Title: The benefits of considering gender in economic development

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Abstract: This chapter argues that gender equality and economic development are tightly intertwined, and that gender aspects should be an essential consideration for economic development. The chapter starts by developing a conceptual framework explaining how gender equality and economic development influence each other. In particular, the framework emphasizes the interaction between SDG 5 (gender equality), SDG 3 (good health and well-being) and SDG 4 (quality education). It then applies the developed framework to discuss how gender affects economic development in four broad domains with reference to the green economy. First, the chapter discusses the links between gender and economic development in employment and social protection, followed by unpaid work and the care economy. Second, the chapter discusses how we can bridge the gap between the green economy and gender inequality. Finally, the chapter points out that the post-COVID-19 recovery can be exploited as a window of opportunity to initiate a development model that encompasses gender inclusiveness and the green economy. The chapter concludes with recommendations for gender-sensitive programmes and policies that can be used by governments to fast-track economic development and growth, and to build inclusive and resilient societies.

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1. Introduction

This chapter argues that gender equality and economic development are tightly intertwined, and that gender aspects should be an essential consideration for economic policies, projects and programmes. Gender relations affect all aspects of human life, and achieving gender equality is important for reasons of equity, equality and efficiency. This chapter critically reviews the existing literature on the importance of considering gender in economic development, a relationship which is important to understand for both academics and policymakers. A growing literature shows that gender inequality is very costly for societies. According to a 2015 study, gender-based discrimination in formal and informal laws, social norms, and practices restricting women's rights and access to opportunities costs the global economy an estimated 12 trillion USD (McKinsey Global Institute, 2015). Additional research shows that violence against women imposes a cost to the global economy of 1.5 trillion USD, equivalent to 2% of the global gross GDP (Puri 2016).

While some have argued that gender equality will naturally follow economic development and growth, the existing evidence contradicts this line of thinking. Although many countries have achieved remarkable poverty reduction and growth trajectories, women's positions often have not improved. For instance, over the past twenty-five years India has experienced rapid economic growth, urbanization, declining fertility rates, and rising educational levels among women. However, women's labor force participation rate declined 25 percent at the national level from 1983-84 to 2011-12 (Lahoti and Swaminathan, 2016).

This chapter starts by outlining a conceptual framework which argues that gender equality *drives* economic development and growth via six main channels: (1) productivity and innovation; (2) corporate governance; (3) better serving female customers; (4) increased spending on household nutrients, health and housing; (5) children's wellbeing; and (6) education. The framework also discusses how these channels interact with women's inclusion in the green economy, and sustainable and inclusive growth more broadly. The conceptual framework is presented in section 2 of the chapter.

Section 3 applies the conceptual framework developed in section 2 to review the literature linking gender and economic development in four broad domains: (1) employment and social protection; (2) unpaid work and the care economy; (3) the green economy and gender inequality; and (4) COVID-19 as a window of opportunity for women in the green economy.

The discussion emphasizes how women's 'double burden' of paid and unpaid work limits women's economic opportunities and pay (both in the global South and in the global North), and concludes that gendered notions of women's roles centering around reproduction and care may be to blame.. The last part of the chapter focuses on the links between gender inequality and the green and brown economies, and points out that the post-COVID-19 recovery should be used as a window of opportunity to initiate a development model that encompasses gender inclusiveness in these domains. Section 4 offers concluding remarks.

Methodology

The chapter is based on desk review taking into consideration certain inclusion and exclusion criteria as depicted in Table 1 below.

Table 1 - inclusion and exclusion criteria for the analysis

Criteria	**Inclusion criteria**
Data sources	Reports, journal articles, grey literature
Research perspective	Gender equality and economic development are tightly intertwined, and that gender aspects should be an essential consideration for economic development.
Search terms	Green Economy, Gender equality, Economic development, Employment, Social protection, Unpaid work, Care economy, COVID-19

2. Conceptual framework

In this section, the chapter develops a conceptual framework explaining how gender equality and economic development influence each other. In particular, the framework emphasizes the interaction between SDG 5 (gender equality), SDG 3 (good health and well-being) and SDG 4 (quality education). In the subsequent sections, the chapter applies the developed framework to discuss how gender affects economic development in three broad domains with reference to the green economy.

Does economic growth lead to gender equality?

Do gender equality and economic development and transition go hand in hand? One group of scholars and policy makers has argued that as countries' incomes increase, gender equality will follow naturally (the idea that "a rising tide lifts all boats"). Greater advancement in technology and the associated evolution of labor markets will increase the bargaining power of women, while attitudinal changes will ensure that discrimination against women (in the workplace and elsewhere) is eradicated. As a result, policies targeted on economic growth only, rather than gender equality, should be emphasized.

However, several pieces of evidence suggest that the impact of economic growth on gender empowerment is less than clear-cut. First, even in developed countries today, women who are equally qualified continue to earn less than men at all levels of qualification (Olivetti and Petrongolo 2016). Motherhood is penalized equally harshly in both developed and developing countries. Recent research (Nizalova et al. 2016) estimates that the motherhood wage penalty (the difference in wages between mothers and women who have no children) is 33% in Germany, 19% in Ukraine, 10-15% in Russia and Hungary but 0% in Finland and Sweden. Second, sex ratios remain skewed in favor of boys in many countries, largely due to the availability of sex-selective abortion (see Guo et al. 2016 on China and India, and Brainerd 2013 for evidence on Armenia and Azerbaijan). Third, there is still a big gender gap in political participation. In 2017, women accounted for only 25.7% of MPs in national parliaments around the world (Inter-Parliamentary Union 2021). Finally, it may matter where exactly growth comes from. Growth driven by natural resources, such as oil or other minerals (as is the case in much of Central Asia) may reduce the number of women in the labor force, thus encouraging the development of institutions and laws which perpetuate the low status of women (Ross 2008).

The effect of gender equality on economic development and growth

Is it then possible that gender equality may actually drive development and growth? There are at least three reasons why this may be the case. First, gender inequality in education has been found to reduce annual per capita growth rates by about 0.4-0.9 percentage points, largely due to decreases in overall human capital (due to the selection of less able males rather than more able women), less investment and declining marginal returns to male education (Klasen 2002). Excluding women from education and the labor force may stifle innovation (particularly if women's and men's skills in some areas, such as research for example, can be regarded as substitutes). Higher female work force participation would also result in a more skilled labor force, in view of women's higher education levels (Elborgh-Woytek et al. 2013).

Second, gender diversity at the firm level can have a positive effect on productivity and overall economic growth. For instance, diverse groups are likely to have access to non-overlapping information, and exposure to different views can lead to creativity and innovation (Nikolova

2017). As Lagarde and Ostry (2018) point out, there is considerable microeconomic evidence that women and men bring different skills and perspectives to the workplace, such as attitudes towards risk and collaboration. Ostry et al. (2018) build a model to estimate the gains to GDP from reducing gender inequality around the world. They show that, for the bottom half of the countries in their sample in terms of gender inequality, closing the gender gap could increase GDP by an average of 35%. Four fifths of these gains come from adding workers to the labor force, and one fifth of the gains is due to the gender diversity effect on productivity.

In particular, gender-related barriers to employment are estimated to be equivalent to a 4% tax on female labor in the average country in Europe and Central Asia, but rising to the equivalent of a 53% tax rate on female labor in the average country in the Middle East and North Africa. For South Asia and East Asia and the Pacific, gender inequality is equivalent to effective tax rates on female labor of 32% and 11% respectively (Ostry et al. 2018). These figures are staggering and highlight the extreme inefficiency of shutting women out of the labor market.

Moreover, there is evidence of a positive impact of women's presence on boards and in senior management on companies' performance. Companies which employ female managers may be better suited at serving consumer markets dominated by women and more gender-diverse boards could enhance corporate governance (Elborgh-Woytek et al. 2013). In the public sector, women as policymakers prefer policies that better reflect their own priorities, including child health and family nutrition, as well as policies that increase their bargaining position within the household, improve their rights in case of divorce and raise their chances to access the labor market (Duflo 2012). Women's presence in parliament also decreases corruption (Jha and Sarangi 2018).

Third, women's empowerment may positively affect a variety of family outcomes. Women's education has been found to be positively correlated with child welfare (particularly child health), and research on the US has shown that giving women the right to vote decreased infant mortality (Miller 2008). Compared to income or assets in the hands of men, income or assets in the hands of women are associated with larger improvements in child health and larger expenditure shares of household nutrients, health and housing (Duflo 2012). Moreover, children who are better nourished and more educated are likely to be more productive adults. This link between women's empowerment and children's wellbeing is highly relevant for Goal 5 of the Sustainable Development Goals, namely 'Achieve gender equality and empower all women and girls.' Women's empowerment is an important aim by itself, but what these studies show is that it may also have positive and long-term spillover effects on children and families.

Figure 1 below summarizes schematically the linkages between gender equality and economic growth and development discussed in this section.

Figure 1: How gender equality increases economic development

The green economy and gender equality

Gender equality, women's economic empowerment, and inclusive green growth are all essential for achieving sustainable economic development and poverty alleviation in a world in which the current economic development model is ecologically unsustainable and inequitable (DCED, 2019). While the impacts of climate change have disproportionate effects on women, actions to address climate change are often agnostic to gender differences, and thus exclude women and perpetuate social injustice (Schulz, 2019). The Global Green Growth Institute (GGGI) sees the transition to green growth as an opportunity to accelerate gender equality and women's empowerment by leveraging women's roles in green growth and climate action as decision-makers, entrepreneurs, workers, and consumers (GGGI, n.d.). The relationship between gender equality, women's economic empowerment, and green growth is further set out in the 2030 UN Agenda for Sustainable Development, and is also established in other international policy frameworks, including the UNFCCC Gender Action Plan (see Box 1).

Box 1: Green Growth and Gender in International Policy Frameworks

The 2030 Agenda for Sustainable Development

"We affirm that green economy policies in the context of sustainable development and poverty eradication should:...Enhance the welfare of women...Continue efforts to strive for inclusive, equitable development approaches to overcome poverty and inequality...Mobilize the full potential and ensure the equal contribution of both women and men."

The United Nations Framework Convention on Climate Change (UNFCCC) Decision -/CP.23 Establishment of a Gender Action Plan

"Gender-responsive climate policy continues to require further strengthening in all activities concerning adaptation, mitigation and related means of implementation... Parties should, when taking action to address climate change, respect, promote and consider their respective obligations on human rights as well as gender equality...The Conference of the parties adopts the gender action plan... with a view to advancing towards the goal of mainstreaming a gender perspective into all elements of climate action."

The Rio Declaration principle 20

"Women have a vital role in environmental management and development. Their full participation is therefore essential to achieve sustainable development."

The Paris Agreement

"Parties should, when taking action to address climate change, respect, promote and consider...gender equality, empowerment of women and intergenerational equity".

The Sendai Framework for Disaster Risk Reduction 2015–2030

"More than 1.5 billion people have been affected by disasters.., with women, children and people in vulnerable situations disproportionately affected. Empowering women...to publicly lead and promote gender equitable and universally accessible response, recovery, rehabilitation and reconstruction approaches is key."

The Beijing Declaration and Platform Agenda

"Eradication of poverty based on sustained economic growth, social development, environmental protection and social justice requires the involvement of women in economic and social development, equal opportunities and the full and equal participation of women and men as agents and beneficiaries of people-centered sustainable development..."

Source: DCED, 2019

3. Discussion

This section applies the conceptual framework developed in section 2 to review the linkages between gender and economic development in the domains of (1) employment and social protection; (2) unpaid work and the care economy; and (3) the green economy.

3.1. Employment and social protection

Women comprise less than half of the global labor force, with 40% of women worldwide being in the labor force (Kochhar et al. 2017). According to Brussevich et al. (2018), women's participation in the labor market leads to enhanced productivity, economic growth, reduced income inequality, and increased economic resilience. However, women's involvement in economic activities does not necessarily drive inclusive growth, largely due to a persistent gendered ideology that continues to perpetuate gender inequality. Women can be subject to sexual harassment and discrimination at work (Elson and Pearson 1981; Corossacz 2018). Working women also often take on the lion's share of unpaid care work within their households, leading to a 'double burden' of paid and unpaid work which may potentially undermine their wellbeing and productivity (Ilkkaracan 2018).

Moreover, due to the burden of care responsibilities at home, women may refrain from working full-time or at all, thus receiving lower wages and fewer benefits compared to men over their lifetimes (Angelov et al. 2016). Women tend to be paid less than men for doing the same work (Elson and Pearson 1981; Wilson 2015), while at the same time taking a disproportionate amount of precarious and unpaid work, such as domestic work (Salardi 2016; Corossacz 2018). The persistent overrepresentation of women in the informal sector, especially in the Global South, is an issue since those employed in the informal sector tend to have little or no access to social security, such as medical care, sickness and unemployment benefits, or family and maternity benefits (Majumdar and Borbora 2013). While increasing female participation in the labor force is necessary, it is not a sufficient condition for inclusive growth. As long as the fundamental aspects of gendered notions about women's capabilities and devaluation of women's work remain unaddressed, inclusive growth will not be achieved.

Discrimination and exploitation

While the incorporation of women in the labor market is often deemed beneficial for the economy by neoliberal feminists, gender discrimination and exploitation of women's labor persists (Elson and Pearson 1981; Wilson 2015). For example, under the creation of the New International Division of Labour (NIDL), less developed economies in the Global South were increasingly integrated into the world economy, leading to the creation of employment opportunities, especially in the garment sector. Large fashion industries based in the Global North searched for cheap labor (largely provided by women) and outsourced manufacturing to developing countries, such as Bangladesh (Dey and Basak 2017). The export-oriented, ready-made garment (RMG) industry is especially critical for the economy of Bangladesh and other developing countries, or the so-called "sweatshop economies." Women working in this sector come from impoverished, rural backgrounds, and are not involved in trade unions to appeal for better wages or working conditions (Siddiqi 2009; Dey and Basak 2017).. In addition, women's work is often categorized as unskilled or semi-skilled while the similar kind of work undertaken by men is considered to be skilled, meaning that women often receive lower wages than men (Elson and Pearson 1981; Wilson 2015).

The overrepresentation of women in the informal economy

The informal sector has been on the rise in part due to the "gig economy," in which workers are able to work flexibly using digital platforms. One of the upsides of such an arrangement is that flexibility around work schedules may allow women to balance paid and care work (Milkman et al. 2020). However, "non-standard" employment often does not provide fair compensation, union protection, personal and family benefits, or job stability (Young 2010, 74). While the Indian Ministry of Labour and Employment recognised gig workers in 2019, due to significant barriers faced by women when it comes to accessing digital education or skills training, the gig economy in India remains dominated by men (Kasliwal, 2020).

Care and domestic work are also part of the informal sector, and are disproportionately undertaken by women, especially women of color (Salardi 2016; Corossacz 2018). For example, while Brazil has seen a substantial increase in its middle class (Neri 2010), gender inequality remains entrenched. More than 90% of Brazilian domestic workers are women, half of whom are of African descent (Corossacz 2018). According to Corossacz (2018), the power relationship between white middle-class men and female Afro-Brazilian domestic workers remains profoundly unbalanced due to the intersection of sexism and racism by the former towards the latter. The double discrimination based on gender and race often leads Afro-Brazilian women to have little or no choice but to go into the informal sector, specializing in precarious, domestic work. In a study by Gonçalves (2010), a black, female interviewee stated that "unfortunately, paid domestic work is a door into the work market for black women in our country" (p.63). Moreover, female domestic workers can be subject to gender-based violence perpetrated by their employers, sons, husbands, relatives, or friends (Gonçalves 2010; Corossacz 2018).

The invisibility and undervaluation of (under) paid female domestic labor also relates to global inequality and migration, since many low-skilled immigrant women end up in domestic positions (Williams, 2010). A qualitative study conducted in Spain, one of the major countries for importing migrant work, documented poor working conditions, low wages, and health hazards for female immigrant workers from countries such as Colombia, Morocco, Romani, and Ecuador (Ahonen et al 2009). Female migrant workers remain vulnerable to labor exploitation largely due to their immigration status (especially those who are undocumented), a lack of legal regulation on the sector, language barriers, and the non-transferability of their education and vocational training (Ahonen et al 2009; Clíodhna 2013).

Social protection as a pillar of inclusive growth and gender equality

Social spending is an investment rather than charity, and it contributes directly to gender equality and empowerment. Lack of social protection stifles women's labor force participation, which is critical for welfare and prosperity. Gender gaps in labor force participation perpetuate gender inequalities in social protection. Maternity leave and protection for those who are disabled are some examples of social protection. There is a close relationship between informality and lack of social protection (UNICEF 2021).

In order to achieve gender equality in social protection, it is crucial to treat women as individual right-bearers, independent of their relationship to a male breadwinner, and to prioritize access to universal social services based on an assessment of the needs of care givers and receivers. Additionally, policy solutions such as universal child allowances, reform of pension and health systems, and the use of community work programs as a tool for gender-equitable social protection floors must be implemented. Finally, it is essential to consider women's needs and constraints in the design and implementation of targeted social protection programs to ensure substantive equality for all (UNICEF 2021)..

3.2 Unpaid work and the care economy

The care economy encompasses the production and consumption of goods and services necessary for the physical, social, and emotional needs of care-dependent individuals, including children, elderly individuals, disabled individuals, and the ill, as well as prime working age healthy adults including self-care. Studies show that women take on the lion's share of unpaid care work throughout the world, which limits their economic activities and economic development more broadly (Addati et al 2018; Ilkkaracan 2018). Issues surrounding the ideologically-driven, gendered division of labor that permeates many societies tend to be overlooked and inadequately addressed in economic development programming. This subsection discusses the invisibility and precarity of women's care and unpaid work, and how women's responsibilities in the household affect their participation in the labor market. The section also discusses policy solutions to address women's unpaid work burden and how such policies can complement global efforts towards achieving inclusive growth.

Persistence of the glass ceiling for women attributed to women's double burden

Even in countries with highly inclusive economies, persistent gender pay gaps remain. A study on Sweden conducted by Angelov et al. (2016) shows that, despite the country's high female labor force participation, parental leave for both men and women, and social protection agendas, there remains a glass ceiling for female workers. The authors attribute the phenomenon to women's heavier involvement in child rearing compared to their male partners. Moreover, women tend to face barriers when it comes to getting promotion or pay rises due to the gendered preconceptions about their capabilities and gender-biased views towards their performance (Ridgeway and Correll 2004).

The care economy ensures that individuals function at a socially acceptable level of capability, comfort, and safety. However, there are significant gender inequalities when it comes to time spent on unpaid work around the world. Even when men participate in unpaid/care work, they tend to spend significantly less time on domestic chores such as food preparation and cleaning (Alonso et al. 2019). According to UN Women (2018), close to half of productive work time globally consists of unpaid work time, and the allocation of time between paid and unpaid work is subject to gross gender imbalances, with women working more than men when paid and unpaid work are combined. Additionally, women's unpaid work time is substantially higher than men's, regardless of the country.

The gendered division of labor

Ideologically driven gendered perceptions often intersect with socio-economic statuses, household structures and societal institutions. Women in many countries are prohibited from working and confined to the private spheres (Kochhar et al. 2017). Women's access to property– such as land and other productive assets – is critical for entrepreneurship, business opportunities, and overall economic growth. Women's property rights are restricted by law in some countries, including those in sub-Saharan Africa (Joireman 2008). Such a distinctive gendered division of labor is largely based on the primitive notion of men as productive, and women as reproductive (Rose 1986). However, patriarchal gender roles undermine women's socio-economic status and entrench gender inequality.

Gender discrimination, exploitation, and inequality of opportunities for women can have negative implications for economies by undermining productivity and growth (Kochhar et al 2017). Above all, gender inequality reduces women's material and overall wellbeing. Appropriate policy and programme interventions should take into account the intertwined issues of women's labor and sexual exploitation, the undervaluation of women's work, women's access to fairly paid employment and social protection, property rights, and the burden on women of combining paid, home and reproductive work.

The impact of unpaid care work on women's economic empowerment

The care economy has multiple functions, including reproducing labor on a daily and inter-generational basis, and strengthening social ties and cohesion, providing a viable social context for the functioning of markets. A well-functioning care economy is crucial to both economic and social sustainability. Unpaid work is an issue of inclusive growth and human development, as it relates to gender equality and other important economic policy issues, including poverty alleviation, human capital enhancement, productivity, job generation and unemployment reduction, the care crisis, and sustainable growth. According to Alonso et al. (2019), the value of unpaid work globally varies from 10% to 60% of GDP.

The unequal burden of unpaid care work on women has a significant impact on their economic empowerment. Women often experience a double burden due to unpaid care work, which results in "time poverty" that limits their prospects for better jobs, longer hours of paid work, or leisure time (Chopra, 2015). This phenomenon forces women into home-based or low-skilled jobs, and working from home while simultaneously carrying out household chores further reducing their productivity (Chopra, 2015). Such gendered roles are a root cause of gender inequalities in the labor market, resulting in occupational and vertical gender segregation, a gender employment gap, clustering of women in a few "feminine" job categories, and a gender pay gap (UN Women, 2018).

The gendered division of labor that results from unpaid care work perpetuates gender stereotypes and biases, with women being perceived as less capable and competent than men due to their domestic responsibilities. Such perceptions often lead to barriers for women in terms of getting promotions or pay rises, further entrenching gender inequalities in the labor market (UN Women, 2018). Furthermore, women's labor market participation is largely shaped by their domestic care responsibilities, and in the absence of care leave legislation and affordable quality care services, many women end up having to quit their jobs upon childbirth or emerging care needs of sick or elderly family members (UN Women, 2018).

Given that unpaid care work, such as child care, elderly care, and household work, is primarily performed by women, it limits their economic opportunities. Women's participation in the labor force is negatively impacted by unpaid care work, resulting in lower wages, limited access to education and training, and fewer opportunities for career advancement (Folbre, 2018). Therefore, recognizing the importance of unpaid care work is crucial to promoting economic development and achieving gender equality and women's economic empowerment. This recognition can lead to more gender-equitable policies and practices in the workplace and society as a whole (Folbre, 2018).

Heteronormativity in the analysis of gender and economic development

While the gendered division of labor is indeed a significant cause of gender inequality, exclusive focus on women would risk normalizing women as caregivers (Nelson 2016), as well as the binarity of households consisting of women and men (Jolly 2011). Non-traditional households, such as single-parent households, are largely overlooked in the current mainstream analysis of the care economy and development programming (Jolly 2011). For instance, in development programming practices, female-headed households are often considered poorer than male-headed households, since men are assumed to be the breadwinners (Jolly 2011). As Jolly (2011) argues, female-headed households may consist of single women who choose not to engage in relationships with men. In addition, men who undertake household work either voluntarily or involuntarily (such as men in single-parent households) are often rendered invisible (Nelson 2016). Excluding non-traditional households from analysis and policy making precludes us from understanding how gender inequality and the gendered division of labor can be addressed fully.

The 3R strategy as a framework for policy interventions on unpaid work and the care Economy

The 3R strategy involves recognizing, reducing, and redistributing unpaid work. This strategy calls for policy actions that go beyond increasing the visibility of unpaid work as a policy issue to include policies that alleviate the care burden and divide it between men and women, families, and public/market services more equitably (UN Women 2018).

Perceptions of women's role in society influence the success of the 3R Strategy in a particular country. For example, Alonso et al. (2019) find that values and perceptions matter for redistributing unpaid work between men and women. Societies that place a lower value on gender equality in jobs, politics, and education, conditional on the level of economic development, have less unevenly distributed unpaid work. Male unpaid work is also higher in societies where more people consider equal rights key to democracy or disagree with statements such as "men make better business executives than women do," "men make better political leaders than women do," or "a woman has to have children to be fulfilled."

Several policy intervention areas are identified to address the recognition, reduction, and redistribution of unpaid work, including investing in social care infrastructure, investing in time-saving (rural) physical infrastructure, work-life balance policies, and labor market regulation for gender equality. Supporting macroeconomic (fiscal) policies is also crucial (UN Women, 2018).

3.3 Green economy and gender inequality - bridging the gap

As discussed in the previous sub-sections, women continue to be 'invisible' and in certain countries and contexts, rarely get to exercise their human rights, especially those in the economic area. Therefore, a much-needed attention on sustainable industrialisation and gender equity/equality has been placed in the 2030 Agenda for Sustainable Development, which argues that gender equality and environmental sustainability are inter-connected. In other words, both women and the environment are undervalued in our global systems while both are essential if we are to see transitions to inclusive sustainable economies (McLean, 2019). There is extensive evidence that women's empowerment leads to economic growth and inclusive sustainable development (World Bank, 2014, UN Women, 2014). For example, a survey of 21,980 public companies around the world shows that companies where women filled 30 percent of leadership roles had a six percent higher net profit margin (Adamy, 2016). Implementation of the sustainable development goals requires inter-connected action and coordination among various stakeholders rather than working in silos. While the inter-relatedness between the green economy and women's economic empowerment is obvious, it needs further elaboration. Although data on gender in the green economy exists at the global level, gender-disaggregated data at the national and provincial levels is critically missing, particularly in low- and middle-income countries.

The literature suggests that the obstacles limiting women's participation in the green and brown economy are similar. Some of the key limiting factors influencing women's participation in green economic activities are the prevailing gender pay gap, the unpaid care burden, lack of education and skills development (particularly in STEM fields), lack of financial literacy and access to information, discrimination and harassment, and male dominance in certain industries (energy and emerging green technologies). Women are more likely to rely on agriculture, forestry and fisheries for income, yet they have limited ownership, access to and control over land and other resources. While women produce over half of the world's food, they own less than 15% of the land. Rural and indigenous women are especially marginalized. The scarcity of natural resources and climate disasters, which are increasingly common in the global South, further exacerbate the care burden and increase violence against women (McLean, 2020). However, it cannot be denied that women tend to have smaller ecological footprints than men and engage in more sustainable behaviors. Women and men respond to and approach environmental issues differently, and have different levels of access and control of natural resources. Women are powerful agents of change and can play a crucial role in the greening of economies (McLean, 2019).

The green economy offers, through the creation of green jobs, multiple windows of opportunities to change the existing situation of women's participation in the labor market. It provides a potential conceptual shift and a starting point to value women's contributions. Failure to do so will result in the perpetuation of existing gender inequalities, reversing the achievement of sustainable development goals and poverty eradication. Engendering the green economy is crucial and has immense benefits for economic efficiency, equity and environmental sustainability. This allows for targeted actions, innovative solutions, increased flexibility, improved environmental management, effective investment, equitable distribution of resources, empowerment and poverty alleviation.

Women ars key actors for environmental protection possess knowledge, capacities, and capabilities to drive solutions in the interface of sustainability and resource scarcity. Women are therefore critical agents of change and their participation in the green industry and contribution to the green economy is important for achieving equitable environmental sustainability. Social, environmental and economic considerations can jointly lead to inclusive green growth pathways to undertake ambitious climate action by integrating gender equality and pro-poor approaches (Schulz, 2019). In many developing countries, though unrecognized and undervalued, women as forest stewards, farmers, natural resource managers and entrepreneurs already engage in green economic activities. For example, in India women are managing small green businesses based on forest and agricultural products allowing them to participate in the workforce both as laborers and entrepreneurs (Jadhav 2009). While there are concerns and apprehensions that the emerging job opportunities in key green industries which tend to be male-dominated, there are opportunities to strategise pathways for both women and men to learn new skills for green job opportunities. Box 2 below summarizes new research on the economic empowerment of women in the green industry in Cambodia, Peru, Senegal and South Africa.

Box 2: Empirical evidence from a study on economic empowerment of women in green industry from 4 countries (Cambodia, Peru, Senegal, South Africa) (UNIDO, 2021)

There is currently limited evidence on women's empowerment and involvement in the green industry. This is a problem given the existing gender inequalities in entrepreneurial roles in green industry that are expressed both overtly and covertly in discriminatory practices. However, **more women are becoming or aspiring to become entrepreneurs in the green industry than in conventional industries and there is a strong perception that there are more opportunities for women to progress on an equal playing field in the green industry.**

The women entrepreneurs interviewed in the four countries reported similar barriers to **starting a green business,** the main ones being:

- The high costs associated with business startup.
- Unavailability of technology and lack of awareness about starting a business.
- There is no clear-cut definition of "green industry" (what makes a business green and what does not).

- Due to lower production costs, products manufactured by “conventional industries” are often less expensive than those produced by green industries, putting green industry products at a disadvantage.
- There is a lack of incentives for businesses operating in green industries.

While there are policies on women’s economic empowerment and climate change adaptation, there is a general lack of synergy between the two, with a dearth of gender responsive green industrial policies. The study found that across countries, there were organizations and institutions working for women entrepreneurs, but not specifically within the green industry. This could be attributed to the fact that the green industry is new and not yet well defined across countries.

3.4 COVID 19 impacts and windows of opportunity for women in the green economy

As discussed earlier in this chapter, more women than men are involved in the informal sector in the global South, and informal activities have been disproportionately affected by lockdown measures. Moreover, the COVID-19 crisis has been not only an economic crisis, but also a health and social one. COVID-19 has had major impacts on family relations, due to increased housework and childcare due to the closing of schools and nurseries. Many women have been struggling to balance their professional and personal lives, and women working in the informal sector (for instance, domestic workers) are particularly vulnerable (UNEP and UN Women, n.d.). For example, while the number of COVID-19 cases in Cambodia is relatively small as compared to other neighboring countries (such as Indonesia, Malaysia, Philippines, and Thailand), Cambodia’s tourism, garment/footwear, and construction sectors have been heavily affected due to declining global demand. The garment, textile and footwear (GTF) sector employs more than 750,000 workers, most of whom are internal women migrants from remote provinces (as cited in UNIDO 2021). Additionally, women are among the worst affected by the worsening climate crisis. Even so, women barely participate to voice their opinion in shaping and evolving the response to the climate and COVID-19 crises. As gender is gradually becoming a significant factor in climate change mitigation and policies, it is critical to learn from global best practices and strategies and develop a robust framework for women in the green economy.

Before the COVID-19 pandemic, the Asia and the Pacific region was seen as a leader in the creation of green jobs supported through various investment instruments, stimulus packages and policy reforms aligned with the Sustainable Development Goals (SDGs) and the pillars of the green economy. Efforts were made to encourage and support women’s participation and contribution in parts of the green industry with historically limited women’s representation.

However, due to a pre-existing gender imbalance, there is a possibility that investments in the green economy may not necessarily result in women's equal access to green jobs, nor provide the resources that would position them effectively for opportunities in the green industry. The COVID-19 pandemic has exposed many fragilities in overall economic development, thus exacerbating existing gender inequalities, and making the plight of the poor and marginalized more visible. The pandemic also should entail rethinking and redesigning approaches for systemic change. There are growing calls for using the crisis to design appropriate strategies and build more inclusive, sustainable and low-carbon circular economies. Despite its challenges, the COVID-19 crisis also offers a unique opportunity. Prioritizing women and economic recovery along more equitable lines is not just morally right, it is also economically practical. Women have long been seen as critical agents of post-crisis recovery and investing in gender equality has the potential to stimulate the economy and reverse losses to global wealth. The World Economic Forum is highlighting the unique window opportunity for the "Great Reset" of our economies and societies (UNEP, n.d.). Box 2 below summarizes some of the proposed mitigation measures that can be adapted to spearhead the green economy, achieve gender equality, and address the COVID-19 crisis.

Box 3

Some mitigation measures that can be adapted for the green industry (CARE, 2020):

1. Collect and ensure the availability of sex- and age-disaggregated data, as well as data and information based on disabilities and at-risk groups.
2. Ensure information, messaging and community outreach on COVID-19 is inclusive and accessible to all, and does not reinforce harmful gender stereotypes.
3. Develop mitigation strategies that specifically target the economic impact of the outbreak on women and build women's financial resilience
4. Ensure women with diverse backgrounds and from different socio-economic strata are given opportunities to meaningfully engage in structures and processes established for COVID-19.
5. Prioritize and strengthen services for the prevention of, and response to, GBV and sexual and reproductive health services in communities affected by COVID-19, with an emphasis on mitigating barriers identified for specific vulnerable groups.
6. Prioritize mental health and psychosocial support services in communities.

Pandemic-related economic measures can be an avenue to invest in the structural transformations and technological innovations needed for sustainable development. Apart from providing economic opportunities in the near term, such improvements are essential to enhance the overall resilience of societies. Greening recovery measures can provide countries with opportunities to “build back better”, combining economic growth and achieving environmental goals (OECD 2020).

4. Conclusion

This chapter argues that gender equality is an indispensable part of economic development and growth, and that women’s role in the green economy is essential for creating resilient and inclusive economies. The chapter reviews the literature linking gender and economic development in four broad domains: (1) employment and social protection; (2) unpaid work and the care economy; (3) the green economy and gender inequality; and (4) COVID-19 as a window of opportunity for women in the green economy.

What are some of the policies that can help achieve gender equality in the post-COVID -19 green recovery? Providing women with employment opportunities alone will contribute to their empowerment only marginally, and instead comprehensive policies addressing educational, socio-cultural, and legal aspects are needed to achieve more gender equality. Otherwise, women’s increased employment will come at the cost of women’s leisure time as they will have to shoulder unpaid childcare and household duties in addition to their newly gained salaried work. Changing “traditional” gender roles and attitudes towards women; lacking childcare facilities; and persisting inequalities in the legal system should also feature high on the agenda (Nikolova and Polansky 2022).

Policies which encourage women to combine childcare with work, such as shared parental leave (following the Scandinavian example) or flexible working policies, may be particularly useful. Education is an important tool for promoting gender diversity, employment and business ownership. Many of the future opportunities for women in the green economy are likely to arise in STEM (science, technology, engineering and mathematics) areas. Women are still under-represented in these subjects in secondary and tertiary education, so tapping into the unexplored female potential is essential (Nikolova 2017). Equal access to specialized education will also ensure that women are able to utilize their skills across a variety of sectors.

In addition, cultural biases against women’s role in society and the economy must be changed. Attitudes are unlikely to be changed overnight, as cultural formation is a long-term process. Companies, entrepreneurial associations, civil society and governments have a responsibility for doing so via awareness-raising, training programmes, networking and promoting female role models. Lastly, the legal system ought to be reformed as to mandate equal remuneration for work of equal value as well as non-discrimination based on gender in hiring (Nikolova and Polansky 2022).

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