

Winnet Centre of Excellence® Series



Sustainability – Equality – Women

No. 4





SUSTAINABILITY – EQUALITY – WOMEN

Winnet Centre of Excellence® Series No. 4



Szczecin 2020

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Szczecin 2020

ISBN 978-83-7867-823-6

Printing house & publishing

volumina.pl Daniel Krzanowski

ul. Ks. Witolda 7–9

71-063 Szczecin

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TABLE OF CONTENT

Introduction	5
Chapter 1 Gender Development Sustainability in Education System of Georgia (Natia Gorgadze)	7
Chapter 2 Dimension of gender equality and sustainability: the case of the European Union (Ilona Kiaušienė)	37
Chapter 3 The gender aspect of happiness & life satisfaction (the case of Armenia) (Gohar Shahnazaryan)	55
Chapter 4 Does gender diversity within corporate management improve financial performance of companies listed on Warsaw Stock Exchange? (Dorota Witkowska)	73
Chapter 5 A suggestion to use insights from women's studies as input in design of industrial ecologies (Maria Uden)	99
Chapter 6 Glass Ceiling: Does Gender Stereotypes matter? (Dinethi Yasodara Jayarathna)	109
References	121

INTRODUCTION

The Winnet Centre of Excellence® Series, issued in English, is a continuous publication. Into the hands of readers we are placing fourth edition which is a collection of works devoted to the three significant issues: sustainability, equality and women.

This monograph consist of six chapters of Authors from Armenia, Georgia, Lithuania, Poland, Sri Lanka and Sweden. In the first chapter gender development sustainability in education system of Georgia is presented. Second chapter explores dimension of gender equality and sustainability. The Author of this chapter focuses on the case of European Union. Chapter three contains the analyses of the gender aspect of happiness and life satisfaction win Armenia. In the fourth chapter the Author seeks an answer to the question: Does gender diversity within corporate management improve financial performance of companies listed on Warsaw Stock Exchange? In chapter five a reader may find an innovative suggestion to use insights from women's studies as an input in design of industrial ecologies. The last chapter – explores the problem of glass ceiling.

We are honoured to express words of gratitude to all co-authors and reviewer for their effort and contribution towards this joint international monograph.

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CHAPTER 1

Gender Development Sustainability in Education System of Georgia

1.1. Introduction

This chapter examines gender equality in education context of Georgia and argues those conceptual visions, which form country education policy in regards to gender. The chapter shows that the steps undertaken by the state concerning gender in education are mainly focused on eradication of negative discourse of gender inequality and are less oriented on gender representation in positive light. At the same time, gender equality is predominantly portrayed and evaluated from the quantitative perspectives of view where equal access to the education and participation rate, number of the trainings mentioning gender, policy documents claiming for gender equality are seen as main indicators for positive outcomes of gender oriented education. The review of gender characteristics in education leads to the conclusion about the scarcity of cognitive domains needed for gender mainstreaming. Instead of focus on reconsideration of gender roles, change of biased and arbitrary teaching practices and strengthening personality-centred approaches in all domains of education, the narrative and representation of gender are still oriented on the excuses and clarifications about the disadvantaged practices.

More specifically, 1. Gender is still the subject of theoretical frameworks and is less reflected in the implementation process of education. 2. The academy is less sensitive to the gender topics and is not sufficiently interested in inclusion of gender equality in education practice. 3. Teachers are not

prepared for gender inclusion in instruction and sensitisation of students about the equality. 4. Civil society is not prepared for review of gender equality in education as an instrument for sustainable development.

1.2. Georgian context in light of gender equality

Georgia is a small country located on the coast of Black Sea and surrounding with the Caucasian mountains. While being famous for its ancient and unique culture as well as rich history, and having the period of “Golden Kingdom” between the period of 10-12 centuries, the history full of Turkish, Iranian, Persian and Mongolian envisions and dominations, in 19th century Georgian was annexed by Russia for a long period. In 1936 the independent state of Georgia was enforced to join Soviet Union as a soviet republic. Only in 1991 Georgia seceded from the Soviet Union confirmed by the Referendum of March 31 and by the act of Independence in April 9. The situation in Georgia during the first years if its independence was exacerbated even more by conflicts (Papava, 2013) leading economic situation in Georgia even more complicated (Kakulia, 2008). After almost 20 years, the modern Georgia is strongly pursued a pro-Western foreign policy while striving for NATO as well as European Integration. Georgia has signed, ratified and is party to the most human rights instruments. The Constitution is the supreme law of Georgia and recognizes the supremacy of international treaties over domestic laws, unless a treaty contradicts the Constitution. In 2014, Georgia has declared joining the European Union’s legal and regulatory space as its top policy priority and has signed an Association Agreement (AA) and the accompanying Deep and Comprehensive Free Trade Agreement (DCFTA) with the EU.

Georgia is committed to the gender equality as a priority of the national policy too. In 1994 The Georgian Parliament ratified the UN Convention on the Elimination of all forms of Discrimination Against Women (CEDAW) and an year later, Beijing Declaration and action plan 1995. On March 26, 2010, Parliament of Georgia approved the law on Gender Equality with a necessary underlined precondition on equal treatment: “Recognition of equal rights and opportunities for men and women in domestic relations and other spheres of socio-political

life, elimination of discrimination by gender in parallel to determination of education, labour and social conditions”. On May 2, 2014, Parliament of Georgia adopted Law on Elimination of All Forms of Discrimination.

The new Constitution of Georgia, adopted in 2017 in Article 11, paragraph 1 contains an equality clause, which reads: “All persons are equal before the law. Any discrimination on the grounds of race, colour, sex, origin, ethnicity, language, religion, political or other views, social affiliation, property or titular status, place of residence, or any other grounds shall be prohibited”. According to paragraph three of the same article the state shall ensure “equal rights and opportunities for men and women . . . shall take special measures to ensure the essential equality of men and women and to eliminate inequality”. The discourse of the new equality article trades earlier formal equality wording for substantive equality that shifts the emphasis towards combating structural inequalities and mandating the State to establish and implement special laws, policies and programmes to ensure that women enjoy equality of opportunities as well as results (UNDP, 2018).

The State Concept on Gender Equality (2006) and the Law of Georgia on Gender Equality (2010) were adopted, which underlines the importance of ensuring equal rights between women and men and improving women’s participation in the political, economic and social processes while recognizing the need for specific actions to achieve equality between women and men and eliminate inequality in Georgia. In 2016 the first National Action Plan for 2016-2017 on the Measures to be implemented for Combating Violence against Women and Domestic Violence and Protection Victims/Survivors was adopted, followed by the second action plan for the period of 2018-2020, National Action Plan for 2018-2020 on the Human Rights and National Action Plan for 2018-2020 on Women, Peace and Security.

According to the 2019 Human Development Report, in Human Development Index (HDI) of Georgia’ HDI value is 0.786— which puts the country in the high human development category— positioning it at 70 out of 189 countries and territories and in Gender Inequality Index (GII) value of 0.351, ranking it 75 out of 162 countries in the 2018 index (UNDP, 2019).

1.3. Literature review. Theories of gender in education

Gender is perhaps the most pervasive, fundamental, and universally accepted way we separate and categorize human beings (Meadow, 2010). Although the nature of cultural intelligibility of woman and man has changed over time, the categories themselves continue to be preserved, prescribed, and projected onto our bodies from their very conception in the minds of our families, as parents imagine who their child might grow up to be (the current proliferation of gender reveal parties during pregnancy illustrates this point). Such categorization narrates even our first moments of life, in declarations of “It’s a girl!” or “It’s a boy!” (Keenan, 2017). This separation and categorization put people in the strictly defined positions disregarding that any categorization is conditional and forgetting that “Categories are made, not found” (Amsterdam and Brunner, 2000). Albeit the feminist theories have different approaches, understanding, interpretations about the gender definition, construct, norms, and equality, they have a common notion of viewing it as “characteristics of individuals [...] which are also embedded in social interactions, social structures, and cultural forms” (Bank, 2007).

With regard to the social structures and norms, the education is one of the strongest social systems “through which a society’s children are taught basic academic knowledge, learning skills, and cultural norms” (Stromquist, 2006). At the same time, education is held to be a key element of the emergent “knowledge society” (Ibid).

Although the promise of the education is to provide equality and equity among the diverse groups of society, the cultural expectations and anticipated norms differ by gender. The large number of the researches show that the students consisted of girls and boys, are expecting to develop different valuable aspects and thus, they are taught differently (Kelly, 1981). as Keenan (2017) claims, “Schooling plays an essential role in establishing what Judith Butler (1990) has called the “heterosexual matrix,” the social regulation of “cultural intelligibility through which bodies, genders, and desires are naturalized” (150). The gender gap in education is reinforced not only by the school as a social institution but

also by the surrounding social agents. The process of acquisition of social regulations, learning of cultural expectations and norms, “is reinforced by our teachers, our textbooks and our classmates” (Little, McGivern, 2014). Moreover, “far from being self-evident, the social disparities in school achievement are, in actuality, a response to a complex interplay of the multiple social forces of class, region, community, family and the state” (Ramachandran, 2004).

The role of the state is mentioned in many gender theories in education and is underlined in almost every key global and regional commitments of gender equality. As Arnot and Mac an Ghall (2006) argue, that messages highlight, the significance of new patterns of educational attainment, a more flexible and open workforce, transformations in gender relations and state commitments to the education of women (27). Banks and McGee (2020) put emphasis on the socio-political context, which “underscores that the education is part and parcel of larger societal and political forces, such as inequality based on stratification due to race, social class, gender, and other differences. Given this perspective, decision concerning such practices as ability tracking, high-stakes testing, native language instruction, retention, curriculum reform, and pedagogy are all influenced by broader social policies and structures (256). Stromquist (2006) criticize the approaches of the governmental approaches while attempting “to increase access to schooling, some fundamental facts are minimised or even denied in the assessment of their work. One of them is that the state is not neutral to women (145-161).

Yet, many researchers and feminism theorists argue the readiness of the education national systems to claim for the equity through the education. “There are exceptionally minor programs that integrate elements that can build critical awareness of gender issues in girls (Stromquest. 2006). In response to the evidences displayed at different international conferences and ministerial meetings governments of many counties made promises to take actions towards the elimination of gender inequity in education. The actions that have been undertaken by the governments include modification of the textbooks and curriculum, informational campaigns as well as provision of teachers gender sensitive trainings. Nevertheless, using more inclusive

language and providing balanced images of women and man in the society, making teachers more sensitive towards own biased teaching or influence over different performance and career expectations as well as pedagogical strategies to foster gender quality in the classroom, still remain most activities “sporadic, superficial and far from the comprehensive context” (Parpart, Shirin, Staud, 2002). At the same time, nor of the educational programs has the issue of gender sensitivity training systemically been addressed in Western education, although programs offering these services have found to be successful in developing regions (Unterhalter & North, 2011). Frei and Leowinata (2014) also point out that “gender mainstreaming is not a one-time activity. Instead, it requires ongoing attention when developing education programmes and budgets, designing schools, developing curricula, governing and managing schools and, of course, teaching and using learning materials” (33)

In lack of genuine equality in education, the researchers consider large share of international agencies who shape the equality orientations in the world. The researchers challenge efficiency of the “International agencies such as the World Bank, which wields inordinate influence on public policies in developing countries” (Stromquist, 2006) as well as the global and regional policies and indexes, such as (GSI) and (HDI) developed by the United Nations Development Project (UNDP) and of Duncan (Walby, 1993). They see the measurements utilised by these agencies as marginal and unilateral, where “quality is measured exclusively in cognitive terms and reduced to two basic skills, math and reading” (Stromquist, 2006). The major global policies such as Education for All and the Millennium Development Goals, do not consider the importance of inserting gender awareness in the provision of an education of high quality and their objectives see gender only as it relates to equal access to school by girls and boys” (Ibid). Walby (1993) dares the comparability of the nations via universal indices and concludes that they cannot diagnose the gender gap at the country level as it presents a “single standard for the whole world, regardless of cultural and national differences (1339). In order to resist to these challenges, the researchers and practitioners alike have to rely on qualitative micro studies to capture regional and context-specific nuances (Ramachandran, 2004).

While the gender is a socially embodied character it should be a crosscutting issue for every stage of education including higher educational institutions with diverse education programs in order to prepare the new generations for wide gender mainstreaming. “Teaching with a gender perspective also stimulates students’ critical thinking capacity, providing them with new tools to identify social stereotypes, norms and roles related to gender. They thus learn to problematize dominant socialisation patterns and develop skills that will enable them to avoid gender blindness in their future careers”. (Verge and Cabruja, 2017).

The Catalan University Quality Assurance (2019) defines the frame for gender perspective teaching, which implies a process of reflection affecting design of the competences and skills in the programme’s curriculum, the design of courses, including learning outcomes, the content taught, examples provided, the language used, the sources selected, and the method of assessment and management of learning environment (28). “The gender perspective is also necessary in courses dealing with research methods and techniques, including quantitative methodology, where numbers and statistical methods are conceived of as being gender neutral. Nevertheless, the choice of research questions, the construction of concepts and the design of hypotheses are not value-free and prejudices often inform methodological decisions, such as the gathering of data and the selection of variables (Harding, 1987; Hesse-Biber et al., 2007).

Accordingly, the gender is an agenda for every program, not only the teacher education training and has to “introduce gender perspectives in education that is focused on stimulation of “critical, constructive and responsible thinking to identify gender stereotypes” (The Catalan University Quality Assurance Agency, 2019).

To summarise, the gender as unseparated part of the education agenda, which provides inclusive outlook on general and specific topics of gender gap and equality; it questions and examines existing practices through historical and cultural lenses and creates positive attitudes towards the parity and equity based on the critical analysis. Gender inclusive education agenda learns gender dimensions in global and local context using qualitative and quantitative measurements, empowering individuals, and strives at integration of rational and transparent principles that promote sustainable and cohesive development.

1.4. Demographic data

Number of population in Georgia as of 1 January 2019 is 3 723.5 (Geostat, 2019) excluding the population of occupied territories of Abkhazian autonomous Republic and Tskhinvali region. According to the data, 51.9 percent of Georgia's population were female, while 48.1 percent were male (geostat, 2019). In 2018, the median age equalled 35 years for males and 40 years for females. At the young ages, the share of males exceeds that of females, which women outnumber men in the age group of 65 and above due to females' higher life expectancy (Goestat, 2017). The population of Georgia is ethnically, linguistically and culturally diverse (Tabatadze 2010, Gorgadze, 2015, Tabatadze and Gorgadze 2013, 2016, 2019, Tabatadze, Gorgadze, Gabunia, Tinikashvili, 2020), where the dominant group is represented by ethnic Georgians (86.8%). Azeri and Armenian population are the second and third representative ethnic groups comparing with others and make respectively 6.27% and 4.53% of total population (census, 2014). Beyond of the diversity of Georgian population, the geographical distribution of ethnic groups is also distinctive as the ethnic minority groups are mostly living compactly in three regions of Georgia. At the same time Azeri population is predominantly inhabitants of urban settlements (81.26%) while Armenian communities are represented with 48.5% share of urban locations compared to 40.21% of Georgians living in villages (Gorgadze, 2015).

Table 1.1. Ethnic composition of Georgian population in 2014

Total population	3 713.8 04	%
Georgians	3,224,564	86.80%
Azerbaijanians	233,024	6.30%
Armenians	168,102	4.50%
Russians	26,453	0.70%
Ossetians	14,385	0.40%
Yazidis	12,174	0.30%
Ukrainians	6,034	0.16%

Total population	3 713.8 04	%
Kistis	5,697	0.15%
Assyrian	2,377	0.06%
Other	14,346	0.40%

Source: National Statistics Office of Georgia, census 2014.

According to a 2014 census, 83.4% of the **Georgian** population identified themselves as Eastern Orthodox Christian, 10.7% Muslim, 3.9% Armenian Apostolic, and 0.5% Catholic. Orthodox churches serving other non-**Georgian** ethnic groups, such as Russians and Greeks, are subordinate to the **Georgian** Orthodox Church. Islam is prevalent among Azerbaijani and north Caucasus ethnic communities in the eastern part of the country and also is found in the regions of Adjara. Since the collapse of the Soviet Union (1991), Protestant denominations have become more prominent. They include Baptists (composed of Russian, Georgian, Armenian, Ossetian, and Kurdish groups); Seventh-day Adventists; Pentecostals (both Georgian and Russian); the New Apostolic Church; and the Assemblies of God. There also are a few Bahá'ís, Hare Krishnas and Jehovah's Witnesses in the country and has about 15,000 adherents. The membership numbers for these groups most likely totals fewer than 100,000 persons (Ibid).

Ethnic and religious diversity of the country has a strong influence on a gender socialisation in the country concerning the perception and distribution of roles, responsibilities and accountabilities between the males and females, which is reflected in political, economic and social inequality. While child marriage is a persistent problem in Georgia generally, (14% under age 18, MICS 2018), the data suggests that the problem is particularly acute in rural areas with 21% of rural women who have married under the age 18. The data suggests that the early marriage rate is significantly higher among the ethnic minorities, particularly in ethnic Azerbaijani communities as well as among the Muslim Georgian population. In Kvemo Kartli region which is predominantly inhabited by ethnic Azerbaijanians 32% of married women in

that they got married before 18 years. Five percent of marriages are early marriages (below 13-14 years), whereas 16% of respondents said they married at between 15-16 years (UN-Women, 2014). While data about the early marriages in Azerbaijanian and Georgian communities is relatively accessible, there is no consistent statistics related to the Armenian population where early marriages suggested to be very common practice too (Tabatadze, Gorgadze, Gabunia and Tinikashvili 2020).

Despite of many positive steps undertaken by the Government of Georgia recently, women's participation in decision-making processes remains low. Under Georgian law men and women have equal rights as voters and candidates. While women may have the formal right to participate in politics, the structure of the electoral system impedes their equal participation. According to latest statistics, Members of the Parliament of Georgia by factions in 2018 consisted of 22 of women and 127 men. The Government of Georgia is composed of 3 female and 8 male ministers, while the proportion of the deputy ministers was 10 females to 47 males. The ethnic composition is reflected in political participation of women too. According to the recent numerous reports, the level of engagement in the public life of ethnic minorities in Georgia is generally low and this is especially evident in regards to the participation of minorities in political life, as well as their representation in elected bodies and governmental agencies (Centre for the Studies of Ethnicity and Multiculturalism, 2018). The condition of women who are representatives of ethnic minorities is especially notable in the process of political alienation and exclusion and the level of political activity of ethnically non-Georgian women is even lower (UN Women, 2014).

As for the property ownership, although there are no legal barriers for women to be registered as landowners, the rate of land ownership is higher for men: the 2014 agricultural census found that 70% of total agricultural holdings were operated by men. The study in 2015 revealed that woman's parcels of land are smaller than men's (UNDP, 2015). Generally, women are behind men in all regions of Georgia with regard to property registration. Concerning employment, more than 40 percent of women in Georgia are economically inactive and 49% are employed with significantly lower rate compared to men with 63%

of employment rate (Geostat, 2018). Occupations are strongly segregated by gender, with a much higher share of men in stereotypically male professions, such as engineering, construction, energy, transport and communications, gas, and water supply. The majority of women is employed in jobs with a caring or service dimension. Women account for around 75% of employees in the health care and social sectors, 60% of people working in the hospitality sector, and 84% of schoolteachers. According to the statistics, the latter is the least paid profession in Georgia (Geostat, 2019). Generally, employed women receive 35 percent smaller salaries than men (UNDP, 2017) where men earned almost 485 GEL more than women each month in Q3 of 2017 (Geostat, 2017).

Many study-researches and inquiries point to widespread experiences of violence against women across the country. Intimate partner violence, as well as early and forced marriage, are among the most prevalent forms of violence against women in Georgia. These types of violence cut across all divisions of income, culture and class and remains largely underreported. Approximately 14 per cent of ever-partnered women aged 15-64 reported having experienced physical, sexual and/or emotional violence by an intimate partner in their lifetime (UN-Women, 2017).

1.5. Education policy and implementation from the gender perspectives

The Government of Georgia began the nationalization of the Sustainable Development Goals (SDGs) in 2016 while has identified the priority goals, targets and indicators through the adaptation of the 2030 Agenda for Sustainable Development where gender equality in and through education is seen as one of the top priorities for the national governments. On March 26, 2010, Parliament of Georgia approved the law on Gender Equality with a necessary underlined precondition on equal treatment: “Recognition of equal rights and opportunities for men and women in domestic relations and other spheres of socio-political life, elimination of discrimination by gender in parallel to determination of education, labour and social conditions”. This law itself does not contribute to establishment of equality principles in all levels of education but

only talks about the decrease of the negative practices of discrimination. At the same time the NAP for 2016-2017 as well as for 2018-2020 require from the Ministry of Education and Science to take proactive measures for tackling gender gap in education policy and practice. Based on data, as of population census 2014, the share of females in vocational and higher education levels exceeds that of males. Females at tertiary education are more represented in Bachelors, Masters and PhD Programs (Gorgadze, 2016).

Table 1.2. Educational attainments of Georgia population aggregated by the sex

	Percent		Sex distribution	
	W	M	W	M
Higher education	36	32	55	45
Vocational education	23	19	57	43
Complete general education (secondary education)	34	41	47	53
Basic education	4	4	49	51
Primary education	1	1	54	46
Has no primary education, but is able to read and write	0	0	56	44
Illiterate	0	0	54	46
Not stated	1	2	50	50
Total	percent	100	100	
	number	1 045	955	

Source: National Statistics Office of Georgia, Population census 2014.

The data suggests that there is no obstacles for females to pursue after-school education. Indeed, the legislation of education is not discriminative towards the women. Nevertheless, it does not encourage clearly gender equality (Gorgadze, 2016). The qualitative statistics, which show women domination at every post-general education stages in reality veil the qualitative traits of inequality represented through hidden curricula and inherited social practices (Khomeiriki, Javakhishvili, Abramishvili, 2012, Gorgadze, 2016, Tabatadze, Gorgadze, Gabunia and Tinikashvili 2020).

1.6. General education in light of gender equality

Full general education includes 12 years of study and carried out in three stages, namely: primary, basic, and secondary. Primary education includes 6 years of study and implemented in I-VI grades; Basic education includes 3 years, implemented in VII-IX grades; Secondary education includes 3 years, carried out in X-XII grades. Primary and basic education is mandatory. Person who completes The Full General Education stages and receives the certificate (Atestate) has the right to continue learning in the higher education institution while passing the national entrance examinations. A person who completes the basic education has the right to continue studies at the secondary education stage of the general education or alternatively take training course of the vocational education (National Centre for Education Quality Enhancement, 2019).

According to Education Management Information System (EMIS) in 2019, **584 374** students were enrolled in the public and private schools of Georgia comprised of 278 880 (47.7%) girls and 305 494 (52.3%) boys which mean that the boys exceed girls by 4.60%. While there is no differences between the girls and boys engagement in school education at primary and basic levels, at the secondary education school level the girls attendance exceeds by 4%. This means that more girls are eligible to pursue higher education than boys. Concerning the completion rate of the secondary education, there is no differences per sex but per geographical location (rural / urban) and social status in accordance with the poorest and richest quintile groups (Geostat, unicef, 2018).

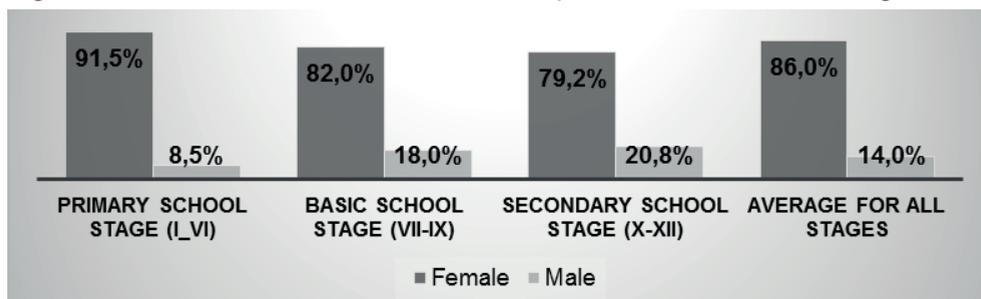
1.6.1. Redistribution of teachers at different levels of education institutions

Based on 2017-2018 year data, 66 634 teachers are employed in Georgian schools, out of which 57552 (86%) are female and 9082 (14%) – male (Geostat, 2018). Though, starting from basic secondary (VII-IX grades) and upper secondary (X-XII grades) education, between primary (I-VI grades) and secondary education stages, teachers are not similarly redistributed and share of male teachers (in total number of teachers) increases at basic secondary and upper secondary

education stages. It should be noted that part of the teachers could teach several subjects and/or teach at different stages (TALIS 2015, Gorgadze 2016).

The below given diagram reflects share of teachers by sex at each stage of school education for 2014-2015 school year and also, average share of female and male teachers in every stage (Gorgadze, 2016).

Figure 1.1. Redistribution of schoolteachers per sex and education stage



In school level, teachers' distribution per males and females in school administration positions also indicates a vertical segregation. The vast majority of teachers in Georgia are women, while senior school administration positions are predominantly held by men (UNDP, 2019). According to the Ministry of Education, science, sport and culture out of 2057 public school directors, 1265 (61.5%) are the females and 792 (38.5%) - males. The proportion of the directors varied by the regions while in Kvemo Kartli and Adjara the share of male directors is higher than that of females (MoES, 2019) which can conceivably be impacted by the ethnic and religious background and subsequent cultural perceptions of the population. Even though, the proportion of the female and male directors generally does not reflect the proportion existing in the teachers' cadres and thus talks about the advantage of male candidates over female for the administrative positions in the school system.

As a conclusion we may say that the statistics and role redistribution give us a basis to presume that even in such "feminine" sphere as education and more specifically – secondary education, the horizontal and vertical segregations are common (Gorgadze, 2016).

1.6.2. Preparedness of the schoolteachers and administration for gender sensitive instruction

By the order of the Minister of Education and Science of Georgia 40 / N, in 2016 the National Curriculum for the 2018-2024 academic year was approved. This is a third edition of a national curriculum that has been developed since 2004 which is a beginning of comprehensive reforms in Georgian following the “Rose Revolution”. The curriculum for the primary grades from 1st to 6th was issued and approved in 2018, and for the grade 7th in 2019. According to the plan, in every next year the next upper grade curriculum will be adopted in the schools and the corresponding textbooks approved. The new national curriculum aims at the achievement of national education goals through development of core knowledge and competences among the students integrating crosscutting competences and pointing out the prioritized topics that include protection of cultural heritage; protection of environment, healthy lifestyle; civil safety; conflict management; financial literacy, cultural diversity. Gender equality principles are discussed in different subject matters of the curriculum and are covered at all school education stage from the primary to secondary. These subjects include social subject matters, (“I and Society” in the primary grades, civil education in grades VII-IX, biology in grade VIII and sports). The gender discussion is introduced from the perspectives of gender social roles and equality, human rights and democratic development, early marriage and discriminative practices, reproductive health (UNDP, 2019). There are still several concerns related to the mainstream of the gender responsive curriculum in the schools, which are related to:

- a. Readiness of teachers for proper interpretation, analysis and synthesis of curriculum in the classroom interaction;
- b. Appropriateness of approved textbooks as a main resource for school education;
- c. Ability of the school to integrate the curriculum into the school practices using interdisciplinary approaches, mainstreaming it in practical work for an achievement of those goals, which are described in the curriculum.

Those include crosscutting competences and prioritised topics of direct education and extracurricular interventions.

- a. *The readiness of teachers for proper interpretation, analysis and synthesis of curriculum in classroom interaction;*

Teacher profession is state-regulated profession whose professional knowledge, skills and appropriate qualifications are determined by the Professional Standard for Teachers (Low on General Education, Article 21.2). Teachers Professional Standard, the part of general statements defines those competences that all teachers regardless of their subject orientation or professional seniority should demonstrate. More specifically, the chapter 3, paragraph four states:

The professional characteristics include:

- g. Sharing the values of inclusive education and adhering to its principles
- d. Recognizing the uniqueness of each student and having the expectation of success of any student
- e. Focus on the cognitive as well as personal development of each student
- v. Development of a curriculum that takes into account the age and gender characteristics of students, their ability, interests and needs, existing material resources;
- g. Understanding the importance and responsibility of own profession towards the sustainable development of civil society and the state; Adherence to the principles of democracy and equality;
- d. Sharing the values of inclusive education and adhering to its principles
- e. Recognizing the uniqueness of each student and having the expectation of success of any student;
- v. Focus on the cognitive as well as personal development of each student
- z. Development of a curriculum that takes into account the age and gender characteristics of the students, their ability, interests and needs, existing material resources; Adherence to safety rules;

The Teachers Code of Conduct also defines the teacher's accountability towards the gender particularities while the 11th clause of the fourth paragraph in "Relationship with students" clearly articulates the requirement for the teacher to show equal attention to all students despite of their sex.

It means though that the teachers should be equipped with the high competences and thorough knowledge of the various teaching principles in order to meet the professional characteristics and to be capable for implementation of the national curriculum. While the knowledge can be built-on the positive practices, there is very limited empirical evidences about the gender gap and gender equality importance in the country representing in academic studies and research. The system lacks methodological resources and evidence-based experiences. The insufficiency of the academic research resonates with the inconsiderable attention to the practical mainstream and positioning of gender in the whole system.

The teacher professional development programs are mostly implemented or coordinated by the National Centre for Teachers Professional Development (TPDC). As of 2016, TPDC had about 300 existing training modules that ensure continuous professional development of teachers, oriented on diverse training programs. These included long-term training-courses oriented on knowledge acquisition and development of skills in a specific direction and short-term subject programs that would help teachers to systematize their professional knowledge. Also, the teachers had an opportunity, referring from their own views, took and free of charge attended the program that would be better adjusted to their professional needs and enabled them to go through the effective professional development. According to the statement of TPDC, the subject of each training program of the TPDC is based on the analysis of the teacher's standard, national curriculum and teacher's needs.

In 2016 in response to the inquiry¹ about the teacher professional development trainings that include gender aspects, TPDC cited the program "problem based instruction" for the teachers of geography where the demog-

¹ Letter from the TPDC on an inquiry about the teacher professional development programs received on Apr. 3.2016

raphy, pronatalistic and antinatalistic demographic policy and their relevance were discussed. In the same period, the teachers of geography were targeted through two master classes called: “Gender as global problem” which aimed at the sensitization of teachers on gender as terminology and concept and awareness raising about the gender equality dimensions comparing the profiles of different countries. According to the centre the courses for teachers of civil education “directions and components of civil education” also included the topics of gender as a part of the teachers competence framework where gender was discussed in light of human rights and civics teachers competences. The gender was represented as one of the essential competences in relation to the strategies against the discrimination.

While recognising the culture of democracy and human rights as the learning topics supported by social unity and inter-cultural dialogue, protection of the values such as human rights, supremacy of law, democracy, violence free environment, ethnic diversity and equality, including gender equality, in 2018, TPDC has initiated a new program “Supporting Democratic Culture and Human Rights Education”. Main goal of the program was to support democracy culture and human rights learning at general education facilities through elaboration and introduction of the training program module for teachers. Worth noting is that the program didn’t target the civics teachers solely but aimed at the awareness raising of all schoolteachers and other individuals engaged in education processes on democratic culture and human rights. The program consisted of multiple elements including elaboration of subsequent materials and supporting of the meetings and conferences. In the scope of the program it was planned to elaborate training module for teachers in democracy culture and human rights; organize studies, meetings and conferences; elaborate supportive materials (guidelines/handbooks/films and etc.) (UNDP 2019). However, the data about these interventions is not available publically.

In the same period, the TPDC introduced the training program in “Bullying Prevention in Schools and a Culture of Tolerance Development” which targeted 600+ teachers of civil education. The training was underlining the topics of violence including stigma and stereotype mind-set on violence and

bullying. Another program encouraging females' engagement in technology, elimination of stereotypes and reducing of inequalities was launched by the UN Women. The training begun in March of 2019 and tackled young females in Western part of Georgia (Ibid).

The initiatives are doubtlessly planned with the purpose to develop of positive attitudes towards the gender equality and combat reproduction of stereotypes among the students; nonetheless, these interventions:

1. Did not contain teaching methodology as a training component and outcome.
2. Alternatively, the trainings targeted only teachers of certain subjects while gender is seen as part of the particular subject content.
3. All trainings were focused on the particular topics of violence, stigma, bullying, reproductive health, e.g. that resonate with the main statements of social and political character highlighted in the international and national documents and did not challenge teachers to make parallels and clues between the training topics and their real instruction.
4. Moreover, all trainings listed above were mainly of informational character and were less oriented on integration of gender in teaching, demonstration of instructional approaches, critical questioning of the subject content, self-reflection and drive for the teacher action research about the gender roles and participation in the classroom. Consequently, gender related topics remain beyond the educational practices, and hence, are not integrated into the implementation process of curriculum in the classrooms.

2. Appropriateness of licenced textbooks as the main resource for school education

In the period of Soviet Union, the education system was centralized and standartized (Zajda 2010; Tabatadze and Gorgadze 2017). After the Soviet Union collapsed, Due to the economic hardships and political instability, Georgia has struggled for many years to implement an independent educational policy. School curriculum and textbook reform began in 2004. Up to today, three waves of the curriculum has been implemented. The first

wave, in 2004-2005, involved development of a national secondary education curriculum and its implementation. Private publishing houses developed the school textbooks and the MoES inspected the quality against the authorization criteria (Tabatadze 2010). The publishing houses begun promoting their textbooks and competing for the free market as the public schools could choose the prioritised textbooks from those approved by the ministry (Tabatadze, Gorgadze, Gabunia and Tinikashvili 2020).

The second wave of the reform began in 2011. The National Curriculum was developed and approved for the period of 2011-2016. Concerning the textbook approval rule, one of the important articles claiming: “Contents, design or any other sign [that] covers discriminative elements (language, nationality, ethnical and social belonging, etc. must be a subject for rejection of the approval of the book.” – was detached. Therefore, the textbooks that were published in the period of the second wave curriculum have not been examined against the criteria of discriminative elements. The negative effect of the change was identified in the analysis of ten textbooks of social sciences (History and Civil Education, grades VII-IX) (Khomeiriki, Javakhishvili, Abramishvili, 2012). One year later, 17 randomly selected textbooks of grades I-VI were analysed against the intercultural sensitivity. The analysis covered every subject taught in primary school and represented every publishing house that received licence from the Ministry in 2013 (Tabatadze and Gorgadze 2013). The analysis revealed qualitative and quantitative misbalance of gender representation in illustrations and content in every textbook. Beyond of quantitative superiority of males, the misbalance, stereotyping and prejudice were revealed in regards of social roles, activeness, and representation of gender. For instance, the math textbook in arithmetic problems often described the situations where the older women (mothers, grandmothers) are cooking, eating cakes or suing while younger females are going to the cinema. Males are purchasing textbook for their children, are learning foreign language, calculating, sketching house model, going to the business trip. The males earning considerably exceed that of females. Boys unlike girls are doing sport including football, athletics, basketball. The math

problems, quizzes or illustrations that depict girls and boys in joint activities are to be found rarely. In the textbooks of history (My Motherland), the males outnumber females three times representing kings, heroes or scientists and they fight, govern, invent and discover. The females are wives, queens delivering the grown prince, amateur artists or organizers of a receipt for the high society. In the textbooks of mother tongue the authors of the texts are predominantly males; heroes of the texts are also males very often the historical figures. The men are cited as “Father of Georgia”, “Kind of Georgia without a crown”, “mountainous eagle” who are described with the adjectives: “thinker”, “genius”, “excellent story-teller”, “wise”, “cordial”, “polite”, “fair”, “kind”, “influential”, “energetic”, “eloquent”. The infrequently representing women are described as “beautiful”, “modest”, “caring”, good mothers and faithful wives. (Khomeriki, Javakhishvili, Abramishvili 2012, Tabatadze and Gorgadze 2013)

The findings of research studies of 2012 and 2013 were taken into consideration by Ministry of Education resulted in an amendment of the textbook approval rule of the third wave of the curriculum. The positive changes were reflected in the criteria for: 1. balanced gender representation in the school textbooks; 2. content ensuring gender equality in the textbooks of social sciences; 3. The publishing houses received guideline from MoES to consider gender issues while preparing school textbooks (Tabatadze, Gorgadze, Gabunia and Tinikashvili 2020).

While the textbooks of primary grades and grade 7 are already approved and published in 2018-2019, we do not analyse those in this paper. Keeping in mind that the textbooks may have an impact on students’ gender socialisation, perception and mind-set formation years later, there is little hope that the positive outcomes are observed within the next couple of years even if the publishing houses are diligently adhered to the amended criteria of the textbook approval. Knowing that school society, including teachers, view gender equality as something imposed, rather than being real or necessary, and questioning whether teachers are capable to equip students with social and critical thinking, self-confidence and lifelong learning skills, we argue that the positive impact of the newly published textbooks even in case of their gender-sensitiveness, is not expected soon.

3. *The school ability for full adoption of the curriculum in instructional practices using interdisciplinary approaches and strengthening practical work for achieving those goals, developing crosscutting competences and representing the prioritised topics in direct and extracurricular education.*

In the previous sections, we have discussed the professional development activities for teachers in light of gender equality. In this chapter, we represent the case-analysis of the large-scale professional development training that took place in 2016-2017 with primary focus on teachers of STEM, geography and English as a foreign language, and school directors - as leaders of the school instructional process. In 2013 the Millennium Challenge Corporation (MCC), sponsored by the United States Agency for International Development (USAID) in partnership with the Georgian Government, launched an education investment for five years. The program aimed to boost the quality and relevance of education, particularly in STEM by improving the learning environment, strengthening school directors and teacher's professional development as well as national assessments, and developing classroom assessment system (MCA-Georgia 2017). Four weekends' long teachers' professional development training covered the topics of general pedagogy and subject-specific methodology. The training of the general pedagogical methods and approaches encompassed the gender equality and inclusion as one session of the training module. The training programme focused on the topics of women's rights and gender equality, implicit and explicit gender bias in education, non-discriminatory teaching practices, gender-sensitive attitudes and non-stereotypical ways of thinking. Gender equality was discussed in view of overall inclusion and highlighted individual differences of the students and importance of student-centred approaches. Along with the theoretical frames, the session incorporated the case studies and practical exercises in gender gap analysis. The session of the training was prepared by the cooperative input of UN Women and MCA-Georgia (UNDP 2019).

While the performance and impact evaluation of the program is still in progress, there are some qualitative study outputs from the 12 participant public schools. The schools were selected through stratified randomisation

and thus, every type of Georgian public schools were representing in the study, including small and large, rural and urban, mountainous and remote as well as ethnic minority schools. (There are 208 schools and 83 school sectors where language of instruction is other than Georgia, state language (Gorgadze, 2020). Totally 12 interviews with school directors and 60 interviews with the trained teachers of STEM, geography and English language were organised and aimed at the overall assessment of the training modules where inclusion and gender were considered as one topic of the study.

The interviews showed sharply polarised attitudes towards the training session in gender equality and inclusion where the helpfulness and practicality of the training session were questioned on the one hand and highly praised on the other. Small part of the training participant teachers stressed the useless and irrelevance of the training session and restated their opinion about the gender discrimination and gap as an imposed topics. This part of the teachers “felt assaulted” by the presentation of the topics inasmuch as they believe in own objectivity and unbiased instruction practices and see the gender disaggregation for an inappropriate practice for the school environment.

“It [gender equality and inclusion session of the training] was the least interesting and useful session of the whole training...”

“I was close to leave this training when this session had begun...”

“We encounter so many real challenges during the classroom instruction that this artificially, imposed topics sound as mocking.”

“We do not have cases of unfair treatment of students based on gender. How can I change my pedagogy and claiming equality for girls when they are even more active in the classroom?” I treat all students equally don’t notice their sex.”

Another type of perception connects the gender role to the physiological and mental disposals and stresses these differences while ignoring social patterns. This type of attitude is based on the students’ sex-related distinctions, which does not recognise the need for different approaches.

“Ok, I try to give to the students the same assignments and have the same expectations from every student. Nevertheless, do you know what?”

The boy comes to the whiteboard and solves the math problem so easily and logically as would never do the girl.”

“It seems so imposed and artificial to make the girls the hammer in a nails and to ask boys to clear up the classroom.”

The interviews revealed many positive changes yet. The good practices are obvious among many teachers and directors. According to larger community of teachers, they have never reflected on their teaching practices from the gender perspectives before. In their interviews, they acknowledged that the training has changed their approaches to teaching. They admitted that they used to have the arbitrary expectations based on gender and dissimilar vision of the potential of girls and boys. The teachers shared their strategy of self-control and meta-cognitive approaches gained during the training in order to provide non-discriminatory, equitable and student-oriented instruction.

“I am still ashamed because of my past practices. I was always sure that math and physics are the subjects where boys perform better due to their better mental abilities. Now I really control my feedback and try to encourage girls exactly so as I do it towards the boys”.

Apart of the reflection on gender roles and equality, the informants carried out practical interventions focused on strengthening of positive perceptions about the gender equality among the students. These include informational sessions about the female-scientists and inventors and discussions about their contribution to human development.

“I asked the students to search for the work of women-inventors and represent their work at the next lesson. I was positively surprised to see how many females contributed to the technological development. The students were also excited to explore their names. What should we do without their inventions?”

“I decided to organize the special stand with the photographs and biographies of famous women scientists and inventors. The stand includes the detailed description of their work too. In this way, I try to challenge girls to focus on science and math. There are so many outstanding female scientists in the field of technology, engineering, science, math and architecture. Here, in Georgia we do not have discussions about them”.

To conclude, the study showed potentially important impact of the inclusion of the gender topics in the pedagogy and professional training. Even if this data cannot be generalised, it emphasizes an importance of continuing evidence-based approaches through training in gender equality pedagogy. The interviews show that teachers lack information about the gender pedagogy and are not equipped with the necessary skills for practical realisation of positive approaches and this hinders their ability to reshape own and students' mind-set, reflect on and mainstream gender-sensitive instruction in the classroom. This means though that the teachers training should embrace gender equality as a crosscutting pedagogical competence, as a curriculum topic and instructional approach.

In the final section, we present a general review of higher education structure in Georgia and connect this with the pre-service training programs for the future generation of teachers as well as shows general awareness of the society for gender equality.

1.7. Higher education in the perspective of gender

At higher education level, the number of female and male students is almost the same. According to the statistics, compared to 2008/2009 year, in 2018/2019 the redistribution of the students in private secondary schools and higher education institutions has increased for both sexes. The increase in demand for private higher educational institutions amounted to 58%, and that of male students exceeded 137% (Geostat 2019). This points out the increasing demand to private education generally as to the education of better quality. Nonetheless, the increased redistribution of females and males in the private universities presumably indicates that parents in Georgia try more to put investment in the education of boys rather than in girls. According to a population survey (ACT, 2013) 72% of the inquired assume that "University education is not more important for males than for females, however 26% considers that men need more the higher education". The same survey says that if the parents have both - son and daughter and financial opportunity to pay for the university education of only one child, 44% would pay for the son and 22% would prefer to pay for the daughter. UNDP report of 2019 on

Gender Equality in Georgia, found more than one study that showed if parents could not afford to educate all their children, they preferred to send their sons to pursue tertiary education (UNDP 2019).

As mentioned, the women outnumber men at every degree of university education. For comparison: in the European Union countries, male with researcher's qualification are 52,1% of the total number (SHE, 2018). Number of women with PhD degree in Georgia is higher than the average for the European country indicator. The number of doctoral graduates in Georgia is suggestively higher for females than for males too.

Table 1.3. Data on PhD admission and graduation

	Admission for doctoral degree (2014-2018)				Doctoral graduates in (2014-2018)			
	Female (number, %)		Male (Number, %)		Female (number, %)		Male (Number, %)	
2014	614	51%	589	49%	216	62%	133	38%
2016	673	52%	632	48%	260	55%	209	45%
2017	747	54%	629	46%	249	58%	178	42%
2018	556	50%	550	50%	295	61%	190	39%

Source: National Statistics Office of Georgia, census 2014-2019.

As the highest stage of higher education – PhD opens ways to academic activities, logically, women should represent the majority in higher education and scientific institutions, though the below given table reflecting the statistics of professor-lecturers, clearly outlines vertical segregation even at the higher education institutions; redistribution of the major personnel by sex is characterized with sound quantitative advantage for females. However, if we discuss academic staff by academic positions, we will notice that share of male full professors exceeds that of females both in public and private universities. Positions of the associated professor, assistant professor and lecturer are more occupied by females and representativeness increases as we move from higher to the lowest academic positions.

Table 1.4. Professors in higher educational institutions in 2017/2018

	Percent		Sex distribution	
	Women	Men	Women	Men
Main staff				
Professor	19	31	54	46
Associate professor	48	44	42	58
Assistant professor	16	12	56	44
Teacher	12	9	62	38
Others	4	4	63	37
Total percent	100	100	54	46
Number	4 448	3 783		
Contracts				
Professor	7	11	49	51
Associate professor	3	3	64	36
Assistant professor	0	1	52	48
Teacher	66	58	65	35
Others	24	27	59	41
Total percent	100	100	62	38
Number	5 882	3 636		

Source: National Statistics Office, data on higher education institutions, 2019.

As for the invited personnel, total number of females also noticeably exceeds that of the males. Actually, this redistribution is conditioned by big number of female teachers/lecturers, which is more than the number of males. Share of male full professors is still higher than that of females. Percent of the invited associated professors is higher for females but the share in academic ladder is equal for both males and females. In total, we may conclude that despite the quantitative advantage of women seeking for or having PhD degree, it is more complicated for females to reach the position of the full professor than for males.

Along with the existing asymmetric distribution of academic staff, the university practices show the strong segregation of the programs by gender; where the share of males is considerably higher in the programs, which are stereotypically attributed to masculine professions. This include “hard” sciences, construction, engineering, agriculture, transport, energy, while the females are concentrating around the programs of humanitarian directions, social services and care.

Worth to mention is that the programs at the university level do not have any incentives, quota or other encouraging mechanisms for attracting females to the STEM programs. The positive exception is a new program introduced by the MCC and MCA-Georgia within the education investment as a Sandwich-program of San-Diego and three national universities of Georgia where the females were encouraged to choose the programs in IT, engineering, biochemistry, etc. and were offered quota.

The lack of interest to the education and gender is typical for the academic space of Georgia, which is resulted in dramatically small number of the academic work including articles, thesis or dissertation focused on gender in education.

As mentioned earlier, the universities are preparing the new teachers’ generation for the schools through the state accredited teacher education programs. The analysis of these programs in 2016 showed deficiency of gender perspectives represented as separate courses, course topics, course approaches and interdisciplinary connections. The study-research that was carried out in 2014 and aimed at the analysis the intercultural competences among the students of teacher education programs from six public universities, has shown that the students have stereotypical attitudes regarding the gender roles. In this research, gender was studied as one of the sources of cultural identity. According to the study, 4.83% of the surveyed students showed stages of defence, more than 56% are on the stage of minimization, while only 37%% showed the stage of acceptance and 1.7% stage of adoption/integration in the Development Model of Intercultural Sensitivity (DMIS), (Cushner, McClelland, & Safford, 2012, p.155)) towards the gender (Tabata-dze and Gorgadze, 2014a).

1.8. Conclusions

This chapter is an attempt of consolidated review of the Georgian education policy and practice in light of gender equality. While realising an importance of detailed and careful analysis of those component and aspects connected with the gender in education, we tried to show the deficiency of links between the declared policy and real practice, and underline the underestimation of the gender sensitive education policy in sustainable development of the country. As the paper shows, the narrative of the gender in education policy still lacks functional practices of gender inclusion in the education agenda. Therefore, we are inclined to assume that gender is not an integral part of education system and has more formal, declarative appeal rather than conceptualised vision of the education strategy and action plan for gender equality. Since the gender equality in education is yet analysed in qualitative dimensions, there is essential to boost the gender socialization research and analysis and learn about the education consequences that influence societal opinion and shape gender roles in the country.

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CHAPTER 2

DIMENSION OF GENDER EQUALITY AND SUSTAINABILITY: THE CASE OF THE EUROPEAN UNION

2.1. Introduction

One of the most significant targets of the modern society, securing its advanced social, cultural and economical evolution, is to guarantee the equality of all society members. The implementation of gender equality directly depends on historical, political and cultural society development, as well as economic, social and gender equality policy and measures applied by the countries.

Women and men face versatile problems when they overcome first difficulties towards their professional activities, obtain some experience, entrench successfully in the labour market and climb career ladder. Therefore in literature women's and men's status in society, labour market and family is treated especially meaningfully, are analyzed some presumptions for the implementation of regulations related to equal gender policy (OSAGI, 2001; Grybaitė, 2006; Dromantienė, 2008; OECD, 2012; Rakauskienė *et al.*, 2014; Tchouassi, 2012; Terjesen *et al.*, 2015; Kublickienė, 2017; Barnat *et al.*, 2019; European Commission, 2010, 2015, 2016, 2020; and others).

Equality between women and men is not only part of human inherent rights, but also a precondition for the development of a sustainable society and an indicator of development. The implementation of gender equality provisions is closely linked to the goals of sustainable development. It is acknowledged that sustainable development requires the full and equal participation

of women at all levels. Gender equality is an essential building block in sustainable development. Indeed, none of the three “pillars” of sustainable development can be achieved without solving the prevailing problem of gender inequality (Hemmati and Gardiner, 2002; Tchouassi, 2012).

The goal of the research: to determine progress on gender equality.

The following tasks were set in order to reach the goal of the research:

1. To describe the essence of gender equality policy implementation.
2. To identify key trends in gender equality.
3. To analyze sustainable development goals from a gender equality perspective.

Research methods: the analysis of scientific literature, synthesis, comparison and summary, the analysis and summary of statistic data. The structure of this chapter is as follows. First, the literature review examines the ways and essence of gender equality policy implementation. Next, the key trends in gender equality are outlined. Finally, the are described gender equality dimension in sustainable development goals.

2.2. The Essence of Gender Equality Policy Implementation

Gender can be defined as the set of characteristics, roles and behaviour patterns that distinguish women from men which are constructed not biologically, but socially and culturally. The sex of an individual is biologically determined, whereas gender characteristics are socially constructed, a product of nurturing, conditioning, and socio-cultural norms and expectations. These characteristics change over time and from one culture to another. Understanding gender means understanding opportunities, constraints and the impacts of change as they affect both men and women. Partnerships and equality between men and women are the basis of strong families and viable societies in a rapidly changing world (Tchouassi, 2012).

Ensuring gender equality is one of the most important principles which guides every democracy. The promotion of equality between women and men is one of European Union’s tasks. Equality between women and men is also

a driver of economic growth (OECD, 2012). Gender equality is a moral imperative, it is about economic empowerment, fairness, justice, it encompasses many social, political and cultural aspects.

Gender equality “refers to the equal rights, responsibilities and opportunities of women and men and girls and boys. Equality does not mean that women and men will become the same but that women’s and men’s rights, responsibilities and opportunities will not depend on whether they are born male or female” (OSAGI, 2001, p. 1). Gender equality implies that the interests, needs and priorities of both women and men are taken into consideration – recognizing the diversity of different groups of women and men. Achieving gender equality requires taking into account the needs, opportunities, experiences and contributions of girls, boys, women and men, while recognizing their diversity. It is the creation of conditions where everyone, regardless of their gender, has the right and opportunity to realize their human potential (Dugarova, 2018, p. 10). Gender equality is “achieved when women and men enjoy the same rights and opportunities across all aspects of life, including social interactions, economic participation and decision-making, and when the different behaviours, aspirations and needs of women and men are equally valued and favoured” (Barnat *et al.*, 2019, p. 2).

Equality between men and women in education, in economic decision-making and political power, and women’s economic independence and equal earning potential are key for Europe’s future (2019 Report on equality between women and men in the EU, 2019, p. 4). According to Terjesen *et al.* (2015), countries with more progressive social policies, larger public sectors, and greater benefits in terms of family policies have higher participation of women in the labor market. Gender equality is also one of “smart economics”: women’s participation in the economy is essential for sustainable development and economic growth. When women are given equal opportunities and access to resources and to decision-making, communities are more prosperous and more peaceful (European Commission, 2015a).

The key objective of the EU’s gender equality policy is “to ensure equal rights, responsibilities and opportunities for women and men, which require certain changes in society” (Dromantiené, 2008, p. 134). In the European Union,

the principle of gender equality is enshrined in many strategic documents (Treaty of Rome, Treaty of Amsterdam, Charter of Fundamental Rights of the European Union, Treaty on European Union). According to Kublickienė (2017, p. 11), European Union law has paid and continues to pay special attention to ensuring gender equality – the implementation of equal rights and opportunities for women and men in social life is emphasized in many international treaties, adopted legal documents, and the European Union’s non-discrimination directives. Equality between women and men is one of the European Union’s founding principles. It goes back to 1957 when the principle of equal pay for equal work became part of the Treaty of Rome (European Commission, 2011). The EU pays special attention to the preparation and implementation of the policy of gender equality through the establishment of institutions responsible for gender equality policy. The EU legal acts and strategic documents promote others to support gender equality. Table 1 presents the some documents defining the principles of gender equality.

Table 2.1. Some documents defining the principles of gender equality

Legislation and strategic documents	The purpose of the document
The Charter of the United Nations (1945) and the Universal Declaration of Human Rights (1948)	Equality of women and men is defined as fundamental human right.
The European Convention on Human Rights (1950) and the European Social Charter (1961, amended in 1996) prohibiting discrimination of gender	Fundamental documents of the European Union council governing human and social rights.
Treaty Establishing the European Economic Community (1957)	The Rome Treaty includes the provision regarding equal salary paid for the same work performed by women and men.
The Convention on the Elimination of All Forms of Discrimination against Women (CEDAW, 1979)	The Convention defines women discrimination and sets out the agenda for national actions in order to eliminate this particular discrimination.

Legislation and strategic documents	The purpose of the document
Beijing Declaration and Platform for Action (1995)	The fundamental document, which shall have a strategic meaning in the future. The document identifies 12 problematic fields revealing obvious obstacles for women progress and defines the need for action. Beijing Declaration and Platform for Action pays special attention to economic situation of women.
Article 13 of the Treaty Establishing the European Community (Treaty of Amsterdam) regarding discrimination (1997)	The Treaty of Amsterdam emphasizes the importance of the promotion of gender equality and defines the obligation to comply with the principle of equal gender integration, to expand the powers and competences of the European Community in the field of gender equality. This Article permits to undertake certain actions not only in the field of occupancy, but also in the field of education and healthcare.
The Women's Charter (2010)	The Women's Charter emphasizes the obligation to promote gender equality and strengthen the aspect of gender equality in all fields of politics.
EU Action Plan for Gender Equality and Women's Empowerment in Development 2010-2015	This work is part of a broader EU policy on gender equality, as reflected in the Commission's Roadmap for Equality between Women and Men (2006-2010), which covers both internal and external EU policies, and aims at improving coherence between these two pillars.
The Strategy for Equality between Women and Men (represents the European Commission's work program on gender equality for the period 2010-2015)	The Strategy provides a coordinated framework for promoting gender equality in all policies of the Union, with five priority areas: 1) equal economic independence for women and men; 2) equal pay for work of equal value; 3) equality in decision-making; 4) dignity, integrity and an end to gender-based violence and 5) promoting gender equality beyond the EU.

Legislation and strategic documents	The purpose of the document
<p>The European Pact for Gender Equality for the period 2011-2020</p>	<p>The European Pact once again emphasizes the obligation of the EU to eliminate gender inequality in occupancy, education and social care, to promote a better balance of women and men professional and personal life and fight against all forms of violence against women.</p>
<p>Strategic engagement for gender equality 2016-2019</p>	<p>It emphasises the need to integrate a gender equality perspective into all EU policies and funding programmes. Action will continue with a focus on all the five priority areas. This “Strategic engagement for gender equality 2016-2019” is a reference framework for increased effort at all levels, be they European, national, regional or local. It continues to corroborate the 2011-2020 European Pact for gender equality.</p>
<p>Joint Staff Working Document: „Gender Equality and Women’s Empowerment: Transforming the Lives of Girls and Women through EU External Relations 2016-2020”</p>	<p>Four pivotal areas have been identified which could transform the lives of women and girls. The three thematic pillars are: 1) Ensuring girls’ and women’s physical and psychological integrity; 2) Promoting the social and economic rights / empowerment of girls and women; 3) Strengthening girls’ and women’s voice and participation. There is also a fourth, horizontal pillar: 4) Shifting the institutional culture to more effectively deliver on EU commitments. Another new aspect is the fact that gender analysis will be done systematically for all new external actions undertaken.</p>

Legislation and strategic documents	The purpose of the document
Gender Equality Strategy 2020-2025	The Gender Equality Strategy sets out key actions for the next 5 years and commits to ensuring that the Commission will also include an equality perspective in all EU policy areas. The implementation of the Strategy will be based on the dual approach of (1) key actions to achieve gender equality combined with (2) strengthening the integration of a gender perspective in all EU policies and major initiatives.

Source: own compilation based on Grybaitė V., 2006; Rakauskienė, O. G. et al., 2014; European Commission, 2010a; 2010b; 2015b; 2015c; 2016; Strategic engagement for gender equality 2016-2019, 2015; European Commission, (2020).

Beijing Declaration and Platform for Action is the fundamental document, which shall have a strategic meaning in the future (Table 1). The main task of the Fourth World Conference on Women, which took place in Beijing in 1995, is as follows: all women should be provided with more powers and should have an opportunity to fully participate in all fields of public life. The document identifies 12 problematic fields. New concept and methodology of gender equality is one of the most significant results achieved by Beijing Platform for Action.

The European Commission's commitments in the field of gender equality are set out in the Strategy for Equality between Women and Men 2010-2015. This strategy is a program that expresses the Commission's commitment to mainstreaming gender equality in these priority policy areas (European Commission, 2011): equal economic independence for women and men; equal pay for equal work; equality in decision-making; dignity, integrity and an end to gender-based violence; gender equality in external actions; horizontal issues (gender roles, legislation and governance). This Strategy based on the roadmap 2006-2010 for equality between women and men. It takes up the priorities defined by the women's charter. It also be emphasized that this strategy explains how gender equality contributes to economic growth and sustainable development.

The newest 2020-2025 Gender Equality Strategy aims to ensure gender equality that gender-based violence, sex discrimination and structural inequality between women and men in Europe would become outdated. A dual approach will be taken in implementing the Strategy that combines gender mainstreaming with specific targeted actions to achieve gender equality. The Commission will try to achieve this by the systematic mainstreaming of gender in all stages of policy creation, in all EU policy areas. The main principle based on which the strategy will be implemented is intersectional, i.e., the combination of gender with other personal characteristics or identities and how these intersections contribute to the unique experiences of discrimination (European Commission, 2020). The EU provides this strategy as an input in creating a better world for everyone: women and men, girls and boys. It will help to achieve the sustainable development goal in the area of gender equality (SDG 5) and gender equality as a crosscutting priority when trying to achieve all SDG as well as implementing EU obligations to the UN Convention on the Rights of Persons with Disabilities.

To conclude, gender equality is one of the European Union's founding values. Equality between women and men is a fundamental right and a precondition for effective democracy and lasting economic growth. Gender equality means that both genders should have equal powers and should have a possibility to equally participate in all fields of public and private life.

2.3. Key Trends in Gender Equality

Currently there is a lot of attention paid not only to the implementation of gender equality, but also to the assessment of gender equality. There are applied various complex indexes for the observation of women's and men's equality advance and measurement. Key aspects, which are included in complex indexes, involve education, income and empowerment. Assessing gender equality, the significant fields are included in Global Gender Gap index.

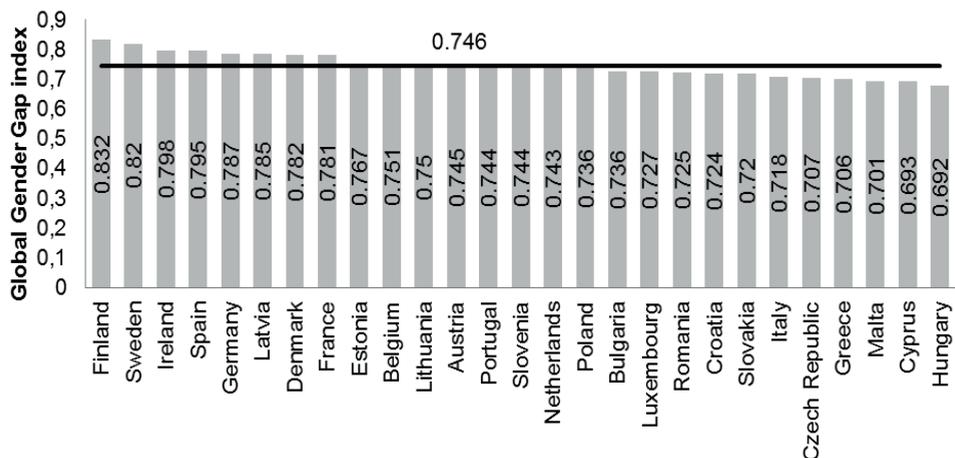
The Global Gender Gap index, introduced by the World Economic Forum (2010), benchmarks national gender gaps on economic, political, education and health-based criteria. The index is a framework for capturing the magnitude and scope of gender-based disparities and tracking their progress. The methodology

of the index has remained stable since its original conception in 2006, providing a basis for robust cross-country and time-series analysis. There are three basic concepts underlying the Global Gender Gap Index, forming the basis of how indicators were chosen, how the data is treated and how the scale can be used. First, the index focuses on measuring gaps rather than levels. Second, it captures gaps in outcome variables rather than gaps in input variables. Third, it ranks countries according to gender equality rather than women's empowerment. The index is constructed to rank countries on their gender gaps not on their development level (World Economic Forum, 2020, p. 45).

Globally, the average (population-weighted) distance completed to parity is at 68.6%. To date, there is still a 31.4% average gender gap that remains to be closed globally (World Economic Forum, 2020, p. 5).

Figure 1 shows that Finland and Sweden are the leading European Countries-members in the field of gender equality.

Figure 2.1. The Global Gap index values in European Union countries, in 2020



Source: own compilation based on World Economic Forum, 2020.

As it can be seen from Figure 2.1, Finland takes the 1st place according to Global Gender Gap index – the value of Global Gender Gap index is 0.832. According to the Global Gender Gap index Sweden took the 2nd place (the value is 0.82). In Finland the value of the index is 20.2% higher, in Sweden

the value of the index is 18.5% higher than in Hungary, which has the lowest index value. Hungary under Global Gender Gap index takes the last place among European Union countries. Moreover, Finland has third place in the world. It has fully closed its gender gap on Educational Attainment. The differences between women and men remain larger on Political Empowerment (56.3%) and on Economic Participation and Opportunity, where 78.8% of the gap has been closed so far.

The significance of the Global Gap index has varied from one Member State to another. Bulgaria, Cyprus, Czech Republic, Estonia, France, Germany, Greece, Ireland, Lithuania, Poland, Portugal, Romania and Spain EU Member States with index value for both 2012-2016 and 2016-2020 grew up (Table 2.2).

Table 2.2. The Global Gap index tendencies in EU Member States

Country	2012	2016	2020
EU Member States with index value for both 2012-2016 and 2016-2020 grew up			
Bulgaria	0.7021	0.726	0.727
Cyprus	0.6732	0.684	0.692
Czech Republic	0.6767	0.69	0.706
Estonia	0.6977	0.747	0.751
France	0.6984	0.755	0.781
Germany	0.7629	0.766	0.787
Greece	0.6716	0.68	0.701
Ireland	0.7839	0.797	0.798
Lithuania	0.7191	0.744	0.745
Poland	0.7015	0.727	0.736
Portugal	0.7071	0.737	0.744
Romania	0.6859	0.69	0.724
Spain	0.7266	0.738	0.795
EU Member States with index value for both 2012-2016 and 2016-2020 decreased			
Luxembourg	0.7439	0.734	0.725
Netherlands	0.7659	0.756	0.736

Country	2012	2016	2020
EU member states where the value of the index increased in 2012-2016 but decreased in 2016-2020			
Finland	0.8451	0.845	0.832
Italy	0.6729	0.719	0.707
Slovenia	0.7132	0.786	0.743
EU member states where the value of the index decreased in 2012-2016 but increased in 2016-2020			
Austria	0.7391	0.716	0.744
Belgium	0.7652	0.745	0.750
Croatia	0.7053	0.7	0.720
Denmark	0.7777	0.754	0.782
Hungary	0.6718	0.669	0.677
Latvia	0.7572	0.755	0.785
Malta	0.6666	0.664	0.693
Slovakia	0.6824	0.679	0.718
Sweden	0.8159	0.815	0.820

Source: own compilation based on World Economic Forum, 2020.

Table 2.2 shows, that in two countries – Luxembourg and Netherlands – the value of the index has been steadily declining. In other EU member states, the value of the index has changed differently: it has either decreased or increased. That leads to a presumption that inequality still exists. There is still gender gap in labour force participation rate, payment and occupation. Women tend to be paid less, choose part-time work and concentrate in lower level occupational positions. Works which require similar skills, qualification or experience are often remunerated worse and evaluated insufficiently if they are performed by women, but not men. As a result, not only the earnings are smaller for women, but also their future allowances and pension will be smaller.

Despite a huge interest in gender equality, women are still insufficiently using a possibility to participate in decision-making process in political, economic and business areas and remain under-represented in positions of power. In addition, due to greater responsibilities of a woman in a family (usually

women are responsible for housework and childcare), the opportunities of women in professional occupation, financial safety, career and self-expression on the whole are still limited.

2.4. Gender Equality Dimension in Achieving Sustainable Development Goals

The concept of sustainable development is the result of the growing awareness of the global links between mounting environmental problems, socio-economic issues to do with poverty and inequality and concerns about a healthy future for humanity. It strongly links environmental and socio-economic issues (Hopwood, Mellor, O'Brienhttps, 2005). The concept of sustainable development was popularized at the UNO Earth Summit, which was devoted to environmental and developmental issues, in Rio de Janeiro in 1992. The outcome of the conference was a key document, the Rio Declaration, which has been signed by ministers from the majority of countries. The idea of sustainable development has been detailed in 27 points. These points are further explanations of the three principles of sustainable development, namely, economic, social and environmental development (Grzebyk, Stec, 2015).

In September 2015 was adopted the 2030 Agenda for Sustainable Development. The 2030 Agenda for Sustainable Development sets out a transformative vision for preserving planet, promoting peace and ensuring that prosperity is shared by all. Human rights and gender equality are core principles of this agenda, underpinning efforts to prevent conflict, overcome divisions and address the root causes of inequality, instability and injustice (UN Women, 2018, p. 2).

The 2030 Agenda is clear that achieving gender equality is not only an important goal in and of itself but also a catalyst for achieving a sustainable future for all (UN Women, 2018, p. 24). The 2030 Agenda makes clear that “development will only be sustainable if its benefits accrue equally to both women and men; and women’s rights will only become a reality if they are part of broader efforts to protect the planet and ensure that all people can live with respect and dignity” (UN Women, 2018, p. 16).

Gender equality lies at the heart of the 2030 Agenda for Sustainable Development, which recognizes that achieving gender equality is a matter of human rights and is crucial to progress across all the goals and targets. It is very important when trying to achieve goals related to sustainable development: from economic growth and labour productivity to reducing poverty and increasing human capital through health and education, ensuring food security, solving climate change consequences and strengthening disaster resilience and creating more peaceful and inclusive communities (Dugarova, 2018, pp. 9–10).

Gender equality is a goal in its own right enshrined in SDG 5 and it cuts across all 17 SDGs within the Agenda, which contains 45 targets and 54 indicators related to gender equality (Table 2.3).

Table 2.3. All 17 goals from a gender equality perspective

SDG no.	SDG	Targets	Gender specific Indicators
1	End poverty in all its forms everywhere	7	6
2	End hunger, achieve food security and improved nutrition and promote sustainable agriculture	8	1
3	Ensure healthy lives and promote wellbeing for all at all ages	13	6
4	Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all	10	8
5	Achieve gender equality and empower all women and girls	9	14
6	Ensure availability and sustainable management of water and sanitation for all	8	0
7	Ensure access to affordable, reliable, sustainable and modern energy for all	5	0
8	Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all	12	7
9	Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation	8	0
10	Reduce inequality within and among countries	10	1

SDG no.	SDG	Targets	Gender specific Indicators
11	Make cities and human settlements inclusive, safe, resilient and sustainable	10	3
12	Ensure sustainable consumption and production patterns	11	0
13	Take urgent action to combat climate change and its impacts	5	1
14	Conserve and sustainably use the oceans, seas and marine resources for sustainable development	10	0
15	Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss	12	0
16	Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels	12	6
17	Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development	19	1

Source: own compilation based on UN Women, (2018).

As it can be seen from Table 2.2, the indicator framework is gender-sensitive in 6 out of 17 goals (SDGs 1, 3, 4, 5, 8 and 16), gender-sparse in other critical areas (SDGs 2, 10, 11, 13 and 17) and gender-blind in the rest (SDGs 6, 7, 9, 12, 14 and 15) (UN Women, 2018, p. 47). Gender equality implementation is important for promoting economic growth and labour productivity (SDG 8), which has a major impact on poverty reduction (SDG 1). Gender equality is also important for attaining food security (SDG 2) and take urgent action to combat climate change and its impacts (SDG 13). Providing equal opportunities create the conditions to ensure healthy lives (SDG 3) and inclusive and equitable quality education (SDG 4). According to Dugarova (2018), providing

equal opportunities for women's participation in decision-making processes is beneficial for ensuring more peaceful and inclusive communities (SDG 16).

Yet, progress on gender equality is highly uneven across the different dimensions of the 2030 Agenda (Table 2.4).

Table 2.4. Gender equality in the 2030 Agenda

SDGs	
1 No poverty	Globally, there are 122 women aged 25-34 living in extreme poverty for every 100 men of the same age group.
2 Zero hunger	Women are up to 11 percentage points more likely than men to report food insecurity.
3 Good health and well-being	Globally, 303,000 women died from pregnancy-related causes in 2015. The rate of death is declining much too slowly to achieve Target 3.1.
4 Quality education	15 million girls of primary-school age will never get the chance to learn to read or write in primary school compared to 10 million boys.
5 Gender equality	5.a Globally, women are just 13% of agricultural land holders. 5.b Women are less likely than men to own a mobile phone, and their internet usage is 5.9 percentage points lower than that of men. 5.c More than 100 countries have taken action to track budget allocations for gender equality.
6 Clean water and sanitation	Women and girls are responsible for water collection in 80% of households without access to water on premises.
7 Affordable and clean energy	Indoor air pollution from using combustible fuels for household energy caused 4.3 million deaths in 2012, with women and girls accounting for 6 out of every 10 of these.
8 Decent work and economic growth	The global gender pay gap is 23%. Women's labour force participation rate is 63% while that of men is 94%.
9 Industry, innovation and infrastructure	Women represent 28.8% of researchers worldwide. Only about 1 in 5 countries have achieved gender parity in this area.
10 Reduced inequalities	Up to 30% of income inequality is due to inequality within households, including between women and men. Women are also more likely than men to live below 50% of the median income.

SDGs	
11 Sustainable cities and communities	Women living in urban slums endure many hardships, with basic needs such as access to clean water and improved sanitation facilities often going unmet.
12 Responsible consumption and production	Investment in public transportation yields large benefits for women, who tend to rely on public transport more than men do.
13 Climate action	Climate change has a disproportionate impact on women and children, who are 14 times as likely as men to die during a disaster.
14 Life below water	The contamination of freshwater and marine ecosystems negatively impacts women's and men's livelihoods, their health and the health of their children.
15 Life on land	Between 2010 and 2015, the world lost 3.3 million hectares of forest areas. Poor rural women depend on common pool resources and are especially affected by their depletion.
16 Peace, justice and strong institutions	In times of conflict, rates of homicide and other forms of violent crime increase significantly. While men are more likely to be killed on the battlefield, women are subjected during conflict to sexual violence and abducted, tortured and forced to leave their homes.
17 Partnerships for the goals	In 2012, finances flowing out of developing countries were 2.5 times the amount of aid flowing in, and gender allocations paled in comparison.

Source: UN Women, (2018).

Despite all efforts, women are more likely than men to face various difficulties (Table 2.4). Women more likely than men to live in extreme poverty, the rate of death from pregnancy-related causes is declining much too slowly, a higher proportion of girls of primary-school age will never get the chance to learn to read or write in primary school compared to boys, possibilities for the women participation in the allocation of economic resources, in decision-making are limited, etc.

Therefore, gender equality is an important condition for sustainable life of society. Only balanced and full participation of women and men in various policy, theory, strategy life areas can ensure sustainable development of the society. The implementation of gender equality is a question of human

rights and is significant when trying to achieve all sustainable development goals and objectives. However, the sustainable development goals will not be achieved if women are not provided with opportunities to use resources and opportunities to learn, work and make decisions.

2.5. Conclusions

The implementation of gender equality is a regulation of social justice, is a necessary condition of equality of rights and society development. Gender equality provisions are enshrined in European Union law and in various national and international instruments. However, although much attention has recently been paid to gender mainstreaming at various levels, women and men still have unequal opportunities to participate in society life, integrate into the labor market and take care of the family, etc.

Measuring changes of gender equality in the society there are applied different indicators and complex indexes, which assess gender equality. One such index is the Global Gender Gap index, which benchmarks national gender gaps on economic, political, education and health-based criteria. Index trends show that inequality still exists. The problem of women's participation in professional life remains relevant. As a result, women's employment remains relatively low, the gender pay gap is wide, and women more likely than men to live in extreme poverty.

When talking about the implementation of gender equality provisions, we can not forget the concept of sustainable development. Gender equality contributes to economic growth and sustainable development. The implementation of gender equality in all spheres of society – in the society life, community and home, in the economy and workplace, in health and educational attainment, in decision-making – leads to faster progress towards achieving the sustainable development goals.

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CHAPTER 3

THE GENDER ASPECT OF HAPPINESS & LIFE SATISFACTION (The Case of Armenia)

Introduction

Life satisfaction is a relative phenomenon, and as is well-known, different things make different people happy. The social context of life satisfaction and happiness varies largely by different characteristics such as gender, age, social and economic status, occupation, etc. Among all the other social-demographic characteristics, gender is one of the most salient. In particular, studying the interconnection of gender and life satisfaction challenges studies that put economic status as a main determinant of happiness, and highlighting social domains, such as socialization processes, access to social networks, and the level of social capital. Moreover, it has been proven that after a certain level of financial success, a person's level of happiness doesn't correlate with economic status anymore. It is more important to have a sense of control over your own life, a possibility to make your own decisions and plan your future. The level of happiness and life satisfaction also widely depends on the conceptual reference through which a person tends to explain and experience happiness. Additionally, as has been shown in numerous studies, the so-called gender lenses through which we see the world are different for men and women, and the assumptions that help us to conceptualize happiness are part of those lenses. It means that the conceptual references explaining happiness and life satisfaction will vary across genders.

The data of various researches show that the post-soviet countries, including Armenia, register low levels of happiness. Countries in Latin America, with relatively low socio-economic levels of development, and Scandinavian countries, with a high level of wealth, have almost the same levels of happiness in the past twenty to thirty years. Interestingly, those countries where the population cares about gender equality and social justice, people are more open and tolerant toward diversities, and have higher scores in happiness.

The data of nationwide *Gender Barometer* Survey, conducted by Yerevan State University Center for Gender and Leadership Studies, allowed us to analyze the level of happiness of Armenians from a gender perspective, and make some correlations between happiness and various socio-demographic, economic, and even social-psychological characteristics of respondents. According to data of Gender Barometer, Armenian women overall are less happy than Armenian men (23% and 30% accordingly). The data also shows a correlation between happiness and marital, socio-economic, educational, and professional status in Armenian society.

1. Happiness and Well-Being as a Subject of Social Science Study

Happiness has been in the center of philosophical debates for centuries, but it became a topic of sociological, psychological, and economic studies only in the second-half of 20th century. As J. Helliwell and R. Putnam mention, *“only in recent years have psychologists, economists and others begun to demonstrate that subjective well-being can be measured with reliability and validity, using relatively simple self-rating questions about happiness and life satisfaction”* [Helliweel, Putnam, 2004]. The researchers of institutional origins of happiness and well-being, R. Spruk and A. Kaseljevic, define happiness as *“overall appreciation of one’s life and a degree to which a person evaluates the overall quality of his/her present life”* [Spruk, Kaseljevic, 2015]. It should be mentioned that in the academic literature on happiness and well-being these two terms often are used interchangeably. Psychologists R. Baumeister, K. Vohs, J. Aaker, and E. Garbinskiy suggest that we should define happiness

as subjective well-being, which can be “*an experimental state that contains a globally positive affective tone*” [Spruk, Kaseljevic, 2015].

In general, happiness is conceptualized in literature from two different perspectives. The first approach is called **affect balance**, which indicates the prevalence of pleasant emotional moments over unpleasant ones. The second is the **life satisfaction approach**. According to Baumeister & colleagues, life satisfaction can be defined as a state of mind that goes beyond “*momentary feelings to invoke and integrative, evaluative assessment of one’s life as a whole*” [Spruk, Kaseljevic, 2015]. The sociologist R. Veenhoven argues that happiness is in fact the normal condition for human being along with physical and psychological health.

Veenhoven also suggests four questions that can help to explain the concept of well-being: 1) what is well-being and how it is different from its determinants; 2) how people evaluate their subjective well-being; 3) what are the conditions of subjective well-being, and finally: 4) what are the consequences of well-being [Veenhoven, 2008]. The question of definition of well-being is quite difficult, because there are on occasion many some contradictory definitions of the term. Veenhoven suggests to follow a definition coined by psychologist E. Diener in 1984. According to that definition, a person who can say that he or she quite frequently experiences life satisfaction, joy, and infrequently experiences such feelings as sadness, anxiety, or anger has a high level of subjective well-being [Diener, 1984]. When trying to assess well-being, Veenhoven is stressing that well-being is a social and cultural concept, and is constructed by shared social norms and values.

The researchers of well-being also distinguish objective and subjective parts in it. Veenhoven adds two main dimensions to the definition of well-being: cognitive and affective comparison. Cognitive comparison includes comparison with standards of the good life, and affective comparison includes evaluation of how one feels most of the time. From this perspective, happiness is more an affective component of subjective well-being, while life-satisfaction is the cognitive component. Objective well-being includes satisfaction with various types of capital one’s own, such as health, education, income [Veenhoven, 2008].

In this chapter, the gender analyses of well-being is based on the positions of cognitive sociology, and is described as a cognitive construct shaped by collective notions of the good life, on the one hand, and a result of social comparison, on the other hand.

By taking into account a constructivist element in well-being, it is important to discuss the following four social-psychological mechanisms that play an important role in the process of the construction of the feelings of happiness and satisfaction. Those processes are the following: adaptation, aspiration, social comparison, and coping. [Frey, Stutzer, 2002]

1. **Adaptation**, within the context of happiness, means that people are getting used to and adjusted to a certain level of well-being, and thereafter gradually don't experience satisfaction anymore, which was formerly derived from their respective incomes.
2. **Aspiration** is a process whereby people assess their current situation within the context of their respective goals and hopes.
3. **Coping** is the ability to cope with unexpected misfortune or failure. Interestingly, after some time, people didn't report a decrease in subjective well-being say for instance after an accident.
4. Finally, **social comparison** is a mechanism that plays a big role in the evaluation of subjective well-being. People tend to compare their respective positions with those of a similar status and position as themselves, and based on that comparison come to conclude how happy they are. A comparison can also be based on the previous living conditions, as well as on aspirations and expectations [Veenhoven, 1991].

It is important to note here that the concept of the relativity of happiness is based on the following three main postulates, and four implications [Veenhoven, 1991]:

Postulates:

1. Happiness results from comparison.

2. Standards of comparison adjust. This means that a standard follows the changes in a given situation. The improvement or worsening of living conditions are happening, and standards of comparison change after.
3. Standards of comparison are arbitrary, often derive from propaganda, and are constructed images of happiness and success.

Implications:

1. Happiness is insensitive to the actual quality of life. According to Veenhoven, this is *“because standards of comparison are arbitrary, the judgment based on them are arbitrary as well. Hence, people can be subjectively happy in objectively bad condition, or feel unhappy in good ones”* [Veenhoven, 1991].
2. Happiness can't be raised permanently.
3. Paradoxically, happiness is multiplied by hardship. As Veenhoven argues *“the worse life was earlier, the lower ones standards and the more favorable the judgement of present life”* [Veenhoven, 1991].
4. It is also interesting that happiness has a tendency to favor a neutral position.

Since studying happiness and well-being is a very complicated task, the majority of researchers agree that the most efficient way to study happiness is through self-evaluation. As Frey and Stutzer point out, *“because happiness is such an elusive concept, it makes little sense to proceed by trying to define what happiness is. Instead of trying to determine what happiness is from outside, one can ask the individuals how happy they feel themselves”* [Helliwell, Putnam, 2004].

Interconnections between Well-being and Capitals (human, social, economic)

Perception of subjective well-being is very much determined by the number and size of capitals than one owns. Among them the following play crucial roles in the evaluations of well-being and life satisfaction:

1. **Human capital**, including education, physical health, certain social-psychological characteristics, and even appearance. At the same time, health itself is very much dependent on social conditions, individual, and/or family economic capital. Among the more researched dimensions of human capital and their impact on subjective well-being are optimism and self-esteem. Major studies on self-esteem and happiness show a positive correlation between these two dimensions. At the same time, there are some variations across the countries. People who are happier, and have a higher self-esteem, are more likely to live in individualistic countries, rather than in collectivistic ones. This is because personal achievements are obviously more valuable in individualistic countries. In general, self-esteem also plays an indirect role in subjective well-being, because it affects many aspects of personal and social life. Based on data from a number of sociological and social-psychological surveys, it can be concluded that people with higher self-esteem are also less depressed, less likely to have any types of eating, sleeping, or behavioral disorders, and have better relationships with their spouses, friends, colleagues, etc.
2. **Economic capital**. Relationships between income and subjective well-being have not been fully studied in either one of the social disciplines. It has been proved by various studies of happiness that rich people are happier than poor people, and with people in richer countries, people overall are happier than people in poorer countries. At the same time, many researchers of happiness and income refer to the correlation between well-being and income as an “Easterlin paradox” [Frey, Stutzer, 2002]. Economist Easterlin was the first who discovered in 1974 that increase in GDP per capita in the US didn’t result in an increase in happiness. [Shjittkea, 2008]. The main characteristic of this paradox, that has been provided by various cross-country surveys, is that the relationship between income and well-being is losing its potency with the passing of time. Easterlin discovered in his surveys that when people are asked how much money they need to be happy, they tend to mention a number that is 20% more than their current income. Several

explanations have been given by sociologists and social psychologists. One explanation is derived by the theory of adaptation. According to this explanation, we adapt to the higher level of income, and are gradually becoming less satisfied with it [Spruk, Kaseljevic, 2015].

Another approach explains the interconnection between income and happiness from the perspectives of aspirations. A higher income can increase happiness if it is corresponding with our aspirations. But as Bartam argues, “a higher income is typically followed by raised aspirations, for further increases; the gap doesn’t close, and our happiness does not change” [Bartam, 2013].

Finally, the third explanation comes from the theory of social comparison, which shows that the satisfaction with income matters only in comparison with the incomes of others, and especially those who are in similar social and economic position. Social comparison even made people living in rich neighborhoods located in poor countries feel happier (a phenomena that is known as the favorable downward social comparison) [Bartam, 2013].

J. Schnittkea explains why happiness has not been improved over the years using the theory of relative deprivation [Easterlin, 2004]. As Easterlin argues, *“at any given time, the living conditions, or real incomes, of others are fixed, and happiness differences depend, therefore only on differences in people’s own, actual, income. Over time, however, as everyone’s income increases, so too do the internal norms by which we are making our judgement of happiness. The increase in internal norms is greater for those with higher income, because as we go through the life cycle, we increasingly compare ourselves with those with whom we come in closest contact, and contacts are more and more limited to those of similar income”* [Easterlin, 2004].

Relative deprivation theory explains decline in subjective well-being, despite the growth of income, through the perspectives of social comparison. Another explanation of the interconnection between happiness and income could be given from the perspective of relative, as opposed to, absolute poverty.

3. **Social Capital.** Various sociological surveys on well-being proved that social networks and social trust (a generalized belief that people around you can be trusted) play a significant role on subjective well-being and a feeling of happiness. It has been proven that people who have close friends, good neighbors, and supportive and trustworthy colleagues, are less likely to experience sadness, loneliness, various eating and sleeping disorders, and in general have higher self-esteem. Interestingly, in self-reports on well-being and happiness, people tend to agree that good relationships with their close family and friends plays a more important role in their subjective well-being rather than income does. All surveys on happiness prove that married people are overall happier than single, divorced, and widowed people. At the same time, it is not obvious whether it is marriage that makes me happier or if it is because happier people are more likely than unhappy ones to be involved in romantic relationships and get married [Stevenson, Wolfers, 2009].

2. Social and Economic Conditions and Well-being

When speaking about social and economic conditions of well-being, it is important to refer to a notion of economic freedom. A vast number of surveys proved that economic freedom, which includes freedom to compete, freedom of choice, freedom to be engaged in a voluntary monetary transaction is positively correlated with the subjective well-being.¹ Countries with higher economic freedom have better socio-economic benefits, such as higher rates of economic growth, lower level of unemployment, relatively fair distribution of incomes in society, overall better quality of healthcare, and education. All of these things turn contribute to a general feeling of happiness and satisfaction with life. At the same time, unfairness of economic inequality, rather than inequality per se, positively correlates with subjective well-being has also shown up in a number of surveys.

¹ It is important to mention that scales that are used for happiness measurement and questioned asked make it quite difficult to compare results from various surveys.

Several interesting correlations have been found when discussing the social and institutional contexts of well-being. Among them are the following: 1) the extent to which people participate in voluntary and social organizations; 2) the quality of a country's governance, and the quality of services provided; 3) the low levels of unemployment; 4) and the high level of inflation [Bartam, 2013].

Another important factor affecting well-being is culture. Individualistic and collectivistic cultures value happiness in various ways. If, then, in an individualistic culture, happiness is derived from personal achievements, in a collectivistic culture, it is based on the level and quality of social interactions and connections.

Subjective well-being, besides giving a person a feeling of self-confidence, happiness, and satisfaction, also plays a crucial role in the overall development of society. Surveys conducted by sociologists, Lyubomirski and Diener, in 2005, showed that happy people overall tend to be better citizens, they are better informed about politics, vote more often, and are more involved in civil society building. Happier people are also more likely to find a job easier, and go forward in their career quicker than unhappy people.

For the purpose of our analyzes, it is especially important to discuss macro transformations that occurred in the post-soviet countries after the collapse of Soviet Union, and their implications on people's life-satisfaction and well-being. According to various surveys [Abbott, 2007, Abbott and Wallace, 2009] there is a big difference between social and individual well-being across Europe, and the countries of former Soviet Union. The level of life satisfaction is lower in CIS countries when compared to former communist countries of Central and Eastern Europe.

The level of general subjective well-being is lower the mid-point in CIS countries, including Armenia. The indicators of four domains of subjective well-being suggested by Abbott, Wallace, and Sapsford economic security, social cohesion, social inclusion, and conditions for empowerment, show that life satisfaction has been drastically decreased in the countries of South Caucasus and Central Asia. The negative impact of social and economic transformations on populations in the post-soviet countries is obvious. In all CIS countries, the majority of respondents tend to evaluate changes as negative in terms of their

impact on a respective countries' well-being. For example, 70% of respondents in Kazakhstan, 80% in Kyrgyzstan, 91% in Georgia, and 96% in Armenia, agree with the statement that “*the disintegration of the USSR had a negative impact on the economy of their country*” [Abbott, Wallace, Sapsford, 2011].

Similarly, a majority of respondents are not satisfied with the material situation of their families. More than 80% of respondents, according to data provide by Abbot and colleagues, are not satisfied with the financial situation of their families. It has also been proven that material dissatisfaction correlates with the level of overall life satisfaction. Social cohesion, which is yet another indicator of life satisfaction, is also quite low in the post-soviet countries.

One of the most crucial indicators of life satisfaction are conditions for empowerment, which means that society offers a possibility to take actions and control over one's life. The results of Abbott and colleague's surveys clearly demonstrates that conditions for empowerment in the post-soviet space are very poor. According to survey, the level of perceived personal control are especially low in Armenia. Up to 67% of Armenians reported that they are unable to enjoy normal daily activities, 50% of Armenians, and 75% of Georgians, said that life is too complicated” [Abbott, Wallace, Sapsford, 2011].

Two thirds of respondents in Armenia feel under constant strain, and only some 10% of respondents feel that they can influence governments in the surveyed countries. In addition, levels of self-reported poor physical and psychological health are quite high in the countries of South Caucasus and Central Asia, especially in Armenia, and significantly higher among women than men [Zweig, 2015].

3. Gender and Well-Being

The question of whether or not gender plays a significant role in the overall perception of happiness and well-being is quite debatable in the literature on happiness and subjective well-being. The sociologist J. Zweig compared 73 countries using Gallup World Poll, and found out that despite the fact that women are poorer, less educated, and occupied less prestigious jobs when compared to men, yet overall women seemed to be happier than

men. But other surveys show that women are more likely to feel unhappy about their status and role in the society. For example, economists J. Wolfers and B. Stevenson, analyzed data from various nation-wide surveys since 1972, and found that women's happiness level had been decreasing over time. Similarly, Nydegger showed that women have higher rates of negative affect, depression, and poorer subjective health than men [Tesch-Romer, Motel-Klingebel, Tomasik, 2008]. Data on happiness dynamics among men and women for the US and European Countries also shows that either the happiness level of women has been decreasing or it has been increasing in less proportion when compared with men's level of happiness.

Several possible explanations of the decline of women's happiness have been provided by sociologist and social psychologist.

1. **Double burden** of work and family life balance. Women still have a double burden in a majority of societies. Women that work outside of the home, and then as "the second shift" still do all housework. At the same time, a professor of history and family, S. Coontz, argues that it is not the amount of work that makes women less happy, but rather the pressure to keep social ties at home and work, and be high performance person at both places. According to Coontz, *"women are still expected to spend more time with their kids than men, despite the fact that they work more hours out of the house than previous generations. Women are socialized to believe that they are in charge of emotional affairs, and when they can't meet expectations, they become stressed"* [Suttie, 2009]. The term "paradox of the contented female worker" has been invented by economist F. Crosby in order to highlight the conditions of female employees in the labor market: low wages, gender segregation of jobs, and limited opportunities for advancement.
2. **High expectations.** Researches conducted in the past decades showed that the feeling of depression, and even suicidal behavior, increased among girls and young women. The main reason that is given is the social pressures and expectations from women to be successful in all areas of life. As Wolfers concludes, *"perhaps women feel that if they*

are not succeeding everywhere, they are not succeeding anywhere" [Suttie, 2009]. Psychologist S. Hinshaw says that women expect more from themselves than they have before. Among numerous expectations from women are to have good families, good work, to be beautiful and thin, to have a good career, and at the same time take care of others. So, all that pressure to be an overachiever creates a situation where women find themselves in the search for perfection that makes them feel stressed and depressed most of the time.

3. **Social isolation.** According to studies on social capital and gender differences conducted by the psychiatrist J. Olds, women overall feel more isolated than men do. As Olds points out, "*women must work very hard to have a secure social network*". Moreover, the data from Wolfers-Stevenson survey shows that with time friendship is becoming more valuable for women, and contribute to their well-being in a more profound way than it is for men. Between work and family life women don't have any time to socialize with their peers, and make new social connections, which makes them isolated and unhappy.
4. **Complexity of life.** In the contemporary world women's well-being depends on many factors, As Stevenson and Wolfers mentions, "*the reported happiness of women who are primarily homemakers might reflect their satisfaction with their home life to a greater extent compared with women who are in both labor force and have a family*" [Stevenson, Wolfers, 2009].
5. **Being exposed to less resources.** One of the explanations of women's low level of well-being is that women have less resources and social tools to acquire better opportunities in life.

One of the most debatable questions is how the increase of women's income impact marriage dynamics, and their relationships with their partners. Some researches [Scanzoni, 1978, Coltrane, 1996, Hochschild, 1989, Hood, 1983] argue that the employment and income of married women correlates with greater marital happiness. It seems that in the partnerships where both men and women are equally responsible for child caring, housework, and financial

sustainability, a couple feels happier and shows greater life satisfaction. In contrast with these findings, other surveys (Thomson and Walker, 1989) show that increase in married women's income actually affect marital quality in a negative way, because it changes the power dynamics and creates tension and conflicts.

It seems that there is a correlation between level of happiness and gender inequality in society. In fact, gender inequality correlates with an overall low level of well-being, and both men and women in less gender equal societies are also less happy than people living in the societies where a gender equality is provided.

When trying to explain various possibilities of gender differences in happiness we also should have in mind one important factor: women and men might perceive and describe happiness in a different way.

4. Gender Aspect of Happiness and Well-being in Armenian Society

The data of nationwide *Gender Barometer* Survey conducted by Yerevan State University, Center for Gender and Leadership Studies, allowed us to analyze a level of happiness of Armenians from gender perspective and make some correlations between happiness and various socio-demographic, economic, and even social-psychological characteristics of respondents. According to the data of Gender Barometer, overall Armenian women are less happy than Armenian men are (23% and 30% accordingly).

4.1. A level of happiness correlates with marital, socio-economic, educational, and professional status

Respondents in bigger families (four and more people) feel happier than those in families with three people. Those respondents who are married feel happier as well. In general, respondents with higher income feel happier than those with lower income, but nevertheless respondents with the highest income in the sampling couldn't tell for sure whether they are happy or not. This data corresponds with world-wide statistics. As Stevenson and Wolfers point out in their article, *The Paradox of Declining Female Happiness*, an individual's subjective well-being rises with marriage and income growth.

Professional status also plays a significant role in the perception of happiness. Those respondents who occupy higher managerial positions feel happier. People with a higher level of education are also relatively happier.

Economic status, whether individual or family and ownership of property, affects one's level of happiness to a great extent. The more satisfied a person is with his/her individual socio-economic status and socio-economic status of his/her family the happier he/she feels. A level of happiness correlates not only with the current economic status, but also with the stability and financial security over the course of several years. As research data shows, those men and women who said that their family and personal income were fully secured, five years ago, as well as now, feel happier.

There are more correlations between ownership of property and feeling of happiness among women than among men. One of the explanations of this correlation might be that owning a property is less common for women than for men, and therefore having a property makes women feel happier, while for men it is somehow taken for granted. According to the data of Gender Barometer, owning an apartment/house, and a car, makes women happy. There is no such correlation registered for men though.

A very strong correlation has been registered between a level of satisfaction with one's salary and a level of happiness. Those men and women who are satisfied with their salaries feel happier than other respondents. At the same time, only those men who had a job during the past one month mentioned that they feel happy. Interestingly, a type of employment doesn't correlate with a level of happiness. Instead, quite strong correlations have been found for both genders among satisfaction by the opportunities for professional growth, and a level of happiness.

A level of happiness also correlates with work relationships. Both men and women feel happier when they have good relationships with their management, but correlations among satisfaction by relationships with colleagues, and even working conditions, and a level of happiness found only for men.

4.2. A level of happiness correlates with a system of value

The survey also revealed some correlations between a system of values and a level of happiness.

Those who agree with the statement *it is important for me to be rich* are less happy (Kendall's tau b = -0.004). At the same time, those who feel that they are more successful feel happier (Kendall's tau b = 0.436). Similarly, those respondents who are always ready to fight for their point of view are relatively happier. The data of survey also proved that those respondents who put friends, leisure time, and religion as their priorities in the system of value are happier. At the same time, those who are interested in politics feel less happy.

A very interesting correlation between happiness and a value of family life has been registered only among men, which actually question a widespread perception that women always priorities their families above anything else. As data of our survey showed those men who value an importance of family feel happier than other men and women. We didn't find same correlations for women though.

Interestingly, those who believe that honesty, cleverness, and place of birth can play a significant role in being happy are in fact feel happier. It also seems that social capital affects happiness among men, but not among women. Those men who value friends are also happier than other men and women.

A very strong correlations has been found among an importance of religion and level of happiness. Both men and women who value religion feel happier that the rest of respondents.

In general, analyses of gender attitudes and happiness show that those respondents who confirm society's expectations and norms in regard to gender norms and roles are happier. So, those who agree that it is very important for a woman to always take care of her appearance, those who think that it is very important for a woman to be a good daughter, a good wife, a good mother, and a good Christian are happier. Even though those men and women who believe that it is always important for a woman to take care of her appearance are happier than the others, at the same time stronger correlations among this statement and happiness have been registered among men. Interestingly,

if those women who believe that it is very important for a woman to be a good wife feel happier. There is no correlation among this statement and a level of happiness among men.

The romantic part of life is also closely correlating with the level of happiness. Those men and women who agree that it is important for a person, regardless of gender, to have a fulfilling romantic and sexual life, feel happier than the rest.

At the same time, those respondents who don't conform mainstream gender serotypes, and think that it is important for a woman to be rich, and have a high income, as well as being actively involved in politics, are less happy.

The same correlations are true in regard of men. Those who believe that a man should not only be a good son, a husband, and a father, but also be a good specialist, a guardian of traditions, and have a big circle of friends, seem happier than the rest of respondents.

It is noteworthy to mention that a level of happiness correlates with various values and attitudes differently for men and women. According to the data of our survey, those women who want their accomplishments are recognized by society, as well as those women who fight for their points of view feel happier than those women who don't have similar attitudes. Interestingly, a correlation between a desire to be accepted by the society and feeling of happiness have not been registered among men.

Similarly, a desire to be different from those around positiveness correlates with the level of happiness among women, but not among men. A positive correlation has also been registered between an agreement with the statement, "*it is important for me that those around me accept and recognize what I have accomplished,*" and a feeling of happiness among women only.

It is also interesting that those women who agree with the statement that men always should earn more than woman feel happier. There is no such correlation found for men though. Similarly, only women who agree that men should do any job in order to guarantee his family's well-being are happier.

The Gender Barometer also allowed to reveal the attitude of Armenians toward their preferences to be born a woman or a man if there is another chance. Only 1% of male respondents answered that they would have liked

to have been born a woman, while 27% of female respondents said that they would have preferred to have been born a man. In correlation with a level of happiness demonstrates, those respondents who would not like to be born a person of an opposite gender are overall happier.

Conclusion

The issue of gender and well-being remains quite controversial and perplexing. Some researches proved that women have a higher level of self-reported well-being, while others showed that the level of happiness and well-being among women have declined over the past years. The happiness gender gap is affected by the double burden women have both at home and at work, professional and financial pressure, relationships with their partners and children, and overall expectations from women in various social domains. But regardless of the impact of various factors, well-being gap between men and women is more in the countries where legal protection and policies in favor of women are not guaranteed.

The data of nation-wide survey Gender Barometer conducted in Armenia in 2015 allowed to distinguish some trends in subjective well being of Armenians, and especially to understand the impact of gender on the perception of well-being. The main conclusion from the research is that those men and women who confirm social norms feel happier. Following mainstream attitudes about distribution of gender roles, being religious and behaving according to social norms are important factors for Armenian men and women to feel happy. Even though the results of various qualitative surveys conducted in Armenia in the past years also show that this “desire to live for a generalized other” doesn’t provide a real fulfillment and satisfaction in life, and just gives a person some superficial feeling of subjective well-being. Moreover, it seems that patriarchal norms and attitudes affect women’s feeling of happiness more. For example, it is more important for women that those around them accept and recognize what they have accomplished, than it is for men. This date corresponds with data from various world-wide surveys on happiness and well-being. A pressure to be perfect at work, maintain great relationships at home, take

care of children, and often elderly family members, and to confirm other norms and expectations makes women unhappy [Jill Suttie, 2009].

Gender and happiness are a policy and public health issues. References to gender, happiness and well-being should become priorities in various strategic programs of governments and ministries. In fact, in the latest Program of the Government for Armenia for 2019-2023, it is specifically mentioned that the main goal of the government is to develop dignity, freedom and happiness among Armenian citizens. It is obviously a great start, but this strategy should be taken on a policy level. In parallel, I suggest to focus on the following research questions and explore the influence of macrosocial factors on level of happiness of various social and demographic groups: 1) How social structures and institutions construct, facilitate and reproduce happiness and life satisfaction? 2) How welfare policies, a system of social stratification and mobility produce happiness and perceived well-being for privileged and not so groups? How certain political order influence the differences in happiness among different social groups?

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CHAPTER 4

Does gender diversity within corporate management improve financial performance of companies listed on Warsaw Stock Exchange?

4.1. Introduction

Diversity is defined as differences between people, that can be considered in many dimensions such as race, gender, age, religion, culture, type of education, socioeconomic status, political orientation. “*Diversity management is much more than just a multicultural issue: it is about embracing many different types of people, who stand for different things and represent different cultures, generations, ideas, and thinking*” (Llopis, 2011). Diversity became an important element of management which refers to include people from different backgrounds and cultural experience that will drive innovation.

The increase of women participation in the management of enterprises and institutions became a “hot” topic among politicians, economists and scientists in recent years. Gender diversity among top managers and their impact on board effectiveness is now one of the most contentious issues in corporate governance. The literature reports examples of research proving both positive and negative influence of gender diversity in boardrooms on the company performance together with lack of effects.

Many authors (Campbell & Miguez-Vera, 2008, 2010; Bear et al., 2010; Catalyst, 2004; Desvaux et al., 2007; Devillard et al. 2012; Curtis et al., 2012; Lenard et al., 2014; Lisowska et al., 2014, p. 4 and 21-29; McKinsey, 2007;

Smith et al., 2006; Erhardt et al., 2003; Bohdanowicz, 2011) claim that more women at the top managerial positions is supposed to be good not only for women but also for corporations because:

- companies faster improve results and are more profitable,
- stability of the company increases since women are less likely to risk,
- price of the company shares rises more rapidly,
- it increases the firms' corporate social responsibility ratings,
- employees are more satisfied with their work, and more productive.

There are also many investigations which show that there is no significant relation between gender diversity and economic performance (Carter et al., 2010; Farrel, Hersch, 2005; Rose, 2007; Wang, Clift, 2009; Marinova et al., 2016; Kompa, 2018 and 2019; Kompa, Witkowska 2017 and 2018; Shabbir, 2018; Ionacsu et al., 2018; Kwakye, Owiredu, 2019; Sekeroglu, Acar, 2019; Herrera-Cano, Gonzalez-Perez, 2019).

Lee and James (2007) and Adams et al., (2009) documented a negative short-run market reaction to the appointment of female CEOs. Adams & Ferreira (2009) claim that average effect of gender diversity on firm performance is negative. Ahern and Dittmar (2012), examining the influence of 40% quotas in the boards of directors of Norwegian companies, find that quota caused a significant drop in the stock price and large decline in Tobin's Q over the following years. Bertrand et al., (2014) claim that in the short run quota in Norway had very little discernable impact on women in business beyond its direct effect on the newly appointed female board members. Dobbin and Jung (2011) find evidence of a negative correlation between gender board diversity and Tobin's Q however they find no significant relation between the former phenomenon and ROA. Wellalage, Locke (2013) find a significant negative relationship between the proportion of women on boards and firm value along with increasing company agency costs.

It must be noticed that the impact of gender diversity at upper management to financial performance of enterprise is not uniform since it depends on many features such as the region, industry, size of company, etc. (Whittaker, 2014, p. 5). It also depends on the general situation of the company (Triana et al., 2013)

and applied methodology since empirical findings on the link between gender diversity and the firms' performance have been inconsistent (Ali et al., 2011). It is worth mentioning that there are many methods used for investigation the relationship between both phenomena. The most popular are: correlation, especially Pearson coefficient (Wellalage, Locke, 2013), pooled regression (Bohdanowicz, 2011; Wellalage, Locke, 2013; Shabbir, 2018), panel regression (Ionascu et al. 2018), meta-analysis (Herrera-Cano, Gonzalez-Perez, 2019) and t-test for equality of two means (Wellalage, Locke, 2013; Sekeroglu, Acar, 2019).

In literature concerning benefits of gender-balanced boards, the term “critical mass” appears (Joecks et al., 2013). To create a “critical mass” women need to hold at least 30% or three board seats. Wiley and Monnor-Tormos (2018) show that the positive effect of board gender diversity on firm performance increases when there is at least a critical mass of women on a corporate board. Reaching critical mass can change boardroom dynamics substantially, creating an environment in which innovative ideas can spring from gender diversity. Nili (2019) claims that women's board tenures are shorter, and women are less likely to hold leadership positions than men. Also, women holding leadership positions on boards is positively associated with other women directors having longer board tenures. Klemash and Smith (2019) show that recognizing the value of gender-diverse boards, institutional investors are starting to vote against all-men boards in US companies.

The aim of our study is to evaluate the women representation in boards of companies listed on the Warsaw Stock Exchange (WSE) and to check if gender diversity on board improves the financial performance of companies listed on WSE. Analysis is provided for all companies quoted on WSE in the years 2010-2013 classified into 16 economic sectors. Financial performance is measured applying taxonomic measures. Structure of the boards is measure as the share of women in the board and as Blau index – gender diversity index (Humbert, Guenther 2017):

$$BI_i = 2 \cdot \left(1 - \sum_{j=1}^2 p_j \right)$$

where: BI_i – is a value of Blau index evaluated for i -th sector, p_j – is the share of each gender in boardrooms. If both genders are equally represented,

the value of index equals one, for the bigger representation of one gender in the boardroom - its value becomes smaller than one. If one of gender is not represented, the index equals zero. In other words, the bigger disparity between both genders the smaller value of *BI* is.

Relations between representation of women in top management of companies and financial standing of companies is measured using Pearson linear correlation coefficient. In our investigation, we use data provided by Norotia Serwis, which is the most comprehensive database covering companies listed on WSE. In our study, we assume that there is at least 6 months' period between appointing women in the board to the financial results of the company. Therefore, we measure the structure of the boards on the 30-th of June each year and financial performance and the share price at the end of the year.

4.2. Women in boardrooms

In October 2010, boards of large listed companies in the European Union were dominated by one gender since 88.1 % of board members were men. Therefore, the European Commission has taken actions to increase the women representation on the boards of large listed companies.¹ In 2012 the European Union Commission proposed introduction of 40% quota for the under-represented sex in non-executive board-member positions in publicly listed companies² in 2020. It is worth mentioning that quota is an administrative way which strongly affects decisions made in companies and it may cause unwanted situations such as “golden skirts” (i.e. one woman is a member of more than one board) which appeared in some countries.

1 Beginning from introducing Strategy for Equality between Women and Men in September 2010.

2 This regulation was to concern companies, employing more than 250 employees with a turnover of 50 million € or total assets of over 43 million €.

Table 4.1. Share of women on the boards of large listed companies in the EU

EU States	Share of women on the boards			Changes
	October 2013	April 2015	October 2019	
Austria*	12.6	17.8	31.3	148.4%
Belgium*	16.7	23.4	35.9	115.0%
Bulgaria	16.7	17.6	18.5	10.8%
Cyprus	7.3	8.4	9.4	28.8%
Czechia	11.3	11.6	18.2	61.1%
Germany*	21.5	25.4	35.6	65.6%
Denmark	22.9	25.8	30.0	31.0%
Estonia	7.3	8	9.4	28.8%
Greece*	8.4	10.3	10.3	22.6%
Spain*	14.8	16.8	26.4	78.4%
Finland	29.8	32.8	34.2	14.8%
France*	29.7	29.5	45.2	52.2%
Croatia	15.1	20.3	27.0	78.8%
Hungary	11.3	11.1	12.9	14.2%
Ireland	11.1	13.2	26.0	134.2%
Italy*	15	25.8	36.1	140.7%
Lithuania	16.1	16.3	12.0	-25.5%
Luxemburg	11.3	11.1	13.1	15.9%
Latvia	28.6	32.3	31.7	10.8%
Malta	2.1	2.5	10.0	376.2%
Netherlands*	25.1	23.8	34.2	36.3%
Poland	12.3	17.6	23.5	91.1%
Portugal	8.8	10.7	24.6	179.5%
Romania	7.8	11.3	12.6	61.5%
Sweden	26.5	29.4	37.5	41.5%
Slovenia	21.6	22.2	24.6	13.9%
Slovakia	24	13.6	29.1	21.3%
United Kingdom	21	25.8	32.5	54.8%
EU average	17.8	21.2	28.8	61.8%

*denotes countries with quotas in 2013.

Source: own compilation based on (European Commission, 2014, p. 4-6 and 2015 p. 6-7, 2019).

The situation in EU member states essentially differs and has been changing in time (Table 4.1). In six years from October 2013 to October 2019 the share of women on boards increased in all EU28 member states, except Lithuania (where it decreased by 25.5%). The biggest increase is observed in Malta (376%) and in Austria, Belgium, Ireland, Italy and Portugal (more than 100%). In Czechia, Germany, Spain, France, Croatia, Romania and United Kingdom the increase is from 52.2% to 78.8%, and in Poland by 91%. The lowest representation of women in boardrooms is noticed in 2019 in Cyprus, Estonia, Malta and Greece. Whereas the biggest fraction of female managers is in Scandinavian countries and in France, Austria, Belgium, Germany, Italy, the Netherlands, i.e. countries with quotas and in Scandinavian countries (i.e. 30% and more women on boards).

Table 4.2. Global board seats held by women

Country	2011	2016	2018	Country	2011	2016	2018
<i>Europe</i>				<i>Asia: Middle and Far East</i>			
Austria	7.5	16.4	19.7	China	8.5	10.7	10.6
Belgium	7.7	27.6	30.5	Hong Kong	8.9	9.6	11.4
Denmark	13.9	24.2	25.4	India	5.3	12.4	13.8
Finland	24.5	24.7	31.9	Indonesia	4.5	7.9	9.3
France	12.7	40.0	37.2	Japan	0.9	4.1	5.2
Germany	11.2	19.5	26.2	Malaysia	6.3	13.7	20.6
Greece	8.8	15.3	9.5	Philippines		10.4	13.9
Ireland	9.5	16.5	19.9	Singapore	7.3	10.7	13.7
Italy	3.7	28.1	29.3	South Korea	1.9	2.5	2.4
Luxemburg		14.9	12.0	Taiwan	6.1	8.3	9.3
Netherlands	14.0	21.4	23.0	Thailand	8.7	11.7	14.2
Norway	39.5	42.2	41.0	<i>Asia: Near East</i>			
Poland	10.8	15.2	15.6	Israel	15.0	20.8	21.0
Portugal	2.3	12.6	17.0	Qatar	0.3		0.6
Russia	5.9	5.8	8.5	Saudi Arabia	0.1		0.7
Spain	9.3	16.3	19.2	United Arab Emirates	0.8	2.1	3.8
Sweden	27.3	31.7	33.3	<i>North America</i>			
Switzerland	8.7	14.8	18.4	Canada	10.3	17.7	21.4
Turkey	10.8	11.5	13.2	United States	15.7	14.2	17.6
United Kingdom	12.5	20.3	22.7	Mexico	6.8	6.0	6.5

Country	2011	2016	2018	Country	2011	2016	2018
<i>Africa</i>				<i>South America</i>			
South Africa	15.8	19.5	26.4	Brazil	5.1	7.7	8.6
Nigeria		21.2	20.0	Chile	1.9	6.5	7.7
Morocco		4.3	5.5	Colombia		14.5	13.9
Australia	8.4	20.4	25.4	New Zealand	9.3	27.5	31.5

Source: own compilation based on (Catalyst Census, 2011; Deloitte, 2017, 2019).

The factors which influence women participation in managerial bodies in different countries relate to tradition, culture, religion and education. Table 4.2 shows the women representation in managerial bodies in 44 countries grouped geographically in the years 2011-2018. As one may notice, the situation was changing in analyzed years in some countries diametrically (for instance, in Belgium the increase of fraction of women in boardrooms is nearly 4 times in 2018 in comparison to 2011). Scandinavian countries were the leaders in 2011 but in 2018 in majority of European countries, Australia, New Zealand, Malaysia, Nigeria, Israel, South Africa and Canada the women share in boards is bigger than 19%. Saudi Arabia, Qatar, United Arab Emirates and Morocco together with Japan and South Korea are on the opposite side with very small (i.e. below 6%) representation of female managers.

Table 4.3. Percentage shares of the board chairwomen

Country	2011	2012	2013	2016	2018	Country	2011	2012	2013	2016	2018
Australia	2.5	2.5	3.0	4.6	6.7	Mexico	4.3	4.3	4.2	2.2	1.8
Belgium	4.2	4.2	4.2	9.1	4.4	New Zealand	0.0	4.0	5.0	11.1	10.3
Brazil	5.4	5.4	3.9	1.5	6.5	Philippines	0.0	0.0	5.3	5.0	4.8
Canada	3.2	3.6	4.1	5.0	5.7	Poland	6.7	6.7	4.8	7.8	17.9
China	3.1	4.1	4.0	1.9	6.4	Russia	3.8	3.8	0.0	3.3	8.8
Denmark	0.0	0.0	4.2	0.0	2.2	Singapore	2.0	3.0	2.7	5.4	5.8
France	2.0	2.0	2.0	2.7	5.5	South Africa	5.3	5.3	5.5	9.0	12.2
Germany	1.2	1.2	2.2	2.2	4.2	South Korea	3.3	3.3	1.9	1.1	0.8
Hong Kong	2.4	2.1	2.1	5.0	7.0	Spain	0.0	0.0	2.3	4.2	5.3
India	0.0	2.0	2.0	3.2	4.5	Sweden	2.5	2.5	4.5	6.5	9.9
Indonesia	4.3	4.3	3.1	6.2	7.6	Switzerland	1.9	1.9	0.0	1.6	2.7
Ireland	5.3	5.3	0.0	4.3	6.1	Taiwan	1.2	1.2	1.9	3.8	5.1
Israel	5.0	5.0	5.0	10.0	14.7	Turkey	11.1	11.1	11.8	6.9	4.7
Italy	3.8	3.8	5.2	8.5	18.2	UK	2.0	1.0	1.0	3.1	4.2
Malaysia	0.0	2.0	2.0	2.7	3.9	USA	2.6	2.6	3.1	3.7	4.4

Source: own compilation based on (Catalyst Census, 2011, 2012, 2014, and Deloitte, 2017, 2019).

Regardless the share of women in the boards of directors there is still very small representation of women as board chairs. Table 4.3 contains percentage shares of chairwomen of management boards by country. It is worth noticing that fraction of chairwomen is very low. In years 2011-2013 only in Turkey there were 11.1-11.8% of women holding board chair positions. The situation changed in 2016 when 11.1% and 10% chairwomen representations were observed in New Zealand and Israel. In 2018 Poland, South Africa and Italy were added to the list of countries with the representation of chairwomen exceeding 10%. Comparison of data presented in Tables 4.2 and 4.3 shows that there is no simple relation between representation of women as board chairs and the share of women in boards and quotas.

As it was already shown, the gender diversity of boards has been increasing but in majority of countries the progress is quite slow. The research provided for 2,765 MSCI ASWI Index companies shows that 20% of all directors are women in 2019, and 36% of global boards had at least three women (Table 4). Also, it is shown that 71.8% of MSCI ACWI companies located in jurisdictions with established compulsory quotas had at least 30% women directors in 2019 (Emelianova, Milhomem, 2019). In Deloitte (2019) report one may find that companies with a woman board chair were more likely to have a larger share of women board members (28.3%) compared to companies with men board chairs (17.1%).

Table 4.4. Women's global representation on boards in 2016 and 2019

Country	2016	2019	% with 3 or more women	% with 0 women
Australia	26.0	31.2	58.2	1.5
Belgium*	27.7	36.7	100.0	0.0
Brazil	5.8	11.9	11.5	28.8
Canada	22.8	29.1	63.0	1.1
France*	37.6	44.3	98.6	0.0
Germany*	19.5	33.3	81.0	1.7
India*	12.8	15.9	21.3	0.0
Japan	4.8	8.4	3.4	33.4
Netherlands*	18.9	34.0	65.2	0.0
Norway*	39.4	39.2	100.0	0.0

Country	2016	2019	% with 3 or more women	% with 0 women
Poland	10.9	19.9	15.8	21.1
Russia	6.8	10.6	9.1	31.8
South Africa**	18.7	27.4	79.5	0.0
South Korea	2.4	3.3	0.0	76.6
Sweden*	35.6	39.6	96.6	0.0
Switzerland	17.5	24.9	48.8	0.0
United Arab Emirates	3.1	6.4	0.0	44.4
United Kingdom	25.3	31.7	82.2	0.0
United States	20.3	26.1	56.6	1.0
MSCI ACWI Index	15.8	20.0	36.2	18.6
MSCI Word Index	19.1	25.0	51.1	7.7

* denotes countries with quotas. ** Only state-owned enterprises.

Source: own compilation based on (Emelianova, Milhomem, 2019).

4.3. Women in boards of public companies in Poland

Women representation in the supervisory and executive boards has been evaluated for all companies listed on Warsaw Stock Exchange, since 2010. We consider women being members, chairs and vice-chairs of boardrooms. In our study, we compare the situation in boards on 30-th of June in following years, applying data available in Notoria Serwis.³

In the statutory bodies of listed companies men are dominating and there are no significant changes in the years 2010-2018. There are only from 10.7% to 23.5% of women in boardrooms. Companies listed on NewConnect are often family businesses and the women representation in management is essentially bigger there than on the main market (Table 4.5). It may be also noticed that there are more women in supervisory than in executive boards. Last row shows percentage changes which took place in 2018 in comparison to 2010.

³ In our study we consider companies from the main market of the WSE and NewConnect which is an alternative stock exchange. Compared to the main market of Warsaw Stock Exchange, NewConnect allows smaller companies to float shares, offers lower costs, simplified entrance criteria and limited reporting requirements.

Table 4.5. Percentage share of women on the executive and supervisory boards of companies listed on the Warsaw Stock Exchange - Market type perspective

Year	Total	Main Market	NewConnect	Total	Main Market	NewConnect
	Women on the executive boards			Women on the supervisory boards		
2010	11.1	10.8	11.0	12.1	10.7	17.9
2011	11.9	10.6	14.2	11.8	10.6	15.3
2012	13.0	12.0	14.1	14.5	11.2	19.8
2013	12.5	11.5	14.5	14.5	11.4	18.9
2014	12.7	12.0	14.0	17.0	13.3	21.5
2015	12.4	11.6	14.0	18.0	14.2	22.3
2016	12.0	11.1	13.8	18.8	15.1	23.5
2017	12.3	11.2	14.6	18.6	15.1	23.5
2018	12.5	11.5	14.9	18.6	15.2	23.2
Changes 2018/2010	13.0%	6.0%	35.2%	53.7%	41.7%	29.7%

Source: own calculation based on data from Notoria Serwis.

To answer the question if it is possible to reach in 2020 the level of 40% women in supervisory boards of public companies we estimated (on annual data) trend functions for all companies and the ones from the main market.

All companies:

$$y_t = 11.1139 + 0.9750\tau$$

$$t: (7.7) \quad (15.7)$$

Main market:

$$y_t = 9.4694 + 0.7017\tau$$

$$t: (9.1) \quad (21.8)$$

$$R^2=0.9221$$

Both trend functions well describe changes of the women representation in boardrooms since determination coefficients are high, and all parameters essentially differ from zero. From obtained parameter estimates, assuming *ceteris paribus*, we conclude that the level of 40% women in supervisory boards will be obtained for the total market in 2039 and the main market not earlier than in 2053. According to trend functions, in 2020 there will be 21.8% of women in supervisory boards when all companies are considered and – 17.2% for companies from the main market. However, one should realize that we consider all companies, also these medium and small size.

Table 4.6. Percentage share of women on different positions in the executive and supervisory boards of companies listed on the Warsaw Stock Exchange

Year	Executive boards			Supervisory boards		
	President	Vice- -President	Member	Chairwomen	Vice- -Chair	Member
2010	7.1	10.0	16.1	11.7	9.1	21.3
2011	7.9	11.2	16.8	10.2	8.2	15.3
2012	7.3	13.9	18.7	12.8	8.5	18.5
2013	7.9	12.4	18.1	12.5	8.9	16.7
2014	7.2	12.4	19.8	12.8	9.1	16.9
2015	7.4	12.3	18.5	13.3	9.9	17.1
2016	7.0	11.6	18.3	11.7	7.8	17.1
2017	6.1	14.1	17.9	11.8	15.0	20.0
2018	6.7	14.3	17.9	11.8	15.2	19.9
2018/2010	-5.0%	42.6%	11.3%	0.6%	67.2%	-6.4%

Source: own calculation based on data from Notoria Serwis.

Table 4.6 contains data concerning women participation in different positions in managerial bodies. The smallest shares are observed among presidents and the biggest among members of executive and supervisory boards i.e. the “leaking pipeline” phenomenon is observed. The last row contains dynamic measure describing changes that took place during analyzed years which show that there is no improvement since in 2018 there is even less presidents of executive boards than in 2010, and a little increase among chairwomen of supervisory boards.

Analysis is provided also for main WSE indexes which portfolios contain companies characterized by different size (Table 4.7). It is visible that, if the situation in 2018 is compared to 2014, there is an increase of women share in the executive boards of the biggest companies composing the index WIG20 (more than 184%) and small size companies from the index sWIG80 (12%), but for medium size companies from the index mWIG40 the decrease of women participation in executive boards is observed (-22.5%).

Table 4.7. Percentage share of women on the executive boards of companies created portfolios of the major WSE stock indexes

Stock index	Years					Changes 2018/2014
	2014	2015	2016	2017	2018	
WIG20	5.3	11.8	12.6	15.5	15.0	183.0%
mWIG40	12.1	7.2	6.7	8.9	9.4	-22.3%
sWIG80	11.5	11.9	11.3	12.5	12.9	12.2%

Source: own calculation based on data from Notoria Serwis.

4.4. Women representation in boardrooms vs. financial performance of companies

As it was already mentioned, there are many factors affecting the financial performance therefore the findings concerning the impact of women – managers to the situation of company are inconsistent. It depends on:

- the measurement of women representation (in executive or supervisory boards or only CEOs) which can be measured as a number or a fraction of women or as gender diversity index;
- the measurement of performance of enterprise or institution – usually Tobin's Q, some financial coefficients (such as ROE, ROA, ROS, etc.) or synthetic measures are used;
- method applied for evaluation of the relation between gender diversity and standing of the enterprise – different type of regression and correlation analysis, statistical interference, metanalysis, etc.,
- period of time and sample length, economic sector, general situation of the company and its size, position of women in society, etc.

In our study, we investigate companies listed on the main market of WSE. The research is provided for all companies classified into 16 economic sectors (Table 4.8). In fact, we use data concerning nearly 86% of companies quoted in the years 2010-2013 since the companies with lacking observations or outliers were excluded from our analysis. In further analysis 1393 cases from years 2010-2013 are investigated, because we omitted banks.

Table 4.8. The distinguished economic sectors used for companies grouping

Sectors		Sectors	
A	Banks	I	Wood and paper, light industry
B	Construction	J	Electro-engineering and automobiles
C	Developers	K	Energy, oil and gas
D	Capital market, finance others	L	Building materials
E	Retails	M	Metals
F	Wholesale	N	Food
G	IT	O	Telecom and media
H	Chemicals, pharmaceutical, plastic materials	P	Hotels and restaurants, services-others
Count of companies from the sectors A-O: 337 (87.76%) in 2010; 368 (86.79%) in 2011; 369 (84.83%) in 2012; 374 (84.42%) in 2013.			

Source: own elaboration based on WSE sectors.

Tables 4.9 and 4.10 contain information about female representation in boards in all analyzed sectors and years, separately for executive and supervisory boards and women on the top positions i.e. president of the executive boards and chair in the supervisory boards. In columns “ranking” we put the position of sectors B-P according to the women participation in supervisory and executive boards and as chairs of boardrooms in the whole analyzed period. The sector with the biggest representation of women in all considered years holds the first position in the ranking (in Tables 9-10 the sectors denoted as F, M and D are the leaders).

Table 4.9. Share of women on supervisory boards and chairwomen and ranking of sectors

Years	2010	2011	2012	2013	ranking	2010	2011	2012	2013	ranking
Sectors	Share of women on boards					Share of women as chairs				
A	7.62	6.60	10.43	14.17	2010-13	7.69	7.69	7.14	13.33	2010-13
B	12.21	15.10	14.59	15.68	4	6.06	8.82	3.23	3.45	10
C	1.19	4.90	5.08	6.34	15	0.00	5.26	4.76	9.52	11
D	17.32	13.53	14.02	13.09	3	0.00	3.23	3.23	3.03	13
E	9.00	12.15	12.75	8.91	12	0.00	0.00	0.00	0.00	15
F	18.80	19.33	18.62	19.05	1	12.50	15.38	16.00	11.54	3
G	10.07	8.72	10.27	13.48	13	18.52	7.41	11.54	20.00	2
H	9.71	11.93	11.71	11.38	11	10.53	11.11	10.53	15.00	5
I	12.22	14.89	17.39	12.64	5	11.76	11.11	11.76	6.25	7
J	15.13	14.38	12.99	13.90	6	7.41	7.41	3.45	7.14	9
K	11.22	13.51	13.85	15.57	8	0.00	0.00	12.50	18.75	8
L	14.10	12.22	9.47	11.46	9	0.00	0.00	0.00	5.56	14
M	13.58	13.64	14.43	13.59	7	18.75	17.65	17.65	21.05	1
N	8.57	11.02	11.21	10.26	14	0.00	5.26	5.88	0.00	12
O	10.42	11.01	11.02	14.52	10	12.50	11.11	11.01	11.76	6
P	14.07	17.92	18.05	13.53	2	13.04	11.54	11.76	12.50	4
average	11.58	12.55	12.87	12.97		7.42	7.69	8.15	9.93	
standard deviation	4.04	3.60	3.36	2.84		6.59	5.12	5.26	6.52	
min	1.19	4.90	5.08	6.34		0.00	0.00	0.00	0.00	
max	18.80	19.33	18.62	19.05		18.75	17.65	17.65	21.05	

Source: own elaboration based on (Kompa, Witkowska, 2018).

It is worth noticing that there are no economic sectors without women in boardrooms. One may notice that on average, fraction of women in supervisory boards is from 11.6% to 13% and it is increasing in time whereas this share in executive boards is from 11% to 11.4% and it is not increasing. The highest percentage of women in the former is observed for wholesale (F) and for the latter in the sector: capital markets, finance others (D). The biggest representation of women as chairs of supervisory boards is noticed in the sector: metals (M) in all consider years. There are four economic sectors: wood and paper, light industry (I), electro-engineering and automobiles (J), energy, oil and gas (K) and food (N) where there are no women appointed into position of the president of executive board of the company in all analyzed years but only one such sector: rentals (E) with no female chairs of supervisory boards.

Table 4.10. Share of women on executive boards and chairwomen

Years	2010	2011	2012	2013	ranking	2010	2011	2012	2013	ranking
	Share of women on boards					Share of women as chairs				
A	12.79	12.36	9.18	13.13	2010–13	18.18	9.09	7.69	6.67	2010–13
B	10.08	7.76	9.52	10.75	11	12.50	6.25	3.45	11.11	6
C	8.70	8.33	13.04	15.49	6	7.69	11.76	21.05	19.05	2
D	18.75	22.09	21.25	20.88	1	20.83	12.50	12.90	16.67	1
E	14.71	11.67	10.34	11.54	5	5.00	0.00	0.00	5.26	10
F	9.88	10.34	10.98	9.20	7	3.85	3.57	4.00	8.00	8
G	6.72	7.69	7.55	6.86	14	0.00	0.00	3.70	3.70	11
H	20.75	14.75	16.07	13.33	2	15.79	20.53	10.53	10.00	3
I	7.14	7.32	9.76	6.25	13	0.00	0.00	0.00	0.00	13
J	9.52	10.00	10.99	8.33	9	0.00	0.00	0.00	0.00	14
K	10.17	10.45	5.71	11.86	10	0.00	0.00	0.00	0.00	15
L	17.50	9.76	11.63	11.11	4	14.29	12.50	6.67	11.76	5
M	8.11	6.98	7.32	6.38	15	12.50	11.76	11.11	10.53	4
N	7.02	8.06	9.26	9.52	12	0.00	0.00	0.00	5.00	12
O	6.38	13.46	10.71	9.23	8	0.00	5.56	5.00	10.00	7
P	14.71	16.25	13.00	13.46	3	8.70	3.57	0.00	0.00	9
average	11.43	11.08	11.02	11.08		7.46	6.07	5.38	7.36	
standard deviation	4.43	3.90	3.56	3.64		7.14	6.12	5.87	5.71	
min	6.38	6.98	5.71	6.25		0.00	0.00	0.00	0.00	
max	20.75	22.09	21.25	20.88		20.83	20.53	21.05	19.05	

Source: own elaboration based on (Kompa, Witkowska, 2018).

Table 4.11. Gender diversity index evaluated for executive boards

Sectors	2010	2011	2012	2013	2010	2011	2012	2013
Executive	Share of women on boards				Share of women as chairs			
B	0.1813	0.1432	0.1723	0.1919	0.2188	0.1172	0.0666	0.1975
C	0.1589	0.1527	0.2268	0.2618	0.1420	0.2075	0.3324	0.3084
D	0.3047	0.3442	0.3347	0.3304	0.3298	0.2188	0.2247	0.2778
E	0.2509	0.2062	0.1854	0.2042	0.0950	0.0000	0.0000	0.0997
F	0.1781	0.1854	0.1955	0.1671	0.0740	0.0689	0.0768	0.1472
G	0.1254	0.1420	0.1396	0.1278	0.0000	0.0000	0.0713	0.0713
H	0.3289	0.2515	0.2698	0.2311	0.2659	0.3263	0.1884	0.1800
I	0.1326	0.1357	0.1761	0.1172	0.0000	0.0000	0.0000	0.0000
J	0.1723	0.1800	0.1956	0.1527	0.0000	0.0000	0.0000	0.0000
K	0.1827	0.1872	0.1077	0.2091	0.0000	0.0000	0.0000	0.0000
L	0.2888	0.1761	0.2055	0.1975	0.2450	0.2188	0.1245	0.2075
M	0.1490	0.1299	0.1357	0.1195	0.2188	0.2075	0.1975	0.1884
N	0.1305	0.1482	0.1681	0.1723	0.0000	0.0000	0.0000	0.0950
O	0.1195	0.2330	0.1913	0.1676	0.0000	0.1050	0.0950	0.1800
P	0.2509	0.2722	0.2262	0.2330	0.1589	0.0689	0.0000	0.0000

Source: own calculation based on Table 10.

Table 4.12. Gender diversity index evaluated for supervisory boards

Sectors	2010	2011	2012	2013	2010	2011	2012	2013
Supervisory	Share of women on boards				Share of women as chairs			
B	0.2144	0.2564	0.2492	0.2644	0.1139	0.1608	0.0625	0.0666
C	0.0235	0.0932	0.0964	0.1188	0.0000	0.0997	0.0907	0.1723
D	0.2864	0.2340	0.2411	0.2275	0.0000	0.0625	0.0625	0.0588
E	0.1638	0.2135	0.2225	0.1623	0.0000	0.0000	0.0000	0.0000
F	0.3053	0.3119	0.3031	0.3084	0.2188	0.2603	0.2688	0.2042
G	0.1811	0.1592	0.1843	0.2333	0.3018	0.1372	0.2042	0.3200
H	0.1753	0.2101	0.2068	0.2017	0.1884	0.1975	0.1884	0.2550
I	0.2145	0.2535	0.2873	0.2208	0.2075	0.1975	0.2075	0.1172
J	0.2568	0.2462	0.2261	0.2394	0.1372	0.1372	0.0666	0.1326
K	0.1992	0.2337	0.2386	0.2629	0.0000	0.0000	0.2188	0.3047
L	0.2422	0.2145	0.1715	0.2029	0.0000	0.0000	0.0000	0.1050
M	0.2347	0.2356	0.2470	0.2349	0.3047	0.2907	0.2907	0.3324

Sectors	2010	2011	2012	2013	2010	2011	2012	2013
Supervisory	Share of women on boards				Share of women as chairs			
N	0.1567	0.1961	0.1991	0.1841	0.0000	0.0997	0.1107	0.0000
O	0.1867	0.1960	0.1961	0.2482	0.2188	0.1975	0.1960	0.2075
P	0.2418	0.2942	0.2958	0.2340	0.2268	0.2042	0.2075	0.2188

Source: own own calculation based on Table 9.

Table 4.13. Ranking of sectors according to their financial situation

Symbols of sectors	Ranking based on					
	synthetic measure of development combined for 2010–2013	average position due to 3 taxonomic measures				
		evaluated for years				combined for 2010–2013
		2010	2011	2012	2013	
B	13	7	13	11	15	13
C	12	6	4	14	12	10
D	7	10	8	7	5	6
E	3	3	11	2	1	3
F	14	14	14	12	13	14
G	8	9	9	5	7	7
H	10	12	3	10	14	11
I	15	15	15	15	11	15
J	4	8	2	4	8	4
K	2	1	1	1	10	1
L	9	5	10	13	2	8
M	5	4	5	6	9	5
N	1	2	6	3	3	2
O	6	11	7	8	4	9
P	11	13	12	9	6	12

Source: Own elaboration based on (Kompa, 2018 and Kompa, Witkowska, 2018).

Here a question arises if gender structure of boards is correlated with the financial standing of companies. The gender structure of management is described either by gender diversity index (evaluated as Blau index for 15 sectors B-P and presented in Tables 4.11-4.12) or by fraction of women and chairwomen in supervisory and executive boards (Tables 4.9-4.10).

The financial situation of companies is described by taxonomic measures which let us evaluate the financial situation using several financial ratios simultaneously. Construction of each taxonomic measure is based on five financial ratios:

1. return on equity (ROE),
2. return on assets (ROA),
3. cash flow per share,
4. EBIDTA per share, and
5. equity to assets ratio,

evaluated for the period 2010-2013 from the year end reports of companies. The values of these ratios were averaged for each economic sector using data from companies belonging to a specific sector. On the basis of these sectors' ratios three different synthetic indicators, namely: synthetic measure of development, relative development indicator and vector taxonomic measure,⁴ are evaluated and all sectors are ordered from the best to the worst according to the values of each measure. These rankings are used to create combined rankings of sectors (Table 4.13) which consist in determination of the sector position:

- in the whole period of investigation, using rankings provided in each year applying synthetic measure of development and aggregated taxonomic measure,⁵
- separately in each year of analysis according to the aggregated taxonomic measure ranking which bases on rankings made using mentioned above three synthetic indicators.

The best position in the ranking is denoted by one the last is denoted by 15.

4 Description of all these measures and rankings of sectors based on them can be found in (Kompa, 2018). Synthetic measure of development was proposed by Hellwig (1968) and its application to measure the financial standing of the enterprise can be found in (Kompa, 2018, 2019, Kompa, Witkowska, 2018) among others.

5 Kompa, Witkowska (2018) constructed rankings of sectors based on three taxonomic measures.

Table 4.14. Values of Pearson coefficients and t-Statistics evaluated for supervisory boards

Year	Current phenomena					Lagged by one phenomena				
	2010	2011	2012	2013	2010–2013	2011	2012	2013	2011–2013	2011–2013
n	15	15	15	15	60	15	15	15	15	45
<i>Relation between women representation on boards and the sector's position in the ranking</i>										
r	0.3853	0.5500	0.0187	0.3173	0.3147	0.4461	0.0554	0.2074	0.2456	
t	1.5052	2.3746	0.0674	1.2062	2.5246	1.7973	0.2002	0.7646	1.6615	
<i>Relation between chainwomen representation on boards and the sector's position</i>										
r	0.5484	0.2640	0.0385	0.3562	0.3132	0.2861	0.3340	0.4186	0.3387	
t	2.3646	0.9867	0.1389	1.3745	2.5112	1.0764	1.2776	1.6618	2.3602	
<i>Relation between gender diversity index for all boards' members and the sector's position</i>										
r	0.3847	0.1478	-0.1357	-0.0895	0.1165	0.2142	-0.1898	-0.3773	-0.0652	
t	1.5029	0.5388	-0.4937	-0.3240	0.8929	0.7908	-0.6971	-1.4689	-0.4283	
<i>Relation between chainwomen gender diversity index and the sector's position</i>										
r	0.3767	0.5486	0.4260	0.5050	0.4626	0.3551	0.4579	0.2087	0.3440	
t	1.4661	2.3659	1.6979	2.1097	3.9741	1.3694	1.8572	0.7696	2.4024	

Source: own own calculation.

As one may notice (Table 4.13) the positions of the sectors were not stable in time if situation of sectors are considered for each year separately. For some sectors changes are essential like for energy, oil and gas (K) or retails (E). One may also notice that application of different synthetic measures causes changes in the sectors' ranking, although there are some sectors which positions (according to the combined in time ranking) remain the same for both aggregated indicators i.e. construction (B), retails (E), wholesale (F), wood and paper, light industry (I), electro-engineering and automobiles (J) and metals (M).

In the last step of our investigation we calculate Pearson coefficients to find out if there is linear correlation between the gender structure of boards and the sectors' financial standing. As it was already mentioned, changes of senior managers or structure of boards do not cause immediate effects and it is difficult to determine the length of the time span between being appointed to the manager position and effects observed as the financial performance of the company. Therefore, in our analysis we look for the relations observed between gender board diversity and company performance in the same year (i.e. we assume 6 months difference between both phenomena) and a year after. Correlation coefficients are calculated using two different measures of gender structure i.e. women fraction on boards and gender diversity index evaluated for general number of women and for chairwomen on supervisory and executive boards. Pearson coefficients are calculated for each year separately and for the whole period of analysis. We also calculated correlation between rankings of sectors evaluated as average position in the whole period of analysis in terms of financial situation (measured by combined rankings provided for synthetic measure of development and aggregated taxonomic measure) and women representation in supervisory and executive boards (as members and chairs). To check the significance of the relations between both phenomena we apply t-statistics assuming significance level 0.05. Rejection of null hypothesis about lack of correlation is denoted by bold numbers in tables.

Table 4.15. Values of Pearson coefficients and t-Statistics evaluated for executive boards

Year	Current phenomena				Lagged by one phenomena				
	2010	2011	2012	2013	2010-2013	2011	2012	2013	2011-2013
n	15	15	15	15	60	15	15	15	45
Relation between women representation on boards and the sector's position in the ranking									
r	0.0956	-0.0390	0.3024	-0.0793	0.0680	0.0094	-0.0853	-0.0409	-0.0366
t	0.3463	-0.1407	1.1440	-0.2869	0.5192	0.0337	-0.3088	-0.1475	-0.2399
Relation between chairwomen representation on boards and the sector's position									
r	0.0691	-0.2136	0.4117	0.1144	0.0907	0.0507	0.4299	0.2710	0.2435
t	0.2498	-0.7885	1.6290	0.4153	0.6938	0.1832	1.7168	1.0151	1.6460
Relation between gender diversity index for all boards' members and the sector's position									
r	0.6587	0.5255	0.5047	0.5106	0.5523	0.4712	0.3266	0.3688	0.3906
t	3.1563	2.2268	2.1077	2.1409	5.0461	1.9263	1.2458	1.4307	2.7828
Relation between chairwomen gender diversity index and the sector's position									
r	0.8229	0.8292	0.8371	0.7139	0.8048	0.7017	0.7323	0.8709	0.7357
t	5.2211	5.3483	5.5162	3.6757	10.3281	3.5511	3.8775	6.3900	7.1224

Source: own elaboration.

Tables 4.14-4.15 contain values of Pearson coefficients between rankings of sectors provided due to aggregated taxonomic measure separately for each year in considered time span and women representation in boardrooms and among chairs, measured by fraction of women in management and gender diversity index. Therefore, positive values of Pearson coefficients mean that the bigger fraction of women in boards or smaller diversification of gender structure of boardrooms the lower position of the sector. In other words, positive and significant correlation shows the negative impact of increasing share of female managers to financial standing of companies belonging to distinguished sectors.

Analyzing correlation results (Tables 4.14-4.15), we notice that the majority of relations are statistically insignificant. However, significant and positive correlation is observed for relations between:

- women representation (measured by the fraction of female members) in supervisory boards in 2011 (both current and lagged relations) and whole period of investigation 2010-2013;
- chairwomen of supervisory boards representation in 2010 and the period 2010-2013 (both current and lagged relations), when the fraction of female members is considered, and in years 2011, 2013 together with the whole period of investigation (current relations), 2012 and years 2010-2013 (lagged relations) when gender diversity index is considered;
- women representation (measured by gender diversity index) in executive boards in all years of analysis for current relations and in 2011 together with whole period of investigation 2010-2013 for lagged relations;
- chairwomen of executive boards representation (measured by gender diversity index) in all investigated years for both current and lagged relations.

Table 4.16. Values of Pearson coefficients and t-Statistics evaluated for combined measures

Measure of financial situation	Correlation measures	Supervisory board		Executive board	
		Member	Chair	Member	Chair
Synthetic measure of development	r	-0.4357	-0.3357	-0.1357	-0.2964
	t	-1.7454	-1.2850	-0.4939	-1.1191
Aggregated taxonomic measure	r	-0.4143	-0.2643	-0.1357	-0.3286
	t	-1.6412	-0.9880	-0.4939	-1.2543

Source: own own calculation.

Table 4.16 contains Pearson coefficients evaluated for combined rankings of 15 sectors which show the general situation observed in the years 2010-2013. Rankings provided for both phenomena display the same direction i.e. positive correlation means that more female in boards at the end of June causes better financial situation of sectors at the end of a year. Women representation is measured by fraction of females and financial standing - by synthetic measure of development and aggregated taxonomic measure. As one can see, all values are negative although insignificant what validates previous statement that the increase of women share on boards causes worsening of the financial performance of companies in sectors.

4.5. Conclusions

Investigation on the gender structure of boardrooms in companies quoted in The Warsaw Stock Exchange in years 2010-2018 shows small fraction of women in statutory bodies. There are more women in the supervisory than in executive boards. There are only 6.1-7.9% women among presidents of executive boards and 10.2-14.3% female chairs of supervisory boards. There are more women in boards in companies listed on NewConnet than in the main market. During analyzed years 2010-2018, we observe essential increase of the share of women in the supervisory boards in all segments of WSE (29.7-53.7%) and in the executive boards on NewConnet (35.2%). In 2018, the biggest share of

women in executive boards (which was nearly doubled in comparison to 2014) is observed in companies creating index WIG20.

Regardless the fact that women participation in the management bodies of public companies has been growing, there is no chance to obtain the 40% women parity level in the supervisory boards in the nearest future. Even fraction of women in boardrooms, creating critical mass, has not been obtained in any segment of regulated capital market in Poland.

Our investigation does not prove that there is positive correlation between the increase of the women share in boards and financial performance of companies. In contrary, we obtain statistically significant negative correlation between both phenomena for 11 and 16 among 72 variants of possible measurements provided for supervisory boards and executive boards, respectively. However, our results may be biased by the small share of women, i.e. much below critical mass, in boards of Polish enterprises.

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CHAPTER 5

A SUGGESTION TO USE INSIGHTS FROM WOMEN'S STUDIES AS INPUT IN DESIGN OF INDUSTRIAL ECOLOGIES

5.1. Introduction

Over time, practices have evolved within industry and engineering that do not promote sustainable development. An idea for improvement in this respect is, to look to nature itself for models and advice. Trying to figure out how to mimic the flows of matter and energy in ecological systems is one way of doing that. This is what Industrial Ecology (IE) is about.

As can be expected from a field termed Industrial Ecology its' focus is on the exchanges commonly understood as constituents of industry or, put in other words, of production. This evokes the classical gender studies observation, regarding epistemological effects in science, from the cultural construction of male and female spheres. A question emerges, regarding the positioning of system boundaries. Ultimately, IE refers to the human interaction with the planet. The goal to control and calibrate the results of this interaction is the very reason for exploring, developing and applying IE. Can a sufficient degree of validity be retained if the system boundaries, are positioned so that they set "production" apart from "reproduction"?

5.1.1. Theoretical underpinning

Keller (2005) comments on a tendency in the scientific conceptualization of self-organization, to overlook that humans perform self-organization as much as other organisms do. The obstacle to fully embrace the thought, she argues, is the insistence on intentionality as something that sets humans apart from “nature”. What humans do thus ontologically becomes “un-natural” and, we refrain from placing our activities in the theoretical contexts that have otherwise shown efficient. If we speak of agency instead, when humans build for instance machines, this is something we share with other organisms building entities that serve as extensions of themselves. In doing so they shape their environment, as do we.

In IE, the physics and chemistry of self-organization and power-law distribution are inscribed, as these are terms through which ecology is understood and, ultimately mimicked. (See, for instance, Andrews, 2003; Salmi, 1991.) The common ground that Keller’s critique has with IE serves as theoretical base also for an interdisciplinary scope. In fact, it takes an interdisciplinary conversation to outline the potentials.

Theory on self-organization articulates and distinctly concerns what happens at system levels. Thus, when assessing an engineering accomplishment, the correct unit of analysis is humans’ collective doings, not the singular human (Udén, 2013). This is theoretically coherent with a social science oriented analysis. Engineering is a means through which a civilization deals with its conditions, not singular individuals. What Keller says, if her account is transposed to IE, is that “the natural” part of humanity – the continuous reproduction of the species – incorporates also the “artificial” – industry, science, and engineering. Production is part of reproduction.

5.2. Industrial Ecology for sustainable engineering

What Andrews (2003) terms *the IE learning community* has struggled with a number of challenges and, it is possible to understand IE by following some of them. Replacing mass and energy balances with the more sophisticated exergy concept is central.

In the article *Two aspects of consumption: using an exergy-based measure of degradation to advance the theory and implementation of industrial ecology* from 1997, Connelly & Koshland state that, “the central purpose of industrial ecology is to develop strategies for reducing resource consumption” (200). To understand the loss of resources’ usefulness it is not sufficient to measure their economic values. Market variations have origins of their own. Therefore, the actual physical properties need be accounted for. For this purpose, it is necessary to distinguish between throughput and degradation. Yet, in themselves, these are unreliable measures. The same consumption (degradation) can be generated if the throughput is large, as where a small throughput causes extensive degradation. The authors find that exergy removal is the optimal measure for degradation. They introduce the exergy-based concept Cycling of Material Exergy, CME. With CME differences among categories of waste re-use can be quantified: upgrading, recirculation, and cascading. To demonstrate this the authors apply an example with methanol-water waste streams. If the methanol can be separated from the water, it can be re-used and, it is then possible to talk of actual recycling (as opposed to mere cascading).

“Two aspects of consumption” can be thought of as a “pure engineering” investigation. No social conditions or other human factors intervene in CME. This does not make its implementation simple. Even if the merits are accepted (that the exergy concept offers unequalled advantages) exergy calculations require efforts of an extent that go further than available in an every-day engineering situation.

Contemporary projects may concern, for instance, mass produced consumer goods. Each artefact is typically assembled from an array of elements that, in turn are composed of several materials. *Application of exergy-based approach for implementing design for reuse: The case of microwave oven* (Almeida et al, 2017) addresses this field. The authors note that though “planning for reprocessing is an area of growing importance as Reuse and disassembly are now playing a key role of any design brief” there is a shortage of structured methods that can be industrially applied (877). They find that combining use of databases on exergy data for industrial processes and materials has potentials for “easy-to-use design practices that favor green engineering, circular

economy and environmental policies” (876). Similar perspectives are increasingly implemented in engineering, also engineering education, with publications of textbooks such as Sustainable manufacturing (Johansson et al 2019).

5.2.1. Industrial ecology and the effects of institutions

In a series of investigations, metallurgist Olli H. Salmi connects technical and socio-political factors in analyses of mining and metallurgical industry in the Kola Peninsula, Northwest Russia. It is not an IE success story. While Kola is rich in mineral resources, their exploitation has led to massive environmental degradation and so-called technogenous deserts. Instead, to Salmi the Kola metallurgical enterprise epitomizes what could have been. He emphasizes this through using the term contrafactual for his IE based analysis and highlights the gap between possible and actual utilizations of the mineralizations:

One of the interviewees gives an example of the bizarre conditions that the bureaucratic ministries posed. In Kovdor 1 million tonnes apatite were discarded for every 10 million tonnes magnetite produced. The Apatity company discarded 1 million tonnes magnetite for every 10 million tonnes apatite. (2003:35) Where the content of apatite is rich, magnetite can be treated as a by-product and sent to the nearby plant for iron ore processing and vice versa. They are however deemed waste and deposited. Salmi points to the institutional context:

“Apatite production was subordinate to the ministries of chemistry and fertilizers whereas magnetite production was subordinate to the ministry of black metals: plant-level cooperation was not allowed across ministerial boundaries.” (2003:35)

The conclusion is that if the prescriptions that can be developed with IE shall render impact, the institutional and political dimensions of a society need be studied together with the natural and technological opportunities. This will require a period of substantial collective efforts, Salmi writes. Indicators need be developed for understanding physical as well as social aspects of a system. This is “a substantial task as it touches upon the divergent foundations of

physical and social sciences” (2007:1703). This notion of incongruence was conceptualized by Salmi, first in relation to thermodynamics:

“... industrial ecology is not only about optimizing material and energy flows. Exergy is suitable as a measure for the effectiveness of the industrial environment and the exergy flows of an ecosystem are good basic models for industrial systems. /.../ However, exergy does not take into consideration the well-being of the social system or how the social system interacts with the natural one.” (2002:9)

5.3. Reproduction, care, the private

In the women’s and gender studies tradition considerable attention is paid to some aspects of human activity that tend to be left unnoticed in the research mainstream. Some of the dimensions studied are conceptualized as reproduction. In this context, the term represents a division of social spheres into production, which socially tends to be perceived as the sphere of industry, masculinity and men, and reproduction reciprocally perceived as the sphere of family, femininity and women.

Care has similar connotations (understood as a practice upheld in particular by women, dually supported by and generating knowledge). Another conceptualization applied in the analytical discourse is the public vs. private polarity, where the private is associated with women, emotional experiences and family life. A representation of the content of the gender studies and feminist curriculum referred to, can commence with the works of European Ulrike Prokop and American Joan Tronto.

5.3.1. Prokop and the German housewife

In the 1970’s Prokop made the daily life of the West German housewife a topic for the social sciences. She lists tasks performed by women in the private sphere of the home and family: a daily routine that consists of “preparation of meals, washing dishes, straightening up and cleaning the living quarters, washing and ironing clothes and shopping”; and occasional “making of

clothing, upholstering and food canning and preserving” (1978: 29-30). For women with children taking care of them involves such as “feeding, diapering, bathing, watching over them during play and homework” (30). These are the types of results that can be collected with help of questionnaires.

Yet, there is more to it, Prokop argued, than “certain quantifiable services rendered in housework and raising children” (20). A complete analysis of societal activity should include also the production of life contexts: “agencies of socialization, of social relationships, of public affairs.” Thereby “there is production in the framework of women’s life context as well.” In other words, Prokop starts with the terms of reproduction but concludes with claiming that there is something that the German housewife *produces*.

5.3.2. Tronto and the topic of moral boundaries

In *Moral boundaries: A political argument for an ethic of care* Tronto starts in the observation that “questions of natality, mortality, and the needs of humans to be cared for as they grow up, live, and die, have not informed the central questions of philosophers” (2009:3). This is not a coincidence, Tronto means. The privileged irresponsibility in these matters, enjoyed by the men that have constructed philosophy, leads to care work being invisible to them. She puts a standard forth, for the ethics of care, constituted by five elements (adapted from a summary by Kardon, 2011:256):

- Attentiveness – noticing the need to care, or recognizing the need of others;
- Responsibility – having more than an obligation, but a responsibility arising in part from one’s position or knowledge;
- Competence – having the ability to carry out the caring act effectively and correctly;
- Responsiveness – being receptive to care, being aware of the care receiver’s perceptions;
- Integrity – acknowledging the interrelationship of the above four elements.

It is fair to say that Tronto addresses what Prokop defines production of life contexts. There is more to it, however. When putting Tronto's deliberations alongside Prokop's, attention is drawn to that the doings of the housewife is not Tronto's only, or even primary interest. Tronto accentuates that if we confine the recognition of care to efforts within the conventionally envisioned family, we only get part of the story. What is romantically perceived as something women perform for their families and other emotionally based interactions has, throughout history also been performed by slaves, servants, and workers. Taking what Tronto writes into consideration, we might think of, for instance, the millions of migrant domestic workers that are today employed in private households all around the globe, many of them migrants.

5.3.3. The descriptive/prescriptive divide

Bringing up women's efforts in care and the private sphere risks being interpreted as a moral endeavor rather than scientific. Indeed, gender researchers highlight certain incidence and content of practices and knowledge. This does not imply that all approve of the social and cultural orders that produce this knowledge (as feminine) or, find their results agreeable. Prokop (1978), for instance, found ambivalence in women's situation as need-oriented caregivers that resulted in "repressed anxiety and aggression" (31) and, such as lack of analytic skills "to classify, to outline an object, to structure the context of a problem" (26). Whether this demeaning judgement was correct is not decisive here.

Many scholars would probably oppose to Prokop's assessment of women in former West Germany and, by proximity of many other women too, but it unmistakably demonstrates the difference between description and prescription. Recognition of women's so-called "traditional" contributions to society does not automatically imply a celebration. It might just propose that overlooking their functions is a mistake.

In IE the difference between facts and norms is discussed under the banner "descriptive-prescriptive divide" (Andrews, 2003). The complications of this double agenda being known in both fields, may show to be helpful, in future attempts to combine the two.

5.4. Gender studies and IE – some thoughts

The way IE and gender studies are presented above evokes disparate details. What can cleaning the house or being receptive to care, reasonably have to do with methanol separation?

Connelly and Koshland (1993) address issues of the type “separation of one fluid from another”. Evidently, this is not a matter about which the social sciences or humanities can provide much clarity. In the same article however, also the application of scientific knowledge in practice is addressed as a central concern. To Almeida and associates (2017), that challenge is the starting point. Salmi finds that IE becomes useful only when the institutional circumstances allow.

In all three cases, the investigators note that it takes ingenuity and organization to turn potentials to practice. They certainly refer to physical matters, but also to implementing knowledge in engineering routines, and to business models and public affairs. What Prokop and Tronto tell us (as do so many women’s and gender studies scholars) and that increases the type and number of factors to bring into the deliberations, is that behind the capacities that are called upon, there is a battery of care, education, production of social networks – a vast body of activity.

The learning from women’s and gender studies is that the activities of care, reproduction or in Prokop’s words “production of life contexts” is what enables advanced and complex interaction. It constitutes a humanity capable to pursue complex endeavors. This goes for such as development and implementation of IE informed procedures, as for any advanced human collaboration.

The difference in the scopes of Prokop and Tronto points to a rift in the discourse on what the private sphere, reproduction and care are about and, how it is done. There is reason to be precise about the job itself, its’ content, result and effects. An early IE prototype analysis concerns exergy optimization where heat produced in industrial processes is used for district heating (Grip et al, 2001). Taking a global perspective one might ask: Where women collect, manage and operate water and fuel – are these activities part of caregiving in the private sphere? Where they take place in sectors perceived as masculine, are they part of industry?

5.5. Conclusion

Salmi, who pays extensive attention to the necessity of interdisciplinary efforts in IE, notes that exergy, does not consider the well-being of social systems. This is, by all means, a reasonable statement. Nonetheless, exergy *calculation*, as favored procedure for measuring and designing IE systems, is not to be mixed up with exergy as such. Calculation routines may well be applicable for many of the dimensions that constitute care, reproduction and, what takes place in the so-called private sphere. Factors such as nutrition needs or, say, data about water and sanitation, housing, schooling, urban planning, and so forth are not matters of taste. Much applicable data can probably be collected from different types of public sources and international platforms such as the World Health Organization, the World Bank and, United Nation's organs. Sorting this out would not be the first challenge for the Industrial Ecology learning community to grapple with.

In no way am I suggesting that calculations for, say, mass and energy balances for smelter processes, benefit from considering "care". However, IE essentially is about systems of human activity. For instance, all IE and proto-IE author teams referred to in this chapter highlight applicability in industrial engineering routines. Is it realistic to overlook the input of care, in the boundary delineation for an industrial system that depends on well educated, socially well-functioning individuals? Can, the provision of physically, mentally and socially sound environments be neglected? Can an IE analysis neglect those who supply those provisions, including but not limited to attentiveness, responsiveness, all the finest, most nuanced elements of care.

A first step of deliberations for a women's and gender studies informed approach to IE, is derived from the fundamental awareness in these fields, of borders and compartmentalization. What might take place in culturally "feminine" zones that is integral to the activities of an industrial system? In fact, with Keller one might ask, if the tables should be turned: Under what circumstances can analytical boundaries be applied that, separate production from reproduction and public from private? Without negative effects on the validity of the analytical procedure, that is. Speaking with Keller this is a matter of investigating human self-organization.

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CHAPTER 6

GLASS CEILING: DOES GENDER STEREOTYPES MATTER?

“I don’t think a woman should be in any government job whatever. I mean, I really don’t. The reason why I do is mainly because they are erratic and emotional. Men are erratic and emotional, too, but the point is a woman is more likely to be”.
President Richard Nixon

6.1. Introduction

Deep and intricate social roots of discrimination and societal stereotypes on specific groups (ex: men and women) affect a larger number of people even in today’s world (Yücel, & Rızvanoğlu, 2019). It is evident that stereotyping errors create negative perception on social groups which suppress their behaviors. Psychological and socialization processes govern different stances on women and men behavior, where men as independent and women as relational. Therefore, women have recognized for providing emotional support and taking care of family and house while men are doing the real work (Gilligan, 1993). Further, in history, gender roles have been designated where men denote with hard work and public domain while women work at home taking care of family and household chores and private domain. These social norms and beliefs have created numerous invisible issues for women at the workplace.

The world still speaks on a dilemma on “why only few women have climbed up the career ladder and taken up top positions in larger organizations’, even though women in majority of countries have achieved higher educational qualifications than men and have been entered in to the labour market for past few decades (Eriksson, Smith, & Smith, 2017). However, in the present context, there more significant improvement toward gender equality all over the world. It is evident specifically in the workplace with different policies and laws imposed in recent past years to ensure gender equity. Still, this effort is not fully achieved in rewards and top positions in a career (AAUW, 2016; Catalyst, 2020). Workplaces in today’s world filled with inequality, midst individuals, yet highlighted among men and women and workplace is highlighted home ground is also a battlefield for gender equality (Ridgeway 2011). Thus, it stresses of an inherent issue in the world in discriminating gender, specifically in the labour market.

Despite the efforts taken to reduce gender equality in terms of giving more promotional opportunities for women in top management positions and higher pay for women, the political agenda of many developed countries create obstacles (Ellwood, Garcia-Lacalle, & Royo, 2020). Further, disparities of human capital, capacity, and capability, absence of role models, flexible working arrangements, and issues on work-life balance identified as quite a few clarifications indicated for this reflected gender gap (Eriksson, Smith, & Smith, 2017). Countries of the European Union (EU) have embraced healthy initiatives to ensure equal opportunities for both men and women. Still, there is a tendency to confront difficulties by women to get job opportunities with the highest salaries and obtain top positions in the management, which shows the glass ceiling effect exists (Christofides, Polycarpou, & Vrachimis, 2013).

Koenig and Eagly (2014). stated that behaviors of men include qualities of authoritative leadership that clearly related to perception of leadership. Thus, it signifies that male is perceived better off with leadership/top position rather female. Absence of women in top managerial positions portrayed by the insensibility of modifications, variations, and toughness in organizations and procedures. It denotes, fewer females in higher positions could be the

result of strong social norms that slowly started changing and prejudice attitudes such as gender stereotypes and gender identity in the labour market (Eriksson, Smith, & Smith, 2017).

Mostly contemporary European societies considered that they are highly advanced, permissive, and promote liberal characteristics meanwhile, the debate is prevailing regarding whether true equality is preserved regardless of gender, age, race, or social position. In considering the arguments made on the position of women in modern society, the majority are contradictory. Meharoof (2009) highlighted that there are people who perceive that women have got an equal status and opportunities in society, where there are some people who perceived completely contrarily. They believe that women in modern society experience glass ceiling regularly in their life.

Sweden, Australia, Austria, Belgium, Canada and other countries which shows a higher female employment rate are undeniable with the fact that women face barriers in their employment which are invisible and are not faced by male colleagues with same set of qualifications and skills in terms of wages and promotions when they pursue top positions in the management (Arulampalam, Booth, & Bryan, 2007; Ortiz-Ospina, Tzvetkova, & Roser, 2018). Further, Kee (2006) stressed in a study that the glass ceiling effect is more prominent in the public sector compared private sector though competition in the private sector is higher than the public sector. Cases presented in the United States revealed that the glass ceiling and glass cliff is more prevalent on female employees rather male employees (Sabharwal, 2015). A study conducted in Sri Lanka proved the same where the existence of the gender wage gap (Gunewardena, 2010) and the presence of glass ceiling in Sri Lanka (Bombuwela & De Alwis, 2013) India (Khanna, 2012) and in Korea (Jung & Cho, 2020). In 2011, the World Bank emphasized gender discriminations exist in professions and industries in both developed and developing countries, and the representation of women in top positions is less. Notably, women still less engage in the workforce and earn a few wages compared to men (World Bank, 2011). Thus, it accentuates the fact that though the country is developed or developing, European, Asian, or Scandinavian glass

ceiling and gender stereotypes exist and generate barriers for women to climb up the top in the career ladder regardless of their educational, professional qualifications and skills.

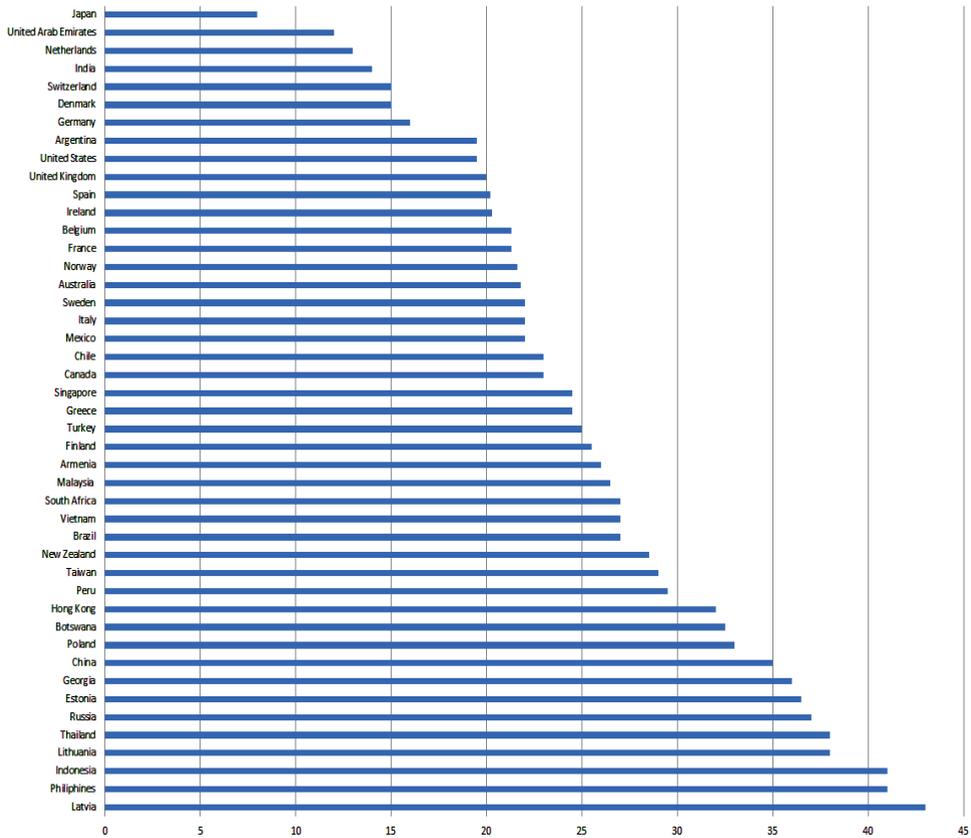
Ensuring gender equality requires women to participate in top positions in the corporate sector for few causes such; in modern society, the power that men and women possess determined by the positions they hold at the workplace (Huffman, Cohen, and Pearlman 2010). Another point of view on gender stereotypes where cultural views on men and women roles in societies have rooted for gender inequality (Ridgeway 2011). In view of gender stereotypes, people observe and expect that men and women have their common behavioral patterns where men have higher status than women, and men have higher authority over resources. Hence, it is perceived that men have greater capability and skill over women. This cultural belief of less capability and skills can be weakened by the presence of women in top management positions. Extant literature highlighted on women labour supply where how female employment choices differ from male and indicates gender gap has increased in top positions due to strong risk aversion and the reluctance of women to enter into higher managerial positions (Eriksson, Smith, & Smith, 2017). Further, male-dominated societies and workplace procedures are constructed by men for men, where the classic labour market view like a man than a woman (Ridgeway 2011). Such circumstances required men, not women; thus, the labour market is resulting in fewer career advancement opportunities for females.

6.2. Glass Ceiling

U.S. Glass Ceiling Commission (1995) defines glass ceiling as barriers of advancement within corporate hierarchies for minorities and women. Glass ceiling is defined as an unseen barrier of discrimination that blocks women from attaining top positions in the corporate ladder (Ćorić, 2018). Glass Ceiling denominates the barriers that inhibit women and minorities at workplace attaining higher positions and paying unfair wages and salaries. Hence, the glass ceiling reflected gender discrimination that emphasis the harassment from the society toward women.

Figure 6.1 shows a study conducted across forty countries on less representation of women in top management. On average, 26% of women hold positions in senior management. Further, the figure depicts that most developing countries represent higher women participation in senior positions compared to so-called “liberal Western democracies.”

Figure 6.1. Percentage of women in senior management across countries



Source: (Ćorić, 2018).

Pipeline problem (Gassam, 2018) highlighted as a reason for the underrepresentation of women in top positions. Women are brought up traditionally with less experience in working environments and invested a few in education and acquiring skills required by a job compared to men. Thus, women with proper education and qualification are vital for the advancement

in top management and is less identified in most of the scenarios. The reason for this issue is where women are bound with social norms. The society has attributed different roles, such as child care and adult care that refrain women in entering the labour market (Ćorić, 2018). Further, these roles have limited the ability of women to work on weekends or late nights, diminishing the capability and eligibility of women for promotion. Accordingly, it indicates that the social norm created discriminate and undermine women, and this phenomenon is more visible around the world when offering top positions for women in senior management.

Gorman and Kmec (2009) highlighted that discrimination and undermining women are highly linked with this underrepresentation of women in senior management. Rather than actual work-family conflict experienced by women, superiors at the workplace perceived that due to work-family conflict, women are unable to focus on work, thus offer fewer opportunities for promotion (Hoobler, Wayne, & Lemmon, 2009). These discriminations and prejudices on women may impact on promotion decisions of women. Further, the studies on psychology, sociology, and management have found that women get less performance ratings compared to men due to these biased perceptions (Jogulu & Wood, 2008) that reduce the chances of promotions for women. These preconceptions on women's capabilities have not only partial on performance evaluations but the quality of performance. Some evaluators have developed firm standards for performance evaluations for women, grounded on these prejudices. Therefore, with similar evaluation ratings for both men and women have in lower management levels, yet men are observed as more competent and expected to get selected for senior management positions (Lyness & Heilman 2006).

Accordingly, the contemporary literature suggests that prejudices and discriminations against women are major causes for the absence of women at top positions in corporate hierarchies. This indicates that the percentage of women in senior positions should, on average or be lower in countries in which prejudice and discrimination against women are greater.

6.3. Gender Stereotypes

The Oxford English Dictionary defines stereotypes as a widely held but fixed and generalized image or idea of a particular type or thing. Having stereotypes on a particular group (in the labour market context) is often believed to be misinterpreted the perceived capabilities and abilities of the members who belong to that group. Stereotypes are universal, which encompasses racial groups (Asians are good at solving numerical problems), genders (males are better off in leadership positions), political groups (democrats are rich), demographic groups (Chinese residents are elderly) and behaviors (crossing and uncrossing of legs). Stereotypes involve intellectual, cognition, and mental activities of a human being; thus psychologists define stereotypes as psychological interpretations of actual differences; people observe between groups that allow managing and processing information more accessible in an efficient manner. Though stereotypes allow the perception of groups quicker and easier but also result in misleading and prejudice judgments that lead to discrimination and intergroup conflicts (Bordalo, Coffman, Gennaioli & Shleifer, 2016).

Bordalo et al. (2016) stress that stereotypes tend to amplify the real differences between two group (Ex: men and women) and that stereotypes depend on the context (ex: environment and culture). In accordance with Psychological Role Congruity theory, Preconceptions and discriminations towards promotional opportunities for women are based on two types of stereotypes (Eagly & Karau, 2002). The first type is descriptive stereotypes, which is regarding how members of a group typically or naturally are. Further, it denotes the beliefs of how males and females are typically behaving in certain situations. The second type is prescriptive stereotypes refers to beliefs on how males and females should behave. It signifies the notions of how members of a group should preferably be (Eagly & Karau, 2002) which creates the ideas and believes how men and women should behave.

Furthermore, the social roles of men and women, as defined by the society, women have identified as being responsible for the family in performing regular household work and being the main caretaker of the family. Matching

with this role, the tendency for women to play people-oriented roles specifically in the service professions is higher than competitive jobs or hard jobs where men are assigned to perform such duties (Lippa, Preston, & Penner, 2014). This opposite distribution on the social roles of men and women has made assumptions and perceptions on how men and women should behave, generate the concept 'gender stereotypes' (Koenig & Eagly, 2014) and lead to several conclusions on the behavior of men and women specifically in the labour market. Further, women are portrayed as more communal with feminist characteristics, more expressive and friendly, and warmth in relationships, are responsible, and more disciplined compared to men. Men are depicted as more competitive, active, and masculine compared to women (Abele & Wojciszke, 2014). This dual principle of social perception has laid down the basic direction of gender stereotypes.

Every so often, gender stereotypes are internalized by men and women, and that affects the behavior. Gender stereotypes are generalizations on men and women where how they are perceived by others and at the same time how men and women are perceived by their own selves with respect to stereotypes attributes (Hentschel, Heilman, & Peus, 2019). Koenig and Eagly, (2014) stressed that Social role theory originates from diverse distribution of men and women into their social roles at home and work. Hence, gender stereotyping may not only illustrate the actions of the decision-maker; it may be subjected to self-stereotyping behavior of the subject that we are focusing on, the women herself. There are extensive stereotypes that exist on groups of people/individuals or subjected to self-stereotyping too, as the individuals start to attribute these stereotypes for themselves. Hence, they themselves in a way consistent with the prevailing stereotypes that concern with the group.

Incongruity hypothesis and role incongruity theory of prejudice also act against female leaders (Eagly & Karau, 2002) highlighted that women are believed with less capabilities that required for senior positions compared to men. Women are normally perceived as kind, helpful, sympathetic, and care about children and family where men are usually perceived as influential, persuasive, independent, and aggressive. Further, it was highlighted that women

are more emotional than men, which has perceived as one of the strongest gender stereotypes that believed in Western countries (Brescoll, 2016). It emphasizes that people have preconceived beliefs and opinions on what men and women should do and how to behave and it affect the evaluations of women who involve in employments as who behave against feminine stereotypes and not worthy of getting organizational rewards and even penalties in socially and economically.

This discrimination on women emerged because of contradictions between the qualities expected from women from society and the required qualities for a successful leader at work. This social norm directs to perceive that women have less potential to be a leader where conventionally leadership capabilities are possessed by men than women. Extant literature constantly revealed that so-called contemporary societies perceived leadership traits are closely bear a resemblance to traits that are typically attributed to men. Attributes, attitudes, sensibility, and idiosyncrasies possessed by women are perceived as not matched compared to men that required to perform outstandingly in a senior position (Paris & Decker, 2012).

Though majority of research studies conducted in western and developed countries relating to gender stereotypes and glass ceiling issues (Koenig & Eagly, 2014) there are few studies in developing countries on the same issue, and highlighted gender stereotypes and attitudes towards women act as a main hurdle for climbing up the career ladder all over the world (Abdalla 2015; Napsari & Yukongdi 2015). Peus Braun and Knipfer (2015) highlighted the consequences of gender stereotypes act as the major barrier for women's career advancement.

6.4. Does Glass Ceiling Influence by Gender Stereotypes?

There is a long history of research studies in psychology and sociology that validate gender stereotypes exist in the labour market massively. This idea of gender stereotypes creates barriers to women for their career advancements and employment decisions on promotion (Heilman, 2012). Further, the existence of gender stereotypes has created self-limiting behaviors

of women (Hentschel et al., 2019). Thus, influence on gender stereotypes has led women themselves to believe that they are inexperienced for a job, the job is too risky for a woman, and particular jobs are not comfortable for a woman, which drag females to not take higher positions in the career ladder.

Stereotypes can allow people to make categorizations on what they perceived and observe and make projections over others. Nevertheless, stereotypes provoke people to make incorrect judgments and assessments of people who induce by the generalization of beliefs of social groups. Yet, these assessments may not correct and do not resemble the unique qualities of people where it ignores the distinctive characteristics of people that make them unique. These incorrect and contradictory judgments and assessments may be positively or negatively impact the performance expectations and work results of both men and women (Heilman, Manzi, & Braun, 2015).

Stereotypes regarding gender are exceptionally powerful and influential as it is an aspect of an individual where people easily noticed and remembered. Simply and commonly, it occurred since gender is always associated with stereotypic thinking. Thus, gender stereotypes are used not only for perceiving others, yet it can be attributed to one-self. This process of self-stereotyping affects individuals identities because of internalizing stereotypes characteristics (Wood & Eagly, 2015). Immediate environment and media extensively influence the younger generations and shape their attitudes and behaviors where they learn about gender stereotypes and behave in gender-appropriate ways. Undoubtedly, these socialization understandings continue to influence later in their lives, and gender stereotypic attitudes and self-internalization of gender stereotypes consistently evolved (Hentschel et al., 2019).

Gender stereotypes and self-internalization create dual negative effects on the working environment, which led to holding skillful, knowledgeable, and qualified individuals within the organization and ultimately resulting in ineffective individuals and organizations. Further, it is extensively acknowledged that women get less career advancement and educational opportunities, earn a lower wage, and recommend for fewer training and development opportunities compared to men. These have been attributed to gender stereotyping

as it has attributed that aggressiveness and toughness of men are not with women, and females tend to choose work outside of organizations to focus more on family responsibilities rather work responsibilities. Overcoming these barriers has not discussed considerably, and several issues are remaining unexplained and unresolved. Hence, women at workplace continually struggle with the inconsistencies of pay and job status, as well with stereotypes and other obstacles to ensure workplace equality (Remington, & Kitterlin-Lynch, 2018; Stephen, Isasc, George, & Dominic, 2014). Thus, it is evident that gender stereotypes have created a glass ceiling that limits career advancement opportunities for women, and that requires an intervention. Several studies have suggested strategies for career and leadership advancement of women that enables them to break the glass ceiling.

Traditional working environments require employees to work stipulated time-period, where that is perceived as rigid in the present scenario. Thus, offering flexibility at the workplace is implemented in contemporary organizations by ignoring traditional methods of the working environment. Flexibility has become a significant element to answer modifications that occur in the modern competitive business environment that required adaptation for arising challenges. Flexibility has also been identified as an essential factor for individual and organizational success, regardless of gender, where female leaders are more flexible rather male leaders (Remington & Kitterlin-Lynch, 2018). Thus, providing a flexible working environment for females make effective women leaders as they get the opportunity to balance their work and life since the society put the family responsibilities on women. As modern working environment requires flexibility rather than traditional working patterns, female leaders can be more successful; thus flexibility of female leaders pave the way to women for career advancement.

Participative leadership is becoming well known in today's work setting, as it involves the inclusion of subordinates in decision making. Hence, subordinates get the opportunity to ask questions, look for consultancy, and give opinions, and their voice is recognized before a decision is finalized at the workplace. Having participatory leadership in the workplace enhances organizational

and job performance, job satisfaction, organizational commitment, employee trust, and employee empowerment (Chan, 2019; Odoardi, Battistelli, Montani, & Peiró, 2019). Female leaders observed to be more participative in nature, and they exhibit a participative leadership style being collaborative, cooperative, and democratic than male leaders at the workplace (Remington, & Kitterlin-Lynch, 2018). Hence, a participative nature of women improves the possibilities of getting a career advancement rather than being non-participative.

Women are proactive in managing their careers and achieving promotions; rather, men and females are taking that proactive approach rather passive of merely not waiting to recognize their achievements to be recognized with promotions. This proactive approach is highly welcomed in this competitive working environment and accepted as a sign of a potential leader. Networking with people, developing sustainable relationships that enable career advancements are identified as proactive behavior, as well as giving priority to acquire educational and professional qualifications and experiences at work can enhance the possibilities of getting a promotion at work (Lyness & Thompson, 2000; Remington, & Kitterlin-Lynch, 2018).

A world as a whole, still gender stereotypes are existing despite modern working environmental policies and practices. The presence of this stereotyping has created an issue of the glass ceiling that decreases the opportunities for females to climb up the career ladder. Thus, it has created a gender gap in pay and promotions that lead to gender inequality. In doing so, organizations and governments have to focus on this matter and impose laws and policies that reduce the glass ceiling and glass cliff effects that create more opportunities for females to climb up in the career ladder.

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WINNET

CENTRE OF EXCELLENCE®

Winnet Centre of Excellence® (WCE®) is a platform created for the purpose of doing and promoting teaching, policy making and research on Gender, Innovation and Sustainable Development. WCE® operates through the international network of researchers from universities in Armenia, China, Estonia, Finland, Georgia, Latvia, Lithuania, Poland, Sri Lanka and Sweden. This initiative is possible thanks to the cooperation with the WINNET Sweden. Our activities were financed by the Swedish Institute under the project TP Winnet BSR (Thematic Partnership Winnet Baltic Sea Region, Winnet BSR, Swedish Institute: 2013 - 2016). WCE® has been established in November 2014 at the Faculty of Economics and Management, University of Szczecin by a decision of partners of the Thematic Partnership Winnet BSR. WCE® Coordinators are: dr Marta Hozer- Kocmiel and dr Sandra Misiak-Kwit, University of Szczecin.

The concept of the WCE® draws on a Winnet Model which combines theory and practice and is based on cooperation between public administration, policy and decision makers, business, non-governmental organizations and academia in order to improve social and economic situation of women at all levels (Quadruple Helix principle). So far, the Winnet model has been implemented through Winnet Women's Resource Centers (WRCs), a non profit womens movement and institution created in Sweden in the nineties. The WRCs have contributed to increase women`s participation on a broad and not segretated labor market, female entrepreneurship and innovation, including in the ICT sector, in crossborder co-operation and in rural development. Establishing the WCE® has strengthened Winnet organisations at local, regional, national and European levels providing support through policy-oriented research and recommendations.

Joint projects implemented by members of the Winnet Center of Excellence®:

- European Baltic Sea Region Forum for Gender Equality and Growth, 3.0 (2020-2021), financed by Swedish Institute, 01284/2020;
- Doing Gender for Sustainable Change in startups and innovation - boosting change!, IGG project, Innovation and Gender for Growth! (2017-2018), financed by Swedish Institute, SI 10241/2017. Overall objective is: Closing the Gender Gap within new business and to boost and to initiate a feministic foreign politics through activities within the area of Economic Empowerment in Business/Innovation and Development for Sustainable Growth;
- Winnet Eastern Partnership (2016 – 2017), Swedish Institute Baltic Sea Cooperation. The main objective is the implementation of the Winnet Model in the EAP countries;
- Thematic Partnership Winnet Baltic Sea Region, Winnet BSR, Swedish Institute (2013 - 2016) - One of the aim is to create the BSR Partnership Platform for Gender, Innovation and Sustainable Development;
- Going abroad, South Baltic Programme (2011 - 2012) - Project aimed to strengthen the position of female entrepreneurs with micro-businesses;
- FEM - Female Entrepreneurs Meetings in the Baltic Sea Region, Baltic Sea Region Interreg III B (August 2004 - July 2007) - The aim of FEM was to strengthen the structures that support women's entrepreneurship through co-operation and the exchange of knowledge and best practices;
- W.IN.NET Europe, Interreg IIIC (2006 - 2008) - The aim was to create WINNET Europe - the European Association of Women Resource Centres;
- Women In Net 8, WINNET8, Interreg IVC (2010 - 2011) - The objective was to contribute to regional growth by improving women's participation in the labour market, focusing on: the lack of women in innovation and technology, the lack of women in entrepreneurship.

More information about us and our activities can be found on the website: <http://wce.usz.edu.pl/>

If you would like to be a member or an associated partner of WCE® or have any question concerning our activities, please contact us. You can reach us under the addresses given below.

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IBSN 978-83-7867-823-6