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Gender Diversity around the World: The Role of Country Legal Regulations and Culture

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Abstract

The goal of this project is to analyze the factors that contribute to the gender discrepancy in labor force participation rates around the world. This paper will explore potential drivers of the gender disparity phenomenon through the analyzation of country-specific elements to detect related impacts that may be imposed on a country's composition of labor force as it relates to gender. More specifically, I interpret the degree to which specific factors can directly influence the proportion of female presence in labor forces around the world. My empirical results suggest that the societal factors, legal regulations, culture, total fertility rate (births per woman) are all determinants of female labor force participation rates by country. My results confirm theoretical and economic theories, as well as findings from existing literature. It is of upmost importance to study these relationships as they explain much of the labor force participation rates around the world.

1. Introduction

Labor force participation rates have been in a global decline for both men and women - but this decline has been particularly accentuated for women. (World Economic Forum, 2017) Women compose one-half of the world's population and therefore their equal participation in the labor force, alongside an equal share of men, is fundamental to whether and how economies and societies survive. Despite recent advances towards lessening the global gender gap, it remains apparent that women are significantly underrepresented within labor force participation rates on a global scale. As a result, the full integration of women into the talent pool has become a must.

The list of barriers to female representation in business is analogous to the list of barriers to female labor force participation rates. If labor force participation rates are high for women, then more women will be working and should eventually enter corporate boardrooms if there are no other barriers to female leadership. This suggests that economic and cultural factors may be important barriers to female career advancement. In turn, we must ensure the healthy development and appropriate use of half of the world's total talent pool as it holds a vast bearing on the growth, competitiveness, and future readiness of economies and businesses worldwide.

This paper will examine various cultural aspects and social norms country-by-country, further analyzing the extent in which they may explain the variation in global labor force participation rates for women. The use of culture in finance literature has been well established overtime. Our study adds to the existing literature by further investigating the international aspect of this research. The behavioral patterns of women ultimately determine their subsequent career path decisions, those of which are impacted by various societal factors as well as upbringing culture. With this, our study fills the gap by using cross-country cultural differences in explaining the behavior of women in choosing careers. To adequately assess shocks to female

labor participation rates on a country-by-country basis, we must analyze the effects of several fundamental components, including differences within the following areas: cultural dimensions and subsequent norms, legal restrictions and regulations, demographics, and population distributions. I also consider additional country factors such as organizational structure, maternity leave policy, education level and several other world development indicators to collectively explain the discrepancy in gender representation.

Several general hypotheses explain these differences; however, the research community still does not completely understand how to combat this problem. Mainly, I hypothesize that cultural norms and values around the world determine the behavior of women in choosing varying career paths and their subsequent decision to actively participate in the global labor force. Finally, I propose my related models as means of improving this disparity and increasing the female participation in the economy.

2. Literature Review

2.1 Gender Diversity and Economic Efficiency

A growing body of literature points to the relationship between female labor force and economic growth. The World Bank's 2012 World Development Report argues that gender equality matters in its own right, but that it is also "smart economics" because it can enhance economic efficiency. (World Bank, 2012) The World Economic Forum's 2014 Global Gender Gap Report finds a positive correlation between gender equality and per capita GDP, the level of competitiveness, and human development indicators. (World Economic Forum, 2014)

A variety of models and empirical studies have suggested that improving gender parity may result in significant economic dividends, which vary depending on the situation of different

economies and the specific challenges they are facing. Notable recent estimates suggest that economic gender parity could add an additional US$250 billion to the GDP of the United Kingdom, US$1,750 billion to that of the United States, US$550 billion to Japan's, US$320 billion to France's and US$310 billion to the GDP of Germany. Other recent estimates suggest that China could see a US$2.5 trillion GDP increase from gender parity and that the world as a whole could increase global GDP by US$5.3 trillion by 2025 by closing the gender gap in economic participation by 25% over the same period. (World Economic Forum, 2017)

Gender-diversity may hold positive impacts within a board's level of efficiency and its associated firm performance. However, results in existing literature are not conclusive. In Spain, gender-diversity has a positive effect on firm value and the opposite causal relation is insignificant. (Campbell & Mínguez-Vera) Studies using data at one or two points in time find that gender diversity in boards is associated with higher stock values and greater profitability. However, studies using panel data over a number of years, which explore the effects of adding women to boards, generally show no effects or negative effects. This suggests that the association between board diversity and performance in cross-sectional studies is simply explained as a consequence of the fact that successful firms appoint women to their boards. (Dobbin & Jung, 2011) However, on the positive side, one study (Smith, Smith, & Verner, 2004) showed that the proportion of women in top management jobs tends to have positive effects on firm performance, even after controlling for numerous characteristics of the firm and direction of causality. The results also showed that the positive effects of women in top management strongly depend on the qualifications of female top managers. Despite a significant number of studies conducted on various aspects of board diversity as they relate to board effectiveness, the debate on conclusive effects is still ongoing. Scholars have assumed that

if board diversity affects corporate performance, it is through its influence on group processes in the board room. (Dobbin & Jung, 2011)

2.2 The Role of Culture

Culture plays a significant role in the evolution of women's careers. For example, if family values are strong then it may be difficult for women to accept more demanding positions. Women may also be passed over for promotion because of the perception that women are not natural leaders. A growing literature argues that culture has an important role to play in explaining female work outcomes. (Olivetti & Goldin, 2013) argued that female labor force participation increased substantially after World War II because it led to changes in attitudes towards working women (Fernández & Fogli, 2009) also argue that culture matters and use characteristics of the countries of (Insight Report The Global Gender Gap Report 2013) origin for US immigrants, such as female labor supply, to proxy for culture.

The many varying aspects of cultural diversity contains both positive and negative effects depending on its specific area of focus. The management literature generally identifies cultural diversity as a "double-edged sword" (Milliken & Martins, 1996), recognizing both positive and negative aspects that come from cultural diversity. Findings have indicated that cultural diversity in boards can have a negative impact on firm performance (measured with Tobin's Q and ROA), with the degree of impact determined by the size and complexity of the observed firm. (Frijns, Dodd, & Cimerova, 2016) Overall, complex firms experience increased levels of cultural diversity which further increases the potential of negative impacts to firm performance. As such, these negative impacts may be mitigated by smaller firms with a minimal amount of foreign sales and operations. Despite the potential of complex firms to be more culturally-diverse and

correspondingly produce negative levels of performance these same complex environments can paradoxically provide an increased opportunity for female inclusion in the work force. Interestingly, boards that operate within complex environments are also more likely to have gender-balanced boards as compared to others. (Terjesen, Couto, & Morais, 2016)

The role of culture on financial decision has gained wide acceptance in the finance literature in more recent years. County specific cultural norms impact behavior of managers in corporate decision making, in choosing mergers and acquisitions, in cross-border cooperation and in establishing subsidiaries in foreign countries. Culture impacts the behavior of individual investors, as research shows that in highly individualistic society's stock markets generate greater return. As a result, this overconfidence in stock market outcome leads to higher trading activity and momentum around the world.

There are many ways to measure the role of culture and the most popular one is the measure created by Professor Geert Hofstede. Based on his definition, culture is "the collective programming of the mind distinguishing the members of one group or category of people from others." Culture is a broad variable that takes several dimensions – individualism, masculinity, confidence, power distance, long term orientation and uncertainty avoidance. The main variables of interest are as follows: Power Distance Index (PDI), Individualism vs. Collectivism (IND), Masculinity vs. Femininity (MAS), Uncertainty Avoidance Index (UAI), and Long-term Orientation vs. Short-term Normative Orientation (LTO). These explanatory variables are detailed within my dataset under Section 5.4 – Hofstede: Six Dimensions of National Culture. Each cultural dimension is represented by a score which is backed by extensive survey type research performed by IBM in 70 countries (Hofstede uses the first 40 countries with the largest numbers of respondents). Hofstede's cultural framework has been used extensively in research in

recent years to help explain differences in performance rates for businesses of all kinds. Hofstede's framework, when applied to these measures, includes aspects of cultural differences that are not equally important once considered as explanations used for describing certain statistical phenomena.

2.3 The Role of Imposed Quotas and Country Regulations

Another topic for debate in determining female participation highlights the use of quotas and regulations imposed on a country for gender equity attainment reasons. The introduction of female quotas in Italy in the 1990s tripled the probability of voting for women (De Paola & Scoppa, 2010) and increased female representation in politic (Bonomi, Brosio, & Di Tommaso, 2013). (Kang, 2013) found that the success of gender quota laws in Niger depended on the design of the law, the institutional context, and having female activists monitoring its application. The perceived notion concerning gender quotas most often accredits an achievement of superior levels of gender proportion directly to strength in regulation levels for a country. Contrarily, the issue can become quite paradoxical and as a result, proves to be a dilemma that is increasingly far reaching.

In 2014, only 20% of directorships on average were held by female directors in the largest European companies, with an important heterogeneity across countries. These further supplement gender inequality statistics as they point towards an overwhelming underrepresentation of females and their inclusion within most labor force sectors across the globe, especially within leadership positions and higher levels of business and finance. As a result, improving board-level gender diversity has become a global agenda that aims to promote gender equality in our societies. This "global agenda" is commonly perceived as an efficient means for increasing firm accountability and improving performance through better corporate

governance. (Rebérioux & Roudaut, 2016) Unfortunately, this link is not so straightforward, especially regarding quotas. For example, in 2008 the Norwegian experience completed the first implementation of a gender quota and provided results inconsistent with their hypothesis as they further demonstrated a negative relationship between gender diversity and firm performance. (Storvik & Teigen, 2010)

Quotas have shown inconsistent results across countries as they have been noted within a vast amount of research globally. Highlighting Sweden and Finland as primary examples, corresponding data per country revealed boards had achieved successes in board diversity without the use of quotas. Both countries contained top ranking values for female representation on boards and paradoxically contained zero targets regarding the improvement of gender diversity. (Kamonjoh, 2014) When looking at within-board effects rather than between, other studies have provided conflicting results concerning the effectiveness of gender quotas. Within French boards, quotas have successfully opened the doors of boardrooms to new, unseasoned females and have distinctive characteristics that set them apart from other board members. Additionally, this influx of women into French boards were all subjects that – whether a seasoned female or not – experienced an inner glass ceiling with "positional" gender segregation. This also resulted in an associated gender fee gap of 5% due to the amplification of the segregation process from the imposed quotas alone. Although these quotas have helped women enter the boardroom, it has not succeeded in preventing positional gender segregation within board composition. (Frijns & Dodd, 2014) The Institutional Shareholder Services further analyzed the average gender diversity on boards at companies in 30 countries around 5 continents. This study compared the differences between genders and further conducted an analysis on its various related drivers, including regulation as a primary explanatory variable.

(Kamonjoh, 2014) Results reveal that levels of gender diversity are disproportionate across countries and intrinsically encompass supplementary variables that should be accounted for in order to more accurately explain the variation amongst labor participation ratios between genders across cultures.

Many believe incorporating a maternity leave policy can aid in increasing the rate of females in the labor force. While maternity leave policies can support female labor force participation rates (Jaumotte, 2003), it also has a non-linear effect on labor force participation rate when accounting for the duration of leave. (Edin & Gustavsson, 2008) Independent of duration, maternity leave has a negative effect on the gender gap (Thévenon & Solaz, 2013). Additionally, the presence of a maternity leave policy that is long in duration as compared to a paternity leave policy that is short in duration (or entirely non-existent) can encourage employer discrimination (Mandel & Semyonov, 2005) As such, cultures need policies with a greater parity between the maternity leave and paternity leave.

Keeping these disparities in mind, it is apparent that not all regulation is equal in terms of its efficiency for increasing female participation country-by-country. As such, this is a far-reaching dilemma and entails additional variables beyond a country's presence of mandatory quotas as primary means for achieving gender diversity on a global scale. As such, the question remains whether a society's differing cultural aspects can provide advantageous economic impacts that may further reflect social trends towards assuring gender equity in labor force participation rates.

2.4 The Role of Societal Norms

Social norms in various markets often drive the regulatory framework for a country entirely. (Kamonjoh, 2014) Societal factors help determine an initial base line for the prosperity level of an economy. The underlying societal factors serve as a comparison tool across countries and help gauge a county's "economic success" by way of statistical measurements within the components of gross domestic product, economic opportunity, health, educational attainment, political empowerment, and global gender gap score ranking. There is a sizable literature showing that gender inequalities in education and employment opportunities come at a cost. They not only deprive the women of basic freedoms (Sen, 1999), but negatively affect development outcomes for the whole society. They can lead to ill-health, low overall human capital, bad governance, and lower economic growth (Abu-Ghaida & Klasen, 2004).

Using the Social Institution and Gender Index (SIGI), (Branisa & Klasen, 2013) indicated that institutions with gender inequality results in lower females in secondary education, higher fertility rates per women, higher child mortality rates, and a greater perception of corruption in a respective country. Additionally, weak or restrictive laws related to family, gender-based violence and economic opportunities are most likely to impede women's empowerment. (Gaye, Klugman, Kovacevis, Twigg, & Zambrano, 2010) These findings provide adequate support for why we should look deeper into the aspects of social norms for a country such as educational attainment, fertility rates, and overall gender gaps.

Most studies have emphasized the importance of education in models of female labor supply. (Eckstein & Lifshitz, 2011) estimate a dynamic stochastic female labor supply model with discrete choice and find that changes in education (accounting for a third of the increase in female employment) and wages, explaining about 20%, play a large role in explaining female

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employment. As such, educational attainment has a positive correlation with female labor participation rates. Additionally, higher female work force participation would also result in a more skilled labor force, in view of women's higher education levels. (Steinberg & Nakane)

Fertility rate has been proven through time to have a significant impact on the composition of female labor force. However, the effect is either positive or negative depending on the level of observation. At the individual level, fertility rate has a negative impact to female labor supply for a country. For example, (Mishra & Smyth, 2010) indicated that a 1% increase in fertility rate results in a decrease in the female labor force participation rate by 0.4%. On the other side, at the cross-country level, fertility rate has a positive impact to female labor supply. (De Laat & Sevilla-Sanz, 2010) explain why this difference appears at the cross-country level and accredits it to a finding on men's home production. Their study found that women living in countries where men participate more in home production are better able to combine having children with market work, leading to greater participation in the labor force at relatively high fertility levels. Within each country however, women with higher relative wages continue to have lower fertility and to participate more in the labor force than lower-paid women due to the higher opportunity cost of remaining at home.

Given these contributing factors, instances of occupational gender imbalances reflect, on the one hand, the societal expectations and role models that contribute to educational and field of study choices young girls and boys make when they embark upon acquiring foundational competencies and, on the other hand, women and men's career planning trajectories as well as the dynamics of hiring imbalances across industries. (World Economic Forum, 2017)

As of 2017, the World Economic Forum found the gaps between women and men on economic participation and political empowerment remain wide: only 58% of the economic

participation gap has been closed—a second consecutive year of reversed progress and the lowest value measured by the Index since 2008—and about 23% of the political gap, unchanged since last year against a long-term trend of slow but steady improvement. Alongside slowed growth in global economic participation, the overall gap in gender across all sectors has additionally grown, exhibiting poor performance within the Gender Gap Index across countries when weighted by population. In 2017, the average progress on closing the global gender gap stands at a score of 0.680—which means that an average gap of 32% remains to be closed worldwide across the four Index dimensions to achieve universal gender parity. Last year that gap was slightly smaller with the average of 31.7%.

3. Dataset

3.1 World Development Indicator (WDI)

Fertility rate, total (births per woman): Total fertility rate represents the number of children that would be born to a woman if she were to live to the end of her childbearing years and bear children in accordance with age-specific fertility rates of the specified year.

3.2 Country Size Indicator

Ln(GDP) (Current US$): GDP at purchaser's prices is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources. Data are in current U.S. dollars. Dollar figures for GDP are converted from domestic currencies using single year official exchange rates. For a few countries where the official exchange rate

does not reflect the rate effectively applied to actual foreign exchange transactions, an alternative conversion factor is used. I took the natural log of GDP in order for the large numerical value to fit more closely within the model and other independent variables.

3.3 Civil Indicator

Rule of Law: Rule of Law captures perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence. Estimate gives the country's score on the aggregate indicator, in units of a standard normal distribution, i.e. ranging from approximately -2.5 to 2.5.

3.4 Hofstede: Six Dimensions of National Culture

Power Distance Index: This dimension expresses the degree to which the less powerful members of a society accept and expect that power is distributed unequally. The fundamental issue here is how a society handles inequalities among people. People in societies exhibiting a large degree of Power Distance accept a hierarchical order in which everybody has a place and which needs no further justification. In societies with low Power Distance, people strive to equalize the distribution of power and demand justification for inequalities of power.

Individualism vs. Collectivism: The high side of this dimension, called Individualism, can be defined as a preference for a loosely-knit social framework in which individuals are expected to take care of only themselves and their immediate families. Its opposite, Collectivism, represents a preference for a tightly-knit framework in society in which individuals can expect their relatives or members of a particular ingroup to look after them in exchange for unquestioning loyalty. A society's position on this dimension is reflected in whether people's self-image is defined in terms of "I" or "we."

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Masculinity vs. Femininity: The Masculinity side of this dimension represents a preference in society for achievement, heroism, assertiveness, and material rewards for success. Society at large is more competitive. Its opposite, Femininity, stands for a preference for cooperation, modesty, caring for the weak and quality of life. Society at large is more consensus-oriented. In the business context Masculinity versus Femininity is sometimes also related to as "tough versus tender" cultures.

Uncertainty Avoidance Index: The Uncertainty Avoidance dimension expresses the degree to which the members of a society feel uncomfortable with uncertainty and ambiguity. The fundamental issue here is how a society deals with the fact that the future can never be known: should we try to control the future or just let it happen? Countries exhibiting strong UAI maintain rigid codes of belief and behavior, and are intolerant of unorthodox behavior and ideas. Weak UAI societies maintain a more relaxed attitude in which practice counts more than principles.

Long-term Orientation vs. Short-term Normative Orientation: Every society has to maintain some links with its own past while dealing with the challenges of the present and the future. Societies prioritize these two existential goals differently. Societies who score low on this dimension, for example, prefer to maintain time-honored traditions and norms while viewing societal change with suspicion. Those with a culture which scores high, on the other hand, take a more pragmatic approach: they encourage thrift and efforts in modern education as a way to prepare for the future. In the business context, this dimension is referred to as "(short-term) normative versus (long-term) pragmatic" (PRA). In the academic environment, the terminology Monumentalism versus Flexhumility is sometimes also used.

Indulgence vs. Restraint: Indulgence stands for a society that allows relatively free gratification of basic and natural human drives related to enjoying life and having fun. Restraint stands for a society that suppresses gratification of needs and regulates it by means of strict social norms

3.5 Quota Indicators (Binary Variables)

Law mandates equal remuneration for females and males for work of equal value (1=yes; 0=no): Law mandates equal remuneration for females and males for work of equal value is whether there is a law that obligates employers to pay equal remuneration to male and female employees who do work of equal value. "Remuneration" refers to the ordinary, basic or minimum wage or salary and any additional emoluments payable directly or indirectly, whether in cash or in kind, by the employer to the worker and arising out of the worker's employment. "Work of equal value" refers not only to the same or similar jobs but also to different jobs of the same value.

Mothers are guaranteed an equivalent position after maternity leave (1=yes; 0=no): Mothers are guaranteed an equivalent position after maternity leave is whether employers of women returning from maternity leave are legally obligated to provide them with an equivalent position after maternity leave. It takes into account paid and unpaid maternity leave and captures whether the employer has a legal obligation to reinstate the returning employee in an equivalent or better position and salary than the employee had pre-leave. Where the maternity leave regime explicitly states that the employee may not be indefinitely replaced, the answer is assumed to be "Yes." Where the maternity leave regime explicitly establishes a suspension of the employee's contract, the answer is assumed to be "Yes." In economies that also have parental leave and the law guarantees return after the leave to the

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same or an equivalent position paid at the same rate but is silent on guaranteeing the same position after maternity leave, the answer is "Yes." The answer is "N/A" if no paid or unpaid maternity leave is available.

3.6 World Economic Forum Indicators (WEF) – Global Gender Gap Report 2017

Global Gender Gap: The Global Gender Gap Index examines the gap between men and women in four fundamental categories (sub-indexes): Economic Participation and Opportunity, Educational Attainment, Health and Survival and Political Empowerment. The Global Gender Gap Index was first introduced by the World Economic Forum in 2006 as a framework for capturing the magnitude of gender-based disparities and tracking their progress over time. The Index benchmarks national gender gaps on economic, education, health and political criteria, and provides country rankings that allow for effective comparisons across regions and income groups. The rankings are designed to create global awareness of the challenges posed by gender gaps and the opportunities created by reducing them.

Economic Participation and Opportunity: This sub index contains three concepts: the participation gap, the remuneration gap and the advancement gap. The participation gap is captured using the difference between women and men in labor force participation rates. The remuneration gap is captured through a hard data indicator (ratio of estimated female-to-male earned income) and a qualitative indicator gathered through the World Economic Forum's annual Executive Opinion Survey (wage equality for similar work). Finally, the gap between the advancement of women and men is captured through two hard data statistics (the ratio of

women to men among legislators, senior officials and managers, and the ratio of women to men among technical and professional workers).

Educational Attainment: This sub index captures the gap between women's and men's current access to education through ratios of women to men in primary-, secondary- and tertiary-level education. A longer-term view of the country's ability to educate women and men in equal numbers is captured through the ratio of the female literacy rate to the male literacy rate.

Health and Survival: This sub index provides an overview of the differences between women's and men's health using two indicators. The first is the sex ratio at birth, which aims specifically to capture the phenomenon of "missing women", prevalent in many countries with a strong son preference. Second, we use the gap between women's and men's healthy life expectancy. This measure provides an estimate of the number of years that women and men can expect to live in good health by taking into account the years lost to violence, disease, malnutrition and other relevant factors.

Political Empowerment: This sub index measures the gap between men and women at the highest level of political decision-making through the ratio of women to men in ministerial positions and the ratio of women to men in parliamentary positions. In addition, we've included the ratio of women to men in terms of years in executive office (prime minister or president) for the last 50 years. A clear drawback in this category is the absence of any indicators capturing differences between the participation of women and men at local levels of government. Should such data become available at a globally comparative level in future years, it will be considered for inclusion in the Index.

3.7 Dependent Variable

Labor force participation rate, female (% of female population ages 15+): Labor force participation rate is the proportion of the population ages 15 and older that is economically active: all people who supply labor for the production of goods and services during a specified period.

4. Methodology

In the second part of my analysis I construct an international list of countries and study the propensity of women involvement in finance based on the country of domicile specific information (such as GDP, legal system – civil vs. common law countries, judicial protection of women), culture variables from Hofstede, and World Development Indicator variables (WDI) from the World Bank data report. In this section, the regression model follows the linear estimates model:

Model 1:

Female Participants (as % of workforce) = $\alpha + \beta_{1*}$ WDI + $\beta_{2*}ln(GDP) + \beta_{3*}RuleofLaw + \beta_4 *$ Hofstede$_{1-6}$ + ε

Model 2:

Female Participants (as % of workforce) = $\alpha + \beta_{1*}$ WDI + β_{2*} RuleofLaw + $\beta_{3*}Quotas_{1-2}$ + $\beta_{4*}WEF_{1-5}$ + ε

5. Empirical Analysis

In Table 1, I show the Summary Statistics for each indicator used in my regression models. Here, I find the mean, median, minimum and maximum for each set of data per indicator. My results showed that the mean for every indicator is similarly very close to its respective median. This indicates that there is not significant outliers in the data and confirms that my results are applicable to all indicators as the median complements the mean as a measure of central tendencies of our data set. Additionally, when analyzing the minimums and maximums of the data, we can see extreme differences across countries in the explanation of labor force participation rates. Within our data set, the minimum female labor force participation rate for a country is 24.96% and the maximum for a country is 68.99%. This implies that there is significant disparity in participation rates between countries and confirms the necessity of increasing rates on a global level. If labor force participation rates are high for women, then more women will be working and should eventually enter corporate boardrooms if there are no other barriers to female leadership. This suggests that economic and cultural factors may be important barriers to female career advancement.

In Table 2, I use a Correlation Matrix to show how each of the indicators used are correlated with each other. Here we can see that long-term orientation and fertility rates are negatively correlated. However, amongst indulgent societies, they are positively correlated.

To study the factors that determine women participation in the labor force around the world, I performed regression analysis and the results are presented in Tables 3 and 4 respectively. Table 3 reflects Model #1 previously identified within my methodology. This table and its associated regression reflects my results for several variables – the dependent variable is

"women participation in the labor force" and the independent variables are two categories –1) measuring the legal system of the country of domicile - rule of law and 2) culture variables defined by Hofstede. Two cultural variables were statistically significant – Long-term Orientation (LTO) and Indulgence vs. Restraint (IVR). The results suggest that countries with a culture that supports long term orientation and goals are characterized with higher proportion of women in the labor force. LTO encourages thrifts and efforts in modern education as a way to prepare for the future. Additionally, a country with high levels of long-term orientation, rather than short-term, uphold a preference for delayed reward versus instant gratification. A high-scoring country reflects that family is the basis of society, individuals are more likely to be married and have children, and education and training are highly valued. This outcome is well defined and explained by existing literature and supports a positive correlation with female labor force participation rates. These results also confirm prior literature regarding education's impact to female labor force participation as educational attainment is a sound explanation for variations within the active female labor supply for a country.

Also shown within Table 3: Model 1, I find strong statistical evidence that the relative measure of indulgence versus restraint is strongly statically significant, suggesting that countries that value indulgence over restraint have a higher percentage of women in the labor force. It is important to note that this is not an absolute variable, it is a relative measure that is used to compare societies. A country reflecting a high score in Indulgence indicates that the individuals of that culture reported higher feelings of happiness and contentment within their society. Indulgent societies are characterized with freedom of speech, in general people feel healthier and happier and interestingly, higher approval of foreign music and films is part of the survey questions used to create this score. Low scoring countries, or "Restraint" cultures, have strict

social norms to control gratification. Examples of countries with high scores of Indulgence are Sweden, Mexico, Australia and low scores – Egypt, India, and Russia. Therefore, my empirical results are consistent with the hypotheses that freedom of speech, general openness of the society and freedom of cultural norms creates a society that is more accepting of higher participation of women in the workforce.

In Table 4, I study the role of several variables that characterize the societal norms of countries on the propensity of women to enter the labor force. The results are statistically significant and suggest that higher degree of economic participation, education, health and political environment are all associated with higher participation of women in the labor force. To proxy for levels of discrimination in the labor market for women, I chose to utilize the World Economic Forum's sub-indices from the 2017 Global Gender Gap Report. This year's analysis also reveals gender gaps at the industry level and highlights that even though qualified women are coming out of the education system, many industries are failing to hire, retain and promote them, losing out on a wealth of capacity. My findings are consistent with this outcome as all global gender gap indicators were statistically significant with labor force participation rates for females, those of which have had declining or stagnant growth more recently, according to recent data from the World Economic Forum. These results suggest that women participation is highly determined by the overall societal development.

Interestingly, higher fertility rates are associated with higher female participation in the labor force. These results contribute to the argument that social norms determine the women participation in society and workforce. Also my results are consistent with the economic theory for fertility, suggesting that women do not have to choose between career and family, in fact, countries with higher fertility rates have also higher participation of women in the workforce.

6. Conclusion

In summary, the goal of my research project was to review the existing literature that explains women participation in the work force and to contribute to the existing research by providing additional empirical analysis on factors that determine women involvement in the workforce around the world. I studied factors such as legal tradition, cultural characteristics and societal norms, health and development. My results are consistent with existing studies and confirm the hypotheses that better developed societies support more active participation of women within their society, families, and, collectively, within their societies

In order to ensure the prosperity of our future global economies, we must develop and maintain economic systems that are both dynamic and all-inclusive. As our world moves into an era focused less on capitalism and more on talent at the individual level, the respective competitiveness that a country or corporation maintains will be largely determined by the innovative capacity of that entity. In this new context, it is imperative that we ensure equal opportunity to all so that we may fully exhaust our population's intellectual resources that are critical to harnessing new opportunities, specifically those that lie within the differing ideas, perspectives, and skill sets of all individuals. As such, we must continue to work towards effort to increase the level of female participation in our global labor supply.

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Table 1: *Summary Statistics*

Indicator	Mean	Median	Minimum	Maximum
Labor force participation rate, female (% of female population ages 15+)	51.304	52.152	24.964	68.989
Fertility rate, total (Births per woman)	1.765	1.640	1.195	2.958
ln(GDP)	26.611	26.443	23.810	30.047
Rule of Law	0.615	0.560	-0.990	1.950
Power Distance Index	58.486	57.000	11.000	104.000
Individualism vs. Collectivism	49.514	51.000	14.000	89.000
Masculinity vs. Femininity	53.135	55.000	5.000	110.000
Uncertainty Avoidance Index	64.270	65.000	29.000	95.000
Long-term Orientation vs. Short-term Normative Orientation	53.809	52.897	12.594	87.909
Indulgence vs. Restraint	42.415	40.402	12.946	80.134
Global Gender Gap Score	0.716	0.719	0.568	0.878
Economic Participation and Opportunity	0.652	0.683	0.274	0.820
Educational Attainment	0.979	0.996	0.819	1.000
Health and Survival	0.973	0.976	0.918	0.980
Political Empowerment	0.260	0.223	0.019	0.750
Law mandates equal remuneration for females and males for work of equal value (1=yes; 0=no)	0.595	N/A	0.000	1.000
Mothers are guaranteed an equivalent position after maternity leave (1=yes; 0=no)	0.676	N/A	0.000	1.000

Table 2: *Correlation Matrix*

	Labor force participation rate, female	Fertility rate, total (births per woman)	ln(GDP)	Rule of Law	Power Distance Index	Individualism vs. Collectivism	Masculinity vs. Femininity	Uncertainty Avoidance Index	Long-term Orientation vs. Short-term Normative Orientation	Indulgence vs. Restraint	Global Gender Gap Score	Economic Participation and Opportunity	Educational Attainment	Health and Survival	Political Empowerment	Law mandates equal remuneration for females and males for work of equal value	Mothers are guaranteed an equivalent position after maternity leave
Labor force participation rate, female (% of female population ages 15+)	1.000																
Fertility rate, total (births per woman)	-0.238	1.000															
ln(GDP)	0.065	-0.005	1.000														
Rule of Law	0.308	-0.417	0.153	1.000													
Power Distance Index	-0.369	0.236	0.025	-0.740	1.000												
Individualism vs. Collectivism	0.164	-0.298	0.100	0.703	-0.639	1.000											
Masculinity vs. Femininity	-0.127	-0.141	0.324	0.123	0.091	0.103	1.000										
Uncertainty Avoidance Index	-0.152	-0.232	-0.107	-0.173	0.090	-0.055	-0.018	1.000									
Long-term vs. Short-term Orientation	0.188	-0.538	0.196	0.043	0.050	0.168	0.092	0.096	1.000								
Indulgence vs. Restraint	0.370	0.174	0.185	0.557	-0.472	0.232	0.059	-0.206	-0.482	1.000							
Global Gender Gap Score	0.038	0.021	-0.090	-0.047	0.048	0.231	0.130	0.134	-0.143	-0.019	1.000						
Economic Participation and Opportunity	0.030	-0.039	0.052	0.008	0.106	0.234	0.049	0.024	-0.062	-0.094	0.805	1.000					
Educational Attainment	0.223	-0.107	0.282	0.095	0.066	0.031	0.201	-0.033	-0.071	0.274	0.253	0.128	1.000				
Health and Survival	0.092	-0.024	0.018	-0.134	0.004	0.152	0.174	-0.067	0.114	-0.200	0.190	0.113	0.042	1.000			
Political Empowerment	-0.021	0.088	-0.248	-0.093	-0.025	0.164	0.110	0.204	-0.165	-0.007	0.871	0.443	0.066	0.140	1.000		
Law mandates equal remuneration for females and males for work of equal value	-0.205	-0.020	-0.324	-0.019	-0.055	0.233	0.116	0.337	-0.098	-0.192	0.225	0.096	0.180	0.238	0.224	1.000	
Mothers are guaranteed an equivalent position after maternity leave	0.114	-0.151	-0.342	0.113	-0.210	0.386	-0.287	0.320	-0.281	0.166	0.408	0.362	-0.011	0.000	0.359	0.251	1.000

Table 3: *Model 1 Regression*

Female Participants (as % of workforce) $= \alpha + \beta_{1*}$ WDI $+ \beta_{2*}ln(GDP) + \beta_{3*}Civil + \beta_4 * Hofstede_{1-6} + \varepsilon$

	Coefficients	t Stat	P-value
Fertility rate, total (Births per woman)	-7.294	-1.434	0.163
ln(GDP)	-0.330	-0.334	0.741
Rule of Law	-4.692	-1.406	0.171
Power Distance Index	-0.114	-1.230	0.229
Individualism vs. Collectivism	-0.014	-0.150	0.882
Masculinity vs. Femininity	-0.066	-0.999	0.327
Uncertainty Avoidance Index	-0.077	-1.135	0.266
Long-term vs. Short-term Orientation**	**0.195**	**2.225**	**0.035****
Indulgence vs. Restraint**	**0.333**	**3.117**	**0.004****

** Indicates that the variable is statistically significant at the 5% level (p-value < .05)

Table 4: *Model 2 Regression*

$$\text{Female Participants (as \% of workforce)} = \alpha + \beta_{1*}\,WDI + \beta_{2*}\,Civil + \beta_{3*}Quotas_{1-2} + \beta_{4*}WEF_{1-5} + \varepsilon$$

	Coefficients	t Stat	P-value
Fertility rate, total**	0.018	2.466	**0.017**
Rule of Law	-0.01	-1.225	0.225
Law mandates equal remuneration for females and males for work of equal value	-0.017	-1.271	0.208
Mothers are guaranteed an equivalent position after maternity leave	-0.012	-0.836	0.407
Global Gender Gap Score**	-14.696	-2.320	**0.024**
Economic Participation & Opportunity**	3.628	2.298	**0.025**
Educational Attainment**	3.596	2.265	**0.027**
Health and Survival**	3.643	2.243	**0.029**
Political Empowerment**	3.653	2.301	**0.025**

** Indicates that the variable is statistically significant at the 5% level (p-value < .05)