

**CRITICAL DETERMINANTS OF GENDER INEQUALITY  
FROM FIVE DIFFERENT PERSPECTIVES**



**Seh Young Kim**

**A Dissertation Submitted in Partial  
Fulfillment of the Requirements for the Degree of  
Doctor of Philosophy (Development Administration)  
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**Seh Young Kim**

**School of Public Administration**

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..... Major Advisor  
(Professor Ponlapat Buracom, Ph.D.)

The Examining Committee Approved This Dissertation Submitted in Partial Fulfillment of the Requirements for the Degree of Doctor of Philosophy (Development Administration).

..... Committee Chairperson  
(Professor Boonton Dockthaisong, Ph.D.)

..... Committee  
(Professor Ponlapat Buracom, Ph.D.)

..... Committee  
(Assistant Professor Danuvas Sagarik, Ph.D.)

..... Dean  
(Associate Professor Boon-Anan Phinaitrup, Ed.D.)

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## ABSTRACT

<b>Title of Dissertation</b>	CRITICAL DETERMINANTS OF GENDER INEQUALITY FROM FIVE DIFFERENT PERSPECTIVES
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Gender inequality (GI) still prevails due to multi-faceted reasons. Therefore, multi-dimensional approaches to examine the root-causes of GI are necessary. In this regard, with the adoption of multi-perspectives and multi-level analyses, i.e. macro- vs. micro-analysis (OECD membership, gender, and regions), the study aims to find out the key determinants affecting GI in five different models, comprised of 17 socio-economic and institutional determinants: the capability-related model (CRM), the livelihood-related model (LRM), the formal institution-related model (FIRM), the informal institution-related model (IIRM), and the power distance model (PDM). The models drew upon related theoretical bases: neoclassical growth theory and convergence theory for the CRM; human capital theory for the LRM; cultural theory for the IIRM and PDM; and new institutionalism for the FIRM. The study utilised secondary data from 34 countries (18 OECD countries and 16 non-OECD countries). All of the data followed by OECD membership, gender, and regions were tested using regression analyses in order to compare the different impacts from various dimensions. The research findings indicated that all of the factors from the CRM, LRM, FIRM, and PDM and one factor from the IIRM (the perception that men make a better boss than women) had impacts on the macro-level analyses. As for the micro-level analyses, 16 factors other than “perception of income” of the IIRM influenced GI. Among the five models, the CRM (fertility rates) affected inequality the most. Meanwhile, the LRM (percentage of wage and salaried workers) turned out to highly significantly affect all categories. The significance of the study is that little research has been carried out on a cross-country level by introducing multi-level and multi-perspective approaches. Three policy recommendations based on the results are suggested: reforming gender-related policies reflecting dominant gender-



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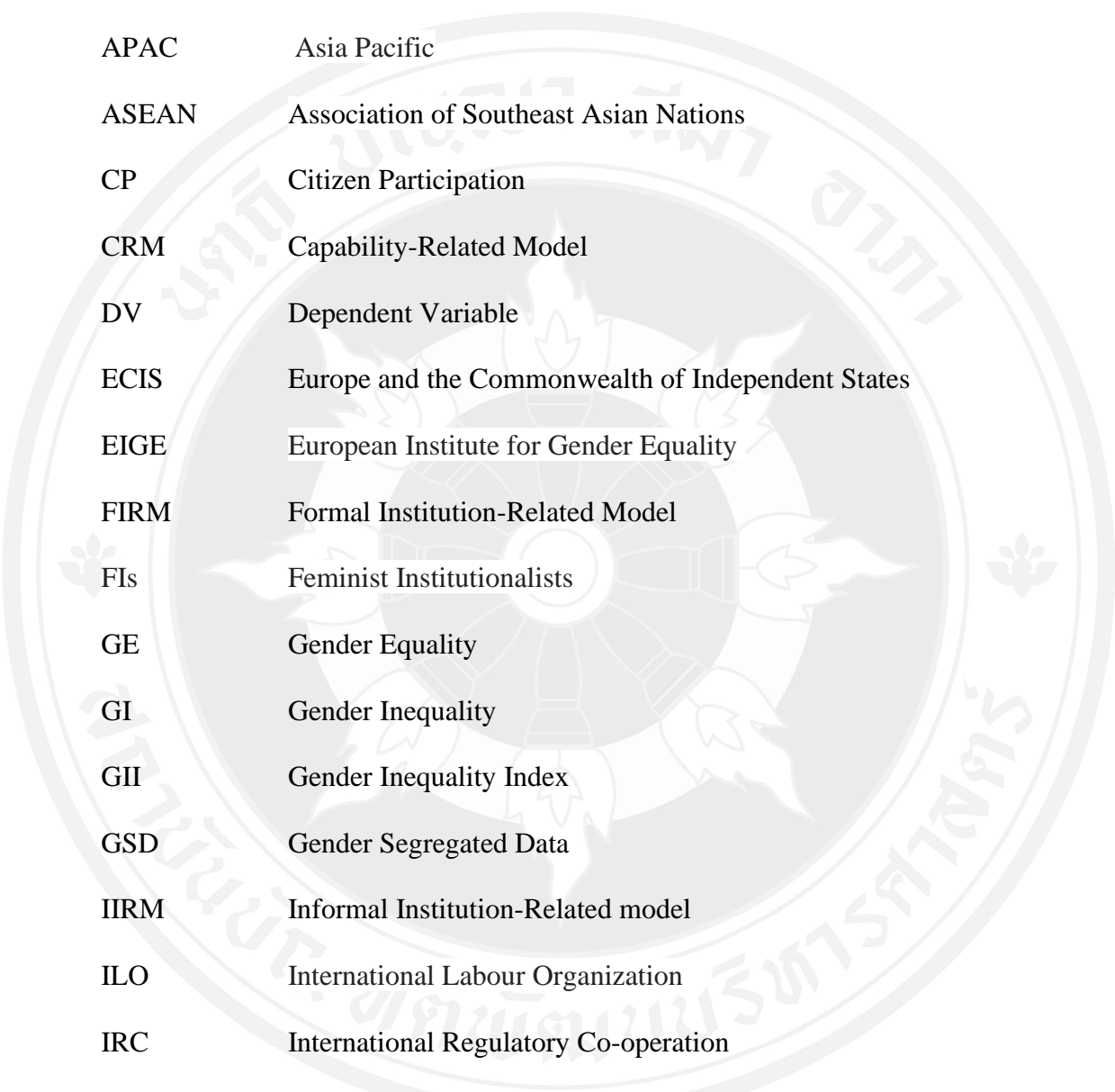
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## LIST OF ACRONYMS AND ABBREVIATIONS



APAC	Asia Pacific
ASEAN	Association of Southeast Asian Nations
CP	Citizen Participation
CRM	Capability-Related Model
DV	Dependent Variable
ECIS	Europe and the Commonwealth of Independent States
EIGE	European Institute for Gender Equality
FIRM	Formal Institution-Related Model
FIs	Feminist Institutionalists
GE	Gender Equality
GI	Gender Inequality
GII	Gender Inequality Index
GSD	Gender Segregated Data
IIRM	Informal Institution-Related model
ILO	International Labour Organization
IRC	International Regulatory Co-operation
LAC	Latin America and the Caribbean
LDCs	Least Developed Countries
LRM	Livelihood-Related Model
MDGs	Millennium Development Goals



OECD	Organisation for Economic Co-operation and Development
PDI	Power Distance Index
PDM	Power Distance Model
PPP	Public-Private Partnership
SDGs	Sustainable Development Goals
SIGI	Social Institutions and Gender Index
TFRs	Total Fertility Rates
UN	United Nations
UN DESA	United Nations, Department of Economic and Social Affairs
UNDP	The United Nations Development Programme
UNECE	The United Nations Economic Commission for Europe
UNESCO	The United Nations Educational, Scientific and Cultural Organization
UNRISD	United Nations Research Institute for Social Development
UNWOMEN	United Nations Entity for Gender Equality and the Empowerment of Women
WGI	Worldwide Governance Indicator
WSW	Wage and Salaried Workers

# CHAPTER 1

## INTRODUCTION

### 1.1 Rationales for the Research

Gender inequality (GI) has long been a source of heated debate and the countries around the world, and international organisations such as UNWOMEN, have tried to reduce the gender gap by increasing female enrolment in higher education and by reducing female illiteracy rates (Charles & Bradley, 2002; United Nations Educational, Scientific and Cultural Organisation [UNESCO] Institute for Statistics, 2017). Efforts have been clearly reflected in the Millennium Development Goals (MDGs) and their successor, the Sustainable Development Goals (SDGs). Despite the progress, women's under-representation in the political-economic arena has left them vulnerable in many ways. Women also have fewer capabilities and opportunities than men in most cases, and even if women have the same capabilities as men, equal opportunities will not be given to them: this is mainly caused by the lack of political will to deal with the matter seriously (Cho, 2016; Seguino, 2000b; Waylen, 1998). Numerous studies have also suggested that economic development through promoting opportunities and reducing poverty would have dramatic impacts on reducing GI (Becker et al., 1990; Berik et al., 2004; Charles, 2011; Cho, 2016; Duflo, 2011; Forsythe et al., 2000; Lemons & Parzinger, 2015; Swamy, 2004). For instance, the divorce rate in the Republic of Korea (ROK) was recorded at 9<sup>th</sup> out of 43 OECD countries and took first place amongst the Asian member countries (Park et al., 2010). If women are not financially independent, divorced women in the ROK would greatly suffer in getting back on their feet because after giving birth to a first child, it is a social custom that the mother should leave the labour force as most household duties and the duties of rearing children are left to women. It is true that women still prefer to choose female-type fields of jobs and study, such as home economics, and a majority of Korean mothers have mostly participated in unpaid work (Kim, 2017; Ryan, 2014; Yoon, 2017). Therefore, the changes in the

status of women have come about through “processes of partial and domain-specific equalisation” (Charles, 2011, p.357). When women are financially independent, they will have more bargaining power and more opportunities for a better future, i.e. employment opportunities, which will, in turn, significantly reduce the female poverty rates (Berik, Rodgers, & Zveglic, 2004; Charles, 2011; Swamy, 2004). On the other hand, if women are financially dependent, the case would be the opposite.

## 1.2 Current Gender Inequality Situations

In order to sufficiently understand GI, it is necessary to specify the current situations across the globe.

As Table 1.1 shows, women’s illiteracy rates are much higher than those of men, and this has been a considerable hindrance in terms of women obtaining decent-paying jobs.

Table 1.1 Global Illiterate Population by Age Groups, 2016

<b>Indicator (Global illiterate population (millions))</b>	<b>Adults (aged 15 years and older)</b>	<b>Youth (aged 15-24 years)</b>	<b>Population aged 25-64</b>	<b>Elderly (aged 65 years and older)</b>
<b>Both sexes</b>	750	102	507	141
<b>Men</b>	277	44	186	47
<b>Women</b>	473	58	321	94
<b>Share of Women (%)</b>	63	57	64	67

Source: UNESCO Institute for Statistics (2017, p.3)

Five percent of women in North Africa and West Asia and 15 percent of women in Sub-Saharan Africa are agricultural holders, and for most of them, basic rights such as getting access to public services, education, and justice systems are not granted (Food and Agriculture Organization [FAO], 2013, p.1). Policymakers often overlook the potential of women’s economic contributions: the underutilised women’s workforce across the Asia-Pacific region causes approximately USD 89 billion loss each year (Rajivan, 2010).

Table 1.2 Level and Trends in Rates of Labour Force Participation and Unemployment by Sex, 2009-2021

Country/region	Labor force participation rate (Percentages)					Unemployment rate (Percentages) and female-to-male unemployment rate ratio				
	Men	Women	Gap (Men-Women)		Men	Women	Ratio (Female rate/Male rate)			
	2018	2018	2009-18	2018	2018-21	2018	2018	2009-18	2018	2018-21
<b>World</b>	<b>75.0</b>	<b>48.5</b>	↓	<b>26.5</b>	↑	<b>5.2</b>	<b>6.0</b>	↑	<b>1.2</b>	↑
Developing countries	81.1	69.3	↓	11.8	↓	4.6	6.1	↓	1.3	↑
Emerging countries	76.2	45.6	↑	30.5	↑	5.2	6.1	↑	1.2	↑
Developed countries	68.0	52.4	↓	15.6	↓	5.3	5.6	↓	1.1	↓
Northern Africa	71.9	21.9	↓	50.0	↓	9.1	19.5	↓	2.2	↑
Sub-Saharan Africa	74.0	64.7	↓	9.3	↓	6.4	8.2	↓	1.3	↑
Latin America and the Caribbean	77.1	51.5	↓	25.6	↓	6.8	9.5	↓	1.4	↑
Northern America	67.9	55.8	↓	12.1	↓	4.6	4.4	↑	1.0	↓
Arab States	77.2	18.9	↑	58.3	↓	6.8	16.3	↑	2.4	↓
Eastern Asia	74.7	59.1	↑	15.6	↑	4.8	4.2	↑	0.9	↑
South-Eastern Asia and the Pacific	79.4	56.5	↓	22.8	↓	3.5	3.3		0.9	↓
Southern Asia	79.0	27.6	↓	51.4	↑	3.7	5.2	↑	1.4	↓
Northern, Southern and Western Europe	63.4	51.6	↓	11.9	↓	7.9	8.2	↑	1.0	↓
Eastern Europe	67.0	51.8	↑	15.2	↓	5.6	4.9	↓	0.9	↓
Central and Western Asia	73.5	45.1	↓	28.4	↓	8.0	9.4	↑	1.2	↓

Source: ILO (2018, p.7)

Women's political participation is still low, and this makes it more difficult to change relevant policies and laws, as many decisions are made by men: only 18.2 percent of legislative seats in Asia are taken up by women (UNDP, 2010).

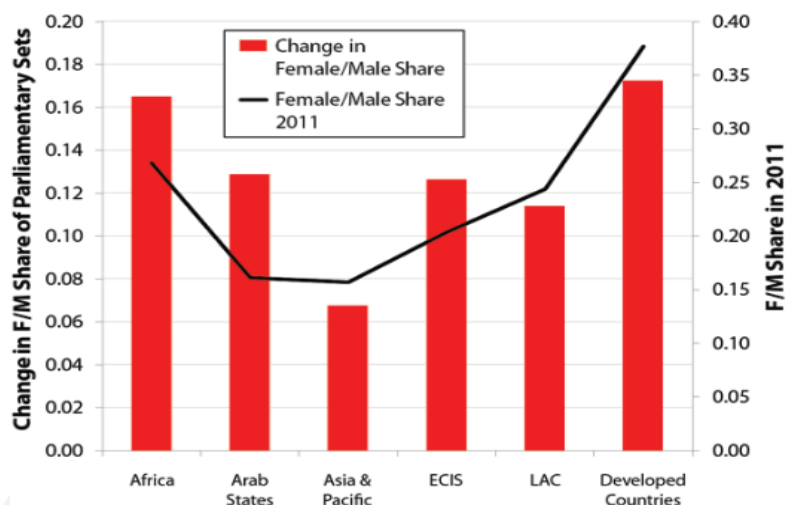


Figure 1.1 Female/Male Shares of Parliamentary Seats

Source: UNDP (2013, p.178)

The severely-biased gender ratio in the upper-management positions and public offices can easily be found. For example, the ratio of women to men is 1 to 9 in the ROK, and that ratio is below some of the world's least-developed countries, such as Syria (Kwon, 2014). According to the Governance Metrics International (GMI) ratings in 2013, the ROK took 43<sup>rd</sup> place (1.9 percent) out of 45 countries in the fraction of women on corporate boards, and 19.5 percent of companies with more than 100 employees had no female executives (Kim et al., 2016).

Table 1.3 Women in Business

Region	Proportion of businesses with at least one woman in senior management	Proportion of senior roles held by women
Eastern Europe	85%	32%
Southern Europe	83%	26%
Africa	94%	31%
North America	92%	31%
Latin America	83%	25%
EU	84%	28%
APAC	85%	28%
ASEAN	94%	28%

Source: Thornton (2019, p.10-11)

According to the 2013 Global Gender Gap Report, which measures the gap between genders in terms of economy, politics, and education and health, the ROK took 111<sup>th</sup> place, and Japan 105<sup>th</sup> place out of 136 countries (Ryan, 2014).

The gender pay gap is not only a problem for the least developed countries (LDCs) and developing countries but is also a problem for the developed countries. The European Union recorded 19.13 percent, Korea 34.62 percent, Germany 16.19 percent, Canada 18.19 percent, and the U.S. 18.17 percent (Organisation for Economic Co-operation and Development [OECD], 2019a).

Table 1.4 Regional Gender Wage Gaps

Region	Number of countries	Gender wage gap
Africa	3	36.1%
Arab States	2	27.5%
Asia and the Pacific	2	15.3%
ECIS	8	21.1%
LAC	7	14.3%
Developed Countries	32	16.4%

Source: UNDP (2013, p.173)

### 1.3 Objective of the Research

The research aims to determine the explanatory powers of the socio-economic and institutional determinants of GI with the utilisation of relevant and comparable data from different reliable sources and to determine which factors positively or negatively affect GI and to what degree with the application of different variables based on various but relevant theoretical bases, such as neo-classical growth theory/convergence theory, human capital theory, new institutionalism, cultural theory, and cultural dimension theory. In sum, the objectives of the study are as follows:

1) To test which determinants in the five different models employed affect GI the least and the most in the respective categories, i.e. macro-level analyses and micro-level analyses (OECD vs. non-OECD, gender, and region)

- 2) To investigate how and why various determinants influence the different categories in different ways
- 3) To provide relevant policy suggestions to reduce GI

#### **1.4 Research Questions**

- 1) How do the 17 socio-economic and institutional determinants in the five different models affect GI in different contexts/categories?
- 2) Which model out of the five models affects GI the most and the least?
- 3) Why do the various determinants have different effects?
- 4) What types of policy implications can be suggested?

#### **1.5 The Significance of the Research**

The research poses questions regarding the socio-, economic-, and institutional determinants in relation to GI based on the relevant theories. These led to insightful findings, as not many studies have dealt with gender equality issues from various perspectives, i.e. socio-, economic- and institutional perspectives (formal/informal institutions) with the adoption of quantitative approaches: a considerable volume of research has only focused on the effects of economic development on GI (Aghion, Caroli, & Garcia-Penalosa, 1999; Aghion, Boustan, Hoxby, & Vandenbussche, 2009; Barro, 1996, 2001; Becker, Murphy, & Tamura, 1990; Berik et al., 2004; Blau & Kahn, 2001; Breen & Cooke, 2005; Cuberes & Teignier-Baqué, 2012; Goodwin, Hall, & Raymond, 2017; Klasen & Lamanna, 2008; Klasen, 2000; Lipset, 1959; Seguino, 1997a; Seguino, 2000). Most studies have looked into the explanatory powers between GI and either capability or livelihood or formal institutions or informal institutions or power distance (Annandale & Hunt, 2000; Atkinson, 2017; Berik et al., 2004; Berk, 2012; Branisa, Klasen, & Ziegler, 2010; Cuberes & Jerzmanowski, 2009; International Labour Organization [ILO], 2002; Jones, 2006; Klasen, 2000, 2002; Morrison & Jutting, 2004; Rajivan, 2010; Ridgeway, 2011; Rizzo, Abdel-Latif, & Meyer, 2007; Seguino, 1997a; Seguino, 2000a; Seguino, 2000b; Walby, 2000; Waylen, 2014, 2017; Berik et al., 2004). This study, however, considers every possible perspective, i.e. five

aspects (five models) and this approach helps to identify the crucial determinants and provide profound insights into the root causes of GI.

Little research has been done to present evidence on gender gaps from multi-perspective on a cross-country level (Barro, 1991; Klasen & Lamanna, 2009). There are studies available focusing on socio-economic factors (Berik et al., 2004; Bloom & Williamson, 1998; Charles, 2011; Klasen, 2002; Nelson & Pack, 1999; Seguino, 1997a). In order to understand GI sufficiently, however, institutional factors should be added because socio-economic factors alone would be inadequate to explain the complex reasons for GI. With the addition of institutional factors, the study results put forward deeper understandings of the reasons for GI. Moreover, few studies have focused on the effects of gender-related social institutions cross-country level (Branisa, Klasen, & Ziegler, 2012; Morrison & Jütting, 2005). The results also indicate how the selected countries, i.e. OECD countries vs. non-OECD countries, with multiple income levels, cultures, and diverse religions, are affected by each determinant differently. Based on the results of the study, useful policy suggestions and directions are suggested.

## **1.6 Limitations of the Research**

For the variables related to capability, livelihood, and formal institutions, panel data were utilised for the periods 1995, 2000, 2005, 2010 and 2013. As for the informal institutional-related variables and power distance<sup>1</sup>, cross-sectional data for 2005 and 2013 were used respectively. The limitations of the research were caused mainly by the availability of the data.

First of all, the comparability and quality of the data from the ILO have been questioned. Klasen and Lamanna (2009, p.102) mentioned that “inherent measurement errors in all the labour force can lead to the bias of coefficients in regression analysis,” as “the structure of the measurement errors” is not known. Hence, this could lead to a biased interpretation or overlooking the actual effects.

Second, Cuberes and Teignier (2011) mentioned the possible measurement errors caused by “the international nature of data used in most studies,” (p.16) as well as the problems of insufficient data for developing countries. For this research, there were problems of a lack of sex-disaggregated data and the availability of data regarding

formal institutions, as data for only the period of 2000 onwards were available in the World Bank databank. As for the variables of informal institutions, cross-sectional data for the period 2005 were utilised due to the availability of the data as well. The limitation, however, was not deemed to be a major problem, as much of the literature has pointed out that perceptions do not change overnight (Chappell & Waylen, 2013; North, 1971; Tripp, 2001; UNDP, 2013; Waylen, 2014; Welzel, 2002).

Third, a limited number of countries (58 countries) participated in the World Value Survey in Wave 5 (2005-2009). As for power distance values, only 76 countries were measured (Hofstede, 2018). Since the data for this research had to be collected within the available countries, it made the study even more challenging.

Fourth, due to the lack of data, in particular for developing countries, problems with collinearity and insufficient observations arose. It was difficult to obtain the regression results for the capability-related model and informal institution-related model for Africa because of the minimal number of observations.

## **1.7 Organization of the Research**

This research is comprised of six chapters. Chapter 1 is the introduction of the study and presents the overall information on the study, including its limitations and significance. Chapter 2 reviews the empirical evidence and relevant theories by citing related literature and suggests the theoretical framework. Chapter 3 specifies the research methods applied to the research, the variable-related information, and the expected signs and data collection. Chapter 4 presents macro-level analyses on the multivariate and bivariate regression results with in-depth investigations of the results. Chapter 5 puts forward sub-analyses or micro-level analyses on the OECD vs. non-OECD, gender, and regions. Chapter 6 offers the conclusion and policy implications and specifies the theoretical contributions of the research, along with possible directions for future research.

## CHAPTER 2

### LITERATURE REVIEW AND CONCEPTUAL FRAMEWORK

#### 2.1 Background

##### 2.1.1 The Definition of Inequality

GI is the cultural, social, and legal situation where gender determines different rights and dignity for men and women, which are manifested in their biased access to or enjoyment of rights and the expectation of stereotyped social and cultural roles (European Institute for Gender Equality, n.d.). GI is mostly caused by a systematic difference in material well-being, and the degrees vary amongst countries. Therefore, GI can be described as men on average having a better position in economic, social, and political arenas; whereas, women receive unjust and unfavourable treatments in comparison to men (Kinias & Kim, 2012; Seguíno, Sumner, van der Hoeven, Sen, & Ahmed, 2013). The definition by Kinias and Kim (2012) well summarises what GI is about: “Gender inequality we refer to differences between women and men in roles, opportunities, and outcomes in a given society and the inequality has been prevalent and widely accepted by custom and law” (p.90).

##### 2.1.2 Types of Inequality

According to Mount (2008, p.3), there are five types of inequality:

- 1) Politically related inequality, such as people not being treated as equal as specified by law
- 2) Inequality of outcome, i.e. inequality of wealth and income
- 3) Inequality of access to opportunity and life changes
- 4) Inequality of treatment
- 5) Inequality of membership in society.

Inequality of access, in particular, is crucial because education enables people to have a better life by getting a higher paying job, and the denied access to available and

essential resources has worsened inequality (World Bank, 2011). Inequality of opportunity causes the inequality of outcome, as pay gaps exist between highly-educated people and people with primary education (Cho, 2010; Kinias & Kim, 2012). When considering GI, additional perspectives should be added, such as “the division of labour, the division between production and reproduction or between paid and unpaid work,” because the additional factors are immensely associated with GI (Korpi, 2000, p.1).

A great deal of literature deals with different types of inequality. Young (1990, as cited in Korpi, 2000, p.5) defined GI as follows:

... gender inequality should consider people as active beings that include being granted to actively and freely utilise skills and education in socially accepted environments; joining, organising and managing institutions with legally accepted such activities; freely expressing themselves such as feelings, experience and so forth which is related to equality of outcome and equality of opportunity.

Sen (1983) focused on a person’s well-being from the points of view of health, happiness, and freedom, i.e. freedom to enjoy prosperity and fundamental rights that are related to equality before the law and equality of opportunity. Korpi (2000) mentioned that GI is mainly caused by economic development. For instance, division of labour and paid and unpaid labour are related to freedom to choose one’s destiny, as many countries utilise girls and women for unpaid labour, such as managing the house and taking care of siblings. There have been controversies over whether women’s caring work without getting paid should be recognised as a basis for measuring women’s rights and their social position and treating them accordingly as men are treated based on their paid work (Kim, 2017; Korpi, 2000). Korpi (2000) rightly argues that policies favouring this view are problematic as they justify women’s unpaid caring and domestic work and have made inequality worsen. As the concepts and policies related to GI have become deeply ingrained in the minds of the public, people do not recognise that women’s and girls’ rights to choose their lifestyle, such as the choice of having a paid or unpaid job, and getting an education, have been violated. The policies

also limit women's rights to access resources and ultimately have led to material inequality, which has caused inequality in the intra-family distribution of rights (Charles, 2011; Cho, 2010; Kim, 2017). In particular, equality of opportunity, i.e. having equal rights to obtain access to material resources, would be a key to increasing women's self-esteem, freedom, and their financial capability; hence, participation in the paid labour force would significantly impact intra-family bargaining power (Korpi, 2000).

### **2.1.3 Types of Inequality for the Research**

Inequality of capability is more closely related to inequality of access to opportunity and life changes. For example, women and girls deny access to education and are allowed only limited economic well-being (Mount, 2008). Inequality of livelihoods is linked to inequality of outcome, and this means having limited or denied access to "work, salaries, credit and asset ownership" (Seguino et al., 2013, p.162). Possessing the capability to survive and securing a livelihood is vital for gender equality (GE), as they are the foundation for obtaining essentials, such as health, wealth, nutrition, and education.

In this regard, the primary focus of the research is on the inequality of outcome and the inequality of opportunity as the capability- and livelihood-related variables are directly linked to income. Hence, the concept of inequality mentioned in the study mostly covers these two types of inequality.

### **2.1.4 The Role of Culture in a Gender Inequality Context**

Farida Shaheed<sup>2</sup> (Culture Action Europe, 2016) mentioned that GI had been taken for granted in the name of tradition, culture, and religion. Although women's rights have been immensely violated, this fact has been ignored because of the reason just indicated. The remark by Shaheed reflects the notion that inequality is frequently regarded as part of a culture and that the culture has been respected and has overlooked the practices of a particular social group that has systematically received different treatments (Hofstede & Bond, 1984; Kinias & Kim, 2012). It is true that GI has strengthened the "stability of a patriarchal gender system" (Seguino, 2000a, p.52). The meaning of gender inequality varies amongst different cultures. For instance, East

Asian culture has been tremendously influenced by Confucianism, which has offered the fundamental bases of social structure, i.e. hierarchical social relationships between parents and children, husband and wife, teachers and students, and so forth (Cho, 2010; Kinias & Kim, 2012). It emphasises the different power relationships amongst different types of status in society: Confucianism highlights keeping harmonious social relationships instead of focusing on equality. Therefore, women's rights have been immensely violated, and this fact has been ignored. Whereas, western cultures recognise GE as a fundamental right and a violation of basic rights would be deemed to threaten emotional well-being (Lutz, 1996). It is evident that different cultures value inequality differently, and "culture and gender are social constructions" (Culture Action Europe, 2016, p.7).

### **2.1.5 The Relationships Between Culture and Power Distance**

One definition of power distance is "the extent to which less powerful individuals accept their place in society, and power distance varies as a function of culture" (Hofstede, 1984, as cited in Kinias & Kim, 2012, p.91).

According to Hofstede et al. (n.d.), power distance is perceived to different degrees in different cultures. For instance, the cultures of Asia and Latin America are more accepting of power distance than those of the US and northern Europe. The countries in Asia and Latin America recognise power distance as acceptable and necessary in order to maintain social order: some groups deserve more benefits than others. For example, Chinese people accept high power distance and the idea that some people deserve better treatment than others.

## **2.2 Theoretical Framework**

The issues of GI have long caused serious controversies across the globe. Gender discrimination has created detrimental impacts on economic development as gender bias can make it difficult for a country to survive in a hectic competition (Seguino, 2000a). Globalisation has also made countries go in the direction of egalitarianism, i.e. a decrease in GI in economic, political, and social arenas (Charles, 2011; Seguino, 1997a). A considerable volume of literature and research has focused on how to

improve the income of female workers because it would provide a solid foundation for promoting their rights, enormously help them to have more bargaining power, and provide them with more opportunities to have a much better future and more capability to deal with poverty (Bem, 1981; Berik et al., 2004; Berkovitch & Berqôvič, 1999; Braunstein, 2008; Charles, 2011; Charles & Bradley, 2002; Correll, Benard, & Paik, 2007; Duflo, 2012; Forsythe, Korzeniewicz, & Durrant, 2000; Jones, 2006; Lemons & Parzinger, 2007; Seguino, 1997a; Seguino, 2000a; Swamy, 2004). Most importantly, financial independence enables women to choose their own destiny. Many women are suffering from physical and psychological molestation, but most of them are unable to avoid this for economic reasons (Sen, 1983). The female labour force has not been adequately utilised by changing it from household work to commercial work, and much of the literature has presented evidence of women's economic contributions that have led to economic growth (Berik et al., 2004; Bloom & Williamson, 1998; Lewis, 1954; Seguino, 1997b; Swamy, 2004; Young, 1995). For the reasons specified above, dealing with gender issues from a socio-economic point of view is crucial and necessary. A series of theories should be adopted in order to expound the determinants of GI from a socio-economic and institutional perspective because it is not adequate to illustrate the determinants sufficiently with a single theory. In order to examine the socio-economic and institutional perspectives of the causes of GI, particular focus on the utilisation of human capital is a suitable approach. Several theories have highlighted the importance of human capital: neoclassical growth/convergence theory, new institutionalism, and human capital theory.

### **2.2.1 Neoclassical Growth Theory/Convergence Theory**

Neoclassical growth theory, developed by Robert Solow and Trevor Swan, posits that economic growth can be achieved through the balance of three critical elements, i.e. labour, capital, and technology: with a proper mixture of labour and capital in production, an equilibrium state can be achieved along with advances in technology (Alesina & Rodrik, 1994; Ferguson, 2008; Weingast, Shepsle, & Johnsen, 1981). The production function utilises a “Cobb-Douglas production function<sup>3</sup>.” The production function of the neoclassical growth theory would be that  $Y = F(K, AL)$ :  $Y = \text{GDP}$ ,  $K$  = capital,  $L$  = the total number of unskilled labour,  $A$  = the level of technology (Seguino,

2000, p.30; Braunstein, 2008; Ferguson, 2008; Ortigueira & Santos, 1997). The function highlights a large-size unskilled labour force, as it can offer better positions in labour-intensive industries. According to Solow, economic growth is affected by two factors: 1) accumulation and capacity to expand physical and human capital and 2) productivity (Braunstein, 2008; Seguino, 2000). When the proportion of female workers grows fast, it causes economic development. For instance, the higher participation of female workers in the manufacturing industry has triggered fast economic growth in East Asia: a one percent rise in female participation contributed to around a 1.2 percent per capita growth in Korea and Singapore (Young, 1995). Female workers have been utilised, in particular, in the manufacturing and service sectors due to the economic boom and it has caused the rise in the income of female workers. Therefore, this theory is relevant to the research as it places emphasis on the proper use of human capital, such as a cheap and abundant labour force and its relation to productivity.

Convergence theory, coined by Clark Kerr, is also relevant to the research in that it deems industrialisation, i.e. economic development, as beneficial for the public: to be fully industrialised, a country should operate efficiently and effectively to survive in a hectic competition (Kerr, 1983). For developing countries, the “catch-up effect” where the developmental patterns are similar to those of the industrialised countries has caused the improvement of women’s status: the economic boom has triggered the high demand for unskilled workers, and this has led to an increase in their income (Crossman, 2019; Kerr, 1983; Charles, 2011; Seguino, 2000; Swamy, 2004). For instance, the female workers’ participation in the labour force led to 1.2 percent of per capita GDP growth in the ROK from 1966 to 1990, and the ratio of female to male workers increased 2-3 times in the ROK in the 80s and 90s (Wood, 1991; Young, 1995). Young (1995) rightly argued that the East Asian miracle would not have been achieved without the utilisation of female workers. Therefore, the theories provide a useful theoretical background for livelihood-related variables.

Livelihoods “enable individuals to adequately provide for themselves and include access to work,” but when women have limited access to major sources of livelihoods, it will significantly reduce their power of negotiation at home, such as the lack of being able to express “preferences in the gender division of unpaid/paid labour” (UNDP,

2013, p.162, p.168; Ridgeway, 2011). Women spend twice the time doing household work and spend five times more than men on childcare (Becker et al., 1990; Duflo, 2012). UNESCO's report (2017) has shown a similar result as well. According to Seguino (2000), women spend a great deal of time on caring labour in order to support the productivity of household members. This reflects the reality that women's participation in unpaid work and vulnerable employment is highly related to GI and affects their inequality level.

Against this backdrop, employment is a crucial factor in reducing GI as it will trigger changes in other fields. For instance, the improvement of women's financial status promotes the voices of women in social and political spheres as they are able to control their resources and have greater negotiation power. Since the data measuring women's control over material resources are scarce, the UNDP's research (2013, p.168) adopted employment-related factors to test the impact of livelihood-related variables (all four factors are related to employment) on GI. Borrowing from the UNDP's research model, three employment-related factors are adopted: unemployment rates, the percentage of employers, and percentage of wage and salaried workers (WSW). One factor was chosen from the UNDP's research, i.e. unemployment rates. As employment provides women with financial and economic empowerment, it is a "key mechanism for promoting gender equity" (UNDP, 2013, p.168). Therefore, unemployment rates should be added to test the impact on GI. In the same vein, the percentage of male and female employers<sup>4</sup> and WSW would be an excellent indicator for examining inequality levels. This is consistent with neoclassical growth/convergence theory: the increase in the utilisation of human resources, including unskilled workers, would lead to economic development, and will, in turn, reduce GI.

According to the World Bank (n.d.-b), there are two different types of self-employed workers: an employer with employees, and a self-employed worker working with unpaid family workers. The latter can be called vulnerable employment<sup>5</sup>, and it makes the inequality situation much worse. According to the World Bank Indicator (n.d.-a), the level of development of a country is reflected by the proportion of salaried workers: the higher the percentage of salaried workers a country has, the more advanced it is. On the other hand, the higher the number of self-employed people with contributing family workers is, the less developed the formal economic sector is, which

means weak development. In this context, the number of employers can be an excellent indicator for examining GI as the higher number of self-employed with contributing family workers indicates a higher number of female unpaid workers (Charles, 2011; Charles & Bradley, 2002; Cho, 2010; Correll et al., 2007; Seguino, 2000b; Swamy, 2004; UNDP, 2013). In the same context, WSWs are crucial as the financial security of women reduces GI considerably since it grants women better access to essential resources (Becker, 1992; Branisa et al., 2012; Seguino, 2000; Waylen, 2013).

### **2.2.2 Human Capital Theory**

According to Becker (1992,1994), an economist and one of the leading founders of human capital theory, government investment in education is more crucial than investment in other sectors, as the knowledge, values, or skills possessed by people cannot be separated from them. He posited that income is profoundly affected by the level of investment in human capital. Even if a country with abundant human capital does not utilize technology entirely, the economy will grow further as it has a self-generating capacity (Becker et al., 1990). The theory specifies that the gender gap between males and females mainly derives from human capital differences, such as education, skills, and so forth (Becker, 1994; Forsythe et al., 2000; Rodrik, Subramanian, & Trebbi, 2004). In short, investment in education and training is crucial because it will further boost the capacity of human capital. Moreover, the gender gap is mainly caused by different utilization of human capital; therefore, the application of human capital theory is necessary for the research.

In order to test how socio-economic and institutional factors affect GI, three key domains were examined, i.e. capabilities, livelihoods, and institutions. The first two key domains were adopted from UNDP's research (2013), and the last one was derived based on new institutionalism.

The capability has intrinsic value as it is related to a person's economic well-being through participating in economic-related activities:

Capability captures gender differences in the preconditions necessary for living a good life. Intergroup gender differences in capabilities condition the

probabilities that females and males at the individual level will achieve particular levels of economic well-being (UNDP, 2013, p.163).

As numerous studies have highlighted the importance of education and its effects on GI, it was necessary to add education-related variables to the research (Becker et al., 1990; Berik et al., 2004; Charles, 2011; Duflo, 2012; Seguino, 2000). From this perspective, the length of compulsory education was chosen as one of the capability-related variables because it would help to examine the cumulative impacts on educational inequality and to understand the cumulative societal influences on GI in education.

The human capital theory also views that if a person regards education as an investment and thinks that the return would be higher than with other financial investment, one would be willing to pay for school. For the developing countries, however, the theory is difficult to apply due to the unstable economy and capital market. What makes the matter worse is that a comparatively short period of compulsory education would make it difficult for people to draw up their career plans (Branisa et al., 2013). The people from the LDCs or the developing countries tend not to send girls to school as the opportunity costs of not sending them to school can be much higher. For instance, capitalizing on a dowry provides the parents or guardians with hefty financial benefits (Weale, 1992). For this reason, many developing countries spend a great deal of their budget on providing the public with basic education free of charge. In this regard, it was necessary to test the different degrees of correlation between government spending on education and GI. The role of the government is vital, as most poor women do not have money to obtain access to schooling. The expansion of the expenditures on education has also led to educational advances and that, in turn, has helped to narrow the gender gap. According to Charles (2011), the increased pressures to come up with policies to boost female accessibility to higher education have been found in policy agendas internationally since the middle of the twentieth century.

Fertility rates also can be a crucial factor to test inequality. There have been significant changes in the women's rights: women have been given more opportunities to choose their destiny than before thanks to better education, the improvement of property rights, accessibility of bank loans, and the decreased incidence of violence

against women (Becker, 1994; Kim, 2017; Seguino, 2000). Whenever women obtain good jobs and get promoted to higher positions, there is a tendency for them to not get married, as marriage would work as a penalty against their careers; hence, a majority of women do not want to have children in many countries (Kim, 2017; Seguino, 2000; Yoon, 2017). In particular, the total fertility rates (TFRs) of East Asian countries, such as the ROK and Japan, have been noticeably low and one of the main reasons is the constant emphases on entrenched gender roles that have been carried out for many generations: women should do domestic labour and child-rearing duties with very little or no help from male family members (Kim, 2017; Park, Cho, & Choi, 2010). Educated women are aware of the consequences of bearing children, can make fertility decisions and plan wisely based on their life plan. Moreover, when women are educated, they can get properly paying jobs, and this will provide women with greater bargaining power to make decisions on fertility controls instead of following men's decisions, who are much less involved in child-rearing duties. Therefore, better utilization of human capital can be possible, and women with excellent skills and qualifications can be effectively used (Doyle & Weale, 1994). In this context, fertility rates are closely related to the increasing capability of women because having fewer or no children means that women have time to get a paid job.

### **2.2.3 New Institutionalism**

#### **2.2.3.1 Formal vs. Informal Institutions**

According to March and Olsen (2009), the definition of institutions are as follows:

The provision of rules of appropriate behaviour, affective ties and a belief in a legitimate order. Principles and custom stipulate what is acceptable and how people should behave in the community and what can be depended on, i.e. what people are expected to do in different settings (p.5).

The roles of institutions are that they provide moral or cognitive templates for interpretation and action, and a person is deemed to be an entity deeply embedded in a world of institutions, which “provide the filters for interpretation, of both the

situation and oneself, out of which a course of action is constructed” (Hall, P., Taylor, & Hall, A., 1996, as cited in Menzel & White, 2011, p.343). Therefore, institutions shape people’s identities, self-images, and preferences.

The foundation of institutions is the rules, and “rules are connected and sustained through identities and senses of membership in groups and recognition of roles” (March & Olsen, 2009, p.6). Through institutions, members act within the culturally-defined purposes and methods of suitable procedures for achieving objectives (Merton, 1938). In this regard, the institutions of a country reflect a particular culture.

A definition of informal institutions is the socially-shared unwritten rules that are enforced, communicated, and created outside “officially sanctioned channels” (Helmke & Levitsky, 2006, as cited in Stroschein, 2013, p.41). Informal institutions are linked to cultural backgrounds, traditions, and customs, for example, social taboos. On the other hand, formal institutions are based on regulations and policies and are executed through official routes, for instance, juridical laws and rules.

Table 2.1 Comparison of Formal and Informal Institutions

	<b>Formal institutions</b>	<b>Informal institutions</b>
<b>Type of exchange</b>	Impersonal	Face-to-face
<b>Approach to rules</b>	Rule of law	Rules in use
<b>Character of rules</b>	Written	Unwritten
<b>Nature of exchange</b>	Contractual	Non-contractual
<b>Time schedule</b>	Specified	Non-specified
<b>Actor premise</b>	Organizational goal adherence	Shared expectations
<b>Implications of agreement</b>	Precise compliance	Ambiguous execution
<b>Transparency</b>	Potentially open to scrutiny	Closed and confidential
<b>Conflict resolution</b>	Thrid party body	Self-enforcement

Source: Hyden (2006, p.11)

In this regard, informal institutions should be considered as one of the critical affecting factors of GI, as socially shared perceptions and gender stereotypes have significantly influenced gender issues. In the same context, introducing formal institution-related factors for the study was essential to examine the impacts of formal institutional factors on GI. For example, once related laws and regulations are put in

place, but the regulatory quality is low, it is highly unlikely that the proper policies related to GI can be implemented. If the male-dominated cabinet and the government are so corrupt and only focused on policy that will bring the greatest benefits to themselves, gender-related regulations and laws will not be enforced. Studies have shown that greater discrimination can be found in more corrupt countries (Dollar, Fisman, & Gatti, 1999; Mauro, 1995). The study results of Branisa et al. (2012) have revealed that the more corrupt countries are, the more restricted the freedom of social participation of women is. Other studies also have investigated the effects of corruption, and the results have shown that higher women's participation in the political and economic arenas lead to lower degrees of corruption (Branisa et al., 2012; Swamy et al., 2001).

#### 2.2.3.2 Old Institutionalism vs. New Institutionalism

Unlike old institutionalism that focuses on “micro-rational individuals or macro-social forces” (March & Olsen, 2009, p.12), new institutionalism's primary objective is to analyze the rules, norms/culture, strategies, and routines of an institution.

Growth theories such as the neoclassical growth theory or endogenous theory fall short of explaining the reason for the different speeds of development of each country. With the addition of institutional factors, however, the different levels of development can be explained adequately. Institutional approaches to economics have moved away from the concept of how to increase profits to how to adopt right institutions to answer to the questions regarding the different levels of development (High, Pelling, & Nemes, 2005). New institutionalism can be regarded as the extension of endogenous theory with the addition of institutional factors because it has higher interests in endogenous factors than exogenous factors, which the old institutionalists focused on (Caldari, 2010; Demsetz & Lehn, 1985; Furubotn & Richter, 2010; March & Olsen, 2010; North, 1971; Rutherford, 1996). It is not surprising that the neo-institutionalists have paid considerable attention to global issues such as GI from an institutional perspective, and this trend can be seen as a diffusion of the world trend that modern nations should be part of global efforts, such as enhancing GE as a gesture of supporting normative standards to survive in the globalised world. Against this backdrop, new institutionalists including feminist institutionalists (FIs, gender scholars) have tried to understand the institutional changes based on how gender-related

institutions have formed, and efforts have been made to incorporate formal institutions with informal institutions such as practices, culture, norms, values, and customs (Bjarnegård, 2013; Mackay, Kenny, & Chappell, 2010; Waylen, 2013). Their objective is to examine the “gendered nature of public and political institutions and how they help to reflect, reinforce, and constitute unequal and gendered power relations in wider society” (Waylen, 2017, p.4). New institutionalists, including FIs, have also been profoundly interested in how informal and formal institutions work in different settings, how informal institutions can trigger changes in formal rules, and “how the formal and informal institutions would interact together both to subvert and uphold each other with varying gender outcomes” (Waylen, 2017, p.10). Additionally, informal and formal institutions are under the same institutional umbrella, which means that they mutually affect each other. According to March and Olsen (1983), leading founders of new institutionalism, the definition of institutionalism is the study of political institutions, a series of theoretical hypotheses and ideas regarding the relations between institutional features and political agency, performance, and change. New institutionalism emphasizes the endogenous nature and social construction of political institutions. The quality of institutions can be measured by a series of factors, such as the rule of law, effective legal and government institutions, good governance, a democratic political system, and so forth (Braunstein, 2008; Kaufmann, Kraay, & Mastruzzi, 2011; March & Olsen, 1983, 1989).

From a new institutionalism perspective, when understanding institutions, understanding the culture of a country would be beneficial as the new institutions are created based on old rules, norms, and practices, and pre-existing norms and rules (Waylen, 2019, p.14). In other words, institutional changes come with incremental changes. It also means that institutionalism includes a cultural community perspective that focuses on values and worldviews in a commonly-shared culture and translates institutions as “carriers of identities and roles reflecting a polity’s character, history and visions” (March & Olsen, 2009, p.2).

Another reason that new institutionalism, i.e. institutional factors should be dealt with as significant for this study is that a great deal of literature refers to the absence of legal protection or suitable policies to reduce GI (Berik et al., 2004; Ferguson, 1984; Kim, 2017; Kim, 2006; Waylen, 2014). Berik et al. (2004) mentioned

that the ROK and China have inadequate legal protection against GI and policies that have overlooked gender discriminatory practices. Interestingly enough, an institutional structure such as patriarchal stereotypes further worsen inequality, and the role of governments can be one of the main reasons to make gender-related stereotypes and norms worse in Asia (Cho, 2010; Heo & Yoon, 2017; Kim, 2017; Seguino, 1997b). For example, the Korean government has overlooked a practice called the marriage ban, and it has been commonly adopted by employers (Seguino, 1997b). The marriage ban tacitly demands women to resign from their jobs when they marry, and this practice is well suited to Korea's patriarchal structure, which guarantees men's economic dominance at home so that women can carry out unpaid work at home after marriage (Park et al., 2010). Moreover, numerous feminist institutionalists have also pointed out that institutional changes have been biased through either informal or formal institutions and the institutions have overlooked patriarchal practices (Azari & Smith, 2012; Chappell & Waylen, 2013; Ferguson, 1984; Helmke & Levitsky, 2006; Waylen, 1998; Waylen, 1994, 2014).

Other than the reasons specified so far, the primary reason for the application of new institutionalism for this study was that "it does not constitute a single and coherent body of theory but comprises many streams of arguments and debates" (Lowndes, 1996, p.182; March & Olsen, 1989). In this way, various ways will be explored, and greater options will be found. For this study, regulatory quality, government effectiveness, the rule of law, political stability, absence of violence and corruption, and voice and accountability, as well as the four factors regarding informal institutions, i.e. perceptions (refer to the conceptual framework) were added as the factors of the GI (Kaufmann et al., 2011, p.223; Mauro, 1995; Rizzo & Meyer, 2007).

### 2.2.3.3 Impacts of Institutional Factors on Gender Inequality

Institutions, built on history and culture, are "taken for granted and become persistent norms and beliefs" (Branisa et al., 2010, p.252). Therefore, finding out the impacts of institutional factors (informal and formal) on gender inequality is crucial as it will help to obtain an in-depth understanding of the deep-rooted causes of gender discrimination. Gender roles that mostly have evolved from informal institutions have worsened GI as the informal institutions vastly impact and shape daily life, and create role models that people should follow and look up to (Branisa et al.,

2010). There has been a series of studies focusing on the impacts of institutional factors (Alexander & Welzel, 2007; Breen & Cooke, 2005; Inglehart & Norris, 2003; Reynolds, 1999). In order to fully comprehend formal and informal institutions, understanding the impacts of social institutions is necessary.

#### 2.2.3.4 Impacts of Social Institutions

Social institutions have formed social statuses, such as that of students, parents, and teachers, and the structures and practices of the society in a particular way and have affected the people's decisions, behaviours, and choices (Eisenstadt, 2003). They also shape how to act in an age-appropriate way and to behave to measure up to a particular role in society. Along with social institutions, such as the family system, the health system, the education system and religions, economic and political organisations have changed due to the trend of migration, fertility rates, lifestyles, and many other reasons. For instance, since more opportunities have been given to married women in the U.S., there have been significant changes in marital roles: a mother can be the primary bread earner, and a father can take the caretaker's role (Branisa et al., 2010). Even if there have not been the dramatic changes in the division of domestic work, the greater participation of husbands in domestic work has turned out to be very helpful for family outcomes in European countries, for example, Sweden and Germany (Branisa et al., 2010; Breen & Cooke, 2005).

Social institutions also affect education-related decisions in developing countries such as India, Brazil, and Indonesia as opportunity costs are high for girls: they can assume the caretaker role and do household work (Branisa et al., 2010). Due to social institution-related issues, that is, the gender pay gap in many countries, the return from investment in girls' education tends to be much lower as well. The research results of Branisa et al. (2012) presented how the level of female education is closely associated with women's bargaining power in the family and their autonomy.

Interestingly, other study results have shown that even if the rates of female involvement in the workforce has been on the rise, taking on domestic duties has not changed which means women still assume a greater proportion of domestic duties than men (Breen & Cooke, 2005). The reason for doing gender is "to legitimate social arrangements based on gender category" (Breen & Cooke, 2005, p.442). The studies of Breen and Cooke (2005) and Bittman et al. (2003) have described situations

in the U.S. and Australia: even though wives are significant earners, they still do more domestic duties than their husbands due to the traditional gender divisions.

In short, people and social institutions are interdependent. Amongst other social institutions, educational and economic institutions affect demographic behaviours and development outcomes the most (Klasen, 2002). For example, inequality in education can cause a lack of utilisation of human capital, and this ultimately leads to adverse development outcomes (Branisa et al., 2013).

#### 2.2.3.5 Democracy

One definition of democracy is a political system that provides people with regular constitutional opportunities for electing government officials and a social mechanism to resolve and coordinate issues incurred amongst different interest groups by granting the majority of the population power to influence the decisions by selecting contenders for political office (Lipset, 1959). This definition indicates the essential role of democracy in reducing GI, as democracy is a fundamental social mechanism for solving social problems such as GI. The coordination of conflicting parties and reflecting the voices of the general public, such as female voters in the decision-making processes, are crucial for resolving the issue fairly. Hence, numerous studies have highlighted the importance of democracy-related elements as the critical factors in improving GE, i.e. government effectiveness, regulatory quality, and effective policies in relation to gender issues (Branisa et al., 2010, 2012; Cuberes & Teignier-Baqué, 2012; Inglehart, Norris, & Welzel, 2002; Inglehart & Norris, 2003; Norris & Inglehart, 2002; Rizzo et al., 2007; Tripp, 2001; Waylen, 2017; Waylen, 2014). Branisa et al. (2010) chose governance, i.e. the rule of law and voice and accountability, as one of the variables to test the level of development outcomes regarding GI by using the Social Institutions and Gender Index (SIGI). The studies by Inglehart and Norris (2003) and Inglehart et al. (2002) discovered that democratic institutions have helped to make women's voices heard. Moghadam (as cited in Rizzo et al., 2007) specified that "the quality of democracy is determined by the form of an institution as well as by the extent that different social groups participate in these institutions. In this regard, the gender of democracy matters" (p. 1153).

A lack of democracy has clearly affected inequality level, as more democratic countries such as the OECD countries have shown better performances in

dealing with GI issues in many ways: higher women's participation rates in politics, higher education level, higher female employment rates, and so forth than those of non-OECD countries (UNWOMEN, n.d.). It means that the voices of women are appropriately heard and reflected in a democratic way.

## **2.3 Culture Related Theories**

Culture is essential for understanding power distance, and informal and formal institutions as they are greatly affected by culture. In this regard, introducing cultural theories was key to further understanding the research.

### **2.3.1 Culture as Adaptive Systems**

Culture is sophisticated, with a combination of various human behaviours that reflect biological and cultural elements, i.e. territoriality, the subsistence of economy, sex roles, and how people should behave; hence, with the application of simple science, culture cannot be explained (Hatch & Cunliffe, 2013). Cultural theory regards culture as an adaptive system and can be understood from an ecological point of view that people behave in a particular ecological environment that shapes settlement types, how to form political organisations, social groupings, and beliefs, values, and practices (Keesing, 1974, p.74). According to Harris (1991), "the concept of culture boils down to behavioural patterns associated with particular groups of people" (p.16), that is, culture is the foundation of how people behave and act. Therefore, people should adapt to the system, and if they do not, they will not be accepted as a member of a particular culture.

The concepts of sex roles, according to this view, are shaped by the culture that people belong to (Goodenough, 1957; Goodenough, 1961). Even if people have negative opinions about GI, in order to adapt and be accepted by society, they have to follow the prevailing views on gender matters; otherwise, they will not be accepted. For example, a Confucius society deems that women's primary role is to carry on the husband's bloodline and take care of the family. If a woman fails to adjust to the culture, it is difficult to get social support and is regarded as socially maladaptive. In the end, in order to adapt in a culturally-accepted way, she has to conform to external pressures

(Hatch & Cunliffe, 2013). From this perspective, the role of culture is extremely crucial in understanding GI.

### **2.3.2 Culture as Cognitive Systems**

Culture as cognitive systems (Keesing, 1974, p.77) regards culture as ideational and as knowledge. Goodenough (1957) stated that the culture of a society means “whatever it is one has to know or believe in order to operate in a manner acceptable to its member” (p.167). Culture is an “organisation of people’s behaviours or emotions” as well as a template of things that “people have in mind and their models for perceiving relating otherwise interpreting them” (Goodenough, 1961, p.522) by providing cognitive standards, such as what can be, what is, and how one feels about a particular thing. The statement indicates what culture is from a cognitive perspective; that is, culture shapes people’s mindset, ideas, and the organisation of how people act in a socially-accepted way within a particular society. For instance, in the late 18<sup>th</sup> century, the inequality of the intra-family distribution of material resources prevailed in the United Kingdom: wearing leather shoes was essential to be recognised as a credible man in society, but an exception was applied to women (Korpi, 2000). If a woman was walking around in her bare feet, people did not deem her as uncreditable or destitute. People thought and interpreted the situation relying on shared views and knowledge. In the modern period, intra-family inequality of material resources can be easily found as well, and the majority of people take for granted biased and unfair customs. Even if some people think of it as unfair and biased, their views will not be regarded as majority opinions. These examples show that culture affects people’s cognitive system, i.e. knowledge, understanding, and perceptions: perceiving women with bare feet walking around the street and the inequality of material resource is recognised as culturally acceptable, and the culture makes GI worse.

### **2.3.3 Culture as Symbolic Systems**

According to the view of culture as a symbolic system, culture can be seen as a reflection of symbolic actions where meaning and symbols are shared by the general public (Geertz, 1973). In order to understand a culture, one should comprehend the rules of meanings of a particular culture, i.e. the semiotic pattern (Geertz, 1973; Keesing,

1974). Schneider (1980) recognized culture as a combination of meanings and symbols that include rules on how to behave, what to do, how to guide oneself in the social world, and how to build relationships in an acceptable way. According to Schneider (1972), meaning and symbols are embedded in culture, constitute the cultural units, define how the units are interpreted and differentiated and how the world is structured, and provide classifications and categories of the different domains of the world and the way to link one with another. For example, the culture of marriage shows the symbolic meaning of the subordination of women to men in most cultures, where socio-cultural association leads to a biased relationship in controlling property and the economic resources within the family. Moreover, the biased tradition has been recognised as acceptable and maintained for centuries. Still, women's access to education, entering into politics, and obtaining managerial or executive positions are limited in many parts of the world as the symbolic meaning of women's high stature does not have a positive connotation in many cultures.

#### **2.3.4 Cultural Dimensions Theory**

Cultural dimension theory assumes that depending on the distribution of the power and wealth of a particular culture or nation, people behave differently, i.e. how the general public or lower-level staff would respond to their bosses or authorities. In order to measure the distribution of power and wealth, the Power Distance Index (PDI)<sup>6</sup> was created by Geert Hofstede (Hofstede, 2018) to provide information on how people behave based on factor analysis. For instance, a low value means a less authoritarian system and more interactions with bosses and authorities during a decision-making process. The PDI compares different levels of inequality that are accepted and tolerated amongst people with and without power. A high level on the PDI signifies that people are more accepting hierarchy and unequal power distribution based on their position in the socio-economic structure; on the other hand, a low score on the PDI indicates that unequal power distribution is the least acceptable and that power is shared (Hofstede Insights, n.d.). For instance, Malaysia's power distance value was recorded at 104, which means that no team members dare initiate any actions, whereas Sweden scored 31, which means greater equally-distributed power than Malaysia (Clearly Cultural, n.d.).

### **2.3.5 Impacts of Cultural Modernity**

Cultural modernity (CM) has contributed immensely to improving GE. The definition of CM implies that factors such as greater accessibility regarding economic and social inclusion and choices help to promote the status of women (Alexander & Welzel, 2007; Inglehart & Norris, 2003; Rule, 1994). It stresses “an emancipative worldview and value of autonomy and choices: As the concept prevails, the policymakers have no choice but to be responsive” (Alexander & Welzel, 2007, p.6). The concept has affected people’s cognitive system and indicates that stereotyped sex roles can be changed and people have adapted to the new concept. Moreover, CM has changed the symbolic meaning of sexual roles. For example, the public shows more accepting attitudes towards men, spending more time doing household work in western countries, if not sufficient (Forsythe et al., 2000).

### **2.3.6 Impacts of Religions**

Religion also has influenced the cultural views and mindsets of the general public and is recognized as a critical factor in improving women’s status (Inglehart & Norris, 2003; Reynolds, 1999; Rizzo et al., 2007). Religion has played a critical role in shaping the norms of particular societies in terms of gender roles at home, in public, and the workforce: different religious denominations show different attitudes toward gender issues. For instance, Islam has been considered the most potent hindrance to improving GI (Inglehar & Norris, 2003). Numerous studies have examined the impact of the Muslim religion on GI (Fish, 2002; Norris & Inglehart, 2002; Rizzo et al., 2007). Rizzo et al. (2007), for example, studied the connection between democracy and GE by comparing Arab Muslim countries such as Egypt and Jordan vs. non-Arab Muslim countries such as Malaysia and Pakistan. The results revealed that in order to achieve ultimate GE, a proper rule of law that guarantees the reflection of the voices of women in policy must be adequately instituted. Other related study results have highlighted three main points regarding GI in relation to Muslim countries (Fish, 2002; Norris & Inglehart, 2002). First, people from Muslim countries give much less support to the concept of equal opportunities and rights for women than their western counterparts (Norris & Inglehart, 2002). Second, insufficient political support and involvement are highly associated with the reasons for “democratic underachievers,” (Rizzo et al., 2007,

p.1153) and cultural barriers also have exerted negative influences on implementing democratic governance, which would help to implement gender-related policies in Muslim countries. Third, female literacy and empowerment rates are much lower in Muslim countries, and authoritarianism is the primary reason for the worsening inequality (Fish, 2002).

Religion has acted as one of the critical means of socially shaping moral values and norms concerning GI and has assumed a similar role in the family, mass media, and school. For instance, the protestant religious concept supports democratic values such as respect for individualism, reciprocity, and popular sovereignty. Not only that, Christian values emphasize equality as the beliefs assert that people are equal in the eyes of God, and this concept is the foundation of democracy (Mount, 2008). Secularisation has led to making the power and prestige of the church weak and has reduced the influence of religious values. It, in turn, has accelerated the movement of improving GE (Inglehart & Norris, 2003).

As explained so far, GI is very closely related to how economic, political, and social factors function in a certain society. Numerous studies emphasize that the main reason for hindering the improvement of GE is institutional arrangements designed to maintain the traditional images of women; thus, the roles of institutional actors are crucial (Alexander & Welzel, 2007; Branisa et al., 2012; Inglehart & Norris, 2003; Rizzo et al., 2007; Swamy, Knack, Lee, & Azfar, 2001; Tripp, 2001).

Table 2.2 Summary of the Related Theories of the Names of Determinants

	<b>Determinants</b>	<b>Related theory</b>	<b>Scholars</b>
<b>Capability-related model (CRM)</b>	Compulsory education (EDUCATION)	Human capital theory	Becker, Rodrik
	Fertility rates (FERTILITY)		
	Government spending on education (EXPENDITURE)		

	<b>Determinants</b>	<b>Related theory</b>	<b>Scholars</b>
<b>Livelihood-related model (LRM)</b>	Unemployment rates (UNEMPLOYMENT)  Percentage of wage and salaried workers (WSW)  Percentage of employers (EMPLOYER)	Neoclassical growth theory/Convergence theory	Solow & Swan/ Kerr
<b>Formal institution-related model (FIRM)</b>	Regulatory quality (REGULARITY)  Control of corruption (CORRUPTION)  Government effectiveness (EFFECTIVENESS)  Rule of Law (RULE)  Voice and Accountability (ACCOUNTABILITY)  Political stability and absence of violence (STABILITY)	New institutionalism	March & Olsen
<b>Informal institution-related model (IIRM)</b>	The government should take more responsibility. (PERGOV)	Cultural theory	Geertz & Keesing

	Determinants	Related theory	Scholars
	On the whole, men make better business executives than women do. (PERBOSS)		
	Being a housewife is just as fulfilling as working for pay. (PERHOUSEWIFE)		
	Incomes should be made more equal. (PERINCOME)		
<b>Power distance model (PDM)</b>	Power distance (POWER)	Cultural dimension theory	Hofstede

## 2.4 Conceptual Framework

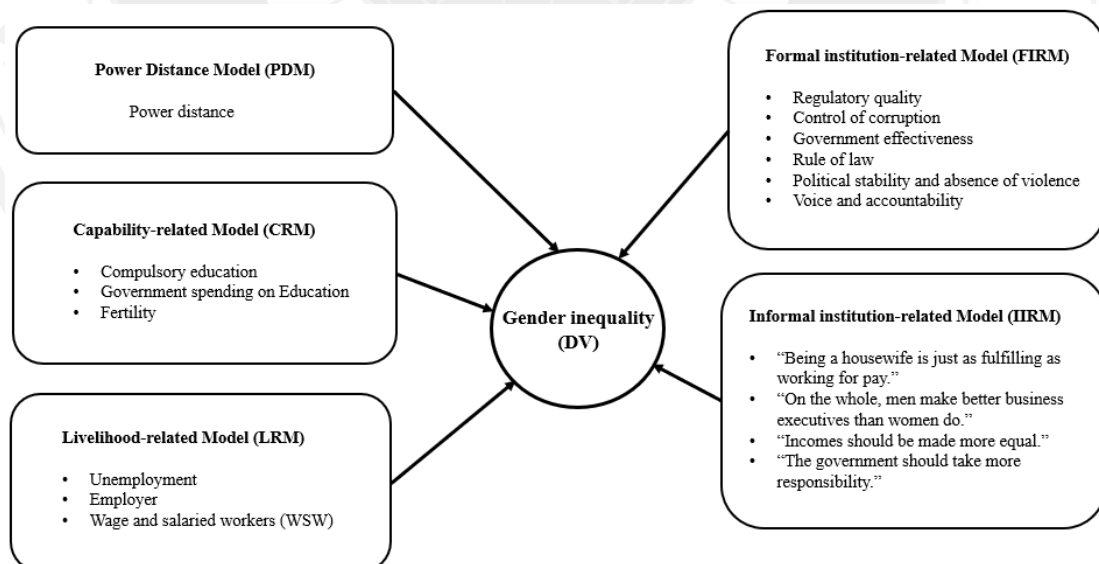


Figure 2.1 Conceptual Framework

## CHAPTER 3

### EMPIRICAL METHODOLOGY AND DATA

Before testing the explanatory powers of the determinants of GI, each variable was needed to be defined. The expected impact on the dependent variable (negative or positive) and the sources of the variables (dependent and explanatory variables) for the quantitative analyses were also to be clarified.

#### 3.1 Research Approach

The quantitative approach was employed, and two different types of data were utilized, i.e. cross-sectional data and panel data. The unit of analysis was each country. Regression analyses were adopted, i.e. multivariate regression analyses (CRM, LRM, and IIRM) and bivariate regression analyses (FIRM and PDM), to test the relationships among the predictor variables (17 variables) and GI (dependent variable: DV), and the impact of each predictor variable was estimated.

#### 3.2 Selection of the Countries

For this research, the data on 34 countries were utilized, and the countries were chosen based on the Organisation for Economic Cooperation and Development (OECD)<sup>7</sup> membership: OECD countries vs. non-OECD countries. When selecting the countries, only the countries that participated in both the World Value Survey (WVS) in Wave 5 (58 countries), and the Power Distance Index (PDI, 76 countries) were chosen. Therefore, 18 OECD countries and 16 non-OECD countries were selected based on that. The list of countries is as follows:

Argentina, Australia, Brazil, Bulgaria, Chile, China, Ethiopia, Finland, France, Germany, Ghana, Hungary, India, Indonesia, Japan, Malaysia, Mexico, the Netherlands, Norway, Poland, Romania, Russia, the Republic of Korea (ROK),

Slovenia, Spain, Sweden, Switzerland, Thailand, Turkey, Morocco, Ukraine, the United Kingdom, the United States, and Uruguay

Table 3.1 Division of the Countries based on the OECD Membership

OECD			Non-OECD		
Australia	Mexico	Sweden	Argentina	Hungary	Russia Federation
Chile	Norway	Switzerland	Bulgaria	India	Thailand
Finland	Poland	The Netherlands	Brazil	Indonesia	Ukraine
France	Slovenia	The United Kingdom	China	Malaysia	Uruguay
Germany	South Korea	The United States	Ethiopia	Morocco	
Japan	Spain	Turkey	Ghana	Romania	

The OECD was officially established in September 1961 to promote economic development and trade and has currently 36 member countries (OECD, 2016b). As an intergovernmental organization, it has provided a venue amongst member states to further advance democracy and economy by looking for solutions to the facing challenges such as economic, social, and political problems, and by providing good examples and practices from the member states. Most of the OECD members are deemed to be developed countries as they took up 62.2 % of the GDP worldwide (USD 49.6 trillion) as of 2017 and recorded a very high Human Development Index<sup>8</sup> (HDI) (OECD, 2019b; UNDP, n.d.-c). Therefore, the non-OECD countries chosen for this research were either least developed countries<sup>9</sup> (LDCs), such as Ethiopia, or developing countries<sup>10</sup> (Ferguson, 1984; ISGE, 2018; UN Economic analysis & Policy Division, n.d.).

Table 3.2 shows the rank of each country's Gender Inequality Index (GII), and the index helped to understand each country's current GI level (UNDP, n.d.-a). In order to obtain the rank, the values were averaged by utilizing the data from 1995 to 2013 (1995, 2000, 2005, 2010, and 2013).

Table 3.2 Country Ranks Based on the Gender Inequality Index

<b>OECD</b>	<b>Rank</b>	<b>Non-OECD</b>	<b>Rank</b>
Australia	11	Argentina	24
Chile	25	Brazil	28
Finland	4	Bulgaria	15
France	10	China	19
Germany	6	Ethiopia	32
Japan	9	Ghana	33
Mexico	27	Hungary	17
Norway	5	India	34
Poland	13	Indonesia	30
Slovenia	7	Malaysia	18
South Korea	12	Morocco	31
Switzerland	2	Thailand	26
The Netherlands	3	Romania	20
The United Kingdom	14	Russia Federation	21
The United States	16		
Turkey	29		

Source: UNDP (n.d.-c)

### 3.3 Hypotheses

The hypotheses for the research concerned whether the 17 independent variables (IVs) were either positively or negatively correlated with GI, for instance, if the regulatory quality is negatively correlated with GI. When regulatory quality is high, the inequality level would be lower (refer to the conceptual framework). Expected signs + signify that the factor positively affects GI.

### 3.4 Defining Variables and Model Specifications

#### 3.4.1 Dependent Variable: Gender Inequality Index (GII)

The GII created by the UNDP measures the degrees of inequality from three different perspectives in 162 countries, and the ranges are between 0, the lowest inequality, and 1, the highest inequality: 1) reproductive health, calculated by maternal mortality ratio and adolescent birth rates; 2) empowerment, calculated by the proportion of parliamentary seats taken by women and the ratio of adult females and males “aged 25 years and older with at least some secondary education”; and 3) economic status, estimated by labour market participation and calculated by the labour force participation rate of men and women aged 15 years and older (UNDP, n.d.-a).

A higher GII level means worse GI and the more considerable disadvantage of human development. Each indicator reflects the areas where government interventions are needed as well as provides the respective government with insights into the inequality situation in the country.

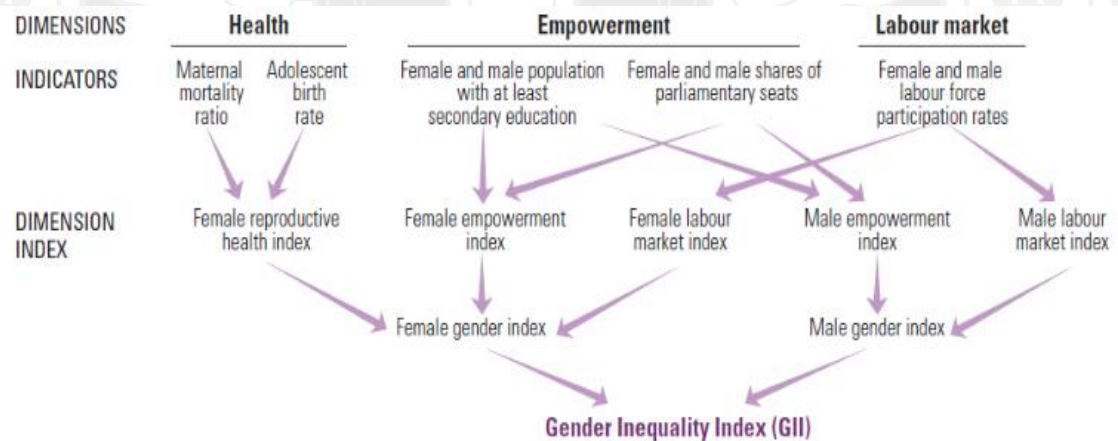


Figure 3.1 The Composition of GII

Source: UNDP (n.d.-b)

### 3.4.2 Independent Variables

The data for the CRM, LRM, and FIRM were obtained from the World Bank databank, and the detailed explications of the explanatory variables are presented as follows (World Bank, n.d.-b).

Model 1: Capability related variables

Three capability related variables were used for panel data analyses.

#### 3.4.2.1 Fertility Rates (FERTILITY)<sup>11</sup>

The data used for the research were “total fertility rate per woman”: the number of children that would be delivered by a woman if she were to live to the end of her childbearing years and have children based on the age-specific fertility rates of the specific year (World Bank, n.d.-b).

#### 3.4.2.2 Compulsory Education Years (EDUCATION)<sup>12</sup>

The definition of “compulsory education years” used here signifies the total period of compulsory education that the children are legally obliged to attend school.

#### 3.4.2.3 Government Spending on Education (EXPENDITURE)<sup>13</sup>

The definition adopted is the “total percentage of government spending on education,” including that internationally funded the government, i.e. local, regional, and central governments. The data are a good indicator for identifying the extent to which the respective government is spending on human capital development and the trend of the specific country; for example, a country with a younger population shows the tendency to allocate a greater budget to education.

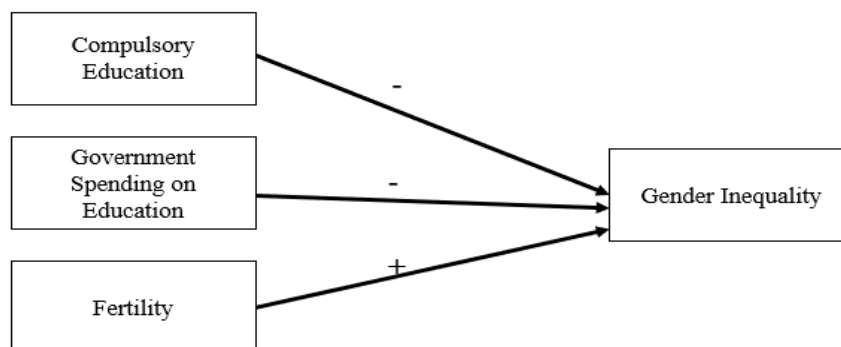


Figure 3.2 Capability-Related Variables

## Model 2: Livelihood- related variables

Three livelihood-related explanatory variables were used for panel data analyses.

### 3.4.2.4 Unemployment Rates (UNEMPLOYMENT)<sup>14</sup>

Unemployment rates mean the percentage of people who belong to the legal working age group, i.e. economically active group of people but out of work, looking for a job, between jobs or available for a job due to getting lost a job or left a job voluntarily (The World Bank, n.d.-b). A person who is out of work but under negotiation for a new job is also counted as an unemployed.

### 3.4.2.5 Percentage of Employers (EMPLOYER)

Employers, by definition, are self-employed, either working alone or with other partners, i.e. jobs where the income is directly linked to the profits from the goods and services produced (World Bank, n.d.-b). There are two types of self-employed workers: one with employees and the other without employees. The percentage of employers offers insights into employment patterns and working conditions and helps to understand a specific socio-economic group. For example, a country with a large portion of self-employed workers without employees would be interpreted as an indicator of the low growth of the formal economic sectors.

### 3.4.2.6 Percentage of Wage and Salaried Workers (WSW)

WSW<sup>15</sup> means employees that have paid occupations where the employers have explicit (oral or written) or implicit job contracts that guarantee a basic salary that is not directly dependent upon the income of the unit for which they work (World Bank, n.d.-a). Employment refers to people that are economically active and are involved in economic activities for pay or profit.

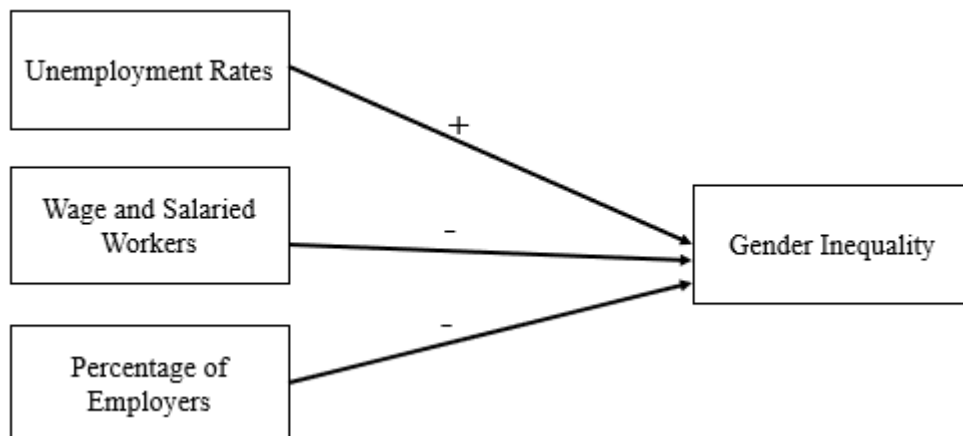


Figure 3.3 Expected Signs of Livelihood-Related Model

### Model 3: Formal institution-related variables

The data from the World Bank database based on the Worldwide Government Indicators (WGI) measuring over 200 countries from six different dimensions since 1996 were utilised for the penal data analyses (Kaufmann et al., 2011). The definition of each explanatory variable is as follows.

#### 3.4.2.7 Regulatory Quality (REGULARITY)

The data were drawn up based on the perceptions of “the ability of the government to implement and formulate sound regulations and policies” that enable and boost private sector development (Kaufmann et al., 2011, p.223).

#### 3.4.2.8 Political Stability and Absence of Violence (STABILITY)

The data measure the perceptions of the possibility that the government will be overthrown or destabilised by violent or unconstitutional means, including politically-motivated terrorism and violence (Kaufmann et al., 2011).

#### 3.4.2.9 Control of Corruption (CORRUPTION)

The data capture the attitudes of “the extent to which public power is used for private gain, including both grand and petty forms of corruption and capture” of the country by private interests and elites (Kaufmann et al., 2011, p.223).

#### 3.4.2.10 Government Effectiveness (EFFECTIVENESS)

The data measure the perceptions of the quality of the civil service and “the quality of public services; the credibility of the government’s commitment to such

policies” (Kaufmann et al., 2011, p.223); the quality of policy formulation and implementation; and the level of its independence from political pressures.

#### 3.4.2.11 Rule of Law (RULE)

This captures attitudes regarding “the extent to which agents abide by and have confidence in the rules of society,” (Kaufmann et al., 2011, p.223) and the quality of the police, the courts, property rights, and contract enforcement, as well as the likelihood of violence and crime.

#### 3.4.2.12 Voice and Accountability (ACCOUNTABILITY)

This captures the attitudes regarding the extent to which the general public of a country are able to participate in choosing their government; to be granted freedom of association and freedom of expression (Kaufmann et al., 2011).

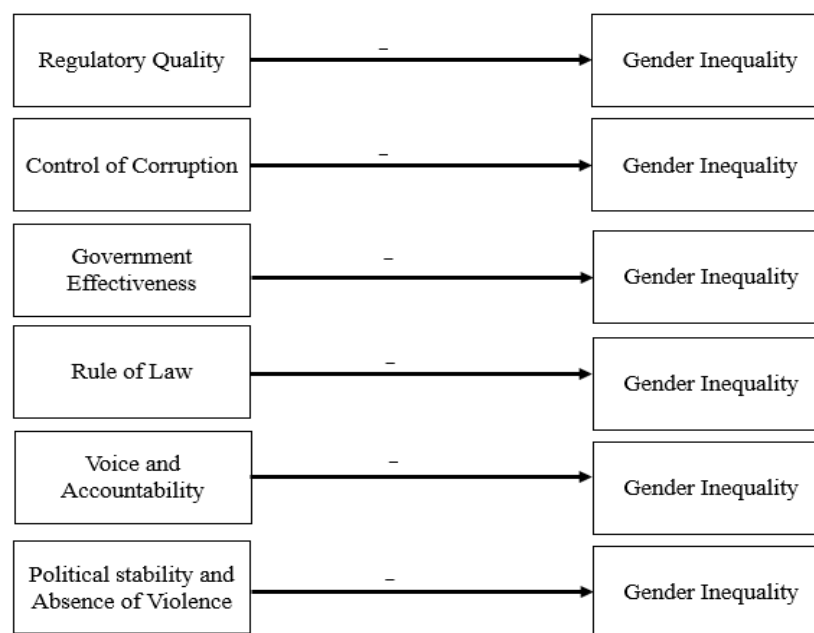


Figure 3.4 Expected Signs of Formal Institution-Related Model

#### Model 4: Informal institution-related variables

The WVS<sup>16</sup> data were used to test the explanatory power of the four variables for the cross-sectional analyses. The four variables are as follows:

1) Perceptions toward business executives (PERBOSS): On the whole, men make better business executives than women do, 2) perceptions toward housewife

(PERHOUSEWIFE): Being a housewife is just as fulfilling as working for pay, 3) perception toward income (PERINCOME): Incomes should be made more equal, and 4) perception toward the government (PERGOV): The government should take more responsibility.

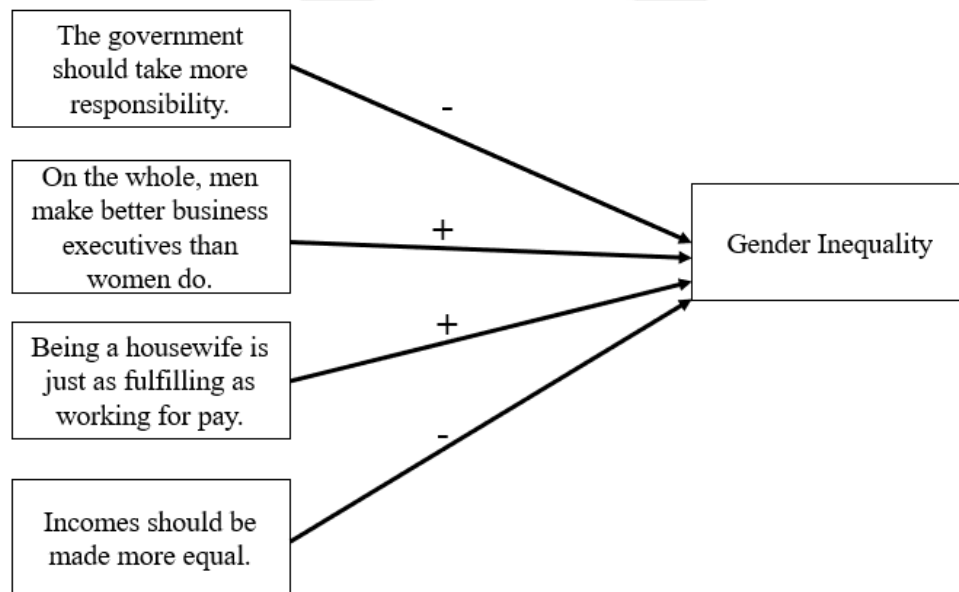


Figure 3.5 Expected Signs of Informal Institution-Related Model

#### Model 5: Power distance-related variables

##### Power distance (POWER)

In order to measure power distance, the Power Distance Index<sup>17</sup> was adopted and utilised for the cross-sectional analyses. The PDI estimates how power and wealth are distributed between people in a particular culture or a country and evaluates how much unequal power distribution is allowed and expected amongst less powerful citizens; hence, it helps to understand how a particular culture deals with inequality amongst people (Hofstede, 1984; Hofstede Insights, n.d.). The scale of the PDI is from 1 to 120, with 120 the worst power distance. For instance, the Arab countries' Power Distance Index is on average at 80, whereas for Austria, it is at 11 (Clearly Cultural, n.d.).

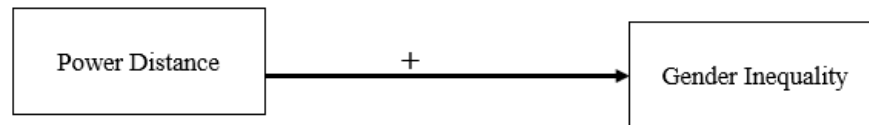


Figure 3.6 Expected Signs of Power Distance Model

Table 3.3 Dependent Variable and Independent Variables  
(GSD: Gender segregated data)

	Factors	Variables	Indicators	Level of measurement
<b>Dependent Variable (DV)</b>				
	Gender inequality	INEQUALITY	Inequality level	Metric (Scale of 0 to 1 and 1 is the highest <sup>18</sup> )
<b>Independent Variables (IVs)</b>				
<b>Capability-related model (CRM)</b>	Compulsory education	EDUCATION	Compulsory education, duration	Metric (years)
	Fertility rates	FERTILITY	Total fertility rates (births per women)	Metric (number of children)
	Government spending on education	EXPENDITURE	Government spending on education	Metric (%)
<b>Livelihood-related model (LRM)</b>	Unemployment rates (% of total/male/female unemployment)	UNEMPLOYMENT	Unemployment rates	Metric (% , GSD)
	Wage and salaried workers (% of total/male/ female)	WSW	Employment in industry (% of employment by ILO estimate)	Metric (% , GSD)

	<b>Factors</b>	<b>Variables</b>	<b>Indicators</b>	<b>Level of measurement</b>
	Percentage of employers (% of total/male/ female employers)	EMPLOYER	% of employers	Metric (% , GSD)
<b>Formal institution-related model (FIRM)</b>	Regulatory quality	REGULARITY		Metric (%)
	Control of corruption	CORRUPTION		Metric (%)
	Government effectiveness	EFFECTIVENESS		Metric (%)
	Rule of Law	RULE		Metric (%)
	Voice and Accountability	ACCOUNTABILITY		Metric (%)
	Political stability and absence of violence	STABILITY		Metric (%)
<b>Informal institution-related model (IIRM): Perceptions toward gender issues</b>	The government should take more responsibility.	PERGOV		Metric (% , GSD)
	On the whole, men make better business executives than women do.	PERBOSS		Metric (% , GSD)
	Being a housewife is just as fulfilling as working for pay.	PERHOUSEWIFE		Metric (% , GSD)
	Incomes should be made more equal.	PERINCOME		Metric (% , GSD)

<b>Factors</b>	<b>Variables</b>	<b>Indicators</b>	<b>Level of measurement</b>
<b>Power distance model (PDM)</b>	Power distance	POWER	Power distance value based on the PDI
			Metric (Scale from 1-120 <sup>19</sup> (low-high))

Source: World Development Indicators; UNDP Gender Inequality Index; World Value Survey data; World Bank governance data; Power Distance Index

### 3.5 Data Collection

For this research, secondary data were used. As the GII data have been collected every five years except for 2013, five different years were utilized for the regression analyses. The sources of the data were as follows.

Table 3.4 Relevant Sources and Scopes of Study

<b>Variables</b>	<b>Source of data</b>	<b>Periods</b>
<b>Dependent Variable</b>		
Gender inequality	UNDP: Gender inequality index (GII) <sup>20</sup>	18-year data (1995-2013): Five different periods 1995, 2000, 2005, 2010, and 2013
<b>Independent Variables</b>		
<b>Capability-related model</b>		
Compulsory education	The World Bank Data Bank: World Development Indicators <sup>21</sup>	Five different periods 1995, 2000, 2005, 2010, and 2013
Fertility rates		
Government spending on education (% of GDP)		
<b>Livelihood-related model</b>		
Unemployment rates	The World Bank Data Bank: World Development Indicators	Five different periods: 1995, 2000, 2005, 2010, and 2013
WSW		
Percentage of employers		
<b>Formal institutions-related model</b>		

Variables	Source of data	Periods
Regulatory quality	The World Bank Data Bank: World Governance Indicators <sup>22</sup>	Four different periods: 2000, 2005, 2010, and 2013
Control of corruption		
Government effectiveness		
Rule of Law		
Voice and Accountability		
Political stability and absence of violence		
<b>Informal institution-related model</b>		
On the whole, men make better business executives than women do.	World Value Survey <sup>23</sup> (Wave 5: 2005-2009)	Used 2005 data from Wave 5 (2005-2009)
Being a housewife is just as fulfilling as working for pay.		
Incomes should be made more equal.		
The government should take more responsibility.		
<b>Power distance model</b>		
Power distance	Hofstede Insights <sup>24</sup>	

Source: World Development Indicators; UNDP Gender Inequality Index;  
World Value Survey data; World Bank governance data; Power Distance Index

### 3.6 The Clarification of the Values of the World Value Survey

The data were utilized from the WVS Wave 5 (2005-2009) for the research; hence, the cross-sectional data for 2005 were used for the regression analyses. Based on the answers, the values were scored from 1 to 4: 1: Don't know; 2: Disagree; 3: Neither; 4: Agree.

## CHAPTER 4

### REGRESSION RESULTS: MACRO-LEVEL ANALYSES

#### 4.1 Data Analyses

In order to analyze the data, the quantitative approach with regression by using panel data for the CRM, LRM, and FIRM or cross-sectional data for the IIRM and PDM were utilized.

##### 4.1.1 Multivariate Regression Models

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###### Model 1: Capability-related regression model

$$\text{INEQ} = \alpha + \beta_1 \text{ FERTILITY} + \beta_2 \text{ EDUCATION} + \beta_3 \text{ EXPENDITURE} + \varepsilon_i$$

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###### Model 2: Livelihoods-related regression model

$$\text{INEQ} = \alpha + \beta_1 \text{ UNEMPLOYMENT} + \beta_2 \text{ EMPLOYER} + \beta_3 \text{ WSW} + \varepsilon_i$$

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###### Model 4: Informal institutions-related regression model

$$\text{INEQ} = \alpha + \beta_1 \text{ PERBOSS} + \beta_2 \text{ PERINCOME} + \beta_3 \text{ PERHOUSEWIFE} + \beta_4 \text{ PERGOV} + \varepsilon_i$$

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**Note:**  $\beta_i$ : Coefficients of independent variables  $\alpha$ : Baseline

##### 4.1.2 Bivariate Regression Models

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###### Model 3: Formal institutions-related regression model

$$\text{INEQ} = \alpha + \beta_1 \text{ REGULARITY} + \varepsilon_i$$

$$\text{INEQ} = \alpha + \beta_2 \text{ CORRUPTION} + \varepsilon_i$$

$$\text{INEQ} = \alpha + \beta_3 \text{ EFFECTIVENESS} + \varepsilon_i$$

$$\text{INEQ} = \alpha + \beta_4 \text{ RULE} + \varepsilon_i$$

$$\text{INEQ} = \alpha + \beta_5 \text{ ACCOUNTABILITY} + \varepsilon_i$$

$$\text{INEQ} = \alpha + \beta_6 \text{ STABILITY} + \varepsilon_i$$

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###### Model 5: Power distance-related regression model

$$\text{INEQ} = \alpha + \beta_1 \text{ POWER} + \varepsilon_i$$

---

**Note:**  $\beta_i$ : Coefficients of independent variables  $\alpha$ : Baseline

## 4.2 Empirical Approach

In this study, two different types of analyses were adopted to explain the determinants.

First, the cross-sectional data for 2005 were used to measure the impacts of informal institutions. As the power distance values were not measured in any specific year, the values were randomly placed for the year 2010 for the analyses. Second, the panel data were utilized from 1995 until 2010. The GII designed by the UNDP was used as the DV, and the data were collected every five years from 1995 to 2010 and 2013. Therefore, the data for the years 1995, 2000, 2005, 2010, and 2013 were adopted for the regression analyses. The data were analyzed using the software Stata version 14.0.

For the panel data analysis, much of the within-country variation in most of the independent variables was not obtained with fixed effects (FE); hence, the random effect (RE) estimation was employed instead<sup>25</sup>. Plumper and Troeger (2007, p.133) explained the reason clearly:

When the fixed-effect model performs the within transformation on a variable with little within variance, the variance of the estimates can approach infinity. Thus, if the within variation becomes very small, the point estimates of the fixed effect estimator become unreliable. In this situation, the fixed-effect model does compute large standard errors as well as the sampling variance gets large. Therefore, the reliability of point predictions is low, and the probability that the estimated coefficient deviates largely from the true coefficient increases.

What this means is that the values of the standard deviation (SD) in a FE model show that the relationships between the IVs and the DV are sufficiently estimated and calculated with the main focus on within variation. Hence, if the within values are too low, there are high chances of losing information. Against this backdrop, the `xtsum`<sup>26</sup> command was introduced to check the overall, between, and within values of the SD. The results showed that the values within the SD were far too low in comparison with the overall and between values, i.e. the average values of the between/within were 2.69

for the CRM and 3.33 for the LRM, which were higher than the threshold value at 2 (Plumper & Troeger, 2007). Therefore, the conclusion was drawn that RE should be employed for the research.

In particular, generalized least squares (GLS) was adopted for this research. This method is usually used to calculate the unknown parameters in a linear regression model when a certain level of correlation between the residuals is presented in the model to forecast the outcomes of a DV by reducing the sum of the square error (Kannu, 2016; StataCorp, 2013; Yohannes, 2016). Table 1 provides descriptive statistics.

Table 4.1 Descriptive Statistics

Model	Variables	Observations	Mean	SD	Min	Max
<b>CRM</b>	FERTILITY	136	2.07	1.01	1.08	7.00
	EDUCATION	98	9.73	1.62	6.00	14.00
	EXPENDITURE	120	4.72	1.64	.94	11.01
<b>LRM</b>	UNEMPLOYMENT	136	7.62	4.16	.62	22.9
	EMPLOYER	136	3.8	1.97	.4	14.94
	WSW	136	68.56	23.26	7.03	97.44
<b>FIRM</b>	REGULARITY	102	69.49	23.02	12.75	99.49
	STABILITY	102	56.43	27.24	2.65	100.00
	CORRUPTION	102	67.03	25.92	8.63	100.00
	EFFECTIVENESS	102	69.93	22.83	5.00	100.00
	RULE	102	67.28	25.77	14.36	100.00
<b>IIRM</b>	ACCOUNTABILITY	102	67.72	25.66	5.21	100.00
	PERBOSS	34	2.41	.82	2.00	4.00
	PERHOUSEWIFE	34	3.65	.77	2.00	4.00
	PERINCOME	34	2.94	1.01	2.00	4.00
	PERGOV	34	3.35	.95	2.00	4.00
<b>PDM</b>	POWER	34	61.47	20.03	31.00	100.00

### 4.3 Diagnostic Test

#### 4.3.1 Auto-Correlation and Heteroskedasticity

As the data for the CRM, LRM, and FIRM covered a long term (over ten years), the serial correlation test was adopted (Greene, 2014). In order to check for autocorrelation, the Wooldridge test for autocorrelation for panel data was utilized. The results showed no first-order autocorrelation in the LRM, while autocorrelation problems were detected for the CRM and FIRM. After checking the autocorrelation, a modified Wald test for group-wise heteroskedasticity to test for heteroskedasticity in the three models was performed. The results indicated that heteroskedasticity problems existed for all three models as the p-values for all three models were below the significant level of one percent. In order to resolve this issue (the heteroskedasticity problem), robust standard errors (RSEs) or White-Huber standard errors were used as RSEs are a reliable procedure yet entirely empirical (Yamano, 2009). The results from all of the related tests are presented in Table 4.2. In short, in order to fix the autocorrelation problems in the CRM and FIRM and the heteroskedasticity in all three models (CRM, LRM, and FIRM), “heteroskedasticity-consistent standard errors,” the RSEs option (using the `vce(robust)`<sup>27</sup> option) in STATA was applied, which produced a “consistent variance-covariance matrix estimator” (StataCorp, 2013, p.372).

Table 4.2 Heteroskedasticity and Autocorrelation Test

	Wooldridge test			Modified Wald test		
	F-test	P-value	Presence of autocorrelation	$\chi^2$	P-value	Presence of heteroskedasticity
<b>CRM</b>	13.274	.002	v	7.8E+31	.001	v
<b>LRM</b>	1.351	.255	x	8.7E+29	.001	v
<b>FIRM</b>	30.95	.001	v	2.00E+31	.001	v

### 4.3.2 Multicollinearity

Pearson's correlation test was adopted to test the "strength and direction of the association that exists between two continuous variables" by generating coefficient values (Laerd statistics, n.d.). The objective of the test is to find out the best-fit line through the data between two variables, and the coefficient value ( $r$ ) signifies how far each data's value is from the best-fit line (Laerd statistics, n.d.). The range of the coefficient values was from -1 to 1, i.e. "either a perfect negative or positive linear relationship or 0 means no relationship" (Laerd statistics, n.d.). The strength of the association can be divided based on the guideline suggested by Cohen (1988), and the guideline is as follows:

Table 4.3 Strength of Association

Coefficient Value	Strength of Association
$.1 <  r  < .3$	small correlation
$.3 <  r  < .5$	medium/moderate correlation
$ r  > .5$	large/strong correlation

#### 4.3.2.1 Model 1: Capability-Related Model (CRM)

Table 4.4 Pearson Correlation Test Results

	EDUCATION	EXPENDITURE	FERTILITY
EDUCATION	1.000		
EXPENDITURE	.158 (.139)	1.000	
FERTILITY	-.185 (.068)	.003 (.975)	1.000

As Table 4.3 shows above, the Pearson correlation coefficients ( $r$ ) for the CRM—EDUCATION and EXPENDITURE; EDUCATION and FERTILITY; and EXPENDITURE and FERTILITY—were not significant as the  $p$ -values were

greater than .05, that is .139, .068, and .974 respectively. The coefficient values for the three explanatory variables were less than .3, which signifies small correlations.

#### 4.3.2.2 Model 2: Livelihood-Related Model (LRM)

Table 4.5 Pearson Correlation Test Results

	UNEMPLOYMENT	EMPLOYER	WSW
UNEMPLOYMENT	1.000		
EMPLOYER	.101 (.242)	1.000	
WSW	.175* (.041)	.255* (.003)	1.000

As for the LRM, the p-values for UNEMPLOYMENT and EMPLOYER were greater than .05, which was not significant. The coefficient value was also less than .3, which is a small correlation. On the other hand, the coefficient values between UNEMPLOYMENT and WSW and between EMPLOYER and WSW were significant at .041 and .002 respectively; however, the values were less than three, which showed a small correlation.

#### 4.3.2.3 Model 3: Formal Institution-Related Model (FIRM)

Unlike the other models, as the correlation results for the formal institution-related variables were either highly correlated or the  $p > .5$  due to the nature of the variables, bivariate regression analyses were employed, i.e. the six variables: regulatory quality, control of corruption, government effectiveness, the rule of law, political stability and absence of violence, and voice and accountability. These can affect one another. For instance, an effective government tends to have better regulatory quality and the rule of law and to be politically stable. Moreover, a politically stable government is likely to be more responsible for the public and reflects the public's opinions more effectively and efficiently. Due to the facts specified above, the variables are highly correlated.

## 4.3.2.4 Model 4: Informal Institution-Related Model (IIRM)

Table 4.6 Pearson Correlation Test Results

	PERGOV	PERBOSS	PERHOUSEWIFE	PERINCOME
PERGOV	1.000			
PERBOSS	.197 (.265)	1.000		
PERHOUSEWIFE	.175 (.323)	.045 (.801)	1.000	
PERINCOME	.022 (.901)	-.043 (.81)	-.027 (.878)	1.000

As for the FIRM, the coefficient values were less than .2, which signified a small correlation. As for the p-values, all of the values were greater than .05. Therefore, they did not have significant relationships amongst the explanatory variables.

## 4.3.2.5 Model 5: Power Distance Model (PDM)

For model 5, bivariate regression analyses were also utilised. According to the Pearson correlation results shown above, there was no multicollinearity problem. Hence, the conclusion can be drawn that the variables were not highly correlated, i.e.  $.1 < |r| < .3$ . In the next step, the regression tests were carried out.

## 4.4 Regression Results

### 4.4.1 Capability-Related Model (CRM)

Table 4.7 Regression Results

Dependent variable: INEQUALITY		
Independent variables	Coefficient/ p-values (Robust Std. Err.)	z-stat
EDUCATION	-.01/.007*** (.004)	-2.69
EXPENDITURE	-.026/.003*** (.009)	-2.93
FERTILITY	.116/.001*** (.025)	4.59
N	86	
R <sup>2</sup>	.546	
Adjusted R <sup>2</sup>	.533	

**Note:** N=number of observations. \*\*\* significant at 1%, \*\* significant at 5%, and \* significant at 10%

Regarding the capability-related variables in the CRM, the multivariate regression analysis results showed that EDUCATION, EXPENDITURE, and FERTILITY had highly significant impacts on GI. Various studies' findings (Branisa et al., 2013; Charles & Bradley, 2002; Correll et al., 2007; Seguino et al., 2013) presented that the duration of compulsory education considerably affects GI. LDCs and developing countries, in particular, provide a relatively short period of compulsory education, and unstable economic situations make the public tend not to invest in education because opportunity costs are much higher than the benefits received from sending girls to school. According to Branisa et al. (2012), education plays a crucial role in reducing inequality as it promotes negotiating power and the autonomy of women and girls. In order to further knowledge and skills, the extension of compulsory education is essential, as it provides girls with the minimal necessary qualification to obtain an adequately-paying job (UNDP, 2010). The regression result supports human capital theory because it highlights the significant role of public spending on education: investment in education is beneficial for the country as education will boost knowledge

and skills that are key for development. Educational advance led by the expansion of government expenditure would considerably help to reduce gender discrimination because it will promote access to higher education for female students and enable them to get better access to the job market, i.e. a higher chance to get a better job. Many studies underlined the importance of the expansion of government spending on education (Becker, 1994; Becker, 1992; Becker et al., 1990; Branisa et al., 2012; Charles, 2011; Doyle & Weale, 1994; UNDP, 2013).

The highly significant relationship between FERTILITY and the DV is consistent with other studies' finding, that is fertility considerably affects GI. When countries grant more rights to women, such as fertility decision-making, the greater the chance of having better access to education and economic activities is given to them (Becker et al., 1990; Duflo, 2011; UN, Department of Economic and Social Affairs, 2017). In many cases, men in the LDCs and developing countries make decisions on fertility control, not the women, who mainly assume caretaker roles. It has gravely hindered improving GE because the women will have little chance of obtaining better education and not be allowed to choose their life paths (Becker, 1994; Doyle & Weale, 1994; Kim, 2017; Seguino, 2000a; Yoon, 2017).

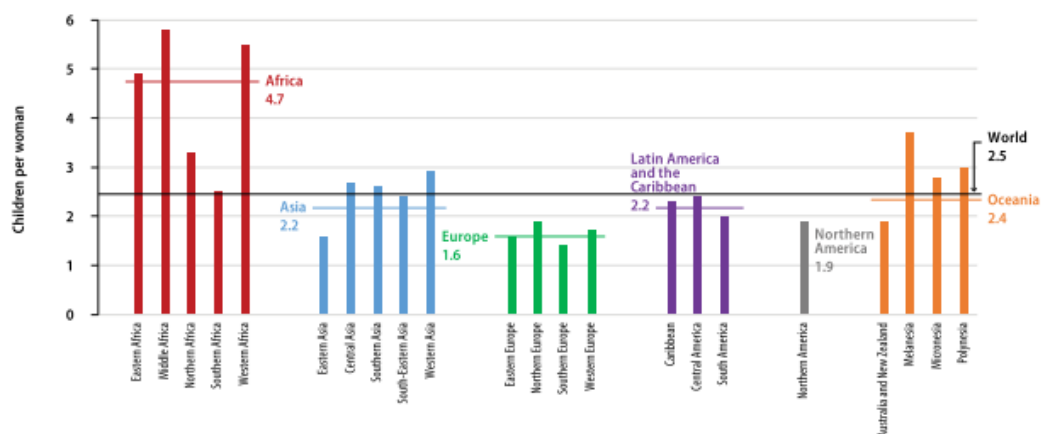


Figure 4.1 Total Fertility by Region and Major Area 2010-2015

Source: World Fertility Patterns 2015 Data Booklet (UN, 2015, p.3)

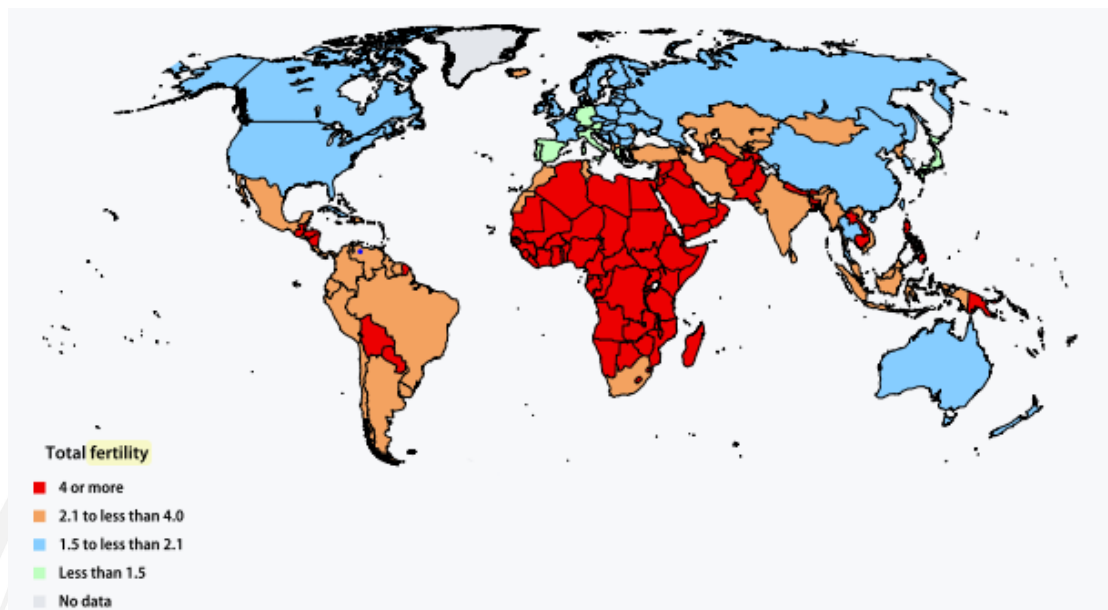


Figure 4.2 Total Fertility (Children per Women) 1990-1995

Source: World fertility patterns 2015 data booklet (UN, 2015, p.4)

The regression result lends support to human capital theory because the theory highlights the importance of promoting the knowledge and skills of a nation as a crucial factor for development. The decrease in fertility rates would enable women possessing abilities and skills to get a paid and a better job. This means that a country should be able to maximise the utilisation of its human capital at home.

Social institutions such as the education system, the family system, and economic institutions and religions have altered due to changes in lifestyles, fertility rates, population changes, and migration. Thanks to these changes, women have a greater chance of participating in economic activities, and GE, in turn, has improved. For example, the number of mothers that are primary bread earners and fathers that take care of the children is on the rise in the OECD countries such as the U.S., Sweden, and Germany (Korpi, 2000; OECD, 2016b). These changes help to break the stereotype that a father earns money, and a mother takes care of the children and does domestic work with minimal help from the father. When comparing the three coefficient values, FERTILITY can be seen to impact the DV the most.

#### 4.4.2 Livelihood-Related Model (LRM)

Table 4.8 Regression Results

Dependent variable: INEQUALITY		
Independent variables	Coefficient/ p-values (Robust Std. Err.)	z-stat
UNEMPLOYMENT	.004/.082* (.002)	1.74
EMPLOYER	-.006/.096* (.004)	-1.66
WSW	-.006/.001 *** (.001)	-11.04
N	129	
R <sup>2</sup>	.61	
Adjusted R <sup>2</sup>	.606	

**Note:** N=number of observations. \*\*\* significant at 1%, \*\* significant at 5%, and \* significant at 10%

Regarding the LRM, the regression results suggest that all three variables—UNEMPLOYMENT, EMPLOYER, and WSW—had significant impacts on GI. These results are the same as can be found in other research (Becker, 1994; Ridgeway, 2011; Seguino et al., 2013; Seguino, 2000). Wage and salaried workers are different from self-employed workers. The higher percentage of WSW and employers with employees in a country can be an indicator of advanced economic development, i.e. developed countries. It is consistent with other studies' results. Having an adequately-paying job and obtaining access to necessary resources considerably strengthen the voices of women in social, economic, and political arenas (Berik et al., 2004; Duflo, 2012; Forsythe et al., 2000; Lemons & Parzinger, 2007; Seguino, 2000; Swamy, 2004; Wood, 1991; Young, 1995). Income is a crucial factor in reducing GI as financial security helps to obtain a stable fallback position, and a woman will have the wherewithal to deal with enforceable contracts and symmetrical bargaining power with men (Branisa et al., 2013; Braunstein, 2007; Juhn et al., 2016; Seguino et al., 2013; Swamy, 2004). Ultimately, for women, having a paid job will be considerably beneficial for enhancing equality as

income security empowers women (Berik et al., 2004; Forsythe et al., 2000; Seguino, 2000; Swamy, 2004; Becker, 1992).

As neoclassical growth theory suggests, abundant physical and human capital, including unskilled workers, has helped to boost productivity and have led to economic development (Braunstein, 2008; Ferguson, 2008; Seguino, 2000). In this context, the key characteristic of the increase in women's commercial employment in developing countries, in particular, is the wage increase of unskilled workers because unskilled workers are paid relatively higher due to the high demand for unskilled workers (Becker, 1957; Becker et al., 1990; Toulemonde, 2014). This has, in turn, helped to reduce the wage and employment gender gap. For instance, the boost in women's participation in the paid labour force has notably contributed to reducing dependency ratios in East Asia (Braunstein, 2007).

Unemployment means that a person is denied or has limited access to the essentials to provide for his or her basic needs and the proportion of working-age people that do not have a job or are looking for a job (UNDP, 2013, World Bank, n.d.-b). A majority of unemployed women would not have financial, social, or economic security; hence, they have to solely rely on government support. Thus, this will cause worsening inequality. Encouraging unemployed women to join or re-join the labour market would help with economic development and reduce inequality (Becker, 1994; Becker, 1992; Branisa et al., 2010; UNDP, 2013).

#### 4.4.3 Formal Institution-Related Model (FIRM)

Table 4.9 Regression Results

Dependent variable: INEQUALITY					
Independent variables	Coefficient/ p-values (Robust Std. Err.)	N	R <sup>2</sup>	Adjusted R <sup>2</sup>	z-stat
REGULARITY	-.004/.001 *** (.001)	96	.591	.587	-4.51
CORRUPTION	-.004/.002*** (.001)	96	.53	.526	-3.16
EFFECTIVENESS	-.003/.069*	96	.535	.53	-1.82

Dependent variable: INEQUALITY					
Independent variables	Coefficient/ p-values (Robust Std. Err.)	N	R <sup>2</sup>	Adjusted R <sup>2</sup>	z-stat
	(.002)				
RULE	-.004/.001 ***	96	.583	.579	-7.11
	(.001)				
ACCOUNTABILITY	-.003/.001***	96	.499	.494	-3.75
	(.001)				
STABILITY	-.002/.003***	96	.569	.564	-2.99
	(.001)				

**Note:** N=number of observations. \*\*\* significant at 1%, \*\* significant at 5%, and \* significant at 10%

In the FIRM, the bivariate regression results showed that all six variables for the FIRM negatively impacted GI, i.e. they significantly help to promote GE. These results support new institutionalism (March & Olsen, 2009; Ferguson, 1984; Kaufmann et al., 2011; Seguino, 1997a; Waylen, 2014). Countries with good formal institutions tend to deal with GI issues better than those that do not have them. For example, the more corrupt countries are likely to have more discrimination cases and to place greater restrictions on women's social participation than their less corrupt counterparts (Dollar et al., 1999; Mauro, 1995).

#### 4.4.4 Informal Institution-Related Model (IIRM)

Table 4.10 Regression Results

Dependent variable: INEQUALITY		
Independent variables	Coefficient/ p-values (Robust Std. Err.)	t-stat
PERGOV	.037/.175 (.027)	1.39
PERBOSS	.101/.001*** (.026)	3.93
PERHOUSEWIFE	-.051/.258 (.044)	-1.15
PERINCOME	.006/.806 (.026)	.25

N	34
R <sup>2</sup>	.327
Adjusted R <sup>2</sup>	.234

**Note:** N=number of observations. \*\*\* significant at 1%, \*\* significant at 5%, and \* significant at 10%

The linear regression results for the IIRM showed that the R<sup>2</sup> value and adjusted R<sup>2</sup> value stood at .326 and .233, respectively. According to Cohen (1988), Mooi, Sarstedt, & Mooi-Reci (2017), and Falk and Miller (1992), R<sup>2</sup> values that are higher than .26 can be considered “significant,” and the values around .13 are deemed to be “moderate” in explaining the variance of a particular endogenous structure.

According to the results, perceptions toward business executives, “Men make better business executives than women do” (PERBOSS), affected GI highly significantly. This result supports the cultural theory. Socially-prevailing gender stereotypes and perceptions have worsened gender issues (Keesing, 1974; March & Olsen, 2009; Waylen, 2014). Cultural theory particularly emphasizes the importance of how people behave specified by the culture to act in an acceptable manner and the culture influences people’s cognitive system (Geertz, 1973; Goodenough, 1961; Harris, 1968; Keesing, 1974). The conclusion can be drawn from the regression results: the perception that men should be in charge of social, economic, and political institutions makes inequality worse. For example, marriage as part of a social institution underlines the subordination of women and gives more social and economic power to men in most Asian, African, Arab, and Latin American countries (Goodenough, 1961; Korpi, 2000). Cultural stereotypes are difficult to change and have made inequality worse.

#### 4.4.5 Power Distance Model (PDM)

Table 4.11 Regression Results

Dependent variable: INEQUALITY		
Independent variables	Coefficient/ p-values (Robust Std. Err.)	t-stat
POWER	.005/.001*** (.001)	5.16
N	34	
R <sup>2</sup>	.373	
Adjusted R <sup>2</sup>	.353	

**Note:** N=number of observations. \*\*\* significant at 1%, \*\* significant at 5%, and \* significant at 10%

The bivariate regression results for the PDM show that POWER affected GI highly significantly. This result lends support to cultural dimension theory, according to which people from different cultures act in a different way based on power distance, i.e. the distribution of power and wealth (Hofstede, Hofstede, & Minkov, n.d.). Countries with high power distance cultures, for example in Asia, Africa, and Latin America are more accepting of inequality regarding gender, wealth, and status and recognize them as part of their culture (Hofstede, 1984). These cultures are communal and focus on connectedness with others, and the members of society are greatly influenced by social relationships, anticipated behaviours, and socially-perceived thoughts (Cortina, Arel, & Smith-Darden, 2017; Hofstede, 1984).

## CHAPTER 5

### EMPIRICAL RESULTS OF THE MICRO-LEVEL ANALYSES

For the sub-analysis, disaggregated analyses were used to test the heterogeneity across the factors, such as OECD membership, gender, and regions.

#### 5.1 Interpretation of Empirical Results

##### 5.1.1 OECD vs. Non-OECD Countries

Table 5.1 Descriptive Statistics

OECD membership	Freq.	Per cent	Cum.
Non-OECD	64	47.06	47.06
OECD	72	52.94	100
<b>Total</b>	136	100	

For the sub-analyses, the only determinants that were significant based on the p-values were placed in the table in order to examine the different effects of the factors more efficiently. The regression results for the OECD countries are presented first.

## 5.1.1.1 Regression Results for OECD Countries

Table 5.2 Regression Results for OECD Countries

Independent variables		Dependent variable: INEQUALITY				
		Coefficient/ p-values (Robust Std. Err.)	N	R <sup>2</sup>	Adjusted R <sup>2</sup>	z-stat
CRM	FERTILITY	.086/.001*** (.02)	34	.5	.476	4.35
LRM	UNEMPLOYMENT	.01/.001*** (.002)	59	.625	.606	3.93
	WSW	-.004/.001*** (.001)	59	.625	.606	-7.56
FIRM	REGULARITY	-.002/.051** (.012)	44	.234	.215	-1.96
	EFFECTIVENESS	-.003/.014** (.001)	44	.144	.123	-2.45

**Note:** N=number of observations. \*\*\* significant at 1%, \*\* significant at 5%, and \* significant at 10%

According to the multivariate regression results for the CRM, FERTILITY (coefficient = .086,  $p < .001$ ) had a significant positive impact on GI.

When it comes to the LRM, UNEMPLOYMENT (coefficient = .01,  $p < .001$ ) and WSW (coefficient = -.004,  $p < .001$ ) was highly associated with the GI. It is safe to say that giving women financial power would cause alleviating GI considerably.

As for the FIRM of the OECD countries, REGULARITY (coefficient = -.002,  $p < .051$ ) and EFFECTIVENESS (coefficient = -.003,  $p < .014$ ) had significant impacts on GI. Considering the R<sup>2</sup> values, as Cohen (1988), Mooi et al. (2017), and Falk and Miller (1992) have specified, it can be said that the R<sup>2</sup> values of REGULARITY and EFFECTIVENESS moderately explained GI. According to the research by the OECD (2013, p.44), fundamental rights are well guaranteed in OECD countries.<sup>28</sup> The value of the rule of law index was at 8.0; however, the regulatory enforcement values were low on average when compared with the fundamental rights values. This is consistent with the regression results because REGULARITY turned out to be significantly correlated with GI. Thus, regularity quality needs to be improved in order to reduce GI for the OECD countries. The results show that CORRUPTION,

RULE, ACCOUNTABILITY, and STABILITY do not have impacts on GI amongst the OECD countries. None of the factors of the IIRM and PDM influenced GI in the OECD countries.

### 5.1.1.2 Regression Results for non-OECD Countries

Table 5.3 Regression Results for Non-OECD Countries

Dependent variable: INEQUALITY						
Independent variables	Coefficient/ p-values (Robust Std. Err.)	N	R <sup>2</sup>	Adjusted R <sup>2</sup>	z-stat	
CRM	EDUCATION	-.01/.001*** (.003)	52	.708	.69	-3.90
	FERTILITY	.13/.012 ** (.053)	52	.708	.69	2.50
	EXPENDITURE	-.036/.016** (.015)	52	.708	.69	-2.41
LRM	WSW	-.009/.001*** (.001)	70	.618	.607	-10.65
FIRM	REGULARITY	-.003/.001*** (.001)	52	.415	.404	-3.5
	CORRUPTION	-.005/.027** (.002)	52	.512	.502	-2.21
	RULE	-.005/.006*** (.002)	52	.571	.562	-2.77
	ACCOUNTABILITY	-.006/.001*** (.001)	52	.649	.642	-6.67
IIRM	PERBOSS	.167/.001*** (.029)	18	.453	.326	5.71(t-stat)
	PERHOUSEWIFE	.042/.02** (.016)	18	.453	.326	2.6 (t-stat)
PDM	POWER	.004/.01*** (.001)	18	.364	.324	2.92(t-stat)

**Note:** N=number of observations. \*\*\* significant at 1%, \*\* significant at 5%, and \* significant at 10%

When it comes to the CRM for the non-OECD countries, the multivariate regression results showed that all three factors were significantly associated with GI.

FERTILITY (coefficient = .13,  $p < .012$ ) had a highly significant negative impact on the GI. Numerous study results have shown that fertility rates are closely related to GI (Becker et al., 1990; Cuberes & Teignier-Baqué, 2012; Galor & Weil, 2016; Psacharopoulos & Woodhall, 1985).

When people “get utility directly from the process of research or education, they will only make these investments if they can profit from them sufficiently to justify the opportunity cost” (Parker, 2012, p.4). If knowledge is deemed to be a rival good so that people must purchase it, it will not be used to the optimal level (Parker, 2012). In this regard, in order to make knowledge freely available to the public, government spending on education and research has been on the rise and the years of compulsory education have been extended (Becker, 1994; Sabatier & Christopher, 2007; UNESCO Institute for Statistics, 2017; Yamano, 2009). Opportunity costs and an insecure economic system will not guarantee to get profits from direct and indirect expenses such as school fees; therefore, parents tend not to send their daughters to school in developing countries and LDCs. In line with this idea, providing compulsory education is crucial for developing countries and LDCs to decrease GI, and the regression results confirmed this.

There are a plethora of studies suggesting a relationship between education and fertility rates; that is, education level affects fertility rates (Barro, 2001; Becker et al., 1990; Cuberes & Teignier-Baqué, 2012; Galor & Weil, 2016; Psacharopoulos & Woodhall, 1985). Fertility rates and education level are negatively correlated: the higher education level is, the lower the fertility rates are (Keller, 2006). There is evidence that a higher level of education leads to lower fertility rates, and education, in particular, considerably helps to reduce fertility in developing countries (Psacharopoulos & Woodhall, 1985). Women who are highly educated have more negotiating power at home and consider the opportunity costs and child-rearing costs before having a child. Economic development and fertility rates are also negatively correlated: the higher the fertility rates are, the slower economic growth is (Galor & Weil, 2016). In the past, when most families relied on farming, children were vital assets. Nowadays due to the economic growth, wages are higher than income through family farms as such the value of children has changed from a quantitative to a qualitative perspective which means providing a child with better quality education, i.e.

human capital investment (Barro, 1996; Cuberes & Teignier-Baqué, 2012). The change has caused the demographic transition to have fewer children than in the past. EDUCATION and EXPENDITURE were highly associated with GI and underline the importance of investment in human capital. Since the respective government understands the crucial role of education that will bring about considerable benefits from accumulating quality human capital, investment in education has been continuously on the rise (Gradstein & Justman, 2002). In short, as the returns from human capital are increasing, higher rates of investment in education and training are occurring, and this ultimately leads to faster economic growth (Becker et al., 1990). Romer (2008)<sup>29</sup> also emphasized the crucial role of human capital: the “production of consumer goods as a function of the stock of knowledge and other inputs exhibits increasing returns, more precisely, knowledge may have an increasing marginal product” (p.1003). In addition, the accumulation of quality human capital causes spillover effects<sup>30</sup> in the community, and knowledge facilitates economic development in a country thanks to positive externalities (Keller, 2006).

Regarding the LRM, only WSW was significantly correlated with GI for the non-OECD countries.

The regression results for the FIRM showed that four factors, i.e. REGULARITY, CORRUPTION, RULE, and ACCOUNTABILITY, significantly affected GI in the non-OECD countries.

For the IIRM, the results showed that PERBOSS (coefficient = .166,  $p < .001$ ) and PERHOUSEWIFE (coefficient = .042,  $p < .02$ ) had significant negative impacts on GI. These results indicate that in general, social norms and cultures related to gender roles suggest that women should assume a caretaker role and do housework. The traditional female images and roles considerably harm their potential and ability by imposing entrenched gender roles and images of women. According to the ILO's statistics, 58 percent of women were engaged in unpaid work in developing countries in 2003-2008 (ILO, 2002, p.206).

Unlike the regression result for the PDM of the OECD countries, POWER (coefficient = .004,  $p < .01$ ) affected GI highly significantly amongst the non-OECD countries. This is understandable considering the average values of POWER amongst the OECD and non-OECD countries, which was 50 and 74, respectively.

### 5.1.2 Gender

Regarding gender, sex-aggregated data were used, and the data were available for the LRM and IIRM.

Table 5.4 Regression Results for Males

Dependent variable: INEQUALITY						
	Independent variables	Coefficient/ p-values (Robust Std. Err.)	N	R <sup>2</sup>	Adjusted R <sup>2</sup>	z-stat
LRM	EMPLOYERMale	-.009/.048** (.004)	129	.596	.596	-1.98
	WSWMale	-.006/.001*** (.001)	129	.596	.596	-9.87
IIRM	PERBOSSMale	.099/.002*** (.029)	34	.35	.26	3.41(t-stat)

**Note:** N=number of observations. \*\*\* significant at 1%, \*\* significant at 5%, and \* significant at 10%

According to the regression results for the LRM, male employer rates (EMPLOYERMale: coefficient = -.009,  $p < .048$ ) and the percentage of wage and salaried male workers (WSWMale: coefficient = -.006,  $p < .001$ ) had highly significant impacts on GI.

One of the main reasons for the results is because of informal employment. There are two types of informal employment according to the ILO (2002, p.12): 1) “Informal employment in informal enterprises (small unregistered or unincorporated enterprises), including employers, employees, own account operators, and unpaid family workers in informal enterprises”; and 2) “informal employment outside informal enterprises (for formal enterprises, for households, or with no fixed employer), including domestic workers, casual or day laborers, temporary or part-time workers, industrial outworkers (including home-workers), and unregistered or undeclared workers.” Many formal and informal sectors are dynamically intertwined with one another as many informal companies, i.e. employment in the periphery,<sup>31</sup> take a role as a sub-contractor, such as a distributor or producer of goods for formal companies in core industrial sectors (The Open University, 2016, p.26). Moreover, formal companies also hire employees under informal employment formats, i.e. temporary workers, part-

time workers, industrial outworkers, casual day laborers, and so forth. Therefore, if a male employer hires part-time or temporary female workers in an informal setting or if the scale of the business is too small, so the company is seen as an informal enterprise, but if the employees have properly paid jobs or are “paid domestic workers employed by households as informal jobs,” the female workers still have paid jobs but in informal sectors (ILO, 2002, p.13). These cases are prevalent in both developing and developed countries. According to the ILO statistics, female wage employment as a percentage of non-agricultural informal employment in North Africa, Sub-Saharan Africa, Latin America, and Asia is at 28, 29, 42 and 37 percent, respectively (ILO, 2002, p.20). For the case of non-standard employment in the OECD countries, women’s share in part-time employment in OECD from 1990 till 1998 accounted for 73.6 percent (ILO, 2002, p.28). In this regard, the results can be understood in the context that higher rates of male employers would help to reduce GI as they provide female workers with more job opportunities in a flexible setting. The regression results present different perspectives, as most studies focus on the impact on the increase in the number of female workers, and the increase in female workers itself has been considered beneficial in terms of reducing inequality.

As for the IIRM, only perceptions toward business executives (PERBOSSMale)—Men make better business executives than women do— were highly significantly associated with GI (coefficient = .099,  $p < .002$ ).

Table 5.5 Regression Results for Females

		Dependent variable: INEQUALITY				
	Independent variables	Coefficient/ p-values (Robust Std. Err.)	N	R <sup>2</sup>	Adjusted R <sup>2</sup>	z-stat/t-stat
LRM	UNEMPLOYMENTFemale	.004/.057 * (.002)	129	.63	.627	1.90
	WSWFemale	-.006/.001*** (.001)	129	.63	.627	-12.65
IIRM	PERBOSSFemale	.154/.001*** (.025)	34	.232	.126	6.13 (t-stat)

**Note:** N=number of observations. \*\*\* significant at 1%, \*\* significant at 5%, and \* significant at 10%

The regression results for the LRM presented that the percentage of female wage and salaried workers (WSWFemale) and female unemployment rates (UNEMPLOYMENTFemale) significantly affected GI, which is consistent with other studies' results: granting women greater financial accessibility would boost women's status socially and politically and this will, in turn, help to reduce inequality as it enables them to be independent (Aghion et al., 1998; Becker, 1957, 1994; Rajivan, 2010). WSWFemale influenced inequality the most significantly (coefficient = -.006,  $p < .001$ ).

Developing countries recorded 1.3 percent of the ratios of female-to-male unemployment rates compared to 1.1 percent in developed countries, which is due to the unstable labour markets (ILO, 2018, p.7). The lack of social protection, deep-rooted gender roles, and labour market discrimination further prevent women from obtaining a job in developing countries. According to OECD research (Turnham and Eröcal, 1990), unemployment is closely related to education level: the poor with an ill-educated female would not have sufficient resources such as cash, qualifications, or connections to enter the job market even as an apprentice or trainee.

These results support neoclassical growth theory, according to which economic growth based on the division of labour and specialisation has caused hectic competition; hence, discriminatory practices such as employing male workers over their female counterparts tend to wither away (Forsythe et al., 2000; Seguino, 2000a). Moreover, according to this theory, the female labour force has been recognised as potential

untapped human capital for commercial employment; therefore, creating paid job opportunities is inevitable to boost the national income (Braunstein, 2008). In a word, fast economic growth makes employers look for other available and abundant human capital such as female workers, and this eventually will lead to promoting equality. Ultimately, economic growth has contributed to reducing GI (Forsythe et al., 2000). For the IIRM, the results indicated that PERBOSSFemale (coefficient = .154,  $p < .001$ ) has a highly significant positive impact on GI. As Cohen (1988), Mooi et al. (2017), and Falk and Miller (1992) mentioned,  $R^2$  values around 0.13 are moderate in terms of explaining the variance of a specific endogenous structure. If the value is less than 0.02, it is deemed to be weak (Cohen, 1988; Mooi et al., 2017). Therefore, the adjusted  $R^2$  value of 0.12 shows that PERBOSSFemale moderately explains GI.

The regression results showed that both male and female PERBOSS impact GE negatively. It makes sense that general perceptions prevent women from assuming managerial or executive positions, even though they have the same qualifications and ability as their male counterparts. For this reason, much less opportunity has been given to women: less than 2 percent of women have taken positions as directors of boards in Japan, Jordan, Bahrain, and Qatar (ILO, 2002). When comparing the results, PERBOSSFemale (coefficient = .154,  $p < .001$ ) can be seen to have had a more significant impact on GI than PERBOSSMale (coefficient = .099,  $p < .002$ ), which means that the perceptions held by women would affect inequality more than those of men. Informal institutions, which are deemed to be “self-enforcing” and govern people’s behaviours, including societal, religious, and civic rules and organisations, are immensely influenced by social and cultural factors (Helmke & Levitsky, 2004, p.727). In the case of the ROK, for example, the Confucian social order makes women subordinate to men and assigns women social roles, such as being chaste or being a dedicated wife and mother for the family (Kim, 2018). Therefore, it is a common perception that men should be in charge of the decision-making processes at home and work (Kim, 2017). This example reflects that culture and social norms shape power relations and preferences between men and women, i.e. they allocate socially-accepted appropriate roles for men and women (World Bank, 2001). In this context, it is understandable why a higher proportion of women than men perceive that men make better business executives than women do (World Value Survey, n.d.b).

The results confirm the cultural theory because informal institutions, such as culture and social norms, regulate and shape people's behaviours, thoughts, and shared values. If people do not follow certain "behavioural regularities," they will face external sanctions such as physical discomfort, and the behavioural regularities are embedded throughout the society (Helmke & Levitsky, 2004, p.727). According to the ILO (ILO, 2002), the traditional views closely correlate with female employment rates. Therefore, the biased ratio between female and male managerial positions can be explained based on cultural theory. Culture and social norms, whereby it is believed that men can be better executives than women, are well reflected in the results because PERBOSSMale and PERBOSSFemale turned out to highly significantly affect GI. For instance, in the upper management positions and public offices in the ROK, the ratio of women to men is 1 to 9, and the ratio is below some of the world's least developed countries, such as Syria (Kwon, 2014). In this context, it is a widespread perception that men should take a managerial role in the company regardless of their actual ability and qualifications. Therefore, if an executive position opens, there is a high chance that a man will get the job.

### 5.1.3 Region

Table 5.6 Descriptive Statistics

Region	Freq.	Per cent	Cum.
Africa	12	8.82	8.82
The Americas	24	17.65	26.47
Asia	28	20.59	47.06
Europe	68	50.00	97.06
Oceania	4	2.94	100
Total	136	100	

Out of 34 countries, Australia is the only country that belongs to Oceania. Therefore, it was excluded from the sub-analysis.

## 5.1.3.1 Africa

Table 5.7 Regression Results for Africa

		Dependent variable: INEQUALITY				
	Independent variables	Coefficient/ p-values (Robust Std. Err.)	N	R <sup>2</sup>	Adjusted R <sup>2</sup>	z-stat
LRM	UNEMPLOYMENT	.015/.001*** (.001)	9	.78	.647	21.64
	EMPLOYER	.008/.001*** (.001)	9	.78	.647	10.4
	WSW	-.005/.001*** (.001)	9	.78	.647	-28.08

**Note:** N=number of observations. \*\*\* significant at 1%, \*\* significant at 5%, and \* significant at 10%

When it comes to Africa, all three determinants in the LRM profoundly affected GI. UNEMPLOYMENT (coefficient = .015,  $p < .001$ ) had the most significant impact on the DV among the three variables. In Africa, women's participation in economic activities is socially and culturally limited compared to other regions, and women are not allowed to purchase land due to biased property rights, for instance, if the husband works the land long enough, the wife may lose her property rights (Braunstein, 2007, p.10). Considering these facts, being a female employer would be extremely challenging for women in Africa, and the regression results reflected this situation. EMPLOYER (coefficient = .008,  $p < .001$ ) had a highly significant negative impact on GI. According to the research by the ILO (2002), the profitability of female-owned enterprises in rural Ethiopia is much lower than that of male-owned ones and "value-added per worker managed by women in Sub-Saharan Africa accounted for only six to eight per cent" (p.201). This trend is mainly because accessibility to the necessary resources such as credit markets and collateral is granted differently based on gender. The results of another study showed that due to the biased allocation of resources, on average, six percent of output losses have incurred in Africa (Braunstein, 2007, p.9). These conditions are far from beneficial for women. WSW highly significantly affected GI, and this result supports other studies' results—that an increase in female labour force participation promotes GE (Forsythe et al., 2000; Korpi, 2000; Seguino et al., 2013; Seguino, 2000a; Swamy, 2004; Toulemonde, 2014). According to Harrell Jr.

(2015), 10 to 20 observations are necessary in order to obtain reasonable-size impacts with reasonable power. The reason for the small number of observations is because of the lack of data.<sup>32</sup>

### 5.1.3.2 The Americas

Table 5.8 Regression Results for the Americas

		Dependent variable: INEQUALITY				
	Independent variables	Coefficient/ p-values (Robust Std. Err.)	N	R <sup>2</sup>	Adjusted R <sup>2</sup>	z-stat/ t-stat
CRM	EDUCATION	-.011/.037 ** (.005)	16	.702	.627	-2.08
	FERTILITY	.121/.004 *** (.042)	16	.702	.627	2.85
LRM	EMPLOYER	-.027/.021** (.118)	23	.842	.823	-2.31
	WSW	-.009/.001*** (.003)	23	.842	.823	-34.02
FIRM	ACCOUNTABILTY	-.003 /.004 *** (.001)	17	.46	.424	-2.90
IIRM	PERGOV	.093/.004*** (.011)	6	.928	.9	8.29(t-stat)
PDM	POWER	.004/.1* (.002)	6	.589	.486	2.13(t-stat)

**Note:** N=number of observations. \*\*\* significant at 1%, \*\* significant at 5%, and \* significant at 10%

When applying the CRM to the American context, EDUCATION and FERTILITY turned out to have significant impacts on GI.

According to the United Nations Research Institute for Social Development (Uthoff, 2014), due to technical development, additional years of education are needed to qualify for particular jobs that require special skills and this results in “educational devaluation whereby the given number of years of schooling is worth less than it was 20 years ago” (P.5). Education, however, is still regarded as a key to reducing inequality and poverty in the Americas. Furthermore, educational quality varies based on income levels, gender, ethnicity, and geographical location in

the region; hence, providing quality compulsory education for all would greatly help to reduce GI. The research results suggest that the length of compulsory education can be seen as a crucial factor in relation to GI and the data for the study also show the tendency of increasing the length of compulsory education in the Americas: Brazil changed from 8 years to 14 years, Mexico from 9 years to 14 years, Uruguay from 9 years to 14 years, and Chile from 8 years to 13 years during the same periods of 2000 and 2013 (World Bank, n.d.-b).

Fertility rates affect GI significantly in the Americas. High fertility rates mean that increased resources should be allocated to raising children and most importantly, fertility decisions are endogenous (World Bank, 2001). The selected North and South American countries for the research show extreme religiosity, i.e. the U.S., Chile, Mexico, Argentina, Brazil, and Uruguay. According to the Strength of Religiosity Scale from 1981 till 2001 of Inglehart and Norris (2003, p.54), the selected countries' religiosity recorded above 70 out of 100 with the scale of 1 being the weakest and 100 the strongest. The role of the church is powerful and influential in the countries, which means the conservative idea that one of the crucial roles of women is having babies and taking care of the children at home. Hence, even if a woman does not want to have a child and wants to continue her career, social pressure shaped by social institutions would not let her make this decision. For this reason, fertility rates act as the crucial determinant in the region.

As for the LRM, EMPLOYER (coefficient = - .027,  $p < .021$ ) and WSW (coefficient = - .009,  $p < .001$ ) had significant negative impacts on GI. As for countries such as Argentina, Brazil, and Mexico, women spend more extended hours on housework and care work in comparison to other countries; therefore, most women become either a stay-at-home mother or are self-employed in the family business (ILO, 2002, p.220). The research by Uthoff (2014) small and medium-sized enterprises (SMEs) in Latin America have played a crucial role in reducing poverty in the region since the 1990s and "two-thirds of all new jobs created in the region in the 1990s were in the informal sector" (p.11). In this regard, the regression results indicated that even though there is a down-side of joining the family business, that is, self-employed women are less likely to have autonomous earnings than those engaged in the formal sector, they have much better positions than women staying at home mainly carrying

out housework and care work because they are able to learn some basic skills such as inventory checks or sending out invoices, if not professional skills. WSW (coefficient =  $-.009$ ,  $p < .001$ ) had highly significant negative impact on GI. According to the ILO (2002, p.218), the couple's time spent on housework has converged due to women's participation in the labour force; for instance, as income increases, the couple contributes to caring work and housework equally in the U.S. so that women can spend more time in the labour force.

Regarding the FIRM, only ACCOUNTABILITY had a significant negative impact on GI (coefficient =  $-.003$ ,  $p < .004$ ).

As for the IIRM, the regression results suggested that the government should take more responsibility (PERGOV) had a significant impact on GI (coefficient =  $.093$ ,  $p < .004$ ). According to Akchurin and Lee (2013), advanced countries that have already reached a certain level of industrialisation, and have well-established institutions, overcome the negative impacts of industrialisation by providing necessary welfare. Therefore, the general public expects the government to allocate increased expenditure on social spending and to implement proper social policies to protect women's rights. A series of government measures are available to help to enhance "women's capacity to form and maintain an autonomous household so that women are less likely to be penalised for childrearing responsibilities" (Akchurin & Lee, 2013, p. 685). Thanks to social policies and support, women are able to take part-time jobs or temporary jobs; however, the reliance on support and benefits from the government and the responsibilities of the government has been on the rise. The "Wollstonecraft Dilemma<sup>33</sup>" presents the rationale for this result because a social policy would boost a woman's participation in unpaid work at home (Korpi, 2000, p.11). As social support is functioning well in the U.S., women may not feel an urgency to join the labour force to support themselves. The situations in Latin America, such as Chile, Mexico, Argentina, Brazil, and Uruguay, are similar. According to a report of the United Nations Research Institute for Social Development (UNRISD) (Uthoff, 2014), through conditional transfer programs in Latin America, women get paid as beneficiaries of the programs, and the programs have helped to promote women's self-confidence and self-esteem at home thanks to the monetary compensation from the government. However, to become the recipients of the programs, women have to fulfil the requirements set by

the government, such as the promotion of community involvement (Uthoff, 2014, p.10). Therefore, due to the duties given by the government, the women's chances of gaining autonomy have been reduced, i.e. being financially independent by joining the proper labour market. Against this backdrop, it is understandable why PERGOV worsens GI in the Americas.

Considering PDM, POWER had a positive impact on the DV (coefficient = .093,  $p < .1$ ). It can be said that POWER deteriorates inequality in the region. The research by Palau (2001) well describes the dispositions of Latin Americans. The Latin Americans regard to culture and values to be interrelated with each other; therefore, "each in the society is submitted to the normative conscience, and it equally affects the groups of different sizes of the collective" (Palau, 2001, p.353). In other words, the Latin Americans are more accepting of power distance, i.e. unequal power distributions are socially expected and understood as part of social practices. The characteristics of Latin Americans are well reflected in the results. There were insufficient observations for the PDM due to the limited number of countries that participated in the Power Distance Index<sup>34</sup>.

### 5.1.3.3 Asia

Table 5.9 Regression Results for Asia

		Dependent variable: INEQUALITY				
Independent variables		Coefficient/ p-values (Robust Std. Err.)	N	R <sup>2</sup>	Adjusted R <sup>2</sup>	z-stat/ t-stat
CRM	FERTILITY	.307/.001 *** (.029)	15	.773	.724	10.42
LRM	EMPLOYER	-.043/.027 ** (.019)	27	.727	.702	-2.22
	WSW	-.006/.001 *** (.001)	27	.727	.702	-4.5
FIRM	REGULARITY	-.008/.001 *** (.001)	20	.631	.611	-6.2
	EFFECTIVENESS	-.009/.001 *** (.002)	20	.622	.601	-4.9
	RULE	-.005 /.002 ***	20	.494	.466	-3.17

	(.002)				
STABILITY	-0.004 / .005***	20	.535	.51	-2.78
	(.001)				

**Note:** N=number of observations. \*\*\* significant at 1%, \*\* significant at 5%, and \* significant at 10%

The regression results for the CRM for Asia showed that FERTILITY (coefficient = .307,  $p < .001$ ) had a highly significant impact on GI. A series of studies show that fertility rates are closely correlated with education, urbanisation, economic development, and wealth (Becker et al., 1990; Branisa et al., 2012; Duflo, 2012; Kim, 2017; Seguino et al., 2013; Braunstein, 2007; UNDP, 1995). In particular, the total fertility rates (TFR) in East Asian countries such as the ROK, Japan, and China are distinctively low. This is because of “a conflict between improvements in women’s status outside the home, such as increased access to education and employment and high inequality within their home” (Kim, 2017, p.744). On the other hand, as for the South Asian countries and Southeast Asian countries such as India, Malaysia, and Indonesia, fertility decisions are mainly made by men (United Nations, Department of Economic and Social Affairs, 2015). According to World Fertility Patterns 2015 (UN, 2017, p.21), the share of total fertility by women under age 20 from 2010 till 2015 of India, Malaysia, Thailand, and Indonesia accounted for 6 percent, 3 percent, 15 percent, and 10 percent, respectively, whereas the ROK, China, and Japan recorded 1 percent, 2 percent, and 2 percent, respectively. Fertility rates (birth per thousand women in age group) of ages between 20 and 29 in Japan and the ROK stood at 121 and 88, whereas in India, Indonesia, Malaysia, and Thailand they were at 358, 262, 172 and 163, respectively (United Nations, Department of Economic and Social Affairs, 2015, p.21). The fertility patterns reflect that the fertility rates of the OECD countries in Asia, such as the ROK and Japan, are much lower than those in their non-OECD counterparts in Southern and Southeast Asia.

For the LRM, EMPLOYER (coefficient = -.043,  $p < .027$ ) and WSW (coefficient = -.006,  $p < .001$ ) were seen to affect inequality in Asia. These results suggest that thanks to the economic development and education in Asia, the number of female employers that run their businesses out of necessity, i.e. view entrepreneurship as a choice of last resort, has decreased and instead, they have become opportunity employers (ILO, 2002). Most female employers engaged in the service sector, such as

childcare, sewing, and so forth and the agricultural sector in Asia have become opportunity employers, which means that their income has increased remarkably (ILO, 2002). Due to globalisation, i.e. diversification and specialisation of the economy, the traditional form of the domestic-based industry has changed to commercial-based industry, such as the manufacturing and service sectors, which need low-skilled and abundant workers, i.e. WSW, which is consistent with neoclassical/convergence theory (Kerr, 1983; World Bank, 2001). The demand for these workers has boosted women's income; for example, the average women's income in proportion to that of men changed from 48 percent in 1968 to 59 percent in 1988 in Japan and from 42 percent to 51 percent in the ROK during the same periods (World Bank, 2001, p.2).

As for the FIRM, four factors out of the six were seen to substantially influence GI in Asia: CORRUPTION and ACCOUNTABILITY, however, did not significantly impact inequality, which is interesting as a series of studies highlights the importance of an accountable government and reducing corruption in Asia (Cuberes & Jerzmanowski, 2009; Gradstein & Justman, 2002; Lipset, 1959; Oh, 2016; Weimer & Vining, 2011).

#### 5.1.3.4 Europe

Table 5.10 Regression Results for Europe

		Dependent variable: INEQUALITY				
	Independent variables	Coefficient/ p-values (Robust Std. Err.)	N	R <sup>2</sup>	Adjusted R <sup>2</sup>	z-stat/ t-stat
CRM	EDUCATION	-.013/.039** (.006)	47	.306	.272	-2.07
	EXPENDITURE	-.034/.057* (.018)	47	.306	.272	-1.90
LRM	EMPLOYER	-.005/.063* (.003)	66	.405	.386	-1.86
	WSW	-.007/.001*** (.002)	66	.405	.386	-3.82
FIRM	REGULARITY	-.004/.001*** (.001)	49	.625	.617	-9.21
	CORRUPTION	-.004/.001***	49	.662	.655	-4.55

Dependent variable: INEQUALITY					
Independent variables	Coefficient/ p-values (Robust Std. Err.)	N	R <sup>2</sup>	Adjusted R <sup>2</sup>	z-stat/ t-stat
	(.001)				
RULE	-.004/.001***	49	.667	.66	-5.49
	(.001)				
ACCOUNTABILITY	-.005/.001***	49	.769	.765	-4.55
	(.001)				
STABILITY	-.002/.006***	49	.661	.654	-2.75
	(.001)				
IIRM PERBOSS	.129/.001***	17	.69	.587	5.63(t-stat)
	(.023)				
PDM POWER	.004/.001***	17	.573	.545	7.3 (t-stat)
	(.001)				

**Note:** N=number of observations. \*\*\* significant at 1%, \*\* significant at 5%, and \* significant at 10%

For Europe, EDUCATION (coefficient = -.013,  $p < .039$ ) and EXPENDITURE (coefficient = -.034,  $p < .057$ ) for the CRM had significant impacts on the DV. According to Cohen (1988), Mooi et al. (2017), and Falk and Miller (1992), R<sup>2</sup> values higher than 0.26 can be regarded as significant. Hence, it can be said that CRM significantly explains GI.

In most European countries used for the research, the duration of compulsory education from 1995 until 2013 was mostly the same (11 countries); five countries increased the duration, such as Turkey from 9 years to 11 years in 2013; and Hungary reduced the duration from 13 years to 11 years in 2013 (World Bank, n.d.-c). As for educational attainment<sup>35</sup> at the upper secondary level<sup>36</sup> as the percentage of the total population aged 25-64, the rates ranged from 40.2 per cent in Norway to 63.5 per cent in Poland, except for Turkey at 18.9 per cent in 2014 (OECD, 2016, p.171). As the statistics show, the completion rates are relatively low. According to UN research, the upper secondary level is the minimum qualification for getting a paid job (Seguino et al., 2013). Therefore, if the European countries extend the duration of compulsory education to cover the upper secondary level, it would be beneficial for reducing GI. In this context, the reason that EXPENDITURE had a significant impact on GI would also

be explained. Increased government spending is needed to cover the upper-secondary level of education to reduce gender discrimination.

As for the LRM, EMPLOYER (coefficient =  $-.005$ ,  $p < .063$ ) and WSW (coefficient =  $-.007$ ,  $p < .001$ ) had significant impacts on GI. According to the OECD Factbook (OECD, 2016b, p.120), thanks to the increase in female employment rates, the employment gender gap has been narrowed by 3.3 percent since 2005 in European countries. The female self-employment rates in the OECD countries accounted for 13 percent, whereas the male self-employment rates were 17.7 percent as of 2013 (OECD, 2016b, p.127). Thus, the gender gap was only 4.7. Noticeably, female self-employers took 40 percent of all working women in Turkey amongst the OECD countries (OECD, 2016, p.126). Hence, the facts are well reflected in the results.

As for the FIRM, five determinants out of six were highly significant, which means that they helped to improve GI. According to OECD research results on the extent of limitations on government power and the civil justice composite (OECD, 2013, p.44-p.46), the Nordic countries<sup>37</sup> have the most reliable checks on government powers, and the average values of the OECD countries are high (nearly 0.8); on the other hand, the controls on government power in Russia and Ukraine are limited (below 0.4). Sweden, Norway, the Netherlands, and Finland have strong regulatory enforcement, whereas Ukraine has the worst regulatory enforcement, and when considering the OECD average, free of corruption in terms of civil justice showed the highest points at 0.8 (OECD, 2013, p.45). When it comes to the results of the civil justice composite, which measures how people settle their complaints through the civil justice systems by measuring accessibility, impartiality, and affordability, the Nordic countries such as the Netherlands had the most significant access to civil justice, whereas Turkey had the lowest points (OECD, 2013, p.45). As the OECD research results show, there are various degrees of development of formal institutions across Europe. Although Europe is deemed to have relatively well-established formal institutions, narrowing the institutional gap amongst the European countries should be done first in order to achieve GE.

Regarding the IIRM, PERBOSS affected inequality highly significantly (coefficient =  $.128$ ,  $p < .001$ ).

POWER of the PDM also turned out to impact GI highly significantly. Russia, Ukraine, and Romania showed values above 90, and France, Poland, Turkey, Slovenia, and Bulgaria recorded above 65, which are considered high power-distance values; therefore, it is understandable why POWER was significantly correlated with GI in Europe.

According to L fstr m (2016), European countries can be divided into five clusters: network, contest, machine, pyramid, and solar system. The Baltic and the Nordic countries such as Finland, Norway, and Sweden, including the Netherlands, are the network countries where consensus decision-making is the rule and femininity is high and anglophone countries such as the UK and Ireland belong to the contest group, where the constant competition takes place based on a fair play. Germany and Hungary fall into the machine group and show well-structured and thoroughly planned tendencies, whereas Turkey, Russia, Ukraine, Slovenia, and Romania are in the pyramid culture group where hierarchical and social rules are strictly applied. Spain, France, and Poland can be categorised as solar system cultures where individualism prevails. The five clusters clearly show the characteristics of European countries and present the rationale for the results for the PDM. Because it is evident that the countries that fall into the pyramid culture show high power distance, whereas the countries that belong to other cultural groups exhibit comparatively low power distance.

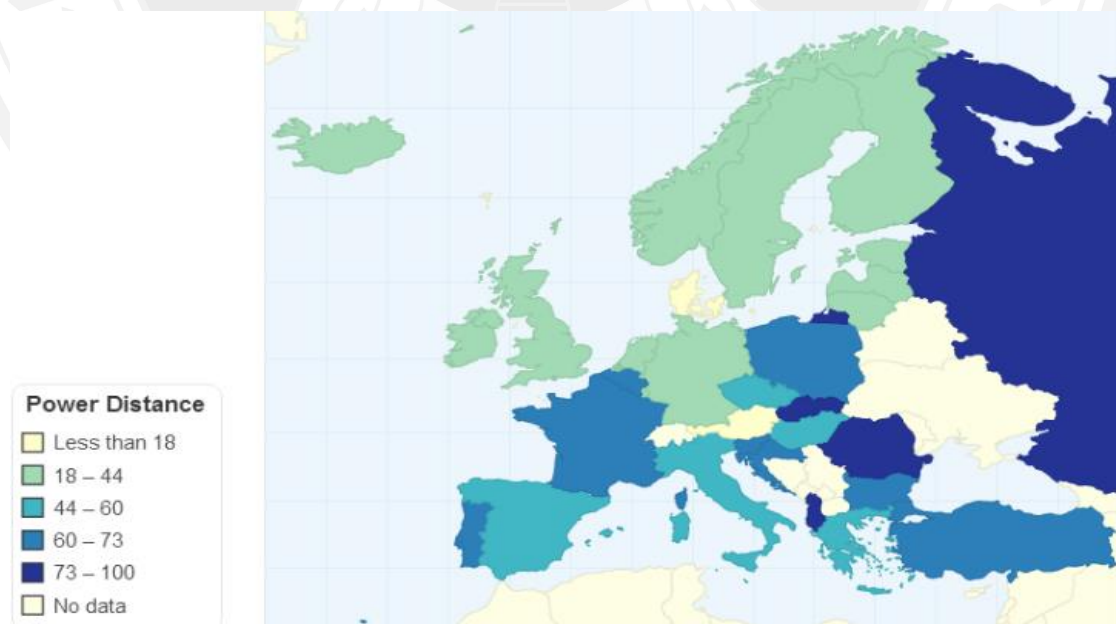


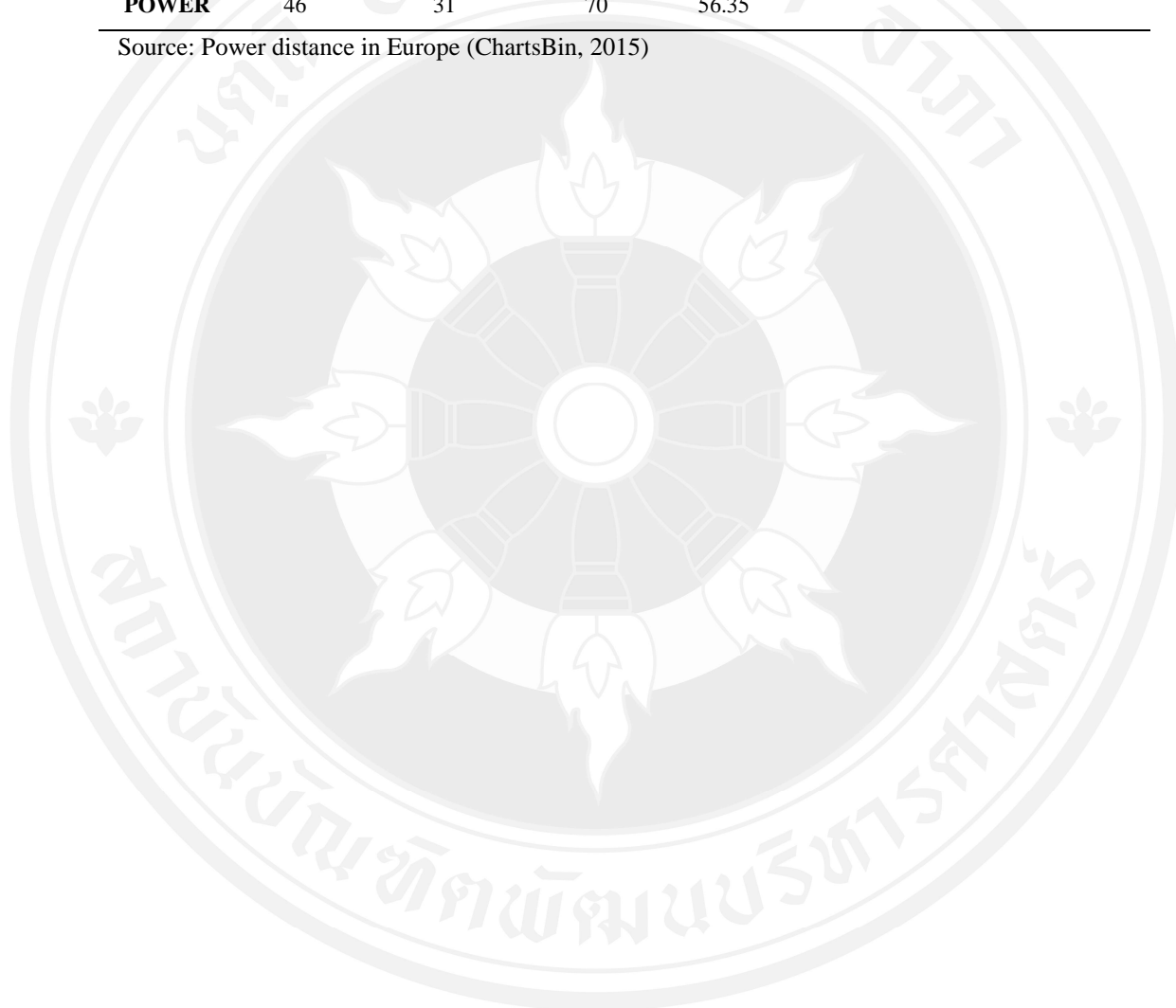
Figure 5.1 Power Distance in Europe

Source: Power distance in Europe (ChartsBin, 2015)

Table 5.11 Power Distance Values

<b>Countries</b>	<b>Sweden</b>	<b>Netherlands</b>	<b>Germany</b>	<b>France</b>	<b>Spain</b>	<b>Poland</b>	<b>The UK</b>
<b>POWER</b>	31	38	35	68	57	68	35
<b>Countries</b>	<b>Finland</b>	<b>Switzerland</b>	<b>Russia</b>	<b>Ukraine</b>	<b>Turkey</b>	<b>Slovenia</b>	<b>Romania</b>
<b>POWER</b>	33	34	93	92	66	71	90
<b>Countries</b>	<b>Hungary</b>	<b>Norway</b>	<b>Bulgaria</b>	<b>Average</b>			
<b>POWER</b>	46	31	70	56.35			

Source: Power distance in Europe (ChartsBin, 2015)



### 5.1.4 Discussion

Table 5.12 Significant-Levels and Coefficient Values

Dependent variable: INEQUALITY									
Independent variables	Main Analyses		Micro-level Analyses						
	Overall	OECD	Non-OECD	Male	Female	Africa	America	Asia	Europe
EDUCATION	-.009***		-.01***				-.011**		-.012**
EXPENDITURE	-.026***		-.03**						-.033*
FERTILITY	.116***	.085***	.13**				.121***	.306***	
UNEMPLOYMENT	.004*	.009***			.003*	.015***			
EMPLOYER	-.006*			-.008**		.007***	-.027**	-.043**	-.004*
WSW	-.006***	-.004***	-.009*	-.006***	-.005***	-.004***	-.008***	-.006***	-.006***
REGULARITY	-.004***	-.002**	-.003***					-.007***	-.004***
EFFECTIVENESS	-.003*	-.002**						-.008***	
RULE	-.004***		-.005***					-.005***	-.004***
ACCOUNTABILITY	-.003***		-.005***				-.003***		-.004***
STABILITY	-.002***							-.004***	-.001***
CORRUPTION	-.003***		-.004**						-.003***
PERBOSS	.101***		.166***	.099***	.153***				.128***
PERGOV							.093***		
PERHOUSEWIFE			.042**						
PERINCOME									
POWER	.005***		.004***				.003*		.004***

**Note:** \*\*\* significant at 1%, \*\* significant at 5%, and \* significant at 10%

#### 5.1.4.1 OECD vs. Non-OECD

For the OECD countries, only FERTILITY of the CRM affected GI, whereas all three independent variables in the CRM, i.e. EDUCATION, EXPENDITURE, and FERTILITY considerably affected GI in the non-OECD countries. According to the Global Human Capital Index 2017 (World Economic Forum, 2017, p.8), 13 out of 18 OECD countries chosen for the research ranked among the top 30, and only two non-OECD countries were in the top 30 based on the overall index values, i.e. the Russian Federation and Ukraine. The results are critical evidence that the OECD countries utilize human capital efficiently and effectively as a driving force for economic growth, whereas non-OECD countries do not fully take advantage of their available human capital at home. The regression results for the non-OECD countries support the fact that human capital is not being utilized well because all three capability-related factors in the CRM significantly affected GI. The government

spending on education in those countries should be expanded in order to extend the duration of compulsory education to sufficiently educate and train available female human capital at home. Reducing fertility rates would also considerably promote the participation of female workers in the formal sector. By doing so, female human capital can be fully used, and inequality will be reduced.

For the LRM, WSW turned out to profoundly influence GI for both the OECD and non-OECD countries, which means that giving women financial power is crucial to reducing inequality. For the OECD countries, UNEMPLOYMENT significantly impacted GI. The reason is that in 2010, the OECD countries experienced a deep recession as nearly the same level as that of the 1930s when the OECD countries experienced the worst recession in history: 12 countries' unemployment rates remained at two percentage points above the 1930s' level, and the pace of economic recovery was sluggish (OECD, 2011b). The high unemployment would trigger human capital deterioration and labour market withdrawal and would affect mostly the youth, who do not have any work experience or are low-skilled workers.

When comparing the regression results for the FIRM, REGULARITY and EFFECTIVENESS turned out to be significant for the OECD countries, whereas four factors other than EFFECTIVENESS and STABILITY affected the non-OECD countries considerably. According to the Corruption Perceptions Index 2016, the least corrupt 20 countries were the OECD countries, except for Singapore<sup>38</sup> (Transparent International, 2016). As table 5.13 shows, the average values of the WGI for the OECD countries are much higher than those of their non-OECD counterparts.

Table 5.13 The Average Values of Data from the Worldwide Governance Indicators

	REGULARITY	STABILITY	CORRUPTION	EFFECTIVENESS	RULE	ACCOUNTABILITY
OECD	86	71	85	86	86	85
Non-OECD	51	39	67	53	47	48

Source: World Bank (n.d.-b)

According to Government at a Glance 2013 (OECD, 2013, p.41), the OECD average of Confidence in National Government in 2012 accounted for only 40 percentage points. According to the "International comparison of the level of access,

responsiveness and quality of services in key areas such as health care, education and justice in 2016” (OECD, 2017, p.14), 14 percent of OECD citizens complained about the way the health care system was managed and the length of time required to solve administrative, civil, and non-criminal cases. The period varied from 40 days to two years, depending on the countries. This fact shows that there is room for improvement in the OECD countries as well.

PERBOSS and PERHOUSEWIFE for the IIRM and the PDM significantly affected the non-OECD countries only. This is understandable because the selected 16 non-OECD countries showed extreme religiosity. According to the Strength of Religiosity Scale from 1981 till 2001, most countries’ religiosity scale was over 70; in particular, Uganda, Ghana, and Ethiopia recorded over 90 with 100 being the strongest (Inglehart & Norris, 2003, p.54; Smith, 2018). The countries with strong religiosity tend to display conservative dispositions, and people behave as they are expected to; hence, the images of male bosses and being a good wife and mother are accepted as a social norm (Baliamoune-Lutz & McGillivray, 2009; Kinias & Kim, 2012; Rizzo et al., 2007). The social and cultural norms seem to be “binding for women at distinct points in time: adolescence and after marriage” (World Bank, 2011, p.201); therefore, women and girls learn to adapt to the institutions without recognizing the fact that what they learn would hamper GE.

#### 5.1.4.2 Gender

For males, EMPLOYERMale and WSWMale in the LRM and PERBOSSMale in the IIRM were significantly correlated with the DV, WSWFemale and UNEMPLOYMENTFemale in the LRM and PERBOSSFemale of the IIRM had considerable impacts on GI.

As previously explained, male employer rates would help to reduce GI as it increases the chances of women being employed. Both male and female WSW and UNEMPLOYMENT profoundly affected GI, as expected. As neoclassical growth theory suggests, economic development led by diversification and specialisation has caused a high demand for unskilled workers, i.e. cheap labor. As numerous studies have indicated, the world witnessed a substantial boost in the number of male/female workers in the manufacturing industry from the 60s until the 2000s in developing countries (Kerr,

1983; Seguino, 1997; Seguino, 2000; Wood, 1991; Young, 1995). The economic boom has helped to raise the number of both male and female workers, and this, in turn, has promoted GE. The regression results support the fact mentioned above as both male and female WSW affected the DV highly significantly.

PERBOSSMale and PERBOSSFemale were considerably associated with GI. Moreover, the perceptions held by women more negatively impact GI than those of men. Informal institutions such as customs and views are deeply rooted in particular societies and shape the beliefs, attitudes, and mindsets of women and girls, which is consistent with cultural theory. For example, there are many examples of the negative relationships between mothers-in-law and daughters-in-law in Muslim and Southeast Asian countries such as India or Indonesia: a mother-in-law demands that the daughter-in-law stop doing paid work in order to help with household work and obey her son (Ghafour, 2014; Islamweb. net, 2007; Monga, 2016; Rodrigues, 2015). Based on the example, it can be said that women and girls that are expected to support and protect each other, either consciously or unconsciously, discriminate against women themselves.

#### 5.1.4.3 Region

When comparing the CRM, EDUCATION and FERTILITY in the Americas, FERTILITY in Asia and EDUCATION and EXPENDITURE in Europe significantly affected GI. FERTILITY had the most noticeable negative impact on Asia. The influence of Confucian philosophy in East Asia and religion in America and other parts of Asia can be deemed to be one of the contributing factors regarding the results. Confucianism has shaped the social institutions in the ROK, China, and Japan. The Confucian social order is based on a dominant-subordinate configuration, such as father-son and husband-wife, and has emphasised the subordination of women to men and the women's roles as a mother and wife. Therefore, this has hampered GE. Moreover, the fertility decisions are mainly made by men in Muslim countries such as Indonesia and the Roman Catholic countries such as Mexico and Brazil, and this has worsened GI (Kim, 2017; Rizzo et al., 2007).

EDUCATION reduces GI in the Americas and Europe, and it can be understood in the context that the minimum qualification for getting a paid job is upper

secondary school level (Seguino et al., 2013). As for the case of Europe, the average duration of compulsory education is 10.5 years, which does not cover the upper secondary level. Hence, an increase in the length of compulsory education would be beneficial for GE. As for the Americas, the duration of compulsory education was 13.5 years as of 2013; however, the quality of education does not support. According to the results of the Program for International Student Assessment (PISA) in 2015, ten countries in Latin America lagged by 2.5 years of schooling when compared with the OECD average in science, math, and reading: around 46 percent of students in reading and 64 percent of students in math did not even meet a very elementary level (Inter-American Development Bank, 2016). Around 50 percent of Mexicans and Brazilians do not have basic knowledge in math and science: Mexican students earned “81 points below on math than the OECD average” (educando, n.d.). Although the quality of education is not the best, it is fortunate that compulsory education aims at providing students with essential skills for the job market and the duration covers the upper secondary level, which is long enough for students to learn the necessary skills. Without compulsory education, the youth would not have a chance to learn basic but essential knowledge. Primary school enrolment rates in Latin America stood at 92 percent, but secondary school graduation rates were only at 35 percent in Mexico and 41 percent in Brazil from 2000 until 2013 (Brookings, 2015; educando, n.d.). This fact indicates that although the duration of compulsory education is long, the general public does not feel that education is necessary and that the economic and social structures do not cater to the needs of the people. Thus, the government’s efforts would be pointless, and the proper utilisation of human capital in the country would not be achievable. It is all the more reason for adopting a suitable policy that reflects the opinions and ideas of all parties concerned.

For the LRM, EMPLOYER and WSW have helped to reduce GI in all four regions. Easy exit and entry into the labour market and flexible work hours to take care of housework and care work are essential for women. In many cases, women are put in a vulnerable position where they have no choice but to take lower-quality and low-paying jobs because of their inflexible time (World Bank, 2011). Hence, a higher percentage of employers and WSW would remarkably help to decrease GI as female employers and workers have more financial security and bargaining power than women

who do not have a paid job. In this context, it is understandable why EMPLOYER and WSW remarkably affected the DV.

Regarding the FIRM, ACCOUNTABILITY affected GI in the Americas and Europe. REGULARITY, RULE, and STABILITY were seen to have an influence on Asia and Europe, whereas CORRUPTION was associated with GI in Europe and EFFECTIVENESS in Asia.

As for the IIRM, “On the whole, men make better business executives than women do” (PERBOSS) and “The government should take more responsibility” (PERGOV) were seen to worsen GI in Europe and America, respectively. The PDM turned out to have a significant impact on the Americas and Europe.

#### 5.1.4.4 Comparative Analyses between OECD Membership and Region

With the addition of gender and region on top of the OECD and non-OECD context, it helps to obtain profound insights into gender issues. When comparing the number of OECD and non-OECD countries for the research, a majority of OECD countries in Europe (12 OECD vs. five non-OECD) and a majority of non-OECD countries in Asia (two OECD vs. five non-OECD) can be found. Three OECD and three non-OECD countries are located in the Americas. As for Asia, only FERTILITY of the CRM affected the DV highly significantly with a comparison to the regression results for the CRM of the non-OECD countries, where all three factors had impacts. On the other hand, only FERTILITY affected OECD countries but not in Europe. The other two factors, however, i.e. EDUCATION and EXPENDITURE, had considerable impacts in Europe. EMPLOYER of the LRM influenced GI in Europe. As the reason specified before, the number of female employers is on the rise, and this has helped to reduce GI (OECD, 2016b). RULE, ACCOUNTABILITY, STABILITY, and CORRUPTION of the FIRM significantly affected GI when adding Europe to the model, but they did not have any impact when the OECD context was applied. A series of reasons can be cited: the crisis between Russian-backed separatists and Ukraine from 2014 to 2018 caused 10,000 deaths (Amadeo, 2019); the Turkey lira crisis caused by a tariff war with the U.S. (Sahinoz, 2018); and the economic crisis of Hungary since 2008 (Darvas, n.d.).

## CHAPTER 6

### CONCLUSION AND POLICY RECOMMENDATIONS

#### 6.1 Conclusion

This study tested the various explanatory powers of 17 socio-economic and institutional determinants using five different models to determine how different factors affected GI and the reasons for the varying degrees of impacts in 34 countries (18 OECD and 16 non-OECD countries).

The main objective of the study was to clarify the following questions. Firstly, how do the 17 socio-economic and institution-related determinants influence GI? Second, which factor would affect GI the most and the least in a different context, such as OECD vs. non-OECD, gender, and regions? Third, why does each determinant have a different effect in various contexts? Lastly, what kinds of policy implications can be made based on the findings?

Reviewing related literature was used to choose the relevant theories to look for the answers. Various attempts were made to come up with hypotheses and to hypothesize the determinants for the study based on the relevant theories and previous research on GI. Seventeen determinants were identified in 5 different models—compulsory education (EDUCATION), fertility rates (FERTILITY), and government spending on education (EXPENDITURE)—and these were included in the CRM; unemployment rates (UNEMPLOYMENT), percentage of employers (EMPLOYER), and percentage of wage and salaried workers (WSW) in the LRM; regulatory quality (REGULARITY), control of corruption (CORRUPTION), government effectiveness (EFFECTIVENESS), rule of law (RULE), voice and accountability (ACCOUNTABILITY), and political stability and absence of violence (STABILITY) in the FIRM; perceptions toward government (PERGOV), business executives (PERBOSS), housewife (PERHOUSEWIFE) and income (PERINCOME) in the IIRM; and power distance (POWER) in the PDM.

Throughout the research, the analytical research approach was adopted. In order to do that, two types of analyses were utilized: panel data analyses for the CRM, LRM, and FIRM, and cross-sectional data analyses for the IIRM and PDM. Multivariate analyses for the CRM, LRM, and IIRM, and bivariate analyses for the FIRM and PDM models were used with a combination of regression techniques and random effect techniques. Pearson correlations were adopted to check for multicollinearity problems, and any highly-correlated variables were eliminated. Multidimensional analysis (MA) was adopted for the research, i.e. macro- and micro-level analyses.

The regression results for the macro-level analyses showed that all three variables in the CRM impacted GI highly significantly. As for the LRM, all three variables significantly affected GI with WSW having a highly significant impact. As expected, UNEMPLOYMENT had a negative impact, and EMPLOYER and WSW had positive effects on GE. All six variables of the FIRM were significant. The PERBOSS of the IIRM and POWER of the PDM had significant impacts on GI.

As for the results of the sub-analyses or the micro-level analyses, only FERTILITY for the OECD countries and all three factors, i.e. EDUCATION, EXPENDITURE, and FERTILITY for the non-OECD countries, significantly affected GI in the CRM. For the LRM, WSW had a highly significant impact on GI for both the OECD and non-OECD countries, and UNEMPLOYMENT considerably worsened GI when the OECD context was added.

Regarding the FIRM, REGULARITY and EFFECTIVENESS for the OECD countries and four determinants other than EFFECTIVENESS and STABILITY for the non-OECD countries proved to be significant. As for the IIRM, PERBOSS and PERHOUSEWIFE profoundly affected the non-OECD countries and PERBOSS, in particular, had a significant impact on GI. None of the factors from the IIRM had an impact on the OECD countries. The PDM was significantly associated with GI only in the non-OECD countries.

Regarding gender, EMPLOYERMale, WSWMale, UNEMPLOYMENTFemale, and WSWFemale in the LRM significantly affected GI: UNEMPLOYMENTFemale worsened GI, and three other variables helped to reduce inequality. Both PERBOSSMale and PERBOSSFemale in the IIRM had significant positive impacts on GI.

Regarding region, all three factors of the LRM had highly significant impacts on GI in Africa. As for the Americas, EDUCATION and FERTILITY significantly influenced GI. EMPLOYER and WSW of the LRM were significantly associated with the DV. ACCOUNTABILITY of the FIRM and PERGOV of the IIRM had a considerable effect on GI. For Asia, FERTILITY in the CRM had a considerable impact on GI, whereas EMPLOYER and WSW of the LRM affected GI significantly. Regarding the FIRM, REGULARITY, RULE, STABILITY, and EFFECTIVENESS were highly significantly correlated with the DV. When it comes to Europe, EDUCATION and EXPENDITURE in the CRM were significant, whereas EMPLOYER and WSW in the LRM had significant negative impacts on GI. For the FIRM, five variables except for EFFECTIVENESS had remarkable impacts on GI. PERBOSS in the IIRM and the PDM turned out to be highly significant.

The 16 determinants chosen for the research affected GI, and the only variable that was not significant was “Incomes should be made more equal” (PERINCOME).

The women’s lower participation in the labour force, limited access to resources, and the lack of other safety nets such as social protection policies have made women dependent on others and have worsened their financial insecurity. Most importantly, social institutions such as social norms, customs, and values have hugely affected how people think and behave; hence, enhancing women’s status by granting financial empowerment and changing the traditional images of women are critical. In order to do that, the government should conduct awareness campaigns on gender stereotypes and impart related information through all available channels such as local governments, civic groups, and so forth to address gender discrimination. If the government makes available gender-related information such as the progress of gender-related policies and programs in comparison to international standards to the public, it would be highly beneficial in terms of reducing GI. Policy reforms must be carried out by reflecting local realities and understanding the local contexts.

As many studies have pointed out, the primary cause for GI derives from social institutions such as customs, cultures, and social norms. Some customs do not allow women to do outside work, attend school, get a paid job, obtain access to necessary resources, exercise their fundamental rights, take a managerial position, or express their political voices. Hence, efforts and measures to change the deeply-ingrained

perceptions must be put in place to achieve GE. Although countries around the world have put substantial efforts into reducing GI and numerous relevant policies have been adopted, there is a long way to go before achieving ultimate GE.

## 6.2 Theoretical Contributions

This study analysed 17 GI-related determinants from five different perspectives amongst 34 OECD and non-OECD countries. Based on the five different models, i.e. the CRM, LRM, FIRM, IIRM, and PDM, the factors were examined with the adoption of multi-perspective analyses, i.e. OECD vs. non-OECD, gender, and region, and multi-level analyses, i.e. macro-level vs. micro-level analyses. Due to these approaches, considerable theoretical contributions of the study can be found.

Firstly, by comparing the macro-level with micro-level analyses, the study first underlines 34 countries' general features, followed by distinct characteristics with the adoption of the sub-level analyses. All three factors in the CRM, built on human capital theory, significantly influenced GI in the macro-level analyses and non-OECD in the sub-analyses, which supports the crucial point of human capital theory. That is, gender discrimination is mainly caused by human capital gaps between men and women such as education level and different levels of expertise and ability; hence, narrowing the gaps is vital for reducing GI (Becker, 1994; Becker, 1992).

Second, in the regression results in the LRM, all three factors were significant in the macro-level analyses and for Africa when the regional factor was added. WSW, in particular, was highly associated with the GI in the all macro- and micro-level analyses. These results confirm the convergence theory of Kerr (1983); that is, industrialisation has triggered changes in economic and social institutions, and countries have shown a similar developmental pattern. The industrialisation in developing countries, especially led by cheap and abundant labour, i.e. WSW, has helped to enhance women's economic, political, and social position because of the increase in women's income.

Third, the sub-analyses presented a valuable insight into the causes of GI. The results of gender revealed that women's perceptions affect GI more than those of men. It underlines the negative influence of social institutions on women and the need for changes in deeply-embedded customs and attitudes. The results support cultural theory

by showing how culture influences people and shapes their values, attitudes, and mindsets.

Fourth, the regional comparisons confirmed the cultural theory by presenting a profound understanding of the characteristics of a particular region: people act within the culturally-defined roles, rules, norms, and strategies of an institution (Merton, 1938). For instance, PERGOV in the Americas and PERBOSS in Europe were seen to affect the DV significantly. These results indicate that the attributes as distinct perception-related determinants have a different impact in different regions.

### **6.3 Policy Recommendations**

#### **6.3.1 Reforming Gender-related Policies and Institutions to Ensure Equal Rights and to Resolve Gender Inequality Issues**

As the results of the macro- and micro-analyses have shown, the CRM and FIRM significantly affected GI. Thus, reforming social and economic institutions is critical. In this regard, reforming gender-related policies and institutions to ensure equal rights and to resolve gender inequality issues is necessary.

##### **6.3.1.1 Changes in Social and Economic Institutions**

The World Bank specified the roles of social institutions on GI in the following statement.

Societal institutions—customs, social norms, rights, laws—as well as economic institutions, such as markets, shape roles and relationships between men and women and influence what resources women and men have access to, what activities they can or cannot undertake, and in what forms they can participate in the economy and in society (The World Bank, 2001, p.13).

When traditions do not allow women to work outside the home, the proportion of female workers becomes very small. For instance, the female economic participation rates in Muslim and Hindu-dominated countries such as India, Morocco, Malaysia or Indonesia are generally lower than in Buddhist or Christian-dominated

countries such as Sweden, the U.S. or the U.K. (Morrisson & Jutting, 2004, p.29). Moreover, even if the female university graduation rates are high, but the society is reluctant to put women in a decision-making position, the ratio of female managers is meagre. As for the ROK, for instance, “the entry rate into tertiary-type A (longer, largely theory-based) programmes was 71% in 2009, which is well above the OECD average of 59%” (OECD, 2011, p.2). The female share of managers, however, accounted for 10.5 percent, which is the OECD minimum (OECD, 2017b, p.2). It is equally problematic that even though there are civil laws properly in place, customary laws override the civil laws in most developing countries. For example, the civil laws in Uganda guarantee equal rights in the case of divorce, but the customary laws prohibit women from gaining access to their property (World Bank, 2001, p.16). Moreover, it is deplorable that in most developing countries, the judicial system that punishes the violators that assault or abuse women, is not favourable to women as the evidentiary requirements and procedures are complex, and enforcers’ attitudes are far from supportive. In this context, reforming related policies and institutions and streamlining judicial and administrative agencies are vital to reducing gender discrimination.

Men and women are influenced the most by the extent to which they are financially secure, i.e. whether they can equally obtain access to available income-generating activities and the necessary resources without any constraints. Hence, granting women equal access to resources and opportunities is crucial, especially in developing countries. According to rural women and access to justice (Food and Agriculture Organization [FAO], 2013, p.1), five percent of women in North Africa and West Asia and 15 percent of women in Sub-Saharan Africa are agricultural landholders, and most of the women are denied access to education, public services as well as decision-making and protection from violence. In order to ensure equal access to resources, the way to deliver them regarding financial organisations, agriculture-related programs, and school systems is essential, because it will have a considerable impact on either promoting or discouraging fair access for women. Thus, community-based approaches taking into account the local context is vital, as it will have beneficial effects on GI. For example, Susu collectors, also known as mobile bankers in Ghana, enable local women to save their time as the collectors visit their homes, local markets,

and the workplaces (World Bank, 2001, p.17). Before introducing the system, they had to travel far to get a loan or to make a deposit in a bank account.

The role of economic institutions is critical as “markets embody a powerful set of incentives that influence decisions and actions for work, saving, investment, and consumption” (World Bank, 2001, p.17). The structure of the market determines the prices of goods and services, wages, and the returns from economic activities and assets; hence, the restructuring economic institutions mainstreaming GE would effectively reduce GI. For example, hectic competition in the market has led to a narrowing wage gap between men and women and has created a less discriminatory environment for female workers in Mexico and the U.S. (Uthoff, 2014). Even so, the gender pay gap still prevails. As mentioned before, the pay gap exists not only in developing countries but also in advanced countries. For instance, as of 2016, the gender gap in median earnings<sup>39</sup> was recorded at the worst at 36.7 percent in the ROK, and the average wage gap stood at 13.5 percent in 35 OECD countries (OECD, 2018, p.1). The real issue is that even if the pay gap seems to be narrowed, the real reason for a narrower gap is caused by, for example, either selection effects<sup>40</sup> in the case of Italy or a compressed wage structure in Norway (OECD, 2018, p.1). Considering this fact, reforming economic institutions mainstreaming GE based on the analyses of the current domestic GI-related problems is critical.

When the economic institutions promoting active labour markets are well in place, they will remove the economic inefficiencies and expand employment opportunities for women, because high demand in the labour market brings about the substitution of female workers engaged in unpaid work for paid workers as the opportunity cost would be higher (World Bank, 2001). Moreover, the economic policies aiming at boosting the market and making up for gender disparities have helped to promote incentives in the labor market. China, for instance, where the government has strategically developed the rural markets, caused a high demand for female workers, so the opportunities for women there have considerably increased (World Bank, 2001, p.17).

The World Bank (2011, p.198) has pointed out three contributing factors that cause gender segregation in economic activities for female workers: 1) gender differences in time use stemming from differences in care responsibilities, 2) gender

differences in access to productive inputs such as land and credit, and 3) gender-differentiated impacts of market and institutional failures.

Therefore, institutional changes focusing on the causes would remarkably reduce GI and based on these factors, three suggestions can be put forward.

First, strategically promoting part-time work or a temporary position for female workers, with a combination of proper measures, such as providing childcare services that help women to participate in the labour market without constraining their economic activities, would considerably increase female labour participation rates because different time use for women due to household and care responsibilities mainly prevents them from joining economic activities.

Second, institutional reforms that guarantee equal access to land and credit would promote GE.

Third, institutional changes focusing on creating a cushion, such as providing social safety nets and affirmative measures for female workers to minimise the impacts of the markets and institutional failures would also help to reduce GI.

In sum, the reforms should balance the changes in social institutions and economic institutions and rectify current GI practices by reflecting women's voices and ensuring their rights and access to available resources to boost their equality with men.

### **6.3.2 Pursuing Economic Development Focusing on Reducing Gender Inequality by Providing Incentives and Ensuring Fundamental Rights**

WSW of the LRM had an impact in all categories. Hence, pursuing economic development with a particular focus on reducing GI by providing incentives and guaranteeing fundamental rights is needed.

#### **6.3.2.1 Provision of Various Incentives**

Providing incentives such as giving tax credits or benefits to the companies that meet the quota system and take affirmative measures, financing for companies, simplifying the complex rules and procedures related to the employment of female workers, and the enhancement of swift accessibility to relevant information would also be essential for reducing GI.

When it comes to incentives for double-income families, most developed countries have adopted an individual taxation system (Lalumia, 2017). Norway, Australia, and Switzerland have already introduced or have been considering tax-benefit measures: the allowance for joint taxation was decreased in Norway as it would increase incentives for a second partner to obtain a job; the maximum rate of the Family Tax Benefit Part B in Australia has changed to provide benefits based on the youngest child's age, and the age has been lowered to five; and Switzerland plans to introduce a series of measures to reduce the tax burden on second earners (OECD, 2017a, p.26). Tax-benefits enable families to reconsider female participation in the workforce.

Conditional cash transfer programs<sup>41</sup> can be an excellent method for raising the awareness of the poor regarding the importance of GE (Fiszbein et al., 2004; Uthoff, 2014). The programs help beneficiary families to understand the significance of the human capital investment for their daughters by offsetting opportunity costs, i.e. economic development will increase the return on human capital and will ultimately increase incentives and incomes for the families.

#### 6.3.2.2 Ensuring Basic Rights

Fundamental rights embrace economic, social, and legal rights. These rights guarantee a favourable environment in which men and women participate in productive activities and are given equal opportunities, i.e. equal access to education and financial resources, and political participation and the necessities for a good-quality life. Even though impressive progress in gender issues has been achieved around the world, there is still a distinct gap in school enrolment rates in South Asia, for example, in India (World Bank, 2001). Hence, ensuring fundamental rights for low-income families with the provision of basic schooling and health care to narrow the gender gap in human capital would decrease GI. Burdens are mostly borne by girls and women at home by not being sent to school and by being involved in unpaid economic activities. There is a close connection between income and GI: the higher the income, the lower the GI is. Higher-income is often a means of equal access to resources, such as education. According to the World Bank (2001, p.18), if South Asia and Sub-Saharan Africa want to reach the income level of the OECD average, secondary school enrolment rates should correspond with the OECD level. Hence, if policy reform in the developing countries aims at the increase in the length of compulsory education to cover

the secondary level, it would be remarkably beneficial for the country and GE. In this regard, the role of the government is critical.

### **6.3.3 Mainstreaming Gender Issues**

The results of the IIRM and the PDM showed the necessity for mainstreaming gender matters by introducing a series of policies to duly reflect women's voices and by making sure that related policies are properly delivered.

#### **6.3.3.1 Promotion of Citizen Participation and IT**

The coordination of supply and demand among social programs such as education is vital to the success of these programs. Citizen participation (CP) would play an indispensable role, to ensure that the services are readily accessible and available for all, to make sure of the proper allocation of essential administrative and financial resources, and to guarantee proper coordination amongst the stakeholders, such as related government agencies, beneficiaries, and other stakeholders. CP is crucial in dealing with GI-related issues. For example, CP enables people to oversee local authorities and program managers; that is, whether the services and programs are adequately delivered and executed in program monitoring. This would greatly help to reduce corruption and mismanagement as well as boost the transparency and accountability of the local governments. Hence, CP further helps to make the voices of the poor be heard in the decision-making processes. In addition, CP is pro-active in solving community-related problems as it seeks open discussions to find possible solutions for the community. The most beneficial factor of CP is that it utilizes community resources with extensive cooperative links with the community, and information from the community comes from many different sources (Singh, 2000). In this regard, CP is key to the success of GE-related policies.

Additionally, using information technology (IT) would promote CP. The impact of IT on public administration has been significant, and IT is fundamentally altering almost every domain within which it is extensively implemented. Most importantly, IT has brought about the need for administrators and political leaders to adopt new forms of managerial mindsets and approaches. The benefit of IT would be that public managers would gain information on services, consumers, and citizens much

faster than they have ever been able to do before IT services came into being. Based on the information, swift responses can be achieved when responding to a specific situation: the sufficient information that IT brings further increases the efficiency and satisfaction of the public (National Information Society Agency, n.d.). IT systems also promote a citizen's ability to gain access to government service providers and the government's ability to target public goods and public information for the people (Danziger & Andersen, 2002).

Most importantly, IT speeds up communications between the citizens and public-sector employees. For instance, in the ROK, a series of government websites have engaged in two-way communications with the citizens, i.e. transactional services, including requesting and receiving input on government policies, programmes, and regulations. Internet civil services ([www.egov.go.kr](http://www.egov.go.kr)) provide highly efficient and convenient services to the citizens as people can use administrative services anytime, anywhere on the internet (National Information Society Agency, n.d.). E-services and e-solutions in the ROK cut across departments and ministries seamlessly. Through integrated applications, the information, knowledge, and data of the respective government agency are transferred (National Information Society Agency, n.d.). These systems enable citizens to search for and visualise useful information and then communicate with relevant units of the government. It is a considerably more efficient means of communication than the conventional method of face-to-face communication. Such linkages can also make it more difficult for public employees to suppress or retain information, which citizens have a legitimate right to access. In this way, more transparency can be guaranteed.

#### 6.3.3.2 Adopting a Measure to Ensure Balanced Gender Representation during Decision-Making Processes and in the Public Sector

Creating a balanced work-life environment, in which top-level female public officers are able to use their time flexibly, as with flexible work entitlement, would greatly help them to focus on their work. The introduction of the quota system in the public sector to ensure that top managerial positions in the public sector are allocated to women would also help to achieve gender-balanced representation (OECD, 2016a). For instance, the world has witnessed changes in women's participation in politics, as the incumbent Prime Minister of New Zealand is a woman who took six-

week maternity leave, and three women have taken the top three government positions in Norway, i.e. the Prime Minister, the Minister for Finance, and the Minister for Foreign Affairs (Inter-Parliamentary Union, 2018, p.2). Therefore, creating social norms that support a work-life balance or family-friendly environments is vital for women to carry out their duties smoothly.

Boosting the participation of women in politics, i.e. major political positions, is crucial to promoting GE as such positions effectively represent women's positions and make sure that their voices are adequately reflected in policy. In this context, introducing a quota system is essential. There are many examples of successful cases of quota systems (Inter-Parliamentary Union, 2018, p.2): Argentina has become the 8<sup>th</sup> country in the region to “legislate gender parity in political representation,” and thanks to the change, 3.5 percent more women were elected to the lower house compared to the previous election. After the adoption of a flexible parity quota in Chile in 2015, the percentage of women elected to the lower house increased by 6.7 percent or 22.6 percent of the total seats. Currently, eight Latin American countries, including Mexico, are considering introducing the parity system to set at least 40 percent female quota (Inter-Parliamentary Union, 2018). Therefore, the promotion of the quota system is beneficial for increasing women's political participation. As Table 6.1 shows, the women's participation rates in the Arab states and Asia are below the world average; hence, adopting the quota system in these regions would remarkably increase women's political participation rates.

Table 6.1 Female Participation Rates in Parliaments 1995 and 2018

Year	World Average	Americas	Europe	Sub-Saharan Africa	Arab states	Asia
1995	11.3	12.7	13.2	9.8	4.3	13.2
2018	23.4	28.4	27.1	23.6	17.5	18.6

Source: World and regional averages of women in parliaments (Inter-Parliamentary Union, 2018, p.3)

### 6.3.3.3 Reinforcing Oversight Systems and Related Laws and Regulations on Gender Inequality

Setting up complaint and appeal mechanisms and proper independent legal institutions such as Supreme Audit Institutions<sup>42</sup> would help to reduce GI. Conducting financial audits and compliance audits<sup>43</sup> on a regular basis to oversee whether GE-related strategies are appropriately implemented and to see that any cases of unfair treatments or complaints and appeals for non-compliance are properly received and resolved is equally crucial to further equality.

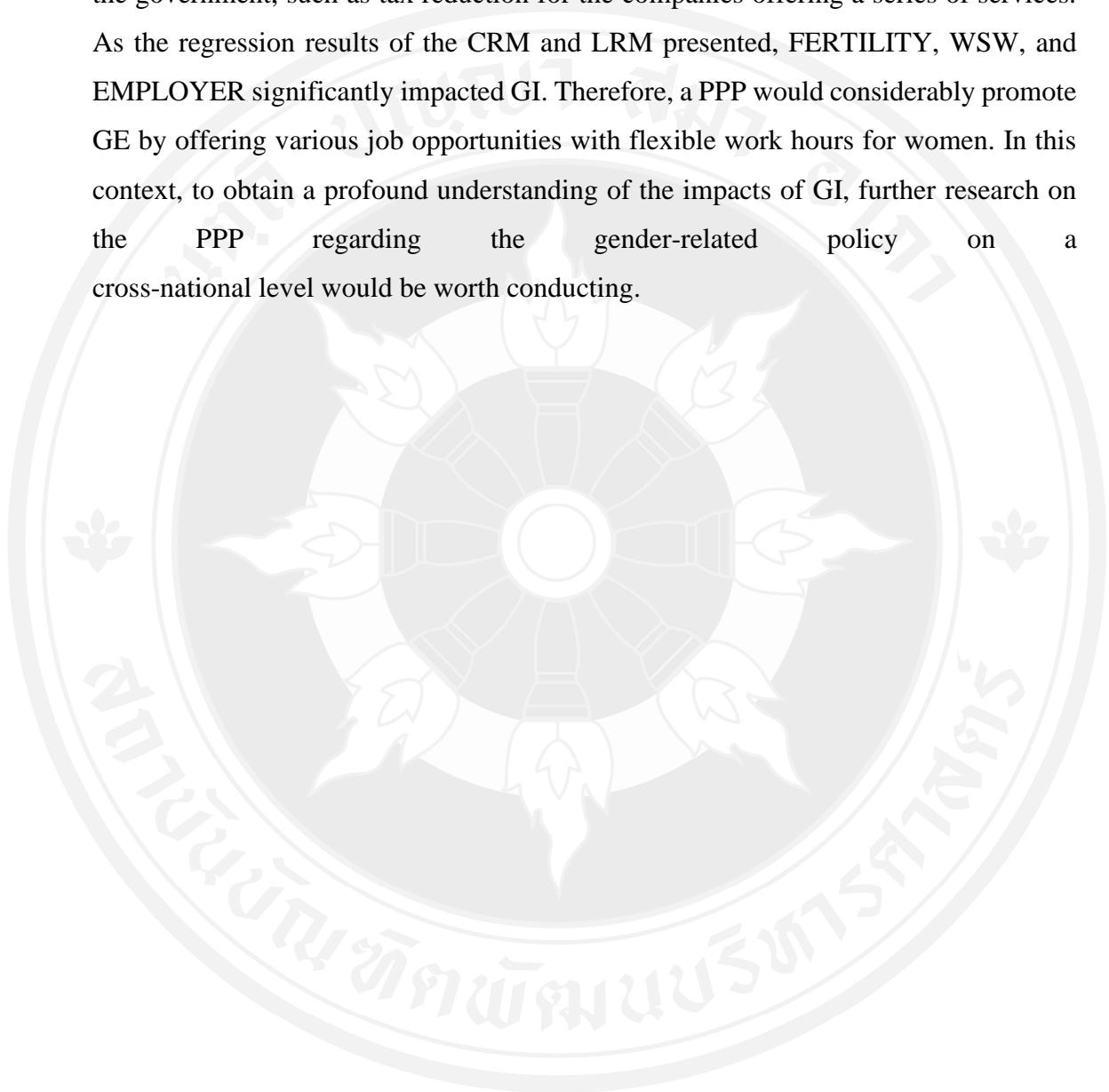
Promoting cooperation with the International Regulatory Cooperation (IRC) is highly beneficial for the developing countries to develop an effective and robust quality management system as the IRC provides advice, feedback, and input based on other countries' evidence-based good examples and experience. In addition, a series of international organisations (IOs), such as inter-governmental organisations (e.g. OECD, WHO,<sup>44</sup> FAO), supranational networks of regulators (e.g. European Commission), trans-governmental networks of regulators (e.g. IOSCO<sup>45</sup>), and private standard-setters (e.g. ASTM International,<sup>46</sup> ISO) are involved in the planning and creation of international norms and standards to assist the IRC (OECD, 2017a, p.126). Therefore, active cooperation with the IRC helps developing countries to put the proper gender-related mechanisms in place as IOs help them to improve local regularity quality and to reform domestic policies by reflecting the culture of a particular country.

## 6.4 Suggestions for Future Studies

Since the study's results underline the crucial role of social institutions, for future studies, it would be worth conducting cross-national comparative research based on a qualitative approach to test the explanatory powers of attitudes towards gender-related policy and the process of policymaking. A series of related issues can be tested: the degrees of the impacts of perceptions on gender-related policies, attitudes toward gender-related policies, and opinions toward the degrees of the involvement of the stakeholders are examples.

Future research on the cooperation between the public and private sectors on gender-related policy would also be beneficial to the policy analysis fields. The

countries around the world are actively pursuing Public-Private Partnerships<sup>47</sup> (PPPs), and this is well reflected in the Sustainable Development Goals<sup>48</sup> (SDGs) of the United Nations (UN, n.d.; UNECE, n.d.). A PPP is vital as it enables the government to deepen professional knowledge in a specialised field and helps to increase the incentives from the government, such as tax reduction for the companies offering a series of services. As the regression results of the CRM and LRM presented, FERTILITY, WSW, and EMPLOYER significantly impacted GI. Therefore, a PPP would considerably promote GE by offering various job opportunities with flexible work hours for women. In this context, to obtain a profound understanding of the impacts of GI, further research on the PPP regarding the gender-related policy on a cross-national level would be worth conducting.



## NOTES

<sup>1</sup> As the Power Distance Index does not state the specific year, the year 2013 was tentatively chosen to run the data for the regression test.

<sup>2</sup> “UNESCO’s Special Rapporteur in the field of cultural rights” (Culture Action Europe, 2016, p.5)

<sup>3</sup> “A Cobb–Douglas production function aggregated across the entire economy, with growth leading to the increases in inputs and exogenously caused technical progress” (Stephanie Seguino, 2000,p.30).

<sup>4</sup> Employers mean workers that are working alone or with one or a few partners and have the kinds of jobs that are termed self-employment (World Bank, n.d.-b).

<sup>5</sup> Vulnerable employment means the sum of the employment status groups of contributing family workers and own-account workers. They have less chance to have formal work arrangements and therefore tend to lack “voice” through effective representation by unions and similar organisations, and adequate social security and decent working conditions (UNWOMEN, n.d.).

<sup>6</sup> According to Kenton (2018a), “the cultural dimensions theory’s original form was based on the results of Hofstede’s global survey of IBM employee values. Testing and collection of results were conducted from 1967 to 1973. Using the results, Hofstede determined that there are six different dimensions to every culture: power distance, uncertainty avoidance, individualism vs. collectivism, short term vs long term, masculinity vs. femininity, and self-restraint vs. indulgence.”

<sup>7</sup> The Organization for European Economic Co-operation (OEEC) was the predecessor of the OECD to help with the reconstruction of Europe after World War II with the implementation

of economic plans, and later the OEEC changed its name to OECD and opened its membership to non-European countries as well, i.e. the United States and Canada (OECD, 2016b).

<sup>8</sup> The HDI measures a country's comprehensive accomplishment in major aspects of human development: a healthy and long life, having a decent standard of living, and being knowledgeable (UNDP, n.d.-c).

<sup>9</sup> GNI per capita was less than 1,025 USD as of 2018 (UN (Economic analysis & Policy Division), n.d.).

<sup>10</sup> GNI per capita is between 1,026 USD and 12,475 USD (World Bank Data Team, n.d.).

<sup>11</sup> The rates were calculated based on vital registration statistics, but for some countries where vital statistics were not available, the data were collected by observing the trend of censuses (World Bank, n.d.-b).

<sup>12</sup> The individual data were collected by UNESCO through annual education surveys, and then aggregate data were put together based on the World Bank estimates (World Bank, n.d.-a).

<sup>13</sup> The aggregate data were drawn up by the World Bank estimates, and education-related data were provided by UNESCO, and the data for the different levels of government were collected through either annual questionnaires or the International Monetary Fund's database (World Bank, n.d.-b).

<sup>14</sup> The data were based on various data sources such as national population censuses, the national labour force survey, and so forth (World Bank, n.d.-c).

<sup>15</sup> The data are from the International Labour Organization, ILOSTAT database (World Bank, n.d.-a).

<sup>16</sup> For each of the questions, the interviewee reads out, "Can you tell me how strongly you agree or disagree with each. Do you strongly agree, agree, disagree, or strongly disagree?" (World Value Survey, n.d.).

<sup>17</sup> The index was created by Dutch social psychologist Geert Hofstede (Kenton, 2018a)

<sup>18</sup> Gender Inequality Index (GII) by UNDP

<sup>19</sup> Reference: Hofstede Insights ( n.d.)

<sup>20</sup> <http://hdr.undp.org/en/indicators/68606> (UNDP, n.d.-d)

<sup>21</sup> <http://databank.worldbank.org/data/reports.aspx?source=world-development-indicators&preview=on#> (World Bank, n.d.-b)

<sup>22</sup> <http://databank.worldbank.org/data/source/worldwide-governance-indicators/preview/on#> (World Bank, n.d.-c)

<sup>23</sup> <http://www.worldvaluessurvey.org/WVSONline.jsp> (World Value Survey, n.d.). The WVS has been conducted since 1981 and currently carry out WVS Wave 7 that is expected to be completed by 2019 (WVS, n.d.). The WVS covers more than 90 percent of the world's population from 97 countries and enables the examination of trends “in gender norms and stereotypes that affect gender outcomes in material well-being” (UNDP, 2013, p.178).

<sup>24</sup> <https://www.hofstede-insights.com/product/compare-countries/> (Hofstede, 2018). As there was no specific year mentioned, the values were calculated for the year of 2010 for the regression analysis.

<sup>25</sup> Hausman’s test results showed that the p-values were not zero, so the null hypothesis could not be rejected, i.e. the random effect model was appropriate.

<sup>26</sup> “A generalization of summarizing, reports means and standard deviations for panel data; it differs from summarizing in that it decomposes the standard deviation into between and within components” (Stata.com, n.d.)

<sup>27</sup> “vce (robust)” uses the robust or sandwich estimator of variance. This estimator is robust regarding some types of misspecifications so long as the observations are independent and although the data are not equally distributed, “vce (robust)” help to draw valid statistical assumptions concerning the coefficients (STATA, n.d.).

<sup>28</sup> The value is based on the World Justice Project's (WJP) Rule of Law Index (OECD, 2013, p.44).

<sup>29</sup> American economist who won the Nobel Prize with William Nordhaus in 2018 for economics for his work on "long-term economic growth and its relation to technical innovation" (Duignan, 2019).

<sup>30</sup> Spillover effects can cause positive and negative externalities. R&D and research are examples of positive externalities, whereas an example of a negative externality is that one country's economic downturn affects other countries' economies (Kenton, 2018b).

<sup>31</sup> This means employment in low-wage secondary (periphery) industrial sectors with little job security and high turnover rates (The Open University, 2016).

<sup>32</sup> When selecting non-OECD countries, only the countries that participated in both the World Value Survey in Wave 5, which included 58 countries, and the Power Distance Index, which included 76 countries, were chosen. Therefore, 16 non-OECD countries were selected based on that.

<sup>33</sup> "Women are specifically different from men: as a result, their difference must be recognised by law. The unpaid work of wives-mothers is the equivalent of their husbands' paid work. Both roles are essential to society; thus, both must be recognised through the granting of citizenship rights to women as well as to men" (Lombardo, 2003, p.176).

<sup>34</sup> According to Harrell Jr (2015), 10 to 20 observations are necessary in order to obtain reasonable-size impacts with reasonable power.

<sup>35</sup> Educational attainment means the highest level of education accomplished by a person, indicated as a percentage of all people in that age group (OECD, 2016).

<sup>36</sup> "Programmes at the upper secondary level are more specialised and offer students more choices, and diverse pathways for completing their secondary education and the entrance age for the level is at 15 or 16 years old" (OECD, 2016, p.169).

<sup>37</sup> A list of the Nordic countries include Denmark, Finland, Iceland, Norway, Sweden, Greenland, and the Faroe and Aland Islands (Worldatlas, n.d.).

<sup>38</sup> Singapore does not meet the OECD criteria necessary for a country to join: the committees evaluate the candidate country's ability and willingness to carry out OECD legal instruments and assess its practices and policies as compared to OECD practices and best policies. Committees will recommend changes to bring the candidate country's policy, practices, and legislation into line with OECD instruments or to bring its policies closer to OECD best practices (Leonard, 2015).

<sup>39</sup> "The gender gap in median income of full-time employees, defined as the gap between the median income of men and women as a proportion of the median income of men" (OECD, 2018).

<sup>40</sup> Most female workers that stay in the labour force are highly-qualified women (HQW) that possess better skills and knowledge than the average female workers; therefore, it seems that the median earning is high, but in reality, the earning of HQW pushed up the median earning.

<sup>41</sup> Conditional cash transfers (CCTS) are programs that transfer cash to low-income families with the condition that they must invest in the human capital of their children (Fiszbein et al., 2004).

<sup>42</sup> An independent and professional Supreme Audit Institution (SAI) is a key actor in a country's accountability chain. It is a government body whose external audit task is set by the supreme law-making authority or the constitution (OECD, n.d.).

<sup>43</sup> Financial audits to evaluate the accuracy and reliability of public entities' financial reporting and compliance audits to evaluate public entities' compliance with their governing bodies (OECD, n.d.)

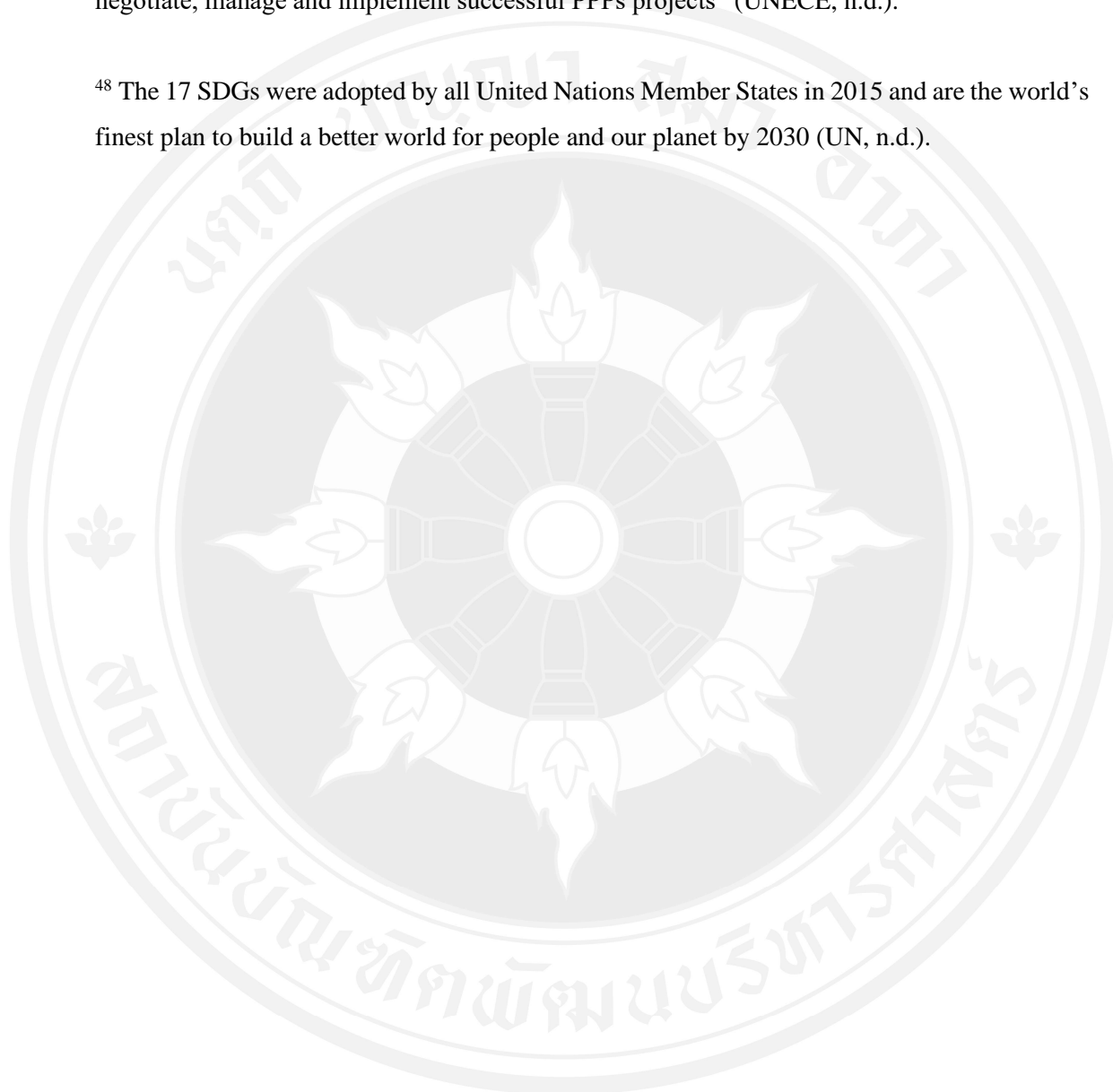
<sup>44</sup> "World Health Organization"; "Food and Agriculture Organisation of the United Nations."

<sup>45</sup> "International Organization of Securities Commissions."

<sup>46</sup> “American Society for Testing and Materials International”; “International Organization for Standardisation,” e.g. ISO 9001 (ISO, n.d.)

<sup>47</sup> “The main objective of the PPPs area is to increase the expertise of governments to identify, negotiate, manage and implement successful PPPs projects” (UNECE, n.d.).

<sup>48</sup> The 17 SDGs were adopted by all United Nations Member States in 2015 and are the world’s finest plan to build a better world for people and our planet by 2030 (UN, n.d.).



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## BIOGRAPHY

<b>NAME</b>	Seh Young Kim
<b>ACADEMIC BACKGROUND</b>	Ph.D. candidate in the Graduate School of Public Administration (GSPA) at the National Institute of Development Administration (NIDA)
<b>EXPERIENCES</b>	<p>Master Degree in Translating and Interpreting and a Master Degree in Applied Linguistics from Macquarie University</p> <p>Presented the thesis entitled “Critical Determinants of Gender Inequality from Five Different Perspectives” at the Integrated Korean Public Administration Summer Conference and Annual KAPA International Conference in 2019</p> <p>Worked as a Specialist and Assistant Permanent Representative to UNESCAP</p>

