



Department of Political Science

Chair of Macroeconomics

The effects of gender inequality on economic
growth: a macroeconomic analysis.

SUPERVISOR:

Prof. Massimo Ricottilli

CANDIDATE:

Matteo Corsini

ID Number: 080452

Academic Year: 2017/2018

TABLE OF CONTENTS

Introduction	3
CHAPTER ONE: Measuring the Gender Gap.....	5
1.1 The Global Gender Gap Index.....	5
1.2 The underlying concepts	5
1.3 The Gender Gap sub-indexes	7
1.3 a Economic participation and opportunity.....	7
1.3 b Educational attainment:	10
1.3 c Health and Survival.....	12
1.3 d Political Empowerment.....	13
CHAPTER TWO: Gender Gap in the Economy	15
2.1 Literature Review.....	16
2.2 Gender Inequality: a global perspective.....	19
2.3. Gender gap, causes and potential from its reduction	22
2.3 a Motherhood Penalty	27
2.3 b The unpaid care work:	34
CHAPTER THREE: Gender Inequality and Education	38
3.1 Women education and fertility rate	38
3.2 Increased female education and economic growth.....	41
Conclusion:.....	46
Bibliography	49
Italian Summary	54

Introduction

The process of globalization, and the consequent emphasis on the necessity to boost economic growth, has significantly increased the attention on the role played by women as far as economic performance is concerned. According to a report published annually by the prestigious World Economic Forum, gender parity is far from being achieved: in fact, despite the fact that considerable progress has been made in the last century, no country in the world has yet achieved an absolute equality of the sexes. Furthermore, by pointing out the gradual shift from capitalism to talentism, the study reveals that future's economic progress lies in the capacity to progressively integrate women in the labor-market system. As things stand today, the undeniable progress on education has not translated in equivalent earning opportunities for women, losing out in terms of industrial wealth capacity.

Historically speaking, the question of gender equality was mainly assessed with regard to its moral and ethical implications, rather than economic ones; however, the positive change in the degree of equality throughout the 1950s has resulted into a proportionally-high number of academic studies that analyzed the causal relationship between equality and economic growth. In fact, well-documented empirical evidence of the benefits of narrowing the gender gap is influencing considerably the development of public policies that identify in the achievement of gender parity the main driver for future economic success.

In particular, a number of studies show that the single, most significant variable to be taken into account is that connected with the positive impact of the increase in female labor market participation: according to a research conducted by the McKinsey Institute (2016), the economic achievement resulting from a full realization of women in work can potentially boost GDP in the United States by a 0.8 percent annual growth, adding a total of 2.1\$ trillion in GDP by 2025.

The recent International attention attributed to the economic power of equality is testified by the emergence of a wide range of NGOs and International organizations whose main scope is not only that of promoting economic achievement through the reduction of gender inequality, but also – and perhaps most importantly – the establishment of an inclusive labor market that is based on the principle of equality of opportunity. This is one of the main reasons why the question of economic growth and gender equality usually follows a two-dimensional pattern, whose dualistic nature was perfectly captured by the UN Secretary General Ban Ki Moon:

“[...] investing in women is not only the right thing to do. It is the smart thing to do. I am deeply convinced that, in women, the world has at its disposal, the most significant and yet largely untapped potential for development and peace.” (International Humanist and Ethical Union, March 2008)

According to Naila Kabeer (2013), the previously-reported quote perfectly summarizes the two sets of arguments in which the notion of gender and development is usually conceptualized: while the first one analyzes the implications of economic inequality with particular regard to its ethical concerns, the second one draws significantly from an empirically-supported set of academic studies that offer documented evidence on the positive relationship between the promotion of gender equality and the consequential economic betterment. Hence, it can be argued that the notion of equality of opportunity does no longer have to be conceptualized at an ethic level, but also at an economic one; in this sense, the *right* and the *good* thing coincide perfectly in a win-win situation.

The purpose of this study is to provide a general understanding of the ways in which economic performance is affected by changes in the degree of equality between men and women. In particular, this research assesses the main implications connected with changes in two of the four gender-parity sub-indexes identified by the World Economic Forum: economy and education.

The paper develops into three main chapters: the first one untangles the complexity of the notion of gender-gap by providing an overview of its main components and parameters, with particular regard to the methodological approach applied by the reference literature. The second chapter examines the index of economic parity proposing an etiological analysis of the current degree of economic inequality between men and women as far as the wage gap is concerned; the chapter also investigates the benefits of improved equality in the pay gap. The third chapter examines the way in which closing the gender gap in education represents the key to long-lasting development.

CHAPTER ONE: Measuring the Gender Gap

The aim of this section is to provide a general understanding of the ways in which gender inequality is captured through the use of statistical tools; in particular, the methodological framework developed in this section draws significantly from “The Global Gender Gap Report” (2017) published annually by the World Economic Forum, by many considered one of the most prominent sources of gender-related studies.

1.1 The Global Gender Gap Index

The Global Gender Gap Index, first introduced by the World Economic Forum (WEF) in 2006, has the scope of providing a scientific framework for the analysis of gender inequality across four key macro-areas: educational attainment, economy participation and opportunity, health and survival, political empowerment. By capturing the magnitude of gender-related disparities through the lens of four thematic dimensions, the Index has the ambition of providing an overview of the 144 countries benchmarked, offering measures on their progress over time. The prominent role played by the WEF is in part connected with the fact that the methodological and quantitative measures adopted in the analysis have remained stable since its conceptualization in 2006, addressing then the need for a consistent measure for gender-related indexes. In fact, the scope of the Index is not only that of tracking changes in the degree of equality between men and women, but also that of reporting the vast variety of potential opportunities that would result from a gradual reduction of the gap: the stability of the index’s methodology, and the consequent consistency of the cross-country and time-series analysis, is in fact designed to offer a methodological basis for the development of policies that intend to reduce the gap. Methodologically speaking, progress towards gender equality is measured on a 0-1 scale, where 0 represents the value associated with absolute imparity, and 1 with absolute parity.

The following parts of this chapter focus on the methodological approach adopted by the World Economic Forum so as to summarize the collected-data in a single quantitative Index. After presenting the four main indexes and their components, the final part of this section will be dedicated to presenting the Report’s main conclusions.

1.2 The underlying concepts

Before taking into account the structure of the Index, it is necessary to make a short premise

concerning what the WEF report calls “the three underlying concepts”, which offer the theoretical explanations behind the indicators adopted in the report. First of all, it has to be clarified that the Index is mainly concerned with the measurement of gaps, rather than levels. This means that when resources and opportunities are taken into account, what is being measured is not the level of their availability in the country concerned, but rather the gender-related gaps in their access. In other words, the Index seeks to differentiate a country’s gender-gap Index from its level of development; in fact, differently from what is usually thought, the World Economic Forum Report does not list countries by their overall level of resources, but rather by a principle of equality of access, which has to be considered as completely independent from the corresponding level of development. Hence, the Index exclusively measures the gender-gap width in accessing to a set of resources and opportunities, regardless of their level. For example, a developed country could potentially result to be less gender-equal than a developing one, even if its level of overall development is way more advanced.

The second concept that inspired the way in which indicators have been chosen is that concerned with the notion of outcomes, rather than inputs: as previously mentioned, the main scope of the report is to offer an understanding of the position occupied by man and women on the virtual equality-line. In order to do so, the Index is developed on the basis of four macro-indicators, that identify areas in which the outcome is the key concept measured. In other words, the indicators do not take into consideration any factor that may be classified as an “input” or “mean”; in fact, the report specifies that country-related policies, customs and culture are not evaluated for the purpose of the final Index elaboration. For example, the study conducted by the WEF features an indicator that compares the gender gap with regard to high-skilled positions, namely managers, lawyers etc., (outcome indicator), but there is no parameter concerning the evaluation of a policy indicator (input), namely maternity-leave length. The exclusion of country-specific input parameters, and the consequent objectiveness of an Index freed from countries particularism, has not only guaranteed long lasting consistency, but it also provided the ideal framework for cross-countries comparative analyses.

The third and last feature of the so-called underlying concepts draws considerably from the difference between the notion of gender equality and that of women’s empowerment: while the first one is associated with a measure that rewards absolute parity between the two sexes, the second one tends to attribute a higher value to an outcome in which women outperform men in the area concerned. In other words, in the case of gender equality, there is no interest in understanding whether women are winning or not the “battle of the sexes”, because what is relevant is not women’s predominance, but rather, equality of access to opportunities. Since the Global Gender Gap Index provides a snapshot of the degree of parity between men and women, it is therefore obvious that the notion of women’s

empowerment has to be set aside. The following example will provide a better understanding of the foregoing concept: if a given country presents higher levels of girl's enrolment in school, its educational index will be exactly equal to a country in which the number of boys and girls enrolled in school is the same.

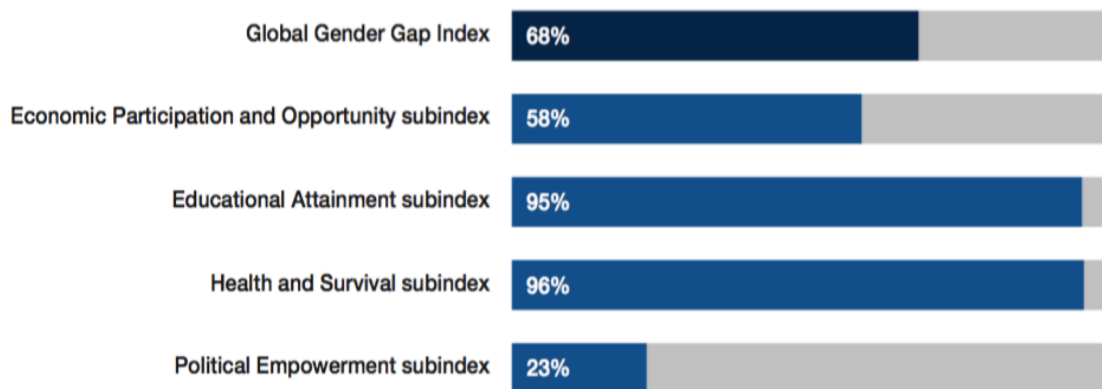
1.3 The Gender Gap sub-indexes

This section untangles the complexity of the four sub-indexes by displaying the main characteristics of each parameter. For the purpose of matching the theoretical and the empirical foundation of the analysis, the indicator's explanation will be also accompanied with a brief overview of the corresponding results.

It has to be clarified that the methodology reported in the following section of this study is based exclusively on the research conducted by the World Economic Forum; hence, it would be a mistake to conclude that it acquires universal validity.

Before displaying each of the sub-indexes' characteristics, it is useful to provide a schematic overview of the 2017 Global performance:

Figure 1: Global performance, 2017



Source: Global Gender Gap Index 2017.

Note: Covers all 144 countries featured in the 2017 index.

1.3 a) Economic participation and opportunity

This sub-index seeks to measure the degree of economic participation and opportunity through the lens of three main underlying forms of gaps: the participation gap, the remuneration gap and the

advancement gap. The first one is obtained by calculating the difference between men and women in labor force participation; the second one is captured by analyzing two main indicators: the female-to-male ratio of estimated earnings, and the degree of wage equality; the third one is measured by taking into account two statistics: the female-to-men ratio among legislators, and the difference between men and women in the field of professional and technical work.

To summarize, the sub-index is composed of five parameters, each reflecting one of the previously-discussed gaps:

- 1) Female labor force participation over male value: this indicator captures the difference between men and women's participation rate by taking into account the level of working-age population having an active engagement in the labor market. The level of engagement is based on the traditional definition of work force, that includes both those who are working and those who are looking for work. It does not take into consideration data concerning workers who are employed abroad.
- 2) Wage equality between women and men for similar work: this data is collected through the World Economic Forum's annual Executive Opinion Survey, which provides an overview of the economy by surveying business leaders on a wide range of topics. In this case, the indicator was derived on the basis of the following question: "In your country, for similar work, to what extent are wages for women equal to those of men?" The respondents express their answer on a scale from 1 to 7, where 1 identifies a situation in which women earn significantly less than men, and 7 indicates absolute parity. In order to adopt the data in the WEF Global Gender Gap Report, the response was later converted and standardized in a 0-to-1 scale.
- 3) Female estimated earned income over male value: such parameter aims at measuring the aggregate income value that men and women earn in any given country. This value is calculated by adopting data concerning the working women and men ratio, their corresponding wages and the overall GDP value of the area concerned. The methodology applied for such indicator is based on the Human Development Report, conducted annually by the United Nations Development Program (UNDP).
- 4) Female legislators, senior officials and managers over male value: in order to provide a holistic understanding of this component, a terminological explanation of the indicator's components is strongly required; the following definitions correspond to Minor Group 111 of the International Standard Classification of Occupations (ISCO), that provides a perfectly-detailed and universally-accepted standardization of the wide range of working positions at a

global level. By legislator, the ISCO means those who:

“Determine, formulate and direct policies of national, state, regional or local governments and international governmental agencies, and make, ratify, amend or repeal laws, public rules and regulations.” (International Standard Classification of Occupations, International Labour Organization, 2012, Geneva)

By senior officials the ISCO means those who:

“Advise governments on policy matters, oversee the interpretation and implementation of government policies and legislation by government departments and agencies, represent their country abroad and act on its behalf, or carry out similar tasks in intergovernmental organizations” (International Standard Classification of Occupations, International Labour Organization, 2012, Geneva)

Finally, the indicator is calculated by comparing the women-to-men ratio of those employed in senior roles and legislators.

- 5) Female professional and technical workers over male value: this indicator takes into consideration Groups 2 and 3 of the ISCO, which defines professionals as those who:

“Increase the existing stock of knowledge; apply scientific or artistic concepts and theories; teach about the foregoing in a systematic manner; or engage in any combination of these activities” (International Standard Classification of Occupations, International Labour Organization, 2012, Geneva)

The indicator is then obtained by calculating the female-to-male ratio between those employed in the foregoing working areas.

Before taking into account the other main indicators that compose the Gender Gap Index, it is worth dedicating a short – and yet extremely helpful- part of this section to displaying the performance of those countries which have reduced the Economic Participation and Opportunity Gap in the recent years. According to the WEF Report (2017), the highest-ranking country in the previously-mentioned sub-index is Burundi, with a score of 0.911 (0-1 scale, where 1 is absolute equality). However, for the purpose of providing an empirically-based understanding of the Index’s complexity, it is also relevant to emphasize the fact that the overall global index is obtained by calculating the average of the scores obtained in each of the four sub-indexes; hence, mathematically speaking, the overall

highest-ranking Country could potentially be one that has never scored 1st in any of the Index components, but reported the highest equality-related consistency in all the four components. The case of Burundi is – in this specific case – of paramount importance: in fact, despite representing the best-achieving Country with regard to the Economic participation and opportunity, its overall, global score is 0.755, which makes the Country the 22nd in the ranking. With a global average of 0.58, the Economic Participation and Opportunity sub-index represents the second lowest parameter taken into account by the Report, well below the overall Global Gender Gap Index (0.68). Finally, according to the Report, 13 Countries, have managed to close their gap by 80% in recent years. (Sources: The Gender Gap Report 2017).

1.3 b) Educational attainment:

This sub-index aims at assessing the gap between men and women in different educational fields: particularly, this sub-index provides an overview of the women-to-men degrees of accessing to primary, secondary and tertiary level of education. Interestingly, the Index seeks to convey a better and consistent analysis of the educational sphere by providing a long-term picture of the given's country capacity to provide a numerically-equal education to both men and women: this value is obtained by calculating the literacy rate ratio between men and women in a given area. The following parameters are strongly connected with the notion of 'Educational attainment' developed by the UNESCO, which strongly emphasizes the far-reaching socio-economic potential as far as achievements in the educational sphere are concerned; particularly, the UNESCO Institute for statistics (UIS) offers a unique picture on the benefits of overall increased levels of education, which are mostly associated with better economic growth, overall well-being, decreased violence and higher degrees of civic involvement (UNESCO Institute for Statistics, website, accessed 2018) . In fact, this is one of the many reasons why the level of global educational attainment has become one of the most relevant measures in tracking movements towards a sustainable development.

The Educational Attainment sub-index is then composed by the following four parameters:

- 1) Female literacy rate over male value: this parameter draws significantly from the notion of educational attainment provided for by the UNESCO Institute of Statistics (Educational Indicators), which not only offers the theoretical framework for the analysis, but it also represents the single, most authoritative data Source. Terminologically speaking, the notion of literacy is defined as follows:

“Percentage of population aged 15 years and over who can both read and write with understanding a short simple statement on their everyday life. Generally, ‘literacy’ also encompasses ‘numeracy’, the ability to make simple arithmetic calculations” (UNESCO Institute for Statistics, Glossary from the International Standard Classification of Education, 2011)

- 2) Female, male net primary education enrolment rate: to better understand the meaning of this indicator, it is necessary to provide an explanation of the concept of primary education, whose meaning is perfectly assessed by the International Standard Classification of Education (ISCED, 2011), designed with the purpose of “assembling, compiling and analyzing cross-nationally comparable data”. Primary education programs belong to the ISCED level 1, and they are designed with the scope of educating students with regard to fundamental skills, namely writing, reading and mathematics. Therefore, primary education mainly refers to basic-level knowledge, with limited level of complexity. In terms of age, the ISCED Level 1 classification identifies students aged between five and six years old, to a maximum of 12, depending on the educational standardization of the Country concerned. The indicator is then calculated by measuring the percentage of boys and girls who are enrolled in primary education.
- 3) Female, male net secondary education enrolment: for the purpose of methodological consistency, it is hereby shortly presented the meaning of ‘secondary education’ as it is defined by the ISCED (2011). The ISCED divides secondary education in two complementary dimensions: lower secondary education (Level 2) and upper-secondary education (Level 3); while the former is mainly referred to as the second stage of basic education, the latter identifies the educational stage in which students deal with an increased level of specialization. In terms of age, students usually enter lower secondary education (Level 2) at the age of 12-14, and most often finish at 14-16. The indicator is obtained by calculating the percentage of boys and girls enrolled in secondary education.
- 4) Female, male tertiary gross enrolment ratio: this indicator seeks to calculate the aggregate level of enrolment in tertiary education, which belongs to ISCED levels 5 to 8, and it is defined as follows:

“Tertiary education builds on secondary education, providing learning activities in specialized field of education. It aims at learning at a high level of complexity and specialization. Tertiary education includes what is commonly understood as academic education, but also includes advances vocational or professional education” (UNESCO Institute for Statistics, Glossary from the International Standard Classification of Education, 2011).

Therefore, in this case, the tertiary level identifies a much broader variety of educational involvements, regulated by a strict hierarchal order. In fact, differently from the previous ISCED levels, tertiary levels are not listed by a set of sequential educational steps, but by a principle of parallelism: for example, Level-4 programs can potentially provide access to any of those belonging to the 5th, 6th or 7th level. Hence, this parameter depicts an empirically-rich source, that increases the overall accuracy of the educational attainment sub-index proportionally. This parameter is calculated by measuring the aggregate enrolment in tertiary education, which has to be expressed with regard to the “most recent five-year age cohort that has left the secondary school” (WEF Global Gender Gap Report, 2017).

As far as empirical evidence with regard to the Educational Attainment sub-index is concerned, the WEF Global Gender Gap Report (2017) reveals that a total of 27 countries managed to fully close the gap. In addition, this sub-index is the only one in which absolute quality has been reached, with a total of 27 countries scoring a value of 1.000. Despite having the second-highest global average in terms of gender equality (Global average of 0.95), the Educational Attainment Index is the one that reports the highest levels of discrepancy between Western and Eastern Countries of the globe; particularly, the study found out that:

“Less than one-third of adults have completed primary education in many sub-Saharan African countries. In most Western European countries, by contrast, nearly all adults have completed primary education and, in many cases, one-third of adults have a tertiary degree”.

1.3 c) Health and Survival

Through the lens of two main indicators, this sub-Index aims at offering an overview concerning different degrees of equality between men and women in health and well-being. The first indicator adopted is the sex ratio at birth, and the second one is calculated by measuring the gap between men and women in terms of life expectancy. In particular, the first one aims to capture the magnitude of the so-called phenomenon of ‘missing women’, which is defined by the Social Institutions and Gender Index (SIGI, 2014) as the “shortfall in the number of women in sex ratio for ages 0-4, 5-9, 10-14, 15-64, 65+ relative to the expected number if there were no sex-selective abortions, no female infanticide or similar levels of health care and nutrition”. In other words, the term ‘missing women’ commonly refers to the unnaturally low, and skewed ratio of women to men as a direct result of sex-

selective abortions; this phenomenon has been highly observed in countries that have a high son-preference, mainly in Asia and North Africa. On the other hand, the second indicator seeks to offer a general overview of the country concerned life expectancy by taking into consideration a set of relevant factors: for example, those connected with the number of years lost because of violence, malnutrition and medical diseases.

To summarize, the previously-explained sub-index is composed of the two following indicators:

- 1) Sex ratio at birth: the World Population Prospects Glossary defines sex ratio at birth as the number of female births per one male birth; for the purpose of conveying an understandable measure, this parameter indicates the number of boys born per 100 girls. Methodologically speaking, data is then translated into a female-to-male ratio. Biologically speaking, according to the UN Department of Economic and Social Affairs (World Population Prospects: The 2017 Revision) the natural ratio should normally be around 94.4%, with men being quantitatively more than women.
- 2) Female, male healthy life expectancy (measured in years): data analyzed for this indicator draw significantly from the World Health Organization, Global Health Observatory database (2016), that defines life expectancy as “the average number of years that a newborn is expected to live if current mortality rates continue to apply”.

In terms of empirical evidence, the WEF Report (2017) reveals that a total of thirty-four countries have managed to considerably reduce the gap with regard to the Health and Survival sub-index. With a global average of 0.956, this represents the most gender-equal sub-index, with only six countries scoring below the world average. However, no country has still reached absolute equality in this field, with a score of 0.980 identifying the highest ranking countries.

1.3 d) Political Empowerment

By calculating the women-to-men ratio with regard to both parliamentary positions and ministerial position, this sub-index seeks to capture the magnitude of the discrepancy between men and women in terms of access to the highest levels of political involvement. Moreover, the sub-index takes into account the gap between men and women also with regard to the number of years spent in the highest executive office, namely president and prime minister. The biggest disadvantage of this indicator is that it does not include measures concerning the gender differences in terms of political involvement

at a local level: in fact – to date – there is no universally available data concerning participation at local levels of governments.

This sub-Index is composed of the three main following indicators:

- 1) Women in parliament: this indicator measures the proportion of seats held by women in national parliaments. In political systems where the legislative, parliamentary body is bicameral, the data adopted are those of the lower house. Data concerning this indicator are from the Women in National Parliaments database.
- 2) Women in ministerial positions: this indicator captures the proportion of women holding ministerial portfolio. The Report states that “overlap between ministers and heads of government that also hold a ministerial portfolio may occur”.
- 3) Years with female head of state: this indicator aims at measuring the number of years (in the last fifty) that a woman held in a head of state or head of government office. In this case, data are taken from the World Economic Forum calculations.

With a global average of 0.23, the Political Empowerment represents by far the most gender-unequal sub-index: only Iceland managed to close the gap by more than 70%. The lowest-ranking scores belong to Lebanon, Qatar and Yemen, with corresponding values of 0.019, 0.016 and 0.014.

Despite the fact that no country in the world has yet reached an absolute level of equality in terms of political empowerment, the World Bank recognizes a growing trend towards a fairer level of political representation: the reported graph shows the diachronic (1997-2017) increase in the proportions of seats held by women in national parliaments (corresponding to the first indicator of this sub-index)

CHAPTER TWO: Gender Gap in the Economy

A growing body of empirical evidence demonstrates that gender equality is much more than just a pressing moral issue: in fact, its attainment is mostly associated with poverty reduction, sustainable development and good governance. However, despite representing more than half the world's population, women's contribution to the economic, global market is far from reaching its full potential, producing potentially-devastating macroeconomic consequences as a result: according to the McKinsey Institute (2015), women only generate 37% of the global GDP.

The enormous economic potential resulting from an increase in female labor market participation is far too often eclipsed by a misplaced attention on feminism per se, which is frequently misconceived as the celebration of women's prevarication on men, rather than as the theory of gender equality.

A study conducted by the International Monetary Fund (IMF, 2015) reveals that the pursuit of gender parity has gained considerable attention in policy-making strategies due to the beneficial macroeconomic effects that it brings about.

An article published by the prestigious newspaper "The Economist" claims that gender disparity in terms of equal pay is not exactly as it is commonly perceived: in fact, contrary to popular belief, data gathered by Korn Ferry from a panel of 25 countries show that in the vast majority of cases women do not receive different emoluments from their male counterparts who are in the same role. However, it is necessary to emphasize the fact that gender disparities do occur when women as a demographic group are taken into consideration: Lawrence M. Kahn (2016) claims that despite the fact that substantial progress was made in the last years, women are still underrepresented when progress at the top of the income distribution is measured. Particularly, the author observes a larger wage gap between men and women with regard to highly-skilled workers; this data seems to confirm the widespread belief that gender gap at the highest levels of the labor market still remains remarkably unequal. An increasingly richer empirical evidence suggests that one of the main reasons why women are still less likely to occupy top-level working positions is because they are - statistically – their children's main caregivers. Such phenomenon is commonly known as the 'motherhood wage penalty': The Economist indicates that a vast majority of women were reduced their salary significantly after giving birth. This unfortunately- common pattern is confirmed by an increasingly higher number of scientific studies that show that a negative relationship between women's wages and maternity. In addition, such gender disparity is also connected with a significantly higher lever

of women's overrepresentation in what is usually defined as the 'informal sector' and unpaid care work.

By analyzing the notion of income distribution through the lens of a gender-based approach, this chapter offers an overview of the ways in which income inequality affects economic growth. This chapter is composed of three main sections: the first section intends to offer an understanding of the main theories concerning the relationship between income and gender inequality; the second one aims at providing a brief overview of the current situation of gender inequality across the world; the third examines the main causes of unequal income distribution by placing particular emphasis on the concepts of wage gap, motherhood penalty and unpaid care work.

2.1 Literature Review

Despite the fact that the phenomenon of economic parity with regard to gender is commonly assessed in a debating way by the collective imaginary, the literature presented in this section is surprisingly uncontroversial: the vast majority of researchers has in fact theorized a positive association between gender equality and economic performance. The aim of this section is to provide an explanation of the various channels through which income equality can produce positive effects in terms of economic performance. Much of the literature displayed in this session aims at assessing the role of income distribution not only related to the phenomenon of gender disparities, but also in terms of major contributor of overall economic development. For the purpose of academic correctness, part of this section will also be dedicated to researchers who claim to have found a negative association between parity and growth.

In his "The Structure of Earnings", Lydall (1968) perfectly captured the strong level of interdependence between a consistent economic growth and the necessity to provide a fair distribution of goods and services in a given community:

"The essential problem of economics is how to increase economic welfare. In a broad sense this problem can be divided into two part: how to increase total output from given resources, and how to distribute the resulting goods and services in such a way as to give the community the most benefit from them".

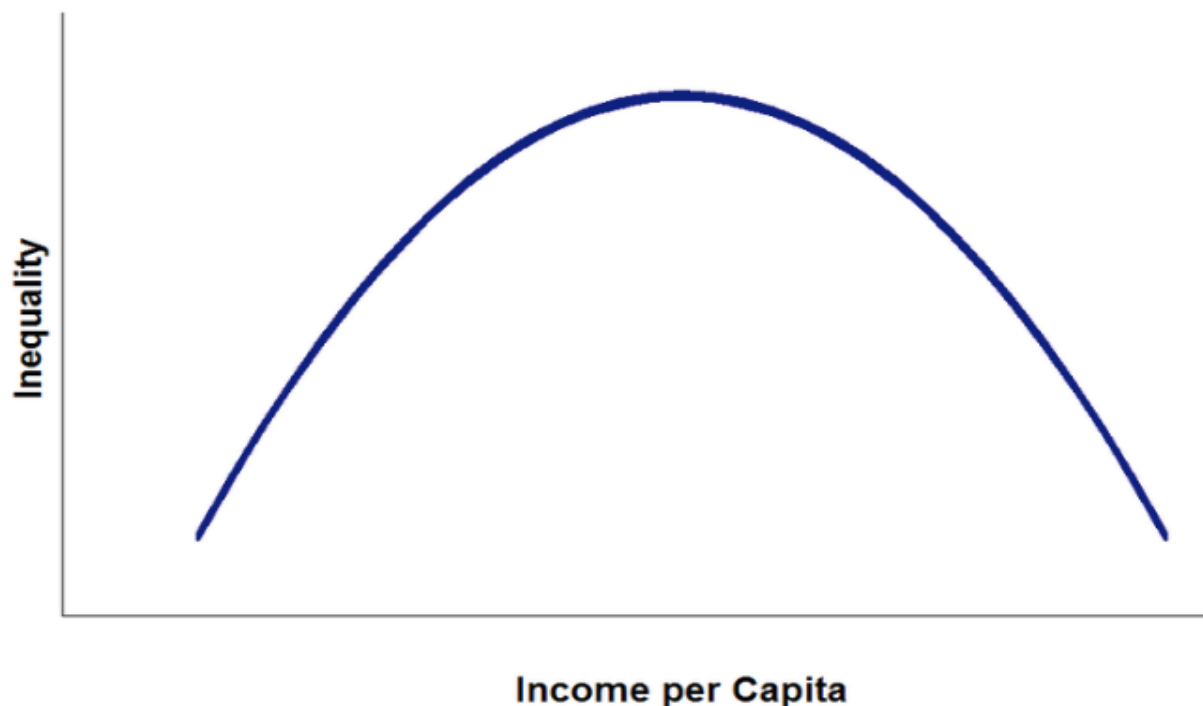
In other words, Lydall developed the theoretical foundation for what is now conceptualized as the problem of ‘production’ and ‘distribution’, whose strong interconnectedness is the key to developing a holistic understanding of economic growth and its macro implications. According to Bar-el and Dafna Schwartz (2003), the growth and distribution trade-off should not have to be conceived as a fixed phenomenon, stating the burden to bear in terms of cost for reaching consistent economic growth. In fact, widespread theoretical considerations indicate that unequal income distribution is mostly negative associated with future economic growth: this is because a concentration of resources inevitably reduces what is usually defined as the ‘proportions of production factors’, namely workers, harming the limiting growth potential as a result.

In their well-known paper “Income distribution and macroeconomics”, Galor and Zeira (1993) critically examined the connection between wealth distribution and macroeconomic with particular emphasis on investments in human capital. Their study draws significantly from an increasingly richer empirical material that show a sharp, positive association between income pre-capita and income distribution; particularly, Kravis (1960) demonstrated that wealthier countries tend to have a generally more equal income distribution: this is mainly because developed countries’ promotion of a much more integrated socio-economic society inevitably determines a progress towards an equal income distribution. In his “*International differences in the Distribution of Income*”, Kravis (1960) suggests that the higher degree of income equality observed in wealthier countries is the result of a generally fairer access to education and lack of economic discrimination. In addition, the author noticed that while economic development may initially determine a system of economic differentiation that further deepens inequality, a consistent economic growth – connected with a stable increase in the general educational rate – is the key to guarantee the establishment of a long-lasting, equal distribution of income. The forgoing line of reasoning illustrates perfectly the sharp connection between inequality and incentives to invest in human capital: a polarized income distribution does not enable the poor people to engage in human capital’s spending, and it will produce a negative growth pattern as a result. Therefore, low investments in human capital can be conceptualized as both the cause and the effect of high levels of inequality.

Additional arguments in support of the negative relationship between unequal income distribution and economic performance are also provided by Galor and Moav (2004), whose brilliant analysis of the consequences of industrialization on the importance of human capital represents a reconciliation of clashing point of views; the authors explain that at the beginning of the Industrial Revolution in England (1760-1830), physical capital accumulation represented a major contributor to development.

This is because in the first phase (Regime I) the wage rate is far lower than the value that would allow the poor, who do not possess capital, to carry out what is usually defined as ‘intergenerational transfers’, namely savings. Therefore, the rate of return to human capital is lower than that of physical one: hence, capital accumulation fuels development in this first stage. Accumulation from the rich increases the amount of physical quantity, which determines a consequential increase in wages. As a result, the rate of return to human capital increases proportionately, and growth is enhanced both by human capital and capital accumulation (Regime II). Since human capital is incorporated into individuals, whose investments follow the principle of diminishing marginal returns, the only way to maximize the aggregate return to investment in human capital is by equalizing marginal returns among individuals. In this context, an equal distribution represents the most effective way to stimulate overall economic performance.

Arguments in support of Galor and Moav’s (2013) theory are provided by the Russian economist Simon Kuznets, who describes the process of economic growth as following a u-shaped curve. By analyzing the relationship between inequality and income per capita, Kuznets argues that high levels of inequality produce economic benefits in the first phase of growth; then, as the economy shifts from pre to post-industrial, the level of inequality and income per capita are negatively associated. The following graph represents a visual representation of his theory:



Therefore, Kuznets' hypothesis has to be analyzed as inextricably linked to the process of industrialization. A possible explanation of his growth-progression theory draws significantly from the rural-urban cleavage resulting from a gradual industrialization, whose emergence emphasized the role of the city as the nerve center of production; namely, technological advancement, and the consequent mechanization of rural work, translated in a sharp increase in the number of workers moving to the city for the purpose of finding well-paying jobs. The urbanizing process was fueled by an unprecedented wave of democratic transition, which not only marked a remarkable increase in the number of people leaving in the city, but it also widened the income inequality between rural and urban areas. Therefore, the income inequality gap continues to widen as long as economic growth does not reach a certain level at which income per capita allows for faster democratization and consequent decrease in the degree of inequality.

Despite the fact that Kuznets' theory has been subjected to widespread criticism for considering income inequality not only inevitable, but also necessary, the relevance of his theory lies in the fact that he provided an explanation of the relationship between income inequality and economic performance.

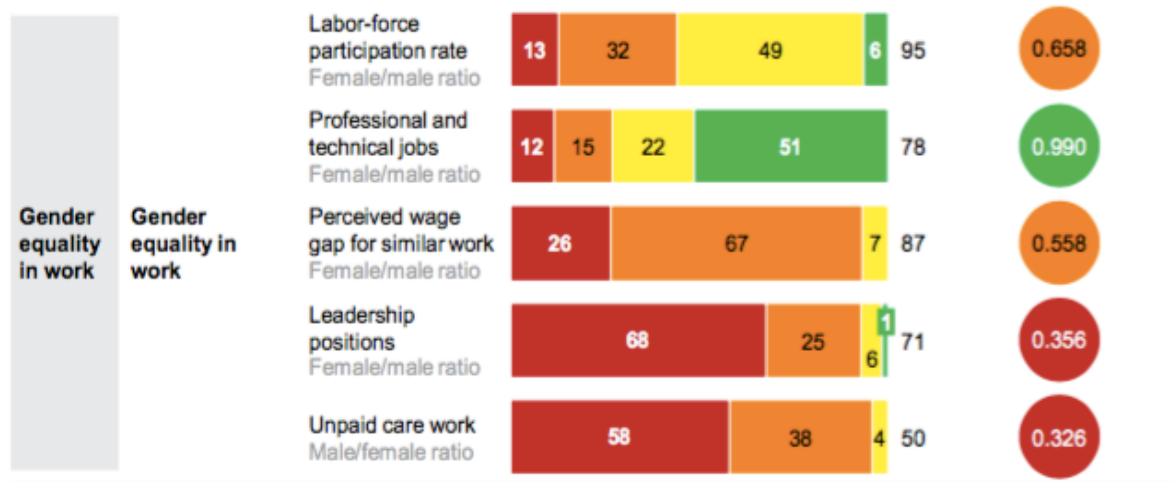
This brief session intended to provide an understanding of the crucial role played by income distribution as far as economic growth is concerned. Particularly, the importance of an equal income distribution not only among society, but also between men and women, is strictly connected with gender differences in spending preferences. The beneficial effects on increased women's earnings will be analyzed further in this chapter.

2.2 Gender Inequality: a global perspective

The purpose of this session is to provide a brief overview of the current global scenario as far as gender inequality is concerned. The data framework presented in this part draws significantly from the research "*The Power of Parity: how advancing women's equality can add 12\$ trillion to global growth*" conducted by the McKinsey Global Institute in 2015. Particularly, the aim of this session is to provide a summary of the ongoing status of gender inequality with regard to four macro-parameters: equality in work, economic opportunity, legal protection and physical security and autonomy. By analyzing each parameter with regard to its degree of gender inequality, the research's findings reveal that the most gender-unequal ratios are connected with: leadership positions,

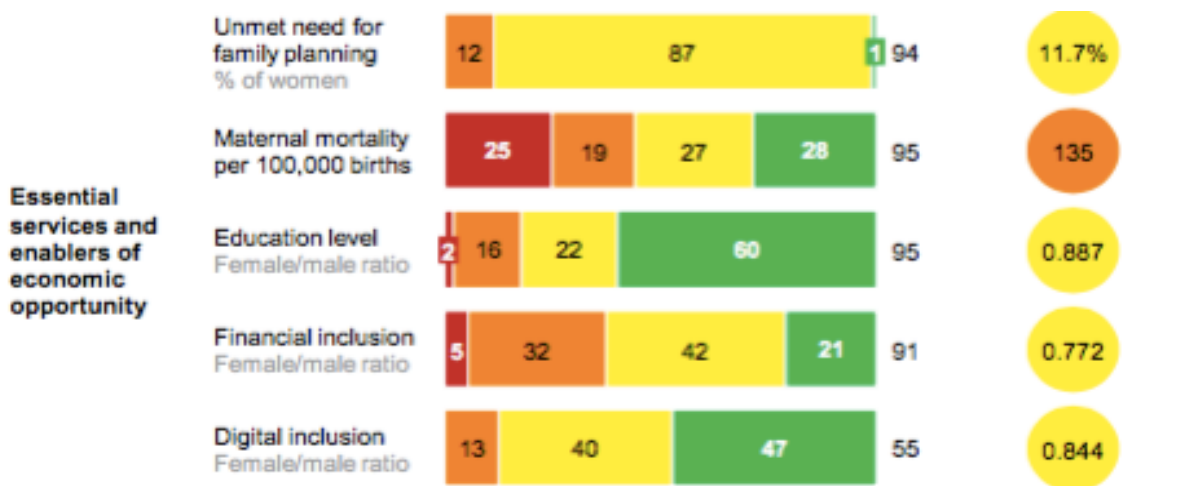
representation in unpaid care work and political representation. After presenting a brief explanation of each parameter, this session will also offer an overview of their main results.

Equality in work: this parameter captures the magnitude of gender bias in work with regard to five main indicators: (Source: McKinsey Institute)



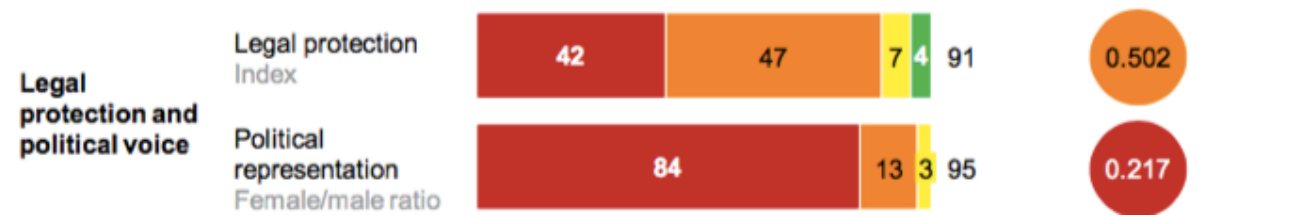
The reported graph shows that, despite recent progress, global gender gaps in working areas still remain considerably high. Graphically speaking, each color represents a different level of gender inequality: red is low, yellow is medium, orange is high and red is extremely high. Therefore, the gap is still remarkably high in four of the five sub-systems presented. Particularly, this indicator shows the high level of women's overrepresentation in the so-called unpaid care work, whose importance in explaining gender gap will be analyzed later in this chapter.

Essential services and enablers of economic opportunity: the scope of this parameter is to assess gender equality in terms of access to education, health care, financial and digital inclusion. McKinsey:

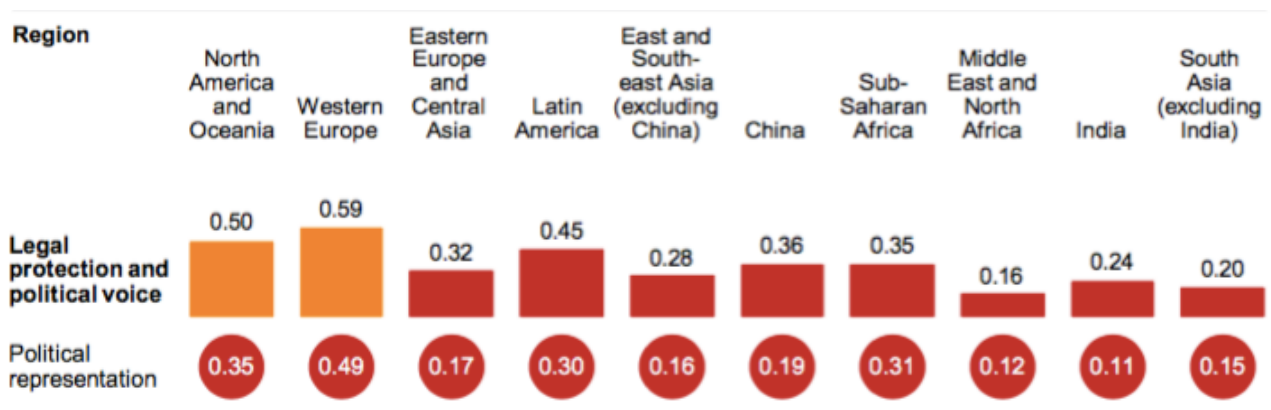


Despite this represents the less-unequal gender gap indicator, absolute equality is still far from being reached. One of the most positive elements is given by increased levels of women education: the reports states that the gap as ‘narrowed considerably’ but ‘women still attain less than 75 percent of the educational levels of men in 17 of the 95 countries studied’. On the contrary, the indicator reveals that maternal mortality is still a significant cause of inequality in 42 countries. As far as the gap in terms of financial services is concerned, women have ‘77% of the access that men have’.

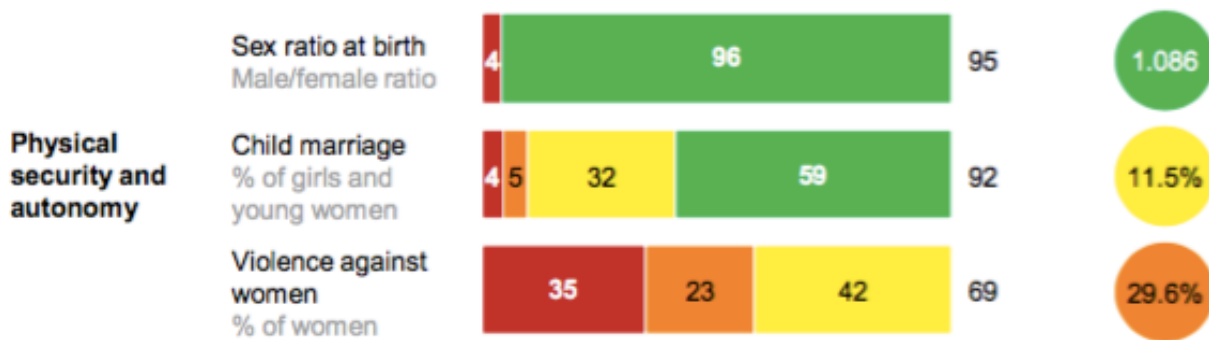
Legal protection and political voice: according to the analysis conducted by the Mckinsey Institute (2015), ‘8 out of the 91 countries for which we have data have extremely high inequality on this indicator’. Despite recent improvements in terms of legal protection, political voice still remains remarkably unequal: (Source: McKinsey Institute)



Interestingly, while developed countries tend to score higher indexes of gender parity in all the other indicators, that of ‘legal protection and political voice’ remains consistently unequal across all the geographical areas taken into account. Women’s involvement in political areas is in fact low even in the most advanced areas, whose political members are, in the vast majority of cases, men. The following graph shows the values associated with legal protection and political voice listed by geographical region: (Source: McKinsey Institute)



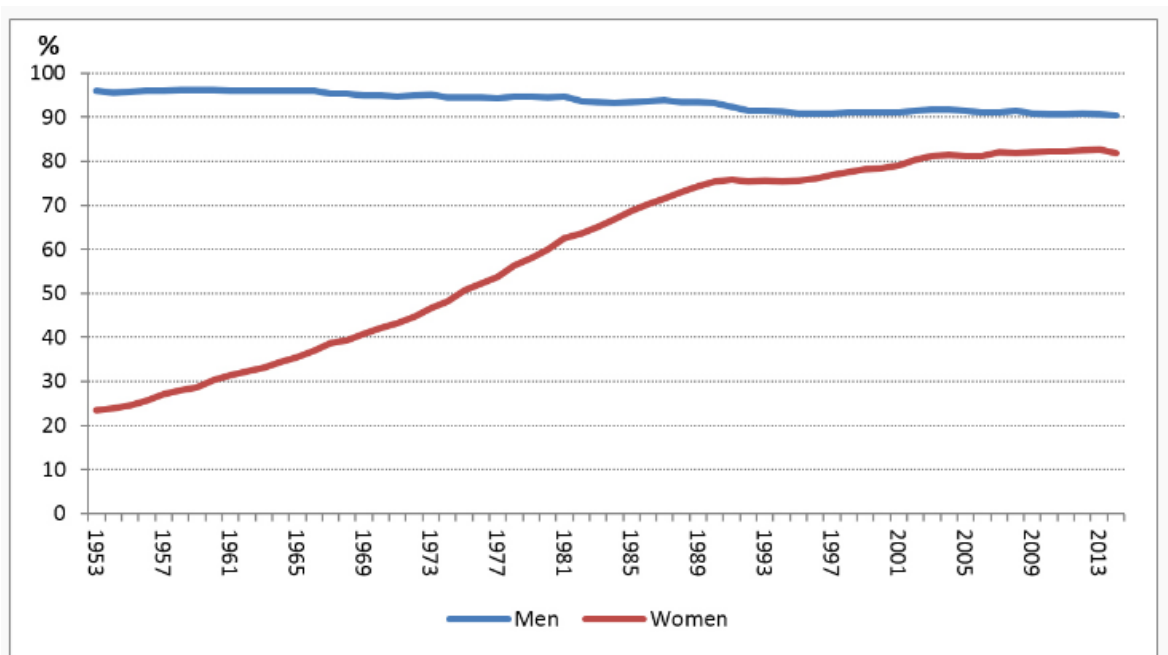
Physical security and autonomy: the purpose of this indicator is to assess the influence of physical security on the measurement of gender gap. Despite the sex ratio at birth does not constitute a significant variable behind the gap, it still represents a key factor of male dominance in a few countries of the world where ‘1.5 million girls are not born each year because of selective abortions that favor male children’. Selective abortions and consequent female infanticide occurs more frequently in developing countries, where a gender roles are still firmly entrenched in the society’s cultural understanding. (Source: McKinsey Institute)



2.3. Gender gap, causes and potential from its reduction

The purpose of this session is to provide a deep understanding of the causal factors behind the wage gap between men and women. The complexity of this analysis lies in the vast variety of areas involved: in fact, while there is not a universally accepted explanation of its causes, it is widely agreed that the question of wage inequality requires a multidimensional analytical approach. By placing particular emphasis on the role played by discrimination, motherhood and gender roles, the following session intends to offer an overview of the main elements that influence gender gap.

In the past fifty years, the rise of female labor force participation emphasized the need to develop a more inclusive labor market. The demonization of domestic slavery was fueled by an increasingly powerful feminist movement, that demanded equality not only in terms of *democratic* rights, but also with regard to women’s involvement in the global workforce. Such growing trend is testified by the following graph, which shows the diachronic increase in women’s participation rates in the labor force:



Source: Labour Force Survey (LFS), 1976 to 2014, and previous LFS publications.

The previously-reported graph not only remarks the drastic increase in female share of the labor force, but it also highlights a fundamental underlying phenomenon: gender convergence. Claudia Golding (2014) regards modern's society gender convergence in the labor market as one of the greatest achievement in the last century. Historically speaking, the industrial revolution triggered an unprecedented change in the composition of the workforce: the decline of rural activities as the main source of the household's income was accompanied by a unique increase in factory jobs. Stretching from education to working hours, the process of the so-called feminization of labor has undergone remarkable changes in a relatively short amount of time. The vast variety of economic, social and political areas involved in such process represents the main reason why the process of convergences needs to be analyzed with a multidimensional approach. Particularly, Raquel Fernández (2013) emphasizes the importance of social and structural changes in the economic system as the main explanatory variables: namely, the author believes that a major contributor is represented by governmental policies that seek to disprove the most stereotypical claims about working women. Hence, the resulting decrease in the degree of social discrimination may have been a solid foundation on which to build a more comprehensive working community. While it is not clear whether policies tackling discrimination produced effective results or not, it is however undeniable that cultural changes represent a key explanatory factor behind the phenomenon of convergence. On the other hand, Mincer & Polachek (1974) believe that social change alone is not enough to explain the aggregate increase in women's involvement in the workforce: in fact, the authors emphasize the role of investment in human capital mainly as a major contributor to women's work experience. Joyce

Jacobsen and others (2014) state that ‘without this human capital investment, social change would likely not have led to substantial measured effects on gender differences’. By measuring the diachronic evolution of the gender wage-gap over the years 1970-2010, Golding (2014) observes that gender differences with regard to investment in human capital have diminished, and the percentage share of wage-gap for which they account has decreased proportionately. The Equal Pay Act approved by the Parliament of the United Kingdom in 1970 perfectly summarizes the relentless feminist movement that demanded gender equality for more than two decades. This is one of the main reasons why, generally speaking, the 1970s represents the epitome of feminization, which is commonly associated with higher female employment, higher wages and increased levels of women education. Namely, one of the main effects of the process of convergence has been the gradual increase in women’s amount of hours worked: (From: *Gender Convergence in the Labor Market*, Solomon W. Polachek, 2015)

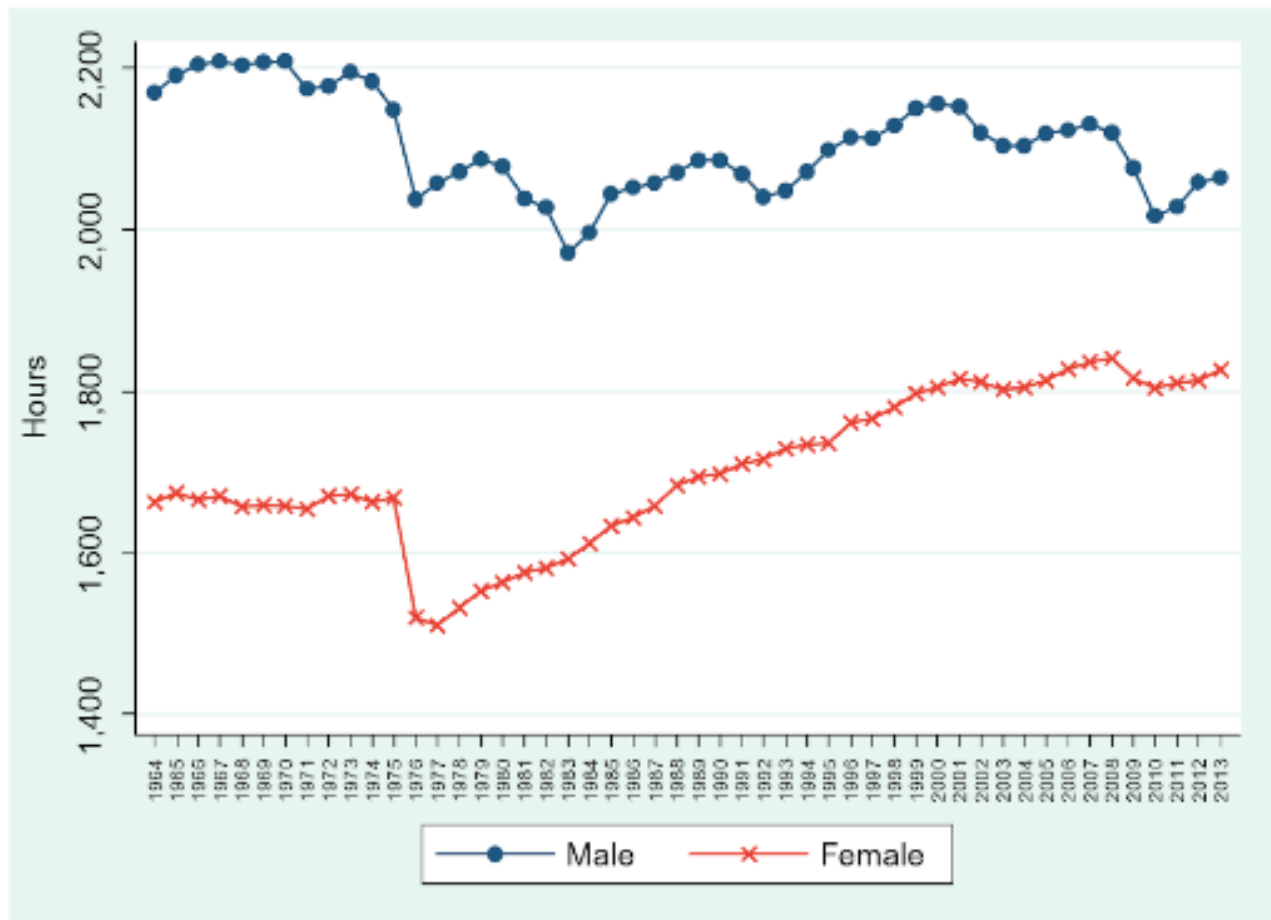
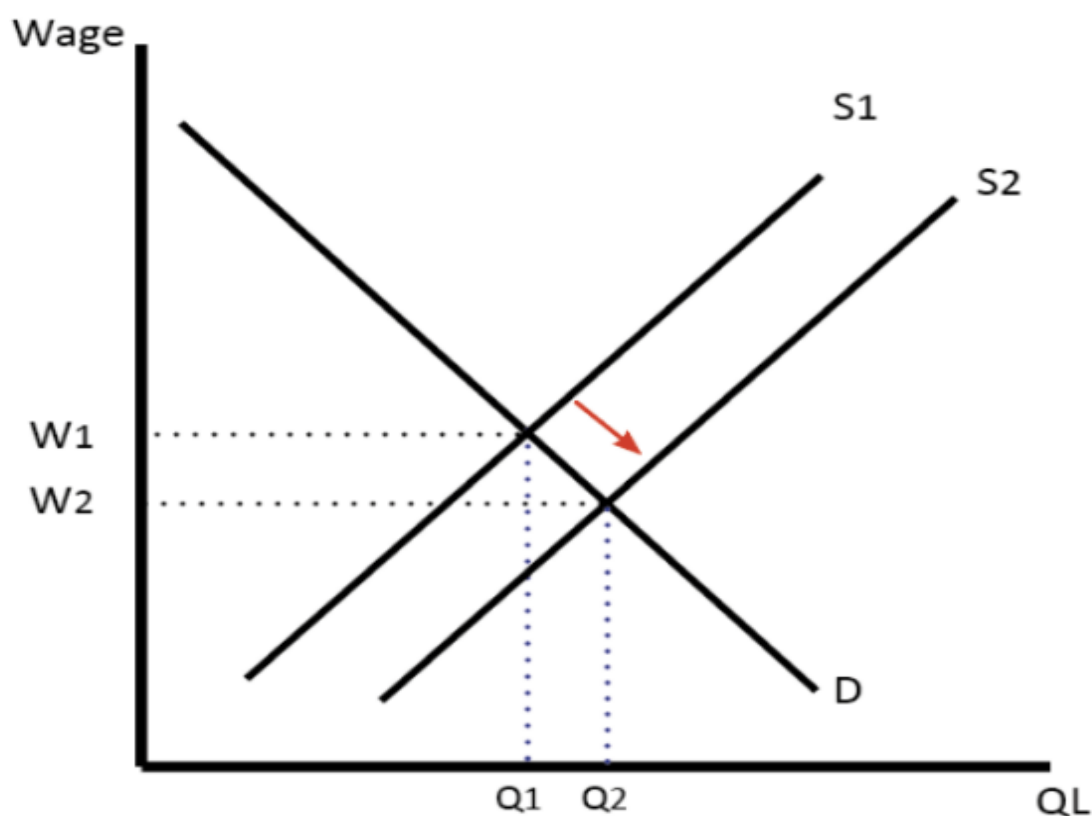


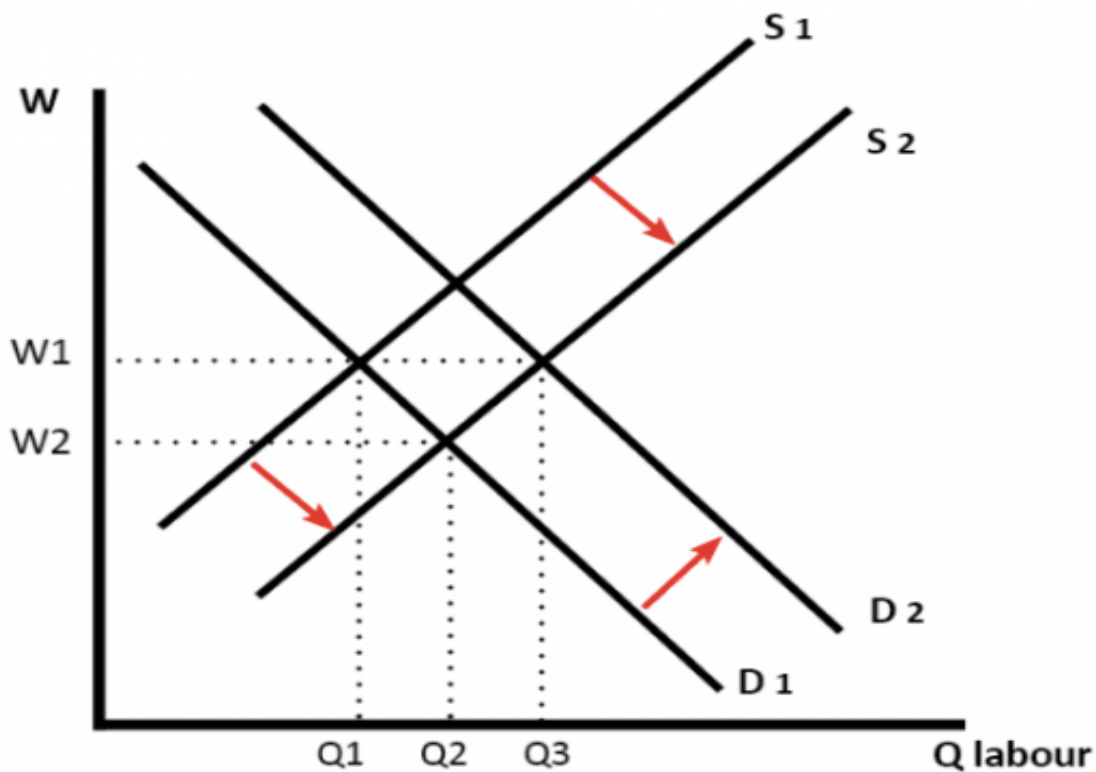
Fig. 5. Descriptive Results: Average Annual Hours Worked by Gender, 1964–2013.

In light of the foregoing discussion, it is reasonable to conclude that the gradual, slow process of convergence not only increased women's percentage in the labor force, but it also triggered a balance-enhancing process among gender roles. Feminism, which has to be considered as the ideological driving force of convergence, emphasized the role of equal female education as a major contributor in the process of acquisition of human capacities. However, it is necessary to mention the fact that politics and social movements in themselves cannot be considered as the explanatory variables behind convergence: in fact, the emergence of an increasingly globalized world ruled by capitalist economic principles has resulted in a sharp increase in the demand for labor, which was mainly provided by women. This process was also enhanced by an unprecedented wave of technological advancement, which not only matched a decline in manufacturing, but it also reduced considerably the magnitude of traditional female work, namely household-related duties. Demand has then been matched by supply, and women's involvement in the labor force was not only morally right, but also economically necessary. In the second half of the twentieth century, male trade unions argued that increasing women's participation in the labor market would cause higher male unemployment and lower pay. Indeed, from a theoretical point of view, the increase in aggregate labor supply resulting from a higher women's percentage share of the total workforce could potentially cause a significant loss in terms of wages: (Source Our World In Data)



The graph shows potential changes in wages (W) resulting from an increase in the quantity of labor supplied (Q_L): at the beginning, the quantity of labor supplied Q_1 identifies a corresponding wage W_1 . As Q_1 increases to Q_2 , wages shift from W_1 to W_2 , whereas $W_2 < W_1$.

However, when practice is taken into account, the increase in the quantity of labor does not necessarily translate into lower wages. This is because the nature of the feminization and consequent convergence is characterized by *gradual* changes: therefore, women steady gain in terms of participation to the workforce went hand in hand with a gradual increase of aggregate demand. In other words, higher labor force supply did not lead to an overall decrease of wages because of its consistency with higher demand: (Source Our World In Data)

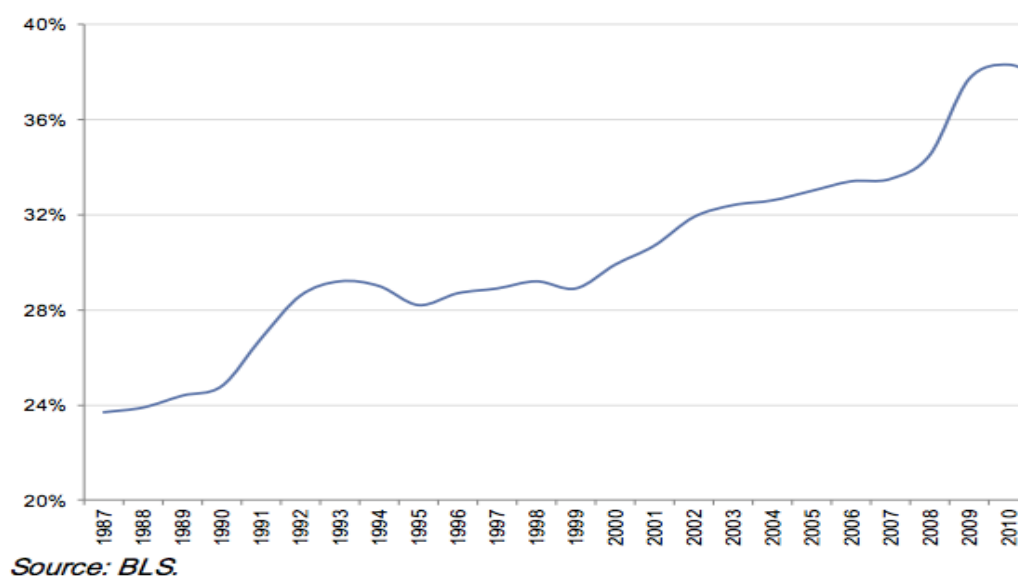


It is undoubtedly true that process of convergence allowed a significant number of women in the labor market. A growing body of empirical evidence suggests that one of the biggest contributions of the gradual increase in female's workforce participation has been the disproval of the most stereotypical understanding of women's role at work; particularly, economic necessities led women to engage in jobs that were hitherto characterized by almost exclusive male presence. In fact, their contribution to the household total earnings, particularly in times of war, placed renewed attention to the potential of

women as far as their involvement in the labor market is concerned. On the other hand, it is also crucial to remember that despite gradual changes towards a more gender-equal working system, the men-to-women wage gap is far from being fully narrowed. While it is undeniable that women are progressively catching up, a new strand of evidence demonstrates that the wage penalty of motherhood still remains impressively high. One of the main reasons why the phenomenon of motherhood penalty does not have a long history of research lies in the fact that its occurrence was rather rare: prior to the foregoing process of gender convergence, working women would abandon their jobs after giving birth. Hence, the negative externalities of motherhood, namely considerable wage penalties, were not observed due to a lack of statistical frequency.

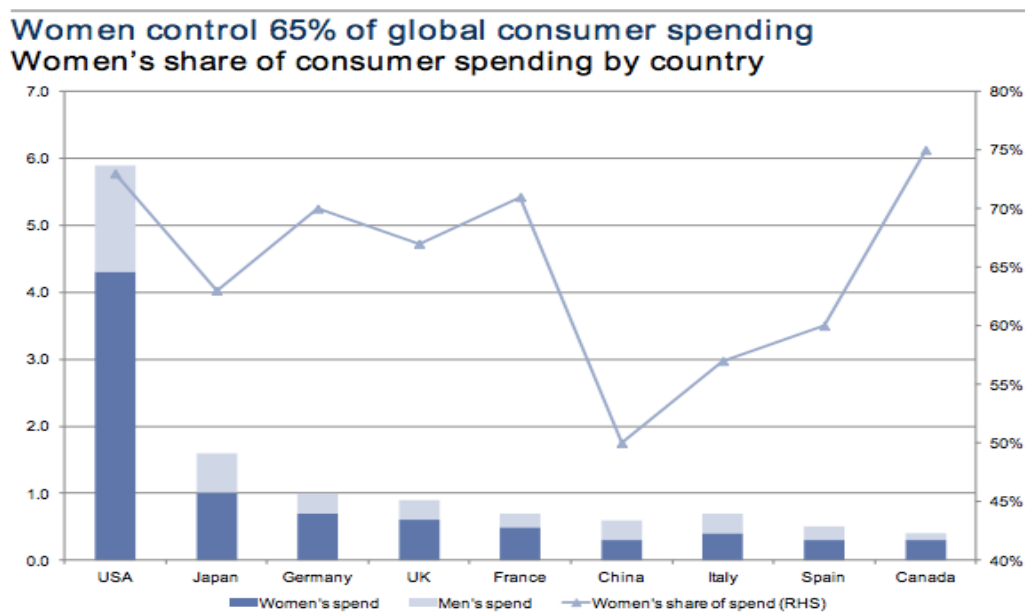
2.3 a) Motherhood Penalty

As Jennifer Glass (2004) notes, providing a deep understanding of the ways in women's wages are affected by maternity represents a pivotal aspect in developing employer policies that guarantee the most efficient economic growth. The recent, drastic increase in women's labor market participation, particularly in the United States, has in fact re-conceptualized significantly the economic framework of the most common household: dual-earner family with dependent children. This trend is testified by the following graph that shows the steady rise in the number of working wives who earn more than their husbands:



Much of the empirical evidence presented in Glass' research shows that in the aggregate level of women's earning in a family has grown proportionately, reaching 40% of the average household's

income in the United States in 2001 according to the Bureau of Labor Statistics (BLS). Ascertaining the impact of such increase is particularly relevant especially with regard to the women's consumption preferences: female control of the family's earning is mostly associated with increased spending on child welfare and general education. Empirical evidence of the positive effects of higher female disposable income are also provided by a research conducted by Goldman Sachs in 2013, that emphasizes the trickle-down effects resulting from an increase in female labor participation: their findings draw significantly from the fact that while the gender gap is still wide in terms of aggregate earnings, the situation is reversed when spending decisions and consequent consumption is measured; according to the research, women's spending influence accounts for up to 65% of global consumer spending:



Source: Harvard Business Review, September 2009.

Interestingly, the reported graph shows that women's influence in terms of purchasing decisions is not only significantly higher than that of men, but also, and perhaps most importantly for the purpose of this research, it accounts for an aggregate economic value of which they share only a small part. Therefore, greater female employment, and consequential increase in the typical family's total earnings, produces a trickle-down effect as women tend to influence others to take part into the given economic system. Such a multiplier effect also maximizes general spending on education and healthcare, triggering a virtuous cycle as a direct result.

Klasen and Lamanna (2009) confirm that the importance of increased women's involvement in the labor market does not only represent the epitome of a more civilized society, but it also constitutes a

major contributor to society overall economic growth. The authors analyzed the staggering amount of academic papers that show the far-reaching benefits of increased female work and consequential betterment of their bargaining power in the family concerned: as testified by Porter's research (2008), higher women wages are mostly associated with a wide range of growth-enhancing effect, namely higher savings, increased spending in health and education, and even more productive investments. Additionally, in their "*Has the Price of Motherhood Declined Over Time?*" Sarah Avellar and Pamela J. Smock (2003) note that women who manage to overcome the obstacles related to the negative implications of the motherhood penalty generally raise more responsible children and future taxpayers' adults. Combining work and family-related duties represents then an efficient way in which working mothers can not only maximize the effectiveness of their children's upbringing, but also contribute to their future's economic integrity.

It seems then that the achievement of a gender equal society is not only a favorable outcome socially, but also economically. One of the most common of explanations of these beneficial effects lies in the fact that women and men differ significantly in terms of spending preferences and savings. In her "*Does gender have any effect on aggregate saving?*", Stephanie Seguino (2003) suggests that women's tendency to be more risk-averse may be the 'rational response to their economic vulnerability'. The author points that gender disparities with regard to economic preferences can be conceptualized in terms of gender norms: especially in developing countries, Naila Kabeer (2001) underlines the fact that women tend to downplay the relevance of their earnings in fear of harming the masculinity of their partners. Consequently, women's increase in the share of the household total income does not always translate into higher spending, but rather into higher savings. This may also be one of the explanations why women statistically have a higher marginal propensity to save than men.

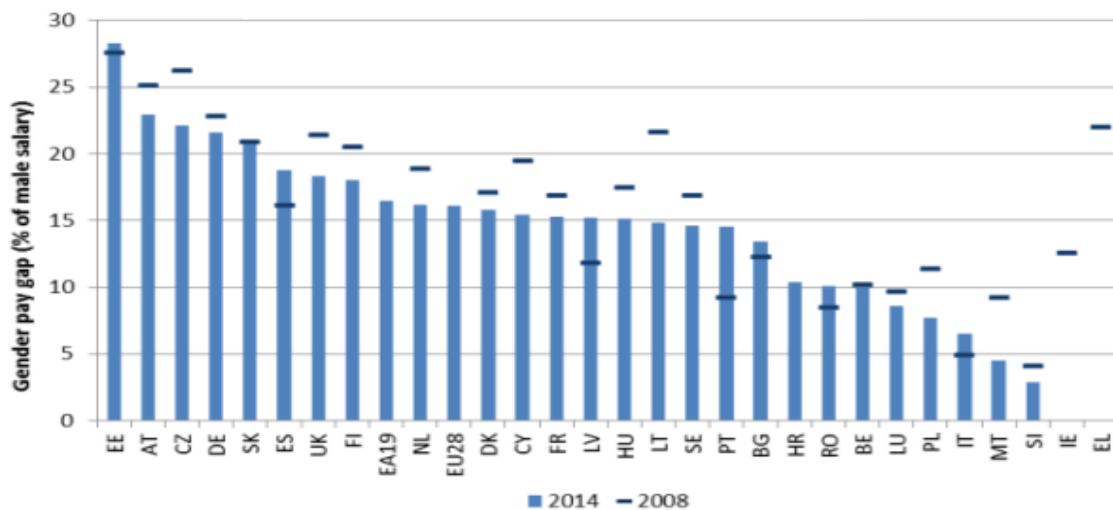
If women play a relevant role in terms of the family's saving behavior, it is reasonable to conclude that a sharp increase in their relative earnings will inevitably produce relevant changes not only in the single household, but also at a macroeconomic level. Particularly, researchers show that the rise of gross domestic savings resulting from the increase in female participation affects mainly spending on human capital: in "*Income, Expenditure and Health Outcomes: Evidence on Intra-Household Resource Allocation*", Thomas (1997) states that 'income in the hands of women increases the budget share spent on housing, education, household services and health'. Hence, additional income in the hands of women triggers a positive chain of growth that enables consistency through investment in human capital, namely their children's education and health. In addition, the BLS (2001) underlines

women's increased earning are of paramount importance when (in)dependence on abusive men is taken into account: a number of empirical studies has in fact confirmed that low salaries, and the consequent lack of financial independence, reduce significantly the possibility of a woman to leave an abusive partner. Violence against women stands out as one of the most undervalued Gender Gap's indicators, and yet it not only represents a crucial measure of a society's civil advancement, but it also identifies a misbehavior whose frequent occurrence made its tackling a global priority. Therefore, the positive effects of increased women's disposable income enhance economic as well as social progress.

One of the reasons why recent studies are increasingly more analyzing the impact of the so-called motherhood penalty on wages is because the vast majority of women are mothers, and therefore their potentially lower earnings account for the biggest portion of gender inequality related to wages. Klerman and Leibowitz (1999) point out that while women are achieving generally higher employments rates, many of them lose their job due to childcare. One of the most widespread explanations is that mothers are often willing to accept lower wages in exchange for greater flexibility (Lawrence M. Kahn & others). As a result, women who take time out of their working schedule so as to take care of their children often lose out in terms of work experience, that inevitably decreases the possibility to progress in their careers. This trend goes hand in hand with a common pattern observed in the United Kingdom, where a working mom loses up to 2% in wage for every year spent out of the labor market. Additionally, a recent article published on *The Economist* reveals that '44-75% of women with children living at home said that they had scaled back at work after becoming mothers'. As previously mentioned, the explanatory variable of this common pattern is usually traced back to the fact women are their children's primary care givers, hence it is quite frequent to see working women switch to less time-consuming and less demanding jobs. Francine D. Blau (2016) offers empirical evidence that confirms the pattern mentioned above: we have seen that recent progress towards gender equality in terms of working opportunities did not follow a uniform pattern; in fact, while women's salaries do not differ significantly when compared to an equivalent male counterpart, the situation changes when the highest working positions are taken into consideration for the analysis. The author observes that in the United States, men and women from both law and business school do not have diverging earnings as soon as they enter the working force, but their gap widens considerably when they move forward in their working careers. Therefore, a growing body of empirical evidence explains this sudden divergence of economic remuneration in terms of the current social norms, namely women being the ones that spend more time with their children. It is hence not a coincidence that, on average, only 37% of fathers decide to engage in less demanding

working activities (The Economist, 2016). The scientific validity of this theory is also corroborated by Blau (2016) study “*The Gender Gap: Extent, Trends and Explanations*”, in which the author observed that women on average tend to change their working activities for family-related causes, while men for job-connected reasons.

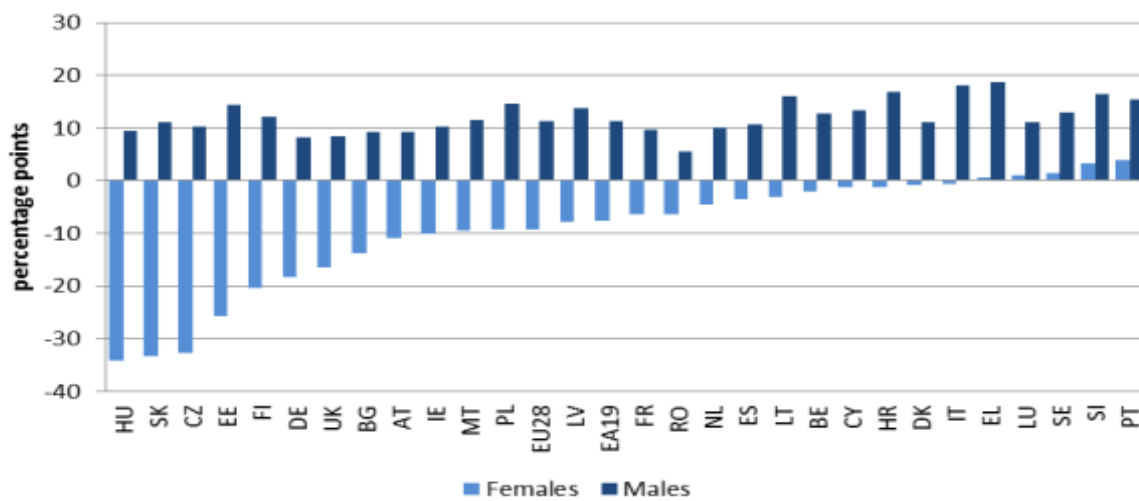
It is undoubtedly true that women of the 21st century are approaching equality, but the gender-related inequalities are visible even in the most developed countries: a report published by the European Commission concerning the gender gaps in labor force participation reveals that in all EU countries women are still underrepresented in the workforce with respect to their male counterparts. Additionally, the report emphasizes that despite the fact that gender pay gap narrowed considerably between 2008 and 2014, the gap still remains remarkably high in Europe: 16.1% on average.



Source: Eurostat; unadjusted; Industry, construction and services (except public administration, defence, compulsory social security). Note that the figures show the difference between men's and women's average gross hourly earnings as percentage of men's average gross hourly earnings - for paid employees, unadjusted for personal or job characteristics.

Furthermore, empirical evidence shows that the gap between men and women increases proportionately when parenthood is taken into consideration: in fact, recent studies reveal that women are not only economically disadvantaged when they choose to give birth, but they are also penalized in terms of what J. Correl (2007) described as ‘perceived competence’. This is because their role as a parent is often perceived to clash with the stereotypical understanding of the ‘perfect worker’. It is therefore clear that men-and-women mismatch extends far wider than a solely economic one. Interestingly, while women suffer a wage penalty when they become mothers, men actually benefit from parenthood: the following graph shows the employment impact of parenthood in the EU area (2014). It is clear that in the vast majority of cases, parenthood is negatively associated with women’s

employment, while positively associated with men's employment.



Source: Eurostat, LFS (lfsi_emp_a) and European Commission, own calculations. Note: data refer to women and men aged 20-64. Note that full time equivalents calculated with regard to the working time of a full-time full-year employee.

The foregoing material seem to support the idea developed by Crittenden (2001) in her “*The Price of Motherhood*”: the author suggests that the differences in wages between women who are mothers and those who are not is actually wider than the gap between women and men. Jennifer Glass (2004) observes that women with children are the single, most significant explanatory variable behind ‘gender gap’ in wages. Hence, it is possible to argue that while the wage gap for both women without children and single mothers increasingly narrowed in the past years, this is not the case for women with children. Budig & England (2001) note that employed mothers are the demographic group that benefited the less from the growing trend’s in female earning in the past twenty years, justifying the most of the previously-explained gender pay gap. The authors’ view is confirmed by Avellar (2003), who analyzes the reasons why the wage gap between mothers and non-mothers did not narrow as the gender gap did: “[...] whereas in previous periods women who had children, especially white, middle-class women, largely left the labor market, now the majority of mothers across the social class spectrum remain employed”. Hence, since modern mothers tend not to leave their jobs after giving birth, the wage penalty is expected to remain steady. However, Casper and Bianchi (2001) underline the fact that the discriminative component of the motherhood penalty may actually be subject to a decrease, given recent positive changes in the degree of husbands’ contributions to childcare.

One of the most well-known explanations behind the reasons why working mothers are often perceived to be less efficient is provided by Becker (1991), who theorized a negative link between motherhood and productivity. His theory, also known as ‘work efforts’, draws significantly from the

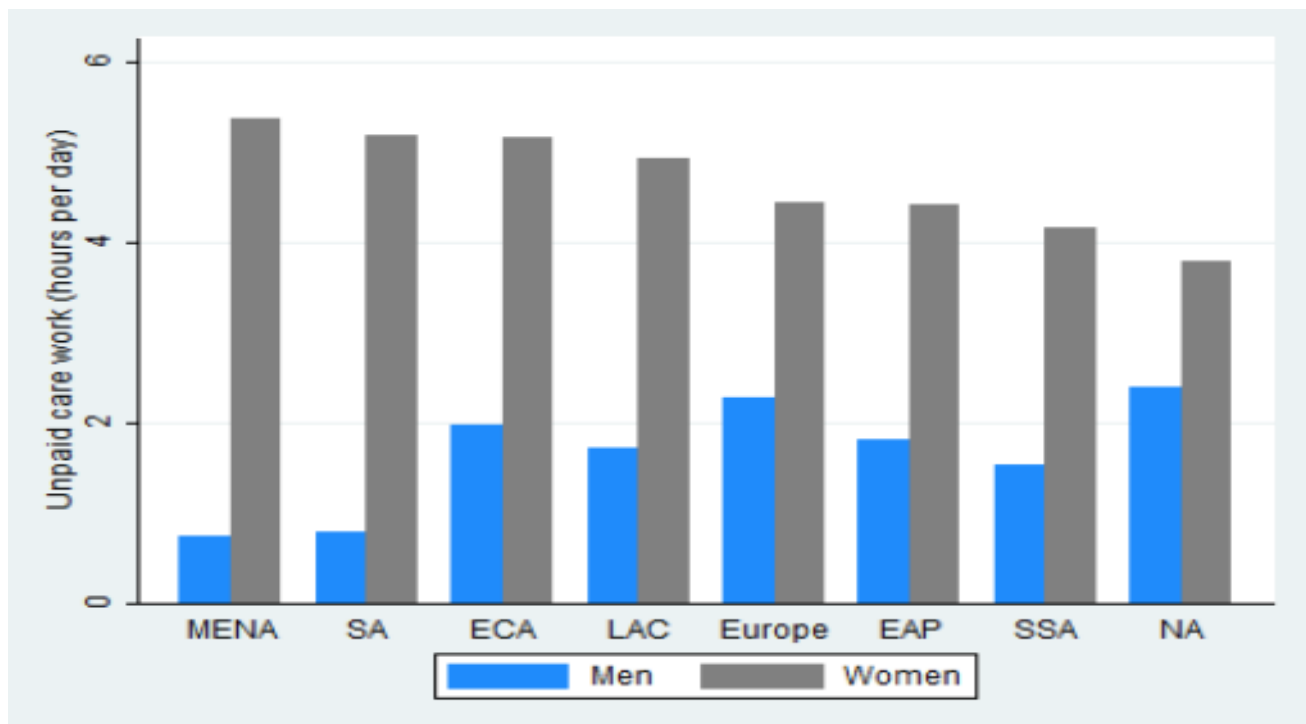
assumption according to which women's supposed lack of energy is the result of their role as a parent, which not only dissipates their energy, but it also leads them to limit their involvement at work in view of their duty of mothers during the remaining part of the day. This assumption seems to be corroborated by the fact that the negative effects of motherhood in terms of wages increase considerably when a mother has more than one child: Anderson (2003) observes that the magnitude of the wage penalty moves from 24% to 44% for mothers with more than one children.

The motherhood negative externalities come with high costs not only for women, but for the whole society: the trade-off between production and reproduction leads many working women to completely reject motherhood, for the fear that it would cause irreversible damages to their future's working career. As previously mentioned, the motherhood penalty does not only affect wages, but also the evaluation of the worker's skills and capabilities, which are significantly undervalued by the common perception of an employed mother. Halpert & Wilson (1993) show that visibly pregnant women are generally 'judged as less committed to their jobs, less authoritative and more irrational than others'. This narrative is inextricably connected with the most socially-rooted cultural understanding of the roles men and women have historically played; Townsend (2002) provides an interesting explanation of the reasons why fathers do not experience similar working disadvantages: our 'understanding of what it means to be a good father is not seen as incompatible with the understanding of what it means to be a good (male) worker'. Therefore, it is reasonable to argue that the phenomenon of wage penalty cannot, and should not, exclusively be considered as the result of a choice – namely, the fact that working mothers sometimes choose to turn to part-time jobs for the purpose of major flexibility – but also of a form of social discrimination. As far as the benefits parents are concerned, in their *"Parenthood and the earnings of married men and women"* Lundberg and Rose (2000) attribute the so-called wage premium to 'the selection of more productive men into marriage and to the increase productivity of men whose household responsibilities have been reduced by the presence of a wife'.

It is widely agreed that women have, statistically and historically, carried out the household-related duties more than men. However, what is perhaps less discussed are the negative economic implications that come with such degree of women's overrepresentation in house work. The next paragraph intends to provide a brief overview of the relationship between gender roles and the so-called unpaid care work.

2.3 b) The unpaid care work:

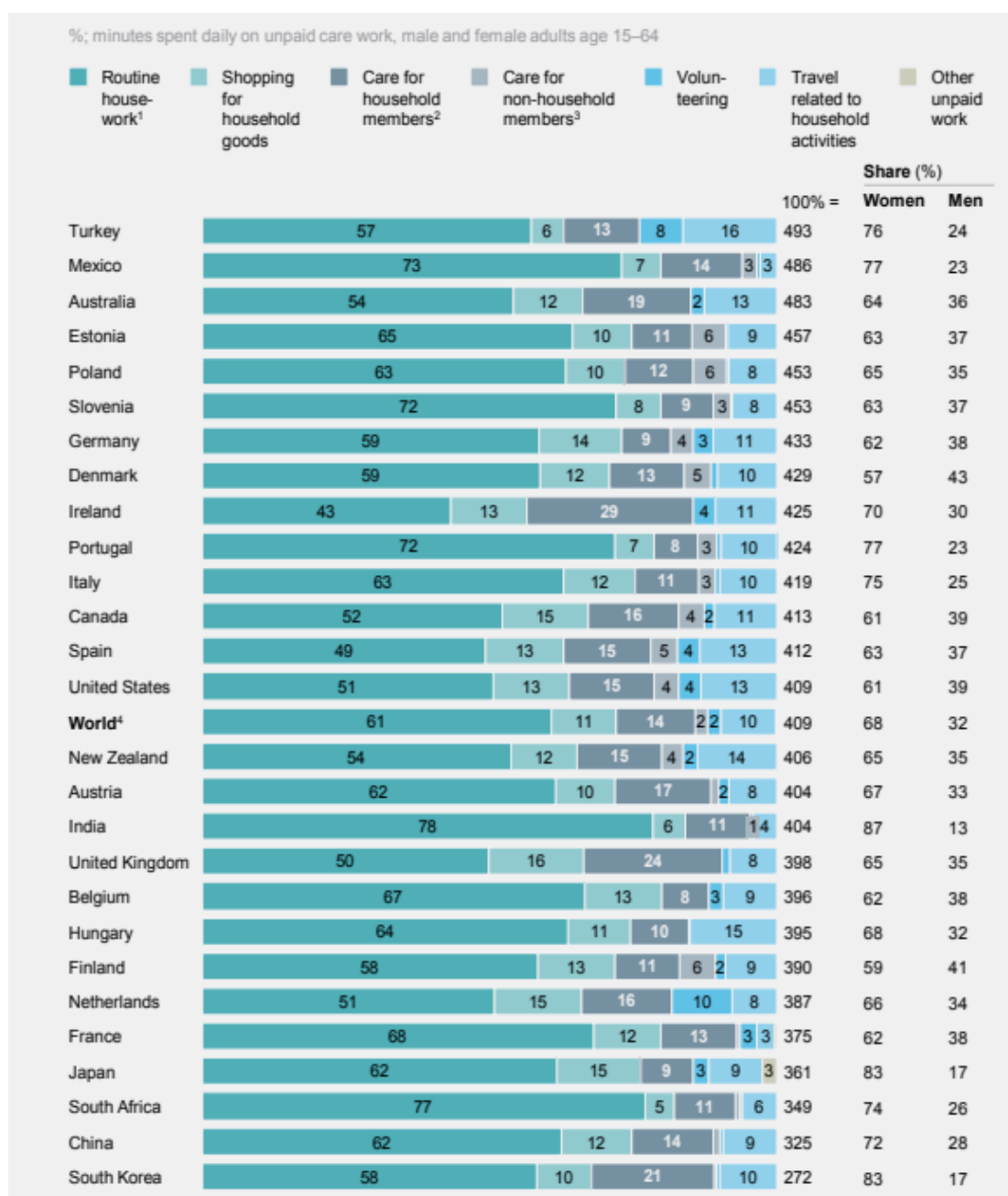
According to the OECD Development Center (2004) women on average spend ‘two to ten times more time on unpaid care work than men’. This is one of the main reasons why the unpaid care work accounts for one of the biggest empirical explanations behind differences in wage gap among men and women. The following graph shows the gender-related disproportion in unpaid care work in different geographical areas (Source: Our World In Data)



In order to provide an effective understanding of the way in which it affects the above mentioned gap, it is worth dedicating a short, and yet extremely necessary, part to a terminological explanation. By employing Elson’s (2000) definition, the OECD defines it as to ‘all unpaid services provided within a household for its members, including care of persons, housework and voluntary community work’. Eliza K. Pavalko and Joseph D.Wolfe (2016) emphasize the necessity to distinguish between the terms ‘caregiving’ and ‘care-work’, as the former may be misleading in considering it a choice, rather than an actual working activity. In fact, it has to be conceptualized as ‘work’ not only because it refers to a physically-engaging and time consuming activity, but also because it identifies duties that could, in theory, be performed by a potentially-paid third person. Obviously, the term ‘unpaid’ refers

to the fact that the person involved does not receive any kind of payment, while the term ‘care’ suggests that the typology of work carried out provides a form of safeguard to someone and/or someone (e.g. childcare, cooking, cleaning etc.).

Empirical observation demonstrates that ‘routine house-work’ (61%) accounts for the biggest percentage share of the global unpaid care work. The following graph shows the distribution of unpaid care work in different activities across 27 countries. For each country, it also shows the percentage share of participation between men and women: (Source: McKinsey Institute)



The previously-reported data demonstrate that time spent on ‘routine housework’ and ‘travel related to household activities’ increases significantly when developing countries are measured: one possible explanation is given by the presence of inefficient public infrastructures and the lack of sufficient mechanization of household technological devices; Mckinsey Institute (2015) puts it as follows: ‘providing access to clean water in homes can reduce the times it takes to collect water [...] (and) innovations such as home-cleaning robots may make a leap forward in automating many more tasks’. Therefore, technological advancement and consequent automation of household devices (e.g. dishwashers, washing machines, etc.) can reduce significantly the amount of time spent on ‘routine house-work’. Consequently, this process could potentially encourage more women to join the labor-market, since they will be able to spend less time on housework.

As previously reported, the activity of unpaid care work is deeply influenced by gender patterns and cultural stereotypes, which tend to consider housework and child-caring as a uniquely female responsibility. A growing body of empirical evidence suggests that women’s overrepresentation in unpaid care work is, together with the previously-discussed motherhood penalty, the most significant factor behind gender differences in the workforce composition, wages and employment quality. Additionally, the high degree of female involvement in household duties is not only related to lower wages, but it also constitutes a significant economic advantages for married men, who are statistically perceived as more productive at work when their wives account for the most part of the household’s duties.

However, it needs to be mentioned that some of the activities which are commonly included in the category of unpaid care work are deep-seated in the family structure. Namely, some women may actually get gratification from taking care and looking after their off springs, therefore, the quantity of time spent on these kind of activities could be conceived as the result of a choice, rather than a socially and externally imposed responsibility.

Paradoxically, empirical evidence demonstrates that policies that offer more flexible employability to women who seek to strike a balance between work and unpaid care produce,

in some cases, the opposite effect: this is because employers could feel discouraged to engage women in the top-level working positions.

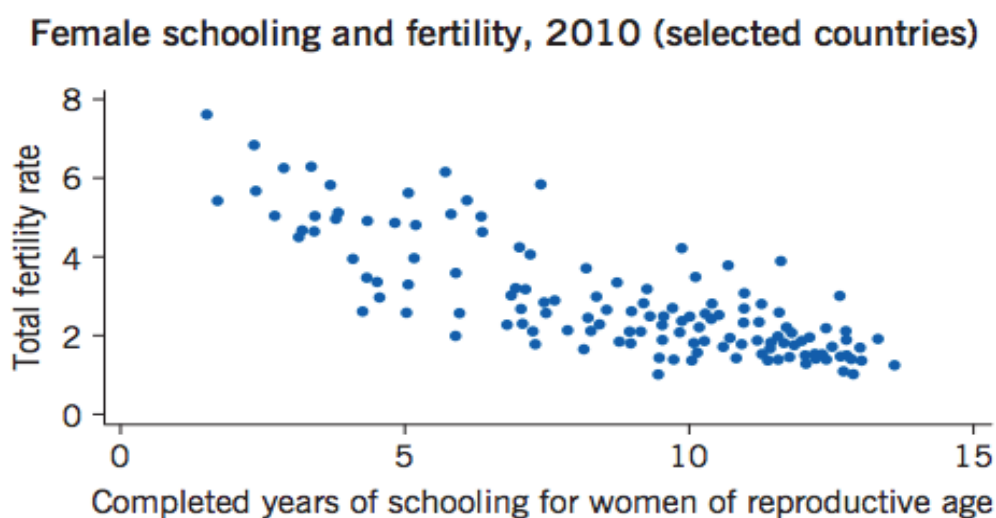
This brief paragraph intended to provide a basic understanding of the way in which women's unequal percentage share of unpaid care work can be explained by gender-related stereotypes. Particularly, while some tasks performed by women may actually represent a choice (e.g. caring for children and/or elderly people), in the vast majority of cases, women's overrepresentation in unpaid care work is the result of a misconceived perception of what the 'ideal' woman is expected to do. Additionally, this paragraph assessed the crucial role played by unpaid care work in explaining the gender wage gap: the widespread conception of unpaid care work being an exclusive 'women responsibility' has increased the amount of women who choose to engage in part-time activities, producing a considerable reduction of female earnings as a result. As long as policies will not be accompanied by a drastic change in the stereotypical assumptions concerning gender roles, the gap will be expected to remain.

CHAPTER THREE: Gender Inequality and Education

The purpose of this chapter is to examine the relationship between gender inequality in education and economic growth. Economically speaking, empirical evidence demonstrates that reducing the gender gap in education may enhance beneficial economic effects: the most common explanation lies in the fact that higher female education is mostly associated with lower fertility rates, whose reduction produces a consequent increase in the income per capita. Additionally, the positive economic repercussions resulting from an increase in female access to education are often considered the result of a human capital's improvement, which is both qualitatively and quantitatively better. This chapter is structured in two sections: after assessing the negative relationship between education and fertility, the first section examines the reasons why lower fertility is beneficial to development; the second section investigates the way in which a favorable demographic constellation can contribute to economic growth.

3.1 Women education and fertility rate

The purpose of this session is to provide an understanding of the way in which female education affects fertility rates. Generally speaking, it is almost unanimously agreed that increased levels of female education are negatively associated with fertility rates. Empirical observation across different data seem to corroborate this idea: the following graph shows the variation of total fertility rate as a function of completed years of schooling



Source: Author's own calculations based on Barro and Lee (2010) and World Development Indicators.

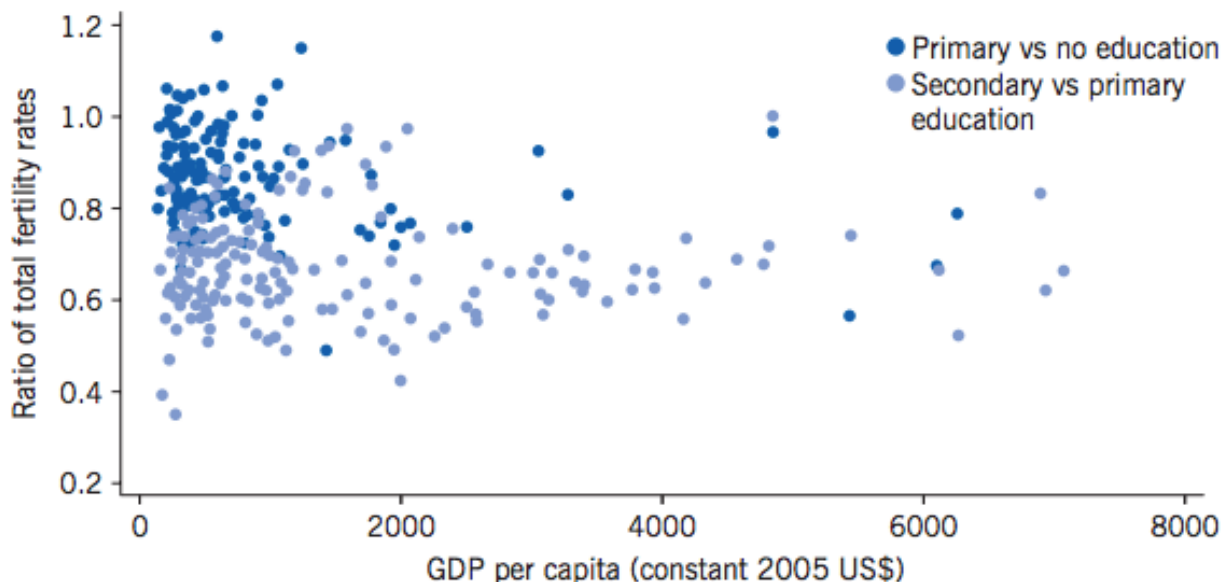
The most common explanations for such a negative relationship can be summarized in the three following points: (1) since higher female education increases women's involvement in the labor market, the resulting betterment of female earnings will inevitably increase the opportunity cost of child bearing. In other words, educated, working women may be willing to spend less time looking after their offspring as that would reduce their earnings potential; as Andrudh K. Jain (1981) put it, this phenomenon 'creates trade-offs between child bearing and participation in the paid labor force'. In addition, as the trade-off deters women from having many children, they will be more likely to invest their limited time in activities that may increase their only child's human capital, lowering the economic necessities for other children as a result. (2) A second explanation draws significantly from the positive implications of increased access to education on health: as educated women generally tend to spend more time not only on their personal health care but also on their children's, they are recognized to be more capable of giving birth to children whose high survival rates will diminish significantly the need to have many more. (3) A third common explanation combines higher female education and society's innovations, namely the contraceptive pill: a growing body of empirical evidence demonstrates that women's increased access to education not only develops their cognitive capabilities, but it also provides them with the instruments to control their sexual activity in a more conscious way. In this sense, the contraceptive pill is widely believed to be of paramount importance as it gives women the consciousness that they do not have to abandon school for the purpose of becoming mothers. In addition, the fact that the contraceptive pills enable women to get married later in time, produced significantly positive effects in the way in which school is perceived: an article published by 'The Economist' reveals that the positive implications of the use of contraceptive pills make 'education more attractive'.

The previous points intended to provide a general overview of the different channels in which education negatively affects fertility rates; it is however necessary to emphasize the fact that each of the factors presented in this session is strongly connected with country-related characteristics: it is hence mandatory to conceptualize these findings with regard to the environmental factors of the country to which they refer. Additionally, since the negative relationship between female education and fertility rates is often explained as the result of increased women's involvement in the labor force, the magnitude of the relationship is expected to vary significantly basing on the given country's working opportunities (K. Jain, 1981). In other words, the negative effect of education on fertility is expected to be more significant in those countries where higher levels of education are accompanied by better working opportunities. It is undoubtedly true that the complexity of this phenomenon is not easy to untangle, but it is equally true that such a complex relationship needs to be conceptualized at

a multidimensional level.

To sum up, it can be argued that – on average – uneducated women tend to have more children than those who had access to education. Interestingly, a study conducted by Jungho Kim (2016) reveals that the negative relationship becomes stronger when Gross Domestic Product (GDP) per capita is added to the equation: in fact, researchers found out that the magnitude of this relationship is not only directly proportional to different education levels (Primary/No education and Secondary/Primary education), but it is also strongly related to the economic conditions of the individuals taken into consideration for the analysis. The following graph shows that fertility rate not only decreases with higher education, but also with higher levels of income:

(Data from USAID STATcompiler, 2015)



It is necessary to specify the fact that the variable ‘GDP per capita’, expressed in US dollar, intends to capture the differences between developing and developed countries. Interestingly, it seems that the impact of higher income on fertility is stronger than that of education: indeed, at the same education level, developed countries report lower rates of fertility. This result seems to confirm the widespread idea that the emphasis should not be placed on education in itself, but rather on its quality: in fact, developed countries usually score higher in terms of academic performativity, increasing then the general efficiency of education. It is then not complex to understand why the negative relationship between education and fertility differ significantly when developing and developed countries are measured. These findings do not only offer an interesting overview of the main reasons why the

magnitude of the correlation diverges from country to country, but they also highlight the role played by an efficient educational system. In order to fully understand the crucial role of good-quality education, it is useful to examine more deeply the (1) ‘opportunity cost’ explanation: as previously mentioned, the validity of the opportunity cost interpretation draws significantly from the assumption that higher education increases the possibilities of engaging in better-paying jobs; consequently, time spent childbearing represents a potential loss of earnings. Logically, it is then possible to express childbearing opportunity cost as a positive function of the educational level. Hence, a good quality education, which is commonly attributed to developed countries, amplifies the magnitude of the opportunity cost proportionately. This is because differences in the quality of education trigger different incentive typologies: namely, when women gain knowledge through good-quality schooling, they not only increase the chances of engaging in high-paying positions, but they also bear the burden of the so-called foregone earnings, as time spent looking after their children is taken away from potentially-profitable working activities.

Empirical evidence gathered by Jungho Kim (2016) perfectly capture how fertility rates are affected by higher education: ‘women with primary education tend to have 0-30% fewer children than uneducated women [...] (whereas) women with secondary education tend to have 10-50% fewer children than those those with primary education’. Previously-reported data confirm the idea that variations in fertility rates do not follow a regular pattern, but rather they grow exponentially as the educational level increases. Additional arguments in support of the idea that women’s fertility rate diminish at increasing levels of education is also provided by Thirwall (2003), who argues that educated women generally want their own offspring to be educated as well. Hence, the resulting rise in the cost of having children may exert down-warding pressure on fertility rate. Another possible explanation for the reason why developed, richer countries tend to have lower fertility levels is provided for by Gary S. Becker (1960): in his ‘An Economic Analysis of Fertility’, the author suggests that increased spending on children may also be the result of a social pressure exercised on richer families.

3.2 Increased female education and economic growth

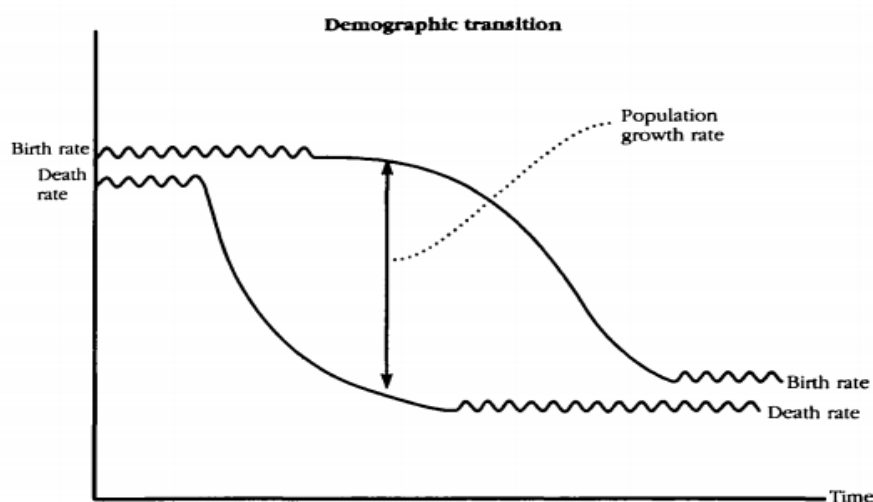
The following part of this chapter aims at understanding the way in which reduced levels of fertility can stimulate economic performance. By placing particular emphasis on what David E. Bloom and Jeffrey G. Williamson (1998) referred to as ‘demographic gift’, this session will analyze how changes in demographic composition affect growth. Explanations behind the positive relationship between lower fertility and economic growth hinge on two main lines of reasoning: the first one is based on

the idea that for a significantly long period of time the working population will grow much faster than the general population. Hence, the resulting decrease in the value of dependency rates produces positive effects in terms of per capita economic growth. The second line of reasoning is connected with the fact that reduced levels of fertility often lead parents to channel their economic resources on their pre-existing offspring, promoting the quality of future's human capital as a result. Additionally, after presenting data from East Asia's 'economic miracle', the final part of this session will briefly summarize different ways in which increased levels of female education can stimulate economic performance.

The term 'demographic gift', which is sometimes also referred to as 'demographic dividend', describes a particular situation in which decreasing fertility rates produce positive effects in terms of economic growth. The term has been coined by David E. Bloom and Jeffrey G. Williamson (1998), and in his *'Understanding the Demographic Dividend'*, John Ross (2004) adds that the positive demographic transition can not only be of particular importance in terms of economic performance, but also in terms of human development. The author believes in fact that such changes in the demographic distribution are mainly associated with higher investments in human capital, higher and longer-lasting female education. This is because, for a period of time, the percentage of working-age (productive) population grows significantly faster than the whole population. The positive economic externalities of the previously mentioned phenomenon mainly deal with increased levels of per capita income (Klasen and Lamanna, 2009).

The authors define the phenomenon of demographic transition as the change from a 'preindustrial high fertility and mortality to postindustrial low fertility and mortality'. This trend is described in the following figure (From: Bloom & Williamson)

Figure 1. *Demographic Transition and Population Growth*



Bloom and Williamson point out that declines in the level of mortality represent the starting point of the greatest majority of demographic transitions. Children and infants are considered the demographic group that enjoys the most of such a diminishing mortality rate, hence their higher survival rate leads parents to consequently reduce fertility. In the previous graph, the population growth rate is obtained by measuring the difference between fertility and mortality. The second stage of the demographic transition is marked at that point in which lower mortality results in a proportionately decline in fertility. The terminological comparison with the industrial revolution aims at expressing the fact that the demographic transition does not have to be conceptualized as an instant phenomenon, but rather as a gradual and progressive one: namely, Coale and Watkins (1986) argue that process of demographic transition in Europe lasted more than 100 years. In addition, the authors point out multiple times that the ‘demographic gift’ describes a growth potential that does not necessarily concretize: in other words, the realization of its full potential depends significantly on the social, economical and political environment of the geographical area to which it refers.

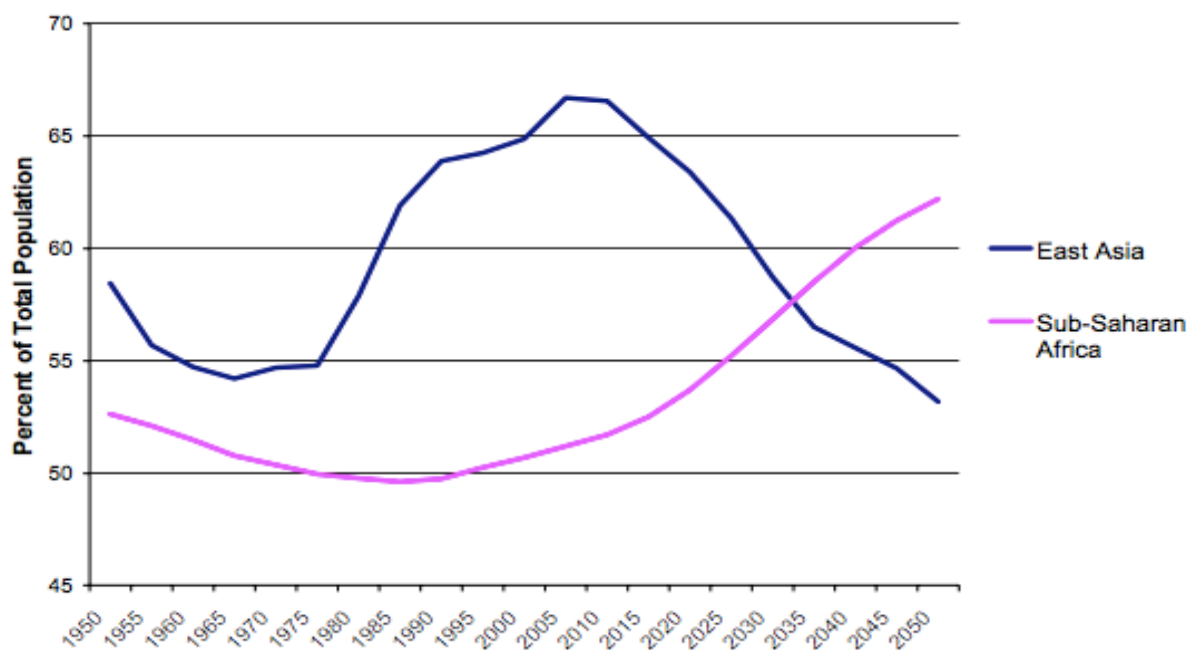
Additional arguments in support of what Bloom and Williamson defined demographic gift are also provided for by a study conducted by C. Mark Blackden and R. Sudharshan Canagarajah (2003): in their “*General growth in Africa, Evidence and Issues*”, they argue that lower total fertility rate can also stimulate ‘higher consumable income at the household level’. This data seems to be corroborated by Ross’s (2004) findings, according to which the benefits of reduced fertility levels include higher savings: this is inextricably linked to the fact that, generally speaking, adults earn and save more than young workers. Hence, since decreasing levels of fertility favor the gradual emergence of a demographic setting in which the number of working adults exceed that of young workers, it can be logically argued that personal, and national, savings will increase proportionately.

It is however necessary to emphasize the fact that the extreme, opposite case is not favorable either: in other words, the enormous potential of the demographic transition is only effective if decreasing levels of fertility are limited to a period of time. This is because consistent and uncontrolled losses in terms of fertility can translate into potentially devastating economic and social effects. Consistently declining birth rates are in fact commonly associated with losses in terms of human capital that may produce irreversible and damaging effects for long lasting economic growth.

The previous paragraphs intended to convey the idea this phenomenon draws significantly from the notion of ‘dependency rate’, which is commonly defined as the ratio between the number of people who are not part of the labor force (‘dependents’, aged 0-14 or 65+) and the group of people who are commonly assumed to be part of the working force (‘productive’, aged 14-64). The dependency rate represents then a useful measure to capture the magnitude of the pressure exercised on the productive part of a given area. In order to offer a complete understanding of the dependency ratio, it is useful to provide the following formula:

$$\text{Dependency ratio} = \frac{\text{number of people aged 0-14 or 65+}}{\text{number of people aged 15-64}}$$

The following graph can offer a better understanding of the relationship between falling fertility rates and the number of total working age population (source: United Nations, 2000)



East Asia represents the example par excellence to capture the magnitude of this phenomenon: it is

in fact unanimously recognized to have experienced the fastest demographic transition in history, which accounts for a remarkable proportion of its economic growth. In fact, the so-called 'East Asia economic miracle' is by many believed to be the direct effect of a favorable democratic constellation. The sharp increase in the percentage share held by working age population resulted in an expansion of per capita productivity in East Asian economic systems (Bloom and Williamson, 1998). However, it is mandatory to emphasize the fact that demographic transition in itself does not necessarily translate into economic growth: without the promotion of social and political policies that aim at expressing its full economic potential, growth is unlikely to occur. The reported graph shows that at the beginning of the 50s, a decrease in fertility translated into a remarkable change in the percentage share of working age population. The resulting decrease in the dependency ratio produced positive repercussions in terms of per capita growth. It is interesting to note that the 'window of opportunity' is gradually closing, and it will be accompanied by a progressive decrease in the percentage of working population.

On the other hand, the trend described in the second line (Sub-Saharan Africa) is particularly relevant as it provides an example of a geographical area whose 'window of opportunity' is about to open. Should the previsions be met, East Asian countries could undergo a significant process of economic development if their governments enact policies that translate potentiality into reality.

In their study, Bloom and Williamson (1998) place particular emphasis on distinguishing mortality-related and fertility-related demographic changes. In fact, by decomposing population into its multiple components, it is easier to assess the role of each variable as far as their influence on economic growth is concerned. A significant strand of academic thought (Bloom and Freeman 1986, Kelley and Schmidt 1996) had already theorized the negative relationship between fertility rates and economic growth; interestingly, they did not find similar connection with mortality. Bloom and Williamson (1998) confirm this view, as their theory hinges significantly on the implications that fertility rates have on the dependency rates; as they put it: 'population growth attributable to general decline in mortality has no effect, because the ratio of the economically active population to dependents stay the same'. On the contrary, if changes in population's composition are the result of increasing fertility, the dependency ratio will change as well.

Conclusion:

This study intended to offer an overview of the various channel in which gender inequality affects economic growth. Interestingly, the academic literature consulted for the elaboration of this thesis is surprisingly unanimous in recognizing the extraordinary potential of gender equality as far as economic performance is concerned. Hence, the research's findings confirm the hypothesis that progress towards gender equality in education and employment is not only morally desirable but also, and perhaps more importantly, economically advantageous. The positive impact of gender equality on economic growth hinges significantly on women's progressive involvement in the labor market, which is often associated with higher savings, improved human capital and better international competitiveness.

The structural framework proposed in this analysis draws significantly from the Global Gender Gap Report published by the World Economic Forum in 2017, which aims at capturing the impact of gender inequality in a multidimensional way: it is in fact widely agreed that understanding the relationship between gender equality and economic performance means developing a holistic analysis, that comprehends each of the sub-indexes employed in the measurement of the Gender Gap: educational attainment, economy participation and opportunity, health and survival, political empowerment. Surprisingly, the greatest majority of the theoretical literature focuses mainly on the first two. Despite none of the sub-indexes identifies an area in which gender equality has been fully achieved, the absence of a rich empirical evidence on health and survival and political empowerment suggests that these sub-indexes do not play a significant role as far as growth is concerned. On the contrary, it is generally undisputed that improved levels of female employability can stimulate a consequent betterment of the economic system concerned. The phenomenon of the so-called convergence perfectly summarizes the dual nature of gender equality: feminism, which undoubtedly represents the ideological driving force of convergence, emphasized the moral and ethical components of an equal gender representation in the labor market. However, the progressive increase in female's participation in the labor market was consistent with steadily rising aggregate demand. This is because the phenomenon of convergence was concomitant to the emergence of an increasingly globalized world, whose capitalistic principles translated into an increase in demand for labor, which was in large part provided by women. It is then not difficult to understand the main reason why the feminization of work was not just morally right, but also economically necessary.

Out of the many ways in which gender stereotypes negatively affect wages, the following two deserve particular attention: the so-called motherhood penalty and the unpaid care work. While it is undoubtedly true that the gender gap in employment is gradually closing, the same cannot be said about motherhood-related inequalities. In fact, an ever growing body of empirical evidence suggests that the gap between working mothers and working women is actually way wider than that between men and women. Differently from what is generally thought, in the vast majority of cases men and women do not have significantly different salaries when they occupy the same working position. However, inequality rises when women as a demographic group is taken into account: this is because women are statistically underrepresented at the highest working positions, which obviously represent the most profitable ones. This pattern corroborates the foregoing-mentioned hypothesis according to which motherhood's negative externalities account for the biggest proportion of the gender gap in economy. The main explanatory variable behind the phenomenon of the 'motherhood penalty' relates to the fact that women are still considered to be their children's primary caregivers.

The second, most significant explanation behind gender inequalities in wages is represented by women's overrepresentation in the so called unpaid care work: according to the OECD Development Center, women spend up to ten times more time on unpaid care work than men. Arguably, the activity of unpaid care work is still highly influenced by gender-related stereotypes, which consider housework to be an exclusively female responsibility. The fact that women spend a significant amount of time on house-related duties, reduces significantly their chances of employing in high paying jobs, producing a significant loss in terms of aggregate income as a result.

Understanding the main causes of gender differences in wages is of paramount importance in assessing the impact of gender equality on economic growth. Evidence demonstrates that increased levels of female's earnings produce a trickle down effect: in fact, while men still earn more than women, the situation is reversed when the attention is placed on spending decision and consumption. In addition, women control of the household's total income disposability is remarkably higher than that of men, hence their higher employability translates into higher bargaining power. Moreover, women's consumption choices favor spending in health and education, whose beneficial effects in terms of future human capital represent an effective way to guarantee long lasting economic growth. In addition, since women tend to have a higher marginal propensity to save, the resulting increase in the level of total earnings is believed to have a positive impact on national economy. An additional argument in support of the positive relationship between gender equality and economic growth is

related to the notion of governance: a growing literature suggests that working women are statistically less inclined to corruption and nepotism.

Moreover, this study confirms the idea that equality in education is positively associated with economic development. Particularly, two channels can be identified: (1) higher female education is unanimously considered to decrease fertility rates, bringing out positive externalities in terms of income per capita. Lower fertility rates are often linked to the emergence of a favorable demographic constellation, where the number of working-age people exceeds that of the so-called 'dependents'. A great deal of the so-called 'East-Asia Miracle' is attributed to the foregoing favorable demographic distribution. (2) A second line of reasoning relates to the benefits of increased female education on the quality of human capital: in fact, evidence demonstrates that educated women not only improve their cognitive abilities, but they also tend to invest more in their offspring's health and education, promoting the formation of future's work force as a result.

In light of the foregoing discussion, it is reasonable to argue that future's development will be inextricably linked to our capacity to fully integrate women in the labor market. The cost of discrimination stretches far wider than a solely ethical one, and it should not only concern women, but rather the whole society. It then seems that achievement of gender equality will be included in an increasingly higher number of development policies, as that really seems the key to long-lasting and enduring economic growth.

Bibliography

Anderson, D. J. (2003) “The Motherhood Wage Penalty Revisited: Experience, Heterogeneity, Work Effort and Work-Schedule Flexibility”, *Industrial and Labor Relations Review*, Vol. 56(2), pp. 273-294.

Avellar, P., Smock, P. J. (2003) “Has the Price of Motherhood Declined Over Time? A Cross-cohort Comparison of the Motherhood Wage Penalty”, *Journal of Marriage and Family*, Vol. 65(3), pp. 597-607.

Bar-El, R., Schwartz, D. (2003) “Economic Growth, Inequality and Spatial Demographic Distribution: A Brazilian Case”. *Region and Development*, Vol. 18, pp. 147-170.

Becker, G. (1991), *A Treatise on the Family*, Harvard University Press, Cambridge, Massachusetts.

Becker, S. G. (1960) “An Economic Analysis of Fertility” National Bureau of Economic Research, Inc. *Demographic and Economic Change in Developed Countries*, pp. 209-240.

Blackedn, M. C, Canagarajah, R. S. (2003) “General Growth in Africa, Evidences and Issues” World Bank, Uganda.

Blau, D. F., Lawrence. M. Kahn (2016) “The Gender Wage Gap: Extent, Trends and Explanations”, *Journal of Economic Literature*, Vol. 55(3), pp. 789-865.

Bloom, D. E., Williamson, G. J (1998) “Demographic Transitions and Economic Miracles in Emerging Asia” *The World Bank Economic Review*, Vol. 12(3,1) pp. 419-455.

Bloom, D., D. Canning, and P. Malaney. 2000. “Demographic Change and Economic Growth in Asia.” *Population and Development Review*, Vol. 26 pp. 257–290.

Bloom, D., Freeman R. B., (1986) “Population Growth, Labor Supply, and Employment in Developing Countries” NBER Working Papers 1837, National Bureau of Economic Research, Inc.

Bongaarts, J. (2015) “Modeling the fertility impact of the proximate determinants: Time for a tune up”, *Demographic Research*, Vol. 33, No. 9, pp. 535-560.

Budig, M. J., England, P. (2001) “The Wage Penalty for Motherhood”, *American Sociological Review*, Vol. 66(2), pp. 204-225.

Casper, L. M., Bianchi, S. M (2001), *Continuity and Change in the American Family*, Sage Publications, London.

Coale, A. J., Watkins, C. (1986) “The Decline of Fertility in Europe” Princeton University Press, London.

Correll, J. S., Benard, S. (2007) “Getting a Job: Is There a Motherhood Penalty?”, *American Journal of Sociology*, Vol. 112(5), pp. 1297-1338.

Crittenden, A. (2001), *The Price of Motherhood: Why the Most Important Job in the World Is Still the Least Valued*, Metropolitan Books.

Elson, D. (2000) “Progress of the World’s Women 2000”, UNIFEM Biennial Report, United Nations Development Fund for Women, New York.

Fernández, R. (2013) “Cultural Change as Learning: The Evolution of Female Labor Force Participation over a Century”, *American Economic Review*, Vol. 103(1), pp. 472-500.

Ferrant, G., Pesando, L. M., Nowcacka, K. (2014) “Unpaid Care Work: The Missing Link In the Analysis of Gender Gaps in Labour Outcomes”, OECD Development Center.

Galor, O., Moav, O. (2004) “From Physical to Human Capital Accumulation: Inequality and the Process of Development”, *The Review of Economic Studies*, Vol. 71, pp. 1001-1026.

Galor, O., Zeira, J. (1993) “Income Distribution and Macroeconomics”, *The Review of Economic Studies*, Vol. 60(1), pp. 35-52.

Glass., J. (2004) “Work-Family Policies and Mother’s Wage Growth Over Time”, *Work and Occupations*, Vol. 31(3), pp. 367-394.

Golding, C. (2014) “A Grand Gender Convergence: Its Last Chapter”, *American Economic Review*, Vol. 104(4), pp. 1091-1119.

Gonzales, S. (2015) “Catalyst for Change: Empowering Women and Tackling Income Inequality” *International Monetary Fund Staff Discussion Note*.

Halpert, J. A., Wilson, M. L., Hickman, J. L. (1993) “Pregnancy as a Source of Bias In Performance Appraisals”, *Journal of Organizational Behaviour*, Vol. 17(7), pp. 649-663

Jacobsen, J., Khamis, M., Yuksel, M. (2014) “Gender Convergence in the Labor Market”, *Research in Labor Economics*, Vol. 41, pp. 1-33.

Jain, A. K. (1981) “The effect of Female Education on Fertility: A Simple Explanation”, *Demography*, Vol. 18(4), pp. 577-595.

Kabeer, N. (2001) “Conflicts Over Credit: Re-Evaluating the Empowerment Potential of Loans to Women to Women in Rural Bangladesh”, *World Development*, Vol. 29(1), pp. 63-84.

Kelley, C., Schmidt R. M. (1996) “Saving, Dependency and Development” *Journal of Population Economics*, Vol. 9(4), pp. 365-386.

Kim, J. (2016) “Female education and its impact on fertility” *IZA World of Labor*. Ajou University, Republic of Korea, Germany.

Klasen, S., Lamanna, F. (2009) “The Impact of Gender Inequality in Education and Employment on Economic Growth: New Evidence for a Panel of Countries”, *Feminist Economics*, Vol. 15(3), pp. 91-132.

Klerman, J. A., Leibowitz (1999) “Job Continuity among new mothers”, *Demography*, Vol. 36(2), pp. 145-155.

Kravis, I. (1960) “International Differences in the Distribution of Income”, *The Review of Economic Studies*, Vol. 42(4), pp. 408-416.

Lundberg, S., Rose, E. (2000) “Parenthood and the Earnings of Married Men and Women”, *Labour Economics*, Vol. 7(6), pp. 689-710.

Lydall, H. (1968), *The Structure of Earnings*, Clarendon Press, Oxford.

McCrary, J. and Royer, H. (2011) “The effect of female education on fertility and infant health: Evidence from school entry policies using exact date of birth.” *American Economic Review* 101:1 158–195.

McKinsey Global Institute (2005) “The power of Parity: How advancing women’s equality can add \$12 trillion to global worth”.

Mincer, J., Polachek, S. (1974) “Family Investment in Human Capital: Earnings of Women”, *Journal of Political Economy*, Vol. 82(2), pp. 76-108.

Pavalko, E. K., Wolfe, J. D. (2016) “Do Women Still Care? Cohort Changes in US Women’s Care for the Ill or Disabled”, *Social Forces*, Vol. 94(3), pp- 1359, 1384, Oxford University Press.

Porter, M., Klasen, S., King, M. (2008) “Gender and Development Challenge Paper”, Copenhagen Consensus Project.

Ross, J. (2004) “Understanding the Demographic Dividend”. Policy Project, Futures Group.

Scott-Gall, H., Manohar, S. (2013) “Women’s Work Driving the Economy”, Goldman Sachs Global Investment Research, Equity Research: Fortnightly Thoughts, Issue 53.

Seguino, S., Floro, M. S. (2003) “Does Gender have any Effect on Aggregate Saving? An Empirical Analysis”, *International Review of Applied Economics*, Vol. 17(2), pp. 147-166.

Thirlwall, A. P. (2003), *Economics of Development: Theory and Evidence*, Palgrave MacMillian, seventh edition, London.

Thomas, D. (1997) “Incomes, Expenditures and Health Outcomes: Evidence on Intra-Household Resource Allocation” In Haddad, L., J. Hoddinott, and H. Alderman, eds. (1997): *Intrahousehold resource allocation in developing countries: Methods, models, and policy*. Baltimore, Md.

Townsend, T. G. (2002) “The Impact of Self-Components on Attitudes Toward Sex Among African American Preadolescent Girls: The Moderating Role of Menarche”, *Sex Roles*, Vol. 47(1-2), pp. 11-20.

World Economic Forum (2017) “The Global Gender Gap Report”, Cologny/Geneva.

Italian Summary

Introduzione

Il processo di globalizzazione, e la conseguente enfasi sulla necessità di stimolare la crescita economica, ha sensibilmente accresciuto l'attenzione sul ruolo ricoperto dalle donne per quanto riguarda le prestazioni economiche. Secondo un rapporto pubblicato annualmente dal prestigioso World Economic Forum, la parità di genere è lungi dall'essere raggiunta: infatti, nonostante i notevoli progressi compiuti negli ultimi decenni, nessun Paese al mondo può affermare di aver raggiunto un'assoluta parità dei sessi. Inoltre, enfatizzando il passaggio graduale dal capitalismo al cosiddetto '*talentism*', lo studio rivela che il progresso economico risiederà sempre di più nella capacità di integrare progressivamente le donne nel mercato del lavoro. Per come stanno le cose oggi, ad un un innegabile miglioramento dell'uguaglianza di genere nell'ambito dell'istruzione non ha corrisposto un proporzionale incremento delle opportunità lavorative, provocando ingenti perdite in termini di *capacità* produttiva.

Da un punto di vista storico, la questione dell'uguaglianza di genere è stata esaminata principalmente in relazione ad un aspetto etico, piuttosto che economico; tuttavia, la maggiore partecipazione delle donne nel mercato del lavoro, che si è avuta a partire dagli anni '50, ha accresciuto l'interesse per gli studi che indagassero sulla la relazione causale tra (dis)uguaglianza e crescita economica. In effetti, l'evidenza empirica che documenta i benefici del restringimento del divario di genere sta influenzando considerevolmente lo sviluppo di politiche pubbliche che identificano nel raggiungimento della parità di genere il principale motore del futuro successo economico. Secondo uno studio condotto dall'Istituto McKinsey, una piena realizzazione delle donne nel mondo del lavoro potrebbe incrementare il PIL degli Stati Uniti di 2,1 trilioni di dollari entro il 2025.

L'allora Segretario Generale delle Nazioni Unite Ban Ki Moon ha confermato tale visione affermando che:

"[...] investire nelle donne non è solo la cosa giusta da fare. È la cosa intelligente da fare. Sono profondamente convinto che, nelle donne, il mondo abbia a sua disposizione il potenziale più significativo e ancora largamente inutilizzato per lo sviluppo e la pace". (International Humanist and Ethical Union, Marzo 2008)

Il presente studio si propone di analizzare i modi in cui lo sviluppo economico è influenzato dai cambiamenti nel grado di uguaglianza tra uomini e donne. In particolare, l'elaborato valuta le principali implicazioni connesse ai cambiamenti di due dei quattro sotto-indici di parità di genere identificati dal World Economic Forum: economia e istruzione.

L'analisi si sviluppa in tre capitoli principali: il primo risolve la complessità del cosiddetto 'gender gap' fornendo una panoramica delle sue principali componenti, con particolare riguardo all'approccio metodologico applicato dalla letteratura di riferimento. Il secondo capitolo analizza l'indice della parità economica proponendo un'analisi eziologica dell'attuale grado di discrepanza di trattamento economico tra uomo e donna; il capitolo indaga anche su quali possano essere i benefici derivanti da un miglioramento del divario retributivo di genere. Il terzo capitolo esamina come un miglioramento del divario di genere nell'istruzione possa rappresentare la chiave di uno sviluppo economico duraturo.

Capitolo I

Lo scopo di questa sezione è fornire un quadro generale dei modi in cui la disuguaglianza di genere viene analizzata attraverso l'uso di strumenti statistici; come già accennato nell'introduzione, lo schema metodologico sviluppato in questa sezione si ispira in modo significativo al 'Global Gender Gap Report' (2017) pubblicato ogni anno dal World Economic Forum, da molti considerato una delle fonti più importanti di studi sul genere.

L'indice 'Global Gender Gap', introdotto dal World Economic Forum (WEF) nel 2006, ha lo scopo di fornire un quadro scientifico per l'analisi della disuguaglianza di genere in quattro macro-aree chiave: livello di istruzione, partecipazione e opportunità economiche, salute e sopravvivenza, potere politico. Analizzando l'entità delle disparità legate al genere attraverso l'adozione di quattro dimensioni tematiche, l'Indice ha l'ambizione di fornire una panoramica dei 144 paesi esaminati, offrendo misure sui loro progressi nel tempo. Il ruolo preminente svolto dal WEF è in parte legato al fatto che le misure metodologiche adottate nell'analisi sono rimaste stabili dalla sua prima edizione del 2006, adempiendo quindi alla necessità di una misura coerente per gli indici relativi al genere. In effetti, lo scopo dell'Indice non è solo quello di tenere traccia dei cambiamenti nel grado di uguaglianza tra uomini e donne, ma anche quello di riferire la vasta gamma di potenziali opportunità che deriverebbero da una graduale riduzione del divario. Da un punto di vista metodologico, il progresso verso l'uguaglianza di genere è misurato su una scala 0-1, dove 0 rappresenta il valore

associato all'assoluta disuguaglianza ed 1 alla parità assoluta.

a) Partecipazione e opportunità economiche

Questo sotto-indice misura il grado di partecipazione e opportunità economica attraverso tre aree: il divario di partecipazione, il divario retributivo e il divario di avanzamento. Il primo si ottiene calcolando la differenza tra uomini e donne nella partecipazione alla forza lavoro; il secondo viene misurato tramite due indicatori principali: il rapporto tra donne e uomini delle entrate stimate e il grado di uguaglianza salariale; il terzo viene misurato prendendo in considerazione due statistiche: il rapporto uomo-donna tra i legislatori e la differenza tra uomini e donne nel campo del lavoro professionale e tecnico.

b) Livello di istruzione:

Questo sotto-indice misura il divario tra uomini e donne in diversi ambiti educativi. In particolare, fornisce una panoramica dei gradi di accesso ai livelli di istruzione primaria, secondaria e terziaria. È interessante notare che l'Indice cerca di trasmettere un'analisi olistica della sfera educativa fornendo un quadro a lungo termine della capacità del Paese di fornire un'educazione numericamente uguale a uomini e donne: questo valore si ottiene calcolando il tasso di alfabetizzazione uomo- donna in una determinata area. I parametri menzionati sono fortemente connessi alla nozione di 'risultati educativi' sviluppata dall'UNESCO, che sottolinea il potenziale socioeconomico derivante da risultati significativi nel campo educativo; in particolare, l'Istituto di statistica dell'UNESCO (UIS) offre un quadro unico sui benefici di un aumento generale dei livelli di istruzione, che sono per lo più associati ad una migliore crescita economica, diminuzione della violenza e maggiori gradi di coinvolgimento civico.

c) Salute e sopravvivenza

Attraverso due indicatori principali, questo sotto-indice intende offrire una panoramica sui diversi gradi di uguaglianza tra uomini e donne nel campo della salute. Il primo indicatore adottato è il rapporto tra i sessi alla nascita e il secondo è calcolato misurando il divario tra uomini e donne in termini di aspettativa di vita. In particolare, il primo misura l'entità del cosiddetto fenomeno delle "*missing women*", definito dal Social Institutions and Gender Index (SIGI, 2014) come la "diminuzione del numero di donne in rapporto tra i sessi". In altre parole, il termine "donne scomparse" si riferisce al rapporto innaturalmente basso delle donne rispetto agli uomini, da considerarsi come risultato diretto degli aborti selettivi. Il secondo indicatore offre una panoramica

generale della speranza di vita di un determinato paese.

d) Potere politico

Calcolando il rapporto donne-uomini nell'ambito delle posizioni parlamentari e ministeriali, questo sotto-indice misura l'entità della discrepanza tra uomini e donne in termini di accesso ai più alti livelli di coinvolgimento politico. Inoltre, il sotto-indice tiene conto del divario tra uomini e donne anche per quanto riguarda il numero di anni trascorsi nel più alto ufficio esecutivo, ovvero presidente e primo ministro. Il più grande svantaggio di questo indicatore è che non include misure riguardanti le differenze di genere in termini di coinvolgimento politico a livello locale: infatti - ad oggi - non ci sono dati universalmente disponibili sul grado di partecipazione politica al livello regionale.

CAPITOLO II

Analizzando la nozione di distribuzione del reddito attraverso la lente di un approccio basato sul genere, questo capitolo offre una panoramica dei modi in cui la disuguaglianza di reddito influenza la crescita economica. Il capitolo è composto da tre sezioni principali: la prima sezione prende in esame la letteratura riguardante le teorie relative alla relazione tra reddito e disuguaglianza di genere; la seconda offre una breve panoramica della situazione attuale della disparità di genere in tutto il mondo; la terza esamina le cause principali della distribuzione disuguale del reddito ponendo particolare enfasi sui concetti di divario salariale, *'motherhood penalty'* e *'unpaid care work'*.

La prima parte ruota intorno all'idea che una distribuzione del reddito polarizzata riduca le possibilità per i meno abbienti di impegnarsi nella spesa di capitale umano, e di conseguenza produce un modello di crescita negativo. In particolare, l'importanza di un'equa distribuzione del reddito non solo nella società, ma anche tra uomini e donne, è strettamente connessa alle differenze di genere nell'ambito delle scelte di consumo. Uno studio condotto dalla Goldman Sachs nel 2013 rivela che se è vero che gli uomini percepiscono in media un reddito superiore alle donne, è altresì vero che il rapporto è invertito quando si prendono in esame le decisioni di spesa: secondo lo studio, le donne influenzano infatti il 65% del consumo globale. Inoltre, un incremento del reddito femminile si associa a maggiori risparmi, incrementata spesa per la sanità e l'istruzione e persino investimenti più produttivi.

Nonostante recenti studi dimostrino che il divario retributivo tra uomo e donna si stia riducendo sempre più velocemente, le esternalità negative connesse alla maternità continuano a rappresentare la principale causa del diverso grado di trattamento economico. Nel suo *'Il prezzo della maternità'*,

Crittenden (2001) afferma che il divario tra donne lavoratrici e mamme lavoratrici sia superiore a quello tra uomo e donna. Budig & England (2001) notano che le mamme lavoratrici sono il gruppo demografico che ha beneficiato meno della crescita del reddito femminile negli ultimi vent'anni. Le esternalità negative della maternità comportano costi elevati non solo per le donne, ma per l'intera società: il 'trade-off' tra produzione e riproduzione porta molte donne lavoratrici a rifiutare completamente la maternità, nel timore che pregiudichi le possibilità di una futura carriera professionale.

Secondo il Centro di sviluppo dell'OCSE (2004), le donne spendono in media da due a dieci volte in più degli uomini nel cosiddetto 'unpaid care work'. Tale attività lavorativa non retribuita è profondamente influenzata dagli stereotipi di matrice sessista, che tendono a considerare il lavoro domestico e la cura dei bambini come una responsabilità esclusivamente femminile. La sovrarappresentazione delle donne nel lavoro di cura non retribuito è pertanto l'ambito che più è influenzato da una componente discriminatoria. La sproporzione del numero di donne in tale settore comporta ingenti perdite nell'ambito dell'economia domestica, in quanto queste prediligono attività professionali part-time, che sono logicamente meno remunerative.

Capitolo III

Questo capitolo si propone di esaminare la relazione tra disuguaglianza di genere nell'istruzione e crescita economica. La natura di tale relazione è generalmente considerata positiva; ciò avviene perché ad un livello più alto di istruzione femminile corrisponde un più basso tasso di fertilità, la cui riduzione produce un conseguente aumento del reddito pro capite. Inoltre, le positive ripercussioni economiche derivanti da un incremento dell'istruzione femminile sono spesso considerate il risultato di un miglioramento del capitale umano. Infatti, ridotti livelli di fertilità inducono spesso le donne a convogliare le loro risorse economiche sulla progenie preesistente, promuovendo di conseguenza la qualità del capitale umano del futuro. In aggiunta, è opinione comune che un basso livello di fertilità promuova la formazione di un assetto demografico favorevole, in cui la popolazione attiva da un punto di vista lavoristico cresce molto più velocemente di quella generale. Tale teoria è alla base di quello che David E. Bloom & Jeffery G. Williamson (1998) hanno definito 'regalo demografico'.

Conclusione

Questo studio ha inteso offrire una panoramica dei vari aspetti in cui la disuguaglianza di genere influenza la crescita economica. È interessante notare che la letteratura accademica consultata per l'elaborazione di questa tesi è sorprendentemente unanime nel riconoscere lo straordinario potenziale dell'uguaglianza di genere nell'ambito della crescita economica. Pertanto, i risultati della ricerca confermano l'ipotesi che il progresso verso l'uguaglianza di genere nell'istruzione e nell'occupazione non sia solo moralmente desiderabile ma anche, e soprattutto, economicamente vantaggioso. L'impatto positivo dell'uguaglianza di genere sulla crescita economica dipende in modo significativo dal progressivo coinvolgimento delle donne nel mercato del lavoro, che è spesso associato a maggiori risparmi, al miglioramento del capitale umano e ad una migliore competitività internazionale.

Il quadro strutturale proposto in questa analisi si ispira in modo significativo al Global Gender Gap Report pubblicato dal World Economic Forum nel 2017, che analizza l'impatto della disuguaglianza di genere in un approccio multidimensionale: è infatti ampiamente riconosciuto che la comprensione del rapporto tra inuguaglianza e sviluppo debba procedere attraverso un'analisi olistica, che comprenda ciascuno dei sotto-indici impiegati nella misurazione del Gender Gap: livello di istruzione, partecipazione e opportunità economiche, salute e sopravvivenza, e potere politico. Sorprendentemente, la maggior parte della letteratura teorica si concentra principalmente sui primi due. Nonostante nessuno dei sotto-indici identifichi un'area in cui l'uguaglianza di genere è stata pienamente raggiunta, l'assenza di una ricca evidenza empirica su 'salute e la sopravvivenza' e 'potere politico' suggerisce che questi sotto-indici non svolgano un ruolo significativo nell'ambito dello sviluppo economico.

Il fenomeno della cosiddetta convergenza sintetizza alla perfezione la duplice natura dell'uguaglianza di genere: il femminismo, che rappresenta senza dubbio la forza trainante della convergenza, enfatizza le componenti morali ed etiche di una pari rappresentanza di genere nel mercato del lavoro. Tuttavia, il progressivo aumento della partecipazione delle donne al mercato del lavoro è stato coerente con la domanda aggregata in costante aumento. Questo perché il fenomeno della convergenza era concomitante alla graduale affermazione di un mondo sempre più globalizzato, i cui principi capitalistici si traducevano in un aumento della domanda di lavoro, che era in gran parte fornito dalle donne. Non è quindi difficile capire la ragione principale per cui la femminilizzazione del lavoro non era solo moralmente giusta, ma anche economicamente necessaria.

Tra i molti modi in cui gli stereotipi di genere influiscono negativamente sui salari, i seguenti due meritano particolare attenzione: la cosiddetta penalizzazione di maternità (*'motherhood penalty'*) ed il lavoro di cura non retribuito (*'unpaid care work'*). Mentre è indubbiamente vero che il divario di genere nel mondo del lavoro si sta gradualmente chiudendo, non si può dire lo stesso delle disuguaglianze legate alla maternità. In effetti, l'evidenza empirica suggerisce che il divario tra madri lavoratrici e donne lavoratrici sia in realtà molto più ampio di quello tra uomini e donne. A differenza di quanto generalmente si pensa, nella grande maggioranza dei casi uomini e donne non hanno stipendi significativamente differenti quando occupano la stessa posizione lavorativa. Tuttavia, la disuguaglianza aumenta quando le donne vengono considerate come gruppo demografico: questo perché le donne sono statisticamente sottorappresentate nelle posizioni lavorative più elevate, che ovviamente rappresentano le più redditizie. Questo schema corrobora l'ipotesi di cui sopra secondo cui le esternalità negative della maternità rappresentano la maggior parte del divario di genere nell'economia. La principale variabile esplicativa alla base del fenomeno della "penalizzazione di maternità" si riferisce al fatto che le donne sono ancora considerate come le principali nutrici dei loro figli.

La seconda, più significativa spiegazione dietro le disuguaglianze di genere nei salari è rappresentata dalla sovra-rappresentazione delle donne nel cosiddetto lavoro di cura non retribuito: secondo il Centro di sviluppo dell'OCSE, le donne dedicano fino a dieci volte di più al lavoro di cura non retribuito rispetto agli uomini. Senza dubbio, l'attività del lavoro di cura non retribuito è ancora fortemente influenzata da stereotipi legati al genere, che considerano le faccende domestiche una responsabilità esclusivamente femminile. Il fatto che le donne trascorrono una quantità significativa di tempo in mansioni legate alla casa, riduce significativamente le loro possibilità di impiegarsi in posti di lavoro ben retribuiti, producendo di conseguenza una perdita significativa in termini di reddito aggregato.

Comprendere le principali cause delle differenze di genere nelle retribuzioni è di fondamentale importanza per valutare l'impatto della disuguaglianza sulla crescita economica. Come già affermato in precedenza, il controllo delle donne sulla disponibilità di reddito totale della famiglia è notevolmente superiore a quello degli uomini, quindi una maggiore *'employability'* si traduce in un incremento del loro potere contrattuale. Inoltre, le scelte di consumo delle donne favoriscono la spesa in sanità e istruzione. Inoltre, poiché le donne tendono ad avere una maggiore propensione marginale al risparmio, si ritiene che il conseguente aumento del livello dei risparmi totali abbia un impatto positivo sull'economia nazionale. Un'ulteriore argomentazione a supporto della relazione positiva tra

uguaglianza di genere e crescita economica è legato alla nozione di 'governance': una letteratura sempre più crescente suggerisce che le donne lavoratrici siano statisticamente meno inclini alla corruzione e al nepotismo.

Inoltre, questo studio conferma l'idea che l'uguaglianza nell'educazione è positivamente associata allo sviluppo economico. In particolare, è possibile identificare due canali di influenza: (1) un'istruzione femminile superiore è unanimemente associata ad una riduzione dei tassi fertilità, producendo esternalità positive in termini di reddito pro capite. In aggiunta, bassi tassi di fertilità sono spesso correlati all'affermazione di una costellazione demografica favorevole, dove il numero di persone in età lavorativa supera quello dei cosiddetti "dipendenti". Gran parte del cosiddetto "miracolo dell'Asia orientale" è attribuito alla precedente distribuzione demografica favorevole. (2) Una seconda linea di ragionamento riguarda i benefici di una maggiore educazione femminile sulla qualità del capitale umano: infatti, la letteratura dimostra che le donne istruite non solo migliorano le loro capacità cognitive, ma tendono anche ad investire di più nella salute e nell'istruzione della loro prole, promuovendo così la formazione della forza lavoro del futuro.

Alla luce della precedente discussione, è ragionevole asserire che lo sviluppo del futuro sarà inestricabilmente legato alla nostra capacità di integrare pienamente le donne nel mercato del lavoro. Il costo della discriminazione è molto più ampio di quello esclusivamente etico e non dovrebbe riguardare solo le donne, ma piuttosto l'intera società. Sembra quindi che il raggiungimento dell'uguaglianza di genere sarà incluso in un numero sempre più elevato di politiche di sviluppo, in quanto rappresenta davvero la chiave per una crescita economica costante e duratura.