

A STRUCTURAL AND COMPARATIVE ANALYSIS OF THE ENTREPRENEURIAL
PROCESS

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ABSTRACT

Daniel Auguste: A Structural and Comparative Analysis of the Entrepreneurial Process
(Under the direction of Ted Mouw and François Nielsen)

Research on the determinants of entrepreneurial entry and success have been dominated by individual-centered arguments. Explanations pertaining to structural forces that may condition the emergence and success of new entrepreneurs have been overlooked in this debate. This project fills this gap in the literature by exploring the structural dimensions of the entrepreneurial process and the interplay between structural forces and individual characteristics, and potential consequences of this link between micro and macro processes for who gets to become involved in entrepreneurship and achieve entrepreneurial success. To this end, this project develops a theoretical framework linking macro- and micro-level forces with the entrepreneurial process. The empirical analysis evaluates this theoretical framework, using indicators of early-stage entrepreneurial activities, business ownership and macro-level forces across a large range of developed and less developed economies. Results from mixed-effects logistic regressions demonstrate the importance of structural forces for the likelihood that individuals would become involved in trying to start a business and eventually become business owners.

First, results show that in societies where beliefs that men make better leaders and that men have more right to employment are strong, women are less likely than men to become involved in starting a new business. Second, findings demonstrate that societal-level economic inequality increases the likelihood that individuals would become engaged in starting a new business and become business owners. However, the result also show that societal-level economic inequality increases entrepreneurship at low levels of economic development, whereas

it decreases entrepreneurship at high levels of economic development. Third, the findings show that the way that individual characteristics, such as educational attainment and income, influence the entrepreneurial process varies significantly across countries. The analysis also demonstrates that societal-level economic inequality accounts for substantial portions of the cross-national variations in the effects of individuals' educational attainment and income on the likelihood of becoming engaged in entrepreneurial efforts and eventually becoming business owners. In conclusion, this analysis demonstrates that structural forces matter for who gets to participate and to what extent in the entrepreneurial process. The importance of structural forces for the entrepreneurial process is independent of potential entrepreneurs' personal characteristics.

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CHAPTER 1: INTRODUCTION

Entrepreneurship, because of its significance for job creation and economic development, has occupied an important place in academic and policy discourses. Entrepreneurship research, building on the large body of organization theories (e.g., ecological theory (e.g., Freeman and Audia 2006; Hannan and Freeman 1977; Ruef 2000), network theory (e.g., Powell, White, Koput and Owen-Smith 2005; Burt 2004), evolutionary theory (Aldrich and Ruef 2006) and institutional theory (Meyers and Rowan 1977; DiMaggio and Powell 1983)), has highlighted various social mechanisms underlying the entrepreneurial process and success. There is consensus among entrepreneurship and organization scholars, particularly those from the sociology research tradition, that the environmental conditions are crucial for understanding the entrepreneurial process and answering questions about who gets to engage, and to what extent, in entrepreneurial efforts (e.g., Aldrich and Ruef 2006; Ruef 2013; Thébaud 2015a; Yang and Aldrich 2014).

Although entrepreneurship theorists have clearly acknowledged the importance of the structural or macro-level factors in shaping organization emergence and change, entrepreneurship theories about social mechanisms underlying processes of entrepreneurial entry and success tend to gravitate largely toward micro or individual-level explanations. As a result, insufficient attention is paid to the interplay of micro- and macro-level processes in theorizing about social mechanisms underlying entrepreneurial entry and success. In the same vein, there have been few empirical investigations of the interplay of micro- and macro-level mechanisms, and their consequences for the entrepreneurial process. Acknowledging this gap in the

entrepreneurship literature, the journal *Entrepreneurship Theory and Practice* recently launched a special issue calling on scholars to pay closer attention to understanding characteristics of the structural environment facilitating the emergence of entrepreneurs, as opposed to focusing merely on the qualities of the people who have become entrepreneurs and succeeded in entrepreneurship (Burton, Sørensen and Dobrev 2016). However, a few studies have already made some strides in this area by emphasizing the characteristics of entrepreneurs' embedded environment as opposed to focusing only on understanding of entrepreneurs' personal qualities that might have influenced their entrepreneurial efforts and success. For instance, previous research has emphasized community-level social trust in the United States (Kwon, Heflin and Ruef 2013), the interplay between societal-level trust and the rule of law in a group of emerging economies (Kim and Li 2014) and work-family policy in 24 advanced economies (Thébaud 2015b) as important structural determinants of individual likelihood of becoming involved in starting a new business and of achieving entrepreneurial success.

Thus, the present project fits into this research niche pertaining to understanding the characteristics of the structural environments that shape the emergence of entrepreneurs and determine the nature of the entrepreneurial process. Particularly, this project aims at exploring the structural dimension of the entrepreneurial process and the interplay between structural forces and individual characteristics, and potential consequences of this link between micro and macro processes for who gets to become involved in entrepreneurship and achieve entrepreneurial success. This project accomplishes this objective by building on contemporary and classical macro sociological theory to develop a theoretical framework linking macro- and micro-level forces with the entrepreneurial process. This framework facilitates theoretical and empirical investigations of questions about the entrepreneurial process, reflecting more clearly

the complexities of the social reality, which theories that focused disproportionately on micro-level dimensions of the entrepreneurial process have been unable to accomplish. This theoretical framework is developed and evaluated in three complementary phases, namely in Chapter 2, Chapter 3 and Chapter 4.

Chapter 2 builds on gender theory and institutional theory to develop a theoretical framework linking societal-level perception about gender differences in competency and right to valued resources and differences in the propensity that men and women have for becoming engaged in trying to start a new business. Using data from Global Entrepreneurship Monitor (GEM) at the early stage of the entrepreneurial process and societal-level measures of attitudes about gender differences in leadership competency and right to employment from World Values Survey, the empirical analysis evaluates this theoretical framework. Results from mixed-effects logistic regressions lend support to the argument advanced in this chapter. The results show that the stronger the beliefs in a society that men make better leaders, the greater the gender gap in the likelihood of becoming involved in trying to start a new business in that society. Results also demonstrate that the stronger the beliefs in a society that men have more right to employment, the greater the gender gap in the likelihood of becoming involved in trying to start a new business there.

Chapter 3 theorizes about entrepreneurial dynamics under conditions of high economic inequality and the potential importance of a society's development stage for how economic inequality influences the entrepreneurial process. The empirical analysis evaluates this chapter's theoretical argument using entrepreneurship data from GEM and economic inequality and economic development data from various sources. Results from mixed-effects logistic regressions show that the higher economic inequality in a society, the greater the propensity that

people have for becoming involved in trying to start a new business and becoming business owners. The results also show that the effect of economic inequality is conditioned by a society's development stage. That is, the analysis demonstrates that economic inequality increases the likelihood that individuals will become involved in starting a new business and eventually become business owners at low levels of economic development. On the other hand, economic inequality lowers the likelihood that individuals will become involved in starting a new business and become business owners at high levels of economic development.

Chapter 4 further investigates the mechanisms underlying the relationship between societal-level economic inequality and entrepreneurial entry and business ownership. This is done by examining potential conditioning effects of societal-level economic inequality on the ways personal characteristics of potential entrepreneurs shape their chances of becoming involved in starting a new business and eventually becoming business owners. To this end, this chapter reviews previous arguments about the importance of individual educational and financial capital for entrepreneurial entry and success. In doing so, this chapter develops theoretical arguments and testable propositions about the importance of societal-level economic inequality for how individuals' educational attainment and financial capital impact their chances of becoming involved in entrepreneurship and becoming business owners.

Results from mixed-effects logistic regressions lend support to previous research showing that individual education and financial capital are important for individuals' propensity for becoming engaged in entrepreneurial efforts and becoming business owners. Consistent with the theoretical argument advanced in Chapter 4, results demonstrated that societal-level economic inequality conditions how individuals' educational attainment and financial capital influence their chances of becoming engaged in starting a new business and eventually becoming business

owners. That is, in line with Chapter 4's theoretical framework, the empirical findings show that societal-level economic inequality conditions how individuals' education and financial capital influence their likelihood of becoming involved in starting a new business and eventually becoming business owners. For example, the results show that in societies where economic inequality is high, people who are at the middle and the top of the income distribution have a lesser propensity for becoming owners of a nascent business.

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CHAPTER 2: VARIETIES OF GENDERED-CAPITALISM: INSTITUTIONAL ENVIRONMENT AND GENDER INEQUALITY IN ENTREPRENEURSHIP

Although women have made great strides in closing the gender gap in many areas of economic life, research has shown that women continue to be underrepresented among owners of established business and nascent entrepreneurs around the world (Kelley, Singer and Herrington 2016). Research conducted in the United States, for example, has found that in the 2000s women represented 43 percent of managers, legislators, and senior officials (UNDP 2009). However, women made up only 28 percent of all private firms in the United States (CWBR 2009). Women also tend to be underrepresented among owners of high-growth, large-size, and innovative businesses (Loscocco and Bird 2012; Kalleberg and Leicht 1991; Tonoyan and Strohmeier 2005; Thébaud 2015a).

The persistence of these gender inequalities across time and space, has fueled the debate about the root causes of the reproduction and persistence of gender inequalities in entrepreneurship. The popular narrative in this debate has, however, focused primarily on supply-side mechanisms, emphasizing an entrepreneur's personal characteristics, such as gender differences in work experience, social networks, motivation, personal life values, income, education, and psychological disposition toward risk taking (Loscocco et al. 1991; Marlow and McAdam 2010; Minniti and Nardone 2007; Renzulli, Aldrich and Moody 2000; Thébaud 2010). Insufficient attention has been paid to macro-level social forces, such as societal-shared gender beliefs, that tend to disadvantage women compared with men in accessing society's valued resources (Ridgeway 2011).

Moreover, most previous research on gender stratification in entrepreneurship has been disproportionately conducted in advanced industrial societies (Thébaud 2010, 2015a). The disproportionate focus on advanced industrial societies persists, despite it having been well established in gender stratification literature that mechanisms underlying the reproduction of gender inequality in social organizations tend to be context-specific (Ridgeway 2011) and vary by societies' development stage (Inglehart and Norris 2003).

The present study fills this gap in previous research by proposing a macro theoretical framework based on institutional and structural theories (Meyer and Rowan 1978, Durkheim's ([1912] 1995), and gender theory (Ridgeway 2011) linking the societal gender status beliefs system with the persistent gender gap in entrepreneurship. This framework particularly establishes a connection between a societal shared belief about gender differences in competencies and the right to valued resources to the gender gap in entrepreneurial entry and the ownership of established businesses. Societal-level beliefs about gender differences in competencies is conceptualized here as gender differences in leadership competency; and the societal-level belief about gender differences in the right to valuable resources is operationalized as gender difference in the right to scarce jobs. This theoretical framework is evaluated using multilevel estimation techniques, indicators of societal-shared gender beliefs and entrepreneurship from 62 economically, politically, and culturally diverse countries drawn from two cross-national and country representation surveys, namely the Global Entrepreneurship Monitor and the World Values Survey.

Consistent with the theoretical argument advanced in this study, the empirical analysis shows that women are less likely than men to become involved in the early-stage entrepreneurial process, and to become owners of established businesses. The analysis also shows that the

gender gaps in early-stage entrepreneurship and the ownership of established businesses varies substantially across countries. The results demonstrate that the gender gap in early-stage entrepreneurship and the ownership of established businesses is larger in societies where the beliefs that men make better leaders and that men have more right to scarce jobs are strong. These findings are robust using three different measures of entrepreneurship from the two surveys mentioned above. Thus, the broader implication of the adverse impact of the societal-level belief that men make better leaders and that men have more right to scarce jobs on women's entrepreneurship (compared with men) is that structural factors, such as a society's gender belief system, shape the differential chances that men and women have to participate in the capitalist production process.

The following section develops the theoretical framework and testable hypotheses about the social mechanisms by which societal-level beliefs about gender differences in leadership competency and the right to scarce jobs relate to the gender gap in entrepreneurial entry and the ownership of established businesses. This is followed by a description of the data, the analytic techniques, and a presentation of the results. Implication of the results, contribution, limitations, and suggestions for future research are discussed in the final sections.

Institution and Gender Inequality in Entrepreneurship

An institution may be understood as a collective body or a manner of organizing social life that is common to members of a society. In this regard, an institution can be an organization that has a certain way of doing things, often guided by written rules, to achieve a certain goal. An institution may also be understood as sets of unwritten rules, semiotic codes, or specific practices that shape social interactions (Meyer and Rowan 1977; Jepperson 1990). Institutions, as unwritten rules, are a belief system and taken-for-granted social arrangements, orienting social actions, and interactions. They serve as cultural codes and schemas, forming what Meyer and

Rowan (1977) referred to as institutional logic, around which social life, behaviors, and organizational practices gravitate. This study uses this conceptualization of an institution as unwritten rules, belief, and social norms (Meyer and Rowan 1977; Jepperson 1990) to theorize about the social embeddedness and taken-for-grantedness of social attitudes about gender differences regarding competency and the right to economic resources and the implications for gender stratification in entrepreneurship.

The theoretical framework proposed here is based on the premise that the working of social organizations depends on society's shared beliefs about what is real. This assumption is particularly useful here because in times of uncertainty and a lack of information or in situations of asymmetric information (e.g., when one party, in a social exchange, has more information than the other), which are inherent to the entrepreneurial process, collective beliefs and cultural codes may be particularly important in shaping the course of actions for both individuals and organizations. For example, to deal with market uncertainty and illegitimacy, new or small organizations tend to mimic prevailing institutional norms, often implemented by more established organizations (DiMaggio and Powell 1983). Furthermore, in the labor market, to deal with uncertainty, employers tend to rely on common beliefs about the relative competence of potential employees in making hiring decisions (Ridgeway 2011; 2014).

The moral of this argument is that whether or not a given shared social belief is true, it may become real to individuals and have a real impact on social organizations, once a large enough number of people abide by it or believe it to be true (Merton 1968). In regard to the organization of an economy, for instance, shared beliefs about the working of the market (whether these beliefs are true or not) may become real to individuals and economic organizations once a large enough portion of the population accepts them to be true; then, other

people will tend to adjust their behaviors to fit these popular beliefs. This is what Goffman implied when he said people tend to adjust their behaviors to fit societal expectations, as performers of scripts set by society (Goffman 1959, 1967), and Durkheim when he claimed that individual behaviors are the sum of the *collective consciousness* ([1912] 1995). For example, if a large enough number of people believe that the economy will grow next year (regardless of the veracity of such a belief), people and organizations may feel confident and start spending and investing, which would result in actual economic growth. In the same vein, if a large enough number of people, for example, believe that banks will lack solvency next year (regardless of the veracity of such a belief), people may start withdrawing their money, which would result in actual bank insolvency. Similar to beliefs about the working of the market, perceptions about the competency and rights of individuals and groups to valued resources are embedded in a social belief system and institutional logic that infuse them with the power to structure the rules that define the distribution of rewards and access to these valued resources. As a result, societal-shared beliefs about differential competency and the right to society's valued resources may impact inequality in participation in the capitalist production process, such as differential chances of entrepreneurial entry and business ownership across individuals.

Theoretical Mechanisms of the Relationship between Shared Gender Beliefs and the Gender Gap in Entrepreneurship

As stated above, this section builds on Durkheim's structure theory ([1912] 1995), Goffman's cultural acting theory (Goffman 1959, 1967), and Merton's theory of self-fulfilling prophesy (1968) to show how societal perceptions about subordinate leadership competency, and the employment rights of women compared with men (although these differences are not inherently true), may be made real by society. This section also uses Ridgeway's (2011) gender performativity theory and Meyer's and Rowan's social norms and belief system as sources of

logic for markets (1977) to show how these negative perceptions regarding leadership competency and the rights of women to employment, may negatively impact women's ability to access resources necessary for business development, thereby lowering women's chances of entering entrepreneurship and becoming owners of established enterprises.

Shared Beliefs about Women's Leadership Competency and the Gender Gap in Entrepreneurship

Societal perceptions about women's leadership ability compared with men are a theoretically appropriate concept for testing this paper's argument that unfavorable gender attitudes may impact differences in the degree to which men and women would participate in economic production, such as differences in the likelihood of becoming entrepreneurs. Although one may question whether entrepreneurs are naturally endowed with unique leadership ability, both scholars and business practitioners tend to perceive leadership quality as an important quality for transitioning to entrepreneurship and entrepreneurial success. Entrepreneurs are often described as people who have strong managerial and leadership qualities and who are risk takers. Indeed, leadership courses are among the core courses that business administration students have to take at all major business schools. Some scholars, supporting the concept of entrepreneurial leadership, have compared entrepreneurs with salary earners to highlight differences in leadership characteristics between entrepreneurs and salary workers. Using the World Values Survey data, Lee-Ross (2015) investigated how likely entrepreneurs (measured as self-employment), compared with salary earners, are to possess characteristics perceived to be entrepreneurial leadership quality, such as locus of control, and to be innovators, risk-takers, and competitively aggressive. These perceived leadership characteristics are believed to be important for entrepreneurial entry and are seen as sources of competitive advantage (Küpers and Weibler 2008), which are believed to be crucial for organization success (Luthans and Youssef 2007).

While leadership quality is perceived to be important for entrepreneurial entry and success, research has shown that perceived leadership quality tends to be attributed to men (see Koenig et al 2011 for a review of this literature). For example, research has found that in organizations being a manager is perceived as a male role (e.g., Powell and Butterfield 1979, 2015, Eagly et al. 1992, Schein and Davidson 1993, Powell et al. 2002, Sczesny 2003, Koenig et al. 2011). Given this emphasis on entrepreneurial leadership quality and the low level of entrepreneurial entry and business ownership of women compared with men, scholars have turned their attention to understanding the factors believed to facilitate female leadership development. Research using Global Entrepreneurship Monitor data has investigated environmental factors that may promote leadership quality in women across 92 countries (Yousafzai and Saeed 2015). Research conducted in England and Wales emphasized personal quality relating to women's leadership style in order to understand the determinants of female entrepreneurship (Vassiliki, Jones, Mitchelmore, and Nikolopoulos 2015), whereas others using longitudinal data from Northern Ireland tried to understand how social and human capital may impact young female leadership development, which may in turn influence these women's entrepreneurial entry later in life (McGowan, Cooper, Durkin, and O'Kane 2015). The underlying assumption in this literature is that leadership and its mastery are important for entrepreneurial entry and success. Another assumption is the implicit belief that if factors fostering leadership quality or the competencies of women are identified and promoted, women's disadvantage in entrepreneurial entry compared with men may be reduced.

Given this emphasis on the strong leadership quality of entrepreneurs, perception about a person's leadership ability may be important for how others evaluate the chances of success of one's entrepreneurial efforts and ideas, because people believe leadership quality to be

important. Because producers, consumers, and potential investors generally lack adequate information or knowledge to evaluate the potential success of entrepreneurial efforts, especially when these activities lack legitimacy, they tend to rely on cultural codes and society's shared beliefs to determine legitimacy and manage uncertainty about the quality of products and the potential success of ventures.

In this regard, societal perception about women's leadership competency may impact women's likelihood of being entrepreneurs relative to men in two primary ways. Attitude toward women's leadership competency, acting as a cultural code (Aldrich and Yang 2014; 2012), may *directly* and *indirectly* impact women's chances of being entrepreneurs (Ridgeway 2014).

Directly, unfavorable societal evaluation of women's leadership competency relative to that of men may discourage women from pursuing entrepreneurial activity. Because people entering entrepreneurship are perceived to possess high leadership ability and because women may internalize the negative societal belief that women possess lesser leadership competency compared with men (Ridgeway 2014), many women that could pursue entrepreneurship careers might refrain from doing so, because they might think they lack the necessary skills to succeed as entrepreneurs, which Merton referred to as a *self-fulfilling prophecy* (1968). In fact, research conducted across 24 industrial countries (including the United States), using Global Entrepreneurship Monitor data, found that women's self-perception about entrepreneurial competencies was adversely related to their chances of becoming entrepreneurs (Thébaud 2010).

Indirectly, perceptions about women's leadership competency may adversely affect women's likelihood of being entrepreneurs compared with men by negatively impacting women's chances of accessing necessary resources for business creation. Society defines the cultural codes by which the potential success of individuals and organizations may be evaluated.

Cultural codes often serve as a default template to evaluate the potential success of business and business ideas (Aldrich and Yang 2014, 2012; Ridgeway 2014). Cultural codes as a template for evaluating the potential success of an individual would be particularly important in a situation of uncertainty, like deciding on the quality of products and the potential success of businesses, for example. Regarding a new business, consumers and potential stakeholders often lack information about the ability of entrepreneurs and the likelihood of entrepreneurial success (Aldrich and Ruef 2006; Aldrich and Fiol 1994; Suchman 1995). The gender of entrepreneurs may become salient and cultural beliefs about the inferior ability of women compared with men may prescribe lower expectations about women's competency compared with men (Foschi 2000; Ridgeway 2011), negatively affecting the willingness to support women-owned ventures and entrepreneurship ideas.

Furthermore, negative attitudes toward women's competency compared with men may cause uncertainty about the potential success of women-owned businesses and ideas for new ventures, and may ascribe an illegitimate status to women-owned ventures. Illegitimacy and uncertainty about the potential success of women-owned ventures may negatively affect willingness to support women-owned businesses and entrepreneurship ideas. Consequently, this would disadvantage women entrepreneurs in their quest for resources necessary for business creation. This would lower both women's entrepreneurial entry and the ownership of established businesses. Thus, attitudes toward the leadership competency of women compared with men may serve as a social schema or cultural code for evaluating the relative success of women's compared with men's entrepreneurial efforts, affecting the differential chances of accessing necessary resources for business creation and success. Based on the above argument, the following hypotheses are formulated.

Hypothesis 1 (H1): All else equal, the gender gap in entrepreneurial entry will be larger in societies where the belief that men make better leaders than women do is strong.

Shared Belief about Women's Right to Employment and the Gender Gap in Entrepreneurship

Societal perceptions about women's right to employment compared with men is a theoretically appropriate measure for testing the argument of this paper that the belief about gender differences in the right to valuable resources, such as employment, should impact the gender gap in entrepreneurship. Differences in societal perceptions about women's and men's rights to employment may produce biases regarding "who is more competent, more deserving of jobs, promotion and money..." (Ridgeway 2014). Access to employment is a particularly important factor for understanding the differences in the likelihood that individuals may become entrepreneurs, because many new ventures are started while entrepreneurs are still working. Ideas for new ventures often emerge from prior work experiences and information from social networks built during one's employment career. Societal perceptions about individuals' right to employment may affect the chances that one would be employed, which, through its impact on one's ability to acquire work experience and build valuable social networks, would impact the chances that one may start a new business and succeed as an entrepreneur.

In this section, I argue that the societal-level belief that men have more right to scarce employment than women do (although such differences may not inherently be true) may have a real impact on the differential chances of men and women becoming entrepreneurs. Differences in the societal shared belief about the right of women to employment compared with men would have a real impact on differential opportunities available to men and women for entry into entrepreneurship.

Institutional sociological theories emphasize the importance of collective norms and beliefs in determining individual actions (Meyer and Rowen 1977; Durkheim [1900] 1960). A process through which the institutional environment shapes human behaviors is by building habits (Aldrich and Yang 2014, 2012; Wood, Quinn, and Kashy 2002). In regard to becoming entrepreneurs, individuals may develop habits and learn skills about how to succeed as entrepreneurs through their employers, co-workers, and via on the job learning and training (Aldrich and yang 2014). Indeed, research has shown that the knowledge acquired from prior work experience tends to improve entrepreneurial performance (Wiklund and Shepherd 2003). Moreover, an underlying assumption of many studies emphasizing a knowledge-based approach to understanding the business creation process is that prior employment provides nascent entrepreneurs with valuable entrepreneurial skills (Aldrich and Yang 2014, 2012). Research has also found that time spent as an employee, compared to time spent with family and in other non-economic activities, tends to be more valuable for building the necessary habits and routines to successfully transition to entrepreneurship (Miner et al 2011).

Because work experience is so important for entrepreneurial knowledge, building habits, and routines valuable for entrepreneurial entry and success, differential access to work should matter for differences in the likelihood of entering entrepreneurship and becoming owners of established enterprises between individuals. Society's unfavorable attitude toward women's right to employment compared with men may disadvantage women in their search for employment, preventing women from benefiting from the positives of work experience that have been shown to be valuable for transitioning to entrepreneurship and entrepreneurial success (Aldrich and Yan 2014; Sørensen and Fassiutto 2011; Miner et al 2011). While it is fair to argue that there are no inherent differences in the right to employment between men and women, the societal belief that

men have more right to employment than women do may disadvantage women compared with men regarding access to employment (Ridgeway 2014). That is, the shared belief that when jobs are scarce men have more right to employment than women do may serve as a cultural code, shaping employers' hiring decisions, especially in a situation in which the gender of potential employees is a salient characteristic (Ridgeway 2014).

This argument about the influence of gender beliefs on hiring decisions does not, however, undermine the meritocratic aspect of job recruitment prevalent in the capitalist mode of production. It implies that despite the meritocratic criteria of job recruitment, perceptions related to ascribed characteristics, such as a belief about gender differences in the right to employment, may impact who employers choose to hire. As Goffman described it, individuals perform society's cultural scripts (Goffman 1959, 1967). Cultural scripts and frames often reside in the subconscious mind, guiding individuals' everyday interactions and behaviors. Societal beliefs about the right of women to employment compared with men may still act as an important factor, alongside meritocratic ones, in hiring decisions. Thus, all else being equal, given favorable societal attitudes toward men's right to employment compared with women, employers may be more likely to hire men over women. Such a disparity in the chances of being employed between men and women is likely to impact differential access to necessary resources for entrepreneurial entry and ultimately success between men and women. Based on the above argument, the following hypotheses are formulated.

Hypothesis 2 (H2): All else equal, the gender gap in entrepreneurial entry will be larger in societies where the belief that men have more right to scarce jobs than women do is strong.

Data, Measurement and Methods

The entrepreneurship data used to evaluate these hypotheses are provided by the Global Entrepreneurship Monitor (GEM) and the gender beliefs data by the World Values Survey (WVS). Both GEM and WVS are cross-national and country representative surveys administered to individuals aged 18 and older. The sample of individuals under study here is restricted to the working-age population, ranging from 18 to 65 years old. GEM is designed to measure the state and evolution of entrepreneurship and organization founding across the world. It is conducted yearly, and the first wave of surveys started in 1998 across a small group of countries. It now contains data for approximately 80 countries. The present analysis uses data collected between 2001 and 2012 across 62 countries. The 2012 wave is the latest wave of the GEM data used here, because it is the most recent wave of data that GEM has made publicly available. WVS was designed to examine changes in values and beliefs across the world, and how those changes relate to changes in other social phenomena, such as economic activities. WVS has a total of six waves of data, spanning 1994 to 2014. The data were collected through face-to-face interviews and by phone surveys in remote areas. Thus, the societal-level gender beliefs factors are drawn from WVS and merged with the entrepreneurship variables (provided by GEM) on country-year, using GEM as the base data set.

Measurement of Entrepreneurial Entry: Early-stage Entrepreneurship

Early-stage entrepreneurship. GEM measures early-stage entrepreneurship by asking individuals whether they were “alone or with others, trying to start a new business” at the time of the interview. Being engaged in early-stage entrepreneurship is coded “1” if the participant reported that she or he was currently trying to start a new business, otherwise it is coded “0.” The analytical sample size for this variable is 346,059, of which 167,311 are men (i.e., 48.05%) and 178,748 are women (i.e., 51.65%). About 11 percent of the 346,059 individuals reported that

they were actively trying to start a new business. About 13.04 percent of men were actively trying to start a new business compared with 8.80 percent of women (see Table 1 for a more detailed description). The level of early-stage entrepreneurship varies substantially across countries (see Figure 1). For instance, less than five percent of people surveyed in Puerto Rico, Hong Kong, Tunisia, Russia, Japan, Croatia, France and Italy indicated that they were involved in starting a new business. On the other hand, more than 30 percent of the survey participants in Zambia, Peru and Uganda reported that they were involved in starting a new business at the time of the interviews.

Measurement of Societal-level Gender Belief Variables

The societal-level belief that men make better leaders than women do (i.e., Men make better leaders). The *men make better leaders* variable is measured in the World Values Survey by asking the respondents whether they agreed with the following statement: “On the whole, men make better political leaders than women do.” Possible responses are measured on a four-point scale, ranking from 1= strongly disagree, through 2=disagree, 3=agree, and 4 = strongly agree (see Table 1 for a more detailed description). The societal-level belief that men make better leaders than women do was constructed by calculating the average of the individual responses by country-year. As demonstrated by the results in Table 1, the average belief that men make better leaders than women do is stronger in some societies than others, which is indicated by a mean of 2.71 and a standard deviation of 0.63 across the 62 countries.

Societal-level beliefs that men have more right to scarce jobs than women do (i.e., men have more right to jobs). WVS measures the belief that men have more right to scarce jobs by asking the respondents whether they agreed, disagreed, or neither agreed nor disagreed with the following statement: “when jobs are scarce, men should have more right to a job than women.” Possible responses were scored on a three-point scale, ranking from 1 = disagree; through 2 =

neither, and 3 = agree. Similar to the *societal-level belief that men make better leaders* variable, the societal-level belief that men have more right to scarce jobs was constructed by calculating the average of individual responses to the question. As indicated by the results in Table 1, the average belief that men have more right to scarce jobs is stronger in some societies than others. This is shown by a mean of about two out of three and a standard deviation of 0.38 across the 62 countries (see Table 1). Thus, the analytical data set was constructed by merging the societal-level gender belief variables with the entrepreneurship indicator on country-year using GEM as the base data set.

Societal-level Control Variables

Female labor force participation and economic development. Female labor force participation and economic development are controlled for in this analysis because of their theoretical importance for business ownership as a whole, and the gender gap in the chances of becoming involved in early-stage of the start-up process, and of becoming owners of established businesses. A key argument of this paper is that work experience is important for learning skills, and access to the necessary resources for business development. Consequently, female labor force participation may influence the gender gap in entrepreneurship independently of societal-level beliefs that men make better leaders and men have more right to scarce jobs than women do. This is important because research has found that women tend to experience low labor force participation (compared with men) in most countries around the world (Tzannatos 1999). In addition to controlling for female labor force participation, accounting for economic development is also important, because economic development tends to be associated with a greater proportion of people working as salaried and wage workers as opposed to being self-employed. This is revealed in the Figures 1 and 2, where the proportion of people who indicated that they were involved in starting a new business and were owners of established businesses is

substantially higher in less developed countries compared with their developed counterparts. As a result, one may expect greater economic development to lower both men's and women's self-employment (Acs et al. 2004), which would impact the gender gap in entrepreneurship independently of the *societal-level beliefs that men make better leaders* and that *men have more right to scarce jobs*.

Consequently, this analysis accounts for the effects of female labor force participation and economic development on the gender gap in entrepreneurship. *Female labor force participation* is measured as the percentage of the female population who are working for pay (i.e., female labor force participation rate). The female labor force participation data were drawn from the International Labour Organization (2015). The economic development variable is measured as real gross domestic product per capita in US dollars (i.e., real GDP per capita). That is, real gross domestic product divided by the population size. The real GDP per capita data were drawn from the Penn World Tables (Feenstra, Inklaar and Timmer 2015). Using GEM as the base data set, the *female labor force participation* and real GDP per capita data were merged on country-year with the entrepreneurship data. As indicated by the results in Table 1, the countries under study here differ significantly in levels of development and the proportion of the female population who are in the labor forces.

Individual-level Control Variables

A common argument made in research on gender inequality in entrepreneurship is that personal characteristics, such as education, income, marital, and parental status, have differential impacts on men's and women's labor market decision, including the decision to become entrepreneurs (Carr 1996; Taniguchi 2002; Thébaud 2016; Burton, Sørensen and Dobrev 2016). As a result, education, income, age, and marital and parental status are often implicated as causes of gender inequality in entrepreneurship (Thebaud 2016). A key argument of the present study is

that structural factors, such as societal-shared gender beliefs, influence the differential chances that men and women have of becoming entrepreneurs, independent of these individual qualities commonly proposed in existing research. To empirically evaluate the validity of this argument, the present analysis accounts for differences in education, income, age, and marital and parental status across the individuals included in this study. GEM is the primary data set used here, because it contains measures of entrepreneurship at an early-stage of the entrepreneurial process (i.e., nascent entrepreneurs). In GEM, education is measured as the highest educational level an individual has completed, ranking from no formal education (coded 1) to postsecondary degree or higher (coded 9). Income is measured in percentiles, ranking from the lowest 33rd income percentile (coded 1) to the upper income percentile (coded 4). A detailed description of these variables is presented in Table 1.

Although GEM permits the examination of the gender gap in the early-stage entrepreneurship process, GEM lacks demographic information about individuals, such as marital and parental status, that are theoretically important for explaining gender inequality in entrepreneurship. Thus, to compensate for the lack of these measures in GEM and to test the robustness of the results using GEM data, the analysis is also conducted using the World Values Survey. This is because WVS collected information about individuals' marital and parental status, in addition to the age, education, and income information collected by GEM. However, WVS is not used as the primary data set here, because it only contains self-employment, which does not clearly capture early-stage entrepreneurial as it is done in the GEM. A detailed description of the variables from WVS is presented in Tables 6 and 7 in the Appendix.

Modeling Techniques

The empirical analysis is conducted in three stages. The first stage examines the patterns of the gender gap across societies and the bivariate correlation between the size of the gender gap

and the strength of the beliefs that men make better leaders and that men have more right to scarce jobs in a society. Stages 2 and 3 evaluate the two hypotheses advanced in this paper using multi-level binomial logistics regression techniques that account for competing explanations for the gender gap in entrepreneurship. The multi-level estimation techniques facilitate the simultaneous estimation of the effects of individual and societal-level factors on the gender gap in entrepreneurship. That is, accounting for men's and women's personal characteristics and other country-level factors (see Table 1 for description), the multi-level estimation method permits the examination of the net effects of societal-level beliefs about gender differences in leadership competency, and the right to scarce jobs on the gender gap in entrepreneurship.

Moreover, an important aspect of the gender status beliefs argument is that the mechanisms by which gender status reproduces social inequalities operate differently across societies. That is, the mechanisms by which beliefs about gender differences in leadership competency and the right to scarce jobs operate to reproduce gender inequality in entrepreneurship should be different across societies. Multi-level modeling enables this study to account for these potential cross-country variations in the relationship between beliefs about gender differences in leadership competency and the right to scarce jobs by estimating cross-level interactions between gender and the belief about gender differences in leadership competency and the right to scarce jobs. The following section describes the models to be estimated.

Modeling the Gender Gap in Entrepreneurship: Early-Stage Entrepreneurship

The first equation is the base model, which assesses the gender gap and how early-stage entrepreneurship and the ownership of established businesses vary across the 62 countries. This

model does not account for individual and country-level controls¹. Equation 2 models the gender gap and controls for the theoretically important individual and country-level factors described in the data section (see Table 1 for a description of these control variables).

$$\text{Equation 1: Early-stage entrepreneurship}_{ij} = \beta_{0j} + \beta_{1j} (\text{Gender}) + \epsilon_{ij}$$

$$\text{Equation 2: Early-stage entrepreneurship}_{ij} = \beta_{0j} + \beta_{1j} (\text{Gender}) + \beta_2 (\text{Marital status}) + \beta_3 (\text{Education}) + \beta_4 (\text{Having children}) + \beta_5 (\text{Income}) + \epsilon_{ij}$$

The i denotes individual effects, whereas the j indicates society-level effects. In these models, it is assumed that the distribution of ϵ_{ij} is random normal, has a mean of 0, and a variance of σ^2 .

Modeling the Effect of the Society-level Gender Beliefs Factors on the Gender Gap in Early-stage Entrepreneurship

To explore the effect of society-level beliefs about leadership competency and the right to employment for women compared with men, the analysis models the effect of the society-level belief that men make better leaders and the societal-level belief that men have more right to scarce jobs on the random coefficient for gender (β_{1j}) from equations 1 and 2, which are represented by the following equations.

$$\text{Equation 3: } \beta_{1j} = \gamma_{00} + \gamma_{01} (\text{men make better leaders}) + \gamma_{02} (\text{Female*men make better leaders}) + \gamma_{03} (\text{men have more right to scarce jobs}) + \gamma_{04} (\text{Female labor force participation rate}) + \gamma_{05} (\text{GDP per capita}) + \mu_{0j}$$

$$\text{Equation 4: } \beta_{1j} = \gamma_{00} + \gamma_{01} (\text{men make better leaders}) + \gamma_{02} (\text{men have more right to scarce jobs}) + \gamma_{03} (\text{Female*men have more right to scarce jobs}) + \gamma_{04} (\text{Female labor force participation rate}) + \gamma_{05} (\text{GDP per capita}) + \mu_{0j}$$

¹ Marital and parental status are accounted for in the robustness analysis using the World Values Survey and self-employment as measure of entrepreneurship.

In this equation, j indicates the country-level impact. β_{0j} is the random intercept and it measures individual involvement in early-stage entrepreneurship adjusting for individual and country-level factors, whereas μ_{0j} represents country-level errors.

Results

Cross-National Patterns of the Gender Gap in Entrepreneurship

Patterns of the Gender Gap in Early-stage Entrepreneurship. For this analysis, the Gender Gap is expressed as risk ratios. That is, the odds of being involved in early-stage entrepreneurship (i.e., women's probability/men's probability). The predicted probability was estimated from mixed-effect logistic models that controlled for the individual-level characteristics described in the data section (see Table 1)². The gender gap in the odds of being involved in early-stage entrepreneurship is presented in Figure 2 for the 62 countries under study here. Figure 2 shows large cross-country variations in the gender gap in the odds of being involved in starting a new business. The gender gap in the odds of being involved in early-stage entrepreneurship is, for example, largest in Pakistan, and smallest in Malaysia and Russia. That is, in Pakistan, men are more than 0.16 time as likely as women to be involved in starting a new business. On the other hand, in Malaysia and Russia, men are less than 0.05 time as likely as women to be involved in starting a new venture.

These results are consistent with previous research that has found women to be less likely than men to become entrepreneurs in many countries around the world (Terrell and Troilo 2010; Thébaud 2015). The following sections examine the bivariate relationship between the gender

² The predicted probability of being involved in early-stage entrepreneurship was calculated using both the fixed and random components of the mixed-effects model.

gap in early-stage entrepreneurship (presented in Figure 2) and the societal-level beliefs that men make better leaders, and the societal-level belief that men have more right to scarce jobs.

Bivariate Analysis of the Relationship between Societal-level Beliefs that Men make Better Leaders and Men Have More Right to Scarce Jobs and the Gender Gap in Early-stage Entrepreneurship

A key argument advanced in this study is that the stronger the beliefs that men make better leaders and that men should have more right to scarce jobs in a society, the greater the gap in the chance that men and women have of becoming involved in early-stage entrepreneurship in that society. In this section, Figure 3 presents a preliminary evaluation of the argument that the gender gap in early-stage entrepreneurship will be larger in societies where the belief that men make better leaders is strong. The bivariate results in Figure 4 provide a preliminary assessment of the proposition that the gender gap in early-stage entrepreneurship will be larger in societies where the belief that men have more right to scarce jobs is strong.

The Societal-level Belief that Men Make Better Leaders. Figure 3 presents the bivariate correlation between the size of the gender gap in the odds of being involved in early-stage entrepreneurship (presented in Figure 2) and the strength of the societal-shared beliefs that men make better leaders than women do across the 62 countries. The strength of the belief that men make better leaders in a society is measured on a five-point scale (see Table 1 for a more detailed description). The one to five-point scale means that a society's average score of one indicates that the prevalence of the belief that men make better leaders is very weak in that society, whereas an average score of five means that this belief is very strong in the society. Figure 3 shows a positive correlation between the size of the gender gap in the odds of being involved in early-stage entrepreneurship and the strength of the belief that men make better leaders than women do in a society. That is, this result indicates that the stronger the belief that men make

better leaders in a society, the greater, on average, the gender gap in the odds of being involved in early-stage entrepreneurship.

This result also shows that the relationship between the size of the gender gap in the odds of being involved in early-stage entrepreneurship and the strength of the beliefs that men make better leaders varies across the 62 countries. For instance, the strength of the belief that men make better leaders in Tunisia and Russia is about 3.90 and 3.33 out of 5, respectively. This belief is relatively weaker, for example, in Peru and the United States. The average score is 2.35 in Peru and 2.30 in the United States. However, although the belief that men make better leaders is stronger in Tunisia and Russia compared with Peru and the United States, the gender gap in the probability of being involved in early-stage entrepreneurship is larger in Peru and the United States. In Peru and the United States, men are, respectively, 0.03 and 0.04 time as likely as women to be involved in early-stage entrepreneurship. However, men are, respectively, 0.02 time and 0.008 time as likely as women to be involved in early-stage entrepreneurship in Tunisia and Russia.

Although these results show that the relationship between the societal-shared belief that men make better leaders and the gender gap in early-stage entrepreneurship varies across societies, the findings also demonstrate that the relationship is overall positive. This is indicated by the positive slope of the correlation line. It means that, overall, the stronger the belief that men make better leaders in society, the larger the size of the gender gap in the predicted probability of being involved in early-stage entrepreneurship across the 62 countries included in this analysis. Thus, these results lend some preliminary support to the first hypothesis stating that the gender gap in early-stage entrepreneurship will be larger in societies where the belief that men make better leaders is strong.

The Societal-level Belief that Men Have More Right to Scarce Jobs. Figure 4 presents the bivariate correlation between the size of the gender gap in the predicted probability of being involved in early-stage entrepreneurship and the societal-level belief that men have more right to scarce jobs. The strength of the belief that men have more right to scarce jobs in a society is measured on a three-point scale. This one to three-points scale means that a society's average score of one out of three indicates that the prevalence of the belief that men have more right to scarce jobs is very weak in that society, whereas an average score of three out of three means that this belief is very strong in the society.

Figure 4 shows a positive correlation between the size of the gender gap in the probability of being engaged in early-stage entrepreneurial activities and the strength of the belief that men have more right to scarce jobs across the 62 countries. This indicates that the stronger the belief that men have more right to scarce jobs in a society, the larger the difference between men's and women's probabilities of being involved in early-stage entrepreneurship. Similar to the result in Figure 3, this relationship varies substantially across countries. For example, the belief that men have more right to scarce jobs is stronger in Tunisia (i.e., the average score=2.6 out of 3) than in Australia (i.e., the average score=1.7 out of 3). However, the size of the gender gap in the odds of being involved in early-stage entrepreneurship is substantially larger in Australia (i.e., the gender gap in Australia=0.60) than in Tunisia (i.e., the gender gap in Tunisia=0.02). That is, in Australia men are 0.06 time as likely as women to be involved in early-stage entrepreneurial activities, whereas in Tunisia men are 0.02 time as likely as women to be involved in early-stage entrepreneurship.

Although these results highlight substantial variations in the relationship between the strength of the belief about men's right to scarce jobs and the size of the gender gap in early-

stage entrepreneurship, the findings show that, as indicated by the positive slope of the correlation line, the size of the gender gap is, overall, positively associated with the strength of the societal-level beliefs that men have more right to scarce jobs. In other words, the stronger the belief that men have more right to scarce jobs in a society, the greater the gender gap in the probability of becoming involved in early-stage entrepreneurship. Thus, these results lend some preliminary support to the third hypothesis stating that the gender gap in early-stage entrepreneurship will be larger in societies where the belief that men have more right to scarce jobs is strong.

In summary, the descriptive analysis provides some preliminary support for the two propositions suggested in this study. The following sections examine the robustness of these descriptive findings by fitting a series of multivariate models (formulated in the methods section in Equations 1-4) that account for other competing explanations about the causes of the observed gender gap in entrepreneurship (i.e., presented in Figures 2). The multivariate analysis is conducted in two stages. The first stage tests the two hypotheses (i.e., H1 and H2), which state that the gender gap in early-stage entrepreneurship will be greater in contexts where the beliefs that men make better leaders (H1) and men have more right to scarce jobs are strong (H2). The second stage tests the robustness of the results from the first stage of the analysis. It does so by using self-employment (as a proxy measure of entrepreneurship) from the World Values Survey and by controlling for important family-related factors (such as marital and parental status), which are unavailable in the Global Entrepreneurship Monitor data.

Modeling the Gender Gap in Entrepreneurship

Modeling the Relationship between Societal-level Belief Factors and the Gender Gap in Early-stage Entrepreneurship

The following models test the argument that the gender gap in early-stage entrepreneurship will be greater in societies characterized by a strong belief that men make better

leaders (H1) and the belief that men have more right to scarce jobs (H2). This is done by specifying four models that address the key theoretical arguments elaborated on in this paper and the results are reported in Table 2 (Models 1-4).

Model 1 in Table 2 is the base model that estimates the gender gap in early-stage entrepreneurship. This result is similar to the gender gap presented in Figure 2 in the bivariate analysis section. The coefficient of the variable *female* is negative and significant (i.e., -0.567, p -value<0.001). This negative and significant coefficient indicates that the odds of women being involved in early-stage entrepreneurial efforts are 43 percent lower than those for men (i.e., $\exp(-0.458) = 0.57$; $0.57 - 1 = -43\%$). This means that the odds of men being involved in early-stage entrepreneurship are about 1.75 times greater than those for women (men's odds ratio = $1/0.57 = 1.75$). Model 2 expands Model 1 by controlling for individuals' education, income, age, societal-level female labor force participation rate, and economic development. Introducing these individual and country-level controls decreases the coefficient of the variable *female* by more than five percent (i.e., $(0.567 - 0.544)/0.567 * 100 = 4\%$), from -0.567 in Model 1 to -0.544 in Model 2 (Table 2).

Model 3 tests the first hypothesis that the gender gap in early-stage entrepreneurship will be larger in contexts where the belief that men make better leaders is strong. To this end, Model 3 specified a cross-level interaction between the societal-level belief that men make better leaders and individuals' self-identified gender (which is represented by the variable *female*). Specifying the cross-level interaction between *men make better leaders* and *female* decreases the *female* coefficient by more 86 percent ($((0.544 - 0.0751)/0.544 * 100 = 86.19\%)$) from -0.544 in Model 2 to -0.0751 in Model 3 (Table 2). The inclusion of the cross-level interaction between the societal-level belief that men make better leaders and individual gender also renders the

coefficient of *Female* non statistically significant. The coefficient of the cross-level interaction term is negative and significant (at $p\text{-value} < 0.001$), which means that the stronger the belief that men make better leaders in a society, the greater the gender gap in early-stage entrepreneurship in that society.

To facilitate the interpretation of the coefficient of the cross-level interaction between the societal-level belief that men make better leaders and the female variable, Figure 5 presents the predicted probability for men and women by societal-level belief that men make better leaders. Figure 5 shows an adverse impact for the societal-level belief that men make better leaders on both men's and women's involvement in early-stage entrepreneurship, with a moderately more adverse impact on women's early-stage entrepreneurship compared with that of men. For instance, in societies where the belief that men make better leaders is weak (g.e., where the average score=1 out of 5), the gender gap in the predicted probability of early-stage entrepreneurship is 4% (i.e., Men's probability=17, women's=13). In societies where this belief is relatively strong (e.g., where the average score=2 to 3 out of 5), the gender gap is five. That is a moderate increase of one percent (i.e., men's probability= 13%, women's = 8%).

The relatively moderate effect of the societal-level belief that men make better leaders is consistent with previous research that has found the perception about differences in leadership competency between men and women to have a moderate impact on the evaluation of women's and men's managerial competency. For example, research conducted in the United States has found that dependent on the rating used, there tends to be no significant difference in how people rate women's and men's leadership competency in organizations (Paustian-Underdahl, Walker and Woehr 2014). Although the effect of the societal-level belief that men make better leaders on the gender gap is moderate, the results do show that the societal-shared belief that men make

better leaders has a more adverse impact on women's chances of being involved in early-stage entrepreneurship compared with men. Thus, this result provides support for the first hypothesis advanced in this paper, stating that the gender gap in early-stage entrepreneurship will be larger in societies where the belief that men make better leaders is strong.

Model 4 in Table 2 tests the proposition that the gender gap in early-stage entrepreneurship will be larger in societies where the beliefs that men have more right to scarce jobs is strong (i.e., H2). This argument is evaluated by estimating the cross-level interaction between the *societal-level belief that men have more right to scarce jobs* (i.e., men have more right to scarce jobs) and the *female* variable (Model 4, Table 2). The coefficient of the interaction term between gender and the societal-level belief that men have more right to scarce jobs is negative and significant, indicating that the stronger the belief that men have more right to scarce jobs in a society, the greater the gender gap in early-stage entrepreneurship. This cross-level interaction is presented in Figure 6, which shows the probability of being involved in early-stage entrepreneurship for men and women by the societal-level belief that men have more right to scarce jobs. This result shows that in societies where the belief that men have more right to scarce jobs is weak (i.e., where the average score =1 out of 3), the gender gap is the smallest. That is, in societies where the belief that men have more right to scarce jobs is weak (i.e., where the average score=1 out of 3), the gender gap in the probability of being involved in early-stage entrepreneurship is less than two percent (i.e., the gender gap=1.8%, men's probability=13% and women's =11.20%). On the other hand, in a society where the belief that men have more right to scarce jobs is strong (i.e., where the average score=3 out of 3), the gender gap is nearly six times higher than in societies where this belief is weak (i.e., average score =1 out of 3). That is, in societies where the belief that men have more right to scarce jobs is strong, the gender gap in the

probability of being involved in early-stage entrepreneurship is six percent (i.e., the gender gap=6%, men's probability = 12%, women's =6%). This means that in societies where the belief that men have more right to scarce jobs is strong, men are, on average, six percent more likely to become involved in early-stage entrepreneurship compared with women.

The Robustness Analysis

Motivation for the robustness analysis. This second phase of the analysis is conducted to account for theoretically important family-related factors, namely marital and parental status, that have been found to influence gender inequalities in the labor market. These measures were not included in the above analyses because they are unavailable in GEM data (see appendix for a detailed explanation). Thus, the robustness analysis addresses potential uncertainty regarding whether the impact of societal-level beliefs that men make better leaders and that men have more right to scarce jobs on the gender gap in entrepreneurship presented in the above analysis are independent of individual marital and parental status.

The robustness analysis conducted using self-employment (as a proxy for entrepreneurship) and information about individual marital and parental status provided by the World Values Survey (see appendix for a variable description). Self-employment is coded as “1” if an individual is self-employed and “0” if the individual is a wage or salary-earner (including full- and part-time employment). Self-employment, however, provides limited information about the stage of the entrepreneurial process that an individual is in. This may thereby limit conclusions about the gender gap at different stages in the entrepreneurial process. Despite these concerns, self-employment has been found to be a reliable measure of the rate of entrepreneurship and business ownership in a country (Kolvereid 2016). Building on previous research, this analysis examines the potential impact of the societal-level belief that men make better leaders and the societal-level belief that men have more right to scarce jobs on the gender

gap in self-employment to test the validity of the result using GEM data (i.e., results presented in Tables 2).

Modeling the Relationship between Societal-level Beliefs that Men Make Better Leaders, Men Have More Right to Scarce Jobs and the Gender Gap in Self-employment

Model 1 in Table 3 estimates the gender gap in self-employment. The *female* coefficient is negative and significant (i.e., -0.870 at $p\text{-value} < 0.001$), which indicates that women's odds of being self-employed are 58 percent lower than the odds for men (i.e., $\exp(-0.870) = 0.419$, $0.42 - 1 = -0.58$). In other word, men are 2.40 times as likely as women to be self-employed (Men's odds ratio is $= 1/0.42 = 2.40$). This result is consistent with the results of Model 1 in Tables 2. That is, Model 1 in Tables 2 shows that men are significantly more likely than women to be involved in early-stage entrepreneurship (Table 2, Model 1).

Model 2 in Table 3 controls for marital and parental status in addition to the other individual and societal-level controls factors included in Tables 2. Introducing these factors increases the size of the coefficient of *female* by more than seven percent from -0.870 in Model 1 to -0.932 in Model 2 (i.e., $(0.932 - 0.870) / 0.870 * 100 = 7.13\%$). Model 3 examines the effect of the societal-level belief that men make better leaders on the gender gap in self-employment by specifying a cross-level interaction between the *female* variable and the societal-level belief that men make better leaders. Including a cross-level interaction between societal-level belief that men make better leaders and the female variable reduces the size of the coefficient for *Female* by 96.21 percent (i.e., $(0.932 - 0.0353) / 0.932 * 100 = 96.21\%$) from -0.932 in Model 2 to 0.0353 in Model 3. The inclusion of this interaction term also renders the coefficient of the *Female* non-statistically significant (Table 3, Model 3). Moreover, the coefficient of the cross-level interaction term is negative (i.e., -0.377) and significant (at $p\text{-value} < 0.001$), meaning that the stronger the belief that men make better leaders in a society, the greater the gender gap in being

self-employed in that society. This result is consistent with the result of Model 3 in Tables 2. Similar to the above analysis, this cross-level interaction is illustrated in Figure 7, showing the predicted probability of being self-employed for men and women by the strength of the belief that men make better leaders in a society. This result shows that, on average, the gender gap in the probability of being self-employed is three and a half times as high in societies where the belief that men make better leaders is stronger (i.e., where the average score =5 out of 5) as opposed to societies where this belief is weak (i.e., where the average score = 1 out of 5). That is, in societies where the belief that men make better leaders is weak, men are on average three percent more likely to be self-employed compared with women (i.e., the gender gap =3%, men's probability = 13%, women's=10%). However, in societies where the belief that men make better leaders is strong, men are 10.5 percent more likely to be self-employed compared with women (i.e., the gender gap =10.5%, men's probability=13%, women's =2.5%). Thus, controlling for parental and marital status, in addition to other country and individual-level factors, these findings are substantially the same as the results of Model 3 in Table 2, which supports the first hypothesis suggested in this study (i.e., H1).

Model 4 in Table 3 examines the effect of the societal-level belief that men have more right to scarce jobs on the gender gap in self-employment. This is done by estimating the effect of the cross-level interaction between gender and the societal-level belief that men have more right to scarce jobs on the log-odds of being self-employed. Specifying a cross-level interaction between societal-level belief that men have more right to scarce jobs and the female variable decreases the size of the coefficient for *Female* by 32 percent $(0.932-0.634)/0.932*100= 32\%$ from -0.932 in Model 2 to 0.634 in Model 4. The coefficient of the interaction term is negative (i.e., -0.752) and significant (i.e., at $p\text{-value}<0.001$), which means that the stronger the belief that

men have more right to scarce jobs in a society, the greater the gender gap in being self-employed. The cross-level interaction is presented in Figure 8, which shows the probability of being self-employed for men and women by the societal-level belief that men have more right to scarce jobs. These results show that in societies where the belief that men have more right to scarce jobs is weak (i.e., when the average score=1 out 3), the gender gap in self-employment is nearly zero (i.e., the gender gap=0%, men's probability= 7%, women's =7%). The results also show that in societies where the belief that men have more right to scarce jobs is strong (i.e., when the average score=3 out 3), men are 15 percent more likely to be self-employed compared with women (i.e., the gender gap=15%, men's probability=22%, women's=7%). These results are also consistent with the results of Model 4 in Table 2, which support the second hypothesis advanced in this paper. The results in Table 3 are reproduced controlling for individual-level beliefs that men make better leaders and that men have more right to scarce jobs (results presented in Table 8 in the Appendix). These results are substantially the same as the ones presented in Table 3.

Discussion and Conclusion

Women have made great progress in closing the gender gap in many areas of economic life. However, men remain significantly overrepresented among business owners and owners of large and high-growth enterprises. Using data from two cross-national and country representative surveys and macro sociological theory about gender status beliefs and their impact on the reproduction of gender inequality in economic life, this study investigated the structural causes of these inequalities in entrepreneurship. The key findings of this analysis stress the importance of society's shared gender status beliefs in shaping the differential chances that women and men have of becoming involved in the early-stage of the start-up process and of being self-employed. The findings demonstrate that gender differences in the chances of becoming entrepreneurs

(conceptualized in this study as being involved in early-stage entrepreneurship and of being self-employed) are greater in societies where the belief that men make better leaders is strong. This finding was robust after controlling for differences in individual characteristics using entrepreneurship indicators from two different cross-national and country-representative surveys, namely the Global Entrepreneurship Monitor and the World Values Survey.

The robustness of the finding across the different measures of entrepreneurship and the two surveys demonstrates that perception about gender differences in competency matters for who gets to participate in the capitalist production process. There have been debates about whether leadership quality is an innate ability or a learned-quality (e.g., similar to learning how to drive a vehicle). Although there remains some disagreement among scholars on this question, the overall consensus in this dialogue about the source of leadership competency assumes it to be a learned-characteristic. That is, leadership ability is believed not to be an inborn talent that is, for example, transmitted genetically. However, the finding that society's shared belief that men make better leaders decreases women chances of becoming entrepreneurs compared with that of men, demonstrates that, while men may not inherently be better leaders than women are, once a large enough portion of society perceived men to have superior leadership ability than women do, this belief may have real consequences for differences in access to economic opportunities between men and women. The analysis shows that the adverse impact of the societal-level belief that men make better leaders on women's chances of becoming entrepreneurs compared with that of men is independent of personal characteristics, namely education, age, income, and marital and parental status.

The magnitude of the gender difference in the effect of the societal-level belief that men make better leaders on entrepreneurship is also in line with some theoretical arguments that

imply that the impact of gender in shaping perceptions about differences in leadership ability may vary depending on organizational context (Eagly and Karau 2002, Paustian-Underdahl, Walker and Woehr 2014). This similarity between these previous arguments and the present analysis is highlighted in Figure 5, which shows that, although the societal-level belief that men make better leaders impacts women's early-stage entrepreneurship more adversely than that of men, the effect is relatively small. Thus, this finding suggests that leadership competency, although it has been the subject of a large amount organizational research, may not actually matter substantially in determining who becomes involved in the start-up process.

Moreover, the relatively moderate effect of the belief about gender differences in leadership competency may be due to three reasons. First, potential entrepreneurs may put less emphasis on leadership ability relative to other factors, such as access to necessary resources, in deciding to start a new venture. Second, because leadership competency is partly believed to be a skill that one can learn (Yousafzai and Saeed 2015; McGowan, Cooper, Durkin and O'Kane 2015), people who have resources to support entrepreneurs' ideas (even though there may be large number of people who believe that men make better leaders) may not place a high emphasis on leadership competency (relative to other perceived entrepreneurial qualities) when deciding whether to support men's or women's entrepreneurial efforts. Third, the relatively small effect of the societal-level belief that men make better leaders may also signal that the measure of the leadership competency used here (which measures political leadership) may not fully capture the type of leadership competency that people would perceive to be important for becoming a successful entrepreneur. This is important because research has found that the perception about gender differences in leadership competency tend to vary depending on the managerial positions for which leadership capacity is being assessed (Eagly and Karau 2002;

Heilman 2001; Paustian-Underdahl, Walker and Woehr 2014). It has been found that in occupations that are male-dominated, people tend to perceive women to be less qualified as leaders compared with men (Eagly and Karau 2002; Heilman 2001), whereas in occupations that are female-dominated, female leadership is perceived more favorably compared with that of men (Eagly et al. 1995; Paustian-Underdahl, Walker and Woehr 2014).

Consistent with the hypothesis suggested in this paper, the results of this analysis also show that gender inequality in the likelihood of being involved in starting a business and of being self-employed is greater in societies where the belief that men have more right to scarce job is strong. That is, the greater the prevalence of the belief that men have more right to scarce jobs than women do in a society, the greater the gender gap in becoming an entrepreneur in that society. This effect of gender status beliefs on the gender gap in entrepreneurship is also robust after controlling for theoretically important individuals and societal-level factors using three different measures of entrepreneurship (early-stage activity and self-employment) from the two cross-national and country representative surveys, namely the Global Entrepreneurship Monitor and the World Values Survey.

Work experience has been found to be an important determining factor of entrepreneurial entry and success. Thus, an institutional structure that restrains individuals' access to work is deemed to hinder individuals' chances of becoming entrepreneurs. The robustness of the findings that the societal-level belief that men have more right to scarce jobs adversely impacts women's chances of becoming entrepreneurs compared with that of men is proof that perceptions about who has the right to society's valued resources (and once these beliefs become institutionalized in the form of taken-for-granted social norms) have a real impact on determining who gets to participate in and the extent of one's involvement in the capitalist production process. This

insight is demonstrated by the finding showing that in societies where the belief that men should have more right to scarce jobs, women are less likely (compared with men) to become entrepreneurs (Tables 2 and 3, Model 4 and Figures 6 and 8). This finding supports sociological theories stating that the beliefs that people hold about social differentiation (such as social status) between social categories may have consequences that spill over into economic life. Thus, gender categorization, when it interacts with an institutionalized belief about who deserves access to society's valued resources, would tend to favor men over women. This is demonstrated by the finding showing that the subordinate evaluation of women's (compared with men's) right to valued resources (such as jobs) increases the gender gap in entrepreneurial entry and self-employment.

Particularly, the findings show that the societal-level belief that men have more right to scarce jobs increases the gender gap in entrepreneurship by impacting women's entrepreneurial chances more adversely than those of men. The explanation for this relatively adverse effect on women's entrepreneurial opportunities compared with those of men may be because employment tends to provide opportunities for generating ideas and discovering entrepreneurial opportunities. Thus, social norms that reduce the chance of women (compared with men) to access employment would deprive women of the chance to be exposed to entrepreneurial opportunities that having a job may provide. This phenomenon will disadvantage women in their opportunity to engage in entrepreneurship. This is supported by the finding that shows that women are significantly less likely to be involved in early-stage entrepreneurial efforts (Table 2, Model 1), and that this gender gap is greater in societies where the belief that men have more right to scarce jobs than women do is strong (Table 2, Model 4, and Figure 6).

Employment also provides potential entrepreneurs with the knowledge necessary to develop their ventures, enabling them to avoid failure that could result from a lack of knowledge about the industry. Employment also provides entrepreneurs with a network that they can draw upon for accessing necessary resources to grow their ventures. In fact, it has been found that knowledge of an industry and access to key actors (often referred to as gatekeepers) make a big difference regarding which products succeed on the market (Hirsch, Paul M. 1972; Compagni¹, Mele¹ and Ravasi 2015; Abrahamson 1991). In this regard, institutional structure that hinders the ability of women to access employment compared with men will adversely impact women's representation (compared with that of men) among early-stage entrepreneurs, established business owners, which will in turn adversely impact women's self-employment. This argument is supported by the finding that shows that women are underrepresented among early-stage entrepreneurs and those identified as self-employed (Tables 2 and 3, Model 1), and that this underrepresentation of women is substantially greater in societies where the belief that men have more right to scarce jobs is strong (see Tables 2 and 3, Model 4, Figures 6 and 8).

Contribution

This study advances the literature on gender inequality in entrepreneurship in four key ways. The first contribution pertains to theorizing about the mechanisms via which societal-level gender status beliefs relate to the gender gap in entrepreneurship. Theorizing in previous research on inequality in entrepreneurship has focused on women's personal beliefs about gender differentiation to understand gender inequality in entrepreneurship (e.g., Terrell and Troilo 2010). Theorizing in the present study focused on the society's shared gender belief system to explain gender differences in the chances of becoming entrepreneurs. Second, by examining the effect of societal-level gender status beliefs on the gender gap in entrepreneurship, this analysis was able to test existing theories about the mechanism through which gender status beliefs

generate social inequalities (Ridgeway 2014). The overall finding in this analysis is that societal gender beliefs system, indeed, shape the differential chances that men and women have of becoming entrepreneurs. Furthermore, consistent with the sociological argument regarding the context-boundedness nature of the conditions through which gender status beliefs influence social inequalities (Ridgeway 2014, 2011), this analysis shows that the relationship between gender status beliefs and gender inequality in entrepreneurship varies significantly across societies. The third contribution of this study resides in its ability to generalize the result beyond advanced industrial countries from North America and Europe, which have been the primary focus of previous research (Thébaud 2010, 2015). The present study fills this gap in existing research by examining the impact of gender status beliefs on the gender gap in entrepreneurship in 62 economically, culturally and politically heterogeneous countries³.

The fourth contribution of this paper lies in the use of two complementary cross-national and country representative survey data, permitting this analysis to address some empirical limitations in previous research. That is, due to unavailability data and the use of only one data source, previous research has been unable to account for theoretically important alternative explanatory factors (Thebaud 2015), namely marital and parental status, in understanding the sources of gender inequality in entrepreneurship. This study advances this previous research by complementing the Global Entrepreneurship Monitor data, which contains indicators of early-stage entrepreneurship, with the World Values Survey, which has data on self-employment. WVS complements GEM by providing a large range of demographic information (such as marital and parental status, in addition to the other individual characteristic factors available in

³ 83 countries using the World Values Survey (i.e., for the Robustness analysis) and 62 countries from the Global Entrepreneurship Monitor, which is the primary data source used for this analysis.

GEM) about survey participants. Thus, the fact that the finding that the gender gap in entrepreneurship is larger in societies where the beliefs that men make better leaders and men have more right to scarce jobs are strong is consistent using both GEM and WVS provides support for the overall theoretical argument of this paper.

Finally, the finding that the adverse effect of gender status beliefs on women's entrepreneurship is robust after accounting for theoretically important individual factors, such marital and parental status (which have been found to be crucial in shaping gender inequality in labor market outcomes) solidifies the underlying theoretical argument of this paper that structural forces (independent of individuals' quality or agency) determine the degree to which individuals participate in the capitalist production process.

Limitations and Suggestions for Future Research

A key argument of this study concerning the mechanisms by which the gender status beliefs system shapes the gender gap in entrepreneurship is that unfavorable attitudes toward women's competency and the right to scarce resources disadvantage women in their quest for necessary resources for business development. Given that the results of this analysis provide support for this argument, one would also expect an unfavorable attitude toward women's competency and the right to scarce resources to also adversely impact the survival of women-owned businesses (compared with those of men), thereby increasing the gender gap in the business failure rate. That is, one would expect that the failure rate for women-owned businesses to be higher than that for men in contexts where the beliefs that men make better leaders and that men should have more right to scarce jobs are strong.

However, due to data limitations, the present analysis was unable to examine the potential impact of the societal-level gender belief that men make better leaders and that men have more right to scarce jobs on the gender gap in business survival. That is, neither the GEM

nor the WVS surveys collected information about individuals over time. Thus, entrepreneurship being measured at one point in time prevents this analysis from examining the potential impact of societal-level beliefs that men make better leaders and have more right to scarce jobs on potential gender differences in business survival. Once such cross-national and longitudinal data are made available, future research may be able to investigate the potential impact of societal-level gender status beliefs on differences in women's and men's business survival and how this effect may potentially vary across societies.

The results also show that societal shared beliefs that men make better leaders than women do increases the gender gap in entrepreneurial entry, but this effect is relatively small. Because it has been found that differences in perception about women's and men's leadership competency tend to vary by the nature of the organizational function for which the leadership capacity is being assessed, one may expect that differences in the evaluation of men's and women's leadership competency to be more important in a situation where the function in question is perceived to require leadership skill (e.g., managerial and supervisory functions in a given organization or organizational team). This argument is in line with the gender status theory, emphasizing the multidimensional nature of the process by which gender norms and expectations influence social relations to produce social inequalities (Ridgeway 2011).

Given this social reality, the belief that men make better leaders than women do may have a stronger impact on gender inequality in an entrepreneurial team than on individuals' decisions to enter into entrepreneurship. Based on this logic, one may expect that the societal-level belief that men make better leaders than women do to be associated with a higher proportion of men in leadership positions in the start-up process. That is, one may expect women to be less likely to lead start-up teams when they partner with men in societies where the belief

that men make better leaders is strong. However, because the data used here do not contain information about the role of members in the start-up process, this analysis was unable to examine how the societal-level belief that men make better leaders may potentially favor men (compared with women) as leaders in the start-up team.

Understanding the potential impact of the societal-level belief on gender inequality in the chances of managing an entrepreneurial team is warranted since recent research conducted in the United States has found men experience an advantage in the likelihood of being leaders in spousal start-up teams (Yang and Aldrich 2014). While research has highlighted how social norms about gender roles spill over onto economic life to shape gender inequality in organizational teams (Yang and Aldrich 2014), one does not know how this gender difference in leadership in the start-up teams that Yang and Aldrich observed in United States organizational founding teams, may operate in other contexts with different belief systems about gender roles. Furthermore, one does not know how this process would operate under economic inequality regimes, and political and welfare regimes that are different from the United States. Thus, future research may be able to examine how gender inequality in the chances of becoming a leader in organizational founding teams may potentially be affected by the societal-level belief that men make better leaders and how this relationship may potentially vary across economic inequality, political, and welfare regimes.

Finally, while data limitation prevents this study from examining these other potential ways that gender status beliefs may impact gender inequality in entrepreneurship, using the current data, this analysis was able to find support for the two propositions advanced in this paper. First, using GEM data the results of this analysis show that the gender gap in early-stage entrepreneurship is larger in societies where the societal-level belief that men make better leaders

is strong (i.e., supporting H1). Second, using WVS data the results also demonstrate that the gender gap in self-employment is greater in societies where the belief that men make better leaders is strong (i.e., supporting H1). Third, using GEM data the findings show that the gender gap in early-stage entrepreneurship is larger in societies where the belief that men have more right to scarce jobs is strong (i.e., supporting H2). Fourth, using WVS data the gender gap in self-employment is larger in societies where the belief that men have more right to scarce jobs is strong (i.e., supporting H2). In conclusion, together these findings support the core argument of this study that the society's gender status beliefs system shapes everyday social interactions to produce and reproduce inequality in the social life, including gender inequality in the ownership of capitalist production.

Table 2.1: Descriptive Statistics of Variables used in the Analyses

| | N | Description | Values | Percent | |
|--|--------|---|---|-------------|-----------|
| Total Sample Size | 332095 | Men and Women | N/A | 100 | |
| Male | 160898 | Respondent identified as Male | Male = 0 | 48.45 | |
| Female | 171197 | Respondent identified as Female | Female = 1 | 51.55 | |
| <i>Entrepreneurship Variables</i> | N | <i>Description</i> | <i>Values</i> | <i>Mean</i> | <i>SD</i> |
| Early-stage Entrepreneurship (Male & Female) | 332095 | Whether respondent, alone or with others, currently trying to start a new business, including any self-employment or selling any goods or services to others? | 1 =yes, 0= No | 0.11 | 0.32 |
| Male: Early-stage Entrepreneurship | 160898 | Whether respondent, alone or with others, currently trying to start a new business, including any self-employment or selling any goods or services to others? | 1 =yes, 0= No | 0.13 | 0.34 |
| Female: Early-stage Entrepreneurship | 171197 | Whether respondent, alone or with others, currently trying to start a new business, including any self-employment or selling any goods or services to others? | 1 =yes, 0= No | 0.09 | 0.29 |
| <i>Societal-level Gender Beliefs</i> | N | <i>Description</i> | <i>Values</i> | <i>Mean</i> | <i>SD</i> |
| Men make better leaders | 62 | Respondent's answer to question: "On the whole, men make better political leaders than women do?" | 1=Strongly disagree ... 5=Strongly agree | 2.71 | 0.63 |
| Men have more right to scarce jobs | 62 | Respondent's answer to question: "when jobs are scarce, men should have more right to jobs than women?" | 1=Disagree 2=Neutral 3=Agree | 1.93 | 0.38 |

| <i>Individual Controls</i> | <i>N</i> | <i>Description</i> | <i>Values</i> | <i>Mean</i> | <i>SD</i> |
|---------------------------------------|----------|---------------------------------------|---|-------------|-----------|
| Education | 332095 | Highest education attained | 1= No formal education ... 9= Graduate education | 3.21 | 1.32 |
| Income | 332095 | Income group of respondent | 1= Lowest 33%tile ...4 = upper 33%tile | 2.47 | 1.15 |
| age | 332095 | Respondent's age | 18-65 | 39.17 | 13.16 |
| Societal-level control | N | Description | Values | Mean | SD |
| Real GPD/capital (US \$) | 62 | GDP divided by population size | In US Dollars | 23362.34 | 14256.13 |
| Female Labor Force Participation Rate | 62 | Female population economically active | In Percent | 56.64 | 15.86 |

Table 2.2: Mixed-effects Regression Estimates of the Effect of Gender and Gender Status Beliefs on the Log-odds of Early-stage Entrepreneurship

| | (1) | (2) | (3) | (4) |
|---|-----------------------|---------------------------|---------------------------|---------------------------|
| Intercept | -1.932*** (0.0850) | 1.444* (0.589) | 1.276* (0.582) | -0.314 (0.508) |
| Female | -0.567*** (0.0505) | -0.544*** (0.0504) | 0.0751 (0.178) | -0.202 (0.116) |
| Men make better leaders | | -0.265*** (0.0528) | -0.202*** (0.0548) | -0.270*** (0.0528) |
| Men have more right to scarce jobs | | -0.207*** (0.0300) | -0.208*** (0.0300) | -0.142*** (0.0376) |
| <i>Societal-level gender beliefs effect on the gender gap</i> | | | | |
| H1: Men make better leaders X Female | | | -0.218*** (0.0601) | |
| H2: Men have more right to scarce jobs X Female | | | | -0.174** (0.0534) |
| <i>Individual-level controls</i> | | | | |
| Postsecondary degree or higher | | 0.105*** (0.00487) | 0.105*** (0.00487) | 0.105*** (0.00487) |
| Income | | 0.0943*** (0.00526) | 0.0945*** (0.00526) | 0.0940*** (0.00526) |
| Age (in years) | | -0.00950*** (0.000458) | -0.00949*** (0.000458) | -0.00951*** (0.000474) |
| <i>Societal-level controls</i> | | | | |
| Real GDP per capita (logged) | | -0.247*** (0.0521) | -0.243*** (0.0511) | -0.190*** (0.0514) |
| Female labor force participation rate (in %) | | -0.000821 (0.00247) | -0.00175 (0.00244) | 0.00490* (0.00218) |
| <i>Random effects</i> | | | | |
| Between-country female standard deviation | 0.151*** (0.0291) | 0.151*** (0.0290) | 0.158*** (0.0311) | 0.145*** (0.0322) |
| Between-country intercept standard deviation | 0.476*** (0.0844) | 0.433*** (0.0832) | 0.404*** (0.0775) | 0.398*** (0.0858) |
| Number of individuals | 332095 | 332095 | 332095 | 332095 |
| Number of countries | 62 | 62 | 62 | 62 |
| Log likelihood | -107802.5 | -106939.7 | -106933.4 | -106947.1 |
| Chi-squared | 126.3 | 1822.1 | 1829.0 | 1792.9 |

Standard errors in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 2.3: Mixed-effects Regression Estimates of the Effect of Gender and Gender Status Beliefs on the Log-odds of being Self-employed (Data source: WVS)

| | (1) | (2) | (3) | (4) |
|---|-----------------------|-------------------------|-------------------------|-------------------------|
| Intercept | -1.895*** (0.111) | -3.100*** (0.337) | -3.451*** (0.340) | -3.688*** (0.340) |
| Female | -0.870*** (0.0152) | -0.932*** (0.0155) | 0.0353 (0.0982) | 0.634*** (0.0941) |
| Men make better leaders | | -0.445*** (0.0768) | -0.308*** (0.0780) | -0.451*** (0.0769) |
| Men have more right to scarce jobs | | 0.623*** (0.0507) | 0.621*** (0.0506) | 0.920*** (0.0542) |
| <i>Societal-level gender beliefs effect on the gender gap</i> | | | | |
| Men make better leaders X Female | | | -0.377*** (0.0379) | |
| Men have more right to scarce jobs X Female | | | | -0.752*** (0.0448) |
| <i>Individual-level controls</i> | | | | |
| Single/Never married | | -0.0929*** (0.00432) | -0.0938*** (0.00432) | -0.0943*** (0.00433) |
| Children | | 0.00825 (0.00520) | 0.00842 (0.00521) | 0.00877 (0.00521) |
| Postsecondary degree or higher | | -0.115*** (0.00372) | -0.117*** (0.00372) | -0.118*** (0.00373) |
| Upper income group | | 0.0374*** (0.00363) | 0.0386*** (0.00364) | 0.0392*** (0.00364) |
| Age | | 0.00823*** (0.00074) | 0.00806*** (0.00074) | 0.00786*** (0.00074) |
| <i>Societal-level controls</i> | | | | |
| Female labor force participation rate (in %) | | 0.0226*** (0.00293) | 0.0224*** (0.00293) | 0.0227*** (0.00292) |
| Real GDP per capita (logged) | | 0.0159 (0.0244) | 0.0183 (0.0245) | 0.0157 (0.0245) |
| <i>Random effects</i> | | | | |
| Between-country female standard deviation | 0.353*** (0.0937) | 0.369*** (0.0996) | 0.327*** (0.0822) | 0.229*** (0.0640) |
| Radom Intercept (country) | 1.025 (0.167) | 0.994 (0.166) | 0.995 (0.166) | 0.989 (0.165) |
| Number of individuals | 195053 | 194796 | 194796 | 194796 |
| Number of countries | 83 | 83 | 83 | 83 |
| Log likelihood | -63697.1 | -62078.2 | -62028.7 | -61937.1 |
| Chi-squared | 3271.1 | 5976.2 | 6041.3 | 6203.1 |

Standard errors in parentheses
 * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Figure 2.1: Percentage of the Workforce who are Involved in Early-stage Entrepreneurship across Countries by Gender

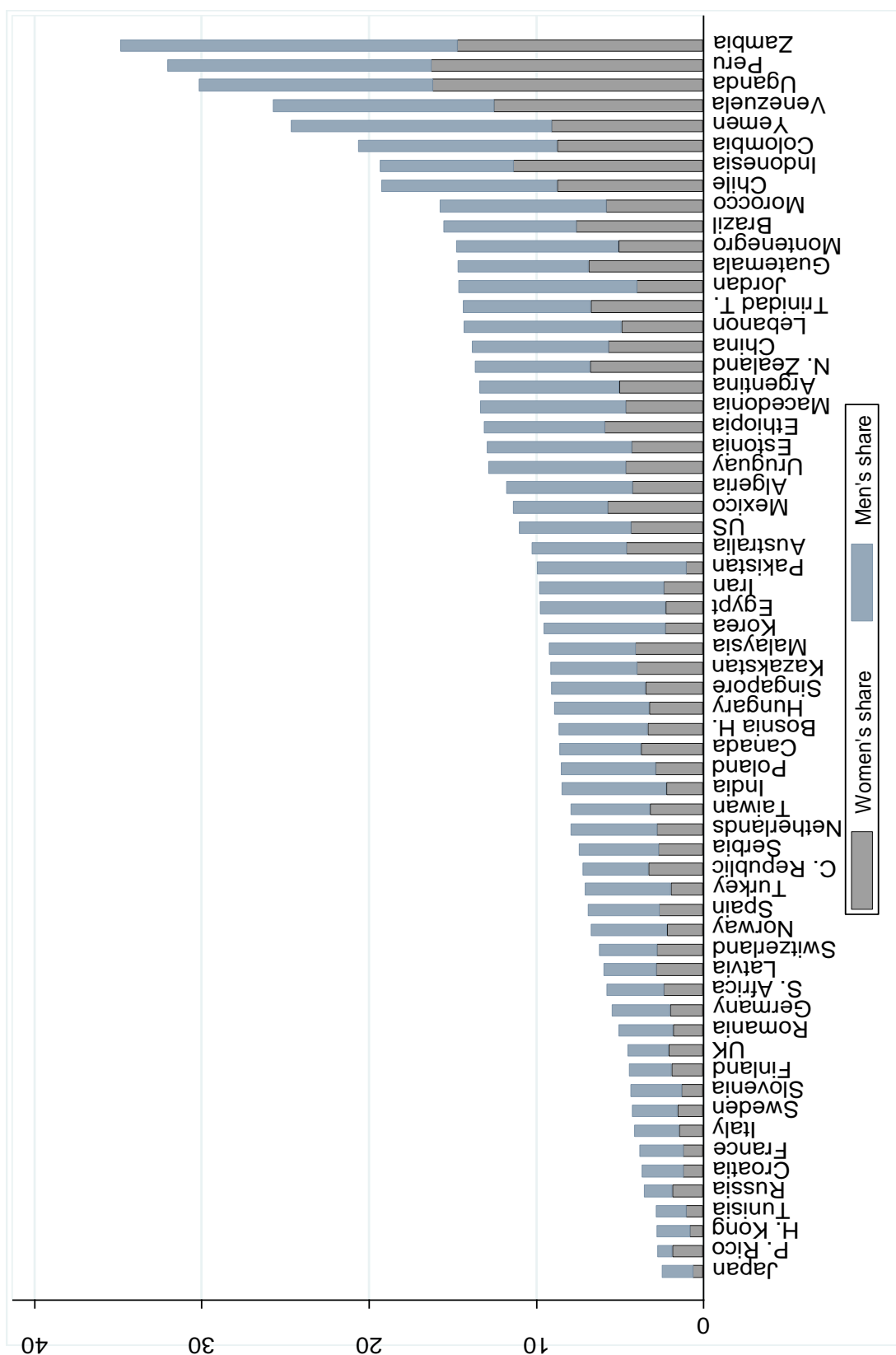


Figure 2.2: Size of the Gender Gap in Odds of being Involved in Early-stage Entrepreneurship across Countries

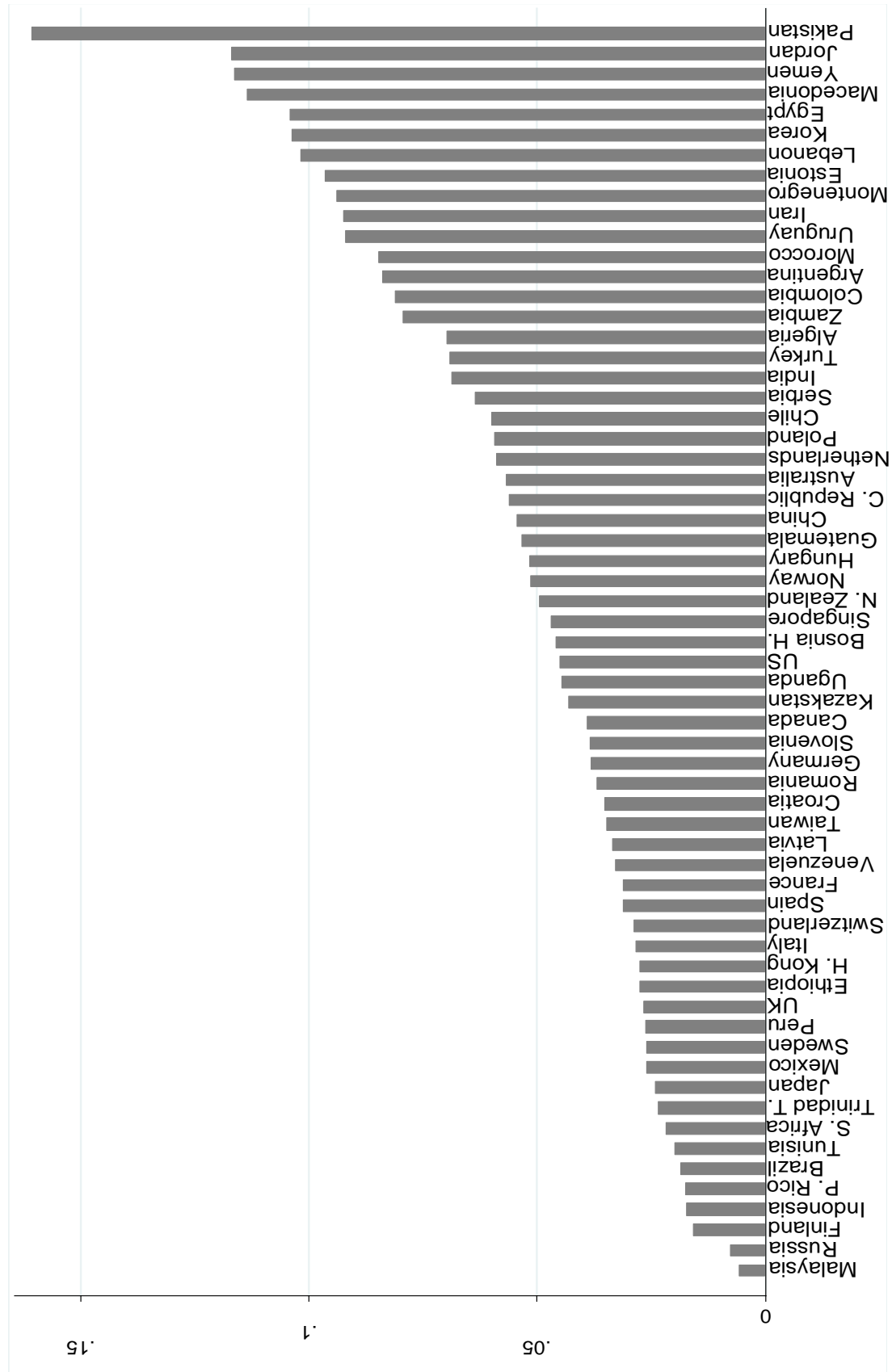
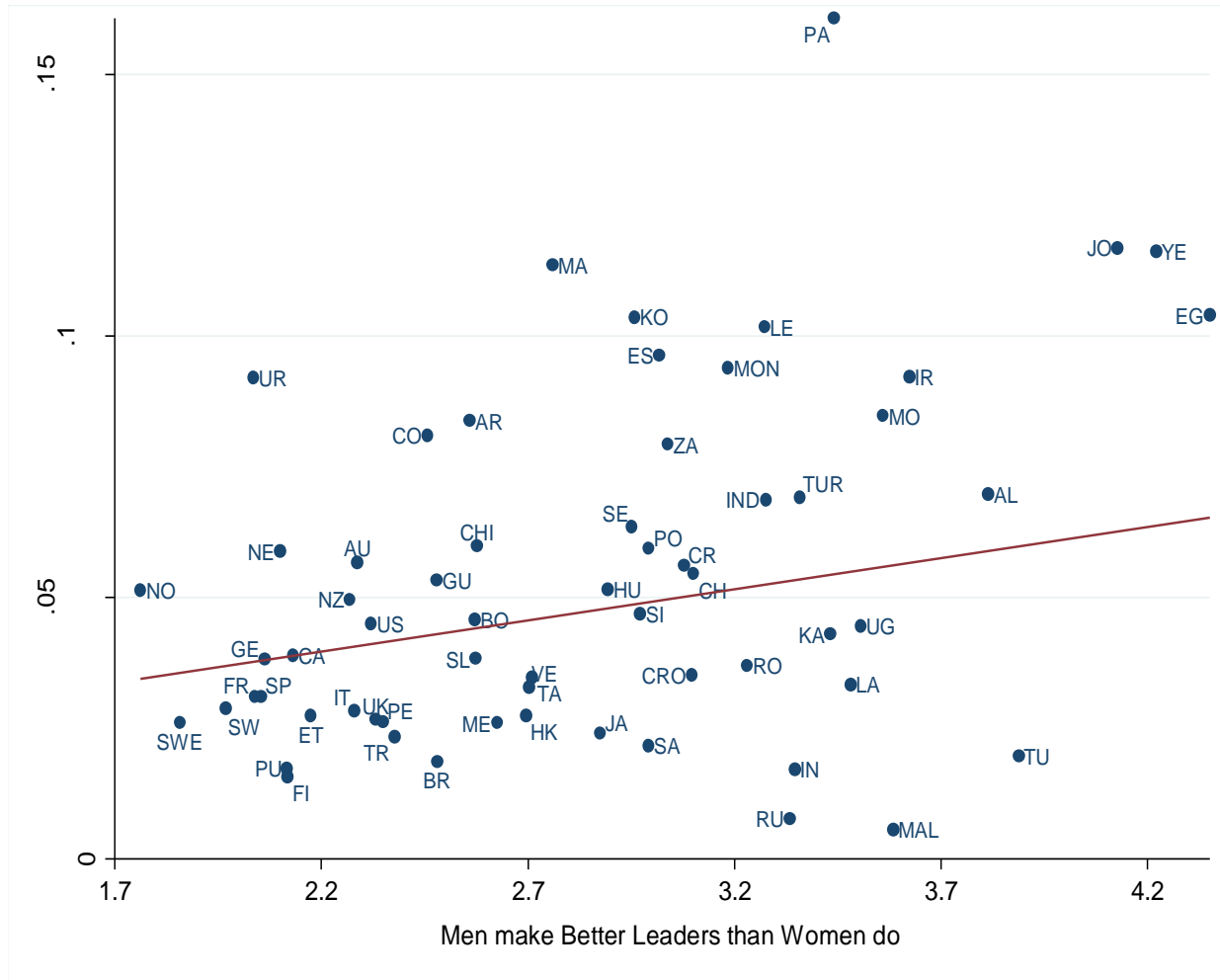


Figure 2.3: Size of the Gender Gap in Odds of being Involved Early-stage Entrepreneurship across Countries, by Societal-level Belief that Men make Better Leaders



Note: AL= Algeria, AR=Argentina, AU=Australia, BO=Bosnia and Herzegovina, BR=Brazil, CA=Canada, CHI=Chile, CH=China, CO=Colombia, CRO=Croatia, CR=Czech Republic, EG=Egypt, ES=Estonia, ET=Ethiopia, FI=Finland, FR=France, GE=Germany, GU=Guatemala, HK=Hong Kong, HU=Hungary, IND=India, IN=Indonesia, IR=Iran, IT=Italy, JA=Japan, JO=Jordan, KA=Kazakhstan, KO=Korea, LA=Latvia, LE=Lebanon, MA=Macedonia, MAL=Malaysia, ME=Mexico, MON=Montenegro, MO=Morocco, NE=Netherlands, NZ=New Zealand, NO=Norway, PA=Pakistan, PE=Peru, PO=Poland, PU=Puerto Rico, RO=Romania, RU=Russia, SE=Serbia, SI=Singapore, SL=Slovenia, SA=South Africa, SP=Spain, SWE=Sweden, SW=Switzerland, TA=Taiwan, TR=Trinidad & Tobago, TU=Tunisia, TUR=Turkey, UG=Uganda, UK=United Kingdom, US=United States, UR=Uruguay, VE=Venezuela, YE=Yemen, ZA=Zambia.

Scatter plot showing the relationship between 'Men have More Right to Scarce Jobs' (X-axis) and 'Women have More Right to Scarce Jobs' (Y-axis). The X-axis ranges from 1.25 to 2.75, and the Y-axis ranges from 0 to 0.15. A positive linear regression line is shown. Data points are labeled with country codes. PA is an outlier with high values on both axes.

| Country | Men have More Right to Scarce Jobs (X) | Women have More Right to Scarce Jobs (Y) |
|---------|--|--|
| PA | 2.50 | 0.16 |
| YE | 2.60 | 0.11 |
| JO | 2.70 | 0.11 |
| EG | 2.75 | 0.10 |
| MA | 2.10 | 0.11 |
| KO | 2.05 | 0.10 |
| LE | 2.10 | 0.10 |
| IR | 2.50 | 0.09 |
| MON | 1.75 | 0.09 |
| ES | 1.65 | 0.09 |
| AR | 1.70 | 0.08 |
| CO | 1.75 | 0.08 |
| MO | 2.30 | 0.08 |
| TUR | 2.35 | 0.07 |
| AL | 2.45 | 0.07 |
| IND | 2.20 | 0.07 |
| SE | 1.70 | 0.06 |
| NE | 1.65 | 0.06 |
| CHI | 1.75 | 0.06 |
| PO | 1.95 | 0.06 |
| CH | 2.05 | 0.06 |
| GU | 2.15 | 0.05 |
| NO | 1.40 | 0.05 |
| US | 1.45 | 0.04 |
| CA | 1.65 | 0.04 |
| SL | 1.75 | 0.04 |
| VE | 1.80 | 0.03 |
| SP | 1.85 | 0.03 |
| HK | 1.85 | 0.02 |
| ME | 1.90 | 0.02 |
| ET | 1.95 | 0.02 |
| SW | 2.05 | 0.02 |
| IT | 2.10 | 0.02 |
| UK | 2.15 | 0.02 |
| JA | 2.05 | 0.02 |
| TA | 2.15 | 0.03 |
| FR | 2.20 | 0.03 |
| KA | 2.30 | 0.04 |
| RU | 1.85 | 0.01 |
| TR | 1.95 | 0.01 |
| SA | 1.90 | 0.01 |
| FI | 1.70 | 0.01 |
| PE | 1.65 | 0.02 |
| LA | 1.60 | 0.03 |
| GE | 1.60 | 0.03 |
| NZ | 1.60 | 0.05 |
| AU | 1.65 | 0.05 |
| BR | 1.55 | 0.01 |
| PU | 1.50 | 0.01 |
| SWE | 1.35 | 0.02 |
| MAL | 2.30 | 0.00 |
| TU | 2.55 | 0.01 |
| IN | 2.45 | 0.01 |

55

Figure 2.5: Predicted Probability of Early-stage Entrepreneurship for Men and Women, by Societal-level Belief that Men make Better Leaders than Women do

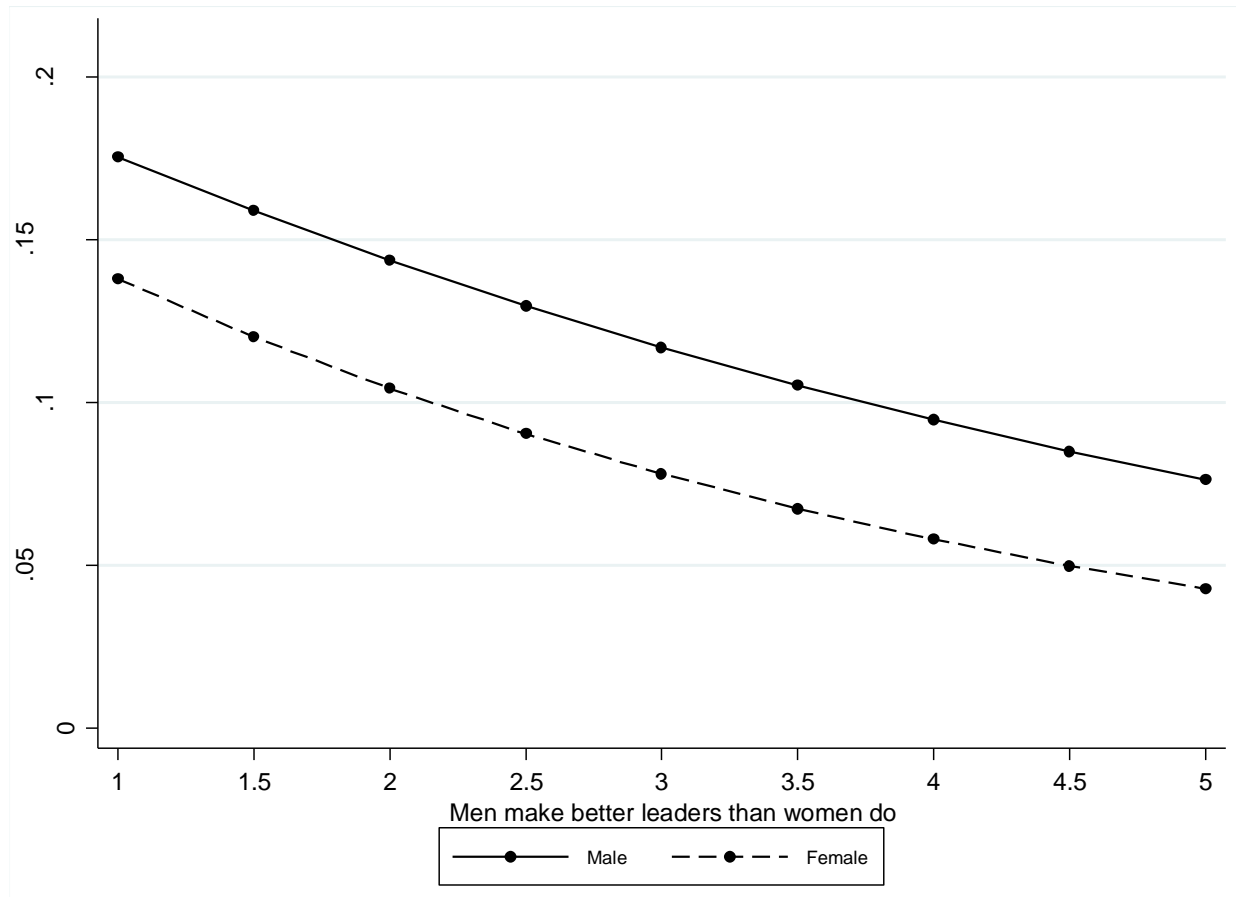


Figure 2.6: Predicted Probability of Early-stage Entrepreneurship for Men and Women, by Societal Men Have More Right to Scarce Jobs than Women do

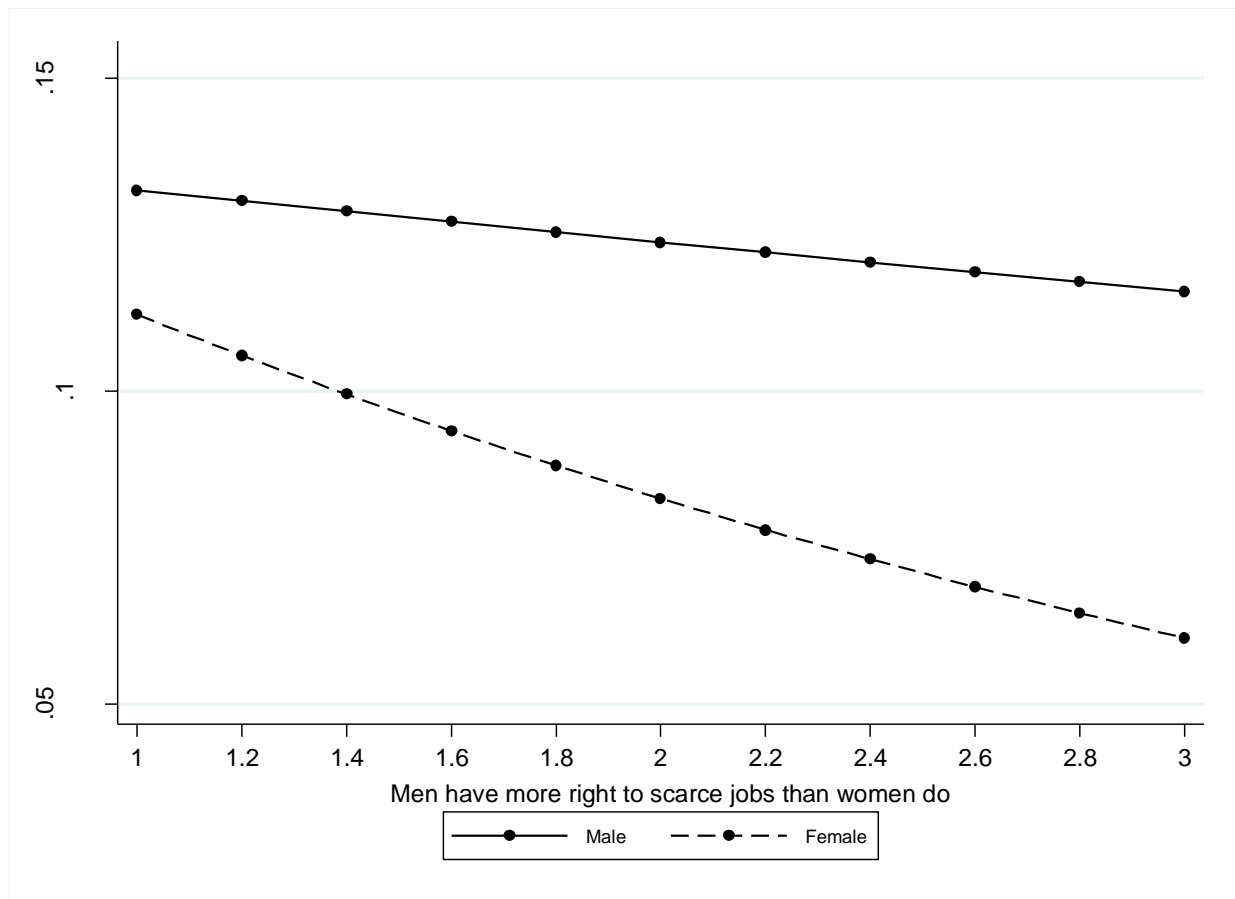


Figure 2.7: Predicted Probability of Being Self-employed for Men and Women, by Societal-level Belief that Men make Better Leaders than Women do (Data source: WVS)

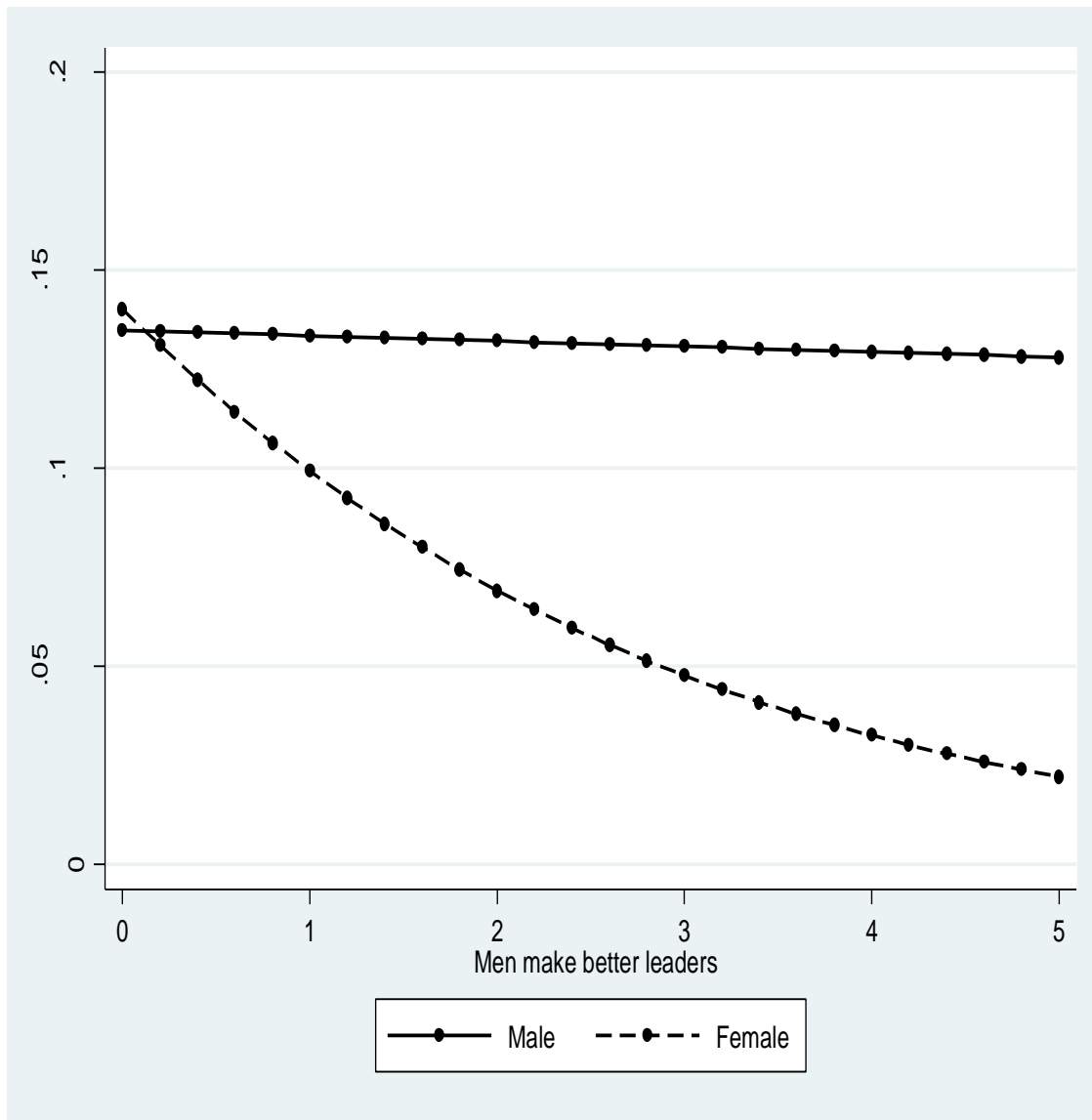
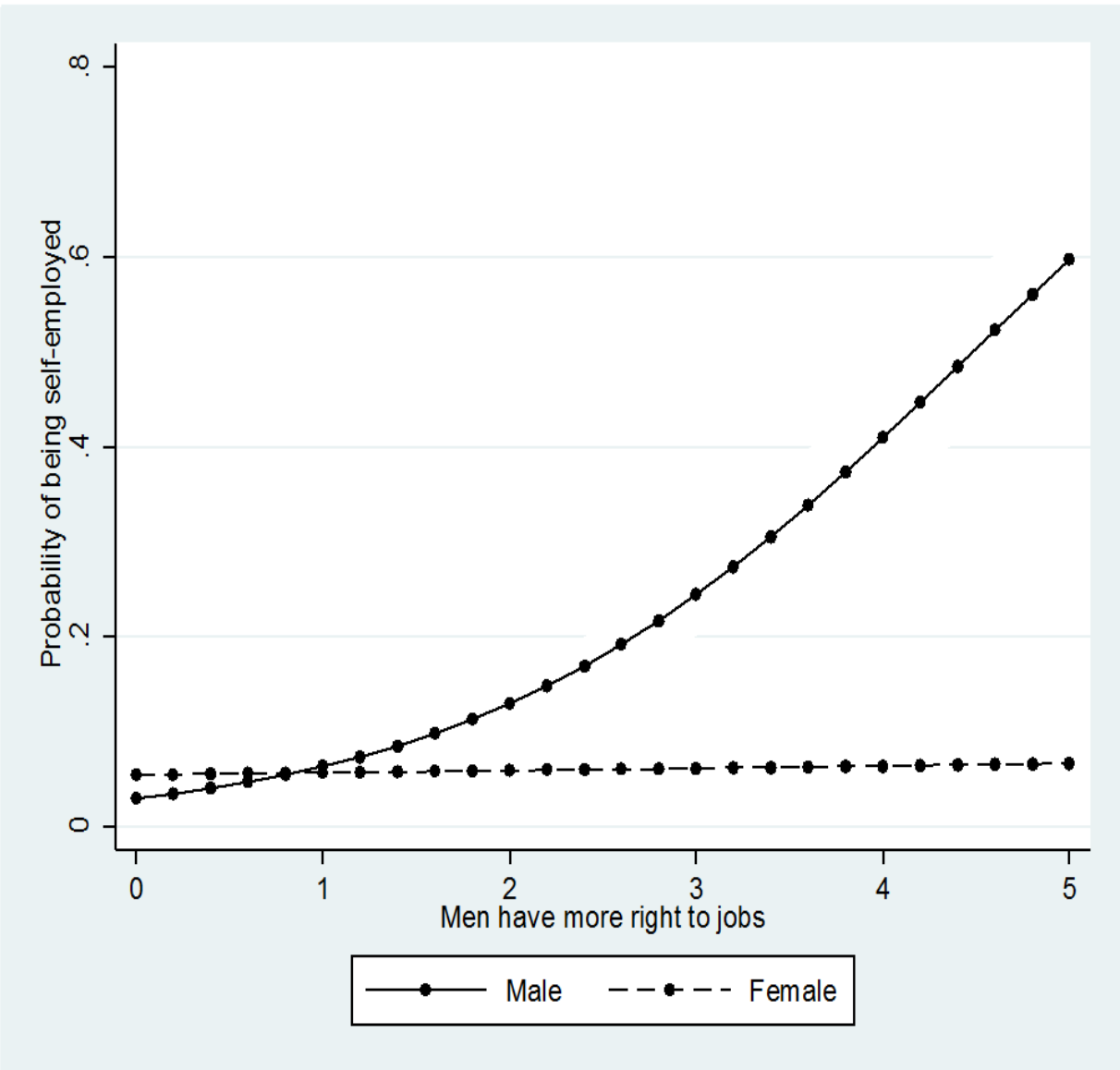


Figure 2.8: Predicted Probability of Being Self-employed for Men and Women, by Societal-level Belief that Men Have More Right to Scarce Jobs than Women do (Data source: WVS)



APPENDIX

Chapter 2: Data and Description of Variables used for the Robustness Analysis

Table 5: Percentage of Self-employed by wave of World Values Survey (WVS)

| <i>Being Self-employed</i> | <i>1994-1998</i> | <i>1999-2004</i> | <i>2005-2009</i> | <i>2010-2014</i> | <i>Total</i> |
|--|------------------|------------------|------------------|------------------|--------------|
| No | 41,063 | 36,178 | 46,989 | 46,405 | 170,635 |
| Yes | 4,540 | 5,525 | 7,375 | 6,978 | 24,418 |
| Number of observation/wave | 45,603 | 41,703 | 54,364 | 53,383 | 195,053 |
| % of self-employed in each wave | 10 | 13 | 14 | 13 | 13 |

Table 6: Description, Measurement, Data source, Mean and SD of the Entrepreneurship Variables

| <i>Entrepreneurship</i> | <i>Description</i> | <i>Values</i> | <i>Sources</i> | <i>Mean</i> | <i>SD</i> |
|--------------------------------|-----------------------------|--|----------------|-------------|-----------|
| Being Self-employed (N=195053) | Respondent is self-employed | 1= Self-employed; 0=wage or salaried employee | WVS | 0.13 | 0.32 |
| <i>Men</i> | <i>Description</i> | <i>Values</i> | <i>Sources</i> | <i>Mean</i> | <i>SD</i> |
| Being Self-employed (N=94449) | Respondent is self-employed | 1= Self-employed | WVS | 0.17 | 0.38 |
| <i>Women</i> | <i>Description</i> | <i>Values</i> | <i>Sources</i> | <i>Mean</i> | <i>SD</i> |
| Being Self-employed (N=100604) | Respondent is self-employed | 1= Self-employed | WVS | 0.08 | 0.27 |

Table 7: Description of the Societal-level and Individual-level Independent Variables (Data source: WVS).

| <i>Country-Level (N=83)</i> | <i>Description</i> | <i>Values</i> | <i>Sources</i> | <i>Mean</i> | <i>SD</i> |
|--|---|---|----------------|-------------|-----------|
| Men make better leaders | Respondent's answer to question: "On the whole, men make better political leaders than women do?" | 1=strongly disagree, 2=disagree 3=agree, 4=strongly agree | WVS | 2.53 | 0.43 |
| Men have more right to scarce jobs | Respondent's answer to question: "when jobs are scarce, men should have more right to jobs than women?" | 1= disagree 2= neither 3= agree | WVS | 2.03 | 0.38 |
| Female labor force participation rate | Proportion of female population economically active | Numeric, as % of female population | World Bank | 48.67 | 15.10 |
| GDP/Capita | GDP divided by population size | Numeric, logged | World Bank | 9 | 1.06 |
| <i>Individual Level (N=195053)</i> | <i>Description</i> | <i>Values</i> | <i>Sources</i> | <i>Mean</i> | <i>SD</i> |
| Sex | Respondent's sex | Male=0, Female=1 | WVS | N/A | NA |
| Single/Never married | Respondent's marital status at time of the interview | 1= Married 2= Living together as married 3= Divorced 4= Separated 5= Widowed 6= Single/Never married | WVS | 2.62 | 2.17 |
| Having children | Number of children respondent has | 0= No child 1= one child ... 8= 8 children | WVS | 1.86 | 1.81 |
| Education | Highest education attained | 1= No formal education ... 9= University education, with degree | WVS | 4.61 | 2.40 |
| Income | Income group of respondent | 1= Lowest group ... 10=Highest group | WVS | 4.70 | 2.3 |
| Age | Age of respondent | 18-65 years old | WVS | 38.14 | 13 |

Table 8: Mixed-effects Regression Estimates of the Effect of Gender and Gender Status Beliefs on the Log-odds of being Self-employed (Data source: WVS)^a

| | (1) | (2) | (3) | (4) |
|---|-----------------------|-------------------------|-------------------------|-------------------------|
| Intercept | -1.906*** (0.109) | -3.039*** (0.343) | -3.088*** (0.353) | -3.297*** (0.347) |
| Female | -0.939*** (0.0692) | -0.958*** (0.0720) | -0.774* (0.323) | -0.206 (0.190) |
| Men make better leaders | | -0.464*** (0.0785) | -0.439*** (0.0888) | -0.467*** (0.0784) |
| Men have more right to scarce jobs | | 0.625*** (0.0513) | 0.626*** (0.0513) | 0.772*** (0.0620) |
| <i>Societal-level gender beliefs effect on the gender gap</i> | | | | |
| Men make better leaders X Female | | | -0.311*** (0.0397) | |
| Men have more right to scarce jobs X Female | | | | -0.374*** (0.0886) |
| <i>Individual-level controls</i> | | | | |
| Men make better leaders | | -0.00548 (0.00883) | -0.00550 (0.00883) | -0.00560 (0.00883) |
| Men have more right to scarce jobs | | -0.00802 (0.0103) | -0.00800 (0.0103) | -0.00724 (0.0103) |
| Single/Never married | | -0.0937*** (0.00433) | -0.0937*** (0.00433) | -0.0938*** (0.00433) |
| Children | | 0.00697 (0.00524) | 0.00695 (0.00524) | 0.00694 (0.00524) |
| Postsecondary degree or higher | | -0.121*** (0.00376) | -0.121*** (0.00376) | -0.121*** (0.00376) |
| Upper income group | | 0.0404*** (0.00365) | 0.0404*** (0.00365) | 0.0403*** (0.00365) |
| Age | | 0.00767*** (0.00074) | 0.00767*** (0.00074) | 0.00766*** (0.00074) |
| <i>Societal-level controls</i> | | | | |
| Female labor force participation rate (in %) | | 0.0232*** (0.00299) | 0.0230*** (0.00301) | 0.0230*** (0.00300) |
| Real GDP per capita (logged) | | 0.0152 (0.0244) | 0.0148 (0.0244) | 0.0136 (0.0244) |
| <i>Random effects</i> | | | | |
| Between-country female standard deviation | 0.347*** (0.0597) | 0.375*** (0.0647) | 0.359*** (0.0667) | 0.314*** (0.0557) |
| Radom Intercept (country) | 0.984 (0.163) | 1.054 (0.180) | 1.042 (0.179) | 1.003 (0.172) |
| Number of individuals | 195053 | 194796 | 194796 | 194796 |
| Number of countries | 83 | 83 | 83 | 83 |
| Log likelihood | -62985.9 | -61327.5 | -61327.3 | -61318.7 |
| Chi-squared | 184.2 | 3132.5 | 3139.1 | 3178.0 |

Standard errors in parentheses, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

a. These models controlled for individual-level beliefs that men make better leaders and have more right to scarce job.

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CHAPTER 3: HOW GOOD OR BAD IS ECONOMIC INEQUALITY FOR ENTREPRENEURSHIP: DOES A SOCIETY'S STAGE OF DEVELOPMENT MAKE A DIFFERENCE?

Organization theories are inherently concerned with understanding the connections between organizations and social inequalities. However, a plethora of theoretical and empirical analyses have been primarily focused on understanding the processes by which organizations, once formed, maintain and reproduce social inequalities. Insufficient attention has been paid to how societal-level economic inequality may potentially influence organizational emergence in the first place. This lack of theoretical and empirical evaluations of the potential connection between societal-level economic inequality and organizational emergence is particularly marked in entrepreneurship research. Theoretical and empirical examinations of the entrepreneurial process have been mainly focused on understanding the characteristics of the people who have become entrepreneurs, at the expense of examining structural conditions that give rise to entrepreneurship in the first place. This project fills this gap in the literature by theorizing about the social mechanism by which societal-level economic inequality influences the possibility that individuals would enter entrepreneurship and become business owners.

Furthermore, stratification research has now well-established that mechanisms underlying economic inequality tend to vary across societies and by development stages. Given the importance of economic development for inequality in the distribution of economic resources, this study will examine how economic development may potentially influence the way in which societal-level economic inequality relates to entrepreneurial development. To this end, the analysis will address the following questions: (1) how does societal-level economic inequality

influence the likelihood that an individual would become involved in entrepreneurial activities and eventually become a business owner? (2) How does a society's level of economic development influence the way in which societal-level economic inequality impacts the chances that individuals would engage in entrepreneurial efforts and become business owners?

This study addresses these questions by developing a macro theoretical framework linking societal-level economic inequality and economic development with the likelihood that people would become involved in entrepreneurial activities and business owners. The empirical analysis evaluates this theoretical framework using multilevel logistic regressions, indicators of involvement in early-stage entrepreneurial efforts, and indicators of ownership of an established business from the Global Entrepreneurship Monitor (GEM). Measures of economic development are from the Penn World Tables (Feenstra, Inklaar and Timmer 2015) and societal-level economic inequality indicators are from the World Standard Income Inequality Data Base (Solt 2016).

Consistent with the theoretical argument advanced in this paper, the results demonstrate that societal-level economic inequality impacts the likelihood that an individual would become involved in the entrepreneurial process and become the owner of an established business. The analysis also shows that a society's position in the global economic stratification system (measured as GDP per capital) influences how societal-level economic inequality affects the chances that its residents have of becoming engaged in entrepreneurial activities and the owners of established enterprises. That is, this analysis highlights that, overall, the greater the inequality in income distribution in the country, the more likely individuals are to become involved in entrepreneurial activities and become business owners. Evaluating the possibility that economic development may condition the way societal-level economic inequality influences

entrepreneurial entry and business ownership, the results show that economic inequality increases entrepreneurial entry and business ownership at low levels of economic development, whereas it decreases entrepreneurial entry and business ownership at high levels of economic development. In sum, these findings highlight the need for greater attention to be placed on understanding the characteristics of structural factors that give rise to entrepreneurship, as opposed to disproportionately emphasizing the characteristics of people who have become entrepreneurs and business owners. This analysis particularly demonstrates the importance of societal-level economic inequality and a society's position in the global economic stratification system in shaping the opportunities available to its residents to become involved in entrepreneurship, and ultimately become business owners.

The following section develops the theoretical framework that links macro-level economic inequality and the individual likelihood of entering entrepreneurship and becoming business owners and the potential moderating effect of economic development on this relationship. The next section describes the data and method used to evaluate this theoretical framework. The following section presents the results, which are discussed in the next section. The final sections illustrate the contributions of this study and its limitations, and also suggest ways that future research may improve on this work.

The Theoretical Link between Societal-Level Economic Inequality, Economic Development, and Entrepreneurship

Economic Inequality and Economic Development

The question about how economic inequality is related to economic development has long been a primary concern of social scientists, and particularly sociologists and economists. A popular narrative among scholars is that at early stages of industrialization capital is concentrated in the hands of small investors, which increases the national income gap. Higher industrial

capitalist production, on the other hand, increases the size of the middle class, which reduces national income inequality. This argument was officially formulated by Kuznets (1955), and has generated a large body of empirical and theoretical research showing mixed results on the relationship between industrialization and economic inequality. For example, Nielsen (1994) attributed the inverted-U shaped of the relationship between economic inequality and economic development to a combination of monotonic change (such as the spread of education) and transitional development process (such as labor shift from the agricultural sector to the modern sector, and population change).

Other research focused on advanced industrial economies has shown that income and wealth inequalities decreased during the late 1920s and the WWII periods, and has increased precipitously in the late 1970s (e.g., Atkinson, Piketty and Saez 2011; Grusky and Maclean 2016; Piketty 2014). For example, using US data from taxes, surveys, and national accounts and 2014 US dollars, Piketty, Saez, and Zucman (2016) found that the average income before taxes and transfers for the bottom 50% of American adults has remained at \$16,000 since 1980, whereas during the same period, the average income per capita grew to \$64,500 in 2014. That is, the share of national income that went to the bottom 50% was 20% in 1980, whereas it was only 12% in 2014. The authors also found that while the income share for the bottom 50% of American adults shrunk from 20% in 1980 to 12% in 2014, the income share for the top 1% increased to 20% (i.e., \$1.3 million) in 2014 from 12% (i.e., \$420,000) in 1980. That is, in 2014, the income of the top 1% of the adult population in the United States was 81 times the income share of the bottom 50%, whereas in 1980, the earnings of the top 1% were only 27 times those of the bottom 50%. These findings suggest a reversal of the inverted-U shaped argument focused on economic development and national income inequality. This reversal has led scholars to

suggest more nuanced explanations about changes in national economic inequality, especially when the focus is on cross-national variations in economic inequality. Although scholars have met with mixed results on the relationship between economic development and economic inequality in advanced industrial economies, research has consistently found economic inequality to be significantly higher and social mobility lower in less developed and developing economies compared with in advanced industrial economies (see Torche 2014, for a review of this literature).

The finding that income inequality is significantly higher in less developed and developing economies compared with developed economies suggests that economic development does matter for national economic inequality. The ambiguous relationship (or reversal of the inverted U-shaped relationship) between economic inequality and industrialization in advanced capitalist economies suggests that the social mechanisms underlying the relationship between economic development and economic inequality may differ across developed and less developed economies. The context specific nature of the relationship between economic development and economic inequality is deemed consequential for cross-societal differences in the process of organization founding. This is important because the organizational founding process has been found to be shaped by the structure of capitalist infrastructure development and the societal economic stratification structure. Thus, the interplay between economic development and societal-level economic inequality should matter for the organization founding process across societies. This paper speaks to this larger issue by theorizing about the mechanisms underpinning the relationship between economic inequality and entrepreneurial development and the potential role of a society's stage of development in shaping this relationship. More systematic and nuanced analyses of the connections between economic

inequality, economic development, and entrepreneurship may improve our understanding of the potential ways that economic inequality and development may influence social organization across space and time.

Economic Inequality and Entrepreneurship

Research on economic inequality and entrepreneurship is very limited. As a result, theories about the potential mechanisms through which inequality may be related to entrepreneurship is scant. Some previous research (mostly from economic literature) connecting entrepreneurship and inequality talks about the former in reference to risk-taking behavior and related rewards (Nireia and Aoki 2015). Little systematic analysis, however, has specifically focused on the relationship between macro-level economic inequality and business creation at both the early-stage of the process and among established enterprises, and how the nature of this relationship may potentially vary based on societies' development stages. Recent cross-national and empirical analysis has investigated the impact of societal-level economic inequality on business funding (Xavier-Oliveira et al 2015). However, no analysis has been conducted on the potential impact of inequality on the likelihood that people would be involved in starting a new business and of becoming owners of established enterprises. Moreover, research on the interplay between macro-level economic inequality and societies' development stages, and the consequences of this relationship for business creation has been virtually unexplored in organizational and entrepreneurship research. This is unfortunate because failing to theorize about the potential importance of a society's development stage for how economic inequality impacts entrepreneurship may potentially limit the depth of our understanding of the potentially complex relationship between economic inequality and entrepreneurship in particular, and organizational emergence, change, and persistence, as a whole. The present study aims to address this gap in the existing literature.

There have been some economic-incentive-based arguments about the potentially positive effects of economic inequality on economic innovation, entrepreneurship, and prosperity. The gist of the argument is that inequality creates an incentive for risk-taking and the potential for high rewards, promoting entrepreneurship, and innovation, all of which potentially facilitate wealth building and economic prosperity (Aghion and Bolton 1997; Shane 2014; Isenberg 2014). However, one could argue that inequality may not necessarily generate entrepreneurial entry because it creates economic incentives for two reasons. First, an incentive may not automatically translate into entrepreneurial activity. One needs to have the necessary resources to transform their entrepreneurial intentions (that might have resulted from economic incentives) into actual entrepreneurial entry. One well-documented impact of economic inequality is the marginalization of large portions of the population from access to needed resources for social and economic mobility. This argument is supported by research that has found that in societies where economic inequality is high, socio-economic mobility tends to be low (Corak 2013). Low social mobility and high economic inequality tend to restrict access to resources to a small portion of the population, effectively limiting the proportion of the population who could become entrepreneurs by preventing people from accessing the resources to transform their potential entrepreneurial intentions into reality. Second, for entrepreneurs to benefit from the high reward (which is argued to be inherent to entrepreneurship and innovation), there would need to be a large enough customer pool with adequate resources to purchase the goods and services that these entrepreneurs would provide. High income inequality, coupled with low social mobility, shrinks the middle-class, limiting the overall purchasing power of the economy. This could restrain potential risk taking, entrepreneurship, and innovation. The moral

of this argument is that increased inequality may not increase entrepreneurship because it creates incentives for risk-taking, as some have argued.

Furthermore, the argument about the positive impact of inequality on innovation and wealth building has been challenged by recent empirical evidence. Research has found that income inequality increased in the mid-1980s in OECD countries, while at the same time, economic growth also decreased (Cingano 2014). Building on previous research, this paper examines alternative explanations surrounding the relationship between economic inequality and entrepreneurship that take into account a country's economic development stage. The assumption is that economic development impacts economic inequality differently at different development stages, which in turn causes the social mechanisms via which economic inequality relates to the organization founding process to be different at various economic development levels. In summary, given that the level and changes in a country's economic inequality is partly shaped by its economic development level and trajectory, how national economic inequality impacts entrepreneurship should be conditioned by a country's economic development level, such that the effect of economic inequality on entrepreneurship should vary by countries' economic development level.

Economic Inequality, Economic Efficiency, and Entrepreneurship

One of the greatest contributions of the Industrial Revolution to the capitalist mode of production is the development of industrial capitalist infrastructure, which increased economic efficiency and the size of economic units, spurring professionalization. As a result, research has found that markets and firm sizes tend to be larger in advanced industrialized economies compared with less industrialized economies. In this section, the paper highlights how economic inequality may impact entrepreneurial entry through its impact on economic efficiency, access to

economic resources, and industrial capitalist infrastructure development across developed and less developed economies.

Economic inequality may constrain organizational performance and hinder firms' expansion by negatively impacting skill pools, available infrastructure, and access to other necessary resources. Economic inequality deprives large portions of the population of access to education, quality education, and health services, and also limits their purchasing power, as mentioned above. In societies characterized by high economic inequality, access to education and health services (which are crucial for worker productivity, and thereby organizational efficiency and growth) are available to only a small portion of the population. The greater the economic inequality, the smaller the portion of the population that would have access to these necessary resources. Thus, in high economic inequality contexts, firms would tend to produce under their efficiency potential, because the pool of high-skill labor necessary for improved productivity and innovation would be small. That is, the greater economic inequality, the smaller is the high-skill labor pool in a society. Thus, economic inequality would cause firms to underperform in the overall economy, which would cause organizational fields to fragment into many small organizations (as opposed to a few large ones). Organizational fragmentation in high economic inequality contexts would provide opportunities for new entrepreneurial entries. As a result, in countries where economic inequality is high, entrepreneurial entry may be high, because economic inequality prevents firms from expanding. This provides opportunities for new firms to fill the gap.

Economic inequality may also affect entrepreneurship through its impact on infrastructure development. Weber argued that large-scale capitalist enterprise development necessitates reliable bureaucratic and physical infrastructure development (on a large scale) that

only the State is capable of providing (1968 [1922])). However, economic inequality may prevent the State from acquiring the needed resources to build the necessary infrastructure for large-scale industrial capitalist development. High economic inequality increases the divide in access to resources between the rich and poor, which may have a doubly adverse impact on the State's ability to acquire resources to conduct its operations. First, high economic inequality concentrates economic resources and political power in the hands of a small minority at the expense of the majority. A disproportionately high share of economic resources vested in the hands of a small minority of the population limits the purchasing power of the majority, constraining the revenue that the State could raise from buying and selling goods and services. Second, political power being concentrated in the hands of a wealthy minority may further hinder the State's ability to raise revenue, as the wealthy may work to maintain economic inequality by influencing government policies toward adopting and implementing regressive tax policies. Regressive tax policies, combined with the limited purchasing power of the majority of the population (due to an increased income gap between the rich and the poor), would limit the ability of the State to raise the revenue necessary to finance the necessary infrastructure development for large-scale organization development. Thus, in the context in which inequality is high, the infrastructure development necessary for economic efficiency may be non-existent or underdeveloped. Consequently, high economic inequality should hinder the State's ability to build the necessary infrastructure for large-scale enterprise development, which creates an opportunity for the development of many small enterprises as opposed to a few large ones. This would positively affect the overall level of entrepreneurial entry, while at the same time adversely impacting the growth prospect of new enterprises. Thus, based on the above argument, the following hypotheses are formulated.

Hypothesis 1: Societal-level economic inequality will increase entrepreneurship.

Hypothesis 2a. Societal-level economic inequality will increase entrepreneurship at low levels of economic development.

Hypothesis 2b: Societal-level economic inequality will decrease entrepreneurship at high levels of economic development.

Data, Methods, and Measurement

Entrepreneurship Measures

Involvement in early-stage entrepreneurial activities and the ownership of established businesses are two measures of entrepreneurship used to evaluate this study's hypotheses. Both measures of entrepreneurship are from the Global Entrepreneurship Monitor (GEM). GEM is a country representative survey that is collected yearly across a wide range of countries. The first wave of data was collected in 1999, and the most recent GEM survey was conducted in 2014. GEM contains data for approximately 85 countries. The entrepreneurship data used here were collected from 2001-2012. 2012 is the latest wave of GEM data that is publicly available.

Early-stage entrepreneurship. GEM measures early-stage entrepreneurship by asking respondents whether they were, alone or with others, trying to start a new business, including any self-employment or selling any goods or services to others at the time of the interview. Possible answers were coded 1 for "yes" and 0 for "no." *Ownership of an established business.* GEM measured ownership of an established business by asking survey participants whether they owned an established business (not a nascent business) at the time of the interview. Possible answers were coded 1 for "yes" and 0 for "no." Table 1 presents detailed descriptions of these variables.

Societal-level Economic Inequality and Economic Development

Economic inequality data were merged with entrepreneurship data on country-year using GEM as the base data set. *Economic inequality* is measured by the Gini coefficient. The Gini coefficient is expressed as a percentage, ranging from 0 to 100. The closer a country's Gini coefficient is to zero, the less economically unequal the country; the closer Gini is to 100, the more unequal the country. Economic inequality indicators were drawn from the Standard World Income Inequality Database (Solt 2016). Two other commonly used sets of cross-national income inequality data are the Luxembourg Income Study (LIS) and the World Income Inequality data (WIID), produced by the World Institute for Development Economics Research of the United Nations University (UNU-WIDER). LIS provides the most reliable income inequality data, because LIS harmonizes concepts and measurements of income across countries to create income inequality measures (Solt 2016). However, LIS income inequality data are available for only a very limited number of countries and the data points are collected only every five years for some countries (Solt 2016). The UNU-WIDER database contains income inequality measures for a wider range of countries. However, it incorporates income data from countries with different concepts and measures of income, which reduces cross-country comparability. SWIID builds on the strength of these two income inequality data sets (UNU-WIDER and LIS) to maximize the number of countries in the LIS data set, while maintaining strong cross-country comparability. Based on the information from country years (household per capita income, household adult equivalent income, household without adjustment income, employee, and person) where the LIS and UN-WIDER data sets overlap, SWIID synchronizes LIS data with the UNU-WIDER data using Gini ratios from the LIS data and information on income concepts from the UNU-WIDER data. As a result, SWIID replicates the cross-country comparability of the LIS income inequality data and the large coverage of the UNU-WIDER

income inequality data. Further detail on the utilized methodology is provided in Solt (2014).

The countries under study here vary largely in the level of economic inequality. For example, the Gini coefficient is 62.09 in South Africa, 57.70 in Zambia, 45 in Mexico, 43 in Ghana, and 40.04 in Brazil. Consistent with previous research, these results show that economic inequality is lower in advanced industrial societies. For example, the Gini coefficient is 24.86 in Sweden, 26.19 in Finland, 29.43 in France, 28.94572 in Germany, and 37.96 in the United States.

Economic development is measured by real gross domestic product (GDP) per capita in US dollars. That is, GDP per capita is measured as real gross domestic product divided by the population size. Real GDP per capita data were drawn from the Penn World Tables (Feenstra, Inklaar and Timmer 2015). The countries under study here vary significantly in their level of economic development (measured as real GDP per capita in US dollars). For example, the average income per capita is \$ 1,270.149 in Ethiopia, \$3,167.262 in Ghana, and \$5,213.28 in Nigeria, whereas it is \$11,636.75 in South Africa, \$14,742.99 in Brazil, \$15,897.31 in Chile, and \$16,749.55 in Romania. As one would expect, the results show that the average GDP per capita is significantly higher in more advanced industrial countries. For example, the average GDP per capita is \$58,643.36 in Switzerland, \$50,517.59 in the United States, \$44,940.29 in Australia, \$41,876.4 in Germany, and \$34,941.02 in Japan.

Individual-level and Societal-level Controls

The *income* variable is coded in GEM into three categories: (1) the lowest 33rd percentile, (2) the middle 33rd percentile, (3) and the upper 33rd percentile. The education variable is coded into four categories: (1) no formal education, (2) some secondary education, (3) secondary education, and (4) postsecondary education or higher. The narrative regarding entrepreneurs' beliefs about the distribution of capitalist production often assumes that potential entrepreneurs would be more likely to hold beliefs that support high social and economic inequality compared

with non-entrepreneurs. As a result, this analysis accounts for an individual economic-egalitarian attitude. An economic-egalitarian belief is measured by asking individuals whether they believe that the residents of their home countries prefer a uniform living standard. Individuals who responded no are coded “1,” those who are neutral are coded “2,” and those who answered yes are coded “3” (see Table 1).

It has also been argued that individual perceptions about entrepreneurship and how society evaluates their status as entrepreneurs matter for their decision to enter entrepreneurship (Kelley, Bosma and Amorós 2011). Thus, individual perceptions about the prestige of entrepreneurship as an occupation may influence a person’s decision to enter entrepreneurship. Individual perceptions about how others or society value entrepreneurship are captured in GEM data by three questions. First, GEM asks individuals whether they believe people growing a new successful business receive high status. Second, individuals are asked whether starting a business is perceived as a good career choice by their society. Third, respondents are queried about whether entrepreneurial development receives media coverage in their society. Possible responses to these questions are no (coded “1”), neutral (coded “2”), and yes (coded “3”). While individual-level attitudes toward economic inequality and entrepreneurship may be important in shaping differences in entrepreneurial effort between individuals within a country, societal-level beliefs about economic and entrepreneurship as a career may matter for cross-national differences in entrepreneurship development and business ownership. Thus, this analysis also accounts for societal-level economic-egalitarian beliefs and the attitude toward entrepreneurship by calculating the average of individual responses to those questions (see Table 1 for a description of these variables).

Method

The theoretical argument advanced in this paper is that understanding the link between macro-level economic inequality, economic development, and entrepreneurship may improve our knowledge of the structural causes of differences in the propensity to become entrepreneurs across individuals. The data used in this study depict a hierarchical structure, where individual-level factors are nested into a country. Thus, based on the theoretical argument and the hierarchical structure of the data, this analysis uses multilevel logistic regressions, which permits a simultaneous estimation of macro- and micro-level effects on the individual likelihood of entrepreneurial entry and business ownership. The multi-level method enables this analysis to simultaneously examine the potential impacts of economic inequality, individual characteristics, and the moderating impact of economic development on the effect of economic inequality on individuals' chances of becoming entrepreneurs and business owners. Thus, the theoretical arguments advanced in this paper are modeled in the following equations.

$$\text{Equation 1: Entrepreneurial entry}_{ij} = \beta_{0j} + \beta_1(\text{Gini coefficient}) + \epsilon_{ij}$$

$$\text{Equation 2: Entrepreneurial entry}_{ij} = \beta_{0j} + \beta_1(\text{Gini coefficient}) + \beta_2X + \beta_3Z + \epsilon_{ij}$$

Equation 1 is the basic model testing cross-country variation in individual entrepreneurial entry and business ownership (β_{0j}), and the effect of societal-level economic inequality without any controls. Equation 2 controls for both individual factors (i.e., represented by vector X) and country-level factors (i.e., represented by vector Z). In equations 1 and 2, i denotes individual- and j represents county-level effects. It is assumed that the distribution ϵ_{ij} is random normal, and has a mean of 0 and a variance σ^2 . As mentioned above, X represents the vector of individual-level controls and Z is the vector of country-level controls (see Table 1).

Modeling country-level effects. To explore the potential moderating effect of economic development on the impact of inequality on entrepreneurial entry and business ownership, the

paper explored the effect of the interaction between economic inequality and economic development on the intercept (β_{0j}) (from equations 1 and 2). This is done in two stages (equations 3 and 4). First, equation 3 models the interaction between real GDP per capita and the Gini coefficient. Second, equation 4 models the interaction between real GDP per capita squared and the Gini coefficient.

Equation 3: $\beta_{0j} = \gamma_{00} + \gamma_{01}(\text{Gini coefficient}) + \gamma_{02}(\text{real GDP per capita}) + \gamma_{03}(\text{real GDP per capita} \times \text{Gini coefficient}) + \mu_{0j}$

Equation 4: $\beta_{0j} = \gamma_{00} + \gamma_{01}(\text{Gini coefficient}) + \gamma_{02}(\text{GDP per capita}) + \gamma_{03}(\text{real GDP per capita squared}) + \gamma_{04}(\text{real GDP per capita} \times \text{Gini coefficient}) + \gamma_{05}(\text{real GDP per capita squared} \times \text{Gini coefficient}) + \mu_{0j}$

In equations 3 and 4, j indicates the country-level impact. β_{0j} is the intercept of the base model (i.e., equation 1) and measures an individual's entrepreneurial entry adjusting for individual characteristics, whereas μ_{0j} represents country-level errors.

Results

This section describes the results of the models constructed in the method section to test the theoretical arguments advanced in this paper. That is, this section evaluates the argument that societal-level economic inequality will increase entrepreneurship (i.e., H1), the proposition that societal-level economic inequality will increase entrepreneurship at low economic development levels (H2), and the supposition that societal-level economic inequality will decrease entrepreneurship at high levels of economic development (i.e., H3). These propositions are evaluated in two phases. The first phase tests the three hypotheses based on involvement in early-stage entrepreneurship. The second stage examines these hypotheses using ownership of an established business as a measure of entrepreneurship.

Modeling the Effect of Economic Inequality on Early-stage Entrepreneurship, Business Ownership and the Moderating Effect of Economic Development on the Effect of Economic Inequality

Early-stage entrepreneurship. The results of this analysis are presented in Table 3 (Models 1-4). Model 1 is the base model (i.e., equation 1). It estimated the effect of societal-level economic inequality on the log odds of being involved in early-stage entrepreneurial activities without controlling for the other factors described in Table 1. Model 1 shows that societal-level economic inequality increases the likelihood that an individual would be involved in early-stage entrepreneurship. This model also shows that the degree to which individuals are involved in early-stage entrepreneurship varies significantly across the 65 countries included in this analysis. This is demonstrated by the statistical significance of the between-country standard deviation of the model intercept (i.e., the model's random intercept, as described in Equation 1). Model 2 tests the robustness of the results from Model 1 by including the individual- and country-level control variables described in Table 1. Model 2 shows that, controlling for individual education, age, income, perceptions about economic inequality, and attitude toward entrepreneurship (see Table 1 for a description of these variables), the coefficient for the Gini coefficient is positive and significant (at $p\text{-value} < 0.001$). Thus, the robustness of the finding that societal-level economic inequality increases the likelihood that an individual would engage in starting up a new business supports the first hypothesis that societal-level economic inequality will increase entrepreneurship.

Models 3 and 4 test the second and third propositions of this paper. That is, these models evaluate the arguments that at low levels of economic development, economic inequality will increase entrepreneurship (H2a), whereas at high economic development levels, economic inequality will decrease entrepreneurship (H2b). To this end, the analysis specifies two separate interactions terms. That is, an interaction term between economic inequality (i.e., the Gini

coefficient) and economic development (i.e., real GDP per capita) is specified and another interaction term between real GDP per capita squared and societal-level economic development is used. In models 3 and 4, log real GDP per capita is mean-centered in order to avoid potential multicollinearity.

First, Model 3 estimates the interaction between real GDP per capita and the Gini coefficient. That is, Model 3 does not account for a potential non-linear relationship between economic development and the effect of economic inequality on entrepreneurship that is suggested in this paper's theoretical argument. Thus, Model 3 shows that the coefficient of the interaction term between economic development and economic inequality is negative and significant (at $p\text{-value} < 0.001$). This negative and significant coefficient indicates that the greater a society's economic development the less likely that individuals would engage in starting a new business. This result provides some support for the third hypothesis that at high levels of economic development, economic inequality will decrease entrepreneurship (H2b). Figure 2 illustrates this relationship. It shows that at low levels of economic development the effect of economic inequality on early-stage entrepreneurial entry is positive. However, as economic development increases the effect of the Gini decreases significantly.

Model 4 estimate the interaction term between real GDP per capita squared and the Gini coefficient. In doing so, this model accounts for the non-linear relationship between economic development and the effect of economic inequality on early-stage entrepreneurial activities. Similar to the result of Model 3, the coefficient of the interaction term is statically significant, but it is positive. This seems to indicate that at high levels of economic development, societal-level economic inequality decreases involvement in early-stage entrepreneurship. But Figure 2 shows a clearer picture of the conditioning effect of economic development on the influence of

economic inequality on early-stage entrepreneurship. Figure 2 presents the marginal effect of the Gini coefficient on early-stage entrepreneurship by the log real GDP per capita squared to facilitate interpretation and to examine the potentially non-linear relationship between economic development and the effect of the Gini on early-stage entrepreneurship. Figure 2 presents the marginal effect of the Gini coefficient on early-stage entrepreneurship by the log real GDP per capita squared to facilitate interpretation and to clearly examine the potentially non-linear relationship between economic development and the effect of the Gini coefficient on early-stage entrepreneurship. Figure 2 shows an inverted U-shaped relationship between log real GDP per capita squared and the effect of societal-level economic inequality (i.e., the Gini coefficient). This result presents a clearer picture of the non-linear relationship between economic development and the effect of societal-level economic inequality on early-stage entrepreneurship. That is, it shows that at low levels of economic development, societal-level economic inequality increases the chance that individuals would become involved in early-stage entrepreneurship. However, at high levels of economic development, societal-level economic inequality decreases early-stage entrepreneurial entry. In sum, these results provide support for the argument advanced in this paper that at low levels of economic development, societal-level economic inequality will increase entrepreneurship (i.e., H2a), whereas at high levels of economic development, societal-level economic inequality will decrease entrepreneurship (i.e., H2b).

Ownership of an established business. Table 4 presents the results of the analysis of the effect of economic inequality on the ownership of an established business and the moderating effect of economic development on the effect of the Gini coefficient. Model 1 in Table 4 is the base model and shows that economic inequality positively impacts ownership of an established

business. Model 2 augments Model 1 by controlling for individual- and country-level factors to test the robustness of the result of Model 1. Model 2 shows that the effect of the Gini remains positive and significant after accounting for individual- and country-level control variables (at $p\text{-value} < 0.001$). That is, controlling for individual characteristics and relevant societal-level factors, societal-level economic inequality increases ownership of established businesses. Thus, these findings support the first hypothesis that economic inequality will increase entrepreneurship.

Models 3 and 4 in Table 4 reevaluate the hypotheses that at low levels of economic development economic inequality will increase entrepreneurship (H2a), whereas at high levels of economic development, economic inequality will decrease entrepreneurship (H2b). To this end, Model 3 specifies an interaction term between economic development (i.e., log real GDP per capita) and economic inequality (the Gini coefficient). Model 4 specifies an interaction term between log real GDP per capita squared and the Gini coefficient to account for the potential non-linear relationship between economic development and the effect of societal-level economic inequality on the ownership of an established business. Similarly to Models 3 and 4 in Table 3, log real GDP per capita is mean-centered in Models 3 and 4 in Table 4 to avoid potential multicollinearity.

Thus, Model 3 in Table 4 shows that the interaction between log real GDP per capita and the Gini coefficient is negative and significant (at $p\text{-value} < 0.01$). The negative and significant coefficient of the interaction term between log real GDP per capita means that economic development decreases the effect of economic inequality on business ownership. That is, the more prosperous a country, the lower the effect of economic inequality on business ownership. This result is illustrated by Figure 3. Figure 3 shows that at low levels of economic development,

the effect of the Gini coefficient on the ownership of an established business is positive. The Gini coefficient effect decreases at high levels of economic development.

The interaction term between log real GDP capita squared in Model 4 accounts for this non-linear relationship between economic development and the effect of societal-level economic inequality on the ownership of an established business. Similar to Figure 2, Figure 3 illustrates this non-linear relationship, showing an inverted U-shape between economic development and the effect of the Gini coefficient on business ownership. It shows that at low levels of log real GDP per capita squared, the Gini coefficient increases the ownership of established businesses in a country. On the other hand, at high levels of economic development, the Gini coefficient decreases business ownership in a country. What these results mean is that societal-level economic inequality promotes business ownership in less economically prosperous countries, whereas it discourages business ownership in economically prosperous countries. Similar to the results displayed in Table 3, these results support the hypotheses advanced in this paper that at low levels of economic development, societal-level economic inequality will increase entrepreneurship (i.e., H2a), whereas at high levels of economic development, societal-level economic inequality will decrease entrepreneurship (H2b).

Discussion and Conclusion

Organization research has now firmly established that the structure of the stratification system influences the process of organization founding. However, empirical analysis of the process by which a society's economic stratification structure influences organization founding lags behind theoretical research in this area. This is partly due to a disproportionate emphasis on understanding the characteristics of people who are involved in entrepreneurship and who found organizations, coupled with a downplaying of questions related to the characteristics of the conditions facilitating organizational emergence and entrepreneurship. This paper addresses this

issue by investigating two aspects of conditions pertaining to the process of entrepreneurial development and business ownership, namely societal-level economic inequality and economic development. That is, this paper investigates the interplay between a society's economic stratification structure and economic development, and the consequences of this relationship for the likelihood that an individual would become an entrepreneur or business owner. In doing so, this analysis examines how a society's level of economic inequality impacts the likelihood that its members would engage in entrepreneurial activities and become owners of an established business, and how this relationship may be altered by a society's development stage.

Using multilevel analytic techniques that account for the context-specific nature of the process via which economic stratification is related to entrepreneurship, the analysis examines the impact of economic inequality on the chance that an individual will become an entrepreneur and business owner. The results show that economic stratification increases the likelihood that an individual would become an entrepreneur and business owner. This is demonstrated by the findings that societal-level economic inequality increases both individuals' chances of being involved in early-stage entrepreneurship (Table 3, Model 2) and their chances of becoming business owners (Table 4, Models 2).

As stated in the theoretical mechanism section, the positive effect of inequality on entrepreneurship may be due to the fragmentation of the organizational field into small-sized economic units. That is, economic inequality may cause firms to operate at less than their potential capacity, which would leave space for new firms to enter the market. This insight is consistent with previous research that has argued that economic inequality tends to negatively impact workers' commitment and satisfaction with their work. Low level of commitment to and satisfaction with one's work would adversely impact workers' productivity, thereby negatively

impacting a firm's ability to grow. Low growth would create space for new firms to enter the industry. The negative effect on firm size may also be due to the adverse effect of economic inequality on overall purchasing power in the economy. Low-purchasing power in the overall economy would limit the market size for goods and services, preventing firms from expanding. As a result, this would create space for new firms to enter the market. In summary, this analysis supports the long-standing argument about the importance of a society's economic stratification system for the organizational founding process.

Another key argument of this study is that, given that the mechanism by which economic inequality is produced has been found to be shaped by capitalist industrial development, the process by which societal-level economic inequality shapes entrepreneurship varies by societies' development stage. The present analysis found evidence for the importance of economic development in how societal-level economic inequality influences entrepreneurial entry and business ownership. This is shown by the result that economic development decreases the effect of economic inequality on involvement in early-stage entrepreneurial efforts and on becoming the owner of an established business (Table 4, Model 4 and Table 3, Model 3). That is, this analysis shows that in the context of low economic development, increased economic inequality is associated with a greater likelihood that an individual would become engaged in starting a new business and the owner of an established business.

On the other hand, the results show that in high economic development contexts, increased economic inequality adversely impacts the likelihood that an individual would start a new business and become the owner of an established business. This insight is supported by the finding in Figures 2 and 4 showing an inverted U-shaped relationship between a society's level of economic development and the effect of societal-level economic inequality on an individual's

chance of becoming engaged in early-stage entrepreneurship and becoming the owner of an established business. In summary, this analysis highlights the underlying complexity in the process of entrepreneurship development. It shows that the interplay between structural conditions, such as economic inequality and economic development, is important for understanding entrepreneurship sources. This analysis also highlights that a country's position in the global economic stratification system matters for the extent to which its members may become involved in the entrepreneurial process and become business owners.

Contribution

The analysis advanced this literature in three key ways. The first contribution of this paper lies in its empirical examination of the long-standing theory regarding the importance of a context's social stratification system for the entrepreneurial process. Second, a large body of research has shown that economic inequality has increased in most countries around the world in recent decades. However, little attention has been paid to the potential impact of societal-level economic inequality on the entrepreneurial process. This study addresses this gap in the literature by showing that in a context characterized by high economic inequality, individuals are likely to become entrepreneurs and business owners.

Third, economic inequality has been shown to be strongly associated with a society's development stage (Kuznets 1950). Entrepreneurship, on the other hand, has been implicated in economic development and growth. However, little attention has been paid to the potential connection and feedback effect between entrepreneurship, economic inequality, and economic development. Thus, this paper advances previous research by demonstrating that a society's level of development conditions how societal-level economic inequality impacts entrepreneurial entry and business ownership. In summary, this paper advances the literature about sources of entrepreneurial development by turning attention on understanding the characteristics of the

conditions that facilitate entrepreneurial development as opposed to the more simplistic focus, in most research, on the characteristics of individuals who become entrepreneurs.

Limitations and Suggestions for Future Research

The key argument of this paper is that a society's economic stratification system and its economic development stage should be important for the entrepreneurial process. The empirical analysis showed that economic inequality does condition the chances that individuals have of becoming entrepreneurs. That is, the results show that in contexts characterized by high income inequality, individuals are likely to become entrepreneurs. However, this relationship is reversed when accounting for a society's level of economic development. It shows that economic inequality decreases entrepreneurship at high levels of economic development, whereas it increases entrepreneurship at low levels of economic development. Thus, these findings support the argument advanced in this paper, stating that economic inequality will increase entrepreneurship (H1) and that societal-level economic inequality will increase entrepreneurship at low levels of economic development (H2a), whereas it will decrease entrepreneurship at high levels of economic development.

However, this analysis did not directly test the mechanism underpinning the differential effect of economic inequality on entrepreneurship in developed and less developed economies. Research has found education to be an important factor in shaping the process of economic growth, as well as the rate of entrepreneurial entry in a society. It has also been shown that returns to education tend to vary by development stage. For example, in regard to the effect of education on economic growth (i.e., GDP per capita), it has been found that returns to primary and secondary education tend to be higher in less developed economies, whereas returns to postsecondary education and higher are greater in developed economies. Because education has been found to be an important factor in shaping entry into entrepreneurship, education may be a

potential mechanism through which economic development shapes the relationship between societal-level economic inequality and entrepreneurship. Thus, future research may investigate the interplay between economic development and education, and the potential consequence of the interplay between education and economic development for the relationship between economic inequality and entrepreneurship. Research may investigate in greater detail how educational access and quality influence the relationship between economic inequality and entrepreneurship in advanced and less advanced industrial societies. Responses to this question may improve our understanding of the interplay between individual and contextual factors in determining who becomes an owner of capitalist production. In conclusion, answers to this question will further improve our understanding of the characteristics of the conditions facilitating entrepreneurship as opposed to the disproportionate focus of most existing research on understanding the characteristics of individuals who become entrepreneurs.

Table 3.1: Mean, Standard Deviation and Range of the Key Variables Used in this Analysis

| | N | Mean | SD | Min | Max |
|--|--------|----------|----------|----------|----------|
| Early-stage Entrepreneurship | 181795 | .114 | .318 | 0 | 1 |
| Owner of an established business | 177725 | .139 | .346 | 0 | 1 |
| Gini coefficient (x100) | 65 | 38.967 | 8.495 | 22.890 | 62.197 |
| Log real GDP per capita ^a | 65 | 9.783 | .774 | 7.147 | 11.042 |
| Real GDP per capita | 65 | 22433.69 | 13334.83 | 1270.149 | 62469.44 |
| Educational attainment | 181795 | 3.158 | 1.376 | 1 | 6 |
| Income | 181795 | 2.495 | 1.165 | 1 | 4 |
| Female | 181795 | .512 | .4999 | 0 | 1 |
| Age | 181795 | 39.057 | 13.043 | 15 | 65 |
| <i>Individual-level entrepreneurship beliefs</i> | | | | | |
| Preference for uniform living standard | 181795 | 2.291 | .932 | 1 | 3 |
| Starting a business is a good career | 181795 | 2.375 | .895 | 1 | 3 |
| Successful business person has high status | 181795 | 2.402 | .889 | 1 | 3 |
| Large media coverage for new businesses | 181795 | 2.224 | .956 | 1 | 3 |
| <i>Country-level entrepreneurship beliefs</i> | | | | | |
| Preference for uniform living standard | 65 | 2.291 | .261 | 1.420 | 2.908 |
| Starting a business is a good career | 65 | 2.375 | .264 | 1.615 | 2.891 |
| Successful business person has high status | 65 | 2.402 | .222 | 1.826 | 2.929 |
| Large media coverage for new businesses | 65 | 2.224 | .282 | 1.473 | 2.901 |

a. In the multivariate analysis, log real GDP per capital is mean-centered to avoid potential multicollinearity.

Table 3.2: Pairwise Correlations Between the Dependent and Independent Variables Used in this Analysis

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
|-----------|-----------|-----------|-----------|-----------|-----------|------------|------------|-----------|-------------|-----------|----------|-----------|-----------|----------|----------|----------|
| 1 | 1 | | | | | | | | | | | | | | | |
| 2 | 0.416*** | 1 | | | | | | | | | | | | | | |
| 3 | 0.143*** | 0.108*** | 1 | | | | | | | | | | | | | |
| 4 | -0.176*** | -0.171*** | -0.570*** | 1 | | | | | | | | | | | | |
| 5 | -0.177*** | -0.171*** | -0.590*** | 0.998*** | 1 | | | | | | | | | | | |
| 6 | 0.0888*** | 0.0510*** | 0.933*** | -0.241*** | -0.267*** | 1 | | | | | | | | | | |
| 7 | 0.0162*** | -0.019*** | 0.714*** | 0.156*** | 0.131*** | 0.918*** | 1 | | | | | | | | | |
| 8 | -0.011*** | -0.061*** | -0.174*** | 0.293*** | 0.293*** | -0.080*** | 0.0347*** | 1 | | | | | | | | |
| 9 | 0.0542*** | 0.0702*** | 0.00169 | 0.0087*** | 0.0092*** | 0.00526*** | 0.0092*** | 0.249*** | 1 | | | | | | | |
| 10 | 0.00201 | 0.0115*** | -0.013*** | 0.0275*** | 0.0248*** | 0.00175*** | 0.0152*** | -0.054*** | -0.038*** | 1 | | | | | | |
| 11 | 0.0581*** | 0.0570*** | 0.120*** | -0.139*** | -0.143*** | 0.0837*** | 0.0283*** | 0.0935*** | -0.031*** | 0.156*** | 1 | | | | | |
| 12 | 0.0395*** | 0.0499*** | 0.0775*** | -0.126*** | -0.125*** | 0.0400*** | 0.00699*** | 0.0681*** | 0.0160*** | 0.117*** | 0.236*** | 1 | | | | |
| 13 | 0.0667*** | 0.0745*** | 0.161*** | -0.133*** | -0.134*** | 0.133*** | 0.0826*** | 0.0507*** | 0.00804*** | 0.104*** | 0.189*** | 0.209*** | 1 | | | |
| 14 | 0.00461 | 0.0406*** | -0.045*** | 0.0993*** | 0.0895*** | 0.00631*** | 0.0549*** | 0.0207*** | 0.00473*** | 0.277*** | 0.119*** | 0.0806*** | 0.0659*** | 1 | | |
| 15 | 0.149*** | 0.156*** | 0.410*** | -0.477*** | -0.490*** | 0.286*** | 0.0970*** | -0.151*** | -0.00287*** | 0.113*** | 0.292*** | 0.145*** | 0.154*** | 0.407*** | 1 | |
| 16 | 0.126*** | 0.175*** | 0.314*** | -0.509*** | -0.507*** | 0.162*** | 0.0283*** | -0.204*** | 0.0234*** | 0.0905*** | 0.172*** | 0.247*** | 0.167*** | 0.327*** | 0.588*** | 1 |
| 17 | 0.158*** | 0.196*** | 0.551*** | -0.453*** | -0.458*** | 0.455*** | 0.283*** | -0.176*** | 0.0238*** | 0.0624*** | 0.154*** | 0.141*** | 0.292*** | 0.225*** | 0.526*** | 0.570*** |

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

1= Early-stage entrepreneurship, 2=ownership of an established business, 3=Gini coefficient, 4=Log real GDP per capita, 5= Log real GDP per capita squared, 6=GDP x Gini, 7=Log real GDP per capita squared x Gini, 8=education, 9=income; **individual level beliefs**: 10= uniform living standard, 11= business is a good career, 12= business people have high status, 13= high praise for new businesses ; **country-level beliefs**: 14= uniform living standard, 15= business is a good career, 16= business people have high status, 17= high praise for new businesses

Table 3.3: Mixed-effects Regression Estimates of the Effect of Societal-level Economic Inequality and Economic Development on the Log-odds of Early-stage Entrepreneurship

| | (1) | (2) | (3) | (4) |
|---|------------------------|---------------------------|---------------------------|---------------------------|
| Intercept | -3.607*** (0.256) | -4.320*** (0.385) | -20.42*** (4.679) | -14.31* (5.861) |
| Gini Coefficient (x100) | 0.0366*** (0.00608) | 0.0392*** (0.00645) | 0.0314*** (0.00731) | 0.0328*** (0.00951) |
| Log real GDP per capita | | | 1.599*** (0.460) | 1.006 (0.571) |
| Log real GDP X Gini (x100) | | | -0.0403*** (0.00964) | -0.00621 (0.0123) |
| Log real GDP per capita squared | | | | -2.331*** (0.538) |
| Log real GDP per capita squared X Gini (x100) | | | | 0.0610*** (0.0137) |
| <i>Individual-level controls</i> | | | | |
| Female | | -0.394*** (0.0156) | -0.394*** (0.0156) | -0.393*** (0.0156) |
| Age | | -0.00933*** (0.000627) | -0.00930*** (0.000627) | -0.00925*** (0.000627) |
| Postsecondary degree or higher | | 0.0829*** (0.00663) | 0.0812*** (0.00663) | 0.0834*** (0.00666) |
| Upper 33 rd income percentile | | 0.102*** (0.00702) | 0.105*** (0.00704) | 0.103*** (0.00706) |
| All inhabitants prefer uniform living standard | | 0.00362 (0.00874) | 0.00360 (0.00875) | 0.00372 (0.00875) |
| Starting a business is considered as a good career | | 0.0582*** (0.00985) | 0.0582*** (0.00985) | 0.0583*** (0.00985) |
| Persons growing a successful new business receive high status | 0.0145 | 0.0146 (0.00963) | 0.0145 (0.00963) | (0.00963) |
| A lots of media coverage for new businesses | | 0.0769*** (0.00907) | 0.0769*** (0.00907) | 0.0769*** (0.00907) |
| <i>Country-level controls</i> | | | | |
| All inhabitants prefer uniform living standard | | 0.308*** (0.0799) | 0.302*** (0.0798) | 0.0615 (0.0950) |
| Starting a business is considered as a good career | | -0.0452 (0.145) | -0.114 (0.148) | 0.223 (0.172) |

| | | | | |
|--|----------|----------|-----------|-----------|
| Persons growing a successful new business receive high status | 0.187 | 0.554*** | 0.499** | |
| | | (0.141) | (0.159) | (0.165) |
| A lots of media coverage for new businesses | | -0.346** | -0.415*** | -0.593*** |
| | | (0.112) | (0.119) | (0.132) |
| <i>Random effect</i> | | | | |
| Between-country intercept standard deviation | 0.497*** | 0.534*** | 0.514** | 0.943 |
| | (0.0907) | (0.100) | (0.118) | (0.303) |
| Observations | 181795 | 181795 | 181795 | 181795 |
| Number of countries | 65 | 65 | 65 | 65 |
| Log likelihood | -59194.5 | -58359.5 | -58345.6 | -58331.0 |
| Chi-squared | 36.21 | 1660.9 | 1687.3 | 1696.6 |

Standard errors in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

- a. In models 3 and 4, log real GDP per capital is mean-centered to avoid multicollinearity (recommended by Ted Mouw and Martin Ruef at the dissertation hearing)

Table 3.4: Mixed-effects Regression Estimates of the Effect of Societal-level Economic Inequality and Economic Development on the Log-odds of Established Business Ownership

| | (1) | (2) | (3) | (4) |
|---|------------------------|-------------------------|-------------------------|-------------------------|
| Intercept | -3.964*** (0.258) | -6.623*** (0.360) | -14.15** (4.362) | -10.36* (4.909) |
| Gini Coefficient (x100) | 0.0501*** (0.00600) | 0.0431*** (0.00637) | 0.0302*** (0.00712) | 0.0291*** (0.00829) |
| Log real GDP per capita | | | 0.754 (0.426) | 0.387 (0.475) |
| Log real GDP X Gini (x100) | | | -0.0254** (0.00918) | -0.0105 (0.0113) |
| Log real GDP per capita squared | | | | -0.847* (0.408) |
| Log real GDP per capita squared X Gini (x100) | | | | 0.0221* (0.00996) |
| <i>Individual-level controls</i> | | | | |
| Female | | -0.543*** (0.0149) | -0.543*** (0.0149) | -0.543*** (0.0149) |
| Age | | 0.0195*** (0.000586) | 0.0196*** (0.000586) | 0.0196*** (0.000586) |
| Postsecondary degree or higher | | -0.0219*** (0.00624) | -0.0231*** (0.00623) | -0.0227*** (0.00624) |
| Upper 33 rd income percentile | | 0.188*** (0.00666) | 0.190*** (0.00668) | 0.189*** (0.00670) |
| All inhabitants prefer uniform living standard | | -0.00116 (0.00834) | -0.00118 (0.00834) | -0.00118 (0.00834) |
| Starting a business is considered as a good career | | 0.0469*** (0.00917) | 0.0468*** (0.00918) | 0.0468*** (0.00918) |
| Persons growing a successful new business receive high status | 0.0124 | 0.0125 (0.00909) | 0.0125 (0.00909) | 0.0125 (0.00909) |
| A lots of media coverage for new businesses | | 0.0586*** (0.00851) | 0.0586*** (0.00851) | 0.0586*** (0.00851) |
| <i>Country-level controls</i> | | | | |
| All inhabitants prefer uniform living standard | | 0.548*** (0.0805) | 0.492*** (0.0806) | 0.384*** (0.0931) |
| Starting a business is considered as a good career | | -1.075*** (0.136) | -1.210*** (0.138) | -1.066*** (0.152) |

| | | | | |
|--|----------|----------|----------|----------|
| Persons growing a successful new business receive high status | 1.055*** | 1.453*** | 1.409*** | |
| | | (0.138) | (0.161) | (0.164) |
| A lots of media coverage for new businesses | | 0.203 | 0.189 | 0.143 |
| | | (0.121) | (0.128) | (0.132) |
| <i>Random effect</i> | | | | |
| Between-country intercept standard deviation | 0.661* | 0.728 | 0.580** | 0.639* |
| | (0.123) | (0.137) | (0.115) | (0.141) |
| Observations | 177725 | 177725 | 177725 | 177725 |
| Number of countries | 62 | 62 | 62 | 62 |
| Log likelihood | -65052.1 | -63201.0 | -63186.5 | -63183.8 |
| Chi-squared | 69.74 | 3640.1 | 3664.7 | 3668.8 |

Standard errors in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

- b. In models 3 and 4, log real GDP per capital is mean-centered to avoid multicollinearity (recommended by Ted Mouw and Martin Ruef at the dissertation hearing).

Figure 3.1: Theoretical Link between Societal-level Economic Inequality, Economic Development and Entrepreneurship

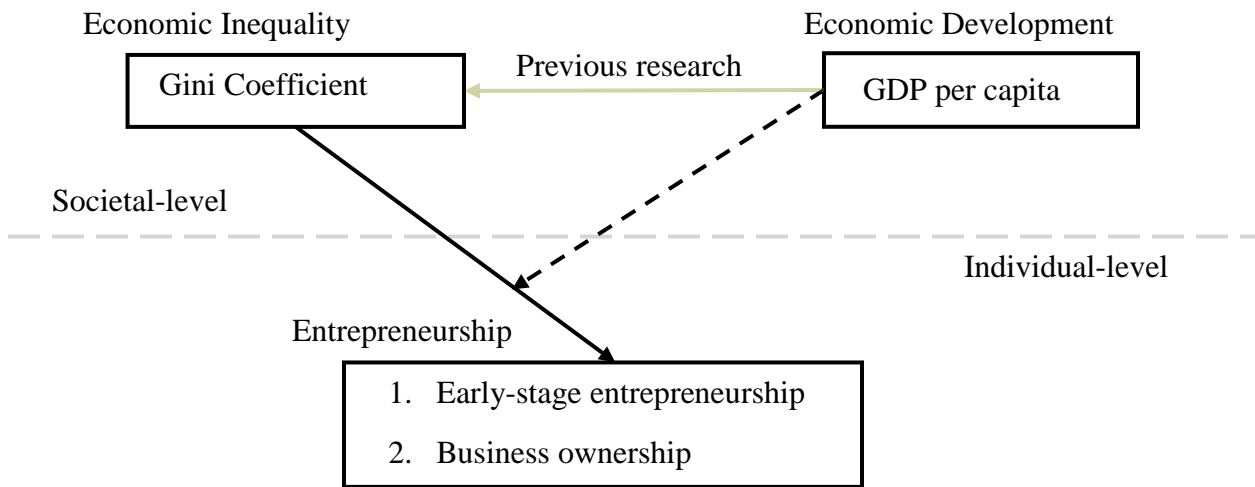
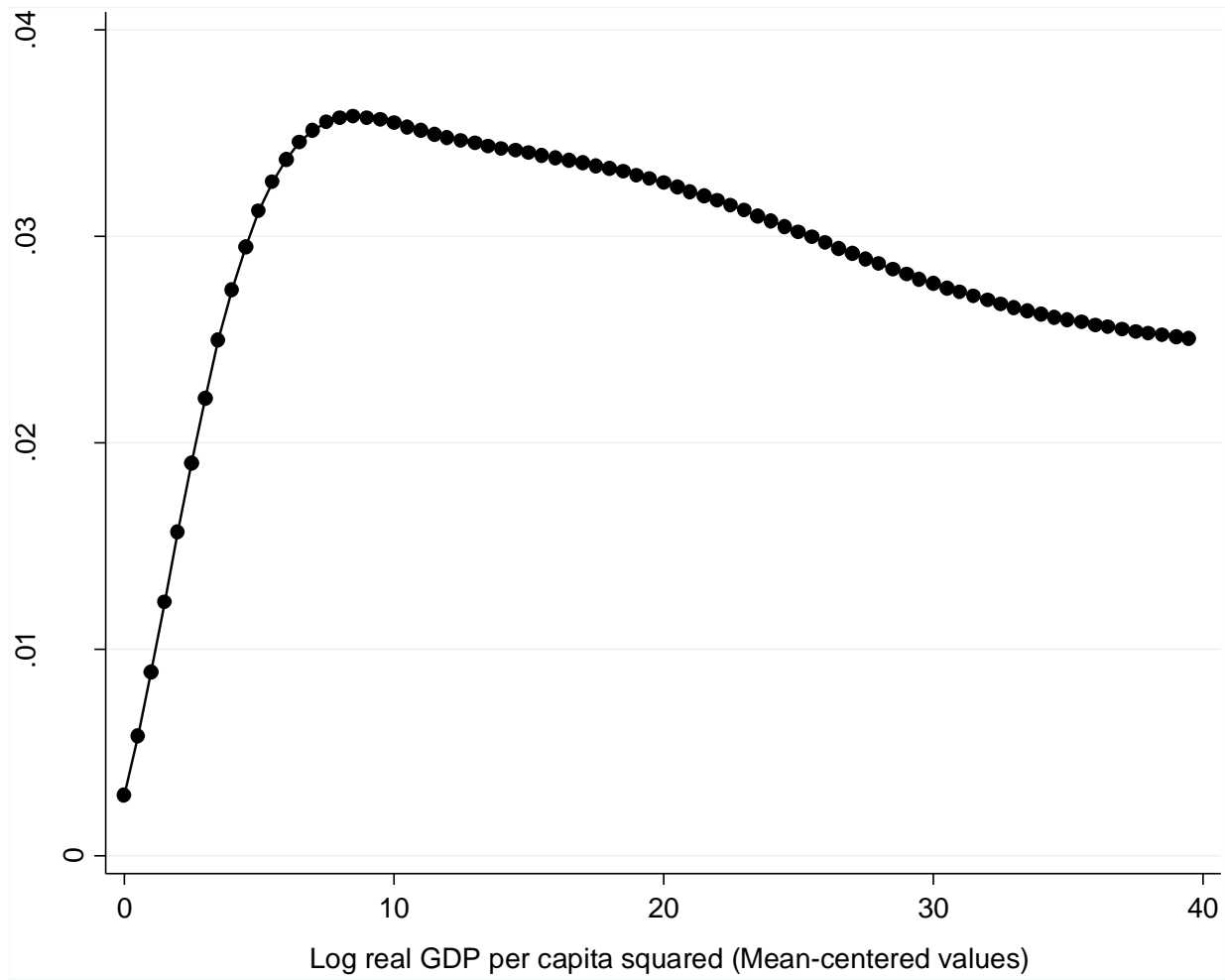
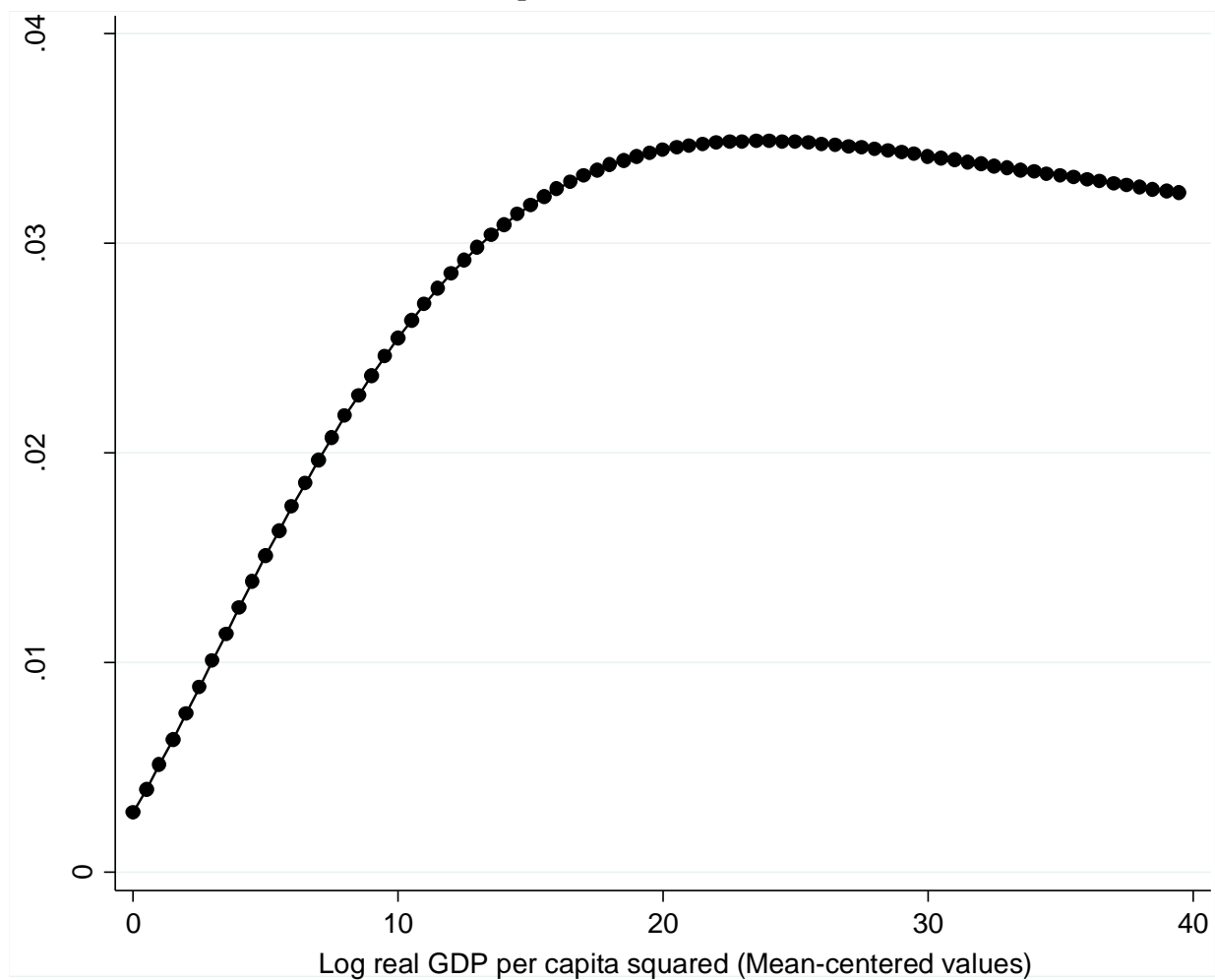


Figure 3.2: The Effect of Gini coefficient on Early-stage Entrepreneurship by Economic Development levels (Model 4, Table 3)



Note: Effects are in log-odds to be consistent with the regression results (Model 4, Table 3).

Figure 3.3: The Effect of Gini coefficient on Ownership of Established Businesses by Economic Development levels (Model 4, Table 4)



Note: Effects are in log-odds to be consistent with the regression results (Model 4, Table 4).

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CHAPTER 4: CONTEXT-BOUNDEDNESS NATURE OF THE RELATIONSHIP BETWEEN HUMAN AND FINANCIAL CAPITAL AND ENTREPRENEURSHIP: DOES SOCIETAL-LEVEL ECONOMIC INEQUALITY MAKE DIFFERENCE?

Understanding what determines who gets to become involved and who ultimately succeeds in entrepreneurship has been at the center of entrepreneurial research. However, narratives about the sources of entrepreneurial development and success have been disproportionately focused on individual characteristics. Individual human and financial capital endowments are common factors that research has often implicated in the differential likelihood that people have to become involved and succeed in entrepreneurship. Although, research has demonstrated the importance of potential entrepreneurs' human and financial capital endowments for the propensity that they will engage in entrepreneurial activities and achieve entrepreneurial success, we know little about how the process through which individual characteristics influence entrepreneurial development potentially vary across societies. As a result, little attention has been paid to understanding the potential structural factors that may condition how individual characteristics, such as human and financial capital, influence the chances that potential entrepreneurs have to become involved in trying to start a new business and potentially becoming business owners. This paper speaks to this broad issue by first investigating the possibility that the process via which individual human capital (measured as individual educational attainment) and individual financial capital (measured as individual income) may vary across societies. Second, this study explores the possibility that structural forces, such as societal-level economic inequality, potentially condition how individual

educational attainment and income affect the likelihood that individuals will become involved in trying to start a new business and become business owners.

This analysis is conducted using entrepreneurship, education, and income indicators from the Global Entrepreneurship Monitors, and societal-level economic inequality data from the SWSID (Solt 2016) drawn from 58 countries. Results from mixed-effect logistic regressions show that individual educational attainment and income influence the likelihood of individuals to become involved in starting a new business and become business owners differently across societies. The findings also show that societal-level economic inequality influences how individual education and income affect an individual's likelihood of becoming involved in trying to start a new business and of becoming business owners. That is, in societies characterized by high economic inequality, individuals with secondary and postsecondary education are less likely to become involved in starting a new business and to become business owners. Results also show that in societies where economic inequality is high, people who are at the middle and the top of the income distribution are less likely than those at the bottom to become involved in starting a new business and to become business owners.

The Theoretical Link between Societal-Level Economic Inequality, Individuals' Education, Income, and Entrepreneurship

Individual Educational Attainment, Entrepreneurial Entry, and Business Ownership

Individual educational attainment, commonly referred to as human capital endowment, has often been evoked as an important determining factor in entrepreneurial entry and success. That is, differences in educational attainment have often been found to influence the differential propensity that individuals have to become involved in entrepreneurial activities and the likelihood of the success of these new ventures. For instance, using the Panel Study of the Entrepreneurial Dynamic data, research found a positive relationship between potential

entrepreneurs' educational attainment and the tendency that they have to become engaged in creating new ventures in the United States (Kim, Aldrich and Keister 2006). More recent studies, echoing this earlier result, found educational attainment to be positively related to entrepreneurial entry in the United States (Semrau and Hopp 2016). Using Current Population Survey data, research found that, in the United States, people with a college degree were more likely to be business owners than those without a college degree (Guo, Chen and Yu 2016). Using PSED data, Hopp and Sonderegger (2015) found that individuals' educational attainment not only influences their likelihood of entering entrepreneurship, but they also found that a higher educational level was positively associated with the number of entrepreneurial activities that an individual undertook.

Research conducted in Sweden (Davidsson and Honig 2003), Germany (Grichnik, Brinckmann, Singh and Manigart 2014), and in Turkey (Cetindamar, Gupta, Karadeniz and Egriçan 2012), echoed the American findings that educational attainment has a significant impact on the differential likelihood that an individual would become involved in entrepreneurship and become an owner of an established enterprise. In Germany, it has been found that the higher the educational attainment of potential entrepreneurs in nascent enterprises, the more likely they are to become involved in entrepreneurial bootstrapping (Grichnik et al 2014). Moreover, research investigating the impact of human capital on the entrepreneurial process in 22 emerging economies using GEM data found a similar positive effect of education on the likelihood that an individual would try to launch a new business (Lim, Oh, De Clercq 2016). Other research found that education was also associated with new venture success. For instance, using waiting lists in restaurants as a measure of business success, research conducted in Spain found that the higher an entrepreneur's educational attainment, the longer the waiting

list at his/her restaurant (Rey-Martí, Ribeiro-Soriano and Palacios-Marqués 2016). In summary, this review of previous research shows that it is well-established in entrepreneurship literature that individual educational attainment matters for whether an individual would become involved in entrepreneurship, for his/her entrepreneurial success, and for his/her potential of becoming an owner of an established business.

Although research has demonstrated the significant importance of individual education for the entrepreneurial process, less attention, however, has been paid to the potential context-specific nature of the mechanisms that underlie the relationship between education and entrepreneurship. That is, we know little about, whether and how, the relationship between individual educational attainment and entrepreneurship varies across societies. This gap in existing research is important to highlight because education, as it pertains to shaping values and beliefs about economic actions, is deemed to operate differently across cultural contexts. For instance, in an individualistic context, education may be focused more on self-determination and individual independence, whereas less emphasis may be placed on the group and cooperation. Thus, an individual-centered educational process may instill beliefs about the entrepreneurial process that may focus, for example, on entrepreneurship as a solo activity. Thus, because of this cultural difference in the way that education may influence beliefs about entrepreneurship, education may impact the entrepreneurial process in ways that may vary across cultural contexts. Therefore, not accounting for the fact that education may potentially influence the entrepreneurial process in different way across societies may limit our understanding of the potential context-boundedness nature of the entrepreneurial process. This study addresses this gap in previous empirical research on human capital and entrepreneurship by examining the possibility that the effect of education on the propensity that an individual would become

involved in nascent entrepreneurship and be a business owner may vary across societies. Thus, based on the above literature, the following propositions are formulated.

Hypothesis 1a: The higher the educational attainment of individuals, the greater their propensity to become involved in entrepreneurial efforts and become business owners.

Hypothesis 1b: The effect of education on individuals' propensity to become involved in entrepreneurial efforts and become businesses owners will vary across societies.

Financial Capital, Entrepreneurial Entry, and Business Ownership

Similar to individual educational endowment, individual financial capital endowment has been found to be important for the likelihood that someone would become involved in entrepreneurial efforts and achieve entrepreneurial success. Some earlier empirical research conducted in the United States found little evidence for the influence of individual financial capital (measured as individual household income) on the likelihood that potential nascent entrepreneurs would engage in the start-up process (Kim et al 2006; Aldrich and Kim 2007). Although the analysis focuses on established businesses, more recent studies have found that financial constraints are important for entrepreneurial entry and new venture growth (see Carreira and Silva 2010 for a review of this body of research). Financial constraints are found to be particularly pronounced at the early-stage of firms' development and within the population of small firms (Carreira and Silva 2010). The greater severity of financial constraints for young and small firms compared with larger and more established business may be due to the *liability of smallness and newness* (Stinchcombe 1965). That is, smaller and new businesses often lack legitimacy, making them less able (compared with larger and more established firms) to raise capital. Given this reality, one may expect potential entrepreneurs' personal capital to matter for entrepreneurial entry and success — at least at the early-stage of the entrepreneurial process, when nascent enterprises have not yet gained the necessary legitimacy to raise outside capital.

Within this line of argument, research investigating the potential importance of personal income on the likelihood of entrepreneurial entry found that, in Turkey for example, individuals' household income was positively associated with the likelihood that they would be engaged in trying to start up a new business (Cetindamar, Gupta, Karadeniz and Egrican 2012). In the United States, research using the Panel Study of Entrepreneurial Dynamic data found that the financial capital (measured as household wealth and assets) of potential entrepreneurs was not only important in terms of new venture creation, but was also important in the amount of time that nascent entrepreneurs dedicated to the start-up process and for the income that they earn from their new ventures (Petrova 2012). It was also found that individuals with low-household wealth were more likely to drop out of entrepreneurship compared with high-wealth individuals. Low-wealth individuals were also less likely to turn their entrepreneurial efforts into established businesses, and among those whose new ventures achieved maturity, low-wealth nascent entrepreneurs tended to earn lower wages and employ fewer employees in the first year of venture creation compared with their wealthier counterparts (Frid, Wyman and Coffey 2016). Using Global Entrepreneurship Monitor (GEM) data for 22 emerging economies and household income as a measure of financial capital, research found a similarly positive association between personal financial capital and the tendency that individuals have to become engaged in entrepreneurial activities (Lim et al 2016). Thus, this review of the previous research highlights the consensus among students of entrepreneurship regarding the importance of individual financial capital endowment for the possibility that one would be engaged in starting a new business and achieving entrepreneurial success.

Similarly to education the importance of income for entrepreneurial entry and success may be context-specific. In contexts where communal living is valued, personal income may be

less important for determining entrepreneurial entry and success. That is because in communal contexts, cooperation may be emphasized, making getting help from an extended network less difficult than in individualistic contexts. In this regard, personal income may be less problematic in regard to accessing resources necessary for entrepreneurial entry. Thus, one may expect financial access to influence entrepreneurship differently across societies. However, there is virtually no available empirical analysis that investigates the possibility that personal financial capital may influence entrepreneurship in different ways across societies. The present analysis addresses this gap in the literature by accounting for the potential context-specific effect of individual income on the entrepreneurial process. Based on the above review of previous research, the following hypotheses are formulated.

Hypothesis 2a: The higher the income of potential entrepreneurs, the greater the likelihood that they will become involved in trying to start a business and become business owners.

Hypothesis 2b: The effect of individuals' income on their likelihood of becoming involved in starting a business and of becoming business owners will vary across societies.

Educational and financial access is known to vary across societies and by societies' economic stratification structures. The importance of economic stratification for educational and income generation should be particularly consequential for the relationship between individual educational attainment, financial capital, and the propensity to become involved in trying to start a new business and become a business owner. Although, we are well informed about the importance of education and financial capital in shaping the entrepreneurial process, we know very little about the ways that societal-level economic inequality may potentially condition the ways in which education and financial capital influence the entrepreneurial process. The following section fills this gap in existing research by theorizing and formulating testable

hypotheses about potential conditioning effects of societal-level economic inequality on the relationship between individual educational attainment and personal income on the propensity that individuals have to become involved in entrepreneurship and to become business owners.

The Conditioning Effect of Societal-level Economic Inequality on the Impacts of Educational Achievement and Personal Income on Entrepreneurial Entry and Business Ownership

Although, education and personal financial capital have been shown to be crucial for new venture creation, societal economic inequality may hinder educational development and the acquisition of income. Economic inequality may restrict access to education to only a small portion of the population, at the expense of the majority. This would prevent a large portion of the population from accessing the necessary resources to develop needed skills for employment. As a result, inequality may prevent individuals from acquiring the work experience and generating the income necessary to launch their ventures. Social networks have been found to facilitate the creation of social trust. Social trust, in turn, facilitates the circulation of information, and other necessary resources for economic exchange (Granovetter 1985). Since economic inequality tends to create a social divide, limiting an individual's potential for building social relations beyond the individual's social class, inequality may undermine social trust across individuals and social groups, limiting an individual's ability to access necessary information and resources for finding jobs, hindering individuals' ability to generate income and gain the skills necessary for entrepreneurial development. In summary, economic inequality may shape the way education and income influence entrepreneurial entry and business ownership. Based on this argument, the following hypotheses are formulated.

Hypothesis 3: Societal-level economic inequality will modify the effect of an individual's educational attainment on their likelihood of becoming involved in trying to start a new business and to become business owners.

Hypothesis 4: Societal-level economic inequality will modify the effect of an individual's income on their likelihood of becoming involved in trying to start a new business and of becoming business owners.

Data, Measurement, and Methods

Entrepreneurship Measures

Involvement in early-stage entrepreneurial activities and the ownership of a nascent business are two measures of entrepreneurship used here to evaluate the hypotheses of this study. Both entrepreneurship measures are from the Global Entrepreneurship Monitor (GEM). GEM is a country representative survey that is collected yearly across a wide range of countries. The first wave of data was collected in 1999, and the most recent wave was completed in 2014. GEM contains data for approximately 85 countries. The entrepreneurship data used here was collected from 2001-2012. 2012 is the latest wave of data made available to the public by the Global Entrepreneurship Monitor.

Early-stage entrepreneurship. GEM measures early-stage entrepreneurship by asking respondents whether they were, alone or with others, trying to start a new business, including any type of self-employment or selling any goods or services to others at the time of the interview. Possible answers were coded 1 for “yes” and 0 for “no.” *Ownership of a nascent business.* GEM measured ownership of a nascent business by asking survey participants whether they owned a business that is up to 42 months old at the time of the interview. Possible answers were coded 1 for “yes” and 0 for “no.” Table 1 presents detailed descriptions of these variables.

Human Capital, Financial Capital, and Societal-level Economic Inequality

Education variable. The education variable is coded in four categories: (1) no formal education, (2) some secondary education, (3) secondary education, (4) postsecondary education

or higher. The *income variable* is coded into three categories: (1) the lowest 33rd percentile, (2) the middle 33rd percentile, (3) and the upper 33rd percentile.

Economic inequality variable. Economic inequality data were merged with entrepreneurship data on country-year using GEM as the base data set. *Economic inequality* is measured by the Gini coefficient. The Gini coefficient is expressed as a percentage, ranging from 0 to 100. The closer a country's Gini coefficient is to zero, the less economically unequal the country is; the closer the Gini is to 100, the more unequal the country. Economic inequality indicators were drawn from the Standard World Income Inequality Database (Solt 2016). Two other commonly used sets of cross-national income inequality data are the Luxembourg Income Study (LIS) and the World Income Inequality data (WIID), which are produced by the World Institute for Development Economics Research of the United Nations University (UNU-WIDER). LIS provides the most reliable income inequality data because LIS harmonizes concepts and measurements of income across countries to create income inequality measures (Solt 2016). However, LIS income inequality data are available for only a very limited number of countries and data are collected only every five years for some countries (Solt 2016). The UNU-WIDER database contains income inequality measures for a wider range of countries but includes income data from countries with different concepts and measures of income, which reduces cross-country comparability. SWIID builds on the strength of these two income inequality data sets (UNU-WIDER and LIS) to maximize the number of countries in the LIS data set, while maintaining strong cross-country comparability. Based on information from country years (household income per capita, household adult income equivalent, household income without adjustment, employee income, and personal income) where the LIS and UN-WIDER data sets overlap, SWIID synchronizes the LIS data with the UNU-WIDER data using Gini

ratios from the LIS data and information on income concepts from the UNU-WIDER data. As a result, SWIID replicates the cross-country comparability of the LIS income inequality data and the large coverage of the UNU-WIDER income inequality data. Further detail on the methodology is provided in Solt (2014). The countries under study here vary widely in terms of economic inequality. For instance, the Gini coefficient is 62.09 in South Africa, 57.70 in Zambia, 45 in Mexico, 43 in Ghana, and 40.04 in Brazil. Consistent with previous research, these results show that economic inequality is lower in advanced industrial societies. For instance, the Gini is 24.86 in Sweden, 26.19 in Finland, 29.43 in France, 28.94572 in Germany, and 37.96 in the United States.

Individual and Societal-Level Controls

The effect of education and income on entrepreneurship may not only vary across economic inequality regimes. Countries' level of economic prosperity may influence the availability of education and the ability of individuals to generate income, thereby impacting how education and income relate to entrepreneurship. Thus, this analysis controls for country-level economic development. *Economic development* is measured by real gross domestic product (GDP) per capita denominated in US dollars. That is, GDP per capita is measured as real gross domestic product divided by population size. Real GDP per capita data were drawn from the Penn World Tables (Feenstra, Inklaar and Timmer 2015). The countries under study here vary significantly in their level of economic development (measured as real GDP per capita denominated in US dollars). For instance, the average income per capita is \$ 1,270.149 in Ethiopia, \$3,167.262 in Ghana, and \$5,213.28 in Nigeria, whereas it is \$11,636.75 in South Africa, \$14,742.99 in Brazil, \$15,897.31 in Chile, and \$16,749.55 in Romania. As one would expect, the results show that the average GDP per capita is significantly higher in more advanced industrial countries. For example, average GDP per capita is \$58,643.36 in Switzerland,

\$50,517.59 in the United States, \$44,940.29 in Australia, \$41,876.4 in Germany, and \$34,941.02 in Japan.

The narrative regarding entrepreneurs' beliefs about the distribution of capitalist production often assumes that potential entrepreneurs would be more likely to hold beliefs that support high social and economic inequality compared with non-entrepreneurs. As a result, this analysis accounts for an individual's economic-egalitarian attitude. The economic-egalitarian belief is measured by asking individuals whether they believe that the inhabitants of their countries prefer a uniform living standard. Individuals who responded no are coded "1," those who are neutral are coded "2," and those who answered yes are coded "3" (see Table 1).

It has also been argued that individual perceptions about entrepreneurship and about how society evaluates their status as entrepreneurs matter for their decision to enter into entrepreneurship (Kelley, Bosma and Amorós 2011). Thus, an individual's perception about the prestige of entrepreneurship as an occupation may influence their decision to enter into entrepreneurship. An individual's perception about how others or society value entrepreneurship is captured in GEM data by three questions. First, GEM asks individuals whether they believe people growing a new successful business receive high social status. Second, individuals are asked whether starting a business is perceived as a good career choice in their society. Third, respondents are asked whether entrepreneurial development receives media coverage in their society. Possible responses to these questions are no (coded "1"), neutral (coded "2"), and yes (coded "3"). While individual-level attitudes toward economic inequality and entrepreneurship may be important in shaping differences in entrepreneurial effort between individuals within a country, the societal-level beliefs about economic inequality and entrepreneurship as a career may matter for cross-national differences in entrepreneurship development and business

ownership. Thus, this analysis also accounts for societal-level economic-egalitarian beliefs and attitudes toward entrepreneurship by calculating the average of the individual responses to these questions (see Table 1 for a description of these variables).

Method

The theoretical argument advanced in this paper is that understanding the link between individual human and financial capital endowment, macro-level economic inequality, and entrepreneurship may improve our knowledge of the individual and structural causes of differences in the propensity to become entrepreneurs across individuals. The data used in this study depict a hierarchical structure, where individual-level factors are nested into countries. Thus, based on the theoretical argument and the hierarchical structure of the data, this analysis uses multilevel logistic regressions, which permits the simultaneous estimation of macro- and micro-level effects on the individual likelihood of entrepreneurial entry and business ownership. The multi-level method enables this analysis to simultaneously examine the potential impacts of individual financial and human capital endowment and the moderating impact of economic inequality on the effect of human and financial capital on individuals' chances of becoming entrepreneurs and business owners. Thus, the theoretical argument advanced in this paper is modeled in the following equations.

Equation 1: $\text{Entrepreneurial entry}_{ij} / \text{Business ownership}_{ij} = \beta_{0j} + \beta_{1j} (\text{Individual educational attainment}) + \beta_{2j} (\text{Individual income}) + \beta_3 X + \beta_4 Z + \epsilon_{ij}$

Equation 2: $\text{Entrepreneurial entry}_{ij} / \text{Business ownership}_{ij} = \beta_{0j} + \beta_1 (\text{Individual educational attainment}) + \beta_{2j} (\text{Individual income}) + \beta_3 X + \beta_4 Z + \epsilon_{ij}$

Equation 1 examines cross-country variations in individual entrepreneurial entry, business ownership (β_{0j}), and cross-country variations in the effect of individual educational attainment (β_{1j}) and income (β_{2j}), controlling for both individual-level factors (i.e., represented by vector X) and country-level factors (i.e., represented by vector Z). In equations 1 and 2, the i denotes individual

and the j represents county-level effects. It is assumed that the distribution ϵ_{ij} is random normal, and has a mean of 0 and a variance of σ^2 .

Modeling country-level effects. To explore the potential moderating effect of societal-level economic inequality on the effect of individual educational attainment and income on entrepreneurial entry and business ownership, cross-level interactions between societal-level economic inequality, individual attainment, and income are modeled on the random coefficient of the education and income variables (i.e., β_{1j} and β_{2j} , from equations 1 and 2). This is done in two stages (i.e., equations 3 and 4). First, equation 3 models a cross-level interaction between the Gini coefficient and individual educational attainment. Second, equation 4 models a cross-level interaction between the Gini coefficient and individual income. Both models control for important individual and country-level factors described in the data section (see Table 1).

Equation 3: $\beta_{1j} = \gamma_{00} + \gamma_{01} (\text{Gini coefficient} \times \text{Individual educational attainment}) + \gamma_{02} (\text{Individual educational attainment}) + \gamma_{03} (\text{Gini coefficient}) + \gamma_{04}X + \gamma_{05}Z + \mu_{1j}$

Equation 4: $\beta_{2j} = \gamma_{06} + \gamma_{07} (\text{Gini coefficient} \times \text{Individual income}) + \gamma_{08} (\text{Individual income}) + \gamma_{09} (\text{Gini coefficient}) + \gamma_{10}X + \gamma_{11}Z + \mu_{2j}$

In equations 3 and 4, β_{1j} and β_{2j} , respectively, indicate the coefficients of education and income in country j , whereas μ_{1j} and μ_{2j} represent country-level errors.

Results

Modeling the Effect of Individuals' Education and Income on Early-stage Entrepreneurial Activities, and the Moderating Effect of Societal-level Economic Inequality

Education and engagement in early-stage entrepreneurship. Models 1 and 3 in Table 3 examine the effects of education and income on early-stage entrepreneurial activities and the possibility that these effects may vary across societies (H1b and H2b). Models 2 and 4 investigate the potential moderating effect of societal-level economic inequality on the relationship between education and income, and how much the relationship between societal-

level economic inequality potentially explain the cross-country-variations in the effects of education and income.

Model 1 in Table 3 tests the relationship between individual educational attainment and the likelihood that they will try to start a new business, controlling for individual and country-level factors described in Table 1. Model 1 in Table 3 shows that the coefficients for secondary education and postsecondary education are positive and significant (at $p\text{-value} < 0.001$). That is, people with secondary and postsecondary education are more likely than those with no or some education to become involved in early-stage entrepreneurship. Thus, these results support this paper's proposition, which states that the higher an individual's educational attainment, the more likely she/he will be to become involved in starting up a new business (H1a).

Model 1 also evaluates this paper's claim, stating that process via which education influences entrepreneurial entry should be context-specific, thereby the effect of education should vary across societies (i.e., H1b). Model 1 examines potential context-specific nature of the effect of education on engagement in early-stage entrepreneurial activities by specifying random coefficients for secondary and postsecondary education. That is, specifying random coefficients for the secondary and postsecondary education variables, Model 1 allows the relationship between individual educational attainment and early-stage entrepreneurship to differ across the 58 countries under study here. Consistent with this paper's argument, the results show that effect of education on the likelihood that the people included in this sample would try to start a new business varies significantly across societies. This is demonstrated by the fact that the between-country standard deviation for secondary education (0.120) and postsecondary education (0.111) are substantial and statistically significant (at $p\text{-value} < 0.001$). Thus, these results show that the way education affects entrepreneurial entry varies across the 58 countries

under study here, supporting this paper's proposition that the effect of education will vary across societies (H1b).

Model 2 in Table 3 tests hypothesis 3, which states that societal-level economic inequality will modify the effect of education on the likelihood that an individual would become involved in trying to start a new business. To this end, Model 2 specifies cross-level interactions between societal-level economic inequality and individual secondary and postsecondary educational attainments using *no or some education* as the reference category. The coefficient of the interaction term between societal-level economic inequality and *secondary education* is negative, but it is not statistically significant. This result means that in contexts characterized by high economic inequality, people with *secondary education* are not different (compared with those with *no and some education*) in their likelihood of becoming involved in trying to start a new business. Similarly, the coefficient of the interaction term between societal-level economic inequality and *postsecondary education* is not significant. This suggests that in countries where economic inequality is high, people with *postsecondary education* and those with *no or some education* are not different in their propensity to become involved in trying to start up a new business.

Although, the coefficients for the cross-level interaction terms between societal-level economic inequality and secondary education, postsecondary education are not significant, the introduction of these cross-level interactions decreases the between-country standard deviation for the effect of secondary education and postsecondary education by a moderate 7.5 percent and 9 percent, respectively. This demonstrates that societal-level makes some difference for how individual educational attainment influences entrepreneurial entry.

Income and early-stage entrepreneurship. Models 3 in Table 3 examines the effect of an individual's income on the likelihood that she/he will become involved in trying to start up a new business. Controlling for other potential individual and country-level explanatory factors described in Table 1, Model 3 shows that an individual's income is positively associated with the likelihood that an individual would become involved in trying to start a new business. That is, Model 3 shows that people who are at the middle 33rd percentile and upper 33rd percentile of the income distribution are more likely (compared with those at the bottom 33rd percentile of the income distribution) to become involved in starting a new business. Thus, these results supports this study's argument that the greater individual income, the more likely that an individual would become involved in trying to start a new business (i.e., H2b).

Model 3 also tests this paper's proposition, which states that the process through which individual income influences entrepreneurial entry should operate differently across-societies (i.e., H2b). Model 3 evaluates this argument about context-specific nature of the effect of income on engagement in early-stage entrepreneurial activities by estimating random coefficients for secondary and postsecondary education. That is, Model 3 allows the relationship between individual income and early-stage entrepreneurship to vary across the 58 countries. Consistent with this paper's theoretical argument, the results demonstrate that the effect of income on the propensity that people would become engaged in trying to start a new business varies significantly across societies. This is shown by the fact that the between-country standard deviation of *Middle 33rd income percentile* (0.0196) and *Upper 33rd income percentile* (0.136) are substantial and statistically significant (at $p\text{-value} < 0.001$). These results demonstrate that the mechanisms through which income influences entrepreneurial entry vary across the 58 countries.

Thus, these findings support this paper's argument that the effect of income will vary across societies (H2b).

Model 4 examines the argument that societal-level economic inequality will influence how an individual's income impacts the likelihood that an individual would become involved in early-stage entrepreneurship. To this end, Model 4 specifies interaction terms between societal-level economic inequality and the individual-level income variables (i.e., Middle 33rd income percentile and Upper 33rd income percentile) using *Bottom 33rd income percentile* as the reference category. Model 4 also evaluates how much of the between-country variation in the effect of income is explained by including these cross-level interactions.

Model 4 in Table 3 shows that the coefficient for the interaction term between societal-level economic inequality and *Middle 33rd income percentile* is not significant. This means that in high income inequality contexts, people who are in the middle of the income distribution and those who are at the bottom of the income distribution are not significantly different in their likelihood of becoming involved in trying to start a new business. Model 4 shows that the coefficient of the interaction term between societal-level economic inequality and *Upper 33rd percentile* is not significant either. This result means that in high income inequality contexts, people who are at the top of the income distribution and those who are at the bottom of the income distribution are not significantly different in their propensity to become involved in trying to start a new business.

Although, the coefficients for the interaction terms between societal-level economic inequality and the income variables are not statistically significant, including these cross-level interaction terms in Model 4 reduces the between-country *Upper 33rd income percentile* standard deviation by a moderate 7.4 percent. This provides some support for this argument advanced in

this about the importance of societal-level economic inequality for cross-country variation in the effect of income (that is for different between people at the bottom and the top of the income distribution) on the likelihood of people becoming involved in starting a new business (i.e., H4).

Modeling the Effect of Education and Income on Ownership of a Nascent Business (i.e., a Business up to 42 Months Old), and the Moderating Effect of Societal-level Economic Inequality

Education and the ownership of a nascent business. Models 1 and 2 in Table 4 present the results of the analysis of the effect of individual educational attainment on the likelihood that individuals would become owners of a nascent business, and the moderating impact of societal-level economic inequality on this relationship. Model 1 in Table 4 investigates the relationship between education and the ownership of a nascent business, controlling for other potential explanatory factors. Model 1 shows that the coefficients for secondary and postsecondary education are positive and significant (at $p\text{-value} < 0.05$ and $p\text{-value} < 0.01$). These results mean that individuals with secondary or postsecondary education are more likely to become owners of a nascent business than people who have no or some education. These findings support the argument advanced in this paper that the higher an individual's educational attainment, the more likely she/he will be to become a business owner.

Model 1 also investigates this paper's proposition that the relationship between education and business ownership will vary across countries. Model 1 achieves this by specifying random coefficients for secondary and postsecondary educational attainment. That is, Model 1 permits the effects of secondary and postsecondary education to differ across the 58 countries. Consistent with the argument of this study, the effect of secondary and postsecondary education vary significantly across the 58 countries. This is demonstrated by the fact that the between-country standard deviations for secondary education (0.124) and postsecondary education (0.182) are substantial and statistically significant (at $p\text{-value} < 0.001$).

Model 2 in Table 4 tests the argument that societal-level economic inequality will modify the way that education affects the likelihood that an individual would become a business owner (i.e., H4). This is done by specifying cross-level interaction terms between societal-level economic inequality and an individual's educational attainment (i.e., Secondary education and Postsecondary education) using *no or some education* as the reference category. Model 2 also evaluates how much of the variations in the effects of secondary and postsecondary education is potentially explained by the introduction of these cross-level interaction in the model.

Model 2 in Table 4 shows that the coefficient for the interaction term between *societal-level economic inequality* and *secondary education* is negative and significant (at $p\text{-value} < 0.05$). This means that the higher economic inequality is in a country, the less likely people with *secondary education* will become owners of a nascent business compared with those with *no or some education*. Similarly, the coefficient of the interaction term between *societal-level economic inequality* and *postsecondary education* is negative and significant (at $p\text{-value} < 0.01$). This signifies that in high economic inequality contexts, individuals with *postsecondary education* are less likely than those with *no or some education* to become owners of a nascent business. These results support the argument of this paper starting that societal-level economic inequality will modify the effect of education on business ownership (i.e., H3).

This argument is further supported by the findings that the between-country standard deviations for secondary education and postsecondary education decrease, respectively, by 18 percent and 24 percent after including the cross-level interactions between societal-level economic inequality and individual educational attainment.

Income and ownership of a nascent business. Models 3 and 4 in Table 4 evaluate the argument that individuals' income will influence the likelihood that they will become business

owners and that societal-level economic inequality will moderate that relationship. Model 3 in Table 4 examines the effect of individuals' income on the likelihood that they will become owners of a nascent business and whether this relationship varies across societies, controlling for other competing explanatory factors that are described in Table 1. Model 3 shows that the coefficient for Middle 33rd income percentile and upper 33rd income percentile are positive and significant (at p-value<0.001). This means that people who are at the middle 33rd percentile and the top 33rd percentile of the income distribution are more likely to become owners of a nascent business compared with those at the bottom 33rd of the income distribution. These results support this paper's proposition stating that the higher an individual's income, the more likely she/he is to become business owners (H2a).

Model 3 also examine this paper's argument that the effect of individual income on business ownership may vary across societies (H2b). To this end, Model 3 allows the coefficients for *Middle 33rd income percentile* and *Upper 33rd income percent* to vary across the 58 countries under study here. The results are consistent with the proposition advanced in this paper. They show that the between-country standard deviations for *Middle 33rd income percentile* (i.e., 0.0164) and *Upper 33rd income percentile* (i.e., 0.125) are substantial and statistically significant (at p-value<0.001). These results support this paper's pertaining to regarding context-specific nature of the process via which individual income influences business ownership (H2b).

Moreover, Model 4 in Table 4 tests this paper's argument stipulating that societal-level economic inequality will influence how an individual's income impacts an individual's likelihood of becoming a business owner. To this end, Model 4 specifies interaction terms between societal-level economic inequality and an individual's income (i.e., Middle 33rd income percentile and Upper 33rd income percentile), using those at the *bottom 33rd percentile of the*

income distribution as the reference group. Model 4 shows that the coefficient of the interaction term between societal-level economic inequality and the middle 33rd percentile of the income distribution is not significant. This result indicates that in countries in which economic inequality is high, people who are at the middle and those who are at the bottom of the income distribution are not significantly different in their likelihood to become owners of a nascent business. On the other hand, Model 4 in Table 4 shows that the coefficient of the interaction term between societal-level economic inequality and the upper 33rd percentile of the income distribution is negative and significant. This means that in societies where income inequality is high, people who are at the top of the income distribution are less likely compared with those at the bottom to become owners of a nascent business. These results support this paper's argument that societal-level economic inequality will influence how an individual's income impacts the likelihood that people will become business owners (i.e., H4).

Furthermore, Model 4 shows that introducing these cross-level interaction terms between societal level economic inequality and individual income in reduces the between-country standard deviation for *Middle 33rd income percentile* and *Upper 33rd income percentile* by a moderate 2% and substantial 17 percent, respectively. Thus, this finding provides further support for the argument that societal-level economic inequality matters for how individual income influences an individual's propensity of becoming a business owner (i.e., H4).

Discussion and Conclusion

Financial and human capital have been found to be important factors in determining an individual's chances of becoming involved in entrepreneurship and of becoming a business owner. This paper's findings are consistent with previous research. That is, using data from 58 countries and mixed-effect logistic regressions, this analysis found that the greater an individual's educational attainment and income, the more likely they are to become involved in

trying to start a new business and become business owners. The positive effects of education and income on entrepreneurial entry and business ownership are robust after controlling for individual and societal-level competing explanatory factors.

Unlike previous research, this study theorizes about the potential that the way that individuals' educational attainment and income influence the likelihood of becoming entrepreneurs and business owners may differ across societies. In support of this argument, the analysis shows that the effects of individuals' education and income vary significantly across the 58 countries under study here. This is demonstrated by the between-country standard deviations of individual educational attainment and income (see Tables 3 and 4). These findings highlight the complexities in the relationship between individual characteristics, such as education and income, which previous empirical research that did not account for the potential context-specific nature of the effect of individuals' education and income on the propensity to become involved in entrepreneurial efforts and to become business owners was unable to achieve. The findings of this analysis suggest that research should no longer overlook the possibility that individual education and income may matter differently for entrepreneurship across different contexts. The findings of this analysis, which demonstrate that individual education and income vary across the 58 countries under study, also suggest the need for more research on understanding potential differential societal-level factors that may condition the way that education and income influence an individual's chances of becoming engaged in trying to start a new business and/or becoming a business owner. Broadly, these findings call on scholars to pay greater attention to the structural conditions that shape the relationship between individual characteristics and entrepreneurial entry and success.

The present analysis makes some strides in addressing how societal-level characteristics may condition the way education and income impact entrepreneurship and business ownership by examining the potential moderating effect of societal-level economic inequality on the impact of education and income on entrepreneurial entry and business ownership. This is demonstrated by the findings that a society's economic inequality matters for how education and income influence an individual's likelihood of becoming engaged in starting a new business and becoming business owners. That is, this analysis shows that different levels of education influence entrepreneurship and business ownership differently under condition of high societal-level economic inequality. This is demonstrated by the finding that cross-level interaction between educational attainment reduces cross-country variations in the effects of secondary and postsecondary education on engagement in early-stage entrepreneurship by a 7.5 percent and 9 percent, respectively (Table 3 Models 1-2). Similarly, economic inequality influences the impact of income on individual entrepreneurial entry and business ownership differently at different locations in the income distribution. This is demonstrated by the results showing that in contexts characterized by high income inequality, individuals who are at the top of the income distribution are less likely (compared with those at the bottom of the distribution) to become business owners (see Tables 4, Model 4). This argument is further enforced by the finding that interactions between societal-level economic inequality and individual income explained about 2 percent and 17 percent in the cross-country variations in the effect of middle income and top income individual on the like that individuals would become business owners.

In summary, it has been well established in organizational research that the process of organization founding tends to reflect the structure of social stratification in the context under which the organizational founding process occurs. The finding of this paper that societal-level

economic inequality conditions how an individual's education and income influence her/his likelihood of entering entrepreneurship and of becoming a business owner lends empirical support to this well-established theory.

Contribution

Narratives about conditions that shape the process of entrepreneurship have been dominated by individual-centered arguments. Less emphasis has been placed on the structural conditions that influence who gets to become involved in entrepreneurship and a business owner. This research advanced this literature in two key ways. First, this was done by theorizing about the context-specific nature of the relationship between individuals' educational attainment and income and the likelihood of becoming involved in starting a new business and becoming business owners. The empirical analysis accomplished this by demonstrating that the effects of individuals' education and income on the propensity to become involved in entrepreneurship and business owners vary significantly across the 58 countries under study here. Thus, by demonstrating the context-specific nature of the relationship between individuals' human and financial capital, this study suggests that research needs to pay closer attention to how societal-level conditions may influence how individual characteristics affect individuals' chances of becoming involved in the entrepreneurial process and their likelihood of entrepreneurial success.

Second, this study advances the literature on the determinants of entrepreneurial entry and business ownership by theorizing and empirically evaluating the potential that societal-level economic inequality may influence how individuals' education and income impact their likelihood of becoming involved in starting a new business and of becoming the owners of an established business. In doing so, this analysis demonstrates that a society's level of economic inequality has a significant impact on how an individual's characteristics, such as education and income, influence an individual's propensity to become involved in entrepreneurship and

become a business owner. By showing the importance of societal-level inequality on the influence of individual education and income, this paper moves the narrative about the determinants of entrepreneurial entry and business ownership beyond the mere and disproportionate focus on individual quality to address the interplay between structural factors and individual qualities, and the consequences for who gets to become entrepreneurs and business owners.

Limitations and Suggestions for Future Research

The theoretical argument and empirical findings of this paper demonstrated that accounting for the context-specific nature of the relationship between individual qualities, such as human and financial capital, is necessary to fully understand the complexities in the mechanism underlying the entrepreneurial process. In doing so, this analysis shows that societal-level economic inequality is a key factor conditioning the process through which individual characteristics, such as education and income, influence an individual's likelihood of becoming entrepreneurs and business owners. That is, results show that a society's level of economic inequality condition how different levels of education and income relate differently to the likelihood that an individual has of becoming involved in starting a new business and becoming a business owner.

Given that this study demonstrated that economic inequality modified the way individual education and income influence an individual's chance of becoming an entrepreneur, future research may improve on this finding by investigating potential conditions under which societal-level economic inequality influences the relationship between individual characteristics (e.g., education and income) and an individual's likelihood of becoming involved in trying to start a new business and becoming a business owner. Moreover, current research has established that a society's level of development tends to shape the structure of economic inequality and social

mobility. Thus, future research may, for example, investigate whether a society's economic development conditions how societal-level economic inequality influences the way that individual characteristics (e.g., individual human, financial, and social capital) impact the likelihood that individuals would become engaged in entrepreneurial activities and become business owners.

Table 4.1: Mean, Standard Deviation and Range of the Key Variables Used in this Analysis

| Variables | N | Mean | SD | Min | Max |
|--|----------|-------------|-----------|------------|------------|
| Early-stage Entrepreneurship | 149961 | 0.11 | 0.31 | 0 | 1 |
| Ownership of a nascent business | 149961 | 0.06 | 0.23 | 0 | 1 |
| Educational attainment | 149961 | 2.01 | 0.83 | 1 | 3 |
| Income | 149961 | 2.04 | 0.81 | 1 | 3 |
| Gini coefficient (x100) | 58 | 38.87 | 8.53 | 22.89 | 62.20 |
| Female | 149961 | 0.51 | 0.50 | 0 | 1 |
| Age | 149961 | 39.29 | 12.90 | 16 | 65 |
| <i>Individual-level entrepreneurship beliefs</i> | | | | | |
| Preference for uniform living standard | 149961 | 2.30 | 0.93 | 1 | 3 |
| Starting a business is a good career | 149961 | 2.38 | 0.90 | 1 | 3 |
| Successful business person has high Status | 149961 | 2.42 | 0.89 | 1 | 3 |
| Large media coverage for new businesses | 149961 | 2.23 | 0.96 | 1 | 3 |
| <i>Country-level entrepreneurship beliefs</i> | | | | | |
| Preference for uniform living standard | 58 | 2.30 | 0.26 | 1.42 | 2.93 |
| Starting a business is a good career | 58 | 2.38 | 0.27 | 1.62 | 2.92 |
| Successful business person has high Status | 58 | 2.42 | 0.22 | 1.84 | 2.96 |
| Large media coverage for new businesses | 58 | 2.23 | 0.28 | 1.43 | 2.93 |
| Real GDP per capita | 58 | 22905.87 | 13392.60 | 1270.15 | 62469.44 |
| Log real GDP per capita | 58 | 9.81 | 0.77 | 7.15 | 11.04 |

Table 4.2: Pairwise Correlation between the Dependent and Independent Variables Used in this Analysis

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
|----|-----------|------------|------------|------------|------------|------------|------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 1 | 1 | | | | | | | | | | | | | | |
| 2 | 0.692*** | 1 | | | | | | | | | | | | | |
| 3 | -0.0428** | -0.0574*** | 1 | | | | | | | | | | | | |
| 4 | 0.0546*** | 0.0380*** | 1 | | | | | | | | | | | | |
| 5 | 0.00092 | -0.0164*** | 0.282*** | 1 | | | | | | | | | | | |
| 6 | 0.134*** | 0.0959*** | 0.00161 | -0.164*** | 1 | | | | | | | | | | |
| 7 | -0.0604** | -0.0333*** | -0.0806*** | -0.0247*** | -0.0121*** | 1 | | | | | | | | | |
| 8 | -0.0779** | -0.0533*** | -0.0347** | -0.0912*** | -0.166*** | 0.0155*** | 1 | | | | | | | | |
| 9 | 0.00573* | 0.00817** | -0.0327*** | -0.0528*** | -0.0145*** | 0.0255*** | 0.0172*** | 1 | | | | | | | |
| 10 | 0.0572*** | 0.0451*** | -0.0275*** | -0.0876*** | 0.124*** | 0.000738 | -0.0460*** | 0.158*** | 1 | | | | | | |
| 11 | 0.0394*** | 0.0340*** | -0.00631* | -0.0560*** | 0.0758*** | 0.00115 | -0.0327*** | 0.122*** | 0.237*** | 1 | | | | | |
| 12 | 0.0666*** | 0.0535*** | 0.00153 | -0.0400*** | 0.159*** | 0.00101 | -0.0204*** | 0.107*** | 0.196*** | 0.212*** | 1 | | | | |
| 13 | 0.0188*** | 0.0183*** | 0.0170*** | -0.00838** | -0.0516*** | 0.00810* | 0.00600* | 0.282*** | 0.129*** | 0.105*** | 0.0733*** | 1 | | | |
| 14 | 0.147*** | 0.118*** | 0.00684** | -0.126*** | 0.414*** | -0.00179 | -0.118*** | 0.122*** | 0.299*** | 0.158*** | 0.166*** | 0.432*** | 1 | | |
| 15 | 0.126*** | 0.110*** | -0.00127 | -0.140*** | 0.302*** | -0.0150*** | -0.113*** | 0.118*** | 0.188*** | 0.251*** | 0.172*** | 0.418*** | 0.628*** | 1 | |
| 16 | 0.162*** | 0.136*** | -0.0145*** | -0.115*** | 0.543*** | 0.00201 | -0.108*** | 0.0704*** | 0.169*** | 0.147*** | 0.293*** | 0.250*** | 0.567*** | 0.587*** | 1 |
| 17 | -0.159*** | -0.124*** | 0.0160*** | 0.283*** | -0.552*** | 0.0156*** | 0.186*** | 0.0160*** | -0.143*** | -0.131*** | -0.135*** | 0.0568*** | -0.479*** | -0.520*** | -0.459*** |

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Note: 1= Early-stage entrepreneurship, 2= Ownership of a nascent business, 3=Income, 4=Educational attainment, 5=Gini coefficient, 6=Female, 7=Age;
individual-level beliefs: 8= uniform living standard, 9= business is a good career, 10= business people have high status, 11= high praise for new businesses,
Country-level beliefs: 12= uniform living standard, 13= business is a good career, 14= business people have high status, 15= high praise for new businesses;
16= Log real GDP per capita

Table 4.3: Mixed-effects Regression Estimates of the Effect of Human and Financial Capital and Societal-level Economic Inequality on the Log-odds of Early-stage Entrepreneurship

| | Education | | Income | |
|---|-------------------------|-------------------------|-----------------------|-----------------------|
| | Model 1 | Model 2 | Model 3 | Model 4 |
| Intercept | 0.791 (0.896) | 0.558 (1.190) | 0.0977 (0.860) | -0.706 (1.099) |
| <i>Education levels (Ref. = no/some education)</i> | | | | |
| Secondary education | 0.246*** (0.0612) | 0.461 (0.270) | 0.126*** (0.0236) | 0.128*** (0.0237) |
| Postsecondary education | 0.382*** (0.0678) | 0.734* (0.291) | 0.278*** (0.0247) | 0.279*** (0.0247) |
| <i>Income levels (Ref. = bottom 33rd percentile)</i> | | | | |
| Middle 33 rd income percentile | 0.124*** (0.0232) | 0.124*** (0.0232) | 0.166*** (0.0357) | 0.229 (0.170) |
| Upper 33 rd income percentile | 0.332*** (0.0236) | 0.333*** (0.0236) | 0.447*** (0.0591) | 0.788** (0.259) |
| Gini coefficient (x100) | | 0.00688 (0.00965) | | 0.0132 (0.0088) |
| <i>Cross-level interactions:</i> | | | | |
| <i>(1)Gini & income, (2) Gini & education</i> | | | | |
| Secondary education X Gini coefficient | | -0.00541 (0.00658) | | |
| Postsecondary education X Gini coefficient | | -0.00893 (0.00715) | | |
| Middle 33 rd income percentile X Gini coefficient | | | | -0.00160 (0.0041) |
| Upper 33 rd income percentile X Gini coefficient | | | | -0.00871 (0.0064) |
| <i>Individual-level controls</i> | | | | |
| Female =1 (Male=0) | -0.383*** (0.0174) | -0.383*** (0.0174) | -0.380*** (0.0174) | -0.379*** (0.0174) |
| Age (in years) | -0.0102*** (0.00072) | -0.0102*** (0.00072) | -0.010*** (0.0007) | -0.010*** (0.0007) |
| Preference for uniform living standard | 0.00817 (0.00976) | 0.00826 (0.00976) | 0.00860 (0.0098) | 0.00866 (0.0098) |
| Starting a business is a good career choice | 0.0581*** (0.0110) | 0.0582*** (0.0110) | 0.0580*** (0.0110) | 0.058*** (0.0110) |
| Successful entrepreneurs receive high status | 0.0143 (0.0108) | 0.0143 (0.0108) | 0.0148 (0.0108) | 0.0148 (0.0108) |
| Large media coverage for new businesses | 0.0760*** (0.0101) | 0.0760*** (0.0101) | 0.0755*** (0.0101) | 0.076*** (0.0101) |

| | | | | |
|--|-----------------------------------|-----------------------|-----------------------|-----------------------|
| <i>Country-level controls</i> | | | | |
| Preference for uniform living standard | 0.332*** (0.0951) | 0.333*** (0.0952) | 0.332*** (0.0947) | 0.339*** (0.0947) |
| Starting a business is a good career choice | 0.179 (0.169) | 0.195 (0.174) | 0.151 (0.171) | 0.188 (0.173) |
| Successful entrepreneurs receive high status | -0.0994 (0.185) | -0.112 (0.189) | -0.0803 (0.188) | -0.110 (0.188) |
| Large media coverage for new businesses | 0.0703 (0.147) | 0.0711 (0.148) | 0.0478 (0.152) | 0.0366 (0.152) |
| Log real GDP per capita | -0.443*** (0.0818) | -0.448*** (0.0958) | -0.363*** (0.0780) | -0.333*** (0.0875) |
| <i>Random effects</i> | | | | |
| Between-country secondary education s.d. | 0.120*** (0.0373) | 0.111*** (0.0363) | | |
| Reduction in between-country secondary education s.d. | 7.5% ((0.12-0.111)/0.12) | | | |
| Between-country postsecondary education s.d. | 0.162*** (0.0445) | 0.148*** (0.0417) | | |
| Reduction in between-country postsecondary education s.d. | 9% ((0.162-0.148)/0.162) | | | |
| Between-country middle 33 rd income %tile s.d. | | | 0.0196*** (0.0101) | 0.020*** (0.0102) |
| Between-country upper 33 rd income %tile s.d. | | | 0.136*** (0.0349) | 0.126*** (0.0331) |
| Reduction in between-country middle 33rd income %tile s.d. | 7.4% ((0.136-0.126)/0.136) | | | |
| Between-country intercept s. d. | 0.532** (0.123) | 0.500** (0.121) | 0.480*** (0.105) | 0.442*** (0.0983) |
| Number of individuals | 149961 | 149961 | 149961 | 149961 |
| Number of countries | 58 | 58 | 58 | 58 |
| Log likelihood | -47460.3 | -47459.6 | -47469.8 | -47468.4 |
| Chi-squared | 1169.3 | 1173.7 | 1092.3 | 1099.9 |

Standard errors in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

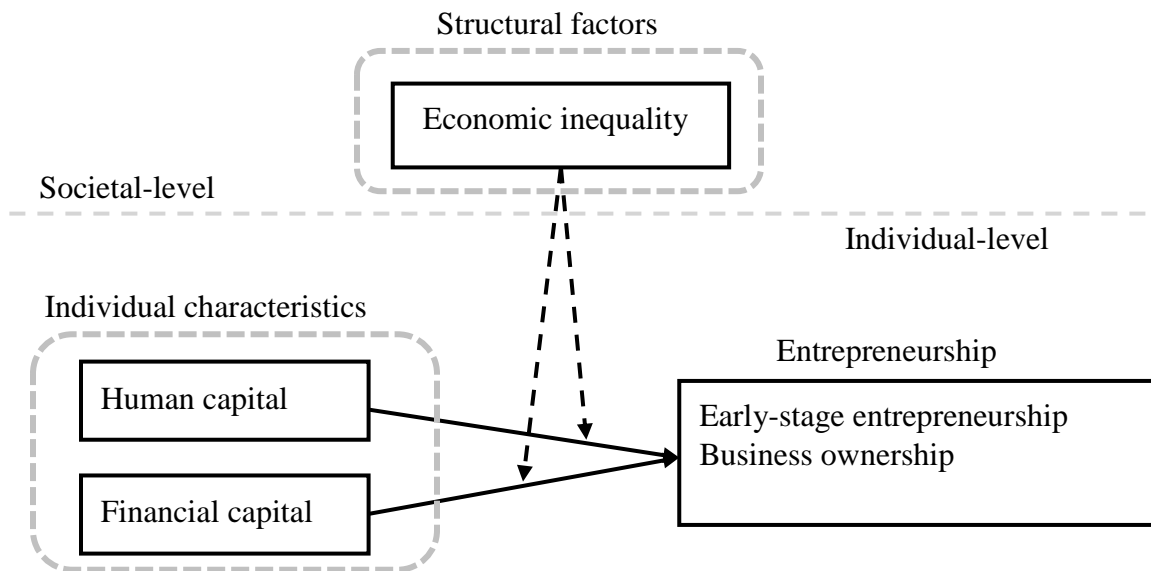
Table 4.4: Mixed-effects Regression Estimates of the Effect of Human and Financial Capital and Societal-level Economic Inequality on the Log-odds of Ownership of a Nascent Business (i.e., a business up to 42 months old)

| | Education | | Income | |
|---|--------------------------|---------------------------|--------------------------|--------------------------|
| | Model 1 | Model 2 | Model 3 | Model 4 |
| Intercept | -0.541 (1.129) | -0.986 (1.479) | -0.969 (1.097) | -1.734 (1.377) |
| <i>Education levels (Ref. = no/some education)</i> | | | | |
| Secondary education | 0.170* (0.0737) | 0.756* (0.305) | 0.0258 (0.0313) | 0.0292 (0.0313) |
| Postsecondary education | 0.271** (0.0827) | 1.080*** (0.324) | 0.115*** (0.0331) | 0.117*** (0.0331) |
| <i>Income levels (Ref. = bottom 33rd percentile)</i> | | | | |
| Middle 33 rd income percentile | 0.150*** (0.0314) | 0.151*** (0.0314) | 0.203*** (0.0518) | 0.381 (0.206) |
| Upper 33 rd income percentile | 0.385*** (0.0318) | 0.387*** (0.0318) | 0.564*** (0.0696) | 1.204*** (0.283) |
| Gini coefficient (x100) | | 0.0158 (0.0114) | | 0.0157 (0.0106) |
| <i>Cross-level interactions:</i> | | | | |
| <i>(1)Gini & education, and (2) Gini & income</i> | | | | |
| Secondary education X Gini coefficient | | -0.0144* (0.00719) | | |
| Postsecondary education X Gini coefficient | | -0.0202** (0.00774) | | |
| Middle 33 rd income percentile X Gini coefficient | | | | -0.00447 (0.00480) |
| Upper 33 rd income percentile X Gini coefficient | | | | -0.0162* (0.00684) |
| <i>Individual-level controls</i> | | | | |
| Female =1 (Male=0) | -0.280*** (0.0233) | -0.280*** (0.0233) | -0.275*** (0.0233) | -0.275*** (0.0233) |
| Age (in years) | -0.0097*** (0.000979) | -0.00968*** (0.000969) | -0.0094*** (0.000963) | -0.0094*** (0.000963) |
| Preference for uniform living standard | 0.0181 (0.0132) | 0.0183 (0.0132) | 0.0186 (0.0132) | 0.0188 (0.0132) |
| Starting a business is a good career choice | 0.0539*** (0.0150) | 0.0542*** (0.0150) | 0.0535*** (0.0150) | 0.0537*** (0.0150) |
| Successful entrepreneurs receive high status | 0.0168 (0.0147) | 0.0166 (0.0147) | 0.0176 (0.0147) | 0.0176 (0.0147) |
| Large media coverage for new businesses | 0.0711*** (0.0139) | 0.0710*** (0.0139) | 0.0702*** (0.0139) | 0.0702*** (0.0139) |

| | | | | |
|--|----------------------------------|----------------------|-----------------------------------|-----------------------|
| <i>Country-level controls</i> | | | | |
| Preference for uniform living standard | 0.418** (0.137) | 0.420** (0.137) | 0.406** (0.137) | 0.403** (0.137) |
| Starting a business is a good career choice | 0.496* (0.224) | 0.524* (0.228) | 0.517* (0.220) | 0.553* (0.221) |
| Successful entrepreneurs receive high status | -0.908*** (0.253) | -0.935*** (0.255) | -0.881*** (0.252) | -0.899*** (0.252) |
| Large media coverage for new businesses | 0.735*** (0.192) | 0.746*** (0.193) | 0.703*** (0.201) | 0.689*** (0.201) |
| Log real GDP per capita | -0.452*** (0.102) | -0.475*** (0.119) | -0.408*** (0.100) | -0.394*** (0.110) |
| <i>Random effects</i> | | | | |
| Between-country secondary education s.d. | 0.124*** (0.0470) | 0.102*** (0.0403) | | |
| Reduction in between-country secondary education s.d. | 18% ((0.124-0.102)/0.124) | | | |
| Between-country postsecondary education s.d. | 0.182*** (0.0647) | 0.139*** (0.0536) | | |
| Reduction in between-country postsecondary education s.d. | 24% ((0.182-0.139)/0.182) | | | |
| Between-country middle 33 rd income %tile s.d. | | | 0.0164*** (0.0166) | 0.0160*** (0.0162) |
| Reduction in between-country middle 33rd income %tile s.d. | | | 2% ((0.0164-0.016)/0.0164) | |
| Between-country upper 33 rd income %tile s.d. | | | 0.125*** (0.0424) | 0.104*** (0.0371) |
| Reduction in between-country middle 33rd income %tile s.d. | | | 17% ((0.125-0.104)/0.125) | |
| Between-country intercept s. d. | 0.689 (0.172) | 0.647 (0.163) | 0.576* (0.136) | 0.544** (0.129) |
| Number of individuals | 149961 | 149961 | 149961 | 149961 |
| Number of countries | 58 | 58 | 58 | 58 |
| Log likelihood | -29670.9 | -29667.7 | -29685.6 | -29682.6 |
| Chi-squared | 581.5 | 591.9 | 486.1 | 502.1 |

Standard errors in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Figure 4.1: Theoretical Framework of the Interplay between Structural and Individual Factors and the Entrepreneurial Process



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CHAPTER 5: CONCLUSION, LIMITATIONS AND SUGGESTIONS FOR FUTURE RESEARCH

We have learned a great deal about the process underlying entrepreneurial development and success. This increased knowledge about the entrepreneurial process is partly due to the importance of entrepreneurship for job creation and economic growth. It is also due to increased availability of large-scale and country-representative surveys that document the state and evolution of business creation. However, while we have learned about some of the macro-level processes underlying entrepreneurship, the bulk of research on entrepreneurial development and success has been focused on understanding the micro-level mechanisms that underlie the entrepreneurial process. That is, the bulk of theoretical and empirical inquiries about sources of entrepreneurial development and success have been focused on understanding personal qualities of potential entrepreneurs and those who have become entrepreneurs. Although some scholars have made some strides highlighting the environmental factors underpinning the entrepreneurial process (e.g., Kim and Li 2014; Kwon, Heflin and Ruef 2013; Thébaud 2015), insufficient attention has been paid to understanding the structural conditions that shape the entrepreneurial process. Moreover, theoretical and empirical investigation into the interplay between structural and micro-level factors and its consequences for the entrepreneurial process is even scantier in the entrepreneurship literature. That is, insufficient attention has been paid to the understanding of the potential conditioning effect of structural factors on the way that individuals' qualities may shape the entrepreneurial process.

This project has made some strides in filling this gap in previous research by developing a theoretical framework that emphasizes the structural conditions underpinning the

entrepreneurial process. This project also advances the literature by developing a theoretical framework that emphasizes the link between micro- and macro-level factors and the consequences of their relationship for the entrepreneurial process. In doing so, this project develops testable hypotheses about the importance of structural conditions, how they relate to individual factors, and the consequences of their relationship for who gets to become engaged in entrepreneurial activities and eventually become business owners.

Using various structural and individual-level factors across multiple countries and multilevel methodology, the empirical analysis demonstrated that structural factors and their relationship with micro-level social phenomena matter for who gets to become involved in entrepreneurship and become business owners. Thus, in Chapter 2, the empirical analysis shows that societal shared beliefs about gender difference in competency and right to valued resources, such as jobs, matter for the differential in chances that men and women have of becoming involved in the entrepreneurial process. The findings show that the stronger the belief that men make better leaders in a society, the less likely that women are to become involved in entrepreneurship compared with men. Moreover, the results also show that the stronger the belief that men have more right to employment than women do in a society, the less likely that women are to become engaged in trying to start a new business in that society.

The findings in Chapter 3 demonstrate further that it is important for research to pay closer attention to structural mechanisms in understanding the entrepreneurial process. Chapter 3 shows that a society's economic stratification system is crucial in determining who gets to become involved in entrepreneurship and who gets to eventually become a business owner. Consistent with the theoretical argument advanced in this project, the empirical analysis shows that structural factors, such as a society's level of economic development, shape how a society's

economic stratification system influences the entrepreneurial process. Particularly, the findings show that the higher inequality in the distribution of income in a society, the more likely that people are to become involved in starting a new business and to eventually become owners of established businesses. However, the analysis also shows that the effect of income inequality on entrepreneurial entry and business ownership is conditioned by a society's level of economic development. That is, income inequality increases entrepreneurial entry and business ownership at low and medium levels of economic development, whereas it decreases entrepreneurial entry and business ownership at high levels of economic development.

The findings also lend support to this project's theoretical framework, which emphasizes the interplay between micro- and macro-level mechanisms for understanding the entrepreneurial process. The empirical analysis also supports this project's theoretical argument pertaining to the context-specific nature of importance of personal qualities for emergence of entrepreneurs and for entrepreneurial success. That is, the empirical analysis supports the theoretical argument stating that the impact of potential entrepreneurs' personal qualities on entrepreneurship should differ across societies. As expected, the analysis shows that individual characteristics, such as individual human and financial capital endowment, affect individual likelihood of becoming involved in starting a business and eventually becoming business owners differently across societies. Findings also show that structural conditions, such as societal-level economic inequality, explain significant portions of the cross-national differences in the way that individual human and financial capital influence individual likelihood of becoming involved in starting a new business and of becoming business owners.

Although this project makes great strides in closing the gap in research regarding structural dimensions of the entrepreneurial process, more research is needed to fully understand

the multifaceted ways that structural conditions influence entrepreneurial development and success. For example, while this project demonstrates that unfavorable beliefs toward women's competency and right to valued resources adversely impact women's chances of becoming involved in entrepreneurial activities, we do not know how these same societal-level factors may potentially influence gender differences in business survival. Thus, future research may shed light on this important theoretical question by examining how societal-level beliefs about gender differences in competency and right to valued resources may condition the survival chances of men-owned businesses compared with that of women.

Taken together, this project shows that structural factors, such as social norms, economic development and social stratification system, are crucial for understanding entrepreneurial entry and success. Given that this analysis demonstrates these structural factors are important for entrepreneurial entry and success, one may also expect such factors to matter for the formation of entrepreneurial teams. That is, one may expect the composition of an entrepreneurial team to mirror the structure of the social differentiation system of the context from which organization emerged. For instance, this could imply that the level of racial, ethnic, gender and economic similarities among members of an entrepreneurial team would reflect the structure of racial, ethnic, gender and economic stratification system of the context where the entrepreneurial process occurs.

However, research on entrepreneurial team formation has paid little attention to those potential structural factors in understanding the composition of the entrepreneurial team. Research has focused primarily on micro-level forces. By focusing on micro-level analysis, research has been unable to unpack these potential structural mechanisms underlying gender, racial, ethnic and economic homophily (i.e., similarity) among members of an entrepreneurial

team. Thus, future research may fill this gap in the literature in two main ways. First, future research may improve on previous analyses by examining the level of racial, ethnic, gender and economic homophily among members of entrepreneurial teams. Second, research may investigate whether structural factors, such as societal-level economic, racial, ethnic and gender differentiations, may explain the potential homogeneous nature of entrepreneurial teams.

This project also highlights the need for scholars to pay closer attention to the interplay between micro- and macro-level social forces and the consequences of their relationships for entrepreneurial development, and organization-founding in general. It is important to pay a greater attention to the micro-macro relationship in understanding entrepreneurial development and success because entrepreneurship and organizational founding are social activities.

Sociologists long ago came to the realization that there may be no social phenomena that exist in isolation (Abbott 2007; Collins 1981; Hedstrom and Ylikoski 2010). Social phenomena are comprised of the interactions of multiple other social elements, evolving symbiotically into seemingly independent elements with distinct characteristics. Similar to all social phenomena, micro and macro mechanisms underlying entrepreneurial process are interconnected. The empirical findings of this project are in line with this social reality. That is, this analysis shows that the effect of individual characteristics on entrepreneurship differs across societies, and that macro-level economic inequality conditions the way that individual characteristics influence an individual's propensity for becoming involved in entrepreneurial efforts and eventually becoming a business owner. These findings suggest that more research should be done on understanding various macro and structural factors conditioning the way that individual qualities influence the entrepreneurial process.

In line with this sociological research tradition, this project highlights the importance of the interplay between societal-level economic inequality and individual human and financial capital for the entrepreneurial process. In this same vein, given that research has shown that the state is important for the functioning of the capitalist production process, one may expect the interplay between the state and micro-level factors to matter also for entrepreneurial development and organizational founding. For example, one may expect the structure of the state (e.g., educational policies, rule of law) may condition how individual-level social networks and social trust influence the emergence of entrepreneurs and entrepreneurial success. The state may influence how social networks and social trust relate to the entrepreneurial process in two key ways. First, the state, through its social development and economic policies (e.g., schooling, labor market training programs and housing policies, among many other policies), has been shown to shape social and economic mobility (Esping-Anderson 1990), impacting the structure and formation of social networks.

Second, state laws that ensure contracts and their enforcement may facilitate links between producers and buyers that might not have developed otherwise. Property rights and financial laws may enable entrepreneurs to access capital for business development and new investment that may not have been available within an entrepreneur's neighborhood and close network of family and friends. Through these exchanges, other non-economic relationships may emerge, increasing social ties across individuals and social groups, and facilitating the development of social trust. That is, as people engage in economic exchanges and maintain long-term partnerships under legal contracts, they may also develop non-economic relationships. For example, it is not uncommon for business partners to engage together in philanthropic and volunteer work, to share family stories, to offer advice about locations for vacations or places to

send their children to school, and so on. These ongoing non-economic exchanges may result in relationships that may outlive the term of the economic exchange and produce trust that would probably have not existed in the absence of state mediated-economic-exchanges that originally brought these actors together. In this regard, not only may the state directly facilitate economic exchange between groups through legal laws and their enforcement, it may also help develop social relations across groups, thereby conditioning how individual social networks and trust influence the entrepreneurial process. Thus, future research may improve on the present project by investigating potential links between the state and individual-level social networks and trust, and the importance of this micro-macro level relationship for the entrepreneurial process.

Finally, this project demonstrates that students of entrepreneurship and organization need to place greater attention on the interdependence of the processes underlying entrepreneurial development and organization founding. By turning attention to the interplay of micro- and macro-level processes, research may be able to bring the study of entrepreneurship and organization closer to the actual social reality governing economic action. That is, as a social phenomenon, the entrepreneurial process should be approached as a phenomenon comprising the interactions of multiple other social elements, which evolve symbiotically into seemingly independent elements with distinct characteristics. In doing so, research would avoid the disproportionate focus on individual-level mechanisms in understanding factors determining who gets to become involved in entrepreneurial efforts and achieve entrepreneurial success.

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