already face fewer legitimacy and fit frictions in entrepreneurial roles, complementary interventions may be needed for women to translate improved feasibility into entry. Such interventions could include targeted support for women's entrepreneurial credibility and resource access, or policies that reduce the non-market constraints that disproportionately shape women's career-mobility choices, thereby reducing the wedge between "lower opportunity cost" and "actual entry."

More broadly, this perspective encourages scholars to examine entrepreneurship not only as an outcome of individual traits or entrepreneurial aspirations, but also as a choice embedded in a broader set of employment alternatives. Doing so is particularly important for understanding gender inequality in entrepreneurial entry, because the same change in job conditions may alter the attractiveness of entrepreneurship for women and men without affecting the underlying policy environment differently for each group.

Limitations and Future Research

Several boundary conditions and future directions follow naturally from these results. First, the gendered effects of insecurity should be strongest in contexts where entrepreneurship is especially male-typed and where credibility constraints are salient, suggesting heterogeneity across industries and local entrepreneurial ecosystems (Gupta et al., 2009; Thébaud, 2010). Second, reforms that reduce adjustment frictions may matter more for growth-oriented entry than for necessity-driven self-employment, implying that decomposing entrepreneurial entry by type can further clarify when flexibility widens versus narrows gender gaps. Third, the divergence in post-hoc mobility responses highlights the value of treating entrepreneurship as one element of a broader mobility set rather than the sole margin of adjustment; future work can formalize this "choice set" logic by jointly modeling entrepreneurship, moves to larger firms, and wage progression following institutional shocks.

CONCLUSION

In conclusion, this study shows that job insecurity can stimulate entrepreneurship by shifting the relative attractiveness of career options, but that these shifts are not experienced symmetrically by women and men. By integrating a careers perspective with an institutional account of labor-market flexibility, we illuminate why policies that increase overall entrepreneurial activity can still widen gender disparities in entrepreneurial entry. More broadly, the results underscore that understanding gender inequality in entrepreneurship requires not only examining barriers within the entrepreneurial ecosystem but also examining how women and men interpret changing pre-entry employment conditions when deciding whether entrepreneurship is a feasible and attractive career move.

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TABLES AND FIGURES – ESSAY 2

TABLE 1: Main Effects of the 2012 Labor Market Reform on Entrepreneurship

	DV Entrepreneurship			
	Model 1 (job insecurity)	**Model 2** (job insecurity)	**Model 3** (gender)	**Model 4** (gender)
(β_1) Treated × Post	**0.019*** [.000]**	**0.008*** [.000]**	**0.025*** [.000]**	**0.010*** [.000]**
Female			0.040*** [0.000]	0.014*** [0.000]
(β_2) Treated × Female			-0.045*** [0.000]	-0.004*** [0.000]
(β_3) Post × Female			0.008*** [0.000]	0.002*** [0.000]
(β_4) Treated × Post ×			**-0.012*** [0.000]**	**-0.006*** [0.000]**
Age		0.001*** [.000]		0.001*** [.000]
Born in Spain		-0.012*** [.001]		-0.012*** [.001]
Married		-0.120*** [.000]		-0.120*** [.000]
Year Fixed Effects	YES	YES	YES	YES
Industry Fixed Effects	NO	YES	NO	YES
Region Fixed Effects	NO	YES	NO	YES
Other Controls	NO	YES	NO	YES
Observations	2,942,582	2,942,582	2,942,582	2,942,582
R-squared	0.02	0.54	0.02	0.54

Notes: Table 1 reports the main effects of the 2012 Spanish Labor Market Reform on entrepreneurship. The dependent variable is an indicator equal to 1 if the individual is self-employed in a given year. In Models 1 and 2, the coefficient of interest is Treated × Post, which captures the effect of reduced job security on entrepreneurial entry after the reform. In Models 3 and 4, the coefficient of interest is Treated × Post × Female, which captures the differential treatment effect for women relative to men.

***p < .001, **p < .01, *p < .05.

TABLE 2: Threshold-Based Robustness Checks Around the 50-Employee Cutoff

	DV: Entrepreneurship	
	Model 1 (job insecurity)	**Model 2** (gender)
(β_1) Treated × Post	**0.008*** [.000]**	**0.008*** [.000]**
Female		0.005*** [0.000]
(β_2) Treated × Female		-0.000 [0.622]
(β_3) Post × Female		-0.004*** [0.000]
(β_4) Treated × Post × Female		**-0.002*** [0.000]**
Age	-0.000*** [.000]	-0.000*** [.000]
Born in Spain	0.006*** [.001]	0.006*** [.001]
Married	-0.072*** [.000]	-0.072*** [.000]
Year Fixed Effects	YES	YES
Industry Fixed Effects	YES	YES
Region Fixed Effects	YES	YES
Other Controls	YES	YES
Observations	1,087,435	1,087,435
R-squared	0.38	0.38

Notes: Table 2 reports robustness checks using a reduced sample restricted to firms near the 50-employee threshold, comparing employees in firms with 5 to 49 employees to those in firms with 51 to 100 employees. The dependent variable is an indicator equal to 1 if the individual is self-employed in a given year. Model 1 estimates the baseline effect of reduced job security on entrepreneurial entry, while Model 2 estimates the gender-differentiated treatment effect.

***p < .001, **p < .01, *p < .05.

TABLE 3: Differential Wage-Employment Responses to Reduced Job Security

	DV: Move to Larger Firm	DV: Move to Any Other Firm
	Model 1	**Model 2**
(β_1) Treated × Post	0.094***	0.353***
	[.000]	[.000]
Female	-0.004***	-0.004***
	[.000]	[0.000]
(β_2) Treated × Female	-0.002***	0.000
	[.000]	[0.622]
(β_3) Post × Female	0.002***	0.002***
	[.000]	[0.000]
(β_4) Treated × Post × Female	**0.007*** **	**-0.037*** **
	[.000]	**[0.000]**
Age	-0.000***	-0.000***
	[.000]	[.000]
Born in Spain	0.001***	0.006***
	[.001]	[.001]
Year Fixed Effects	YES	YES
Industry Fixed Effects	YES	YES
Region Fixed Effects	YES	YES
Other Controls	YES	YES
Observations	2,942,582	2,942,582

Notes: Table 3 reports post-hoc analyses of alternative wage-employment responses to reduced job security. In Model 1, the dependent variable equals 1 if an individual moves after the reform to a different wage-employment firm with more than 50 employees. In Model 2, the dependent variable equals 1 if an individual moves after the reform to a different wage-employment firm. The coefficient of interest is Treated × Post × Female, which captures whether women and men differ in their post-reform wage-employment responses.

***p < .001, **p < .01, *p < .05

ESSAY 3: RESOURCE FOR HIM, CONSTRAINT FOR HER?

ENTREPRENEURSHIP AND THE GENDER GAP IN PARENTHOOD INTENTIONS

ABSTRACT

This study examines how entrepreneurship relates to individuals' short-term intentions to have a child, and how this relationship differs by gender and entrepreneurial mode. Drawing on a work-family interface perspective, we argue that entrepreneurship can simultaneously increase the perceived feasibility of parenthood through autonomy and boundary control while decreasing feasibility through heightened uncertainty and responsibility, and that these trade-offs are gendered. We further argue that heterogeneity within entrepreneurship matters by distinguishing solo entrepreneurs from entrepreneurs who employ others. We test our hypotheses using the Generations and Gender Survey (GGS). Analyzing 26,768 economically active women and men of reproductive age (18-49) across nine European countries, we find a pronounced gendered pattern. On average, entrepreneurship is positively associated with short-term intentions to have a child, but this association reverses among women. Among men, both solo and employer entrepreneurs report higher intentions to have a child than male employees. Among women, both solo and employer entrepreneurs report lower intentions than female employees, with similar magnitudes across the two modes. As a result, entrepreneurship is associated with a widened gender gap in short-term intentions to have a child. These findings advance "reversed-arrow" research on entrepreneurship's societal consequences by showing that entrepreneurship shapes a core family-formation outcome, extend family embeddedness scholarship by shifting attention from how families affect entrepreneurship to how entrepreneurial careers affect families, and contribute to gender and entrepreneurship research by showing that entrepreneurship can function as a resource for men's family-expansion intentions while functioning as a constraint for women's.

INTRODUCTION

A perceptible shift is evident in research on the societal embeddedness of entrepreneurial activity. While much prior work tended to focus on how societal considerations influence entrepreneurship, an emerging stream has called attention to "reversed-arrow" questions; that is, how entrepreneurial activity shapes society beyond traditional indicators of economic growth, job creation, and technological innovation (Eberhart et al., 2022; Jennings et al., 2022). Consistent with this emergent trajectory are studies of entrepreneurship as a tool for addressing society's grand challenges (Dorado & Ventresca, 2013; Fernhaber & Zou, 2022; Markman et al., 2019), as a means of eroding socio-cultural constraints (McAdam et al., 2020; Rindova et al., 2009; Scott et al., 2012), and as a contributor to profound changes in the structure of labor markets and careers (Burton et al., 2016; Davis & Sinha, 2021; Eberhart et al., 2022).

Despite the increased interest in how entrepreneurship is affecting contemporary society, one important societal institution has received comparatively little attention: the family. This lacuna is surprising given that the family is widely considered to be one of the most elemental and pervasive social institutions (Friedland & Alford, 1991; Thornton et al., 2012). It is also noteworthy considering the volume of entrepreneurship research conducted from a family embeddedness lens (Aldrich et al., 2021). Although the initial formulation of this perspective emphasized the mutual relationships between entrepreneurship and family (Aldrich & Cliff, 2003), most subsequent work has attended to how family-related factors influence entrepreneurial activity (e.g., Cogan et al., 2022; Gras & Nason, 2015; Coppens & Knockaert, 2022). As a result, comparatively little is known about how entrepreneurship affects families (Jennings et al., 2013). This gap is particularly evident regarding questions of family composition,

specifically whether the decision to become an entrepreneur affects an individual's intentions to have a child. If so, why, how, and for whom in particular?

One of the most compelling reasons to advance research on the entrepreneurship-parenthood relationship stems from the continued valorization of entrepreneurial activity. Although this valorization has contributed to rapid growth in entrepreneurship education and training programs worldwide (Beynon et al., 2014; Kauffman Foundation, 2013), these programs often adopt an instrumental "how-to" approach to venture creation (Galvão et al., 2020; Henry & McGowan, 2016). As a result, they frequently overlook issues that matter for the lived experience of entrepreneurship, including the potential implications for family formation. This oversight is especially troubling because the age range with the highest documented rate of entrepreneurial activity in most regions around the globe, i.e., the 18- to 34-year-old category (Elam et al., 2022), overlaps with the time period when initial parenthood decisions are typically made (Virtala et al., 2011). In order for young adults to be as informed as possible with respect to the decision to become an entrepreneur, it is important for researchers to build a reliable base of information on whether, why, how, and for whom entrepreneurship affects an individual's intentions to have a child. By failing to account for how the entrepreneurial career path interacts with family formation, the literature maintains an incomplete view of the professional and personal reality of the entrepreneur.

We designed our study to help address this need by theorizing and testing how entrepreneurship relates to short-term intentions to have a child, and how this relationship differs by gender and entrepreneurial mode. Conceptually, we draw upon and extend an established yet vibrant stream of scholarship within research attentive to the family embeddedness of entrepreneurial activity, namely the work-family interface

(WFI), which highlights how work demands and family demands interact to shape consequential life decisions. At the same time, we move beyond the assumption that entrepreneurs are a homogeneous group to investigate heterogeneity along two moderators: the entrepreneur's gender, distinguishing between female and male entrepreneurs, and the mode of entrepreneurship, differentiating between those who are self-employed and those who are employers of others. This approach allows us to examine how occupational autonomy and resource potential, alongside gendered role expectations and constraints, jointly shape intentions to have a child.

Specifically, we argue that entrepreneurship combines competing pathways: it can increase the perceived feasibility of parenthood through autonomy, discretion, and future-oriented resource expectations, while also decreasing feasibility through heightened uncertainty, responsibility, and anticipated interruption costs. We further argue that these trade-offs are gendered, because entrepreneurial autonomy and flexibility are experienced within gendered role expectations and unequal caregiving demands.

Empirically, we test our hypotheses using baseline interviews from the Generations and Gender Survey (GGS Wave 2 release), focusing on 26,768 economically active women and men of reproductive age (18-49) across nine European countries. Our results reveal a strikingly gendered pattern. On average, entrepreneurship is associated with higher short-term intentions to have a child than paid employment, but this average masks pronounced differences by gender. Among men, both solo entrepreneurs and employer entrepreneurs report higher short-term intentions to have a child than male employees. Among women, the entrepreneurship premium reverses: female entrepreneurs report lower short-term intentions to have a child than female employees,

and this negative association is similar in magnitude for solo and employer women. In other words, entrepreneurship appears to function as a resource for men's family expansion intentions, but as a constraint for women's.

These findings contribute to the entrepreneurship literature in several ways. First, we advance "reversed-arrow" research by documenting that entrepreneurship has meaningful implications for a core social institution, the family. Second, we extend the work-family interface account of entrepreneurship by suggesting that autonomy and flexibility do not carry comparable family-planning implications for women and men. Third, we contribute to gender and entrepreneurship research by indicating that entrepreneurship can widen, rather than narrow, gender gaps in family formation intentions, and by showing how entrepreneurial heterogeneity relates to these gendered trade-offs. In addition, our results call into question a simple "more resources solve it" story. More broadly, our study engages the emerging question of whether entrepreneurship is good for families (Jennings & Brush, 2013). At least with respect to intentions to have a child, the answer appears more conditional than the flexibility narrative often implies: entrepreneurship functions more like a resource for men's family expansion intentions, but more like a constraint for women's.

THEORETICAL BACKGROUND AND HYPOTHESES DEVELOPMENT

Entrepreneurship and intentions to have a child: A work-family interface perspective

Research on the societal embeddedness of entrepreneurship increasingly asks "reversed-arrow" questions about how entrepreneurial activity shapes life outside the business domain. One important yet underexplored domain is the family. Research on women's entrepreneurship and family embeddedness has emphasized that

entrepreneurial activity is embedded in families (Jennings & Brush, 2013), in the sense that entrepreneurial decisions and outcomes both shape and are shaped by family systems. This insight suggests that entrepreneurship should not be studied only as an economic activity, but also as a role with consequences for core family-related decisions such as whether and when to have children.

A work-family interface (WFI) perspective provides a natural starting point for theorizing this relationship because it emphasizes that work roles structure time, strain, resources, and identity in ways that spill over into family-related decisions (Greenhaus & Beutell, 1985). From this view, intentions to have a child reflect a forward-looking assessment of whether individuals can sustain family responsibilities while meeting the demands attached to their work role.

WFI research highlights two broad, partly competing pathways through which work roles can shape family formation intentions. First, work roles can increase the perceived feasibility of parenthood by expanding autonomy, predictability, and resources, which can reduce anticipated conflict between work and family. Second, work roles can decrease perceived feasibility by raising time demands, financial strain, and psychological spillovers, which can intensify anticipated conflict and reduce willingness to take on additional family responsibilities (Greenhaus & Beutell, 1985; Parasuraman & Simmers, 2001). Entrepreneurship is well suited for examining these competing pathways because it combines unusually high autonomy and upside potential with unusually high uncertainty and responsibility.

Below, we develop hypotheses that align entrepreneurship research with the WFI lens while explicitly accounting for heterogeneity among entrepreneurs. In particular, we argue that the relationship between entrepreneurship and intentions to have a child

depends on (a) gender and (b) entrepreneurial mode, distinguishing solo entrepreneurs from entrepreneurs who employ others. This approach integrates long-standing arguments about autonomy and flexibility in self-employment (Boden, 1996, 1999; Lombard, 2001) with research documenting gendered constraints in how entrepreneurial autonomy is experienced and translated into family outcomes (Jennings & McDougald, 2007; Parasuraman & Simmers, 2001).

Baseline effect: Why entrepreneurship can increase intentions to have a child

A baseline prediction in the literature has often emphasized the "time squeeze" of business ownership. Entrepreneurship can be demanding, time-consuming, and psychologically absorbing, sometimes more so than paid employment (Hyytinen & Ruuskanen, 2007; Parasuraman & Simmers, 2001). These demands can reduce family engagement and exacerbate work-family conflict (Parasuraman & Simmers, 2001). If this pathway dominates, entrepreneurs should be less likely than employees to intend to have a child.

However, a competing and increasingly plausible pathway is that entrepreneurship can increase intentions to have a child because it provides autonomy and perceived control over one's work life, which can raise the perceived feasibility of integrating parenthood with work. Compared with employees, entrepreneurs have greater discretion over task selection, scheduling, and the organization of work (Loscocco, 1997). Even when entrepreneurship involves long hours, discretion over when and how work is performed can matter for family planning because having a child often requires coordination, flexibility, and the ability to respond to unpredictable family needs. In this sense, entrepreneurship can increase perceived boundary control between work and

family domains even if total work demands remain high (Kossek & Lautsch, 2012; Perlow, 1999).

Entrepreneurship can also shape intentions to have a child through expectations about future resources. Parenthood decisions are not only about current time constraints; they are also about anticipated financial capacity, stability, and longer-term life trajectory. Entrepreneurship offers an upside potential that many wage-employment roles do not, and this upside can generate optimism about the ability to support a family, even under uncertainty. Individuals may interpret the decision to pursue entrepreneurship as a commitment to a long-term life project that includes both business building and family expansion. This logic is consistent with the idea that intentions reflect not only current constraints but also anticipated resources and life-course planning.

Taken together, although entrepreneurship can create substantial time and strain demands, it can simultaneously increase the perceived feasibility of parenthood by increasing discretion and by changing expectations about future resources and life trajectory. When these autonomy and future-oriented resource pathways dominate, entrepreneurs should report higher short-term intentions to have a child than employees.

> ***Hypothesis 1 (baseline):*** *Entrepreneurs will possess higher short-term intentions to have a child than employees.*

Gendered moderation: Why entrepreneurship can lower intentions to have a child among women relative to men

Although Hypothesis 1 predicts a positive average association between entrepreneurship and intentions to have a child, we argue that this relationship is strongly contingent on gender. A central insight of the gender literature is that work

roles are not experienced in a gender-neutral manner because social role expectations and household divisions of labor remain gendered (Knudsen & Wærness, 2008; Lachance-Grzela & Bouchard, 2010; Ridgeway, 2011). Women continue to perform a disproportionate share of household and caregiving responsibilities in many contexts, even when they participate fully in the labor market (Baxter & Western, 1998; Ridgeway, 2011). As a result, women's work-family interface is often more constrained, and the same work role can produce different levels of anticipated conflict for women and men.

Entrepreneurship does not escape these gendered dynamics. In principle, entrepreneurship offers autonomy that should facilitate balancing work and family. Yet research suggests that women entrepreneurs often have less latitude to convert autonomy into reduced work-family strain (Jennings & McDougald, 2007; Prottas & Thompson, 2006). Women entrepreneurs have been found to carry a greater share of domestic responsibilities than men entrepreneurs and than their partners at home, which can limit the practical benefits of autonomy (Parasuraman & Simmers, 2001). Moreover, entrepreneurial autonomy can become a double-edged sword because the permeability of the work boundary can allow family demands to intrude more into business time, especially when household norms implicitly assume that women will accommodate family needs (Craig et al., 2012; Jennings & McDougald, 2007). Women tend to adopt more integrative strategies that weave work tasks around family responsibilities, whereas men more often adopt segmentation strategies that keep the domains separate (Eddleston & Powell, 2012; Jennings & McDougald, 2007). Integration can increase the salience of simultaneous demands and thus intensify perceived conflict even when schedule discretion exists.

Second, a complementary mechanism is economic and institutional. Entrepreneurship typically provides weaker institutional supports than wage employment, including less predictable income streams and less standardized access to leave and benefits. Even when entrepreneurial upside exists, the lack of institutional support, income volatility and financial risk can be especially consequential for women if they anticipate higher caregiving demands and therefore higher potential costs of business interruption. Put differently, uncertainty in entrepreneurship can amplify the perceived penalty of parenthood when individuals expect that caregiving will disproportionately fall on them.

Third, gendered identity expectations can produce divergent interpretations of entrepreneurship for family formation. For men, entrepreneurship can reinforce traditional provider identities (Hytti et al., 2024). Entrepreneurial success and business ownership can signal agency, earning potential, and status; these signals can strengthen a sense of readiness for fatherhood and can activate motives related to legacy and lineage. A "breadwinner and legacy" logic implies that entrepreneurship can increase men's intentions to have a child because a child becomes part of a broader life project that includes building something to pass on, materially and symbolically. For women, in contrast, entrepreneurship can intensify identity conflict because women can face stronger penalties for deviating from gendered expectations in both the business and family spheres. Women entrepreneurs may anticipate that motherhood will be interpreted as reduced commitment to business, while entrepreneurship may be interpreted as reduced commitment to caregiving. This double bind can reduce the perceived feasibility of simultaneously pursuing entrepreneurship and parenthood.

These mechanisms imply that the autonomy and future-oriented resource pathways that can increase intentions to have a child (Hypothesis 1) should be weaker for women and stronger for men. For men, entrepreneurship may combine autonomy with identity reinforcement as provider and legacy builder, which can increase intentions to have a child. For women, entrepreneurship may combine high responsibility with identity conflict through higher expected caregiving demands, greater perceived work-family conflict, and stronger perceived penalties of business interruption, which can reduce intentions to have a child. The net result is a gendered divergence in the entrepreneurship-parenthood intentions relationship.

> ***Hypothesis 2:*** *An individual's gender will moderate the relationship between entrepreneurship and short-term intentions to have a child such that female entrepreneurs will possess lower short-term intentions to have a child than male entrepreneurs.*

Mode contingency: Why the gender gap should be larger among solo entrepreneurs than employer entrepreneurs

Entrepreneurs are not a homogeneous group, and self-employment status alone can obscure meaningful differences in roles, responsibilities, and resources (Baum et al., 2014; Frese & Gielnik, 2014; Parker, 2004; Shir et al., 2019). A particularly consequential distinction is between solo entrepreneurs and entrepreneurs who employ others. This distinction captures differences in organizational scope, task delegation, and resource bases, all of which shape the work-family interface.

Solo entrepreneurs often perform a wider range of tasks themselves, from core production to administration, sales, and customer management. This broad task burden can intensify time pressure and reduce the feasibility of stepping back temporarily. Solo

entrepreneurship can therefore amplify the "time squeeze" pathway, especially when business continuity depends directly on the entrepreneur's daily labor. In addition, solo entrepreneurs may face higher income volatility because they lack organizational slack and cannot easily redistribute tasks during disruptions (Prottas & Thompson, 2006). For individuals considering parenthood, this combination of time dependence and financial fragility can reduce the perceived feasibility of having a child.

Employer entrepreneurs, in contrast, can sometimes delegate tasks, create redundancy, and build routines that reduce dependence on their personal labor. Employing others can also signal that the venture has reached a level of stability, legitimacy, and organizational capacity that supports longer-term planning (Fisher et al., 2016). Even if employer entrepreneurs face complex managerial responsibilities, they may have greater capacity to buffer short-term disruptions through delegation, scheduling, and resource allocation. In WFI terms, employing others can increase perceived boundary control because the entrepreneur can partially decouple business continuity from personal availability (Kossek et al., 2012; Perlow, 1999). This decoupling should be especially relevant for parenthood, which introduces predictable long-term responsibilities and unpredictable short-term interruptions.

Because solo entrepreneurship offers fewer delegation and buffering options, parenthood-related interruptions are more consequential, especially for women. We expect these mode differences to interact with gender in a specific way. For men, solo entrepreneurship can produce an "autonomy premium" that reinforces a self-directed identity and can increase intentions to have a child, particularly when entrepreneurship strengthens breadwinner and legacy motives. For women, however, solo entrepreneurship can produce a "precarity and time-constraint penalty." When women

anticipate higher caregiving demands, the lack of delegation capacity and the higher consequences of stepping back can be especially discouraging. Employer status may partially mitigate this penalty by providing delegation capacity and a stronger resource base, thereby reducing the degree to which anticipated parenthood threatens business continuity.

Therefore, we expect the gender gap in intentions to have a child among entrepreneurs to be most pronounced in the solo mode, where women face the sharpest combination of time dependence and precarity while men can still benefit from autonomy and identity reinforcement. Among employer entrepreneurs, we expect the gender gap to be smaller because resources and delegation capacity reduce the constraints that disproportionately bind women.

> ***Hypothesis 3:*** *The gender gap in entrepreneurs' short-term intentions to have a child will be larger among solo entrepreneurs than among employer entrepreneurs.*

METHODS

Data and sample

For the empirical component of our study, we analyzed multi-country, micro-level data from the "Generations and Gender Survey" (GGS). This survey was initially commissioned by the United Nations Economic Commission for Europe and is currently maintained by an independent research infrastructure in collaboration with national statistical offices. GGS uses a largely harmonized questionnaire across participating countries and provides cross-nationally comparable information on family formation decisions, career experiences, and household characteristics. These features make the dataset well suited for testing our hypotheses.

Our focal analytic sample draws on baseline (Wave 1) interviews included in the GGS Wave 2 data release (Version 1.3). Interview years range from 2004 to 2013. The baseline wave was designed to represent the population of adults aged 18 to 78 at the national level. Given our focus on the entrepreneurship-parenthood relationship, we restrict the sample to economically active women and men of reproductive age (18 to 49 years old). Although the United Nations Population Division defines women of reproductive age as 15 to 49 years, our lower bound is determined by the GGS sampling frame (adults aged 18 and older). We operationalize "economically active" respondents as those who report being either paid employees or self-employed, aligning with our theoretical comparison between employees and entrepreneurs.

We exclude the Netherlands and Poland because their employment response categories do not allow us to distinguish between self-employed individuals with and without employees, a distinction that is required for our analyses. We also exclude Italy because information on respondents' number of biological children is not available. Our final analysis draws on baseline interviews from nine countries: Austria, Bulgaria, the Czech Republic, France, Georgia, Germany, Lithuania, Russia, and Sweden. Other countries included in the release were not retained because key variables required for our analyses were missing, not comparable across countries, or not available in the baseline questionnaire.

To ensure a consistent classification of entrepreneurs into solo versus employer entrepreneurs, we exclude 44 self-employed respondents with missing or non-substantive responses on the employee-count item used to construct this split. The resulting analytic sample includes 26,768 respondents.

Measures and variable coding

Dependent variable. Our dependent variable is short-term intention to have a child. We measure this construct using the GGS baseline questionnaire item: "Do you intend to have a/another child during the next three years?" Responses range from 1 ("definitely not") to 4 ("definitely yes"). To facilitate interpretation, we recode the item into a binary indicator equal to 1 for "definitely yes" or "probably yes," and 0 for "probably not" or "definitely not."

Independent variables. Our focal independent variables capture respondents' *occupational status* and *gender*. We classify respondents as *entrepreneurs* if they report being self-employed and as *employees* if they report being paid employees (based on the GGS class-of-worker item).

We code a binary indicator for women: f*emale* = 1 for women and 0 for men.

We further distinguish between two types of entrepreneurship. Among the self-employed, we code *solo entrepreneurs* as those who report having zero paid employees and *employer entrepreneurs* as those who report having one or more paid employees (based on the employee-count item; a851). Because the employee-count item includes country-specific codes in some cases, we harmonize these codes before constructing the solo versus employer split. We exclude 44 self-employed respondents with missing or non-substantive values on the employee-count item, as noted above.

Control variables. We include standard demographic and household controls: age (in years), tertiary education (educ_high), cohabiting with a partner (has_partner), and number of biological children (num_children). We also include country fixed effects using indicator variables for Austria, Bulgaria, the Czech Republic, France, Georgia,

Germany, Lithuania, Russia, and Sweden and interview-year fixed effects based on respondents' interview year.

Empirical approach

Because our dependent variable is binary, we test our hypotheses using logit regression models predicting individuals' short-term intention to have a child. Across all specifications, we include country fixed effects and interview-year fixed effects to account for time-invariant cross-country differences and common time shocks. Because the analysis includes only nine countries, we report robust standard errors in the main analyses. As a robustness check, we re-estimate the models using country-clustered standard errors. Coefficient estimates remain unchanged, and inference is substantively similar; our key conclusions do not change (Appendix Table A1).

Results

Table 1 presents descriptive statistics and correlations for the variables. Table 2 presents the main results. Model 1 shows a positive association between entrepreneurship and short-term intention to have a child ($b = 0.17$, $SE = 0.05$, $p < .01$), consistent with Hypothesis 1. However, this average effect masks strong gender differences, in line with Hypothesis 2. Model 2 adds gender and indicates that women report lower short-term intention to have a child than men ($b = -0.21$, $SE = 0.03$, $p < .001$), while the entrepreneurship coefficient remains positive ($b = 0.14$, $SE = 0.05$, $p < .01$). Model 3 reports the interaction between entrepreneurship and gender and reveals a strongly gendered pattern: the main effect of entrepreneurship is positive ($b = 0.33$, $SE = 0.06$, $p < .001$), but the interaction term is negative and statistically significant (Entrepreneur × Female: $b = -0.62$, $SE = 0.11$, $p < .001$). This implies that the net association of entrepreneurship with the intention to have a child is positive for men but

negative for women, thereby widening the gender gap in the short-term intention to have a child.

Model 4 distinguishes between solo entrepreneurs and employer entrepreneurs and confirms the same pattern while allowing for entrepreneurial heterogeneity. Among men, both solo entrepreneurs ($b = 0.32$, $SE = 0.08$, $p < .001$) and employer entrepreneurs ($b = 0.34$, $SE = 0.10$, $p < .001$) report higher short-term intention to have a child than male employees. In contrast, the entrepreneurship premium reverses for women. The interaction terms are negative and statistically significant for both modes (Solo × Female: $b = -0.62$, $SE = 0.13$, $p < .001$; Employer × Female: $b = -0.62$, $SE = 0.20$, $p < .01$). The implied net effects are negative and similar in magnitude for women in both modes (Solo: 0.32 - 0.62 = -0.30; Employer: 0.34 - 0.62 = -0.28).

Insert Table 1 and Table 2 about here

Figure 1 visualizes these differences using predicted probabilities from the fully specified model that distinguishes solo and employer entrepreneurs. The figure reinforces the main takeaway: relative to employees, men in both solo and employer entrepreneurship show higher predicted intentions to have a child, whereas women in both solo and employer entrepreneurship show lower predicted intentions to have a child. The similar negative association for solo and employer women suggests that the gender gap is not primarily driven by whether entrepreneurs employ others, but instead reflects a broader gendered trade-off in how entrepreneurship relates to family-formation intentions.

Insert Figure 1 about here

Overall, these results support Hypothesis 1 and Hypothesis 2. They do not provide evidence consistent with a larger gender gap among solo entrepreneurs than among employer entrepreneurs, because the negative associations among women are similar in magnitude across the two entrepreneurial modes (Model 4). Therefore, we do not find support for Hypothesis 3.

Robustness checks

To address concerns that individuals may self-select into entrepreneurship based on characteristics correlated with fertility intentions, we implement inverse probability of treatment weighting (IPTW) (Assenova & Amit, 2024; Hallen et al., 2020). We estimate the propensity to be an entrepreneur (vs. employee) using a logistic regression that includes age and age squared[5], tertiary education, partnership status, number of children, household structure (marital status, household type, and household size[6]), housing size (number of rooms), and country fixed effects. These covariates help ensure that entrepreneurs and employees are comparable on broader life circumstances, not only on age, education, partnership status, and number of children. We compute stabilized IPTW weights, trim extreme weights at the 1st and 99th percentiles, and restrict analyses to common support (propensity scores between 0.01 and 0.99). Because all observations fell within the common-support interval, the restriction did not reduce the sample size; IPTW reweights observations rather than discarding them.

Balance diagnostics indicate that weighting substantially reduces observed differences between entrepreneurs and employees (Table 3). We then re-estimate the

[5] We include age squared to flexibly capture non-linear associations between age, occupational choice, and fertility intentions.
[6] To avoid dropping observations due to missing values on household structure variables, we treat missing marital status and household type as separate categories. For household size, we replace missing values with the sample mean and add an indicator for missingness.

main models using the IPTW weights and robust standard errors (Table 4). As a second analysis, we restrict the sample to entrepreneurs and apply the same IPTW procedure to compare employer entrepreneurs with solo entrepreneurs. Balance diagnostics again indicate improved covariate balance (Table 5), and Table 6 presents the corresponding IPTW-weighted estimates. The results show that the main entrepreneurship-by-gender pattern remains after reweighting entrepreneurs and employees to be comparable on observed covariates, and that differences between solo and employer entrepreneurs are small and statistically indistinguishable from zero. Within the entrepreneur subsample, employer status is not associated with intentions to have a child, and the employer-by-female interaction is not statistically significant; the primary difference remains gender, with women reporting substantially lower intentions than men.

Insert Table 3, Table 4, Table 5, and Table 6 about here

We also examine whether entrepreneurs differ from employees in baseline parenthood (having any biological children). In a logit model with the same controls and fixed effects, entrepreneurship is not associated with having any biological children ($b = 0.02$, $p = .897$), whereas the controls behave as expected (Appendix Table B1). This pattern suggests that the main results for intentions to have a child are not simply a reflection of compositional differences in whether respondents already have children.

As an additional robustness check, we re-estimate the models using the original four-category item measuring short-term intentions to have a child (a622; 1 = definitely not, 2 = probably not, 3 = probably yes, 4 = definitely yes) and estimate ordered logit models with the same controls and fixed effects. The results remain substantively unchanged; the entrepreneur-by-female interaction is negative and statistically

significant (b = -0.49, p < .001). Predicted probabilities of responding "definitely yes" show the same pattern: entrepreneurship is associated with higher intentions among men (0.104 to 0.130) but lower intentions among women (0.087 to 0.074) (Appendix Table C1).

Mechanisms and alternative explanations

Growth orientation. One alternative explanation is that women who enter entrepreneurship may be systematically more career-driven or more growth oriented and therefore report lower intentions to have a child. If this mechanism were driving the results, the entrepreneurship-by-gender gap should be more pronounced among employer entrepreneurs, who are more likely to pursue growth and expansion, than among solo entrepreneurs. However, when we restrict the sample to entrepreneurs and reweight employer and solo entrepreneurs using IPTW, we find no evidence that the entrepreneurship-by-gender pattern is concentrated among employer entrepreneurs (Table 6). Instead, employer and solo entrepreneurs exhibit very similar short-term intentions to have a child, and the employer-by-female interaction is statistically indistinguishable from zero. This pattern is inconsistent with a selection story based on venture scale.

To further probe whether our findings reflect selection of a small subset of especially growth-oriented women into entrepreneurship, we additionally proxy venture scale using the number of paid employees and re-estimate the models comparing solo entrepreneurs (0 employees), small employers (1-9 employees), and larger employers (10+ employees). In the data, the venture-size-by-female interaction terms are statistically indistinguishable from zero, and predicted probabilities show a broadly similar gender gap across venture sizes. Because the number of female entrepreneurs

with 10+ employees is small, we interpret estimates for that subgroup cautiously; overall, the evidence provides limited support for a selection explanation based on venture scale (Appendix Table D1).

We next explore two candidate mechanisms discussed in the literature: work-family conflict and financial difficulty.

Work-family conflict. We operationalize *work-family conflict* (WFC) using two GGS items (a855_a and a855_c), each measured on a four-point agreement scale. We reverse-code both items so that higher values represent higher conflict (x_rev = 5 − x) and compute a two-item index as the average of the reverse-coded items: wfc_index = ((5 − a855_a) + (5 − a855_c)) / 2.

To assess the dimensionality of our work-family conflict measure, we conducted a principal-component factor analysis on the two reverse-coded items (a855_a and a855_c). The results support a single-factor structure (eigenvalue = 1.31), with both items loading strongly on the retained factor (loadings = 0.81). Consistent with this unidimensional structure, our index (wfc_index) equals the mean of the two reverse-coded items. These items are not available for Germany; accordingly, wfc_index is missing for German respondents. We retain German respondents in the overall sample and exclude them only in analyses that include work-family conflict (N = 24,283).

In our sample, WFC ranges from 1 to 4 (mean = 1.88, median = 2). Women report higher WFC than men (1.93 vs. 1.83). Entrepreneurs report slightly higher WFC than employees (1.91 vs. 1.88). Female entrepreneurs report the highest WFC (1.96). Thus, the index behaves in the expected direction descriptively.

In the regression models, work-family conflict is positively associated with short-term intentions to have a child in the baseline specification, but interaction terms

provide no evidence that this association differs by gender or entrepreneurship status. Overall, these results offer limited support for work-family conflict as an explanation for the entrepreneurship-by-gender gap in intentions to have a child (Appendix Table E1).

To probe whether the positive association between work-family conflict and intentions to have a child is driven by parental status, we re-estimated the baseline WFC model separately for childless respondents and for parents. Work-family conflict remains positively associated with intentions to have a child in both subsamples (childless: b = 0.07, p = .048; parents: b = 0.07, p = .034), suggesting that the pattern is not confined to respondents who already have children. The entrepreneurship-by-gender interaction also remains negative in both subsamples, indicating that the main gendered entrepreneurship pattern is not driven exclusively by either group (Appendix Table E2).

Financial difficulty. We operationalize financial difficulty using the GGS item capturing how easily the household can make ends meet (a1002; six response categories). We reverse-code the scale so that higher values indicate greater financial strain (fin_diff = 7 − a1002) and treat values outside the valid 1-6 range as missing.

In our sample, financial difficulty ranges from 1 to 6 (mean = 3.71; median = 4), consistent with a six-category strain measure. Women report slightly higher financial difficulty than men (3.73 vs. 3.68). Entrepreneurs report slightly lower financial difficulty than employees (3.67 vs. 3.71). In the gender-by-entrepreneurship breakdown, female employees report higher financial difficulty than female entrepreneurs (3.74 vs. 3.66).

In the regression models, financial difficulty is not significantly associated with intentions to have a child, and interaction tests provide limited evidence that financial

difficulty explains the entrepreneurship-by-gender gap. Descriptively, financial strain is not higher among women entrepreneurs, which helps explain why the financial-difficulty mechanism does not emerge in the regression models (Appendix Table F1).

GENERAL DISCUSSION

This study examines how entrepreneurship relates to individuals' short-term intention to have a child, and how this relationship differs by gender and entrepreneurial mode. In line with work highlighting "reversed-arrow" questions, we move beyond treating entrepreneurship only as an outcome shaped by social institutions and instead examine entrepreneurship as a career form that can shape outcomes in a core social institution, the family (Eberhart, Aldrich, & Eisenhardt, 2022; Jennings, Hannigan, & Jennings, 2022). Using logit models with country fixed effects and interview-year fixed effects, we find a strikingly gendered pattern. Entrepreneurship is positively associated with the short-term intention to have a child among men, but the association reverses among women. Distinguishing solo entrepreneurs from employer entrepreneurs does not alter this conclusion; women show similarly lower intentions in both modes. As a result, entrepreneurship is associated with a widened gender gap in the short-term intention to have a child. Importantly, this pattern remains robust across multiple checks, including inverse probability of treatment weighting, an ordered-logit specification using the original four-category fertility-intentions item, and analyses that rule out simple differences in baseline parenthood.

Theoretical Implications

Our findings contribute to research on entrepreneurship's societal consequences and to scholarship on family embeddedness in four ways. First, we extend "reversed-

arrow" entrepreneurship research by documenting that entrepreneurship is associated with family formation considerations, not only with traditional economic outcomes (Eberhart, Aldrich, & Eisenhardt, 2022; Jennings, Hannigan, & Jennings, 2022). Family embeddedness research has long emphasized mutual links between work and family domains, yet much of the empirical emphasis in entrepreneurship has focused on how family conditions affect entrepreneurship rather than how entrepreneurial careers shape family-related outcomes (Aldrich & Cliff, 2003; Jennings, Breitkreuz, & James, 2013). By showing systematic differences in intentions to have a child by occupational status and gender, our results help rebalance this agenda toward the family-side consequences of entrepreneurship.

More broadly, our findings speak to the emerging question of whether entrepreneurship is good for families (Jennings & Brush, 2013). Our results suggest that this question should be asked in a more differentiated way, because any such benefits do not appear to be uniform across genders. At least with respect to intentions to have a child, the answer appears more conditional than the flexibility narrative often implies: entrepreneurship is associated with higher intentions among men but lower intentions among women.

Second, our results refine the work-family interface account of entrepreneurship by clarifying that autonomy and flexibility do not translate into comparable family-planning implications for women and men. WFI research emphasizes that work demands and family demands jointly shape consequential life decisions, including perceived feasibility of taking on additional family responsibilities (Greenhaus & Beutell, 1985). Entrepreneurship can, in principle, increase boundary control because it offers discretion over scheduling and task organization (Kossek & Lautsch, 2012).

Consistent with this logic, male entrepreneurs report higher short-term intentions to have a child than male employees. Yet women entrepreneurs report lower intentions, consistent with the argument that gendered role expectations and unequal domestic labor create asymmetric constraints, so that the same occupational autonomy yields different experienced feasibility for women versus men (Jennings & McDougald, 2007; Ridgeway, 2011). In other words, our findings highlight that entrepreneurship can function as a resource for men's family expansion intentions while functioning as a constraint for women's, even though both groups occupy the same broad occupational category.

Third, the mode results speak to heterogeneity among entrepreneurs, but in a way that challenges a simple "more resources solve it" story. We expected employer status to potentially alter feasibility by enabling delegation and buffering. However, women's lower intentions appear similar in magnitude among solo entrepreneurs and employer entrepreneurs. Likewise, men's higher intentions are similar in magnitude across the two modes. These patterns suggest that the gendered trade-off we document is not confined to one entrepreneurial mode. Instead, it may reflect more pervasive constraints tied to gendered expectations, anticipated interruptions, and the difficulty of converting discretion into reduced work-family strain (Parasuraman & Simmers, 2001; Jennings & McDougald, 2007). This is important because it cautions against assuming that moving from solo to employer status necessarily mitigates family-related constraints for women entrepreneurs.

Fourth, our exploratory mechanism and alternative-explanation analyses help narrow the interpretation of the main findings. Work-family conflict and financial difficulty do not provide strong support as mechanisms explaining the entrepreneurship-

by-gender gap, and women entrepreneurs are not descriptively more financially strained than female employees. Taken together with the null differences between solo and employer entrepreneurs, these findings suggest that the central pattern is better understood as a broader gendered assessment of whether entrepreneurship and anticipated parenthood are jointly feasible, rather than as the product of any single observed constraint.

Practical Implications

The findings also carry practical implications for entrepreneurship education and career guidance. Entrepreneurship continues to be valorized as a desirable career path, and education and training programs often emphasize venture creation skills while giving limited attention to how entrepreneurial careers intersect with major life decisions such as parenthood (Beynon et al., 2014; Galvão et al., 2020; Henry & McGowan, 2016). Our results suggest that guidance framed only around flexibility and autonomy can be incomplete. If entrepreneurship is linked to higher intentions to have a child among men but lower intentions among women, then "entrepreneurship as flexibility" may describe an experience that is uneven across genders. Programs that advise young adults who are in prime family-formation ages may better serve participants by discussing work-family boundary management, realistic expectations about interruptions, and the support structures that make entrepreneurship compatible with parenthood (Kossek & Lautsch, 2012; Parasuraman & Simmers, 2001). More broadly, the findings encourage educators, mentors, and policymakers to treat family formation as part of the lived experience of entrepreneurship rather than as an external private matter.

The results also carry implications for aspiring entrepreneurs and current entrepreneurs themselves. Individuals considering entrepreneurial careers may benefit from evaluating not only venture opportunities but also the support systems, household arrangements, and organizational structures that make entrepreneurship more or less compatible with parenthood. Likewise, current entrepreneurs may need to think strategically about delegation, boundary management, and the timing of family decisions, rather than assuming that entrepreneurial autonomy alone will make work and family easier to combine.

Limitations and Future Research

Several limitations point to future research directions. First, while we control for a rich set of covariates, include country- and interview-year fixed effects, and conduct multiple robustness checks, the analysis remains correlational. Future research can strengthen causal inference using designs that better isolate exogenous variation in occupational status. Second, because our dataset is cross-sectional, our dependent variable captures short-term intentions to have a child rather than realized fertility. Future research should examine whether and when these intentions translate into subsequent childbearing, and whether entrepreneurship affects the timing of childbearing rather than ultimate parenthood. Third, our exploratory mechanism analyses rely on available survey measures and therefore capture only part of the processes we theorize. In particular, work-family conflict and financial difficulty do not fully capture broader identity conflict, anticipated interruption costs, or gendered expectations about caregiving. Future research should develop more direct measures of these pathways. Fourth, although our multi-country design is a strength, it might not capture different forms of contextual heterogeneity. Future work could examine more

explicitly whether the entrepreneurship-parenthood relationship varies across institutional environments, policy regimes, and cultural contexts.

CONCLUSION

In conclusion, this study shows that entrepreneurship is associated with family planning in a strongly gendered manner. Entrepreneurship relates to higher short-term intentions to have a child among men, but lower intentions among women, and this pattern persists across solo and employer entrepreneurship. By linking entrepreneurship to a fundamental family-related outcome, we extend "reversed-arrow" research and deepen a family embeddedness perspective that has historically emphasized the opposite direction of influence (Eberhart, Aldrich, & Eisenhardt, 2022; Aldrich & Cliff, 2003; Jennings, Breitkreuz, & James, 2013). More broadly, the results underscore that understanding gender inequality in entrepreneurship requires not only examining access to resources and outcomes within the entrepreneurial domain, but also examining how entrepreneurial careers intersect with life-course decisions that shape careers over time (Ridgeway, 2011). In this sense, our study suggests that whether entrepreneurship is "good" for families is not gender neutral, and that answering this question requires attention not only to entrepreneurial status, but also to gendered life-course constraints and expectations.

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TABLES AND FIGURES – ESSAY 3

TABLE 1: Descriptive Statistics and Correlation Matrix

		Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12
1	Short-term intent to have a child	0,27	0,45	1.00											
2	Entrepreneur	0,11	0,31	-0.01	1.00										
3	Solo-entrepreneur	0,07	0,26	-0.00	0.80***	1.00									
4	Employer-entrepreneur	0,04	0,19	-0.01	0.55***	-0.06***	1.00								
5	Employee	0,89	0,31	0.01	-1.00	-0.80***	-0.55***	1.00							
6	Female	0,50	0,50	-0.07***	-0.11***	-0.07***	-0.08***	0.11***	1.00						
7	Age	34,91	7,94	-0.36***	0.10***	0.07***	0.07***	-0.10***	0.02***	1.00					
8	Tertiary education	0,40	0,49	0.08***	-0.03***	-0.05***	0.03***	0.03***	0.08***	0.08***	1.00				
9	Living with partner	0,66	0,47	-0.06***	0.05***	0.02***	0.05***	-0.05***	-0.02**	0.26***	0.01	1.00			
10	Number of biological children	1,18	1,04	-0.38***	0.09***	0.07***	0.05***	-0.09***	0.07***	0.51***	-0.00	0.47***	1.00		
11	Work-family conflict index	1,88	0,74	-0.01*	0.01*	-0.01	0.03***	-0.01*	0.06***	0.04***	0.02**	0.01*	0.05***	1.00	
12	Financial difficulty	3,71	1,32	-0.06***	-0.01	0.05***	-0.09***	0.01	0.02***	0.04***	-0.11***	-0.04***	0.14***	0.16***	1.00

* p < .05 ** p < .01 *** p < .001

TABLE 2: Logit Regressions

	DV: Intention to have a child in the next 3 years			
	Model 1	**Model 2**	**Model 3**	**Model 4**
Entrepreneur	**0.17** (0.05)**	0.14** (0.05)	0.33*** (0.06)	
Female		-0.21*** (0.03)	-0.15*** (0.03)	-0.15*** (0.03)
Entrepreneur x Female			**-0.62*** (0.11)**	
Solo entrepreneur				0.32*** (0.08)
Employer entrepreneur				0.34*** (0.10)
Solo Ent. x Female				**-0.62*** (0.13)
Employer Ent. x Female				**-0.62** (0.20)
Age	-0.07*** (0.00)	-0.07*** (0.00)	-0.07*** (0.00)	-0.07*** (0.00)
Tertiary education	0.45*** (0.04)	0.48*** (0.04)	0.48*** (0.04)	0.48*** (0.04)
Living with partner	1.24*** (0.04)	1.23*** (0.05)	1.23*** (0.05)	1.23*** (0.05)
Number of biological children	-1.20*** (0.03)	-1.18*** (0.03)	-1.19*** (0.03)	-1.19*** (0.03)
Country fixed effects	Yes	Yes	Yes	Yes
Interview-year fixed effects	Yes	Yes	Yes	Yes
Observations	26768	26768	26768	26768

Notes: Robust standard errors in parentheses. * p < .05 ** p < .01 *** p < .001

TABLE 3: Covariate Balance After IPTW: Entrepreneur vs Employee

Variable	SMD (Unweighted)	SMD (IPTW)
Age	0.332	0.105
Tertiary education	-0.081	0.056
Living with partner	0.165	0.051
Number of biological children	0.266	0.018
Number of rooms	0.304	0.054
Household size (imputed)	0.138	0.012

Notes: Entries are standardized mean differences (SMD). Absolute values below 0.10 are typically considered indicative of good balance. IPTW uses stabilized weights, trimmed at the 1st/99th percentiles, with common support 0.01-0.99.

TABLE 4: IPTW Robustness Check: Entrepreneur vs Employee

Panel A: Logit Regression **DV: Intention to have a child in the next 3 years**	
Entrepreneur	0.29*** (0.07)
Female	-0.17*** (0.03)
Entrepreneur x Female	-0.43*** (0.13)
Controls	Yes
Country fixed effects	Yes
Interview-year fixed effects	Yes
Observations	26768
Panel B: Predicted Probabilities (at means)	
Male Employee	0.21
Female Employee	0.18
Male Entrepreneur	0.26
Female Entrepreneur	0.16

Notes: Panel A reports IPTW-weighted logit coefficients (stabilized weights; trimmed at 1st/99th percentiles; common support 0.01–0.99) with robust SEs in parentheses. * p < .05 ** p < .01 *** p < .001

TABLE 5: Covariate Balance After IPTW: Employer vs. Solo Entrepreneur

Variable	SMD (Unweighted)	SMD (IPTW)
Age	0.157	-0.011
Tertiary education	0.305	0.056
Living with partner	0.223	0.003
Number of biological children	-0.015	-0.053
Number of rooms	0.134	0.006
Household size (imputed)	-0.116	0.017

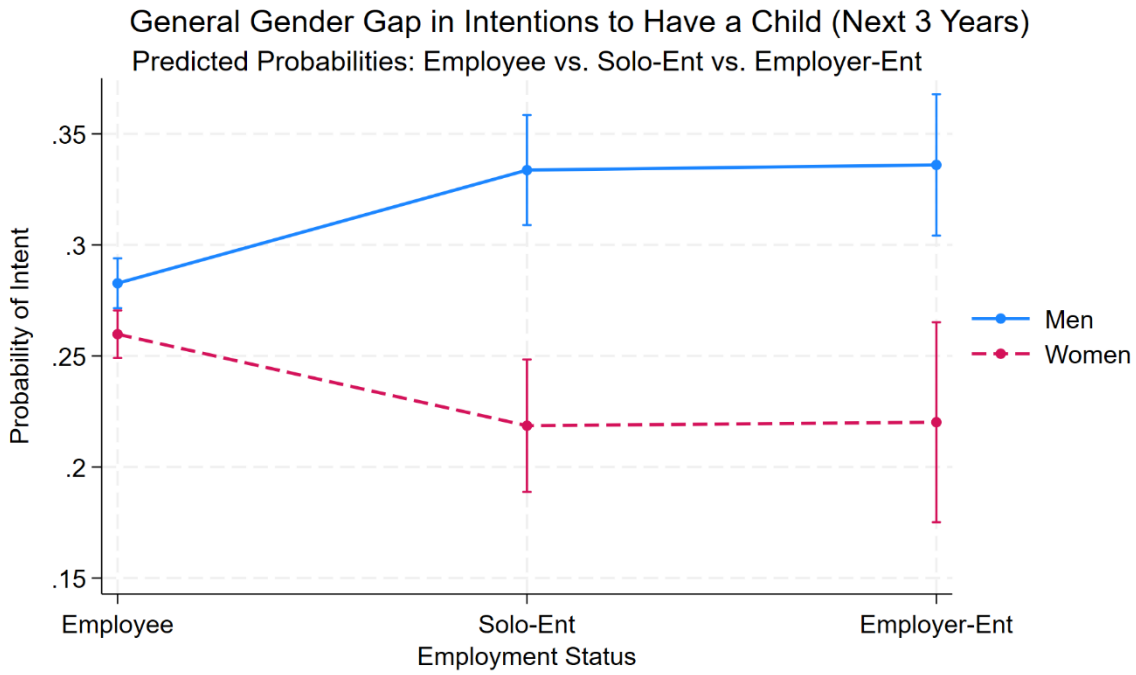
Notes: Entries are standardized mean differences (SMD). Absolute values below 0.10 are typically considered indicative of good balance. IPTW uses stabilized weights, trimmed at the 1st/99th percentiles, with common support 0.01-0.99.

TABLE 6: IPTW Robustness Check: Employer vs. Solo Entrepreneur

Panel A: Logit Regression **DV: Intention to have a child in the next 3 years**	
Employer Entrepreneur	0.08 (0.14)
Female	-0.78*** (0.14)
Employer Entrepreneur x Female	-0.09 (0.26)
Controls	Yes
Country fixed effects	Yes
Interview-year fixed effects	Yes
Observations	2960
Panel B: Predicted Probabilities (at means)	
Male Solo Entrepreneur	0.22
Female Solo Entrepreneur	0.11
Male Employer Entrepreneur	0.23
Female Employer Entrepreneur	0.11

Notes: Panel A reports IPTW-weighted logit coefficients (stabilized weights; trimmed at 1st/99th percentiles; common support 0.01–0.99) with robust SEs in parentheses. * p < .05 ** p < .01 *** p < .001

FIGURE 1: Gender Gap in Intentions to Have a Child (Next 3 Years): Employee vs Solo vs Employer



APPENDIX – ESSAY 3

Table A1: Logit Regressions with Country-Clustered Standard Errors

	DV: Intention to have a child in the next 3 years			
	Model 1	**Model 2**	**Model 3**	**Model 4**
Entrepreneur	**0.17*** **(0.08)**	0.14 (0.08)	0.33*** (0.08)	
Female		-0.21*** (0.06)	-0.15* (0.06)	-0.15* (0.06)
Entrepreneur x Female			**-0.62**** **(0.21)**	
Solo entrepreneur				0.32*** (0.08)
Employer entrepreneur				0.34*** (0.09)
Solo Ent. x Female				**-0.62**** (0.23)
Employer Ent. x Female				**-0.62**** (0.19)
Age	-0.07*** (0.01)	-0.07*** (0.01)	-0.07*** (0.01)	-0.07*** (0.01)
Tertiary education	0.45*** (0.05)	0.48*** (0.05)	0.48*** (0.05)	0.48*** (0.05)
Living with partner	1.24*** (0.12)	1.23*** (0.11)	1.23*** (0.11)	1.23*** (0.11)
Number of biological children	-1.20*** (0.14)	-1.18*** (0.14)	-1.19*** (0.14)	-1.19*** (0.14)
Country fixed effects	Yes	Yes	Yes	Yes
Interview-year fixed effects	Yes	Yes	Yes	Yes
Observations	26768	26768	26768	26768

Notes: Clustered standard errors (country) in parentheses. * p < .05 ** p < .01 *** p < .001

Table B1: Logit Regressions

	DV: Existence of Biological Child
Entrepreneur	**0.02**
	(0.06)
Female	0.87***
	(0.04)
Age	0.18***
	(0.00)
Tertiary education	-0.63***
	(0.04)
Living with partner	2.72***
	(0.04)
Number of rooms	0.20***
	(0.01)
Country fixed effects	Yes
Interview-year fixed effects	Yes
Observations	26768

Notes: Robust standard errors in parentheses. * p < .05 ** p < .01 *** p < .001

Table C1: Ordinal DV Robustness Check: Entrepreneur vs Employee

Panel A: Logit Regression **DV: Intention to have a child in the next 3 years**	
Entrepreneur	0.30*** (0.05)
Female	-0.23*** (0.03)
Entrepreneur x Female	-0.49*** (0.09)
Controls	Yes
Country fixed effects	Yes
Interview-year fixed effects	Yes
Observations	26768
Panel B: Predicted Probabilities ("definitely yes")	
Male Employee	0.104
Female Employee	0.087
Male Entrepreneur	0.130
Female Entrepreneur	0.074

Notes: Panel A reports ordered logit coefficients with robust SEs in parentheses. Panel B reports Pr(a622=4) from margins. * p < .05 ** p < .01 *** p < .001

Table D1: Alternative Explanations: Venture Scale (Number of Employees)

Panel A: Logit Regression DV: Intention to have a child in the next 3 years	
1-9 employees	0.04 (0.13)
10+ employees	0.11 (0.27)
Female	-0.83*** (0.14)
1-9 employees x Female	0.06 (0.25)
10+ employees x Female	-0.55 (0.70)
Controls	Yes
Country fixed effects	Yes
Interview-year fixed effects	Yes
Observations	2960
Panel B: Predicted Probabilities (at means)	
Male, 0 employees	0.220
Female, 0 employees	0.110
Male, 1-9 employees	0.228
Female, 1-9 employees	0.120
Male, 10+ employees	0.240
Female, 10+ employees	0.073

Notes:
- Entrepreneurs only.
- Panel A reports logit coefficients with robust SEs in parentheses.
- Venture scale proxied by number of paid employees (a851): 0, 1-9, 10+.
- The 10+ employees female cell is small (n=36); estimates should be interpreted cautiously.
- * p < .05 ** p < .01 *** p < .001

Table E1: Mechanism Test: Work-Family Conflict

	DV: Intention to have a child in the next 3 years		
	Model 1	**Model 2**	**Model 3**
Entrepreneur	0.35***	0.35***	0.28
	(0.07)	(0.07)	(0.18)
Female	-0.17***	-0.23*	-0.24*
	(0.04)	(0.09)	(0.10)
Entrepreneur x Female	-0.60***	-0.60***	-0.64*
	(0.12)	(0.12)	(0.30)
Work-family conflict	**0.06****	**0.05**	**0.04**
	(0.02)	**(0.03)**	**(0.04)**
WFC x Female		**0.04**	**0.04**
		(0.05)	**(0.05)**
WFC x Entrepreneur			**0.04**
			(0.09)
WFC x Female x Entrepreneur			**0.02**
			(0.14)
Age	-0.07***	-0.07***	-0.07***
	(0.00)	(0.00)	(0.00)
Tertiary education	0.49***	0.49***	0.49***
	(0.04)	(0.04)	(0.04)
Living with partner	1.24***	1.24***	1.24***
	(0.05)	(0.05)	(0.05)
Number of biological children	-1.22***	-1.22***	-1.22***
	(0.03)	(0.03)	(0.03)
Country fixed effects	Yes	Yes	Yes
Interview-year fixed effects	Yes	Yes	Yes
Observations	24283	24283	24283

Notes: Robust standard errors in parentheses. * p < .05 ** p < .01 *** p < .001

Table E2: WFC Comparison: Childless vs Parents

	DV: Intention to have a child in the next 3 years	
	Childless (Number of children = 0)	**Parents (Number of children > 0)**
Entrepreneur	0.31**	0.39***
	(0.10)	(0.09)
Female	0.14**	-0.54***
	(0.05)	(0.05)
Entrepreneur x Female	-0.66***	-0.49**
	(0.19)	(0.16)
Work-family conflict (WFC)	**0.07***	**0.07***
	(0.03)	**(0.03)**
Age	-0.01***	-0.15***
	(0.00)	(0.00)
Tertiary education	0.48***	0.51***
	(0.06)	(0.06)
Living with partner	1.36***	0.58***
	(0.05)	(0.08)
Number of biological children		-1.36***
		(0.06)
Country fixed effects	Yes	Yes
Interview-year fixed effects	Yes	Yes
Observations	8187	16096

Notes: Robust standard errors in parentheses. * p < .05 ** p < .01 *** p < .001

Table F1: Mechanism Test: Financial Difficulty

	DV: Intention to have a child in the next 3 years		
	Model 1	**Model 2**	**Model 3**
Entrepreneur	0.32***	0.32***	0.26
	(0.06)	(0.06)	(0.19)
Female	-0.15***	-0.11	-0.14
	(0.03)	(0.10)	(0.10)
Entrepreneur x Female	-0.62***	-0.62***	-0.24
	(0.11)	(0.11)	(0.34)
Financial difficulty (FD)	**-0.02**	**-0.02**	**-0.02**
	(0.02)	**(0.02)**	**(0.02)**
FD x Female		**-0.01**	**-0.00**
		(0.02)	**(0.03)**
FD x Entrepreneur			**0.02**
			(0.05)
FD x Female x Entrepreneur			**-0.11**
			(0.09)
Age	-0.07***	-0.07***	-0.07***
	(0.00)	(0.00)	(0.00)
Tertiary education	0.47***	0.48***	0.47***
	(0.04)	(0.04)	(0.04)
Living with partner	1.23***	1.23***	1.23***
	(0.05)	(0.05)	(0.05)
Number of biological children	-1.18***	-1.18***	-1.18***
	(0.03)	(0.03)	(0.03)
Country fixed effects	Yes	Yes	Yes
Interview-year fixed effects	Yes	Yes	Yes
Observations	26768	26768	26768

Notes: Robust standard errors in parentheses. * p < .05 ** p < .01 *** p < .001

CONCLUDING REMARKS

This dissertation examines the persistent gender gap in entrepreneurship by showing how it unfolds across multiple stages of the entrepreneurial journey: from access to resources and entry into entrepreneurship to the ways entrepreneurial careers intersect with family formation. Taken together, the three essays show that this gap does not arise from a single source. Instead, it is produced and reproduced through a combination of gendered perceptions, lived experiences, and structural constraints that shape who is encouraged, who enters, and who is ultimately able to thrive.

Each essay highlights a different part of this process. Essay 1 shows that trustworthiness, a signal typically assumed to be beneficial, does not generate equal returns for women and men. Rather than functioning as a universally positive signal, it can disadvantage women in investment evaluations, revealing how even favorable impressions are filtered through gendered expectations. Essay 2 shifts the focus to entrepreneurial entry and shows that job insecurity pushes individuals toward entrepreneurship, but that this effect is stronger for men than for women. In doing so, it underscores how labor market experiences and institutional change can widen, rather than narrow, gender disparities in entry. Essay 3 extends the analysis to the family domain, showing that, relative to paid employees, entrepreneurship is associated with higher short-term parenthood intentions among men but lower intentions among women. This pattern suggests that entrepreneurial careers can offer flexibility and opportunity for men while reinforcing constraints and trade-offs for women.

Together, these findings contribute to a more complete understanding of gender inequality in entrepreneurship. They show that the gender gap is not confined to one moment, one institution, or one decision-maker. It emerges across interconnected

domains, shaped both by how entrepreneurs are evaluated and by the conditions under which they make career and family decisions. By linking these processes, the dissertation brings together insights from entrepreneurship, social psychology, economics, and strategic human capital to offer a broader account of how inequality persists over time.

Beyond academia, the dissertation also offers implications for practice and policy. Its findings indicate that efforts to reduce gender inequality in entrepreneurship must extend beyond any single intervention point. Accordingly, efforts to foster greater equality in entrepreneurship must address the broader contexts in which entrepreneurial decisions are evaluated, enacted, and sustained. Understanding how gender shapes entrepreneurial trajectories is therefore essential not only for explaining persistent gaps, but also for designing more inclusive and sustainable entrepreneurial ecosystems.

CONSIDERACIONES FINALES

Esta tesis doctoral examina la persistente brecha de género en el emprendimiento y muestra cómo se despliega a lo largo de múltiples etapas de la trayectoria emprendedora: desde el acceso a recursos y la entrada en el emprendimiento hasta las formas en que las carreras emprendedoras se entrecruzan con la formación de la familia. En conjunto, los tres ensayos muestran que esta brecha no surge de una única fuente. Más bien, se produce y reproduce a través de una combinación de percepciones condicionadas por el género, experiencias vividas y restricciones estructurales que moldean quién recibe estímulo, quién entra en el emprendimiento y quién logra finalmente prosperar.

Cada ensayo pone de relieve una parte distinta de este proceso. El Ensayo 1 muestra que la confiabilidad, una señal normalmente considerada beneficiosa, no genera rendimientos equivalentes para mujeres y hombres. En lugar de funcionar como una señal universalmente positiva, puede perjudicar a las mujeres en las evaluaciones de inversión, revelando cómo incluso las impresiones favorables son filtradas a través de expectativas de género. El Ensayo 2 desplaza el foco hacia la entrada en el emprendimiento y muestra que la inseguridad laboral empuja a las personas hacia el emprendimiento, pero que este efecto es más fuerte para los hombres que para las mujeres. Al hacerlo, subraya cómo las experiencias en el mercado laboral y el cambio institucional pueden ampliar, en lugar de reducir, las disparidades de género en la entrada. El Ensayo 3 extiende el análisis al ámbito familiar y muestra que, en comparación con las personas asalariadas, el emprendimiento se asocia con mayores intenciones de tener un hijo en el corto plazo entre los hombres, pero con menores intenciones entre las mujeres. Este patrón sugiere que las carreras emprendedoras

pueden ofrecer flexibilidad y oportunidades para los hombres, al tiempo que refuerzan restricciones y tensiones para las mujeres.

En conjunto, estos hallazgos contribuyen a una comprensión más completa de la desigualdad de género en el emprendimiento. Muestran que la brecha de género no se limita a un único momento, una única institución o un único agente decisor. Surge en dominios interconectados, moldeada tanto por la manera en que se evalúa a las personas emprendedoras como por las condiciones bajo las cuales toman decisiones de carrera y familiares. Al vincular estos procesos, la tesis reúne aportaciones del emprendimiento, la psicología social, la economía y el capital humano estratégico para ofrecer una explicación más amplia de cómo la desigualdad persiste a lo largo del tiempo.

Más allá del ámbito académico, la tesis también ofrece implicaciones para la práctica y la política pública. Sus hallazgos indican que los esfuerzos por reducir la desigualdad de género en el emprendimiento deben ir más allá de un único punto de intervención. En consecuencia, los esfuerzos por fomentar una mayor igualdad en el emprendimiento deben abordar los contextos más amplios en los que las decisiones emprendedoras son evaluadas, llevadas a cabo y sostenidas. Comprender cómo el género configura las trayectorias emprendedoras es, por tanto, esencial no solo para explicar las brechas persistentes, sino también para diseñar ecosistemas emprendedores más inclusivos y sostenibles.