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The Well-being of Women Entrepreneurs: The Role of Gender Inequality and Gender Roles

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Abstract

We present new evidence on the well-being of women entrepreneurs using data from the World Values Survey for 80 countries. We find that in low- and middle-income countries, female entrepreneurs have lower well-being than male entrepreneurs, while in high-income countries, they have higher well-being. We further explore several macro and micro-level mechanisms--institutional context, gender roles, and individual characteristics--that potentially moderate this relationship. We find that the gender gap in well-being is larger in countries with higher gender inequality, lower level of financial development, and stricter adherence to sexist gender roles. We also find that women entrepreneurs with lower education, more children, and risk-averse preferences are likely to report lower well-being. Our results suggest several policy mechanisms that can be used to enhance the well-being of women entrepreneurs.

Keywords: well-being, women entrepreneurs, institutions, entrepreneurship, non-economic outcomes

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Introduction

Entrepreneurship scholars are increasingly recognizing "the importance of studying well-being as a key outcome in entrepreneurship research" (Lerman et al., 2020; Nikolaev, Boudreaux, et al., 2020; Nikolaev et al., 2022; Stephan, 2018; Wiklund et al., 2019, p. 580). In fact, an increasing number of studies document that a large number of people start new ventures not because they look for financial gain but because they want greater freedom, more meaningful work, and an outlet for creative expression (Dellot, 2014; Parker, 2021; Shane, 2010). In turn, numerous recent studies suggest that engaging in entrepreneurship holds promise in fulfilling people's basic psychological needs for autonomy, competence, meaning, and relatedness, and, in turn, can lead to higher levels of subjective well-being[2] (e.g., Andersson, 2005; Benz & Frey, 2004; Binder & Blankenberg, 2020a; Binder & Coad, 2013, 2016; Blanchflower, 2004; Blanchflower & Oswald, 1998; Kautonen et al., 2017; Lindfors et al., 2007; Ljunggren & Kolvereid, 1996; Nikolaev, Shir, et al., 2020; Nikolaev et al., 2022; Nikolova et al., 2022; Przepiorka, 2017; Shir et al., 2019; Stephan et al., 2020; Taylor, 2004; Wolfe & Patel, 2018).

Despite that promise, however, we still lack systematic analysis that explores well-being differences between male and female entrepreneurs in different institutional and developmental contexts. In a recent review of the literature, (Stephan, 2018) surveys 144 empirical papers on the determinants and consequences of the health and well-being of entrepreneurs and identifies no papers that focus on gender differences in well-being. Yet, understanding gender differences in well-being are important because the rates of entrepreneurship are markedly lower among women in most developed and developing countries (Bosma et al., 2018; OECD, 2016). In

[2] Subjective well-being is a complex construct that reflects a fully functioning life (Ryan & Deci, 2001). One way to conceptualized well-being is to use a cognitive evaluation that allows individuals to assess the overall quality and satisfaction with their life according to their own criteria (Diener et al., 1985). Thus, as it is common in the literature, we use the terms well-being, happiness, and life satisfaction interchangeably. We also use the terms entrepreneur, business-owner and self-employed interchangeably.

addition, women entrepreneurs are more likely to be motivated by non-economic outcomes such as self-empowerment, time flexibility, self-perceptions, work-life balance, and life satisfaction (Carranza et al., 2018). Thus, if entrepreneurship holds promise to increase the non-monetary rewards from one's work, which women tend to value more, it is critical to understand what factors drive the well-being of women entrepreneurs, especially in less developed economies where gender inequality still persists, labor market opportunities are scarce, and women are more likely to face institutional and cultural constraints (World Economic Forum, 2022).

In this paper, we fill this gap in the literature by exploring differences in well-being between male and female entrepreneurs in a large cross-section of countries. We further explore several macro and micro-level mechanisms--economic development, institutional context, gender roles, and individual characteristics--that potentially moderate this relationship. Thus, our paper contributes to the entrepreneurship literature on well-being in several ways.

First, we explore whether the relationship between entrepreneurship and well-being differs for men and women, answering recent calls to examine the heterogeneity of well-being among different groups of entrepreneurs (e.g., Nikolaev et al., 2020; Stephan, 2018; Wiklund et al., 2019). We hypothesize that while women may derive greater well-being from having a more autonomous working environment since they value schedule flexibility and work-life balance more than men (Arai, 2000; DeMartino et al., 2006), they are nonetheless more likely to report lower levels of well-being relative to men. Compared to men, women are more likely to enter entrepreneurship out of necessity rather than an opportunity (GEM, 2019), to have lower endowments (e.g., assets, education, skills, or networks), and to face more institutional and cultural constraints (e.g., restrictive social norms, unequal legal treatment, unfair family responsibilities, and financial discrimination), which in turn can compromise their well-being

(Brush et al., 2009; Campos & Gassier, 2017; Klapper & Parker, 2011; McGowan et al., 2012; Poggesi et al., 2016).[3]

Second, we investigate whether the gap in well-being between women and men entrepreneurs is affected by the level of economic development. Self-employment choices could be driven by different motives in high- and low-income countries. In high-income countries, women are more likely to enter self-employment to realize their creative potential, to feel more independent, or to have a better work-life balance. In low-income countries, women often don't have any other feasible employment options and thus are more likely to enter self-employment out of necessity (Kirkwood, 2009). For example, in Sub-Saharan Africa, women are 64% more likely to be necessity entrepreneurs than men (GEM, 2019). Hence, in low-income countries, women entrepreneurs are more likely to experience lower well-being relative to men (e.g., De Neve et al., 2018).

Third, we explore the role of several institutional factors--regulations that constrain the ease of doing business, gender inequality, and financial development--on the well-being gender gap. In many countries, there is gender discrimination, be it in the legal sector, financial sector, or in social norms and traditions. For example, several studies have documented that women entrepreneurs are more likely to face financial disadvantages, including high loan denials, high-interest rates, and additional collateral requirements (Alesina, 2013; Coleman, 2000; Muravyev et al., 2009). These constraints can be especially challenging in countries with burdensome regulations and low levels of financial development where access to private capital is scarcer.

[3] We note that a recent study by (Hmieleski & Sheppard, 2019) explores differences in well-being of men and women entrepreneurs in a US sample. However, their focus is primarily on how the masculine characteristics (such as creativity) and feminine characteristics (such as teamwork) differentially impact the well-being of men and women. While broadly related to our study, their focus is narrower both in scope of their research questions and the sample used.

Similarly, in many societies, starting and running a business is often viewed as a male role (Bird & Brush, 2002). Women continue to face sociocultural biases and gender myths and are often perceived as less credible than men (Brush et al., 2009; Minniti & Nardone, 2007). In turn, such institutional constraints and culturally defined gender roles can further compromise the well-being of female entrepreneurs.

Finally, we examine the extent to which three individual-level characteristics--education, the presence of children, and risk preferences--moderate the gender gap in well-being. For example, higher education is considered to be one of the most important investments in human capital that can provide many monetary and non-monetary benefits (Card, 1999; B. Nikolaev, 2016; Oreopoulos & Salvanes, 2011). Yet, there are still significant gender gaps in educational attainment, especially in less developed countries (UN, 2022). In turn, women with lower levels of education are likely to experience lower levels of well-being.

To test our hypotheses, we use data from the World Values Survey (WVS), which is a large cross-country database that includes measures of well-being as well as other personal characteristics. The WVS is well-suited for our analysis for several reasons. First, this dataset has been widely used in the well-being literature (Blanchflower & Oswald, 2004; Hammond et al., 2011; Peiró, 2006; Salinas-Jiménez et al., 2013). Second, there is data on employment outcomes, including self-employment. Third, the data contains a large set of questions on people's values and preferences. Fourth, the WVS survey has been conducted in a large set of countries at different income levels, and most countries have been surveyed more than once. Specifically, our dataset contains 80 countries, many of which with two or more years of data, for a total of about 180,000 individuals.

LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

In this paper, we seek to evaluate differences in well-being between male and female entrepreneurs and investigate what factors drive these relative differences. Below, we provide an overview of the literature and develop our hypotheses.

Relative well-being differences between men and women entrepreneurs

There are several reasons to expect differences in well-being between female and male entrepreneurs. First, business outcomes are often weaker in women-owned businesses. For example, women-run businesses tend to be smaller in size (Bardasi et al., 2011; Bruhn, 2009) and operate in more crowded, competitive, and less profitable service sectors (Hisrich & Brush, 1984; Singh et al., 2001; Storey & Greene, 2010), have lower productivity and profitability (Aterido et al., 2011; Hundley, 2001; Islam et al., 2020), grow slower (Singh et al., 2001), and have lower survival rates (Boden & Nucci, 2000; McPherson, 1995).

There is a large literature that shows that income (and economic performance more generally) is strongly and positively correlated with subjective well-being, both within and across countries. This is one of the most well-established relationships in the cross-country literature on well-being that has become a stylized fact (e.g., Kahneman & Deaton, 2010; Killingsworth, 2021; Stevenson & Wolfers, 2013). Therefore, because of weaker economic performance, being an entrepreneur may be less psychologically rewarding for women than it is for men.

Second, women entrepreneurs are likely to face more obstacles and constraints, which could, at least in part, also explain the weaker economic performance of their businesses. For example, ample evidence suggests that endowments such as income, assets, and skills tend to be skewed toward men, especially in less developed countries (e.g., for a review, see Carranza et al., 2018). Similarly, various external factors, such as laws that restrict women's economic activities,

tend to further disadvantage women entrepreneurs (World Bank Group, 2018). These challenges may further increase the well-being gap between men and women, especially in less developed countries.

Third, women entrepreneurs are more likely to enter entrepreneurship out of necessity, such as a lack of other options for gainful employment (DeMartino et al., 2006; GEM, 2019; McGowan et al., 2012; Moore et al., 1999). Thus, they are more likely to be "pushed" into entrepreneurship by necessity rather than "pulled" by opportunities such as the pursuit of a creative business idea or a drive for independence. Economic necessity, such as a lack of jobs or a need for extra income, is the most prominent push factor (Eversole, 2004; Holmen et al., 2011). Gender inequality in wage and salary earnings may provide an additional push for women to leave wage employment for self-employment (Boden, 1996).

The distinction between necessity and opportunity entrepreneurship is one of the most comparatively well-researched areas with regard to well-being. Previous studies consistently show that necessity entrepreneurs report lower levels of well-being (for a review, see Binder & Blankenberg, 2020b; Stephan, 2018). These results have been validated in British and German samples (e.g., Binder & Coad, 2013, 2016) as well as in many other countries (e.g., Larsson & Thulin, 2019; Zbierowski, 2014). Therefore, if women are more likely to be "pushed" into self-employment, they will derive less satisfaction from their entrepreneurial activities, and hence their well-being will be lower.

Finally, women may enter into self-employment for non-economic reasons, such as self-empowerment, independence, better work-life balance, and flexibility of schedule to allow them to better care for their family (Boden, 1999; Kirkwood, 2009). In most societies, women are still considered to be the primary housekeepers and caretakers of children (e.g., Rubio-Bañón &

Esteban-Lloret, 2016). Their businesses are more often located in their homes, which makes it easier to juggle business and home demands. Thus, self-employment may give women important non-economic benefits (such as schedule flexibility or proximity to home), which they may value relatively more than self-employed men.

However, for many self-employed women, greater freedom and flexibility of running a business is tempered by more stress and conflicting commitments: constant work demands, managing the interests of children and other dependents, and a sense of guilt for neglecting children and family (Duberley & Carrigan, 2013; McGowan et al., 2012). Previous studies show that women still face workplace adversity (Weyer, 2007) that can even undermine the positive returns from higher educational attainment, even in developed countries (Heilman & Chen, 2003; Solomon et al., 2022; Stevenson & Wolfers, 2009). Thus, we expect that:

Hypothesis 1: *Women entrepreneurs have lower well-being than men entrepreneurs.*

Next, we examine four boundary conditions--(1) economic development, (2) institutional factors, (3) gender roles, and (4) personal characteristics and attitudes--that can influence the well-being gender gap.

The role of economic development

There are several reasons why a country's income level may moderate the gender well-being gap. First, "women are disproportionately more likely than men to report a necessity motive in most countries" (GEM, 2019, p. 22). However, women in low-income countries are more likely to be "pushed" into self-employment than women in high-income countries. Data from the Global Entrepreneurship Monitor (GEM), for example, reveals that necessity-driven entrepreneurship for women is highest among low-income countries, while opportunity-driven entrepreneurship for women is highest in high-income countries. These differences can be

striking -- for example, only 9% of women entrepreneurs in North America started a new business venture out of necessity, while in sub-Saharan Africa, close to half of all women reported being pushed into entrepreneurship out of necessity (GEM, 2019). Sub-Saharan Africa also shows the largest gender gap in necessity motivations--women are 64% more likely to be necessity entrepreneurs relative to men (GEM, 2019).

Women are "pushed" into self-employment when they face limited job prospects, more discrimination on the job market, or simply need to supplement their family income. These factors are likely to be more pronounced in low-income countries where women continue to face higher entry barriers in the formal labor market and often have to resort to entrepreneurship as a way out of unemployment and poverty (GEM, 2019; Minniti & Naudé, 2010). Such outcomes can be further exacerbated because endowments such as income, assets, and skills tend to be skewed toward men in less developed countries (e.g., for a review, see Carranza et al., 2018).

Second, while women, in general, have lower productivity businesses, this productivity gap is much larger in low-income countries. For example, in Africa, as well as in many other developing countries, women entrepreneurs tend to concentrate on sectors that are more crowded and hence have lower profitability and growth prospects (Aterido et al., 2011; Bardasi et al., 2011). Some of these differences are explained by (1) the adverse business environment women face, (2) access to digital assets, (3) firm-age disadvantage and lack of access to foreign investment, and (4) the size of the sector in which women-owned businesses operate (e.g., see (Islam et al., 2020).

Overall, as rates of necessity entrepreneurs tend to be much higher in less developed countries, such push and pull factors tend to be at the heart of the observed differences in well-being among entrepreneurs across countries (e.g., see De Neve et al., 2018). Because women

tend to be disproportionally more likely to be necessity entrepreneurs and run less-profitable businesses in less-developed countries, we expect that:

Hypothesis 2: *Women entrepreneurs who live in less developed societies will experience relatively lower well-being than men.*

The impact of institutional factors

Women entrepreneurs are also more likely to face more severe obstacles to running their businesses in low-income countries due to a range of institutional constraints--from access to financial resources to gender discrimination in the labor market (Carranza et al., 2018; Minniti & Naudé, 2010; Wu et al., 2019). In turn, such institutional constraints can limit women's opportunities even further, both in the labor market and self-employment, and lead to lower levels of well-being. In this section, we discuss three institutional factors that can potentially influence the well-being gender gap: (1) the level of financial development, (2) the ease of doing business, and (3) gender discrimination.

First, substantial literature suggests that financial capital is critical to entrepreneurship (Acs & Szerb, 2007; Fairlie & Krashinsky, 2012). For example, bank loans are a common source of finance for new ventures (Eddleston et al., 2016), and micro-loans are a critical resource for creating economic opportunities and empowering self-employed women, especially in developing countries (Samineni & Ramesh, 2020). However, research has documented several disadvantages faced by women entrepreneurs, including high loan denials, high-interest rates, and additional collateral requirements (Alesina, 2013; Coleman, 2000; Muravyev et al., 2009).

These constraints may be especially pronounced in countries with a low level of financial development, where women are more likely to be excluded from the formal financial sector (Morsy and Youssef, 2017). For example, when financial capital is scarce, bankers may

disproportionately lend to male entrepreneurs (Orser & Riding, 2006). Aidis et al. (2007) show that access to funds is a more significant barrier to the progress of women business owners in Lithuania and Ukraine than to men. Similarly, Muravyev et al. (2009) use cross-country data and find that women-managed firms are less likely to obtain a bank loan and are charged higher interest rates when loan applications are approved. Women borrowers are also more likely to pay higher interest rates and have higher collateral requirements (Coleman, 2000; Riding & Swift, 1990). Finally, women continue to be dramatically underrepresented in the financial services workforce, even in developed countries (Ellingrud et al., 2021). Thus, we expect that women entrepreneurs in countries with a low level of financial development will have lower well-being.

Second, business regulations such as licensing restrictions, administrative requirements, bureaucracy costs, and tax compliance increase the cost of doing business (Djankov et al., 2002) and reduce new venture creation and growth rates (De Soto & Diaz, 2002; Dean & Meyer, 1996; Djankov et al., 2002). Because highly regulated economies are susceptible to corruption (Holcombe & Boudreaux, 2015), and women are less likely to use bribes than men (Swamy et al., 2001), in countries with more cumbersome regulations, women may face greater constraints to starting, running, and growing new ventures. Recent research, for example, finds that women in countries with more business regulations have lower early-stage growth aspirations (Boudreaux & Nikolaev, 2019). Therefore, we expect that when the cost of doing business is high, women entrepreneurs will experience lower levels of well-being.

Finally, we expect women entrepreneurs who live in countries with higher levels of gender inequality to have lower well-being. A large literature documents that a higher level of inequality at the country level is associated with many negative outcomes--from lower physical and mental health to lower levels of trust and cooperation (e.g., Buttrick & Oishi, 2017; Picket &

Dando, 2019). Similarly, numerous studies suggest that discrimination is strongly associated with a variety of negative well-being outcomes--from lack of self-esteem and depression to anxiety and life dissatisfaction) (e.g., Schmitt et al., 2014). Therefore, we expect that:

Hypothesis 3: *Women entrepreneurs who live in societies with greater gender discrimination, higher barriers to starting a business, and less access to financial resources experience relatively lower well-being than men.*

The role of cultural gender norms

In addition to formal institutional constraints, many of the social norms and traditions may affect women entrepreneurs differently than men. Social norms define appropriate behaviors and desirable attributes for women and men, creating gender roles in realms outside of the family, such as work (Eagly & Kite, 1987; Williams & Collins, 1995). They include rules and traditions regarding many relevant aspects of business, such as property ownership (i.e., whether or not women are allowed to own assets in their name), location (i.e., whether or not women have freedom of movement and location), restrictions on contact with men who are not their relatives, types of economic behaviors that are allowed for women, including their career choices, and social attitudes on working outside of the home (for a review, see (Carranza et al., 2018).

In many societies, social norms are more restrictive toward women, especially when it comes to gender roles in the labor market and, in particular, self-employment (e.g., Marques, 2017; Rubio-Bañón & Esteban-Lloret, 2016). For example, it is by now well-established that men are more likely to start businesses (Eagly & Kite, 1987; Langowitz & Minniti, 2007; McKay et al., 2010; Themudo, 2009). One reason is that social norms and traditions "put women in the home, doing housework and caring for children and elderly, while men are

responsible for working and bringing home money to support the family" (Rubio-Bañón & Esteban-Lloret, 2016, p. 10) Therefore, starting and running a business is often viewed as a male role ((Bird & Brush, 2002). In this respect, women continue to face sociocultural biases and gender myths and are often perceived as less credible than men (Brush et al., 2009; Minniti & Nardone, 2007). As a result, women experience gender discrimination when seeking start-up capital (Fay & Williams, 1993) and have a more difficult time exploiting business opportunities (Carter & Rosa, 1998).

Similarly, women often face more discrimination in societies where entrepreneurship is viewed as a male activity (Baughn et al., 2006). In addition, in developing countries, the views on gender roles may push women into low-growth sectors (Estrin & Mickiewicz, 2011). Finally, unequal intra-household power allocation can limit women's ability to gain the benefits of their entrepreneurial activities (Kantor, 2002). In turn, women entrepreneurs who live in societies that place more importance on traditional values, and those that subscribe to sexist gender roles, are likely to find themselves less happy being self-employed.

Hypothesis 4: *Women entrepreneurs who live in societies that favor sexist gender roles will experience relatively lower well-being than men.*

The role of education, children, and risk preferences

Our next hypothesis considers how individual characteristics and attitudes influence the gender gap in well-being. Specifically, there are significant gender differences when it comes to educational attainment, childcare expectations, and risk preferences that can influence the well-being of men and women entrepreneurs.

First, education is widely considered to be one of the most important investments in human capital that helps individuals develop a multitude of competencies that provide many

monetary and non-monetary benefits. Hundreds of academic papers show that more educated people are more likely to have better job opportunities, greater labor force flexibility, earn higher incomes and live longer and healthier lives (Card, 1999; B. Nikolaev, 2016; Oreopoulos & Salvanes, 2011). Higher education is also strongly and positively correlated with subjective well-being--more educated people view their lives as more meaningful, experience more positive and less negative emotions, and are more satisfied with most life domains, including financial, family, and job satisfaction (Nikolaev, 2016; Nikolaev & Rusakov, 2016).

Education is also an important factor in starting a business as it expands the owner's competencies, cognitive skills, and social networks (Delmar & Davidsson, 2000; Henley, 2005; Kim & Baylor, 2006; Parker, 2021; Shane, 2010). For example, higher education is strongly correlated with high-growth entrepreneurship--the vast majority of the world's self-made billionaires have professional degrees and are highly educated (e.g., see Henrekson & Sanandaji, 2014). However, only 12 percent of the world's billionaires are women (Frank, 2016).

Overall, we expect that women entrepreneurs with higher education will report higher levels of well-being relative to their less educated counterparts--they will be less likely to be pushed into entrepreneurship out of necessity and more likely to rip the monetary and non-monetary benefits from their higher education.

However, while transformative gains in women's education have unfolded in recent decades, significant gender gaps in completion rates still exist, especially in less developed and rural areas ((UN, 2022). Women now outnumber men in tertiary education in some areas of the world (Parker, 2021), but they are a minority of students in STEM (science, technology, engineering, and mathematics) and hold only 2 in 10 science, engineering, and communication technology jobs globally Women are also far less likely to hold managerial and high executive

jobs--only 1 in 3 managers is a woman (UN, 2022), and women make up only about 5% of Fortune 500 CEOs (Zarya, 2018). Thus, we expect that higher education will disproportionally benefit female entrepreneurs.

Second, prior work suggests that women cope with occupational demands differently than men, especially as family needs such as childcare emerge (Brett & Stroh, 2003; Heilman & Chen, 2003). For example, discontent with corporate life and opportunities for advancement can push women into entrepreneurship as an alternative route for professional success (Heilman & Chen, 2003). In addition, highly educated women tend to specialize both at home and in the labor market (Cunningham, 2007), which can create more stress and lower their job satisfaction even if they have higher education (Solomon et al., 2022). In turn, lower job satisfaction may push women into entrepreneurship (Nikolaev, Shir, et al., 2020). Previous studies, for example, document that married women with young children, especially in less developed countries, are more likely to enter entrepreneurship (Minniti & Naudé, 2010). This is likely because of a lack of suitable wage work options that would allow them sufficient flexibility in childcare.

In addition, most cross-sectional and longitudinal studies suggest that having children is associated with lower levels of subjective well-being (for a review, see Hansen, 2012). This negative effect is mostly driven by children living at home, particularly among women who have low socio-economic status and live in fewer pronatalist societies (Hansen, 2012). Thus, we expect that women with children will be more likely to be pushed into entrepreneurship and experience extra pressure to balance family and business responsibilities, which will be reflected in lower well-being.

Finally, previous studies suggest that women, on average, are more risk-averse than men (Croson & Gneezy, 2004; Eckel & Grossman, 2008; Meyers-Levy & Loken, 2015). However,

running a business is inherently uncertain and risky--most businesses fail, while the owners of those that do survive are likely to experience volatile and below-average incomes (Hamilton, 2000; Parker, 2021; Shane, 2010). In turn, we expect that more risk-averse women entrepreneurs, those who have a lower propensity for risk and adventure, will derive less satisfaction from being an entrepreneur. On the contrary, women who express a preference for a stimulating and interesting life are more likely to be "pulled" into entrepreneurship as a form of self-expression. In this case, a better person-environment fit may lead to higher levels of well-being (Markman & Baron, 2003).

Hypothesis 5: *Women entrepreneurs with lower educational attainment, more children, and more risk-averse preferences will have relatively lower well-being than men.*

DATA AND METHODS

World Values Survey

We use data from the World Values Survey (WVS), which is the largest cross-country dataset that provides individual-level data on well-being and values across the globe.[4] Data is available for six successive waves starting in 1980. For this study, we use the data from waves five (2004-2009) and six (2010-2014). The WVS interviews nationally representative samples of adult residents with a targeted minimum sample size of 1,000 respondents per country. Data were collected using face-to-face interviews at the respondent's homes to make sure that respondents with no internet or phone connection were represented in the survey. The WVS is ideal for our analysis because it includes individual-level data on life satisfaction, age, education, gender, marital status, other personal characteristics, and, importantly, a large set of value-based questions.

[4] The data are publicly available and can be downloaded at: www.worldvaluessurvey.org

Well-being. We proxy well-being using a measure of overall life satisfaction. Specifically, respondents are asked to answer: "*All things considered, how satisfied are you with your life as a whole these days? Using this card on which 1 means you are "completely dissatisfied" and 10 means you are "completely satisfied" where would you put your satisfaction with life as a whole?"* The economic literature uses the terms "life satisfaction," "happiness," and "well-being" interchangeably. These alternative measures are highly correlated and have similar coverage (Stevenson & Wolfers, 2008). Large literature supports the use of life satisfaction as a measure of well-being (Bennett & Nikolaev, 2017; Howell & Howell, 2008; Layard & Oparina, 2021; Naudé et al., 2013). For example, according to the World Happiness Report (2021), overall life satisfaction provides a broader indication of human welfare than measures of income, poverty, health, education, and good governance since it captures the overall quality of life.

Gender Roles. We use two measures to capture society's gender roles. First, we use the proportion of people in a country that agree or strongly agrees with the following statement: "*On the whole, men make better business executives than women do*." Thus, this variable captures the extent to which society accepts sexist gender roles. We find huge cross-country variation--in Egypt, 85 percent of the population agrees that men make better business executives, while in the Netherlands and Sweden, less than 10 percent of the population agrees with the statement, reflecting more equal gender roles. In addition, we created a variable "Tradition" that captures the proportion of the population who answers that the following statement is "like me" or "very much like me": "*Tradition is important to this person; to follow the customs handed down by one's religion or family.*"[5] Prior studies show that more traditional values tend to affect how men and

[5] In converting Likert-type scale variables to dichotomous variables we made sure the two categories (i.e. 0 and 1) are as close to dividing the sample in half as possible, which corresponds to a common practice of splitting the sample at the median. Our results are similar if we use original (ie non-dichotomized) Likert-scale variables. In

women view family and work expectations, with more traditional societies expecting women to spend disproportionally more time on household chores and taking care of children (e.g., Cerrato & Cifre, 2018). Appendix A1 provides detailed descriptions of variable construction.

Individual Moderators. We focus on three individual levels of characteristics as potential moderators--education, number of children, and risk preferences. Education captures four different levels of education: no formal education '0', elementary education '1', secondary education '2', and college education or higher '3'. Similarly, the number of children is measured with a categorical variable that captures: no children '0', one child '1', two children '2', and more than three children '3'. To measure risk preferences, we created a variable equal to 1 if a person responds that the following statement is "like me" or "very much like me": "*Adventure and taking risks are important to this person; to have an exciting life*."

Table 1a reports the average level of well-being broken down by several individual-level variables--e.g., self-employed, employed, unemployed, married, etc. Table 1b provides summary statistics of all individual-level variables. Table 1c shows pairwise correlations for all variables used in the analysis. The average well-being is 6.8, with a standard deviation of 2.3. Women represented 52% of the sample, and most respondents were married (63%). Employed individuals comprised 42% of the sample, while self-employed 12%. The average well-being of self-employed individuals was 6.6, which is higher than the unemployed (6.1) but lower than the employed (7.0). Individuals with higher education, which comprised 58% of our sample, reported higher well-being (7.0) compared to individuals with basic education (6.5).

The WVS data does not contain the person's actual income, only the decile of the income distribution. However, relative income shows similar influences on an individual's life satisfaction

addition, the use of dichotomous categories avoids the problem with interpreting the original ordinal variables as cardinal.

as absolute income (Salinas-Jiménez et al., 2013). Almost half of our sample (48%) contains individuals whose household income falls in the middle-income category, and 22% of our sample comes from high-income households. We see a monotonic relationship between household income and average well-being. Individuals from high-income households have the highest well-being of 7.6, which decreases to 6.8 for those with middle household income and to 6.1 for those with low household income.

Country-level Moderators. We combine WVS data with country-level data from various sources. First, we use data on Gender Inequality Index (GII) from the United Nations Development program.[6] The data are available as average annual estimates for 2005-2020. GII reflects gender-based disadvantage in three dimensions—reproductive health, empowerment, and the labor market. It shows the loss in potential human development due to inequality between women and male achievements in these dimensions. The GII ranges from 0 (perfect equality) to 1 (perfect inequality).

Second, we use the Ease of Doing Business index from the World Bank (Wrold Bank, 2019). The data are available for 2003-2019. Since the goal of this paper is to investigate the relationship between the business environment and the well-being of entrepreneurs, we focus on a subset of indicators relating to starting a business. Specifically, we use three indicators: the time, cost, and the number of procedures required to start a business. We use these indicators individually and also as a single index constructed using Principal Component Analysis (PCA).

Third, we use data on Financial Development (FD) available from the World Bank. The data are available for all the years covered by WVS in our sample (2004-2014). Specifically, we

[6] Data are publicly available and can be downloaded at: https://hdr.undp.org/en/content/gender-inequality-index-gii

use a measure of private credit by deposit money bank to GDP (%), which is the most commonly used proxy for financial development.

Finally, we use data on Gross Domestic Product (GDP) per capita (constant 2010 US$) from the World Bank, which is also available for all the years in our sample.

Empirical Methodology

We use a standard well-being equation where individuals' reported well-being score is regressed on various individuals' characteristics (e.g., Castriota, 2006; DiTella et al., 2003). Precisely, our dependent variable is the self-reported life satisfaction level with values from 1 (dissatisfied) to 10 (satisfied). We include a set of personal characteristics commonly included in well-being regression as control variables: education, age, number of children, income level, and marital status. A detailed description of the variables used in this study is provided in Appendix Table A1. Our first model is given by:

$$\mathbf{WB_{ict} = \beta_1 F_{ict} + \beta_2 SE_{ict} + \beta_3 F_{ict} * SE_{ict} + \beta_4 X_{ict} + \alpha_{ct} + e_{ict}} \qquad \mathbf{(1)}$$

Where i denotes individuals, c denotes countries, t denotes time, α_{ct} are country-year fixed effects, WB is well-being, F is a dummy variable equal to one for females, SE is a dummy for self-employed, X is a vector of control variables, e_{ict} is an idiosyncratic error. The country-year fixed effects capture all common factors that could affect average well-being in a country in a year of the survey. Our error term is also clustered at the country-year level to allow for unspecified correlation between individual-level observations in each country-year combination.

Our first hypothesis evaluates whether there is a "well-being gap," i.e., we test whether the well-being of self-employed women is different from the well-being of self-employed men. Formally, we test whether β_3=0, i.e., we focus on the interaction of F (female) and SE (self-employed) dummies. We run this model first on the full sample, and then we split our sample into

three subsamples based on the country's level of development: low, medium, and high level, based on the World Bank classification. Thus, we explore whether our results hold at different levels of economic development, which is the first way we test hypothesis 2.

Our second model will be used to test the remainder of our hypotheses--i.e., the relative effect of a country's economic, institutional, and cultural environment as well as individual characteristics on the "well-being gap" between men and women. To capture this effect, we use the triple interaction of F (female dummy), SE (self-employed dummy), and the moderating factors (denoted by M), which are either institutional or individual factors, as we describe below. Our second model is given by:

$$\mathbf{WB_{ict} = \beta_1 F_{ict} + \beta_2 SE_{ict} + \beta_3 F_{ict} * SE_{ict}}$$
$$\mathbf{+ \beta_4 M * F_{ict} + \beta_5 M * SE_{ict} + \beta_6 M * F_{ict} * SE_{ict} + \beta_7 X_{ict} + \alpha_{ct} + e_{ict}} \qquad \mathbf{(2)}$$

This model is an extension of our model (1), so for brevity, here we only discuss the differences. We added M to represent either country-level or individual-level moderating factors. Our main interest is in the triple interaction coefficient β_6. Because we added a triple interaction, we also have to add two additional double interactions captured by the coefficients β_4 and β_5. The double interactions capture how moderating factors M affect all women (coefficient β_4) and how moderating factors M affect all self-employed (coefficient β_5). Our main focus, however, is on the coefficient β_6, which captures the effect of moderating factor M on the *relative difference* between men and women. In other words, the triple interaction captures how our moderating factors M affect the well-being gap.

We have two sets of moderating factors. For testing our hypothesis 2, our moderating factors are country-year institutional variables (and hence M will have a subscript of ct). We use

four country-year measures: economic development (log GDP per capita), financial development (private credit), gender inequality index, and business regulation. For testing our hypothesis 3, our moderating factors are individual characteristics (and hence M will have a subscript of cit). We have 5 individual characteristics: the presence of young children, education, preference for stimulation, gender roles, and adherence to tradition. These measures were discussed in the data section and Appendix Table A1. When we use country-year moderating factors, the level of factor M is subsumed into the country-year fixed effects. When we use individual moderating factors, we also add M as a separate variable among the control variables given by vector X.

RESULTS

Estimating the well-being gap

We start the analysis in Table 2, which presents results that test our main hypothesis (H1). The results on all control variables are consistent with the prior literature, which offers reassurance in our empirical methodology. To streamline the presentation of our main results, the results for control variables are discussed in Appendix A1. Our main focus here is on the interaction of female and self-employed dummies, given in our model by the β_3 coefficient. We find that the interaction is significantly negative. In other words, women entrepreneurs are less happy than men entrepreneurs, even after controlling for a large number of demographic characteristics (column 2), including income (column 3). This result suggests that there is a negative well-being gap for self-employed women, which supports H1. The magnitude of this effect is relatively small -- being a self-employed female is associated with a 5% standard deviation reduction in well-being.[7] Nevertheless, this effect is equal to the difference in well-

[7] In our discussion of magnitudes of various coefficients, we rely on classification of effect sizes in behavioral sciences proposed by (Cohen) 1988 The Cohen's d is calculated as difference in means scaled by the standard deviation. The values below 0.2 are considered small, above 0.8 are considered large and the values in-between are medium size.

being between non-self-employed women and men (i.e., the coefficient on the Female dummy without interaction is a positive 0.1). The self-employed dummy, which captures the effect on men from being self-employed, is not significant. Another way to interpret our results is that women suffer a loss in well-being from being self-employed, while men do not. We refer to this difference in well-being between self-employed men and women as "the well-being gap."

The role of economic development

In Table 3, we reproduce the most complete model from Table 2 (i.e. column 3) on four sub-samples of countries based on their level of economic development: low, middle, and high-income countries, as well as a combined low- and middle-income sample. We find that the well-being gap is negative in low- and middle-income countries and positive in high-income countries. The magnitude of the gap is larger and more significant in low-income countries than in middle-income countries (although the difference in magnitudes of 0.03 is not statistically significant). These results provide support for H2 -- women entrepreneurs experience lower levels of well-being in low- and middle-income countries but experience higher levels of well-being in high-income countries. Both of these effects are relatively small in magnitude (Cohen, 1988).

The role of the institutional environment

In Table 4, we examine the role of the institutional environment on the well-being gap. Our main focus here is on the triple interaction between the institutional characteristic M (institutional environment) with F (female) and SE (self-employed), i.e., the coefficient $\boldsymbol{\beta_6}$. The same control variables discussed above are included but not reported. In column 1, we confirm the sample splits results seen earlier in Table 3: countries with a higher level of GDP per capita

have a smaller well-being gap. The interaction with GDPPC is positive, meaning higher GDP shrinks the well-being gap (i.e., making it less negative), and it is significant at the 5% level.

We are using log GDP in these regressions, which ranges in our sample from 5.6 to 11.4 with an average and a median of around 9. Therefore, in the country with the lowest level of economic development (Ethiopia), the well-being gap is equal to -0.23 (i.e., -0.51+0.05*5.6). In countries with an average level of economic development (e.g., Lebanon, Romania, and South Africa), the well-being gap shrinks to -0.06. In countries with the highest level of economic development, the well-being gap is positive and equals about 0.05 for Switzerland and 0.06 for Norway. Thus, the difference in the well-being gap between the lowest and the highest income country in our sample is about 0.3 (i.e., 0.23+0.06). While this is still considered a small effect (Cohen, 1988), this effect is comparable to the effect of higher education in low- and middle-income countries (column 4 in Table 3) and corresponds to a 15% change in standard deviation in well-being.

In column 2, we use the Gender Inequality Index as our intuitional measure and find that the triple interaction is also significant at 5% despite a significant loss of observations. Specifically, gender inequality has a significantly negative impact on the well-being gap. We note that higher values of the GII indicate worse outcomes – i.e., higher gender inequality. Thus, countries with higher gender inequality have a larger (more negative) well-being gap.

In our sample, the countries with the highest GII (the worst gender discrimination) are Yemen, India, Iran, Qatar, and Zimbabwe. For these countries, the well-being gap ranges between -0.27 and -0.5.[8] In our sample, the countries with the lowest GII (the least gender discrimination) are Sweden, Netherlands, Germany, Slovenia, and Singapore. For these

[8] Obtained as 0.22-0.87*0.57 for low end and 0.22-0.87*0.83 for high end.

countries, the well-being gap is positive and ranges between 0.15 to 0.18. Thus, the range of the well-being gap is significantly more pronounced when we use the GII index. Specifically, the well-being gap range from the lowest GII to the highest GII country is 0.68. This difference is equivalent to a 30% of standard deviation increase in well-being from the least to the most gender-equal country. In terms of Cohen's (1988) size effect scale, this is considered a medium-size effect.

In column 3, we use financial development and find the triple interaction to be significant at 5%. Here the coefficient is positive since higher levels indicate better financial development. Thus, in countries with higher levels of financial development, there is a smaller gap in well-being, i.e., women entrepreneurs are not as disadvantaged.

Finally, in column 4, we use the regulatory burden of starting a new business (DB). However, the results are not significant. Our measure of DB captures how cumbersome it is to start a new formal business. One possible explanation for this insignificant finding is that the DB measure does not capture the level of inequality between men and women when it comes to regulations that constrain business activity. Unfortunately, such data is not available. Thus, while it is possible that women are disproportionately affected by more cumbersome business regulations, the DB measure does not capture such gender differences.

Overall, our results provide support for H3. Female entrepreneurs who live in countries with more discriminatory institutions toward women and lower levels of financial development experience lower levels of well-being than men compared to female entrepreneurs who live in countries with greater gender equality and better financial development.

The role of gender roles

Next, we switch our attention to the impact of cultural values and gender roles on the well-being gap. We create aggregated country-level measures of the prevalence of gender stereotypes based on individual responses. These results are presented in Table 5. We find that in societies in which a greater proportion of people subscribe to sexist gender values (column 1) and more traditional values (column 2), the well-being gap is bigger. However, only the interaction effect with traditional values is significant (column 2). The results imply, for example, that the difference in well-being between the least traditional (Japan) and most traditional society (Qatar) is close to 30% of a standard deviation in well-being, which is a moderately strong effect.

The role of education, children, and risk preferences

Finally, we examine the role of education, children, and risk preferences on the well-being gap in Table 6. Again, our focus here is on the triple interaction coefficient, in this case, of an individual characteristic with F (Female) and SE (Self-employed) dummies. We find that women entrepreneurs with higher education have higher well-being (i.e., lower well-being gap) (column 1). These results imply that it is mostly uneducated women entrepreneurs who suffer a loss in well-being. Second, we find that women with children suffer a greater loss in well-being (column 2). Finally, we observe that women entrepreneurs with a higher preference for risk and stimulation experience a smaller loss in well-being (column 3). These effects are moderate in size. For example, compared to women who had no formal education, female entrepreneurs with a college education experience a well-being boost close to 25% of a standard deviation in well-being. Similarly, compared to women with no kids, women who have three or more kids experience a well-being penalty that is close to 22% of a standard deviation in well-being.

DISCUSSION

We present new evidence on the relative well-being of men and women entrepreneurs and evaluate how gender differences in well-being are affected by economic, institutional, cultural, and individual factors. We find that women entrepreneurs have lower well-being in low- and middle-income countries but a higher level of well-being in high-income countries. In other words, we document a negative "well-being gap" in low- and middle-income countries and a small but positive gap in high-income countries. We further explore how institutional, cultural, and individual factors moderate the well-being gap we document. We find that greater gender inequality, lower levels of financial development, and more traditional cultural values increase the well-being gap, with gender inequality having the largest negative effect. At the same time, higher levels of education, fewer children, and greater preferences for risk and stimulation reduce the gender gap in well-being.

Theoretical Implications

An increasing number of studies have documented that engaging in entrepreneurship can lead to higher levels of subjective well-being by fulfilling people's basic psychological needs for autonomy, competence, and relatedness (e.g., Benz & Frey, 2004; Nikolaev et al., 2020; Stephan et al., 2020). Despite this growing literature, however, we still lack systematic analysis that explores well-being differences between male and female entrepreneurs (Stephan, 2018). In this study, we advance this growing literature by answering recent calls to examine the heterogeneity of well-being for male and female entrepreneurs in different institutional, cultural, and individual contexts (Stephan, 2018; Wiklund et al., 2019).

Consistent with previous studies, our results suggest that entrepreneurship can lead to higher levels of well-being, but this is highly dependent on the developmental, institutional, and cultural context within which entrepreneurs operate. However, ours is a first study to show that

female entrepreneurs tend to experience significant well-being disadvantages, especially in countries with lower levels of economic development, high gender inequality, and more traditional cultural values. The well-being gap is also larger for less educated female entrepreneurs who also have more kids.

Our results are consistent with the idea that in low- and middle-income countries, women are more likely to be "pushed" into entrepreneurship by necessity, while in high-income countries, where they have more opportunities in the labor market, they are more likely to be "pulled" by opportunity. In addition, in low- and middle-income countries, women entrepreneurs are likely to face more severe obstacles and constraints than their male counterparts. These constraints could be in the form of restrictive social norms and traditions and legal, financial, and labor market discrimination.

Finally, we also show that the well-being gap is highly dependent on several individual characteristics. Specifically, women entrepreneurs have higher well-being if they are more educated, have no children, and have a stronger preference for risk and stimulation. In this respect, higher education holds significant promise in reducing the negative well-being gap.

Overall, our results suggest that the well-documented well-being premium from entrepreneurship is highly contingent on the institutional and cultural environment as well as the individual characteristics of entrepreneurs. For example, the negative well-being gap is significantly higher (close to 30% standard deviation in well-being) between the least and most gender-unequal countries. This effect is larger than the negative well-being effect we document from unemployment, which has been consistently found to "depress mental well-being and lower life satisfaction … more than any other single characteristic" (M. Nikolaev & Nikolaev, 2021; Powdthavee & Vernoit, 2013).

Policy Implications

Our results have several policy implications. First, we find that economic development plays a critical role in promoting well-being equality, especially when it comes to the well-being of male and female entrepreneurs. While in the least developed countries, women entrepreneurs experience significantly lower well-being than their male counterparts, in the most developed countries, the gender gap is non-existent or even reversed.

However, achieving equality requires more than economic development and is also contingent on the cultural and institutional environment. Even in the most developed countries, women who face more sexist and traditional gender roles and greater discrimination are more likely to experience significant gaps in well-being. Therefore, policies that aim to equalize the playing field for men and women by reducing gender inequality also hold significant promise in reducing gender inequalities in well-being.

Similarly, policies that promote equality in educational outcomes between men and women are also likely to reduce the gender gap in well-being. In this respect, while transformative gains in women's education have unfolded in recent decades, significant gender gaps still remain (UN, 2022). For example, women are still a minority of students in STEM (science, technology, engineering, and mathematics) and hold only 2 in 10 science, engineering, and communication technology jobs globally (UN, 2022). Our results suggest that education is a powerful tool for empowering women entrepreneurs across the world. Thus, promoting equal access to education and increasing the number of women in STEM fields may significantly reduce the well-being gender gap we document.

Our results also suggest that women with children are more likely to be pushed into self-employment than those without children (and hence experience lower well-being from their

activities). Or, even if they engage in entrepreneurship to pursue opportunities, women may experience more stress due to juggling both work and family responsibilities. In this respect, policies should make it easier for women with children to work outside of the home. For example, better options for childcare and more flexible hours might support not only women entrepreneurs but wage earners as well, who will be less likely to be pushed into entrepreneurship.

More generally, many traditional values continue to be unfair and discriminating toward women (UN, 2022), so naturally, those who feel more bound by these traditions will experience more challenges in their business endeavors. For example, given the endurance of distinct gender roles even in developed countries (e.g., Bianchi et al., 2012; Grunow et al., 2012), women are more likely to aspire to excel both at home and in the labor market (Cunningham, 2007; Yavorsky et al., 2015). However, family duties can often lead to conflict with career development (Phillips & Imhoff, 1997; Stroh & Reilly, 1999). In this respect, the division of household labor typically disadvantages women even in developed societies (Bianchi et al., 2012; Kamp Dush et al., 2018), regardless of whether women earn more or less than their male partners (Bittman et al., 2003; Solomon et al., 2022). In this respect, policies associated with eliminating forced marriages, working to end the exploitation of women, valuing unpaid childcare, promoting shared domestic responsibilities, having universal access to reproductive rights and health, and, more generally, strengthening policies that promote gender equality through legislation will likely to continue to reduce the gender gap in well-being.

Finally, it is important to emphasize that our results are consistent with the notion that women prefer wage employment and only when it is not available they are likely to be pushed into entrepreneurship. While we don't test for this directly, we show that more educated women,

who are likely to have more opportunities for wage employment, have higher well-being from being an entrepreneur likely because they are pulled into entrepreneurship rather then pushed. Our results on women with children are consistent with this proposition as well: since women with children are often discriminated in the labor market, especially in low-income countries, they are more likely to be pushed into entrepreneurship.

In conclusion, our results are consistent with the UN's Developmental Goals--reducing poverty (goal 1), quality education (goal 3), and gender equality (goal 5) can significantly enhance the relative well-being of women entrepreneurs (UN, 2022). As societies make progress with these goals, this may encourage more women to enter entrepreneurship by choice rather than by necessity, which could not only enhance their personal well-being but result in positive societal gains. Finally, our results call attention to focusing on non-economic outcomes of entrepreneurship, such as well-being, and reducing the emphasis on profits and growth as the main metrics of success.

Limitations

Although the WVS provides a large sample size and inclusion of countries and individuals with different levels of income and values, there are several limitations to our study. First, the time gap between different waves is, on average, five years, and each wave covers a different set of countries surveyed in different years. While some countries appear in both waves, others appear only in wave five, and some only in wave 6. See Appendix Table A2 for a detailed list of countries and years included in each wave.

Second, since the data set is not a panel, there is no possibility for a longitudinal analysis or including individual fixed effects (DiTella et al., 2003; Kruse et al., 2017). Thus, it is difficult to identify the direction of causality. Without such data, our results should be interpreted as

correlational and not causal. Nevertheless, the focus of the paper is on the well-being gap between men and women and the interaction effects, which should not suffer from serious endogeneity.

Finally, several of our variables are single-item measures. For example, we proxy well-being with a single-item life satisfaction measure. Previous studies suggest that single-item life satisfaction measures perform very similarly compared to multi-item measures, providing virtually identical answers to substantive questions (Cheung & Lucas, 2014). At the same time, other variables used in our study, such as risk preferences or gender roles and traditional values, have not been validated. Therefore, we caution readers when interpreting these results.

REFERENCES

Acs, Z. J., & Szerb, L. (2007). Entrepreneurship, Economic Growth and Public Policy. *Small Business Economics*, *28*(2), 109–122.

Aidis, R., Welter, F., Smallbone, D., & Isakova, N. (2007). Female entrepreneurship in transition economies: The case of Lithuania and Ukraine. *Feminist Economics*, *13*(2), 157–183.

Alesina, A. (2013). Women, Fertility, and the Rise of Modern Capitalism. *Science*, *342*(6157), 427–428.

Andersson, P. (2005). *Preliminary version – Please do not quote Happiness and Health: Well-being among selfemployed*.

Arai, A. B. (2000). Self-Employment as a Response to the Double Day for Women and Men in Canada*. *Canadian Review of Sociology/Revue Canadienne de Sociologie*, *37*(2), 125–142.

Aterido, R., Hallward-Driemeier, M., & Pagés, C. (2011). Big Constraints to Small Firms' Growth? Business Environment and Employment Growth across Firms. *Economic Development and Cultural Change*, *59*(3), 609–647.

Bardasi, E., Sabarwal, S., & Terrell, K. (2011). How do female entrepreneurs perform? Evidence from three developing regions. *Small Business Economics*, *37*(4), 417.

Baughn, C. C., Chua, B., & Neupert, K. E. (2006). The Normative Context for Women's Participation in Entrepreneruship: A Multicountry Study. *Entrepreneurship Theory and Practice*, *30*(5), 687–708.

Bennett, D. L., & Nikolaev, B. (2017). Economic Freedom & Happiness Inequality: Friends or Foes? *Contemporary Economic Policy*, *35*(2), 373–391.

Benz, M., & Frey, B. S. (2004). *Being independent raises happiness at work*. 41.

Bianchi, S. M., Sayer, L. C., Milkie, M. A., & Robinson, J. P. (2012). Housework: Who Did, Does or Will Do It, and How Much Does It Matter? *Social Forces*, *91*(1), 55–63.

Binder, M., & Blankenberg, A.-K. (2020a). *Self-employment and Subjective Well-Being*. 36.

Binder, M., & Blankenberg, A.-K. (2020b). Self-employment and Subjective Well-Being. *Handbook of Labor,Human Resources and Population Economics*, 1–25.

Binder, M., & Coad, A. (2013). Life satisfaction and self-employment: A matching approach. *Small Business Economics*, *40*(4), 1009–1033.
Binder, M., & Coad, A. (2016). How Satisfied are the Self-Employed? A Life Domain View. *Journal of Happiness Studies*, *17*(4), 1409–1433.
Bird, B., & Brush, C. (2002). A Gendered Perspective on Organizational Creation. *Entrepreneurship Theory and Practice*, *26*(3), 41–65.
Bittman, M., England, P., Sayer, L., Folbre, N., & Matheson, G. (2003). When Does Gender Trump Money? Bargaining and Time in Household Work. *American Journal of Sociology*, *109*(1), 186–214.
Blanchflower, D. G. (2004). *Self-Employment: More may not be better* (Working Paper No. 10286). National Bureau of Economic Research.
Blanchflower, D. G., & Oswald, A. J. (1998). What Makes an Entrepreneur? *Journal of Labor Economics*, *16*(1), 26–60.
Blanchflower, D. G., & Oswald, A. J. (2004). Well-being over time in Britain and the USA. *Journal of Public Economics*, *88*(7), 1359–1386.
Boden Jr., R. J. (1999). Flexible Working Hours, Family Responsibilities, and Female Self-Employment. *The American Journal of Economics and Sociology*, *58*(1), 71–83.
Boden, R. J. (1996). Gender and self-employment selection: An empirical assessment. *The Journal of Socio-Economics*, *25*(6), 671–682.
Boden, R. J., & Nucci, A. R. (2000). On the survival prospects of men's and women's new business ventures. *Journal of Business Venturing*, *15*(4), 347–362.
Bosma, N., Content, J., Sanders, M., & Stam, E. (2018). Institutions, entrepreneurship, and economic growth in Europe. *Small Business Economics*, *51*(2), 483–499.
Boudreaux, C. J., & Nikolaev, B. (2019). Capital is not enough: Opportunity entrepreneurship and formal institutions. *Small Business Economics*, *53*(3), 709–738.
Brett, J. M., & Stroh, L. K. (2003). Working 61 plus hours a week: Why do managers do it? *Journal of Applied Psychology*, *88*, 67–78.
Bruhn, M. (2009). *Female-Owned Firms in Latin America: Characteristics, Performance, and Obstacles to Growth*. World Bank.
Brush, C. G., de Bruin, A., & Welter, F. (2009). A gender-aware framework for women's entrepreneurship. *International Journal of Gender and Entrepreneurship*, *1*(1), 8–24.
Buttrick, N. R., & Oishi, S. (2017). The psychological consequences of income inequality. *Social and Personality Psychology Compass*, *11*(3), e12304.
Campos, F., & Gassier, M. (2017). Gender and enterprise development in Sub-Saharan Africa: A review of constraints and effective interventions. *World Bank Policy Research Working Paper*, *8239*.
Card, D. (1999). The Causal Effect of Education on Earnings. In *Handbook of Labor Economics* (Vol. 3, pp. 1801–1863). Elsevier.
Carranza, E., Dhakal, C., & Love, I. (2018). Female entrepreneurs: How and why are they different? 1818 H Street NW. *Washington, DC*, *20433*.
Carter, S., & Rosa, P. (1998). Indigenous Rural Firms: Farm Enterprises in the UK. *International Small Business Journal*, *16*(4), 15–27.
Castriota, S. (2006). Education and happiness: A further explanation to the Easterlin Paradox. *Unpublished Paper*.
Cerrato, J., & Cifre, E. (2018). Gender Inequality in Household Chores and Work-Family Conflict. *Frontiers in Psychology*, *9*, 1330.

Cheung, F., & Lucas, R. E. (2014). Assessing the validity of single-item life satisfaction measures: Results from three large samples. *Quality of Life Research: An International Journal of Quality of Life Aspects of Treatment, Care and Rehabilitation*, *23*(10), 2809–2818.

Cohen, S. (1988). Perceived stress in a probability sample of the United States. In *The social psychology of health* (pp. 31–67). Sage Publications, Inc.

Coleman, S. (2000). Access to capital and terms of credit: A comparison of men-and women-owned small businesses. *Journal of Small Business Management*, *38*(3), 37.

Croson, R., & Gneezy, U. (2004). *Gender Differences in Preferences*.

Cunningham, M. (2007). Influences of Women's Employment on the Gendered Division of Household Labor Over the Life Course Evidence From a 31-Year Panel Study. *Journal of Family Issues*, *28*, 422–444.

De Neve, J.-E., Ward, G., De Keulenaer, F., Van Landeghem, B., Kavetsos, G., & Norton, M. I. (2018). The Asymmetric Experience of Positive and Negative Economic Growth: Global Evidence Using Subjective Well-Being Data. *The Review of Economics and Statistics*, *100*(2), 362–375.

De Soto, H., & Diaz, H. P. (2002). The mystery of capital. Why capitalism triumphs in the West and fails everywhere else. *Canadian Journal of Latin American & Caribbean Studies*, *27*(53), 172.

Dean, T. J., & Meyer, G. D. (1996). Industry environments and new venture formations in US manufacturing: A conceptual and empirical analysis of demand determinants. *Journal of Business Venturing*, *11*(2), 107–132.

Dellot, B. (2014). *Salvation in a start-up? The origins and nature of the self-employment boom*.

Delmar, F., & Davidsson, P. (2000). Where do they come from? Prevalence and characteristics of nascent entrepreneurs. *Entrepreneurship & Regional Development*, *12*(1), 1–23.

DeMartino, R., Barbato, R., & Jacques, P. H. (2006). Exploring the career/achievement and personal life orientation differences between entrepreneurs and nonentrepreneurs: The impact of sex and dependents. *Journal of Small Business Management*, *44*(3), 350–368.

Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The Satisfaction With Life Scale. *Journal of Personality Assessment*, *49*(1), 71–75.

DiTella, R., MacCulloch, R., & Oswald, A. J. (2003). The macroeconomics of happiness. *Review of Economics and Statistics*, *85*(4), 809–827.

Djankov, S., La Porta, R., Lopez-de-Silanes, F., & Shleifer, A. (2002). The regulation of entry. *The Quarterly Journal of Economics*, *117*(1), 1–37.

Duberley, J., & Carrigan, M. (2013). The career identities of 'mumpreneurs': Women's experiences of combining enterprise and motherhood. *International Small Business Journal*, *31*(6), 629–651.

Eagly, A., & Kite, M. (1987). Are Stereotypes of Nationalities Applied to Both Women and Men? *Journal of Personality and Social Psychology*, *53*, 451–462.

Eckel, C. C., & Grossman, P. J. (2008). Men, women and risk aversion: Experimental evidence. *Handbook of Experimental Economics Results*, *1*, 1061–1073.

Eddleston, K. A., Ladge, J. J., Mitteness, C., & Balachandra, L. (2016). Do you See what I See? Signaling Effects of Gender and Firm Characteristics on Financing Entrepreneurial Ventures. *Entrepreneurship Theory and Practice*, *40*(3), 489–514.

Ellingrud, K., Krivkovich, A., Nadeau, M.-C., & Zucker, J. (2021). *The state of women in finance | McKinsey*. https://www.mckinsey.com/industries/financial-services/our-insights/closing-the-gender-and-race-gaps-in-north-american-financial-services

Estrin, S., & Mickiewicz, T. (2011). Institutions and female entrepreneurship. *Small Business Economics*, *37*.

Eversole, R. (2004). Change makers? Women's microenterprises in a Bolivian city. *Gender, Work & Organization*, *11*(2), 123–142.

Fairlie, R. W., & Krashinsky, H. A. (2012). Liquidity constraints, household wealth, and entrepreneurship revisited. *Review of Income and Wealthfo Working Paper*, *58*(2), 279–306.

Fay, M., & Williams, L. (1993). Gender bias and the availability of business loans. *Journal of Business Venturing*, *8*(4), 363–376.

Frank, R. (2016, December 30). *Why Aren't There More Female Billionaires?* https://www.nytimes.com/2016/12/30/business/why-arent-there-more-female-billionaires.html

GEM. (2019). *GEM Global Entrepreneurship Monitor*. GEM Global Entrepreneurship Monitor. https://www.gemconsortium.org/report/gem-2019-2020-global-report

Grunow, D., Schulz, F., & Blossfeld, H.-P. (2012). What determines change in the division of housework over the course of marriage? *International Sociology*, *27*(3), 289–307.

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

Hammond, P. J., Liberini, F., & Proto, E. (2011). *Individual welfare and subjective well-being: Commentary inspired by Sacks, Stevenson and Wolfers*.

Hansen, T. (2012). Understanding Trust in Financial Services: The Influence of Financial Healthiness. *Journal of Service Research*, 280–295.

Heilman, M. E., & Chen, J. J. (2003). Entrepreneurship as a solution: The allure of self-employment for women and minorities. *Human Resource Management Review*, *13*(2), 347–364.

Henley, A. (2005). Job Creation by the Self-employed: The Roles of Entrepreneurial and Financial Capital *. *Small Business Economics*, *25*, 175–196.

Henrekson, M., & Sanandaji, T. (2014). Small business activity does not measure entrepreneurship. *Proceedings of the National Academy of Sciences*, *111*(5), 1760–1765.

Hisrich, R., & Brush, C. (1984). The woman entrepreneur: Management skills and business problems. *University of Illinois at Urbana-Champaign's Academy for Entrepreneurial Leadership Historical Research Reference in Entrepreneurship*.

Hmieleski, K. M., & Sheppard, L. D. (2019). The Yin and Yang of entrepreneurship: Gender differences in the importance of communal and agentic characteristics for entrepreneurs' subjective well-being and performance. *Journal of Business Venturing*, *34*(4), 709–730.

Holcombe, R. G., & Boudreaux, C. J. (2015). Regulation and corruption. *Public Choice*, *164*(1–2), 75–85.

Holmen, M., Min, T. T., & Saarelainen, E. (2011). Female entrepreneurship in Afghanistan. *Journal of Developmental Entrepreneurship*, *16*(03), 307–331.

Howell, R. T., & Howell, C. J. (2008). The relation of economic status to subjective well-being in developing countries: A meta-analysis. *Psychological Bulletin*, *134*(4), 536.

Hundley, G. (2001). Why and when are the self-employed more satisfied with their work? *Industrial Relations: A Journal of Economy and Society*, *40*(2), 293–316.

Islam, M. A., Barna, S. D., Raihan, H., Khan, M. N. A., & Hossain, M. T. (2020). Depression and anxiety among university students during the COVID-19 pandemic in Bangladesh: A web-based cross-sectional survey. *PLOS ONE*, *15*(8), e0238162.

Kahneman, D., & Deaton, A. (2010). High income improves evaluation of life but not emotional well-being. *Proceedings of the National Academy of Sciences*, *107*(38), 16489–16493.

Kamp Dush, C. M., Yavorsky, J. E., & Schoppe-Sullivan, S. J. (2018). What Are Men Doing While Women Perform Extra Unpaid Labor? Leisure and Specialization at the Transition to Parenthood. *Sex Roles*, *78*(11–12), 715–730.

Kantor, P. (2002). Gender, microenterprise success and cultural context: The case of South Asia. *Entrepreneurship Theory and Practice*, *26*(4), 131–143.

Kautonen, T., Kibler, E., & Minniti, M. (2017). Late-career entrepreneurship, income and quality of life. *Journal of Business Venturing*, *32*(3), 318–333.

Killingsworth, M. A. (2021). Experienced well-being rises with income, even above $75,000 per year. *Proceedings of the National Academy of Sciences*, *118*(4), e2016976118.

Kim, Y., & Baylor, A. L. (2006). A Social-Cognitive Framework for Pedagogical Agents as Learning Companions. *Educational Technology Research and Development*, *54*(6), 569–596.

Kirkwood, J. (2009). Motivational factors in a push-pull theory of entrepreneurship. *Gender in Management: An International Journal*.

Klapper, L. F., & Parker, S. C. (2011). Gender and the business environment for new firm creation. *The World Bank Research Observer*, *26*(2), 237–257.

Kruse, S., Ravlik, M., & Welzel, C. (2017). The legitimacy puzzle: Why so many people confuse the absence of democracy with its presence. *World Values Research*, *9*(2), 1–30.

Langowitz, N., & Minniti, M. (2007). The Entrepreneurial Propensity of Women. *Entrepreneurship Theory and Practice*, *31*(3), 341–364.

Larsson, J. P., & Thulin, P. (2019). Independent by necessity? The life satisfaction of necessity and opportunity entrepreneurs in 70 countries. *Small Business Economics*, *53*(4), 921–934.

Layard, R., & Oparina, E. (2021, March 19). *World Happiness Report: Living long and living well* [Online resource]. LSE Business Review; London School of Economics and Political Science.

Lerman, L. G., Schrag, P. G., & Rubinson, R. (2020). *Ethical problems in the practice of law* (Fifth edition). Wolters Kluwer.

Lindfors, P. M., Meretoja, O. A., Töyry, S. M., Luukkonen, R. A., Elovainio, M. J., & Leino, T. J. (2007). Job satisfaction, work ability and life satisfaction among Finnish anaesthesiologists. *Acta Anaesthesiologica Scandinavica*, *51*(7), 815–822.

Ljunggren, E., & Kolvereid, L. (1996). New business formation: Does gender make a difference? *Women in Management Review*, *11*(4), 3–12.

Markman, G., & Baron, R. (2003). Person-Entrepreneurship Fit: Why Some People Are More Successful as Entrepreneurs than Others,. *Human Resource Management Review*, *13*, 281–301.

Marques, H. (2017). Gender, entrepreneurship and development: Which policies matter? *Development Policy Review*, *35*(2), 197–228.

McGowan, P., Redeker, C. L., Cooper, S. Y., & Greenan, K. (2012). Female entrepreneurship and the management of business and domestic roles: Motivations, expectations and realities. *Entrepreneurship & Regional Development*, *24*(1–2), 53–72.

McKay, T., O'Brien, B., Calius, E., & Anderson, I. (2010). Self-Priming Dielectric Elastomer Generator Design. *Smart Materials and Structures*, *19*, 055025.
McPherson, M. A. (1995). The hazards of small firms in Southern Africa. *The Journal of Development Studies*, *32*(1), 31–54.
Meyers-Levy, J., & Loken, B. (2015). Revisiting gender differences: What we know and what lies ahead. *Journal of Consumer Psychology*, *25*(1), 129–149.
Minniti, M., & Nardone, C. (2007). Being in Someone Else's Shoes: The Role of Gender in Nascent Entrepreneurship. *Small Business Economics*, *28*(2–3), 223–238.
Minniti, M., & Naudé, W. (2010). What Do We Know About The Patterns and Determinants of Female Entrepreneurship Across Countries? *The European Journal of Development Research*, *22*(3), 277–293.
Moore, D. P., Buttner, E. H., Wong-MingJi, D. J., & Sullivan, S. E. (1999). *Women entrepreneurs: Moving beyond the glass ceiling*. Academy of Management Briarcliff Manor, NY 10510.
Muravyev, A., Talavera, O., & Schäfer, D. (2009). Entrepreneurs' gender and financial constraints: Evidence from international data. *Journal of Comparative Economics*, *37*(2), 270–286.
Naudé, W., Amorós, J., & Cristi, O. (2013). "Surfeiting, the appetite may sicken": Entrepreneurship and happiness. *Small Bus Econ*, *42*, 1–18.
Nikolaev, B. (2016). Does Higher Education Increase Hedonic and Eudaimonic Happiness? *Journal of Happiness Studies*.
Nikolaev, B., Boudreaux, C. J., & Wood, M. (2020). Entrepreneurship and subjective well-being: The mediating role of psychological functioning. *Entrepreneurship Theory and Practice*, *44*(3), 557–586.
Nikolaev, B., Lerman, M., Boudreaux, C., & Mueller, B. (2022). Self-Employment and Eudaimonic Well-being: The Mediating Role of Problem- and Emotion-Focused Coping.". *Entrepreneurship Theory & Practice (Forthcomming)*.
Nikolaev, B., & Rusakov, P. (2016). Education and happiness: An alternative hypothesis. *Applied Economics Letters*, *23*, 827–830.
Nikolaev, B., Shir, N., & Wiklund, J. (2020). Dispositional Positive and Negative Affect and Self-Employment Transitions: The Mediating Role of Job Satisfaction. *Entrepreneurship Theory and Practice*, *44*(3), 451–474.
Nikolaev, M., & Nikolaev, B. (2021). "Family Matters: Involuntary parental unemployment during childhood and subjective wellbeing later in life.". *Journal of Economic Behavior & Organization*, *181*, 312–331.
Nikolova, M., Nikolaev, B., & Boudreaux, C. (2022). Being your own boss and bossing others: The moderating effect of managing others on work meaning and autonomy for the self-employed and employees. *Small Business Economics*, 1–21.
OECD. (2016). *Policy brief on women's entrepreneurship.* Organisation for Economic Cooperation and Development.
Oreopoulos, P., & Salvanes, K. G. (2011). Priceless: The Nonpecuniary Benefits of Schooling. *Journal of Economic Perspectives*, *25*(1), 159–184.
Orser, B. J., & Riding, A. L. (2006). Gender-based Small Business Programming: The Case of the Women's Enterprise Initiative. *Journal of Small Business & Entrepreneurship*, *19*(2), 143–166.

Parker, K. (2021). *What's behind the growing gap between men and women in college completion?* https://policycommons.net/artifacts/1888118/whats-behind-the-growing-gap-between-men-and-women-in-college-completion/2638104/

Peiró, A. (2006). Happiness, satisfaction and socio-economic conditions: Some international evidence. *The Journal of Socio-Economics*, *35*(2), 348–365.

Phillips, S. D., & Imhoff, A. R. (1997). *Women and career development: A decade of research*. https://www.proquest.com/openview/7ff520ee2b757ff12e2e8439517ce2d7/1?pq-origsite=gscholar&cbl=24892

Picket, B., & Dando, R. (2019). Environmental Immersion's Influence on Hedonics, Perceived Appropriateness, and Willingness to Pay in Alcoholic Beverages. *Foods*, *8*(2), Article 2.

Poggesi, S., Mari, M., & De Vita, L. (2016). What's new in female entrepreneurship research? Answers from the literature. *International Entrepreneurship and Management Journal*, *12*(3), 735–764.

Powdthavee, N., & Vernoit, J. (2013). Parental unemployment and children's happiness: A longitudinal study of young people's well-being in unemployed households. *Labour Economics*, *24*, 253–263.

Przepiorka, A. M. (2017). Psychological Determinants of Entrepreneurial Success and Life-Satisfaction. *Current Psychology*, *36*(2), 304–315.

Riding, A. L., & Swift, C. S. (1990). Women business owners and terms of credit: Some empirical findings of the Canadian experience. *Journal of Business Venturing*, *5*(5), 327–340.

Rubio-Bañón, A., & Esteban-Lloret, N. (2016). Cultural factors and gender role in female entrepreneurship. *Suma de Negocios*, *7*(15), 9–17.

Ryan, R. M., & Deci, E. L. (2001). On Happiness and Human Potentials: A Review of Research on Hedonic and Eudaimonic Well-Being. *Annual Review of Psychology*, *52*(1), 141–166.

Salinas-Jiménez, M. del M., Artés, J., & Salinas-Jiménez, J. (2013). How Do Educational Attainment and Occupational and Wage-Earner Statuses Affect Life Satisfaction? A Gender Perspective Study. *Journal of Happiness Studies*, *14*(2), 367–388.

Samineni, S., & Ramesh, K. (2020). Measuring the Impact of Microfinance on Economic Enhancement of Women: Analysis with Special Reference to India. *Global Business Review*, 0972150920923108.

Schmitt, M., Branscombe, N., Postmes, T., & Garcia, A. (2014). The Consequences of Perceived Discrimination for Psychological Well-Being: A Meta-Analytic Review. *Psychological Bulletin*, *140*.

Shane, S. (2010). *Born Entrepreneurs, Born Leaders: How Your Genes Affect Your Work Life*. Oxford University Press.

Shir, N., Nikolaev, B. N., & Wincent, J. (2019). Entrepreneurship and well-being: The role of psychological autonomy, competence, and relatedness. *Journal of Business Venturing*, *34*(5), 105875.

Singh, S. P., Reynolds, R. G., & Muhammad, S. (2001). A Gender-Based Performance Analysis of Micro and Small Enterprises in Java, Indonesia. *Journal of Small Business Management*, *39*(2), 174–

Solomon, B. C., Nikolaev, B. N., & Shepherd, D. A. (2022). Does educational attainment promote job satisfaction? The bittersweet trade-offs between job resources, demands, and stress. *Journal of Applied Psychology*, *107*(7), 1227–1241.

Stephan, U. (2018). Entrepreneurs' Mental Health and Well-Being: A Review and Research Agenda. *Academy of Management Executive*, *32*, 290–322.
Stephan, U., Tavares, S. M., Carvalho, H., Ramalho, J. J. S., Santos, S. C., & van Veldhoven, M. (2020). Self-employment and eudaimonic well-being: Energized by meaning, enabled by societal legitimacy. *Journal of Business Venturing*, *35*(6), 106047.
Stevenson, B., & Wolfers, J. (2009). The paradox of declining female happiness. *American Economic Journal: Economic Policy*, *2*(1), 190–225.
Stevenson, B., & Wolfers, J. (2013). Subjective well-being and income: Is there any evidence of satiation?. *American Economic Review*, *103*(3), 598–604.
Storey, D. J., & Greene, F. J. (2010). *Small Business and Entrepreneurship*. Pearson. https://www.research.ed.ac.uk/en/publications/small-business-and-entrepreneurship
Stroh, L. K., & Reilly, A. H. (1999). Gender and careers: Present experiences and emerging trends. *Handbook of Gender and Work*, 307–324.
Swamy, A., Knack, S., Lee, Y., & Azfar, O. (2001). Gender and corruption. *Journal of Development Economics*, *64*(1), 25–55.
Taylor, M. P. (2004). Self-employment in Britain: When, who and why? *Swedish Economic Policy Review*, *11*(2004), Article 2004.
Themudo, N. (2009). Gender and the Nonprofit Sector. *Nonprofit and Voluntary Sector Quarterly - NONPROFIT VOLUNT SECT Q*, *38*, 663–683.
UN. (2022). *Progress on the sustainable development goals: The gender snapshot 2022.* https://www.unwomen.org/sites/default/files/2022-09/Progress-on-the-sustainable-development-goals-the-gender-snapshot-2022-en_0.pdf
Weyer, B. (2007). Twenty years later: Explaining the persistence of the glass ceiling for women leaders. *Women in Management Review*, *22*(6), 482–496.
Wiklund, J., Nikolaev, B., Shir, N., Foo, M.-D., & Bradley, S. (2019). Entrepreneurship and well-being: Past, present, and future. *Journal of Business Venturing*, *34*(4), 579–588.
Williams, D. R., & Collins, C. (1995). US Socioeconomic and Racial Differences in Health: Patterns and Explanations. *Annual Review of Sociology*, *21*, 349–386.
Wolfe, M. T., & Patel, P. C. (2018). Satisfaction guaranteed? Life satisfaction, institutional factors, and self-employment. *Journal of Business Venturing Insights*, *9*, 45–52.
World Bank Group. (2018). *Doing Business 2018: Reforming to Create Jobs*. The World Bank.
World Economic Forum. (2022). *Global Gender Gap Report 2022*. https://www3.weforum.org/docs/WEF_GGGR_2022.pdf
Wrold Bank. (2019). *Doing Business Data*. https://archive.doingbusiness.org/en/data
Wu, B., Bhulani, N., Jalal, S., Ding, J., & Khosa, F. (2019). Gender Disparity in Leadership Positions of General Surgical Societies in North America, Europe, and Oceania. *Cureus*, *11*(12).
Yavorsky, J. E., Dush, C. M. K., & Schoppe-Sullivan, S. J. (2015). The Production of Inequality: The Gender Division of Labor Across the Transition to Parenthood. *Journal of Marriage and the Family*, *77*(3), 662–679.
Zarya, V. (2018). The share of female CEOs in the fortune 500 dropped by 25% in 2018. *Fortune. Com*.
Zbierowski, P. (2014). WELL-BEING OF ENTREPRENEURS - INTERNATIONAL COMPARISON BASED ON GEM DATA. *Journal of Positive Management*, *5*(4), Article 4.

Table 1a: Life Satisfaction by Group

Variables	Mean	SD	Percent	N	Variables	Mean	Sd.	Percent	N
Well-being	6.8	2.3	100%	168725	**Marital-Status**				
Gender					Other	6.3	2.5	12%	20207
Female	6.8	2.3	52%	88744	Married	6.9	2.3	63%	106702
Male	6.8	2.3	48%	81319	Single	6.8	2.2	25%	42842
Employment Status					**No. of Children**				
Other	6.8	2.4	37%	61227	No Child	6.8	2.2	30%	48435
Employed	7.0	2.1	42%	68973	One	6.7	2.3	16%	26597
Self-employed	6.6	2.3	12%	20040	Two	6.8	2.3	25%	40689
Unemployed	6.1	2.5	10%	15899	3 or More	6.7	2.4	29%	48168
Education Level					**Child dummy**				
No-Formal	5.7	2.6	7%	11600	Yes	6.7	2.3	70%	115454
Elementary	6.7	2.4	34%	57854	No	6.8	2.2	30%	48435
Secondary	6.8	2.2	35%	59841					
University	7.1	2.1	23%	39662	**Income Level**				
Education dummy					Low	6.1	2.7	30%	48783
Basic	6.5	2.5	41%	69454	Middle	6.8	2.1	48%	76032
Higher	7.0	2.2	59%	99503	High	7.6	1.9	22%	35167
Gender roles									
Yes	6.5	2.4	42%	65473	**Stimulation**				
No	7.0	2.2	58%	91531	Yes	6.8	2.3	57%	88811
Tradition					No	6.8	2.3	43%	66644
Yes	6.8	2.4	58%	91033					
No	6.8	2.1	42%	66072					

Note: Each cell reports the mean life satisfaction, standard deviation an percentage of people in each category. N represents the number of observations in each category. "Other" employment category includes retired, housewife, students and other. "Other" Marital status category includes separated, widowed, and divorced.

Table 1b: Descriptive Statistics

Variable	N	Mean	Std. Dev.	Min	Max
Life Satisfaction	169000	6.774	2.305	1	10
Female	170000	.521	.5	0	1
Self-Employed	170000	.118	.322	0	1
Unemployed	166000	.096	.294	0	1
Age	170000	41.782	16.534	15	99
Married	170000	.629	.483	0	1
Number of Children	164000	1.541	1.195	0	3
Education	169000	1.755	.89	0	3
Income Level	160000	.915	.719	0	2
Tradition	160000	.579	.178	.103	.957
Men Better CEOs	164000	.416	.211	.052	.851
Risk Taking	155000	.429	.495	0	1
Log GDP	169000	8.986	1.327	5.607	11.425
Gender Inequality	92897	.298	.157	.047	.83
Financial Development	160000	3.744	.871	-.203	5.469
Ease of Doing Business	138000	-.233	.845	-1.996	1.566

Table 1c: Pairwise Correlations

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
(1) Life Satisfaction	1.000															
(2) Female	0.009*	1.000														
(3) Self-Employed	-0.022*	-0.120*	1.000													
(4) Unemployed	-0.089*	-0.033*	-0.120*	1.000												
(5) Age	-0.017*	0.009*	-0.008*	-0.122*	1.000											
(6) Married	0.051*	-0.019*	0.071*	-0.113*	0.227*	1.000										
(7) Number of Children	-0.010*	0.081*	0.075*	-0.085*	0.501*	0.508*	1.000									
(8) Education	0.127*	-0.051*	-0.097*	-0.066*	-0.161*	-0.064*	-0.229*	1.000								
(9) Income Level	0.232*	-0.035*	-0.001	-0.091*	-0.102*	0.037*	-0.084*	0.267*	1.000							
(10) Tradition	-0.090*	-0.002	0.042*	0.073*	-0.161*	0.012*	0.065*	-0.164*	-0.025*	1.000						
(11) Men better CEOs	-0.207*	-0.008*	0.057*	0.054*	-0.183*	0.033*	0.036*	-0.149*	0.015*	0.635*	1.000					
(12) Risk & Stimulation	0.018*	-0.107*	0.045*	0.057*	-0.220*	-0.107*	-0.146*	0.032*	0.090*	0.102*	0.119*	1.000				
(13) Log GDP	0.199*	0.012*	-0.157*	-0.105*	0.226*	-0.009*	-0.034*	0.237*	0.068*	-0.531*	-0.602*	-0.127*	1.000			
(14) Gender Inequality	-0.039*	-0.020*	0.110*	0.101*	-0.218*	-0.003	0.067*	-0.211*	-0.029*	0.598*	0.430*	0.116*	-0.716*	1.000		
(15) Financial Dev	0.138*	0.008*	-0.108*	-0.067*	0.186*	0.022*	-0.031*	0.127*	0.060*	-0.422*	-0.326*	-0.090*	0.616*	-0.630*	1.000	
(16) Ease Doing Bus	-0.042*	-0.019*	0.078*	0.051*	-0.153*	-0.011*	0.012*	-0.180*	-0.099*	0.231*	0.185*	0.054*	-0.463*	0.442*	-0.443*	1.000

* Shows significance at the .05 level

Table 2. Baseline results for the full sample

	(1) Well-being	(2) Well-being	(3) Well-being
Female	0.10***	0.11***	0.11***
	(0.02)	(0.02)	(0.02)
Self-employed * Female		-0.10**	-0.10***
		(0.04)	(0.03)
Age	-0.05***	-0.05***	-0.05***
	(0.004)	(0.004)	(0.004)
Age Squared	0.0005***	0.0005***	0.0005***
	(0.00)	(0.00)	(0.00)
Employed	0.05*	0.05**	-0.01
	(0.03)	(0.03)	(0.02)
Self-employed	-0.01	0.02	-0.01
	(0.04)	(0.04)	(0.03)
Unemployed	-0.52***	-0.52***	-0.40***
	(0.04)	(0.04)	(0.004)
Married	0.61***	0.61***	0.48***
	(0.04)	(0.04)	(0.04)
Single	0.28***	0.28***	0.21***
	(0.04)	(0.04)	(0.04)
One Child	-0.08***	-0.08***	-0.04
	(0.03)	(0.03)	(0.03)
Two Children	-0.03	-0.03	-0.002
	(0.03)	(0.03)	(0.03)
Three or more Children	0.02	0.02	0.07**
	(0.03)	(0.03)	(0.03)
Elementary Education	0.29***	0.29***	0.20***
	(0.06)	(0.06)	(0.06)
Secondary Education	0.49***	0.49***	0.28***
	(0.08)	(0.08)	(0.07)
University Education	0.73***	0.73***	0.36***
	(0.07)	(0.07)	(0.07)
Middle Income			0.77***
			(0.05)
High Income			1.39***
			(0.07)
Observations	156873	156873	148205
R-squared	0.17	0.17	0.21

Note: Dependent variable is well-being. See Table A1 for variable definitions. All regressions include country-year fixed effects and the error term is clustered at the country-year level. P-values are in parenthesis.

Standard errors clustered at the country-year are reported in parenthesis. *** *p<0.01,* ** *p<0.05,* * *p<0.1*

Table 3: Sample splits for countries with different income levels

	(1) Low- Income	(2) Middle-Income	(3) High-Income	(4) Low-Middle Income
Female	0.12***	0.10**	0.13***	0.11***
	(0.04)	(0.04)	(0.03)	(0.03)
Self-employed*Female	-0.17***	-0.13**	0.15*	-0.16***
	(0.05)	(0.06)	(0.07)	(0.04)
Age	-0.03***	-0.05***	-0.05***	-0.04***
	(0.01)	(0.01)	(0.01)	(0.01)
Age Squared	0.0003***	0.0004***	0.0005***	0.0004***
	(0.0001)	(0.0001)	(0.0001)	(0.0001)
Employed	-0.01	0.04	-0.04	0.01
	(0.05)	(0.04)	(0.03)	(0.03)
Self-employed	0.04	0.05	-0.07	0.02
	(0.06)	(0.06)	(0.06)	(0.04)
Unemployed	-0.20***	-0.47***	-0.59***	-0.34***
	(0.06)	(0.05)	(0.07)	(0.04)
Married	0.39***	0.46***	0.57***	0.43***
	(0.09)	(0.05)	(0.04)	(0.05)
Single	0.31**	0.17***	0.17***	0.22***
	(0.012)	(0.05)	(0.04)	(0.06)
One Child	-0.05	-0.03	-0.05	-0.04
	(0.06)	(0.04)	(0.04)	(0.03)
Two Children	-0.05	-0.03	0.05	-0.04
	(0.07)	(0.05)	(0.03)	(0.041)
Three or more Children	0.06	0.07	0.08**	0.06
	(0.06)	(0.06)	(0.04)	(0.04)
Elementary Education	0.13*	0.08	0.23	0.16**
	(0.07)	(0.11)	(0.14)	(0.06)
Secondary Education	0.21**	0.16	0.31*	0.23***
	(0.10)	(0.14)	(0.14)	(0.08)
University Education	0.36***	0.21	0.42**	0.31***
	(0.09)	(0.13)	(0.15)	(0.07)
Middle	1.08***	0.63***	0.61***	0.84***
	(0.08)	(0.09)	(0.05)	(0.07)
High	1.96***	1.30***	0.98***	1.60***
	(0.11)	(0.13)	(0.07)	(0.09)
Constant	5.42***	6.77***	7.04***	6.11***
	(0.20)	(0.20)	(0.18)	(0.13)
Observations	43504	54916	49785	98420
R-squared	0.20	0.20	0.13	0.21

Note: See notes to Table 2. Each column represents a subgroup of countries as listed in the heading. Standard errors clustered at the country-year are reported in parenthesis. *** *p<0.01, ** p<0.05, * p<0.1*

Table 4: Interactions with institutional characteristics

	(1)	(2)	(3)	(4)
Institution Variable	GDP	GII	FD	DB
Female	-0.08	0.14	0.02	0.11***
	(0.15)	(0.09)	(0.12)	(0.001)
Self-employed*Female	-0.51**	0.22	-0.35***	-0.11***
	(0.023)	(0.13)	(0.13)	(0.04)
Self-employed	-0.17	-0.11	-0.34***	0.01
	(0.21)	(0.10)	(0.10)	(0.04)
Female *Institution	0.02	-0.06	0.02	-0.05**
	(0.02)	(0.34)	(0.03)	(0.02)
Self-employed *Institution	0.02	0.37	0.09***	0.01
	(0.02)	(0.29)	(0.03)	(0.04)
Female*Self-Employed*Institution	0.05*	-0.87**	0.07**	0.001
	(0.03)	(0.35)	(0.04)	(0.04)
Constant	6.46***	6.69***	6.46***	6.40***
	(0.011)	(0.016)	(0.011)	(0.12)
Observations	147147	82311	138741	120867
R-squared	0.21	0.19	0.21	0.21

Note: All regressions include the same control variables used in Table 3. Only the interaction terms and related controls are included. See notes in Table 2. Each column reports interactions with a different institutional characteristic, which is given in the column heading. Dependent variable is well-being. GII = Gender Inequality Index, FD = Financial Development, DB = Ease of Doing Business. Standard errors clustered at the country-year are reported in parenthesis. *** $p<0.01$, ** $p<0.05$, * $p<0.1$

Table 5: Interactions with cultural values

Cultural Value	(1) Men Better CEOs	(2) Traditional Values
Female	0.080*	0.132*
	(0.044)	(0.070)
Female self-employed	-0.037	0.324**
	(0.094)	(0.141)
Self-employed	0.058	-0.058
	(0.063)	(0.119)
Female * Cultural Value	0.074	-0.035
	(0.120)	(0.133)
Self-employed * Cultural Value	-0.102	0.108
	(0.145)	(0.182)
Female * Self-Employed * Cultural Value	-0.180	-0.741***
	(0.203)	(0.237)
Constant	6.470***	6.465***
	(0.111)	(0.111)
Observations	142971	142321
R-squared	0.198	0.198

Note: All regressions include the same control variables used in Table 3. Only the interaction terms and related controls are included. See notes in Table 2. Each column reports interactions with a different individual characteristic, which is given in the column heading. Dependent variable is well-being. Standard errors clustered at the country-year are reported in parenthesis.
*** $p<0.01$, ** $p<0.05$, * $p<0.1$

Table 6: Interactions with individual characteristics and attitudes

	(1)	(2)	(3)
Individual Characteristic:	Education	N Children	Risk & Stimulation
Female	0.13***	0.11***	0.15***
	(0.03)	(0.03)	(0.02)
Self-employed * Female	-0.20***	0.03	-0.19***
	(0.06)	(0.07)	(0.05)
Self-employed	0.07	-0.06	0.07*
	(0.05)	(0.05)	(0.04)
Individual Characteristic	0.14***	-0.005	0.13***
	(0.001)	(0.02)	(0.03)
Female*Individual	-0.02	0.005	-0.06**
	(0.03)	(0.03)	(0.03)
Self-employed*Individual	-0.15***	0.08	-0.12**
	(0.05)	(0.06)	(0.05)
Female* Self-employed* Individual	0.19***	-0.17**	0.15**
	(0.07)	(0.08)	(0.07)
Constant	6.44***	6.46***	6.44***
	(0.11)	(0.11)	(0.11)
Observations	148205	148205	138844
R-squared	0.21	0.21	0.20

Note: All regressions include the same control variables used in Table 3. Only the interaction terms and related controls are included. See notes in Table 2. Each column reports interactions with a different individual characteristic, which is given in the column heading. Dependent variable is well-being. Standard errors clustered around country-year are reported in parenthesis.
*** $p<0.01$, ** $p<0.05$, * $p<0.1$

Appendix A 1. Discussion of Results for Control Variables

Results on control variables for the whole sample

Here we briefly describe the results for our control variables based on Table 2. We find predictable patterns for all our control variables. Age has a non-linear U-shaped relationship with well-being. women have slightly higher well-being then men, but the magnitude of the difference is small: the coefficient is equal to 0.1, which is small according to Cohen's metric. Employed have slightly higher well-being than those out of the labor force (the omitted category), while unemployed have a significantly lower well-being. The magnitude is equal to 0.5, i.e. almost half a point difference in well-being, however, according to Cohen's metric it is still considered small.

When we add income level dummies in model 3 the employed dummy is no longer significant, while the magnitude of unemployed dummy drops to 0.4. This means that only some of the negative impact of unemployment is due to the pure income effect. Interestingly, the self-employed dummy is not significant. This might be because the positive and negative influences of self-employed on well-being discussed earlier cancel out.

Among different relationship status categories, married people are the happiest, followed by single, and the least happy are divorced or separated (the omitted category). People with one child are slightly less happy, while those with two, three or more children are not significantly different in well-being from those with no children (the omitted category). Education has a monotonically positive relationship with well-being (the omitted category is "no formal education").

In model 3 we add two income level dummies for middle and high income (the omitted category is low income). The income dummies are highly significant and have meaningful magnitudes. Having a self-declared high income (note that the income responses are in the form of the decile relative to the rest of the population), is associated with 1.4 higher well-being than declaring low income. According to Cohen's metric this is a medium size effect. People declaring that they have a middle-income level have on average about 0.8 higher well-being than those with low income.

Results on control variables in samples splits

These results are based on Table 3. The income effect is much stronger in low- and middle-income countries. The coefficient on high income dummy is almost twice as large in

low-income countries as it is in high income countries: it equals to 1.96 in low income countries and 0.97 in high income countries (note that low income is the omitted category). According to Cohen's metric, the impact in low-income countries can be considered large. The coefficient on middle income dummy is about half of the high-income dummy. Our results show that poor are more miserable in low-income countries. This could be due to lack of social safety net which is present in high income countries.

On the flip side, the loss of well-being due to unemployment is larger in a high-income country. Note that since we control for income, this coefficient captures non-pecuniary effects of unemployment such as loss of meaning, connections, self-esteem and other psychological effects. This larger well-being loss could be due to less prevalent unemployment in high income countries: in our sample the unemployment rate is about 6% in high income countries, while it is 12.6% in low-income countries. When unemployment is a common occurrence, i.e. in low income countries, people are more likely to adapt to being unemployed, which will result in smaller loss of well-being. In addition, if more people around are unemployed, the unemployment is less psychologically stinging.

The well-being relationship with education has about the same magnitude in all three sets of countries, although results are more statistically significant in low-income countries. This is likely because there are very few people with "no formal education," which is our omitted category, in high income courtiers. There is a higher well-being advantage to being married in a middle- and high-income countries, which there is almost no difference to being single or married in low income countries.

Table A1: Variable definitions

Variable	Definition	Data Source/ Survey Questions
	Section A: Individual Characteristics	
WB	Self-declared life-satisfaction level from 1 (not at all satisfied) to 10 (very satisfied)	(WVS): All things considered, how satisfied are you with your life as a whole these days? Using this card on which 1 means you are "completely dissatisfied" and 10 means you are "completely satisfied" where would you put your satisfaction with your life as a whole? (Code one number):
Age	Age of the respondent	(WVS): can tell me your year of birth, please?

Female	DV which takes the value 1 if the respondent is female, 0 otherwise	(WVS): Code respondent's sex by observation
Education level	Categorical variable which takes value of 0,1,2,3 for no-formal education, elementary, secondary and university education level respectively.	(WVS): What is the highest educational level that you have attained?
Education dummy	DV which takes the value of 1 (higher education) if the respondent has secondary or university level of education, and 0 (basic education) otherwise.	(WVS): What is the highest educational level that you have attained?
Marital-status	Categorical variable which takes value of 0,1 and 2 for other, married and single respectively. Other category includes divorced, separated and widowed.	(WVS): Are you currently (*read out and code one answer only).*
Employment Status	Categorical variable which takes value of 0,1,2 and 3 for other, employed, self-employed and unemployed respectively. Other category includes retired, housewife, students, and others.	(WVS): Are you employed now or not? (code pone answer*)*
No. of Children	Categorical variable which takes value of 0,1,2 and 3 for no-child, one-child, two-child, and three or more child respectively.	(WVS): Have you had any children? (code 0 if no, and respective number if yes).
Child dummy	DV which takes the value 1 (yes) if respondent has any children and 0 (no) otherwise.	(WVS): Have you had any children? (code 0 if no, and respective number if yes).
Income level	Categorical variable which takes value of 0,1 and 2 for low, middle- and high-income level respectively. Low includes responses (1-3), middle includes responses (4-6) and high includes responses (7-10).	(WVS): We would like to know in what group your household is (1 indicates the lowest income group and 10 the highest income group in your country). Please, specify the appropriate number, counting all wages, salaries, pensions and other incomes that come in. (Code one number)
Gender Roles	DV which takes the value 1 (yes) if the respondent answers agree or strongly agree with the statement (on the right), 0 (no) otherwise.	(WVS): For each of the following statements, can you tell me how strongly you agree or disagree with each. Do you strongly agree, agree, disagree, or strongly disagree? "On the whole, men make better business executives than women do."

Tradition	DV which takes that value 1(yes) if the respondent answers very much like me or like me to the statement (on the right), 0 (no) otherwise	(WVS): For each description, please indicate whether that person (briefly describe some people) is very much like you, like you, somewhat like you, not like you, or not at all like you? "Tradition is important to this person; to follow the customs handed down by one's religion or family".
Stimulation	DV which takes the value 1 (yes) if the respondent answers very much like me, or like me, or somewhat like me to the statement (on the right), 0 (no) otherwise.	(WVS): For each description, please indicate whether that person (briefly describe some people) is very much like you, like you, somewhat like you, not like you, or not all like you? "Adventure and taking risks are important to this person; to have an exciting life."
	Section B: country level variables	
GDP	Gross Domestic Product, GDP per capita (constant 2010 US$)	World Bank
FD	Financial Development, measured by private credit by deposit money bank to GDP (%)	World Bank, International Monetary fund,
DB	Index of starting a business, constructed using weights generated by the Principal Component Analysis (PCA) of three variables: number of procedures, cost and time required to start a business.	World Bank and author's calculations
GII	Gender Inequality Index shows the gender-based disadvantage in three dimensions: reproductive health, empowerment and labor market.	United Nation Development Programme (UNDP)

DV stands for "dummy variable"

Table A2: List of countries and years in WVS data

Country	Wave 5	Wave 6	Country	Wave 5	Wave 6
Algeria		2013	Libya		2014
Andorra	2005		Malaysia	2006	2012
Argentina	2006		Mali	2007	
Armenia		2011	Mexico	2005	2011
Australia	2005	2012	Moldova	2006	
Azerbaijan		2011	Morocco	2007	2011
Bahrain		2014	Netherlands	2007	2012
Belarus		2011	New Zealand	2004	2011
Brazil	2006	2014	Nigeria		2011
Bulgaria	2005		Norway	2007	
Burkina Faso		2007	Pakistan		2012
Canada	2006		Palestine		2013
Chile	2006	2011	Peru	2007	2012
China	2007	2012	Philippines		2012
Colombia	2005	2012	Poland	2005	2012
Cyprus	2006	2011	Qatar		2010
Ecuador		2013	Romania	2005	2012
Egypt		2013	Russia	2006	2011
Estonia		2011	Rwanda	2007	2012
Ethiopia	2007		Serbia and Montenegro	2005	
Finland	2005		Singapore		2012
France	2006		Slovenia	2005	2011
Georgia	2009	2014	South Africa	2006	2013
Germany	2006	2013	South Korea	2005	2010
Ghana	2007	2012	Spain	2007	2011
Great Britain	2005		Sweden	2006	2011
Guatemala	2004		Switzerland	2007	
Hong Kong	2005	2013	Taiwan	2006	2012
Hungary	2009		Thailand	2007	2013
India	2006	2014	Trinidad and Tobago	2006	2011
Indonesia	2006		Tunisia		2013
Iran	2007		Turkey	2007	2011
Iraq	2006	2012	Ukraine	2006	2011
Italy	2005		United States	2006	2011
Japan	2005	2010	Uruguay	2006	2011
Jordan	2007	2014	Uzbekistan		2011
Kazakhstan		2011	Viet Nam	2006	
Kuwait		2014	Yemen		2014
Kyrgyzstan		2011	Zambia	2007	
Lebanon		2013	Zimbabwe		2012