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**Gender inequality and the gender gap in (social) entrepreneurship**



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## **Abstract**

This study analyzes the moderating effect of gender inequality in a country on the probability that a female engages in social or commercial entrepreneurship. A combination of individual-level data from the Global Entrepreneurship Monitor and national-level data from the World Bank of the year 2015 is used (144.010 individuals from 58 countries). Using binominal logistic regressions, the results show that being a female is negatively associated with becoming an entrepreneur compared to becoming a waged worker. When the interaction between gender and gender inequality is added to the model, the relationship between being a female and engagement in entrepreneurship becomes more negative and is significant. Being a female is positively associated with social entrepreneurship compared to commercial entrepreneurship. Adding the interaction term between gender and gender inequality gives a positive, but insignificant relationship between being a female and social entrepreneurship. These results suggest that gender equality strengthens the effect of women becoming an entrepreneur. These results suggest that the effect of women on becoming an (social) entrepreneur is strengthened by the gender inequality index in a country.

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## 1. Introduction

According to Thébaud (2015), there is profound gender inequality in business start-up, ownership and growth orientation. This is called the gender gap in entrepreneurship. The number of female entrepreneurs lags behind compared to male entrepreneurs. Thébaud (2015) found that the context in which women are embedded influences the decision to become an entrepreneur. When supportive institutions that reduce work-family conflict are established, entrepreneurship lacks attractive employment options and thus women are then less likely to become an entrepreneur. When they have more options in the wage and salaried labor market, they would not choose entrepreneurship. However, previous studies emphasize the importance of women in entrepreneurial activities (Harding & Cowling, 2006; Noguera, Álvarez, & Urban, 2013; Verheul, Van Stel, & Thurik, 2006). According to Verheul and Thurik (2001), female entrepreneurs contribute to a more diverse economy. Besides, the increasing number of female entrepreneurs contributes to economic growth and employment creation.

While most businesses have a commercial goal, in the last decades studying social entrepreneurship (SE) has become more popular. SE focuses on the entrepreneurial phenomenon where the aim is to generate benefits with a social purpose by using business management strategies (Kickul and Lyons, 2012; Lumpkin, Moss, Gras, Kato, & Amezcua, 2013). Social entrepreneurs try to tackle social challenges in an innovative way and aim to create social value by using their resources and benefits. In addition, they seek financial sustainability with market orientation (Nicholls & Cho, 2006; Nicholls, 2010; Haugh, 2005). Contrarily, commercial entrepreneurs rather aim to create economic value (Mair & Martí, 2006), personal and shareholder wealth by maximizing their profits than creating social value (Austin, Stevenson & Wei-Skillern, 2006; Estrin, Mickiewicz & Stephan, 2013).

Entrepreneurship has become a more and more interesting topic in the last few decades. More specifically, interest in social entrepreneurship has grown exponentially over the last decade. In addition, the effect of women entrepreneurs on becoming a social entrepreneur has become more essential. A lot of research has been done on women becoming an entrepreneur. However, the explanatory variable gender inequality, which refers to the unequal rights, responsibilities and opportunities of men and women, has not yet been investigated. It will be the main determinant analyzed in this study and therefore, this research contributes to the existing literature.

Moreover, studies with empirical findings in the social entrepreneurship literature are mostly based on qualitative methods (Sassmannshausen & Volkmann, 2018). Due to the lack of comparable and harmonized international data (Hoogendoorn, 2016), it is difficult to draw conclusions about social entrepreneurship. Therefore, this research contributes to the literature by analyzing large-scale empirical data using a quantitative approach.

This study also addresses a large societal problem, namely the inequality between men and women. It is proven that women have lower chances of success in the labor market and also in becoming a prosperous entrepreneur (Verheul, van Stel & Thurik, 2006). The effect of gender on entrepreneurship and on social entrepreneurship may be moderated by gender inequality in a country. Therefore, the environment in which policies are applied could be an important factor to keep in mind when developing new entrepreneurial actions plans. This research has the potential to highlight suitable areas for entrepreneurship and gender equality policies.

In this research I aim to analyze if gender has an influence on becoming an entrepreneur and if this effect is moderated by the gender inequality present in a country. Hence, I want to analyze whether gender inequality affects the gender gap in entrepreneurship. Afterwards, given someone is an entrepreneur, I will also analyze what the effect of gender inequality and gender is on being a social entrepreneur. Therefore, my research question is:

*“What is the effect of gender on becoming an entrepreneur and on being a social or commercial entrepreneur, and are these effects moderated by gender inequality?”*

To answer the research question, I analyze combined data from the Global Entrepreneurship Monitor (GEM) and from the World Bank (WB) from the year 2015. This dataset is chosen, because it has all the relevant variables for this research in it regarding the specific topic social entrepreneurship and gender inequality. The GEM includes multiple variables regarding entrepreneurship, such as socio-demographic variables and entrepreneurial orientation questions. The WB data comprises information about gender inequality.

The results obtained show that being a female is negatively correlated with becoming an entrepreneur compared to becoming a wageworker. When the moderator gender inequality is added, the effect of a female becoming an entrepreneur becomes more negative. When there is more gender equality in a country, the likelihood of women becoming an entrepreneur decreases. Being a female is positively correlated with social entrepreneurship compared to

commercial entrepreneurship. Adding the moderator gender inequality gives a positive, but insignificant relationship between being a female and social entrepreneurship. However, the likelihood of women becoming a social entrepreneur increases when there is more gender equality.

The structure of this study is as follows. In section 2, existing relevant studies are discussed. Previous literature will provide needed background to form the hypotheses. In section 3, the data and methodology for this study is presented. Subsequently, in section 4, the results of the statistical models will be discussed. Section 5 gives the conclusion and discussion, discussing the implications as well as addressing both limitations and suggestions for future research.

## **2. Theoretical Overview and Development of Hypotheses**

In this section, the existing literature about (social) entrepreneurship will be discussed (section 2.1). Thereafter, the existing literature will be used to link (social) entrepreneurship with gender (section 2.2), and lastly, how gender inequality may act as a moderator of the relationship between (social) entrepreneurship and gender (section 2.3). There will also be a motivation of why this is important to analyze.

### **2.1 Entrepreneurship and social entrepreneurship**

#### **Entrepreneurship**

In existing literature, studies define entrepreneurship differently. Carsrud, Olm and Eddy (1985) define entrepreneurship as "an individual who is willing and able to engage in personal risk-taking and responsibility, while at the same time combining the means of production and credit in the expectation of realizing profit and/or other specific objectives such as power and prestige". Moore's (1986) definition is in line with Carsrud et al. (1985) in such way that a person who starts a new business pursues profit while bearing financial risk. Shane and Venkataraman (2000) developed this definition further by adding the opportunity aspect, and how these individuals identify and exploit these opportunities. This is consistent with the perspective of Dejardin (2000). He describes it as "the manifest ability and willingness of individuals, on their own, in teams, within and outside existing organizations, to perceive and create new economic opportunities and to introduce their ideas in the market, in the face of uncertainty and other obstacles, by making decisions on location, form and the use of resources and institutions" (Dejardin, 2000, p. 4). However, Scherer, Adams and Wiebe (1989) argue that the definition of entrepreneurship depends on the environment, organization and situation.

It is important to have a similar view on the definition of entrepreneurship, because otherwise, countries could interpret it differently and then it would be difficult to measure. Different views on entrepreneurship may influence the interpretation of the outcome. Hence, there are many ways to define entrepreneurship, but it generally means "Any attempt at new business or new venture creation, such as self-employment, a new business organization, or the expansion of an existing business, by an individual, a team of individuals, or an established business" (Global Entrepreneurship Monitor, n.d.). In this study, we use this definition, because it has been used in the data collection process.

Entrepreneurship is in many ways an important factor for the economy and society. Firstly, it creates wealth for entrepreneurs in such way that due to their higher incomes, they have a higher chance of moving up to higher wealth classes (Quadrini, 1999). In addition, entrepreneurship plays a key role in economic development throughout the world. However, it may depend on the type of motivation why an individual wants to start a business. An individual who starts a business out of necessity, may influence economic development negatively, while an individual who starts a business out of opportunity may influence economic development positively (Ardagna & Lusardi, 2008). To extend this further, GEM reports also show that necessity-driven entrepreneurship is more common in low-income economies and opportunity-driven entrepreneurship more common in high-income economies (Kelley, Singer, & Herrington, 2016). Furthermore, entrepreneurship may drive innovation by making new or improved products and thus enabling new markets to develop (Reynolds, 1997; Schumpeter, 1934). Innovation will lead to economic development.

Entrepreneurship can be divided into social, environmental and commercial entrepreneurship (CE). For the ease of this study, only the distinction between social and commercial entrepreneurship will be considered. The main difference between social and commercial entrepreneurship is that social entrepreneurs focus primarily on social returns and commercial entrepreneurs focus on economic returns (Austin et al. 2006). In the next subsection, social entrepreneurship will be discussed in more detail.

### **Social entrepreneurship**

While SE is gaining popularity, defining it has not been an easy task as it could be interpreted in multiple ways. This is not unusual in the areas of more social issues. Dees (1998b) called SE a “rare breed”, followed by many studies who tried to define this concept. Austin et al. (2006) note that definitions for SE range from very narrow to very broad. For example, the broad definition uses SE and compares it with CE. SE is defined as “innovative, social value creating activity that can occur within or across the nonprofit, business, or government sectors” (Austin et al., 2006, p. 2). The narrow conceptualization of SE defines it as “the phenomenon of applying business expertise and market-based skills in the nonprofit sector such as when nonprofit organizations develop innovative approaches to earn income” (Austin et al., 2006, p. 2). Moreover, while many define SE as a process, others focus on the entrepreneur itself (Ghalwash, Tolba & Ismail, 2017).

In the literature, the three related terms “social entrepreneurship”, “social entrepreneurs”, and “social enterprises” are often used (Bacq & Janssen, 2011). These terms are related, but distinct. Where social entrepreneurship is the dynamic process, social entrepreneurs are the individuals with a social mission and they create and develop an organization which is called a social enterprise (Defourney & Nyssens, 2008b; Mair & Marti, 2006). However, there are still different views on the use of the terms which depends on context and perspective. Bacq and Janssen (2011) review these notions based on geographical and thematic criteria, and propose the three definitions of SE, social entrepreneur and social entrepreneurial venture (SEV). They say SE is a process to create and sustain social value which is the mission of a social entrepreneur, who needs to exploit new opportunities by being innovative and by using limited resources. Austin et al. (2006) consider SE as an innovative activity and seek for social value creation that can occur in either nonprofit, for-profit sector or corporate sector or across these sectors.

The lack of a clear definition of SE makes a quantitative research more challenging (Short, Moss & Lumpkin, 2009). This research will focus on the broad definition of a social entrepreneur proposed in GEM: “an individual who is starting or currently leading any kind of activity, organization, or initiative that has a particularly social, environmental, or community objective” (Bosma et al. 2016, p. 9). The definition is also in line with what is discussed by Dees (1998b), Austin et al. (2006), Mair and Marti (2006), Short et al. (2009).

Multiple empirical studies have used the definition of SE advanced by the GEM. In the GEM Women’s Report 2018/2019 (Elam et al., 2019) women’s participation in entrepreneurial behavior all over the world is investigated. Moreover, in a recent study done by Fernandez-Laviada, Lopez-Gutierrez & San-Martin (2020), it has been studied whether the level of development of a country has a moderating effect on the characteristics of social entrepreneurs. In another recent study, Clappers (2020) investigates “the influence of government institutions on the prevalence of social entrepreneurship by combining institutional void theory and institutional support theory” (p. 1).

## **2.2 Gender and (social) entrepreneurship**

One key determinant of entrepreneurship that has been studied is gender. The differences between men and women in commercial entrepreneurship have been extensively researched, with a broad consensus on males' greater proclivity (Langowitz & Minniti, 2007; Minniti, 2010; Minniti, Allen & Langowitz, 2006; Themudo, 2009). However, studies regarding the impact of

gender on social entrepreneurship are rather scarce (Nicolás & Rubio, 2016). The reason for this greater propensity can be explained by the fact that culture is the main factor defining socially acceptable behavior for men or women, and that it is not about the biological predisposition. This is also known as the *social role theory* developed by Eagly (1987). Roles and stereotypes of men are control or achievement, which makes them the responsible one who provides the financial support in a household. On the other hand, women are more associated with working from home, housekeeping and caring for children. These observations of the roles performed by men and women cause a certain division of labor in society. The gender stereotypes that arise from them reflect the fact that men and women are associated with certain jobs. As a result, occupational sex-role stereotypes are created (Koenig & Eagly, 2014).

Research by Gupta, Turban, Wasti and Sikdar (2009) found that both men and women associate entrepreneurs with more masculine characteristics and that they find entrepreneurship is a more masculine field. However, while men only described entrepreneurial characteristics similar to men, women described entrepreneurial characteristics similar to men and women. This suggests that women have a more extensive view on sex-role stereotypes about entrepreneurship. Due to general sex-role stereotype of entrepreneurs, women may be discouraged to start a business. It is not women, but men, who do not want to attribute feminine characteristics to success-related careers. Based on this, it is concluded that the male gender is more ideal to start and run a business than the female gender (Sara & Peter, 1998).

According to Vossenbergh (2013), the gender gap in entrepreneurship is often defined as “the difference between men and women in terms of numbers engaged in entrepreneurial activity, motives to start or run a business, industry choice and business performance and growth” (p. 4). Studies about the gender gap first concentrated on the fact that only women may have been the causal force behind the gender divide (Kaufmann, 2006). However, Wirl (1989) introduced a new interpretation of the gender gap, in which the changing politics of men is the systematic base of the gender gap.

Most earlier studies about entrepreneurship have investigated gender disparities in early investment, suggesting that investors are much less likely to provide capital to women than to men (Canning, Haque & Wang, 2012; Green et al., 2003; Gatewood et al., 2003; Brush et al., 2003). This may discourage women from becoming an entrepreneur. Guzman and Kacperczyk (2019) point out that entrepreneurship is a process, hence, investigating gender disparities not only in the early stage, but also at different points in entrepreneurship, will give a better understanding of the origins of these disparities. Subsequently, there is also gender inequality

regarding income. Many studies have shown that women still earn relatively less than of men (Grune & Reder, 1983; Davidson & Cooper, 1984).

As discussed in the introduction, Thébaud (2015) argues about inequality between men and women in entrepreneurship. Women do pursue entrepreneurship. However, their career path tends to be more financially vulnerable. The gender gap in the likelihood of becoming a business owner also arises due to the different perceptions about their skills compared to men (Arenius & Minniti, 2005). The perceptions women have of themselves makes them less likely than men to become an entrepreneur. Contrarily, another factor influencing the decision of women to become an entrepreneur is work-family conflict. While entrepreneurship provides more flexibility and autonomy in terms of scheduling work, office hours, and physical work environment, most wage and salaried jobs do not offer this (Moore & Buttner, 1997; Heilman & Chen, 2003; Hughes, 2003; Mattis, 2004; Mainiero & Sullivan, 2006). Hence women associate entrepreneurship with less work-family conflict (Reynolds & Renzulli, 2005). However, this effect would still be relatively low because of, for example, the sex-role stereotypes of entrepreneurs and the more financially vulnerable career path of female entrepreneurs, which is discussed previously. This leads to the first hypothesis:

***Hypothesis 1.A:*** *Women are less likely than men to be an entrepreneur (as compared to being a wage worker).*

It has been shown that men and women have different motives to become an entrepreneur. The literature shows that men often have economic objectives, while women are primarily guided by social objectives (Liñán & Fernández-Serrano, 2014; Hechavarria et al., 2017; Urbano & Alvarez, 2014). It all comes back to the “guiding principles” related with ethical guardianship (Noddings, 2012). This explains the differences between men and women regarding the framing of moral issues (Gilligan, 1982). Women find communal and relational values most important (e.g., Schwartz and Rubel, 2005). Besides, women find caring for others very powerful (Hawk, 2011). Some researchers have argued that women are the key players in SE (Hechavarria, Ingram, Justo and Terjesen, 2012; Hechavarria et al. 2017). While previous literature shows that men are more likely to engage in SE than women (Lepoutre, Justo, Terjesen & Bosma, 2013), among others, Nicolás and Rubio (2016) found in their study that the gender gap in SE is smaller than in CE. Research in the UK indicates that males are more likely to become commercial entrepreneurs rather than social entrepreneurs (Levie & Hart,

2011), while in the USA social entrepreneurs are predominantly female (Van Ryzin & Grossman, 2009). This suggests that women's care orientation may be the driver for their social objectives and are thus more likely to start a social business. Considering this, the following hypothesis is formulated:

***Hypothesis 1.B:** Women are more likely than men to be a social entrepreneur (as compared to being a commercial entrepreneur).*

### **2.3 Entrepreneurship and social entrepreneurship**

The World Economic Forum (WEF) is a platform where different important topics come up and are discussed. One of these topics is gender inequality. The general definition of the gender inequality is, as stated in the global gender gap report 2017, "the relative gaps between men and women in four fundamental areas: health, education, economy and politics" (World Economic Forum, 2017, p. 7). This is also in line with the data from the WB, where the closer the index is to 1 the more equality between men and women there is in a country. The Global Gender Gap Index is a combination of measures of Economic participation and opportunity, Educational attainment, Health and survival, and Political empowerment. They measure the observed differences between men and women based on these four fundamental categories. Three elemental concepts are used to form the basis of the Global Gender Gap Index. First, the indicators were chosen in gaps instead of levels. Second, the data is treated in such way that the gaps capture the output variables instead of the input variables. Third, the outcomes generated are ranked based on gender equality and not on women's empowerment (World Economic Forum, 2017).

A lot of studies have been done on the effect of gender inequality. Jacobs (1996) examines gender inequality in higher education and concludes that women are disadvantaged when it comes to school results. In addition, Busse and Spielmann (2006) link gender inequality with trade flows and show that gender wage inequality is positively correlated with higher exports of labor-intensive goods. Kleven, Landais and Sogaard (2019) study the effect of children on gender inequality. The Global Gender Gap Index also captures the Economic participation and opportunity gaps between men and women. A higher gap in this category would have a negative effect on the overall gender gap of a country. However, no research has yet been conducted on the effect of gender inequality on entrepreneurship. Therefore, this study will examine the moderator effect of gender inequality on the effect of gender on

entrepreneurship, such that it may weaken or strengthen the incentive of women to become an entrepreneur. Therefore, building on the literature above, the second hypothesis is formulated:

***Hypothesis 2.A:*** *Gender inequality moderates the negative relationship between being a woman and being an entrepreneur (compared to being a wage worker), such that it is stronger when gender inequality is high.*

Previously discussed, women are primarily guided by social objectives rather than economic objectives in entrepreneurship (Liñán & Fernández-Serrano, 2014; Hechavarria et al., 2017; Urbano & Alvarez, 2014). Most women seek to make a social impact. In addition, gender inequality plays a role in many situations, such as in educational systems (Jacobs, 1996) and trade flows (Busse & Spielmann, 2006). Gender inequality may therefore also be a social objective of a female to become a social entrepreneur instead of a commercial entrepreneur. Women may have an even stronger incentive to become a social entrepreneur when there is more gender inequality (British Council, 2017). With this social objective, they may want to change the gender inequality by starting a business to help solve this problem. However, the British Council only investigated this for five countries. Furthermore, the gender gap in SE is smaller than in CE (Nicolás & Rubio, 2016), suggesting that there is more equality in SE and thus more attractive for women. This study will examine the moderator effect of gender inequality on the effect of gender on social entrepreneurship, such that it may strengthen the incentive of women to become a social entrepreneur. This leads to the last hypothesis:

***Hypothesis 2.B:*** *Gender inequality moderates the positive relationship between being a woman and being a social entrepreneur (as compared to being a commercial entrepreneur), such that it is stronger when gender inequality is high.*

### **3. Data & Methodology**

In this section, the data and methodology that are used in the analyses will be elaborated on. The data section (section 3.1) will explain all the relevant variables and the sources of these variables. The methodology section (section 3.2) will explain the empirical model in detail.

#### **3.1 Data**

##### **3.1.1. Datasets**

To investigate whether the gender has an effect on becoming a (social) entrepreneur I use data from the Global Entrepreneurship Monitor (GEM) and the World Bank (WB). The GEM carries out survey-based research on entrepreneurship. More specifically, I merged the data from the GEM 2015 Adult Population Survey (APS) Global Individual Level Data with the GEM 2015 APS Global Individual Level Data - Social Entrepreneurship Special Topic. I am using GEM 2015, because that year's survey contained a special part about social entrepreneurship. As such, GEM 2015 is the most recent large-scale quantitative dataset about social entrepreneurship. The WB is a unique global partnership between a group of five institutions that provide funding and knowledge for developing countries. They reduce poverty and build shared prosperity by providing sustainable solutions. The data I am using from the WB is the Overall Global Gender Gap Index, which examines the gap between men and women.

##### **3.1.2. Variables**

To identify an entrepreneur I look at all types of entrepreneurship, namely nascent entrepreneurs, young and established business owners. The question that was asked in the GEM survey to identify an entrepreneur is as follows: "Are you, alone or with others, currently trying to start a new business, including any self-employment or selling any goods or services to others?" and "Are you, alone or with others, currently the owner of a business you help manage, self-employed, or selling any goods or services to others?" An individual answering "Yes" to one of these questions is considered an entrepreneur. As the answer "No" may indicate that the individual is a waged worker as well as a non-working individual. Therefore, I create a new variable with the combination of this answer with the answer to the question if someone is a full-time or part-time wage worker. Thus, wage workers (full-time or part-time) are the reference category in this variable.

To identify a social entrepreneur, the following question was asked in the GEM survey: “Are you, alone or with others, currently starting or leading any kind of activity, organization or initiative that has a particularly social, environmental or community objective?” When the answer was “Yes”, an individual is considered as a social entrepreneur. In this variable, the other (commercial) entrepreneurs comprise the reference category.

The moderator variable is Gender Inequality. This index number is conducted from The Global Gender Gap Index and captures the observed differences between men and women based on four categories. An index number of 0 is the lowest possible number of gender equality, indicating that there is gender inequality country. An index number of 1 is the highest possible number of gender equality, indicating that there is no gender inequality in a country. The index score can take any value between 0 and 1 and this means that there is a certain rate of gender inequality.

The control variables consist of socio-demographic variables, such as age in years and age in years squared (and therefore not assuming the effect is linear for all ages), level of education (none; some secondary, secondary degree, post-secondary and graduate), household income (first, second, or third tercile) and household size. I will also include the dummy variable Stage of Economic Development of the countries (LED) I’m investigating as a control variable. This variable is measured at three levels, namely the three stages of economic development: Factor-driven (stage 1), Efficiency-driven (stage 2) and Innovation-driven (stage 3). The control variables will be added in all models, because they may influence the dependent variable and covary with the independent variable.

### **3.2 Methodology**

The empirical analysis will be conducted using logit models, because the 2 outcome variables are both binary variables. I will use a moderation analysis as this determines whether the relationship between gender and entrepreneurship depends on gender inequality in a country. For interpretation purposes, I will use the average marginal effect (AME) to calculate the effect size. Four models will help answering the hypotheses. In the first model I will analyze the effect of Gender on becoming an Entrepreneur compared to a wageworker (1= Yes; 0 = No). The independent variable Gender will be used on the individual level. Gender is a dummy variable with male = 0 and female = 1. Furthermore, Gender inequality, which is measured on the national level, may change the nature of the relationship between the dependent and

independent variable, causing a moderating effect. I will therefore include this variable as well. All the control variables as discussed above are also included.

$$(1) Y = \beta_0 + \beta_1 (\text{gender}) + \beta_2 (\text{genderineq\_index}) + \beta_3 (\text{LED\_2}) + \beta_4 (\text{LED\_3}) + \beta_5 (\text{age}) + \beta_6 (\text{age2}) + \beta_7 (\text{hhinc\_middle}) + \beta_8 (\text{hhinc\_highest}) + \beta_9 (\text{hhsiz}) + \beta_{10} (\text{education\_somesecundary}) + \beta_{11} (\text{education\_secundary}) + \beta_{12} (\text{education\_postsecundary}) + \beta_{13} (\text{education\_graduate}) + \varepsilon$$

In the second model I will analyze the effect of Gender on being a Social entrepreneur (1= Social; 0 = Commercial) compared to being a commercial entrepreneur, given someone is an entrepreneur. I will also include Gender Inequality and all the control variables as discussed above.

$$(2) Y = \beta_0 + \beta_1 (\text{gender}) + \beta_2 (\text{genderineq\_index}) + \beta_3 (\text{LED\_2}) + \beta_4 (\text{LED\_3}) + \beta_5 (\text{age}) + \beta_6 (\text{age2}) + \beta_7 (\text{hhinc\_middle}) + \beta_8 (\text{hhinc\_highest}) + \beta_9 (\text{hhsiz}) + \beta_{10} (\text{education\_somesecundary}) + \beta_{11} (\text{education\_secundary}) + \beta_{12} (\text{education\_postsecundary}) + \beta_{13} (\text{education\_graduate}) + \varepsilon$$

The moderating effect that Gender Inequality has on the effect of Gender on becoming an entrepreneur will also be examined. In order to test the moderating effect, I add the interaction effect between Gender and Gender inequality. In the third model, we can see whether the interaction effect is different from the main effect.

$$(3) Y = \beta_0 + \beta_1 (\text{gender}) + \beta_2 (\text{genderineq\_index}) + \beta_3 (\text{LED\_2}) + \beta_4 (\text{LED\_3}) + \beta_5 (\text{age}) + \beta_6 (\text{age2}) + \beta_7 (\text{hhinc\_middle}) + \beta_8 (\text{hhinc\_highest}) + \beta_9 (\text{hhsiz}) + \beta_{10} (\text{education\_somesecundary}) + \beta_{11} (\text{education\_secundary}) + \beta_{12} (\text{education\_postsecundary}) + \beta_{13} (\text{education\_graduate}) + \beta_{14} (\text{gender*genderineq\_index}) + \varepsilon$$

Similar to the third model, I will add the interaction effect in the fourth model so I will again examine the moderating effect that Gender Inequality has on the effect of Gender on becoming a Social entrepreneur.

$$(4) Y = \beta_0 + \beta_1 (\text{gender}) + \beta_2 (\text{genderineq\_index}) + \beta_3 (\text{LED\_2}) + \beta_4 (\text{LED\_3}) + \beta_5 (\text{age}) + \beta_6 (\text{age2}) + \beta_7 (\text{hhinc\_middle}) + \beta_8 (\text{hhinc\_highest}) + \beta_9 (\text{hhsiz}) + \beta_{10} (\text{education\_somesecundary})$$

$$+ \beta_{11}(\textit{education\_secondary}) + \beta_{12}(\textit{education\_postsecondary}) + \beta_{13}(\textit{education\_graduate}) + \beta_{14}(\textit{gender*genderineq\_index}) + \varepsilon$$

## 4. Results

### 4.1 Main results

The descriptive statistics of the analysis sample are presented in Table 1. The sample size of over the year 2015 is 144.010 observations in 58 countries. Approximately 39% individuals of the sample are entrepreneur compared to wageworker and 19% of the individuals are a social entrepreneur compared to commercial entrepreneur. The mean score of the gender inequality index is 0.718.

**Table 1** Descriptive statistics analysis sample ( $N_{individuals} = 144,010$ ;  $N_{countries} = 58$ ; Year = 2015)

	Variable operationalization	Source	Mean	S.D.	Min.	Max.
<i>Outcome variables</i>						
Entrepreneur	1=Yes; 0= No	GEM	0.389	0.487	0.000	1.000
Social Entrepreneur	1=Yes; 0= No	GEM	0.188	0.390	0.000	1.000
<i>Main explanatory variables</i>						
Gender	0=Male; 1= Female	GEM	0.495	0.500	0.000	1.000
<i>Moderator variable</i>						
Gender inequality	Index number from 0 (inequality) to 1 (equality)	WB	0.718	0.055	0.58	0.85
<i>Control variables</i>						
LED_1	1=First stage; 0= Second/Third stage	GEM	0.128	0.334	0.000	1.000
LED_2	1=Second stage; 0= First/Third stage	GEM	0.441	0.496	0.000	1.000
LED_3	1= Third stage; 0= First/Second stage	GEM	0.431	0.495	0.000	1.000
Age	Years	GEM	41.173	14.286	18.000	98.00
Age squared	Years squared	GEM	1899.340	1262.135	324	9604
Household income: Lowest tercile	1=Lowest tercile; 0=Middle/Highest tercile	GEM	0.361	0.480	0.000	1.000
Household income: Middle tercile	1=Middle tercile; 0= Lowest/Highest tercile	GEM	0.323	0.467	0.000	1.000
Household income: Highest tercile	1=Highest tercile; 0= Lowest/Middle tercile	GEM	0.316	0.465	0.000	1.000
Household size:	Number of household members	GEM	3.777	2.525	1.000	90.00
Education: None	None=1; Other=0	GEM	0.118	0.322	0.000	1.000
Education: Some secondary	Some secondary=1; Other=0	GEM	0.164	0.370	0.000	1.000
Education: Secondary degree	Secondary degree= 1; Other=0	GEM	0.370	0.483	0.000	1.000
Education: Post-secondary	Post-secondary=1; Other= 0	GEM	0.298	0.458	0.000	1.000
Education: Graduate	Graduate=1; Other=0	GEM	0.050	0.218	0.000	1.000

Notes: LED = Level of Economic Development; GEM = Global Entrepreneurship Monitor; WB = World Bank; S.D. = Standard deviation; Min. = Minimum; Max. = Maximum

Table 2 shows the correlation matrix of the variables used in the model. According to Tabachnick and Fidell (2012) a correlation should be below 0.90 for the assumption of multicollinearity not to hold. Almost all variables are weakly correlated, and this implies that multicollinearity does not occur. However, the correlation between *Age* and *Age squared* is 0.986, which is the strongest correlation between two variables.

**Table 2 Correlation matrix**

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
(1) Entrepreneur	1.000										
(2) Social Entrepreneur	-0.571	1.000									
(3) Gender	-0.022	0.000	1.000								
(4) Gender inequality	-0.128	0.084	0.020	1.000							
(5) Gender*Gender inequality	-0.050	0.018	0.976	0.223	1.000						
(6) LED	-0.150	0.032	-0.043	0.509	0.061	1.000					
(7) Age	-0.006	-0.003	-0.022	0.161	0.013	0.206	1.000				
(8) Age squared	-0.005	-0.002	-0.025	0.162	0.010	0.201	0.986	1.000			
(9) Household income	-0.060	0.056	-0.078	0.062	-0.065	0.093	0.047	0.038	1.000		
(10) Household size	0.054	0.041	0.022	-0.204	-0.020	-0.363	-0.104	-0.109	0.064	1.000	
(11) Education	-0.127	0.078	-0.035	0.215	0.011	0.273	-0.047	-0.049	0.195	-0.260	1.000

The results from the empirical analysis are presented in Table 3 and Table 4. In the first model, which can be found in Table 3, the likelihood of a woman becoming an entrepreneur is presented. The main explanatory variable *Gender* is negative and significant (-0.080) which implies that when the gender is woman (*Female* = 1), and all else being equal, the likelihood of a woman becoming an entrepreneur compared to a waged worker decreases. This result is in line with Hypothesis 1A. Gender inequality is negative and significant (-1.762) indicating that the more gender equality the less entrepreneurs there are compared to waged workers. Regarding the effect size, which is shown in Table 5, the average marginal effect (AME) of a female on entrepreneurship is -.017 indicating that the probability of a female becoming an entrepreneur decreases with this number when gender is female. In addition, the AME of the gender inequality index is -0.380 implying the probability of becoming an entrepreneur decreases with this number when gender inequality index increases with 1. In the model, all the control variables, except are significant at a 1% significance level.

In Table 4, Model 2, the likelihood of a woman to become a social entrepreneur is presented. A positive and significant relationship (0.093) is found between gender and being a social entrepreneur, and thus women are more likely than men to be a social entrepreneur as compared to being a commercial entrepreneur, given all else being equal. This is line with Hypothesis 1.B. In contrast to Model 1, gender inequality is positive and significant (3.029) indicating that the more gender equality the more social entrepreneurs there are compared to commercial entrepreneurs. Regarding the effect size, which is shown in Table 6, the average marginal effect (AME) of a female on entrepreneurship is .014 indicating that the probability of a female becoming an entrepreneur increases with this number when gender is female. In addition, the AME of the gender inequality index is 0.445 implying the probability of a female becoming a social entrepreneur increases with this number when gender inequality index increases with 1. Stage of Development (*LED\_3*), *Household income; middle tercile* and *Education: Secondary degree* are not significant, but all the other control variables are significant at a 1% significance level.

The third model, shown in Table 3, includes the moderator effect of gender inequality and is presented as the interaction term *Gender x Gender inequality*. The variable *Gender* has gone from negative and significant to positive and significant coefficient (2.338) compared to model 1. Gender inequality shows a positive and significant relationship with entrepreneurship (2.954). However, the interaction term shows a negative and significant relationship (-3.384) with a woman being an entrepreneur. More specifically, given all else is equal, when the gender

inequality index increases (i.e., more gender equality) the likelihood of women being an entrepreneur decreases. Hypothesis 2.A is therefore not accepted. Regarding the effect size, which is shown in Table 5, the average marginal effect (AME) of a female on entrepreneurship is .039 indicating that the probability of a female becoming an entrepreneur increases with this amount when gender is female. In addition, the AME of the gender inequality index is 0.636 implying the probability of a female becoming an entrepreneur increases with this amount when gender inequality index increases with 1. The AME of the interaction term is -0.729 indicating that the probability of a women being an entrepreneur decreases with this amount when the gender inequality index increases with 1. Figure 1 shows a visualization of the marginal interaction effect. It makes clear that the correlation between gender inequality and becoming an entrepreneur is positive and that females have a higher probability than males to become an entrepreneur. The control variables are significant at a 1% significance level.

Model 4, shown in Table 4, is similar to model 3, but with *Social entrepreneur* as dependent variable. Gender shows a negative and insignificant relationship with social entrepreneurship (-0.250). Gender inequality a positive and significant relationship with social entrepreneurship (2.361), which indicates that the more gender equality the likelihood of social entrepreneurs increases compared to wageworkers. The interaction term shows a positive, but insignificant coefficient (0.479) indicating that we cannot conclude anything about the moderating effect of gender inequality on the main effect. In addition, *gender* is also not significant in this model. Hence, the results are not in line with Hypothesis 2.B. Regarding the effect size, which is shown in Table 6, the average marginal effect (AME) of a female on entrepreneurship is -.036 indicating that the probability of a female becoming an entrepreneur increases with this number when gender is female. In addition, the AME of the gender inequality index is 0.347 implying the probability of a female being a social entrepreneur increases with this number when gender inequality index increases with 1. The AME of the interaction term is 0.070 indicating that the probability of a women being a social entrepreneur increases when the gender inequality index increases, suggesting more gender equality, with 1. Despite of the insignificant coefficients, Figure 2 visualizes the marginal interaction effect of Model 4. It makes clear that the correlation between gender inequality and becoming a social entrepreneur is positive and that males have a higher probability than females to become a social entrepreneur. Stage of Development (*LED\_3*), *Household income; middle tercile* and *Education: Secondary degree* are not significant, but all the other control variables are significant at a 1% significance level.

**Table 3** Results of the logit regressions explaining whether gender inequality in a country moderates the effect of women to become an entrepreneur (Yes =1; 0 = No).

	(1)	(3)
Gender	-0.080*** (0.014)	2.338*** (0.187)
Gender inequality	-1.762*** (0.160)	2.954*** (0.395)
Gender × Gender inequality		-3.384*** (0.261)
LED_2	-0.591*** (0.021)	-0.598*** (0.021)
LED_3	-1.356*** (0.025)	-1.358*** (0.025)
Age	-0.030*** (0.003)	-0.029*** (0.003)
Age squared	0.000*** (0.000)	0.000*** (0.000)
Household income: middle tercile	0.093*** (0.017)	0.091*** (0.017)
Household income: highest tercile	0.280*** (0.018)	0.274*** (0.018)
Household size	0.047*** (0.003)	0.048*** (0.003)
Education: Some secondary	-0.374*** (0.027)	-0.376*** (0.027)
Education: Secondary degree	-0.495*** (0.025)	-0.492*** (0.025)
Education: Post-secondary	-0.564*** (0.025)	-0.560*** (0.025)
Education: Graduate	-0.399*** (0.036)	-0.395*** (0.036)
Pseudo R <sup>2</sup>	0.0710	0.0722
Individuals	102.792	102.792
Countries	58	58

Notes: Standard errors in parentheses; \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.10$ .

**Table 4** Results of the logit regressions explaining whether gender inequality in a country moderates the effect of women to become a social entrepreneur (Yes =1; 0 = No).

	(2)	(4)
Gender	0.093*** (0.025)	-0.250 (0.340)
Gender inequality	3.029*** (0.289)	2.361*** (0.722)
Gender × Gender inequality		0.479 (0.475)
LED_2	-0.351*** (0.036)	-0.350*** (0.036)
LED_3	-0.027 (0.044)	-0.026 (0.044)
Age	-0.075*** (0.005)	-0.075*** (0.005)
Age squared	0.001*** (0.000)	0.001*** (0.000)
Household income: middle tercile	0.035 (0.033)	0.035 (0.033)
Household income: highest tercile	0.090*** (0.032)	0.091*** (0.032)
Household size	0.040*** (0.004)	0.040*** (0.004)
Education: Some secondary	-0.361*** (0.052)	-0.361*** (0.052)
Education: Secondary degree	-0.059 (0.044)	-0.060 (0.044)
Education: Post-secondary	0.326*** (0.044)	0.324*** (0.044)
Education: Graduate	0.893*** (0.058)	0.891*** (0.058)
Pseudo R <sup>2</sup>	0.0357	0.0357
Individuals	43.628	43.628
Countries	58	58

Notes: Standard errors in parentheses; \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.10$ .

**Table 5** Results of the average marginal effects of the logit regressions explaining whether gender inequality in a country moderates the effect of women to become an entrepreneur (Yes =1; 0 = No).

	(1)	(3)
Gender	-0.017*** (0.003)	0.390*** (0.017)
Gender inequality	-0.380*** (0.034)	0.636*** (0.085)
Gender × Gender inequality		-0.729*** (0.056)
LED_2	-0.143*** (0.005)	-0.145*** (0.005)
LED_3	-0.313*** (0.006)	-0.312*** (0.006)
Age	-0.006*** (0.001)	-0.006*** (0.001)
Age squared	0.000*** (0.000)	0.000*** (0.000)
Household income: middle tercile	0.020*** (0.004)	0.019*** (0.004)
Household income: highest tercile	0.060*** (0.004)	0.059*** (0.004)
Household size	0.010*** (0.001)	0.001*** (0.003)
Education: Some secondary	-0.085*** (0.006)	-0.085*** (0.006)
Education: Secondary degree	-0.111*** (0.006)	-0.111*** (0.006)
Education: Post-secondary	-0.126*** (0.006)	-0.125*** (0.006)
Education: Graduate	-0.090*** (0.008)	-0.089*** (0.008)
Pseudo R <sup>2</sup>	0.0710	0.0722
Individuals	102.792	102.792
Countries	58	58

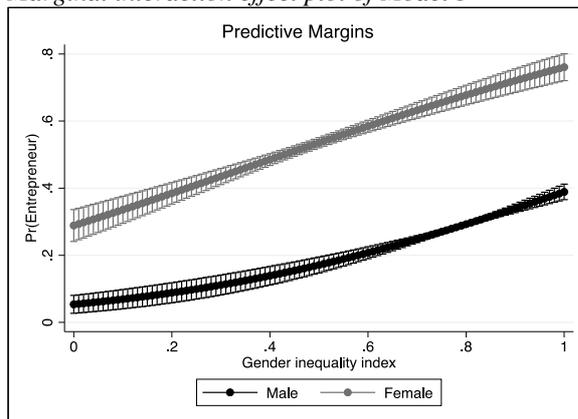
Notes: Standard errors in parentheses; \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.10$ .

**Table 6** Results of the average marginal effects of the logit regressions explaining whether gender inequality in a country moderates the effect of women to become a social entrepreneur (Yes =1; 0 = No).

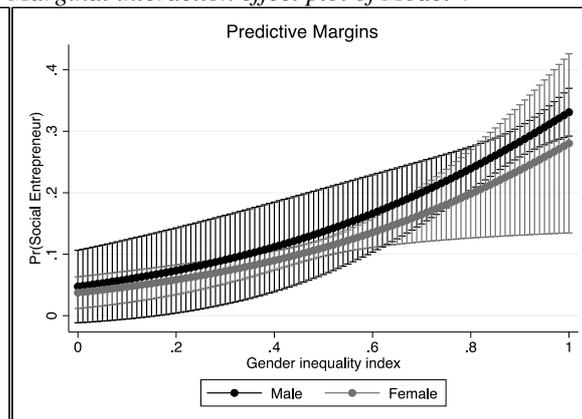
	(2)	(4)
Gender	0.014*** (0.004)	0.036 (0.049)
Gender inequality	0.445*** (0.042)	0.347*** (0.106)
Gender × Gender inequality		0.070*** (0.070)
LED_2	-0.052*** (0.005)	-0.052*** (0.006)
LED_3	-0.004 (0.007)	-0.004 (0.007)
Age	-0.011*** (0.001)	-0.011*** (0.001)
Age squared	0.000*** (0.000)	0.000*** (0.000)
Household income: middle tercile	0.005 (0.005)	0.005 (0.005)
Household income: highest tercile	0.013*** (0.005)	0.013*** (0.005)
Household size	0.006*** (0.001)	0.006*** (0.001)
Education: Some secondary	-0.045*** (0.006)	-0.045*** (0.006)
Education: Secondary degree	-0.008 (0.006)	-0.008 (0.006)
Education: Post-secondary	0.050*** (0.006)	0.050*** (0.007)
Education: Graduate	0.160*** (0.011)	0.160*** (0.011)
Pseudo R <sup>2</sup>	0.0357	0.0357
Individuals	43.628	43.628
Countries	58	58

Notes: Standard errors in parentheses; \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.10$ .

**Figure 1**  
*Marginal interaction effect plot of Model 3*



**Figure 2**  
*Marginal interaction effect plot of Model 4*



## 4.2 Robustness check

I will also check the robustness of the results by using a different standard of the dependent variable *Social Entrepreneur*. In this model, I will use a narrower definition of *Social Entrepreneur* as the broad definition may be too broad. The broad definition includes the individuals who are currently trying to start a social business and who are currently leading a social business. Thus, to use the reduced definition may give a more specific result based on social business starters only, and not the ones who already survived the first stage and are now leading the business. More specifically, the narrow definition of *Social Entrepreneur* includes the individuals who are currently trying to start a business and thus exclude the currently leading social business owners. This leads to a reduced sample size of 41.946 individuals compared to the broad definition, which includes 43.628 individuals.

The results of the robustness check in Table 7 and the AME of the robustness check are presented in Table 8 (See Appendix). The results are similar in size compared to the main results. However, there are more insignificant results in the results of the robustness check. These insignificant results show different results in size, while the significant results show similar results in size. The independent variable *Gender* is in both models insignificant. This may be caused by the smaller sample size of social entrepreneurs. We should therefore use the broad definition as this includes all social entrepreneurs in different stages of their business.

## 5. Discussion and Conclusion

### 5.1 Discussion

This purpose of this research was to examine the influence of gender on becoming an entrepreneur and on being a social or commercial entrepreneur, and if these effects are moderated by gender inequality. Gender was negative and significant in Model 1 and positive and significant in Model 2. This results that women are less likely than men to be an entrepreneur as compared to being a wageworker, but more likely to be a social entrepreneur compared to being a commercial entrepreneur. This is in line with the findings of existing literature of Langowitz and Minniti (2007), who address the influential variables of entrepreneurial propensity of women. In addition, women are more likely than men to be a social entrepreneur, which may be caused by the potential more social objectives of women (Liñán & Fernández-Serrano, 2014; Hechavarría et al., 2017; Urbano & Alvarez, 2014). Hence, we can conclude that hypotheses 1.A. and 1.B. are accepted.

However, the effect of gender on (social) entrepreneurship may depend on the gender inequality in a country. The interaction between gender and gender inequality is negative and significant in Model 3 which suggests that the main effect is moderated by gender inequality. However, this means that with higher equality, women are even less likely to be an entrepreneur. Hence, hypothesis 2.A. is not supported as it states that women would be more likely to become an entrepreneur when there is more gender equality. Instead, gender equality strengthens the effect and thus the effect is weaker when gender inequality is high. The reason for this may be that when there is more gender equality, firms also provide gender equal policies. A fixed salary provides more security than when you become an entrepreneur. While Reynolds and Renzulli (2005) stated women associate entrepreneurship with less work-family conflict than wage and salaried jobs, it is also a more vulnerable career path (Thébaud, 2015). The results are in line with Thébaud (2015), where she addresses the fact that women are less likely to become an entrepreneur due to inequalities in entrepreneurship. Therefore, when there are more options in the wage and salaried market due to possible gender equality policies, and there is a secure job environment, women would probably prefer wagework over entrepreneurship.

Lastly, in Model 4 the interaction term between gender and gender inequality is positive, but insignificant suggesting that the likelihood of a woman to become a social entrepreneur increases when there is more equality. However, due to the insignificant coefficient we cannot

conclude that there is a statistically significant moderating relationship between gender inequality and being a social entrepreneur. Hence, hypothesis 2.B. is not supported. Gender inequality itself has a positive and significant coefficient, so the results show that the more gender equality, the higher the likelihood of more social entrepreneurs compared to commercial entrepreneurs. This may explain why the gender gap in SE is smaller than in CE (Nicolás & Rubio (2016). However, the interaction term is insignificant, so gender inequality does not play a moderator role in the decision of women becoming a social entrepreneur. The positive interaction term is not in line with research by the British Council (2017), suggesting that women are more likely to engage in social entrepreneurship when there is more gender inequality.

## **5.2 Conclusion**

No prior research had incorporated the gender inequality index to investigate the relationship with gender on (social) entrepreneurship. Therefore, this investigation adds to the scarce existing literature of social entrepreneurship. The research question that is discussed is as follows: *“What is the effect of gender on becoming an entrepreneur and on being a social or commercial entrepreneur, and are these effects moderated by gender inequality?”* Hypothesis 1.A. and 1.B. are both supported, suggesting that gender (= female) has a negative effect on becoming an entrepreneur and a positive effect on being a social entrepreneur. Hypothesis 2.A. suggest that gender inequality moderates the effect of gender on entrepreneurship, in such way that it is stronger when gender inequality is high. The results do not support this but support the fact that the main effect is stronger when gender inequality is low. Hypothesis 2.B is also not supported as it shows an insignificant result. Therefore, no conclusive statements can be made about the moderating relationship of gender inequality and gender on social entrepreneurship.

Based on the results, if governments pursue economic development, then the results of this study suggest they should promote entrepreneurial activity more often and provide better conditions for entrepreneurs compared to wageworkers. Gender equality will lower the likelihood of women to become an entrepreneur compared to a wageworker. As governments also pursue gender equality, this will not lead to more entrepreneurs. Therefore, they should also encourage women more often to become an entrepreneur.

### **5.3 Limitations and directions for future research**

This research extends prior literature by analyzing how the gender inequality index interacts with gender on being an entrepreneur and social entrepreneur. The data and methodology used are reliable as the GEM analyzes entrepreneurship and the WB analyzes, among other things, gender inequality for many years. These data were used to estimate binominal logistic regression models for the likelihood of women to become an entrepreneur and social entrepreneur. The results can be applied in many countries, because the outcome depends on the gender inequality index of a country. However, not all countries were in the database and therefore the results are not necessarily applicable in every country. In addition, the study only analyzed data from the year 2015, and thus the results may have changed over the years. Hence, a suggestion for future research may be to complete the GEM questionnaires and to measure the gender inequality in more countries and in more recent years.

In future research, it would also be good to consider the assumptions of the statistical models in more detail. The assumptions of the statistical tests have only been shortly discussed. Firstly, the assumption of multicollinearity did not fully hold, which suggests that the variables used did not have to be combined. Secondly, although becoming an (social) entrepreneur would not influence the gender of an individual, there could still be some form of reverse causality present as the Gender Gap Index partly reflect engagement in the labor market by females. Lastly, factors like perceptions about entrepreneurship are not included in this model but could be added to overcome endogeneity (omitted variable bias). This research focused on the broad definition of entrepreneurship and social entrepreneurship. Another suggestion for future research is to use a narrower definition.

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## 6. Appendix

**Table 7** Results of the logit regressions explaining whether gender inequality in a country moderates the effect of women to become a social entrepreneur (Yes =1; 0 = No). Currently leading social entrepreneurs are excluded from the analysis sample.

	(2)	(4)
Gender	0.049 (0.032)	0.099 (0.438)
Gender inequality	2.790*** (0.366)	2.796*** (0.927)
Gender × Gender inequality		-0.070 (0.613)
LED_2	-0.030 (0.045)	-0.031 (0.045)
LED_3	-0.045 (0.056)	-0.045 (0.056)
Age	-0.074*** (0.007)	-0.074*** (0.007)
Age squared	0.001*** (0.000)	0.001*** (0.000)
Household income: middle tercile	-0.038 (0.042)	-0.038 (0.042)
Household income: highest tercile	0.028*** (0.041)	0.028 (0.041)
Household size	0.032*** (0.005)	0.032*** (0.005)
Education: Some secondary	-0.110* (0.067)	-0.110* (0.067)
Education: Secondary degree	0.165 (0.057)	0.165 (0.057)
Education: Post-secondary	0.493*** (0.057)	0.493*** (0.057)
Education: Graduate	1.081*** (0.073)	1.082*** (0.073)
Pseudo R <sup>2</sup>	0.0216	0.0216
Individuals	41.946	41.946
Countries	58	58

Notes: Standard errors in parentheses; \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.10$ .

**Table 8** Results the average marginal effects of the logit regressions explaining whether gender inequality in a country moderates the effect of women to become a social entrepreneur (Yes =1; 0 = No). Currently leading social entrepreneurs are excluded from the analysis sample.

	(2)	(4)
Gender	0.005 (0.003)	0.010 (0.043)
Gender inequality	0.259*** (0.035)	0.268*** (0.089)
Gender × Gender inequality		-0.007 (0.059)
LED_2	-0.003 (0.004)	-0.003 (0.004)
LED_3	-0.004 (0.005)	-0.004 (0.005)
Age	-0.007*** (0.001)	-0.007*** (0.001)
Age squared	0.000*** (0.000)	0.000*** (0.000)
Household income: middle tercile	-0.004 (0.004)	-0.004 (0.004)
Household income: highest tercile	0.003 (0.004)	0.003 (0.004)
Household size	0.003*** (0.000)	0.003*** (0.001)
Education: Some secondary	-0.008 (0.005)	-0.008 (0.005)
Education: Secondary degree	-0.014*** (0.005)	0.014*** (0.005)
Education: Post-secondary	0.047*** (0.005)	0.050*** (0.0075)
Education: Graduate	0.129*** (0.010)	0.129*** (0.010)
Pseudo R <sup>2</sup>	0.0216	0.0216
Individuals	41.946	41.946
Countries	58	58

Notes: Standard errors in parentheses; \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.10$ .