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# The Gender Dimensions of Global Value Chains

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# **TABLE OF CONTENTS**

LIST	T OF TABLES	iv
LIST	T OF ABBREVIATIONS	V
EXE	CUTIVE SUMMARY	vi
1.	INTRODUCTION	1
2.	GLOBAL VALUE CHAINS AND SUSTAINABLE DEVELOPMENT	3
3.	GLOBAL VALUE CHAINS AS GENDERED STRUCTURES	6
4.	GENDERED OPPORTUNITIES AND CHALLENGES IN GLOBAL VALUE CHAINS	10
5.	POLICIES FOR GENDER EQUALITY AND UPGRADING IN GLOBAL VALUE CHAINS	17
REF	ERENCES	22

# **LIST OF TABLES**

Table 1. Potential Indicators to Measure Women's Participation in GVCs

# LIST OF ABBREVIATIONS

CSR corporate social responsibility

EPZ export processing zone
ETI Ethical Trading Initiative
GDP gross domestic product

GVC global value chain

ICT information and communications technology

MDG Millennium Development Goal NGO non-governmental organisation SDG Sustainable Development Goal

TNC transnational corporation

TVET technical vocational education and training

#### **EXECUTIVE SUMMARY**

This paper seeks to integrate gender into the global value chain (GVC) framework, to assess the gender dimensions of integration and economic and social upgrading in GVCs, and to offer GVC-related policy recommendations that support economic and social development.

Policymakers are increasingly turning to GVCs as a means of driving development, including generating employment and raising incomes. Access to and benefits from participation in GVCs are closely related to gender issues. The opportunities associated with GVCs differ for men and women as a result of gender-based segregation and constraints that exist to different degrees in all societies. Not seeing these inequalities is problematic from a gender equality perspective and can hinder the broader effectiveness of trade and development policies. Taking gender issues into account and addressing them is critical to harness the potential for GVCs to contribute to both sustainable economic and social goals.

The prominent role female workers play in many export-oriented industries integrated in GVCs often leads to claims that GVC participation results in positive development benefits for women in developing countries. But overall female employment share says nothing about the nature and quality of the work, the implications of how women and men participate in chains, and what this means for the type of integration into GVCs and economic and social upgrading prospects. An increase in employment opportunities for women often contributes to female empowerment, but this does not necessarily lead to reduced inequalities, such as gender segregation in types of occupations and activities, gender gaps in terms of wages and working conditions, and gender-specific constraints in access to productive resources, infrastructure, and services. The case literature reviewed in the paper shows that such gender-specific dynamics and outcomes exist in GVCs and are an important additional dimension of power relationships that span the local, national, and global level.

Policies have to take these issues into account to ensure that both men and women can access GVCs, improve their positions, and gain from upgrading.

First, as a basis for policy interventions, a gendered GVC analysis is essential as this improves understanding of the roles men and women play in these chains, how access to and exclusion from particular activities differ by gender, and the gender-intensified constraints and opportunities in GVCs.

Second, trade-related policies should mainstream gender aspects. Leveraging multilateral trade interventions, such as Aid for Trade, is particularly effective to help countries mainstream gender issues into trade support through information sharing, capacity building, and targeting aid programmes at areas where women are concentrated and/or face particular challenges.

Third, actions by all GVC actors, including governments, lead firms, industry associations, trade unions, and NGOs should be leveraged. Particularly, lead firms can play a pivotal role, as their production and sourcing policies may reinforce gender issues. These firms can drive change by including a gender lens to their employment, training, sourcing, and corporate social responsibility policies, as well as supporting their suppliers to adopt gender-sensitive policies.

Fourth, complementary policies focusing on overcoming gender-based segregation and constraints embedded in laws or in socially constructed gender norms need to be aligned with trade-related policies. Most important are improving access to information and networks for women; increasing access to training, as well as finance, and productive resources for women; and reducing the burden of reproductive work on women.

#### 1. INTRODUCTION

The global economy is increasingly structured around GVCs which account for a rising share of international trade, global GDP and employment. Production in many sectors has become fragmented across multiple countries that link firms, workers and consumers around the world. No longer are products simply made in one country and shipped to another for sale. Indeed, products often go through many stages, traversing several borders and adding components and value before they reach their final markets. It is imperative for effective trade, competitiveness and broader sustainable development polices to take GVCs as the overwhelming reality of globalisation.

Policy makers are increasingly turning to integration and upgrading in GVCs as a means of driving development, including generating employment and raising incomes (OECD 2012). With statistics indicating high levels of female employment in many GVCs, this integration is also being seen as a way to reduce poverty and support gender equality through incorporating women into the workforce. It is thus crucial from a policy perspective concerned with sustainable development to understand GVCs and their dynamics, possibilities and challenges in order to access and increase the benefits of international trade integration, particularly for developing countries.

In the context of the organisation of trade around GVCs, and the new development commitment to ensuring gender equity agreed upon in the United Nations Sustainable Development Goals (SDGs), this paper seeks to integrate gender into the GVC framework and to assess the gender dimensions of integration and economic and social upgrading in GVCs. In doing so, it aims to contribute to policymakers' understanding of key gender dimensions of GVC participation and offers recommendations to improve the effectiveness of trade and export promotion policies that support both economic growth and social development. The paper will also focus on policy suggestions to ensure that women and men can access GVCs, improve their positions and gain from upgrading processes. GVC and policy illustrations will be provided from different sectors with a focus on horticulture, apparel, electronics, call centers and tourism.

The recently adopted SDGs once again illustrate global commitment to development encompasses both economic and social dimensions while recognizing that these dimensions are highly intertwined and can reinforce or contradict each other. Hence, it is no longer enough to highlight the long-term impact of economic development on social improvements, but it has become crucial to directly link the economic and social dimensions in development plans and policies. This recognition that both economic and social objectives have to be jointly addressed and understood has likewise been seen in recent GVC research which has widened the concept of upgrading to include social issues. Apart from a focus on economic upgrading (i.e. firms, producers or countries moving to higher value activities in GVCs), social upgrading, understood as enhancing conditions and rights of workers in GVCs, has been brought to the forefront of GVC analysis in recent years. Research findings show that GVC integration and economic upgrading can but does not necessarily lead to positive social outcomes (Barrientos et al 2011; Milberg & Winkler 2013; Rossi 2013). While GVCs often provide opportunities for workers, producers and entrepreneurs in developing countries to increase sales, exports and wages, learn new skills and technologies, and gain exposure to successful business practices, they are also often based on low value added activities and low waged workers with problematic working conditions (ILO 2015).

In order to understand how GVCs can contribute to SDGs, it is crucial to view GVCs through a gender lens. Access to and benefits from GVC participation, in particular, are closely related to gender-specific issues. Despite important similar challenges that female and male entrepreneurs, producers and workers face, there are gender-specific differences related to gender-based inequalities that exist to different degrees in all societies. Not seeing these gender issues is not just problematic from a gender equality

perspective but also from a broader social and economic development perspective as they may hinder the broader effectiveness of development policies. While gender equality is an end in itself and a matter of social justice (Fontana 2014), it is also a means to achieve poverty reduction, economic growth and export expansion. Gender blindness can lead to large resources being ploughed into policies aimed at raising exports and competitiveness — without success, as the very women involved and their gender-based constraints are not adequately seen and addressed (Barrientos 2014).

This dual role for gender equality is embraced by the SDGs. In contrast to the Millennium Development Goals (MDGs) where gender equality focused mostly on education and agency of women and not on obstacles women face as economic agents (Goal 3), the SDGs focus more on access to productive resources as a precondition for ensuring gender equality, achieving productive employment and fighting poverty. Specifically the SDGs include targets on ensuring that women and men have equal access to economic resources, basic services, property and inheritance, technology, financial services and markets as a means to achieve gender equality and fight poverty (UNCTAD 2015). Seeing women as economic agents and understanding their specific constraints is crucial to ensure that the benefits of integration into GVCs are reaped by women and the economy more broadly. In this way, trade can be used as an enabler of sustainable socio-economic development as envisaged in the SDGs.

The prominent role female workers play in many export-oriented industries integrated in GVCs — as high as 80 percent of workers in some sectors

such as apparel or horticulture — shows that participation in GVCs has important impacts on women and gender relations. Often this leads to claims that GVC participation results in positive development benefits for women in developing countries. However, this is based on overall female employment share without examining the nature and quality of the work, the implications of how women and men participate in chains and what this means for the type of integration into GVCs and economic and social upgrading prospects. An increase in employment opportunities for women is important, and often contributes considerably to female empowerment, but this does not necessarily lead to reduced gender inequalities such as gender segregation in types of occupations and activities, gender gaps in terms of wages and working conditions, and gender-specific constraints in access to productive resources, infrastructure and services. Overcoming these challenges is essential to harness the potential for GVCs to contribute to both economic and social goals, including gender equality. A more holistic approach to integrating gender into the GVC framework is hence required to identify key issues, opportunities and challenges for gender equality and socio-economic development.

This paper is structured in four sections: Section 2 gives an overview of GVCs and sustainable development; Section 3 discusses GVCs as gendered structures with important gender dimensions and outcomes; Section 4 identifies and analyses key issues, opportunities and challenges related to gender and integration and upgrading in GVCs; finally, section 5 concludes with policy interventions for supporting upgrading, gender equality and socio-economic development in GVCs.

# 2. GLOBAL VALUE CHAINS AND SUSTAINABLE DEVELOPMENT

The global economy, particularly the organisation of global production and international trade, has changed significantly in the last three decades of globalization. The contemporary economy is increasingly structured around GVCs where transnational corporations (TNCs) break up the production process in different parts and relocate them on a global scale. It is estimated that between 55-80 percent of world trade now passes through GVCs (OECD & WTO 2013; UNCTAD 2013). Changes in communications, transportation, technology and most importantly government policies (trade liberalisation and shift from importsubstitution to export-oriented development strategies) and corporate strategies (focus on core competencies and vertical disintegration) have led to a significant change in industrial organisation. While no longer directly engaged in all operations, these TNCs have maintained control of production as global buyers and coordinators of GVCs. Such global production arrangements can be found in sectors as diverse as apparel, footwear, vegetables, fruits, beverages, flowers, electronics, automobiles, tourism and business service outsourcing. GVC analysis explores how the linkages between the production, distribution and consumption of these products are globally interconnected and how lead firms control or govern the terms on which different firms participate and upgrade within these chains (Gereffi 1994; Kaplinsky & Morris 2001).

These transformations in production have crucial implications in terms of global trade and employment as well as how developing country firms, producers and workers are integrated in the global economy. The extension of GVCs have often provided a stepping stone for developing country firms to integrate into the global economy and contributed to the significant increase in productive capacities in developing countries in the last three decades. In manufacturing, for example, this can be seen in the increasing share of developing countries in world manufacturing exports. It rose constantly from around 5 percent at the end of

the 1980s to almost 35 percent in 2014. Similar shifts have occurred in the agricultural sector; Latin American countries, Chile and Peru, now rank amongst the leading global exporters of fruits and vegetables (UNComtrade 2016). Participation in GVCs can facilitate access to external and diversified markets, economies of scale and scope, technological learning and knowledge transfer.

However, integration into GVCs can also lock firms and countries in low value added activities relying on static competitive advantages in terms of low production (often labour) costs without long lasting benefits for learning and development. For example, firms and countries can remain integrated as assembly production sites fulfilling simple labour-intensive tasks where competition is very high. This has occurred in the apparel export sectors in Sub-Saharan African, Central and Eastern European and Central American countries (Bair & Gereffi 2003; Morris et al 2016; Pickles et al 2006). In the electronics sector, in both Latin America and Central and Eastern Europe contract assemblers operate in "enclaves" without creating linkages to the wider economy (Dussel Peters, 2008; Gallagher & Zarsky 2007; Plank & Staritz 2013), The number of developing countries that have successfully upgraded into high value services provision is likewise limited (Fernandez-Stark et al 2011); the Philippines, for example, has found it difficult to move beyond call centers into more sophisticated services and existing operations are isolated from the domestic economy (Kleibert 2015). Furthermore, as participation in GVCs increasingly involves fulfilling strict requirements with regard to quality, lead times and flexibility and compliance with process, product and social standards, many firms in developing countries can be excluded (Kaplinsky 2010).

To take advantage of the opportunities and to cope with the challenges resulting from this global environment, firms and countries need to improve competitiveness and 'upgrade.'

Most generally, economic upgrading refers to moving to higher value activities in value chains to increase the benefits (e.g. security, profits, skills, technology, knowledge) from participating in global production (Bair 2005). Upgrading is generally categorized into four types (Humphrey & Schmitz 2002):

- process upgrading (improving technology and/or production systems),
- product upgrading (producing more sophisticated, complex or better quality products),
- functional upgrading (increasing the range of functions or changing the mix of activities to higher value tasks) and
- chain upgrading (moving from one industry to another).

Upgrading processes are shaped by the type of value chain in which developing country firms are inserted, and in particular by the governance structure of chains. Governance structures determine the power relationships among the different actors involved and the flow and allocation of resources within chains. Hence, they determine the prospects of firms in developing countries to engage in GVCs and how the benefits of participation (to both firms and workers) are distributed along the chain (Gereffi 1999; Gereffi et al 2001; Gereffi et al 2005; Kaplinsky & Morris 2001). These structures are crucially influenced by lead firms though their control over product specifications, technical standards, and broad cost and performance structures according to which global networks of suppliers operate. Lead firm governance strategies can both enable or constrain upgrading prospects of supplier firms (Kaplinsky & Morris 2001).

The upgrading debate has largely focused on economic upgrading but in the last decade has shifted to also include a focus on workers and social upgrading. Particularly in the context of the SDGs, upgrading has to shift from a sole focus on economic aspects to one that

integrates implications on working and living conditions of the workers, producers and communities engaged in value chain trade and more broadly what integration and upgrading in value chains imply for inclusiveness and equity. Social upgrading is generally defined as increases in employment and changes in the working conditions and rights of workers as well as skills development which improve the quality of their employment (Gereffi et al Forthcoming; Rossi 2013). This perspective can be extended to also include producers in addition to workers and also take into account social implications of exclusion from value chains. Importantly, and in the vein of the SDGs, social aspects should not be seen in isolation but integrated with economic aspects. In such a broader perspective, social upgrading is oriented towards reducing poverty through job and income creation and ensuring decent work and rights for workers, producers and communities, and also supporting value addition and the sustainability of activities integrated in value chains for which economic upgrading is important. Particularly, supporting education, skill development and innovation are important as they have a clear economic and social upgrading dimension.

Evidence on the outcomes for workers in GVCs is mixed. On the one hand, GVCs have created new employment opportunities for marginalized groups such as unskilled workers without previous access to wage employment (ILO 2015). These have brought serious gains for many workers, especially women, previously locked into a harsh and dependant existence with little chance of major improvements in the economic and social quality of their lives. However at the same time, globalization of production and especially requirements deriving from lead firms' commercial practices that combine demands for low costs, high quality, short lead times and high flexibility, often lead to high pressure being put on supplier firms and, in turn, on workers in the form of low wages and precarious working conditions and labour arrangements (Barrientos et al 2011; Locke 2013).

Economic and social dimensions of upgrading are often intertwined, but one does not necessarily lead to the other (Barrientos et al, 2011). There are examples where economic and social upgrading has occurred together, where outcomes are mixed for different groups of producers and workers, and where economic and social downgrading have reinforced each other. For economic upgrading, growth in export market share is often associated with declining unit export values. Likewise, for social upgrading, overall trends in employment growth are often associated with lower real

wages (Bernhardt & Milberg 2011; Milberg & Winkler 2013). This indicates that expanding participation in GVCs can but does not necessarily result in higher paying jobs, improvements in workers' well-being and higher bargaining power (Barrientos 2014).

Understanding these complex and potentially varying impacts on firms, producers and workers will be crucial to assess the overall development impacts of upgrading processes and GVC interventions and how these ultimately contribute to the goals set out by the SDGs.

# 3. GLOBAL VALUE CHAINS AS GENDERED STRUCTURES

In terms of the wider economy, GVCs are gendered structures because of the structural differences between the positions and roles of women and men in the household, the community, the labour market and the economy (Benería et al 2000). These differences are rooted in social structures, norms and roles, and although there is important variation across countries, they exist in all societies. GVCs are embedded within and interact with these social and gender norms and relations. They can change them, dampen or reinforce them, particularly through practices of lead firms in activities such as recruitment, promotion, skill development, knowledge transfer, procurement, working conditions and possibilities to combine work and family life.

Clearly, however, women and men are not homogenous groups. Gender is a crucial socio-economic identity and gender norms and roles are prevalent in households, communities and the economy, but it is intertwined with other socio-economic identities such as age, status, income class, education and skill levels, nationality, ethnicity and race. Therefore women as a group share similar opportunities and constraints but the extent, articulation and consequences of these may be quite different for different groups of women with regard to their material, educational or ethnic background.

Structural differences between women and men, most importantly, include (i) the gendered composition of the labour force, (ii) women's primary responsibility for reproductive work, and (iii) women's differential access to and control over resources relative to men.

(i) Women tend to be concentrated in fewer sectors (such as food production, apparel, domestic and other social services) than men, who seem to be more evenly distributed across a larger range of occupations and productive activities (Fontana 2011). Women also tend to be

- located in different occupations and activities within these sectors than men, leading to gendered job segregation. Women are more likely than men to be found in low value added and precarious forms of work (UNCTAD 2015).
- (ii) Women's response to potential opportunities in new economic activities is dampened by time constraints due to their primary responsibility for reproductive, care and unpaid work, such as domestic work, childcare, and caring for the sick and elderly. Poor infrastructure and services heighten this challenge for women in developing countries. These responsibilities structure and often constrain their participation in the paid economy. In countries where data is available, women are reported to spend more than twice the number of hours that men do on unpaid domestic and care work on average (Ferrant et al 2014). Many studies point to the presence of other female members in the household as a determinant of women's participation in new opportunities created by trade (Fontana 2011).
- (iii) Women also face greater disadvantage in responding to new economic incentives because of gender differences in access to productive resources such as land, credit, education, skills, infrastructure, utilities and services (e.g. health, transport, water, electricity) and also information and networks. While both women and men in developing countries generally experience constraints in these areas, gender interacts with other socioeconomic inequalities to exacerbate women's disadvantage leading to "gender-intensified constraints" (Fontana 2011).

Because of these gendered structures women and men are involved at different stages of GVCs as workers, managers, producers

and entrepreneurs. Gender relations underlie this involvement and influence the workings of GVCs and upgrading processes. Hence, the expansion of GVCs has different impacts on men and women, and they may not be in an equal position to take advantage of the opportunities of GVCs. Indeed, trade has had a considerable impact on increased employment opportunities for women as workers in export-oriented sectors; at times, the first waged job these women have held. Yet, women are often concentrated in specific sectors and types of jobs. Demands for low-cost and flexible labour in export-oriented industries have often led to relatively low wages and poor working conditions in these "female jobs." Upgrading in some sectors has improved women's working conditions but in other sectors upgrading has led to women being replaced by men in higher value, skill or capital intensive activities (Tejani & Milberg 2010). Women as producers and entrepreneurs have often been less able to benefit from new export opportunities given gender-intensified constraints particularly in terms of access to training and skills, credit, inputs and networks.

Gender-based inequalities in turn also impact on trade relations and outcomes as gender inequalities influence the patterns of resource allocation and competitive advantages of countries (Fontana 2009). Gender inequality may be a source of export competitiveness as the segregation of jobs by gender tends to keep women's wages artificially low in the labour market; and this gender wage gap may become a stimulus for export growth in sectors that compete on the basis of low costs (Seguino 1997, 2000). In this context, GVCs take advantage of existing gender relations by using female labour to produce low-cost (but often high quality) products with high flexibility for export markets (Barrientos 2014). Hence, in labour-intensive sectors, including manufacturing, certain types of services and non-traditional agriculture, the rapid growth of export capacity in many

developing countries has been associated with an increase in the demand for female labour (Tejani 2011).

But gender inequality may also limit trade expansion and the gains from integration in GVCs, through its negative impact on the process of skill development and innovation in higher value added and technology sectors (Fontana 2011; Seguino 2000). This can affect women in their roles as workers, managers, and entrepreneurs. intensified constraints can, for example, mute upgrading responses as gender discrimination undermine workers' productivity and managerial efficiency; while women entrepreneurs' limited access to skills and credit may undermine quality improvements and investments in GVCs. Generally, women's limited access to resources constrains their activities as entrepreneurs and results in female entrepreneurs being concentrated in small firms and informal trade (ODI 2009).

Gendered GVC analysis improves understanding of specific the roles, opportunities and constraints of women and men as well as of the overall functioning of GVCs and upgrading processes (Barrientos 2001; Fontana 2011). A gender-differentiated analysis is, firstly, imperative because it highlights the impact of GVC integration and upgrading on female workers, producers and entrepreneurs, and thus, the broader socioeconomic effects of such processes. Secondly, it is crucial because it allows understanding of gender-specific opportunities and constraints concerning competitiveness and upgrading, improving the effectiveness of interventions and policies. Particularly as women account for a large portion of the workforce in many GVCs, failing to understand and address their specific constraints can undermine countries' ability to be competitive and upgrade in GVCs.

A gendered GVC analysis requires:

- (i) identifying in which sectors, occupations and stages of the GVC women and men work, and employment terms and rewards of women relative to men;
- (ii) identifying gender-based constraints that reduce the benefits of women from GVC integration and upgrading may mute supply responses, export performance and upgrading prospects for the whole economy;
- (iii) identifying policy interventions that would remove these gender-based constraints to achieve equal benefits for women and men from GVC integration and upgrading.

A gender GVC analysis involves also giving visibility to those areas of work that tend to be often overlooked in policy interventions — reproductive work that is primarily the responsibility of women and strongly impacts on women's paid work possibilities.

However, much of this analysis remains difficult due to the lack of available data and in order to ensure that gendered GVC approaches can contribute adequately to development policies, new indicators must be incorporated. Table 1 includes potential indicators for developing empirically based gendered GVC analyses.

Table 1. Potential Indicators to Measure Women's Participation in GVCs

	Challenge	Indicator				
	Time	Average time spent on paid work of women vs. men				
Women's Reproductive work	infrastructure	Average time spent on unpaid reproductive work (household responsibilities, child care, etc.) of women vs. men  Access to electricity, water, etc. in reproductive work				
	Patterns of segregation	Participation of women by sector, GVC stage, occupation, or job profile				
	Job status & access to promotions	Women's share of supervisory, managerial, professional, technical, and clerical work				
ν	Vulnerable employment	Women's share of informal/contract/seasonal employment Women's share in permanent jobs with contracts				
Women as Workers	Wage gap	Average wages by gender by GVC stage Ratio of women's wages to men's wages for similar work				
	Working conditions	Average number of working hours for women vs. men  Number of occupational health and safety incidences for women vs. men  Share of women with access to social security  Share of women with access to paid sick leave  Share of women with access to maternity leave  Provision of on-site child care and nursing facilities  Share of female workers with discrimination/sexual harassment claims				
	Access to training	Women's participation rate in TVET and other external training programmes Women's participation in "on the job" training programmes				
. Entrepreneurs	Patterns of segregation	Share of female entrepreneurs/producers vs. men's in GVC-linked operations Participation of women by sector, activity, or crop type Size of women's firms compared to size of men's				
	Access to land	Women's share of land access, landholding, and immoveable property Women's size of landholdings/land access vs. men's				
	Access to finance	Women's share of bank/savings accounts Women's share of total loan portfolio Size of women's loans compared to size of men's loans				
	Access to infrastructure & utilities	Proportion of female-owned businesses with access to electricity, water, transport, etc.  Proportion of female-owned businesses with access to mobile phones & internet  Share of female entrepreneurs/producers with discrimination at customs clearance claims				
Women as	Access to inputs	Women's participation in collective buying & production schemes Women's use rate of storage & processing facilities				
Wo	Access to skills & technology	Women's participation rate in skill training programmes in different areas (entrepreneurship, technology, etc.)				
	Access to information & networks	Women's participation rate in extension services  Women's participation in relevant industry associations  Women's participation in trade unions & workers' groups  Women's participation in cooperatives  Inclusion of women's groups in industry-relevant negotiations				
Gendered effects of upgrading	Benefits from integration in GVCs and economic upgrading	Women's vs. men's share of employment by value chain segment Women's vs. men's share in higher skilled jobs created due to economic upgrading Women's vs. men's ownership of businesses that successfully upgraded Change in gender share due to economic upgrading of jobs & firms				
Gend	Benefits from social upgrading	Women's vs. men's share in better jobs created due to social upgrading Change in gender share due to social upgrading of jobs & firms				

Source: Authors based on Fontana (2012); Staritz and Reis (2013); and UNCTAD (2014).

# 4. GENDERED OPPORTUNITIES AND CHALLENGES IN GLOBAL VALUE CHAINS

The discussion above illustrates that there is a two-way relationship between gender dynamics on the one hand, and integration and upgrading in GVCs, on the other. This is particularly the case for low income countries attempting to embark on an industrialization and development trajectory. Integration and upgrading in GVCs are influenced by, and have an influence on, gender relations. Hence, trade matters for gender and gender matters for trade (Fontana 2012).

This section examines this two-way relationship in the context of a number of GVCs, including the agricultural, apparel, electronics, offshore services and tourism sectors. As cross-country data to facilitate the analysis remains limited, this section draws on the growing country case literature to illustrate these dynamics of gendered opportunities, constraints and outcomes in GVCs in a range of geographic locations, including Africa, Asia and Latin America. While the examples provided may not be representative of all GVCs, nor all countries, they demonstrate certain common issues and patterns as well as illustrate how the gendered dynamics of GVCs integration and upgrading can play out differently across diverse sectors and contexts.

Importantly, it should be highlighted that this section seeks to identify and classify the complex interactions between gender equality and GVC dynamics in these varying contexts and their implications for policies (see next section), rather than to draw straightforward conclusions on positive or negative outcomes. Hence, just because more points below refer to challenges does not necessarily mean that the overall assessment is negative. It shows the complexities regarding the challenges and the multi-faceted ways that gender inequality and GVC dynamics interact.

1. Entry into GVCs generally has a positive impact on female employment generation, providing an important step towards economic independence: GVCs have contributed to rising levels of female employment in manufacturing, agriculture and services in developing countries. This has important economic and social implications as access to paid employment remains one of the most important avenues towards more economic independence of women. Generally speaking, developing countries tend to exhibit similar patterns of entry into GVCs first, entering lower value, labour-intensive segments in non-traditional agricultural, basic manufacturing (particularly apparel), and tourism (Bamber et al 2013; Cattaneo et al 2013). These "starter" industries offer disproportionally higher opportunities for female workers (Kucera & Tejani 2014). For example, on average, 60-80 percent of production workers in the apparel chain in the top 27 apparel exporting countries are women (Barrientos 2014). In horticultural 70-80 percent of packing jobs are female (Bamber & Fernandez-Stark 2013) and in floriculture women account for 75-80 percent of the workforce (Christian et al 2013). In tourism GVCs, 70 percent of jobs are female (Christian 2013).

Strong female employment with value chain entry also holds as countries upgrade into more sophisticated sectors. In the electronics sector, over 50 percent of smart phone assembly roles in China are female with often higher shares in other products and countries, while in call centers, the typical entry point for developing countries in the offshore service GVC, women make up around 70 percent of all agents (Batt 2007). This strong bias towards female GVC employment is reflected in many emerging export processing zones (EPZ), where the female labour share

varies between 50 percent and 90 percent (Milberg & Amengual 2008; Tejani 2011). For these female employees, this is often their first waged job and provides an important first step towards economic independence (Said-Allsopp & Tallontire 2014; Tejani 2011). As such, integration into GVCs has provided new opportunities to earn incomes or wages for tens of millions of women, without previous access to international trade.

2. The gendered division of labour in economies is largely perpetuated in GVC employment: Most of the jobs created in GVCs do not challenge or dismantle gendered job segregation and related stereotypes but are based on and use these gendered structures. While there is a moderate decline in horizontal segregation related to GVCs as women are also employed in traditionally more male-dominated sectors such as exportoriented agriculture, offshore services and electronics, segregation in occupations within sectors tends to be persistent (Barrientos 2014; Fontana 2006; Staritz & Reis 2013). This appears to be deeply rooted in social constructs and perceptions of what is considered appropriate male and female work. Men are typically favoured for positions that require physical strength, technical know-how, and supervisory and management skills, while women are preferred for jobs that depend on finesse, attention to detail and social and caring competencies. The perceived skill for 'nimble fingers' has resulted in the recruitment of women in the more delicate tasks required for assembly work in mobile phones, apparel and food and vegetables (Christian et al 2013). Women workers are also seen as flexible, hardworking, easier to manipulate and without (collective) bargaining power, which makes them suitable for jobs in labour-intensive industries operating under significant global competition.

This pattern is pervasive across sectors and many country contexts. In the horticulture industry, across developing countries, men do work that involves operating machinery,

such as transportation and logistics, and hold management roles, while women generally do work that requires careful handling and attention to detail: nursery work, transplanting, quality control, washing, grading and packing (Bamber & Fernandez-Stark 2013). In Ugandan floriculture, the majority of senior supervisors are men, while 70-85 percent of harvesters are women (Christian et al 2013). In the Lao rice sector, male farmers are in charge of land preparation while female farmers do most of the drying. While women are involved in some processing activities they are mostly excluded from activities that involve transport, networking and marketing (Fontana 2012). In the apparel and electronics sector, job functions are also strongly gender segregated. In the former, women account for the majority of sewing operators (including often also cutting, packaging and ironing); while workers in textile production that is more capital intensive, tend to be male. Women seldom rise to the rank of supervisor and even less so to the technician and management level; the only exception being human resource management positions (Frederick & Staritz 2012; Silvander 2013).

electronics, women carry out monotonous, low-wage production line tasks that require precision, while engineers, technicians and management positions are taken up by men. Female employees are favoured on the assembly line as they are considered to possess finesse and meticulousness, be submissive, adaptable and with little ambition for career advancement (McKay 2006). In the tourism industry, women are concentrated in the accommodation segment, mostly as low- to mid-skill workers in hotels, e.g. housekeeping, laundry, food and beverage, and clerical work whereas men are typically tour guides and managers (Christian 2013). In the offshore services value chain, while women constitute the majority of frontline agent positions in many countries, perceptions of science and technology as male roles largely keep women from higher paying information technology positions such as coding (Ahmed 2013). In India, for example, the number of women working in higher paid engineering support call centers is only 11-19 percent in contrast to being the majority in less high tech call centers (Basi 2009).

3. Women's roles are often cast as unskilled, limiting their remuneration and taking advantage of higher value opportunities: Often jobs where women are concentrated are perceived as low skilled jobs and are paid accordingly. This is related to gender perceptions of what is perceived as skilled and un-skilled. Given gender wage gaps prevalent in most economies, casting particular skills or functions as "feminine" allows GVC recruitment of women at lower overall labour costs (Barrientos 2001). For example, a (male) truck driver with formal skills is perceived as 'skilled' whereas a (female) packaging worker in the horticulture industry that has learned how to handle fruit and vegetables in the household and is valued for her dexterity and attention to detail is perceived as 'unskilled'. These socially acquired skills — that are not, however, formally accepted as skills — create important value in GVCs, particularly at the intersection of quality, time and price, but (female) workers are often not rewarded for them accordingly. Hence, gender inequalities that ascribe lower value to "feminine" tasks means women's contribution to value creation is insufficiently remunerated, limiting women from taking advantage of higher valued jobs and facilitating value capture by other actors in GVCs (Barrientos 2014).

4. Female employment also often goes hand in hand with lower payment and poorer working conditions: Sectors and positions in which women are concentrated are often paid a lower wage and face poorer working conditions than positions in which men are concentrated. Or women may be even paid lower wages for the same work than men. Gender wage gaps — both unadjusted (i.e. the average difference between men's and women's aggregate hourly earnings) or adjusted (i.e. taking into account relevant differences in the type of occupation,

education levels, work experience, etc.) exist in many sectors as portrayed in the case literature. In the Indian cocoa sector, for example, women are paid less than men for the same work (Christian et al 2013). In the apparel sector, in some countries, product segments within apparel are paid at different rates, such as in Bangladesh where knitters receive higher wages than weavers with men being concentrated in the former group (Bhattacharya & Rahman 1999; Frederick & Staritz 2012). Wage disparity tends to be lower in call center functions than in other GVCs, but still persists; in the Philippines, for example, female agents earn 13 percent less than their male colleagues (Messenger & Ghosheh 2010). However, it is important to note that compared to other employment opportunities open to women in developing countries, wages and working conditions can be the same or even better in GVC related activities (Jenkins 2005).

Working conditions and insecure work in particular, is one of the most frequently cited challenge for women. Much of the case literature suggests that women are disproportionately kept in informal, short term or seasonal employment (Barrientos 2013). This is the outcome of firm response to the need for high flexibility and often seasonality of orders by lead firms in GVCs where temporary or subcontracting work models have become central to maintaining competitiveness. There are numerous examples of this in the case literature. Female casual workers are on the increase in the Mombasa tourism sector as local hotels under pressure from global tour operators are trying to cut costs; casual workers can earn up to 50 percent less than their permanent colleagues and have no access to social protection (Christian 2013). In Lesotho, in order to remain flexible to the changing demands in the US apparel market, an important share of the (mostly female) workers in apparel factories are kept on part time basis (UNCTAD 2014). In the highly seasonal horticulture sector, women dominate poorly paid and insecure casual work (Christian et al 2013);

temporary labour is also commonly used in the packhouse where women dominate (Barrientos & Kritzinger 2004). In the electronics sector, the use of temporary workers has at times accounted for as much as 90 percent of workers in Mexico (ILO 2014). The call center segment deviates from this trend slightly, as the tight supply of qualified workforce in developing countries contributes to an increase in permanent contracting in general (Fernandez-Stark et al 2013). Women's role as temporary labour is often justified as providing them with the necessary flexibility to manage their reproductive responsibilities and the assumption that female wages are complementary to those of the male breadwinner of the family. However, this does not reflect the reality that many women are single earners.

5. Gender-intensified constraints limit women's abilities to break these patterns of feminisation of the low value stages of chains and defeminisation of trade in higher value roles: Women as a group share similar gender-intensified constraints to participate and upgrade in GVCs. These include unequal access to productive resources, training and skills development and networks and information, as well as being more time constrained than their male counterparts due to reproductive work responsibilities. Female entrepreneurs face additional challenges of gender-constrained access to land, finance, physical infrastructure and support services. Yet, access to skills, finance, productive resources and networks are fundamental to integration and upgrading in GVCs and in meeting the increasingly strict process and quality requirements by global lead firms. Hence, because of restricted access to economic resources, the majority of women are more unlikely to be in a position to take advantage of any new economic opportunity resulting from GVCs than men (Fontana 2011).

6. Access to training and skills development: In developing, especially in low income, countries, women in general face higher constraints in accessing skills development

than men, particularly in lower value stages of value chains. The limited access seems to be less overt in general primary and secondary education where in many countries, women have importantly caught up relative to men, but it is more problematic in vocational training, skill development programs, and extension services, particular in technical and management related fields. This is persistent across different regions and sectors. Regarding extension services, for example, in Mozambique, twice as many men as women in the agricultural chain participate in extensions services (45 percent versus 23 percent) (Fontana 2011). The same is true for Asian countries. In Cambodia, women account for just 10 percent of extension beneficiaries and in Vietnam, women make up 25 percent and 10 percent of participants in training programs on animal husbandry and crop cultivation, respectively (Fontana 2012). In Honduras, greater gains have been made, but women still only account for 33 percent of extension service beneficiaries (Bamber & Fernandez-Stark 2013).

Access to training is often not overtly discriminative towards women but does not take into account gender specific constraints. Social restrictions such as interacting with male teachers, trainers or extension agents or taking transportation late at night or to faraway places and reproductive responsibilities can all constrain access to training. Women may however, also face constraints to be selected for training given their limited networks and representation in supervisory and management positions as well as industry associations and trade unions, and employers not wanting to invest in women given their expected withdrawal from the labour force due to family reasons. Hence, women are under-represented in vocational and technical education, as well as among vocational teacher and trainers. Training often also reinforces gender based job segregation as boys and girls are channeled into different subjects. Gender-intensified constraints on access to training and career development can result in a shortage of qualified labour, limiting productivity and preventing upgrading into higher segments of GVCs.

7. Access to networks and information: information and Access to networks, including access to inputs, technology, markets and support services, is of crucial importance. However it is limited for many female producers and entrepreneurs due to the dominance of gender based decision making in many business networks and industry associations. For example, in the tourism sector, female entrepreneurs are less likely to upgrade their own businesses. This is because many supplier decisions in the tourism sector are taken by men, who, simply by choosing suppliers from their own personal network, tend to perpetuate a male-centric business network limiting access for female entrepreneurs (Christian 2013). Women often also face barriers to membership in rural or farmers' organisations and cooperatives which inhibits a channel to facilitate market access (Doss 2011).

Access to networks is particularly fundamental for smaller businesses to integrate and upgrade in GVCs. Networks allow them to exchange ideas to manage common problems, reduces information asymmetry, and builds social capital to empower firms to engage with more sophisticated markets (Markelova et al 2009). This can provide economies of scale necessary to serve global markets, as well as increase bargaining power to secure key inputs. Coordinated networks can also help alleviate other gender-intensified constraints such as access to finance, productive resources and training. Access to networks is also important for female workers. Insofar as women are under-represented in workers' associations or trade unions issues pertinent to gender based constraints tend to be underrepresented. Trade unions - if they exist remain dominated by men, even in sectors where production jobs are overwhelmingly female such as in the apparel and electronics sector.

8. Access to land, finance and productive resources: In many countries and sectors, women have more limited access to these resources which makes it difficult for them to become independently involved in export production. Access to finance is particularly important to fulfill requirements and standards of global lead firms and to initiate upgrading processes. Access to land is important in itself, particularly in agricultural sectors, but also to get access to finance due to its role as collateral. Even if they are the primary farmers, women often do not have independent ownership of land (Barrientos 2014). In Kenya and in other African countries, land policies overtly disadvantage women through the enforcement of customary laws. These laws in many countries have favored male inheritance and allocation of productive assets. Even in Mozambique, where official land laws grant women equal access to land, the few female farmers who own land have still smaller plots than men (Fontana 2011b). This problem is also apparent in Central America; in Honduras, women have less access to land than men - in the 1960s, they made up just three percent of the beneficiaries of land reform (Bamber & Fernandez-Stark 2013). This discrimination makes it difficult for women to gain access to title deeds and collateral for loans. As a result they have a harder time getting loans from financial institutions to develop businesses in different sectors (Fontana 2011).

In sectors highly dependent on land as an input, such as agriculture, this constraint is particularly binding for women's integration and upgrading in GVCs. For example, in Honduras, selling to higher paying US buyers requires the installation of expensive and sophisticated irrigation systems and greenhouses. However many female farmers simply cannot finance these (Bamber & Fernandez-Stark 2013). In Laos, modernized rice farming requires mechanisation, high yielding varieties, more intensive use of fertilisers and supplementary irrigation systems which requires access to credit where

women farmers face specific constraints. This explains why it is predominantly men that control motorised equipment and dominate cash crops (Fontana 2012). A large body of empirical evidence from many different countries shows that female farmers are just as efficient as their male counterparts but they have less land, less access to finance and use fewer inputs, so they produce less (FAO 2010). It has been demonstrated that equalising access among women and men to fertiliser and other agricultural production factors increased maize production by 11-16 percent in Malawi and by 17 percent in Ghana (World Bank 2012). Similarly, in the horticulture sector, female entrepreneurs have been found to be as capable — if not more so - as their male counterparts when gender-based constraints of access to finance are removed, and more responsive in repaying loans (Bamber & Fernandez-Stark 2013).

9. Economic upgrading can have varying effects on gender equality related to gendered job segregation and genderintensified constraints: Economic upgrading often leads to the creation of higher skilled jobs and activities, which can provide important opportunities for women and men alike. However there is evidence that men may benefit more from these new opportunities related to upgrading. In the case of functional upgrading, or moving into higher value segments of the chain, employment statistics in more advanced countries suggest that women are displaced by increased male employment. Particularly in manufacturing sectors, there is evidence that women are disproportionately favored in low stages of the chain but that they are often disadvantaged in the context of upgrading within a sector or between sectors to higher technology ones (Kucera & Tejani 2014). For example, in countries such as Malaysia, Mauritius, Mexico, Singapore and South Korea that have undergone structural transformation from low value to higher value manufacturing exports, women's share of the total labour force in EPZs declined significantly (Fontana 2006).

The share of female workers in the labour force has also declined across a number of different industries as a result of certain functional, product and process upgrading (Ahmed 2013; Kucera & Tejani 2014; Tejani 2011). In the apparel sector in Bangladesh, the female share has declined in the context of upgrading to knit products and to textile production with men being overwhelmingly employed in these higher waged activities. In knitwear, for example, women constitute only 14 percent of the labour force. Female employment has remained highly concentrated in the woven segment of ready-made apparel while other subsectors are predominantly male (Bhattacharya & Rahman 1999; Frederick & Staritz 2012). In the electronics sector with increased mechanisation of production processes, male workers tend to be preferred (McKay 2006). Similar developments are seen in the call center industry, as the industry upgrades into more complex services the workforce becomes male dominant (Ahmed 2013). This is largely the result of the gendered job stereotypes which attribute women to roles with careful 'handling' requirements and men in technical positions. Hence, when higher or automated technologies are implemented — key for many upgrading processes in manufacturing - men are favoured over women.

Outcomes seem to be different when upgrading is oriented towards reducing seasonality; an essential step for firms to smooth cash flow operations over the year and maximise returns on their fixed assets. Where product market diversification and process and upgrading can ensure year round production, both women and men have been able to benefit from more secure jobs. For example, in the horticulture industry in Peru, product diversification from asparagus and avocados to grapes and blueberries and the installation of greenhouses and extensive irrigation systems have led to year-round production. This has enabled exporters to retain and invest in their workforce, increase overall permanent employment and reduce the burden of seasonality which particularly affected female workers (Fernandez-Stark et al 2016). Similar results are seen in Uganda where improvements of processes and products contributed to an increase in the share of permanent female workers (Gibbon & Riisgaard 2014). In the tourism sector, developing and marketing multiple tourism products to diverse target markets (including regional and domestic markets) also helps offset fluctuations due to seasonality and fickle tourist demand and can improve stability for both male and female employment (Christian 2013).

10. Gender inequalities impact on and often constrain economic upgrading efforts: Gender inequalities can both facilitate and inhibit industry competitiveness. Low wages and flexible employment of predominantly female workers help reduce costs for employers, enabling them to offer cost-competitive, flexible and high quality products. But there may be a trade-off between short-term gains and longer-term upgrading. Lack of training and career development of female workers can negatively impact productivity and prevent economic upgrading into more sophisticated segments. For women as producers and entrepreneurs, gender-intensified constraints of access to resources, skills and networks limit their participation and upgrading in GVCs. Hence, while lower-cost and flexible female labour can help drive cost-competitiveness in the lower segment of GVCs, gendered job segregation and gender-intensified constraints have the potential to limit a country's access to higher value segments of GVCs where the availability of skilled labour and access to finance, training and networks is a crucial competitiveness factor.

Social upgrading often improves women's working conditions but gender specific issues have to be taken into account: Growing public awareness of how products are produced in GVCs has spurred the emergence of numerous private governance initiatives such as the Ethical Trading Initiative (ETI) (multi-sector), the Better Work Program (apparel), Fair Trade (agriculture) or the International Cocoa Initiative (cocoa) (Lund-Thomsen & Lindgreen 2014). In addition, voluntary codes of conduct by lead firms have been on the rise to address social issues in their GVCs in the context of corporate social responsibility (CSR). Moreover in developing countries government initiatives to raise labour standards have increased. While many of these programs have been accessed quite skeptically and may be yet to achieve important aspects of social upgrading, they tend to have directly and indirectly (through improved working conditions) contributed to gender equality. Governance initiatives, particularly when NGOs are involved, have often contributed to raising awareness of specific gender issues such as discrimination, sexual harassment and the need for on-site childcare and promoting programs such as gender committees and gender-sensitive management practices (Barrientos 2014; Christian et al 2013; Said-Allsopp & Tallontire 2014). Indirectly, women workers often benefit from initiatives that improve wages and working conditions in GVC-related employment as women account for a large share of jobs in labour-intensive segments. Gender-specific problems may however be overseen if not directly addressed such as gender-based job segregation and constraints.

# 5. POLICIES FOR GENDER EQUALITY AND UPGRADING IN GLOBAL VALUE CHAINS

The case literature highlights that gender specific dynamics and outcomes exist in GVCs and are an important additional dimension of power relationships that span the local, national and global level. In order to foster competitiveness and upgrading and to ensure that benefits of integration into GVCs and upgrading are available to both women and men, this section offers a range of policy interventions. The objectives of these policies is to use trade as an enabler of sustainable development by increasing the value captured from participating in GVCs, secure equal access to the benefits for both women and men, and create a gender inclusive and sensitive environment by reducing gendered job segregation and gender intensified constraints.

Most importantly, trade, industrial, export promotion and GVC intervention policies need to take into account gender aspects to make policies more effective drivers of sustainable development based on gender equity. Gender aspects — as has been the case also with social aspects — should not be put aside to other actors and policy areas but must be mainstreamed into trade and related policies and aligned with complementary policies. It is however important to not shift the responsibility alone to complementary policies as there are often limits in funding and effectiveness and more importantly some gender inequalities are deeply rooted and difficult to overcome. Complementary interventions in other policy areas include most importantly overcoming gender based segregation and constraints that are embedded directly in laws (legislation, regulations) or in socially constructed gender norms. Unless the capacity of women and men to participate in GVCs is strengthened through aligned trade, industrial and complementary policies, the development outcomes of GVC integration and its contributions to the SDGs may be well below its potential.

- 1. Identify and acknowledge the role and contribution of women and men in GVCs: One of the most influential constraints to adequate policy development is the misconception of male versus female roles in GVCs. The most striking example is agriculture which is usually thought of as a male domain, yet, 79 percent of women in developing countries report agriculture as their primary economic activity (Doss 2011). In Uganda, broadly illustrative of Sub-Saharan Africa, 75 percent of agricultural producers are estimated to be women (World Bank 2009). A gender lens in policy making and implementation is required to identify the positions and roles women and men are located in GVCs, and what their specific rewards, opportunities and constraints are. Hence, there is a need to conduct gender-based analysis and collect sex-disaggregated data and indicators with regard to employment, activities, rewards and constraints, as well as approaching women groups, female producers' and women workers' associations (see Table 1). Without including gender-based differences, policies may address the wrong issues and actors.
- 2. Support economic upgrading, taking into account gender-based segregation and constraints: Economic upgrading is crucial for long term development and also to ensure sustainable and high quality employment and better bargaining power of supplier firms. Hence, support for economic upgrading of firms and producers is important but remains inadequate in many developing countries. Such support requires taking into account gender intensified constraints as otherwise women workers and entrepreneurs may not be able to benefit from upgrading, undermining the effectiveness of the policies. Hence, to ensure that economic upgrading also goes along with positive gendered outcomes, it needs to be reinforced by gender-sensitive

interventions that address gender-based segregation and constraints (Barrientos 2014). This involves a dual policy strategy. First, improving the conditions for women workers and entrepreneurs in occupational and sectoral activities they are already concentrated in. Second, focusing on more transformative strategies to open up new opportunities for women that counter traditional gender roles and stereotypes (Fontana 2012).

3. Improve the quality and nature of female work by supporting social upgrading: Given that women are the majority of workers and producers in many labour intensive stages of GVCs especially in low income countries, securing social and labour rights is key. But gender issues should be incorporated more explicitly into social upgrading initiatives as otherwise certain working conditions may be improved but not overall gender structures in GVCs. Hence, women workers may earn higher wages but may still be concentrated in certain activities that are comparatively lower remunerated and face lower upward mobility than activities where men are concentrated, leaving gendered job segregation and the gender wage gap unaddressed. Hence, social upgrading initiatives should include ensuring enforcement of core labour standards, non-discrimination and equality in wages, working conditions, career mobility and job opportunities between women and men. Social standards would need to reach all workers, also informal part-time workers where women are concentrated, and along the whole chain, including subcontractors where women also tend to be concentrated (Barrientos 2013). One approach for the latter is assigning liability with the lead firm for the labour practices of their subcontractors, as Chile and Uruguay have done (Direccion del Trabajo-Gobierno de Chile 2015; PwC 2014). Generally, collective bargaining agreements that provide important channels for negotiations need to be supported and extended by gender specific issues. The same is true for strengthening and training labour inspectorates to enable them to fulfil their enforcement functions effectively.

- 4. Leverage actions by all GVC actors: Governments play an important role in implementing gender equity interventions. However policies implemented by other GVC actors (most importantly lead firms, industry associations, trade unions and NGOs) are crucial and can play a critical complementary role. Given the power of lead firms in GVC governance, they can play a particularly pivotal role, as their production and sourcing policies often reinforce deeply embedded gender issues in production in order to capture rents by accessing low-cost and flexible female labour. They can reverse this and help develop understanding amongst GVC actors of the social and business case behind reducing gender inequalities. Most importantly, they can drive change by including a gender lens to their employment, training, sourcing and CSR policies. Lead firms need to ensure their commercial practices recognise and adequately remunerate women producers and workers. Lead firms could also encourage and support their suppliers to implement gender-sensitive policies and could enforce their application through internal codes of conduct as well as third party monitoring. They could introduce longer-term contractual relationships with suppliers which would allow suppliers to offer more secure and longer-term employment contracts, leading to increased job security. Industry associations would be well placed to identify gender-specific constraints and skill gaps in GVCs and come up with innovative approaches to ensure training curricula, courses and other support programs are better tailored to female workers and entrepreneurs needs. Trade unions and NGOs play an important role in raising issues of gender discrimination and exploitation of women producers and workers (Barrientos 2014).
- 5. Target multi-lateral trade interventions such as Aid for Trade to secure positive economic, social and gender outcomes: Aid for Trade has centered on using trade expansion as an engine for development and poverty eradication in developing countries. It has developed into the most important aid

channel in the area of trade, streamlining a good portion of multilateral trade support. In this role, it should be leveraged to help countries mainstream gender issues into trade support and better develop gender sensitive trade and related policies. This can be done through information sharing and capacity building among key policy actors in target countries, as well as through targeting aid programs at areas where women are focused and/or face particular challenges. First, a gender dimension has to be added to Aid for Trade guidelines, templates, best practices and other policy materials. Efforts began to focus in this direction following the Aid for Trade monitoring exercises in 2011, including exploring appropriate gender indicators to include in assessments to drive more empirically-informed policy making. stakeholders agree that more needs to be done (WTO 2015b). Second, there could be specific funds dedicated to projects targeting challenges related to gender equality and trade and GVC dynamics. Particularly economic upgrading initiatives could be supported that target activities where women workers and/or producers are concentrated through specific training, technology transfer, financing and/or networking activities (WTO 2015a). In such a way, Aid for Trade could be a powerful instrument for driving and supporting a gendered trade support and GVC approach that integrates economic, social and gender aspects in multiple countries.

6. Improve access to information and networks for women: To get access to information and influence policies it is crucial to support women's inclusion and influence in industry or farmers' associations and trade unions that are often male-dominated, also in sectors that have a predominantly female workforce. Industry and farmers' associations and trade unions often function on gendered premises and therefore do not see and take action to resolve gender-specific problems. Increased awareness, capacity-building and inclusion of female members and leaders in these representative organisations would be necessary for these to recognize and address

gender based segregation and constraints (Silvander 2013). Further, women's groups and associations for workers and entrepreneurs need to be institutionally strengthened and supported by assisting and financing capacity building in networking and leadership. Strong women representation bodies provide female entrepreneurs and workers with a voice in policymaking, increase their bargaining power and can help raise awareness of genderintensified constraints. Such networks can also facilitate access to information, technology, inputs and markets and hence contribute to overcoming gender intensified constraints. Moreover, a gender council could be established that assesses specific gender based constraints related to GVC participation and upgrading and identifies necessary policy measures. The council would need to work in collaboration with different government ministries and agencies, industry and farmers' associations, trade unions, firms and women's groups and associations.

7. Increase access to training for women: Eliminating gender disparity at all levels of education is among the preconditions for women to become efficient economic agents and benefit from GVCs and upgrading (UNCTAD 2014). Access to training for women as workers and entrepreneurs is essential for learning about GVC requirements and standards and needs to be enabled and encouraged. Most basically, training programs need to be scheduled and located in such a way that women can attend, accommodating their reproductive responsibilities. They must also take into account cultural and social norms that may prevent women from interacting with men. Further, training needs to be targeted and tailored to the specific needs of female workers and entrepreneurs and at those areas where women are excluded or under-represented such as technical and management related fields. For example, tailoring vocational training and extension services better to female entrepreneurs' needs could require, for example, adopting participatory methods, focusing on tasks in which female farmers or producers specialize

and increasing the number of female agents or teachers (Fontana 2012). Further, managers would need to undergo training on gender specific challenges and be encouraged to undertake on the job training in a gender sensitive manner. Improvements in curricula in formal education are not only important to take into account gender based inequalities but also to be more relevant to the skills required in GVCs and for upgrading requiring the government and the private sector to work together. In addition, the recognition of all skills required for particular industries through certification programs, regardless of whether these skills were obtained through formal education, training, or life experience, would be crucial to avoid a gender-bias in role assignation and ensure that "feminised skills" are rewarded accordingly. In addition to reducing gender inequality, competency certifications can reduce transaction costs related to recruitment and facilitate labour mobility.

8. Increase access to land, finance and productive resources for women: In order to support GVC entry and upgrading for femaleowned firms, it is important to address genderintensified constraints with regard to access to land and finance. In many countries, access to land tends to be more difficult to change as it is related to customary laws. Hence, in the short to medium term it may be easier to address access to finance, in particular also de-linking it from land as a collateral. Addressing gender constraints to access to credit requires raising awareness among financial institutions, initiating financial inclusion programs, developing innovative financial instruments and improving female financial literacy (Bamber & Fernandez-Stark 2013). The financial sector has a clear role to play in facilitating access to financial services for female farmers and producers (Fontana 2012). In the medium-term, resources could be invested in making improvements to infrastructure, in particular transport to improve women's mobility and ICT supply that benefits female entrepreneurs more due to their limited access to information and higher

illiteracy rate. Further, the introduction of modern, electronic customs clearance systems could overcome the difficulties women tend to experience in border procedures related to gender discrimination (Fontana 2011).

9. Reduce the burden of reproductive work on women: This is a longer term challenge to be addressed through changes in the legal, education and cultural system and equal sharing of reproductive responsibilities between women and men. But in the shortto medium-term, responsibilities can be eased by policies that aim to reduce the work burden related to reproductive obligations and free up women's time to participate in productive activities. Such policies would involve investments in improvements in infrastructure, in particular improvements to transport networks, electricity and water, and promoting regulations and services that facilitate combining paid and unpaid work (e.g. child care, maternity and paternity leave, care for the elderly, transport, housing, health provisions, etc.). Easing constraints for women through initiative such as providing on-site child care, for example, has been found to importantly reduce absenteeism in the apparel, horticulture and tourism sectors (Bamber & Fernandez-Stark 2013; Christian et al 2013), which also contributes to increased productivity and competitiveness in GVCs.

While there is no 'one size fits all' approach, combining economic and social upgrading as well as gender equality often requires multistakeholder collaboration between public, private and civil society actors within GVCs to ensure competitiveness, value addition, labour rights and gender equality are not viewed as mutually exclusive but as reinforcing objectives. This is required if GVC integration should lead to upgrading and sustainable development. This type of collaboration, while not easy to achieve, offers a promising pathway to bring together governmental, employer, labour and women actors to simultaneously achieve economic and social gains for both women and men as set out by the SDGs. These win-win outcomes envisaged by the SDGs require that social issues and upgrading as well as gender equity initiatives be fully integrated into trade and industrial policy geared towards competitiveness and economic upgrading.

To sum up, as a basis for policy interventions in specific GVCs, sectors and countries, a gendered GVC analysis is key as this allows seeing the economy and GVCs as gendered structures and understanding the gender composition of employment, gendered access to and exclusion from particular activities, and gender-

intensified constraints and opportunities in GVCs. It requires including the differential power relations between women and men reflecting wider gender inequalities in society that can affect the positions, integration and upgrading of firms, producers and workers at any GVC node (Barrientos 2001; 2014). This is important from a gender quality and social justice perspective but also to understand broader GVC and upgrading dynamics and to further GVC integration, upgrading and socioeconomic development.

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Other publications from the Development and LDCs programme include:

- Global Value Chains, Industrial Policy, and Sustainable Development Ethiopia's Apparel Export Sector. By Cornelia Staritz, Leonhard Plank, and Mike Morris, 2016.
- Trade Policies and Sustainable Development in the Context of Global Value Chains. By ICTSD, 2016
- Inclusive and Sustainable Growth: The SDG Value Chains Nexus. By Raphael Kaplinsky, 2016.
- Global Value Chains, Sustainable Development, and the Apparel Industry in Lesotho. By Mike Morris, Justin Barnes, and Moshe Kao, 2016.
- Global Value Chains and Trade Facilitation: Opportunities for Sustainable Development. By Ben Shepherd, 2016.

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