



VIRTUAL INSTITUTE TEACHING MATERIAL ON
TRADE AND GENDER

VOLUME 1: UNFOLDING THE LINKS



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TRADE AND GENDER

VOLUME 1
Unfolding the links



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The UNCTAD Virtual Institute is a capacity-building and networking programme that aims to strengthen teaching and research of international trade and development issues at academic institutions in developing countries and countries with economies in transition, and to foster links between research and policymaking.

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TABLE OF CONTENTS

NOTE	ii
ACKNOWLEDGEMENTS	iii
LIST OF BOXES	vi
LIST OF FIGURES	vii
LIST OF TABLES	vii
LIST OF ABBREVIATIONS	viii

1 MODULE	<i>The trade and gender debate: Concepts, definitions and analytical frameworks</i>	1
	1 Introduction	2
	2 The economy as a gendered structure	3
	2.1 Women as workers and producers	4
	2.2 Women as traders	6
	2.3 Women as consumers	7
	2.4 Women as tax payers	8
	3 Measures of gender (in)equality	10
	3.1 Three domains of gender equality indicators	11
	3.2 Relative and absolute measures of gender inequality	11
	3.3 Availability and quality of sex-disaggregated data	12
	3.4 Gender indicators for employment, income and assets	14
	4 Trade: Definition and measurement	17
	4.1 Some preliminary distinctions	17
	4.2 The use of the concept of trade	20
	5 The trade-gender relationship	21
	5.1 A two-way relationship	21
	5.2 Gender-sensitive frameworks for the analysis of the trade-gender relationship	22
	5.3 Channels of interaction between trade and gender	22
	6 Case study on gender and trade: Angola	23
6.1 Basic facts about the economy	23	
6.2 The gender profile of Angola	24	
6.3 Basic facts about trade and trade policy	24	
6.4 Trade and gender interactions	25	
7 Mainstreaming gender in trade policy	26	
7.1 Comprehensive <i>ex-ante</i> gender impact assessments of trade agreements	27	
7.2 Negotiations of trade agreements	27	
7.3 Development assistance after the entering into force of trade agreements	28	
Exercises and questions for discussion	30	
REFERENCES	32	
2 MODULE	<i>The effects of trade on women's well-being and economic empowerment: Evidence and research methodologies</i>	35
	1 Introduction	36
	2 Women as wage workers	36
	2.1 Employment effects	36
	2.2 Wage effects	42
	3 Women as producers	46
	3.1 Theoretical expectations	46
	3.2 Existing evidence	46
	4 Women as traders	49
	4.1 Theoretical expectations	49
	4.2 Existing evidence	49

5 Women as consumers	50
5.1 Consumers of imported products	50
5.2 Consumers of public services	50
6 Women as tax payers	52
6.1 Theoretical expectations	52
6.2 Existing evidence	52
7 Conclusion	54
Exercises and questions for discussion	55
ANNEX	56
A1 Wamboye and Seguino (2012)	56
A2 Kucera, Roncolato and von Uexkull (2012)	57
A3 Rani and Unni (2009)	58
A4 Tejani and Milberg (2010)	59
REFERENCES	61
<i>Gender-based inequalities and trade performance</i>	67
1 Introduction	68
2 Women as “sources of competitive advantage”	68
2.1 The gender wage gap and “flexibility”	68
2.2 The role of gender norms and stereotypes	70
2.3 Export competitiveness and economic growth	71
2.4 The unsustainability of an export strategy based on gender inequality	71
2.5 Case study of Taiwan Province of China: Leveraging gender inequality to achieve competitive advantage	73
3 Women as under-achievers of competitive advantage	74
3.1 Three domains of inequality	74
3.2 Case study of the fisheries sector in the Gambia: How trade policy can exacerbate gender inequality	76
3.3 Case study of the agricultural sector in Rwanda: Gender inequality as a barrier to growth	77
4 Conclusion	79
Exercises and questions for discussion	80
ANNEX	81
A1 Seguino (1997)	81
A2 Seguino (2000)	82
A3 Busse and Spielmann (2006)	83
A4 Darity (1995)	84
REFERENCES	86
GLOSSARY	90
REFERENCES	98
ENDNOTES	99

LIST OF BOXES

Box 1	Time use surveys	5
Box 2	What are Structural Adjustment Programmes?	8
Box 3	Direct and indirect taxes	9
Box 4	International instruments and goals related to gender equality	10
Box 5	The gender wage gap	12
Box 6	The category of female-headed households	13
Box 7	ILO SEGREGAT dataset	15
Box 8	International systems of classification of traded goods	20
Box 9	Comparative advantage vs. competitive advantage	37
Box 10	Trade, structural change and employment implications for women: The case of the apparel sector in Lesotho	40
Box 11	How are wages measured?	44
Box 12	The impact of trade liberalization on women as workers: A summary	45
Box 13	Trade policy and intra-household dynamics: A brief note	52
Box 14	The gender wage gap and the terms of trade	72
Box 15	Three domains of inequality: Women as informal cross-border traders	75
Box 16	The evidence on the relationship between gender inequality and economic growth	82
Box 17	What is a Cobb-Douglas production function?	84

LIST OF FIGURES

Figure 1	International distribution of total employment by status and sex, 2012 (per cent)	5
Figure 2	Average time (minutes) per day spent on unpaid care work, by sex, selected countries	5
Figure 3	Trade policy measures	19
Figure 4	Female share of employment in EPZs by sector, selected countries, 2009	70
Figure 5	The multiple challenges faced by female informal cross-border traders	75

LIST OF TABLES

Table 1	Number of countries with gender inequality related to inheritance rights and entitlements to ownership of land and other property, by region	6
Table 2	Women's economic roles and gender bias	10
Table 3	Summary of gender indicators for employment, income and assets	16
Table 4	Measures of trade openness	18
Table 5	Summary of channels of interaction from trade to gender	53
Table 6	South-East Asia and Latin America ratio of manufacturing wages, female to male (per cent)	69
Table 7	Examples of job segregation in different industries	71

LIST OF ABBREVIATIONS

ACP	AFRICAN, CARIBBEAN AND PACIFIC
AFT	AID FOR TRADE INITIATIVE
AGOA	AFRICAN GROWTH AND OPPORTUNITY ACT
ATC	AGREEMENT ON TEXTILES AND CLOTHING
BDPFA	BEIJING DECLARATION AND PLATFORM FOR ACTION
CEDAW	CONVENTION ON THE ELIMINATION OF ALL FORMS OF DISCRIMINATION AGAINST WOMEN
CIS	COMMONWEALTH OF INDEPENDENT STATES
DWR	DOMESTIC WORK RATIO
EAC	EAST AFRICAN COMMUNITY
ECLAC	ECONOMIC COMMISSION FOR LATIN AMERICA AND THE CARIBBEAN
EIF	ENHANCED INTEGRATED FRAMEWORK
EPA	EUROPEAN PARTNERSHIP AGREEMENT
EPZ	EXPORT PROCESSING ZONE
EU	EUROPEAN UNION
FAO	FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS
FDI	FOREIGN DIRECT INVESTMENT
FE	FIXED EFFECTS
FPNAE	FEMALE SHARE OF PAID NON-AGRICULTURAL EMPLOYMENT
GATT	GENERAL AGREEMENT ON TARIFFS AND TRADE
GDI	GENDER-RELATED DEVELOPMENT INDEX
GDP	GROSS DOMESTIC PRODUCT
GEM	GENDER EMPOWERMENT MEASURE
GGI	GENDER GAP INDEX
GNP	GROSS NATIONAL PRODUCT
GPI	GENDER PARITY INDEX
GVC	GLOBAL VALUE CHAIN
GWG	GENDER WAGE GAP
HOSS	HECKSCHER-OHLIN-STOLPER-SAMUELSON
HS	HARMONIZED COMMODITY DESCRIPTION AND CODING SYSTEM
ICT	INFORMATION AND COMMUNICATIONS TECHNOLOGY
ID	INDEX OF DISSIMILARITY
IFPRI	INTERNATIONAL FOOD POLICY RESEARCH INSTITUTE
ILO	INTERNATIONAL LABOUR ORGANIZATION
IMF	INTERNATIONAL MONETARY FUND
ISCO	INTERNATIONAL STANDARD CLASSIFICATION OF OCCUPATIONS
ISIC	INTERNATIONAL STANDARD INDUSTRIAL CLASSIFICATION
IT	INFORMATION TECHNOLOGY
LFPR	LABOUR FORCE PARTICIPATION RATE
LIAE	LOW-INCOME AGRICULTURAL ECONOMY
LSMS	LIVING STANDARD MEASUREMENT SURVEY
MDG	MILLENNIUM DEVELOPMENT GOAL
MEC	MINERAL-EXPORTING COUNTRY
MFA	MULTI-FIBRE ARRANGEMENT
MFN	MOST-FAVOURABLE-NATION
NAFTA	NORTH AMERICAN FREE TRADE AGREEMENT
NGO	NON-GOVERNMENTAL ORGANIZATION
NIC	NEWLY INDUSTRIALIZED COUNTRY
NMEC	NON-MINERAL-EXPORTING COUNTRY
NTAE	NON-TRADITIONAL AGRICULTURAL EXPORT
NTB	NON-TARIFF BARRIER
OECD	ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT
OLS	ORDINARY LEAST SQUARES
PPP	PURCHASING POWER PARITY
PRSP	POVERTY REDUCTION STRATEGY PAPER
R&D	RESEARCH AND DEVELOPMENT

LIST OF ABBREVIATIONS

SADC	SOUTH AFRICAN DEVELOPMENT COMMUNITY
SAM	SOCIAL ACCOUNTING MATRIX
SAP	STRUCTURAL ADJUSTMENT PROGRAMME
SDT	SPECIAL AND DIFFERENTIAL TREATMENT
SIE	SEMI-INDUSTRIALIZED ECONOMY
SIEO	SEMI-INDUSTRIALIZED EXPORT ORIENTATION
SIGI	SOCIAL INSTITUTIONS AND GENDER INDEX
SITC	STANDARD INTERNATIONAL TRADE CLASSIFICATION
SME	SMALL AND MEDIUM-SIZED ENTERPRISE
SNA	SYSTEM OF NATIONAL ACCOUNTS
TOT	TERMS OF TRADE
TRQ	TARIFF RATE QUOTA
TSLS	TWO-STAGE LEAST SQUARES
TUS	TIME USE SURVEYS
UNCOMTRADE	UNITED NATIONS COMMODITY TRADE STATISTICS DATABASE
UNCTAD	UNITED NATIONS CONFERENCE ON TRADE AND DEVELOPMENT
UNDAW	UNITED NATIONS DIVISION FOR THE ADVANCEMENT OF WOMEN
UNDESA	UNITED NATIONS DEPARTMENT OF ECONOMIC AND SOCIAL AFFAIRS
UNDP	UNITED NATIONS DEVELOPMENT PROGRAMME
UNECA	UNITED NATIONS ECONOMIC COMMISSION FOR AFRICA
UNESCO	UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION
UNICEF	UNITED NATIONS CHILDREN'S FUND
UNRISD	UNITED NATIONS RESEARCH INSTITUTE FOR SOCIAL DEVELOPMENT
UR	UNEMPLOYMENT RATES
VAT	VALUE-ADDED TAX
WCO	WORLD CUSTOMS ORGANIZATION
WEF	WORLD ECONOMIC FORUM
WTO	WORLD TRADE ORGANIZATION



MODULE 1

*The trade and gender debate:
Concepts, definitions and analytical frameworks*

1 Introduction

Before starting any kind of research, there are three basic questions that need to be answered: (a) What is the topic I want to examine? (b) Why is it important to investigate it? (c) How can I carry out my analysis? In this introductory module, we aim to provide an answer to each of these questions and thus set the stage for the analysis in Modules 2 and 3.

Over the last 30 years, globalization has contributed to increased cross-border flows of goods and services, capital, technology, and information. The prevailing assumption during this period has been that the lowering of economic, geographic and cultural barriers would lead to higher levels of productivity and expanded employment opportunities from which everybody would benefit. Economic policies were often designed on the assumption that market forces would automatically ensure these outcomes would be realized.

With the adoption of the Millennium Declaration in 2000, the discourse in international development has shifted to the Millennium Development Goals (MDGs) as an overarching framework for development. With regard to trade, the Doha Round of multilateral trade negotiations, launched in 2001 with a strong emphasis on development, contributed to challenging the view that globalization would consequentially lead to economic growth and development for all. Indeed, a key feature of the last decade's economic development is a disconnection between economic growth and social development: income disparity, social inequality and exclusion have increased even in countries that have recorded high levels of economic growth and remarkable trade performance. It has become increasingly evident that economic policies impact different segments of the population, including men and women, in different ways; the assumption that economic policies are "gender neutral" has been increasingly challenged and it has also become clear that economic policy, including trade policy, can play a critical role in narrowing the gender gap only if policymakers consciously take into account these horizontal differences (UNCTAD, 2012).

Country-based research, including research conducted by UNCTAD, has shown that the different roles played by women and men in society and in the economy have repercussions on countries' trade performance and outcomes, as well as on women's and men's ability to take advantage of the opportunities emerging from expanded trade.

Adopting a gender perspective contributes to a deeper and richer understanding of trade performance and brings new insights into trade policy analysis. Firstly, a gender perspective challenges the prevailing aggregate focus of conventional trade policy analysis which overshadows the redistributive effects of trade at the country level. Secondly, a gender perspective is instrumental in bringing to the forefront of the analysis the intersecting patterns of inequality – including inequalities of income and wealth, as well as horizontal differences rooted in race/ethnicity/caste or spatial location – that would otherwise be overlooked in mainstream trade policy analysis. Finally, by delving deep into social norms and power relations, the gender approach integrates social and cultural factors into economic analysis. This, in turn, encourages a shift from formal models to real life economics. In sum, the gender perspective provides a framework for reassessing macroeconomic policy, and trade policy in particular, in ways that magnify their social meaningfulness and inclusiveness (UNCTAD, 2012).

This teaching material explores the consequences of trade for women's economic empowerment and well-being and the impact of gender inequality on trade. Since the economy is a gendered structure, any impact of trade on the economy is likely to have gender-specific repercussions. Looking at countries' socio-economic structure through a gender lens is therefore the general framework, which will be described in Section 2. Sections 3 and 4 will then discuss some key concepts and issues in this area, paving the way for analysis in the following sections. Specifically, Section 3 will present a set of key indicators for measuring gender inequality and provide the reader with the necessary tools to understand which indicator is more appropriate to use depending on the purpose of his/her study. Section 4 will explore different definitions of trade used in research and policymaking, as well as provide some clarifications on how we use the term "trade" in this teaching material. After tackling these introductory definitions, the analysis will turn to the core issues at stake in the trade and gender debate. Section 5 will present the multiple channels of interaction between trade and gender. Section 6 will then look at the country case study of Angola, with the objective of applying the previously presented theory to some hard data, as well as providing an initial insight and empirical evidence on the trade and gender debate. The final section (Section 7) will introduce the notion of "mainstreaming gender into trade policy": its meaning in practice, challenges encountered and the steps that need to be taken for trade policy to fully acknowledge and address gender-based

inequalities. The module will conclude with exercises and questions for discussion.

At the end of this module, students should be able to:

- Identify topics related to the trade and gender relationship and understand why and when it is important to investigate them;
- Explain why the economy is a gendered structure and describe its main constitutive elements;
- Compare the strengths and weaknesses of different indicators of gender inequality and identify relevant data sources;
- Understand the difference between “trade” and “trade policy” as well as define and compare different measures of trade;
- Describe the main channels through which gender and trade interact while understanding that the trade and gender relationship is a bi-directional one;
- Understand and gain confidence with the use of a range of different gender analysis frameworks;
- Define the concept of “mainstreaming gender into trade policy”.

2 The economy as a gendered structure

Before delving into the trade and gender debate it is important to clarify the ways in which “gender” and the “economy as a gendered structure” are conceived in this teaching material.

Gender is a system of norms and practices that ascribe particular roles, characteristics and behaviours to males and females based on their sex and generally assign those born female a subordinate status in society. These differences are socially constructed rather than based on any “natural” distinctions and they structure social, economic and political power relations between persons of different genders within the household, the market and society at large. According to UN Women,¹ gender is defined as: “the social attributes and opportunities associated with being male and female and the relationships between women and men and girls and boys, as well as the relations between women and those between men. These attributes, opportunities and relationships are socially constructed and are learned through socialization processes ... [and are] context/time-specific and changeable ... In most societies there are differences and inequalities between women and men in responsibilities assigned, activities undertaken, access

to and control over resources, as well as decision-making opportunities. Gender is part of the broader socio-cultural context. Other important criteria for socio-cultural analysis include class, race, poverty level, ethnic group and age.”

Our analysis in this teaching material focuses on gender biases that prevent women from accessing the same kind of economic, social and political opportunities as men. With the term gender inequalities we refer to the “equal rights, responsibilities and opportunities of women and men and girls and boys” and recognize that gender equality implies that the interests, needs and priorities of both women and men are taken into consideration and that equality between women and men is a human rights issue and as a precondition for, and indicator of, sustainable people-centred development.² With the term gender inequalities we therefore refer to the concrete manifestations of gender bias that create disadvantages for women (e.g. lower wages); with the term gender equality we refer to situations where men and women receive equal treatment (e.g. equal pay for equal work).

By understanding the economy as a “gendered structure”,³ we explicitly acknowledge and identify the gendered power relations that underpin the various institutions, transactions and relations that make up the sphere of the “economy”. That is, we view the economy as part of a system of social relations in which gender is already inscribed, though gender relations within that system can also be transformed and made anew. For example, gender-based discrimination in labour markets is rife and means that women can access only a limited range of occupations and that wages paid to them underestimate their contribution. This is not only a breach of basic labour rights but also makes it harder for a country to take advantage of the full productive capacity of its current and future workforce.⁴ Similarly, when women gain access to employment and income, it may lead to greater power and say in the household and therefore mitigate some gender inequalities.

The first step in looking at the economy through a gender lens is to make visible the unpaid household-based work of caring for others that is vital for the continued functioning of the market-oriented economy. Gender-aware economists draw attention to the fact that goods and services required for adequate living standards are produced not only through market work but also through many hours of unpaid labour spent on cooking and cleaning, collecting water and fuel, and taking care of children, the elderly, ill and able-bodied adults.⁵ This unpaid labour is vital

for the functioning of the paid economy though it remains invisible. It has therefore been proposed that the boundaries of the economic system should be broadened to include both market and non-market dimensions. Understanding the interdependence between non-market activities (alternatively termed “reproduction” or also “unpaid care work”) and market activities (or “production”), and the gender division of labour within these, constitutes the starting point for any gender-aware economic analysis.

Gender-based norms about what is men’s and what is women’s work mean that women are expected to take on the bulk of caring responsibilities (Razavi, 2007). This implies that women (much more than men) have the double burden of participating in both paid and unpaid work. This dual role has often the effect of undermining women’s position and negotiating power in the paid labour market, and jeopardizes their access to credit and other productive resources. For instance, it can make women seek jobs that offer flexible arrangements, such as informal⁶ and part-time jobs, so that they can combine work with care responsibilities. But because informal and part-time jobs usually pay lower wages than formal and full-time jobs, women often have little incentive to engage in paid work, which reinforces their participation in unpaid household/family work (Higgins, 2012). Consequently, women become more vulnerable within their own families because, for example, they are more dependent on their husband’s income.

The second step of a gender-aware analysis is to identify and analyse how gender bias operates and affects women in the multiple roles they play in the economy. Typically, women in the economy are workers and producers, traders, consumers (and users of public services), and tax payers. Of course, women play several roles in parallel and are therefore exposed to different forms of gender inequality that may reinforce each other, putting women at a disadvantage in the market economy (see Table 2 for a summary of these roles and the corresponding gender bias affecting women). In Sections 2.1 to 2.4, we explain and give examples of the operation of gender biases in each of these roles and make brief reference to data sources whenever possible. However, we leave more detailed discussion of gender indicators and data issues to Section 3.

2.1 Women as workers and producers

Women can participate in the economy as workers and producers. In order to understand the gendered structure of an economy and the type of gender bias women have to deal with in these

economic roles, we need to first identify the sectors (agriculture, manufacturing or services) where women and men work and, secondly, what their employment status is (e.g. self-employed, wage employee or contributing family worker).

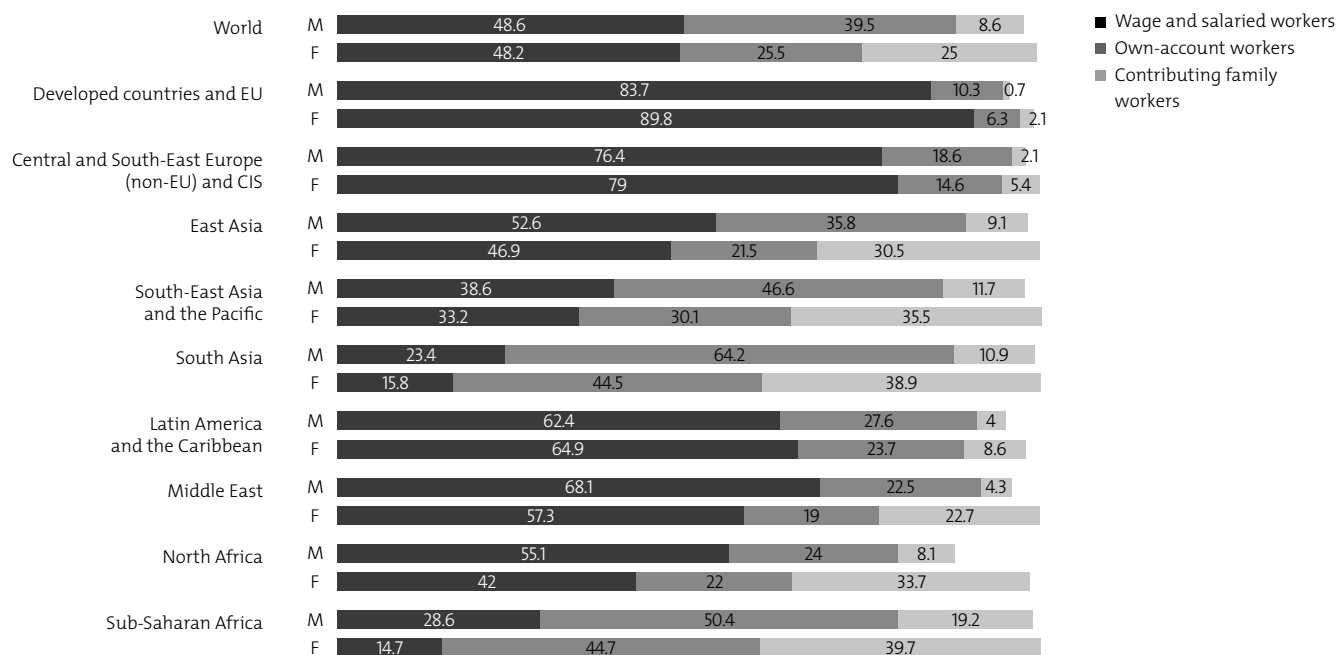
Despite some variations across regions and countries, women not only tend to be concentrated in fewer sectors (“horizontal gender segregation”)⁷ – such as food production in agriculture, textiles and garments in manufacturing, and domestic as well as other social services – but they are also underrepresented in power and decision-making positions (“vertical gender segregation”).⁸ Conversely, men are more evenly distributed across a wider range of occupations and productive activities (World Bank, 2012).

Women are also more likely than men to be found in precarious forms of work. The International Labour Organization (ILO) is a good source of global data on these patterns. Figure 1, taken from the report on women’s employment trends (ILO, 2012), shows for instance that, in all regions of the world, women constitute a larger share of “contributing family workers”.⁹ This gender difference is particularly marked in South Asia, where unpaid family work accounts for 39 per cent of women’s employment compared with 11 per cent of men’s, and in sub-Saharan Africa, where the corresponding figures are 40 per cent for women and 19 per cent for men. A contributing family worker is the most vulnerable form of employment, as his/her status implies no independent access to income.¹⁰

In the same vulnerable position are unpaid (household) female workers, who are also included in the category of women as workers and producers. Responsibility for food preparation, water and fuel collection, housework, as well as child and elderly care, falls disproportionately on women’s shoulders all over the world. For example, Budlender (2008) shows that in India, women spend on average 354 minutes every day on housework and childcare, as compared to men who only spend 36 minutes on it. For Tanzania, the corresponding figures are 270 minutes for women and around 50 minutes for men. The burden of unpaid work is particularly heavy for rural women in remote areas, due to poor physical infrastructure. As mentioned above, this is likely to limit the ability of these women to contribute to paid productive activities and it increases the probability that they will be involved in informal low-return forms of employment (World Bank, 2007). The most used source of information on unpaid work are time use surveys (TUS).

Figure 1

International distribution of total employment by status and sex, 2012 (per cent)



Source: ILO (2012).

Note: EU stands for European Union; CIS stands for Commonwealth of Independent States.

Box 1

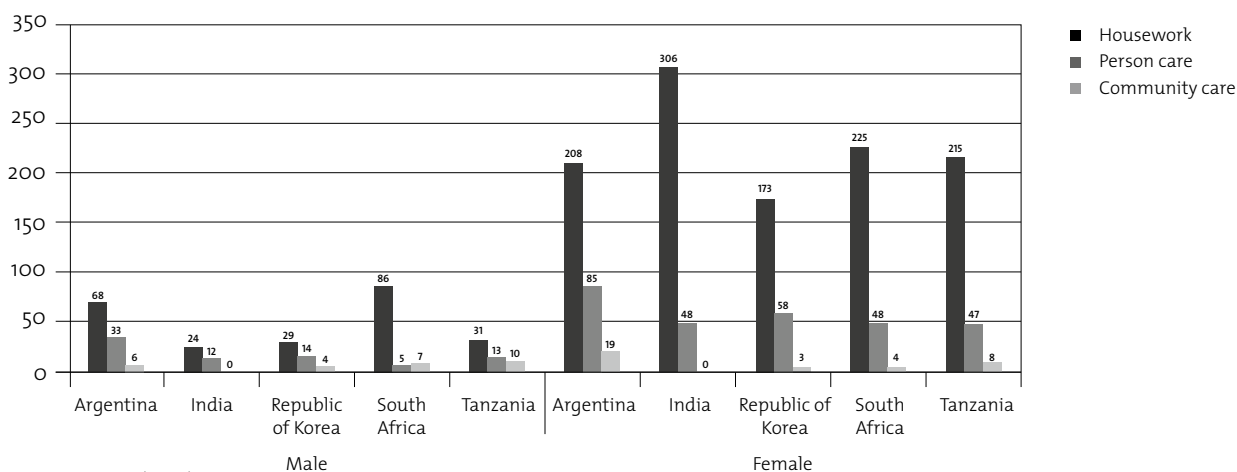
Time use surveys

Information on the time spent on providing unpaid services for the family and neighbours can be gleaned from time use surveys, which are carried out in a growing number of developing countries (see Figure 2). TUS generally measure all types of unpaid work, with a good level of detail both for the activities recorded and the socio-economic characteristics of the people undertaking them (such as whether they live in rural areas or not, and what their levels of income and livelihood strategies are). TUS-based analysis could be used to guide decisions on how to prioritize sectoral allocation of public expenditures and strengthen gender-sensitive policies in key sectors, such as agriculture commercialization, infrastructure and employment. With a few exceptions (such as the Republic of Korea and Mexico), however, developing countries' TUS are currently available only for one point in time, which limits their usefulness for analyses of economic changes over time. Small-scale qualitative research at the grassroots level may offer helpful insights when other statistics are lacking.

Source: UNCTAD Secretariat.

Figure 2

Average time (minutes) per day spent on unpaid care work, by sex, selected countries



Source: Budlender (2008).

Note: The data used vary according to when the countries at stake did the time use surveys: Argentina in 2001, India in 1998/99, the Republic of Korea in 2004, South Africa in 2000, and Tanzania in 2006.

Women’s restricted time availability implies that they face greater disadvantages than men in responding to new economic incentives, especially in their role as workers and producers. Women are also found to produce less than men because of their limited access to productive resources (e.g. credit, land and inputs). Empirical evidence from different countries shows that female farmers are as capable as their male counterparts; however, because of fewer entitlements to land and limited access to inputs, they become less efficient and produce smaller quantities of crops (FAO, 2010). Table 1 shows that in most African countries and half of the Asian countries, women are disadvantaged by statutory and customary law in their right to own and inherit land. With regard to credit, women tend to receive only small loans since they have

limited or no collateral and therefore often remain trapped in low-value activities that may help them in meeting their practical needs but do not widen their opportunities or favour capital accumulation (UNDAW, 2009). With regard to education and vocational training, women and girls have fewer opportunities than men and boys to develop skills because boys are more likely to be sent to school than girls, who often stay at home to help within the household. At a later stage, vocational training, including agricultural extension services, may not fit women’s time schedule and preclude their participation in it. Women’s lower education and knowledge, in particular in cutting-edge technical fields, limits their upward mobility for employment opportunities when the economy moves up the technology ladder.

Table 1

	Inequality related to inheritance rights	No/limited right to acquire and own land	No/limited right to own property other than land
Africa (48)	45	43	35
Northern Africa (5)	5	3	1
Eastern Africa (15)	13	13	12
Middle Africa (8)	7	8	8
Southern Africa (5)	5	5	4
Western Africa (15)	15	14	10
Asia (42)	25	21	19
Central Asia (5)	2	2	2
Eastern Asia (4)	0	1	0
South-East Asia (10)	4	2	1
Southern Asia (8)	7	7	7
Western Asia (15)	12	9	9
Latin America and the Caribbean (22)	2	5	2
Caribbean (6)	2	1	1
Central America (6)	0	3	0
South America (10)	0	1	1
Oceania (2)	0	2	2
Eastern Europe (9)	2	2	1

Source: UNDESA (2010).

Note: The numbers in brackets indicate the number of countries reviewed. The quality of women’s ownership rights was graded from 0 meaning “no restrictions” to 1 signifying complete discrimination against women. Variations between 0 and 1 may indicate the extent of restrictions or the size of the group of women for which the restrictions may apply. Countries presented in the table are those with partial (graded 0.5) or complete (graded 1) discrimination against women on the issue considered.

2.2 Women as traders

Women in developing countries actively participate in informal cross-border trade¹¹ and in those countries where women do not face specific barriers to their mobility, they constitute the majority of street traders and vendors.

Women who own and run micro, small and medium-sized enterprises (SMEs) also fall into this category.

Women as informal cross-border traders face gender-related barriers because of cultural norms that may determine which modes of

transportation are appropriate for women. Gender differences exist in the perception, availability and use of many means of transport, especially in developing countries. Women's control even over simple means of transport, such as bicycles, animals and carts, may be limited. This imposes an obstacle on women to reach markets where their products can fetch fair prices and conditions in a timely manner. In Uganda, for example, it was found that only men could use bicycles, allowing them to travel and trade outside the village, something that women were not able to do then (Malmberg Calvo, 1994). A project in Tamil Nadu, India, introduced bicycles in the 1990s as a way of promoting women's literacy. It was found that bicycles empowered women and changed their lives because they were able to get quicker access to schools, hospitals, and markets. In addition, gender roles changed as women could undertake tasks such as marketing, taking children to school, and running errands typically done by men. Moreover, bicycles allowed women to complete their tasks faster and more easily, freeing time for other activities (Starkey *et al.*, 2002). Female informal cross-border traders may also face harassment by customs officials. As a result, they often get an unfair deal both as sellers and as buyers.

Women street vendors and owners of micro and small enterprises tend to be at a disadvantage compared to men in terms of having less education and bargaining power, and less access to productive resources and market information and networks. Women entrepreneurs often have different responsibilities, goals and business strategies than men. Obligations related to the well-being of the household place extra demands on their time and income. Even when programmes targeting small businesses are available, often they do not sufficiently take into account the needs and local realities of women entrepreneurs. This is why businesses run by women tend to remain small and generate little income, undermining their potential for growth. Considering that in developing countries SMEs are important for generating employment and make up a large share of economic activities, the fact that businesses run by women often remain micro-businesses that are unable to grow and upgrade technologically jeopardizes the growth prospects of the whole economy.

In street trading environments, there is a general lack of health and safety standards. Women often need to travel long distances to access health services; thus, their opportunity cost in terms of lost earnings increases when seeking treatment. These poor conditions, coupled with women's higher household workload, increase women's exposure

to work-related risks, including those related to stress and ill health. As informal workers, women street traders and vendors are also excluded from the protection of labour legislation and are often unable to access formal social protection measures, such as insurance, disability, maternity and unemployment benefits (Lee, 2004).

Sex-disaggregated data on access to markets and other networks are less readily available and not found in standard surveys. Case studies of particular regions or countries and sector-specific gender value chain analyses (of women's involvement in the various stages of production and distribution of a particular commodity relative to men's) are an underutilized source of information for capturing some of these important dimensions.

2.3 Women as consumers

Women in developing countries play an important economic role as consumers: they purchase food and other goods for their families and use public services. Any economic shock resulting in changes in the relative price of necessities and in the provision of essential public services is therefore likely to have a different impact on female and male household members.

Women's contribution to the economy as caregivers means that women essentially buy goods that provide sustenance for the home and family. While a large share of men's income is often devoted to products that Darity (1995) defines as "pure luxury items", women's consumption basket is mainly made up of food products. A change in economic policy that increases food prices means, for example, that women can purchase a smaller amount of food products with a given income. This has consequences for the well-being of the family generally, but particularly so for girls since food may be unequally distributed among male and female members of the family. Collier and Appleton (1995) note that in northern India boys are favoured over girls in terms of food allocation. Smaller quantities of food available in the household can result in higher risk of nutritional deficiencies and ill health for female members.¹²

If an economic shock derives from a change in trade policy, such as a change in tariffs, women will be affected according to: (a) how much influence trade policy has on the domestic prices of imported goods; and (b) their degree of exposure to various imported goods. Module 2 investigates this impact in detail and describes the transmission mechanisms from tariff changes to women's well-being.

Women are also consumers of public services. A change in government revenues – which may be the result of tariff reduction or elimination pursued within the framework of trade agreements – is likely to have gender-specific effects if it impacts the size and composition of public expenditure, e.g. if public services are cut. The privatization of public services pursued unilaterally or in the framework of trade agreements may also lead to higher prices or to the unavailability of such services in remote areas where services provision may prove unprofitable.

The provision of essential services – health and education services, as well as electricity, sanitation and water infrastructure – are likely to favour vulnerable groups the most (if appro-

priately designed and targeted). Gender-aware research, mostly on the early episodes of structural adjustment (see Box 2), has highlighted the greater adverse effects of cuts in public spending on women compared to men (Gladwin, 1991; Elson, 1991). Elson (1991) reported for example that, in Zambia, cutbacks in health expenditure were harming women farmers who could spend less time farming because of the need to care for sick relatives. Gender-responsive budgeting initiatives, promoted in a number of countries (see e.g. Budlender *et al.*, 2002), might be a useful tool both for gathering information on gender patterns of public services use and for ensuring that social sector spending, especially oriented towards promoting gender equality, is protected. However, data on these issues are still limited.

Box 2

What are Structural Adjustment Programmes?

Structural Adjustment Programmes (SAPs) are a set of economic policies that were promoted by the World Bank and the International Monetary Fund (IMF) since the early 1980s as a response to the economic crisis experienced by sub-Saharan Africa during the 1970s. Their aim was to encourage more open and efficient economies and boost economic growth in developing countries. Adopting such policies was often a precondition for countries to obtain loans. SAPs usually included measures such as trade liberalization, deregulation of markets, privatization of public enterprises, a diminished role for the state, reduction of subsidies, and flexibility of the labour market. SAPs became increasingly the subject of criticism because of doubts about their positive impact on the economic growth of developing countries, and concerns about their considerable social costs, including higher unemployment, cuts in welfare spending and greater inequality. In 1999, the World Bank and the IMF introduced the poverty reduction strategies (Poverty Reduction Strategy Papers – PRSPs) as the new framework for concessional lending and debt relief for developing countries.

Source: UNCTAD Secretariat.

2.4 Women as tax payers

Women and men pay taxes. However, because of their different economic roles and responsibilities, women and men are likely to be affected differently by tax policies.

A distinction can be made between explicit and implicit biases against women in taxation (Stotsky, 1997; Elson, 2006; UNDP, 2010). Explicit forms of bias include cases in which men and women are subject to different tax rules. An example is the law in Morocco, which grants tax reductions for dependents to men but not to women (Bouazzaoui *et al.*, 2010, as quoted in Hui, 2013: 9). Implicit forms of bias, on the other hand, are the result of social norms and are more difficult to identify; in this case, the different treatment of men and women is not the result of tax law, but rather of how societies are organized. For exam-

ple, in Argentina, Mexico, Morocco, South Africa, and Uganda, tax exemptions and deductions benefit professionals and those in formal employment, who are more likely to be male (Grown and Valodia, 2010).¹³

Another distinction with respect to gender can be made between direct and indirect taxes (see Box 3). In the case of income tax, for example, changes in income tax tend to disproportionately impact men as they usually earn more and own more wealth. The way in which income tax returns are filed is also relevant in assessing the gendered impact of taxation: when the husband's and the wife's income are pooled together for tax purposes, women – who tend to earn less – may decide to drop out of formal employment if the income loss is partially compensated by lower marginal tax rates (Grown and Valodia, 2010; Tax Justice Network, 2011; Hui, 2013).

Box 3

Direct and indirect taxes

Taxes can be classified in various ways, according to who pays them, who bears the ultimate burden of them, the extent to which the burden can be shifted, and other criteria. The most common classification is direct and indirect taxes.

Direct taxes are taxes on individuals or companies (income and corporate taxes) based on the tax payer's ability to pay as measured by income or wealth. Individual income taxes are commonly levied on the income of tax payers (be they individuals or households). They are frequently adjusted to take into account the circumstances that can impact the ability to pay, such as family status, number and age of children, etc. Direct taxes are often progressive, meaning that tax rates rise along with income. A direct tax is paid to the government and cannot be shifted to another individual or entity.

Indirect taxes are levied on the production or consumption of goods and services or on transactions, including imports and exports. Examples include sales taxes, value-added taxes (VAT), taxes on legal transactions and customs duties. General sales taxes are applied to most consumer expenditures. The same tax rate can be applied to all taxed items; different items (for example food and medicines) can also be subject to different rates. Some basic goods are sometimes exempted from sales taxes to reduce the tax burden of low-income households. Conversely, excise tax is levied only on particular commodities or services, in particular alcoholic beverages, tobacco, and motor fuel. Indirect taxes are collected by an intermediary (e.g. a merchant) from the person who bears the burden of the tax (e.g. the customer).

Source: Encyclopaedia Britannica [online], Taxation, available at: <http://www.britannica.com/EBchecked/topic/584578/taxation>.

Corporate tax can also have different impacts on men and women (Barnett and Grown, 2004). For example, if there are deductions for small-scale enterprises, women may particularly benefit since they often own and manage such enterprises.

Indirect taxes, such as the VAT, are based on consumption rather than on income. Lower income groups – including women – tend to consume a higher proportion of their income than wealthier groups; therefore, they face a higher tax incidence: in other words, they pay more taxes as a proportion of their income.¹⁴ In addition, as mentioned in Section 2.3 above, men and women are reported to purchase different kinds of items. For example, in the case of India, it is reported that female-headed households concentrate their consumption on items such as food, medicines and clothing, while male-headed households have higher expenditures related to beverages, tobacco, and transportation (Hui, 2013).

Since individual data on taxation are often missing, the most frequent approach to assess the gender implications of changes in both direct and indirect taxation is to differentiate between

the sex of the household's head (see e.g. Grown and Valodia, 2010). This should however only be regarded as a rough approximation as household members might have different earnings that are not captured in this approach.

Policies with an impact on trade are implemented in the context of gendered structures like the ones just described. Given that women in many settings have fewer resources than men, they have greater difficulty in both taking advantage of new opportunities generated by trade and coping with adjustments brought about by trade reforms. The objective of this section was to show that economic policies and related reforms are not gender neutral. Attention needs to be devoted to designing policies and complementary interventions with a view to mitigating any adverse impacts and promoting gender-equitable adjustments. The many channels through which trade and trade-related policies interact with gender will be described in Section 5. Before this, we need to deal in greater detail with the definitions and measurements of "gender (in)equality" (Section 3) on the one hand, and "trade" and "trade policy" (Section 4) on the other hand.

Table 2

Women's economic roles and gender bias	
Women's economic role	Gender bias
Workers and producers <ul style="list-style-type: none"> • Self-employed or wage workers • Contributing family workers • Unpaid (family) workers • Casual¹⁵ (seasonal) workers 	<ul style="list-style-type: none"> • Labour segregation at the industrial, sectoral and occupational level (horizontal segregation) • Vertical segregation • Gender wage gap • Concentration in precarious and low-paid forms of work (part-time and informal jobs) • Fewer skills and lower education • Restricted time availability ("time poverty"): household responsibilities fall disproportionately on women's shoulders • Limited access to and control over income and productive resources (i.e. credit, land and inputs)
Traders <ul style="list-style-type: none"> • Informal cross-border traders • Street traders and vendors • Owners of micro and small enterprises 	<ul style="list-style-type: none"> • Time constraints to travel long distances to seek better deals • Limited access to and control over different modes of transportation (e.g. bicycles) • Weaker bargaining power • Higher exposure to gender-based violence and harassment • Limited access to capital • Higher health-related risks • Limited access to formal social protection measures • Limited access to business development services that are usually designed without taking into account the needs of women entrepreneurs
Consumers <ul style="list-style-type: none"> • Purchasers of food and other goods • Users of public services 	<ul style="list-style-type: none"> • Higher exposure to increases in import prices • Higher vulnerability to cuts in public expenditure
Tax payers	<ul style="list-style-type: none"> • Higher exposure to explicit and implicit forms of bias in taxation • Higher risk of dropping out of work as a result of higher direct taxes • Higher exposure to indirect taxes on consumption

Source: UNCTAD Secretariat.

3 Measures of gender (in)equality

This section provides an overview of the various indicators currently used to measure gender inequality. It focuses only on individual indicators

and does not discuss aggregate indices.¹⁶ This is because composite indices are of limited use for analyses that aim to disentangle multiple distributional effects of trade-induced changes, which is the objective of this teaching material.

Box 4

International instruments and goals related to gender equality

Gender refers to the socially constructed differences between women and men. These vary from one society to another, change over time and define who has power and influence over what.

The Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW) was signed by governments in 1979, entered into force in 1981 and has at present 187 States Parties. CEDAW is the first legally binding instrument that takes a comprehensive approach to prohibiting discrimination against women in all domains and is considered a significant achievement.

The Beijing Declaration and Platform for Action (BDPfA) was signed by 189 governments in 1995. The BDPfA is the first international legal instrument to incorporate a detailed action plan that sets out strategies to ensure equality and full human rights for women in 12 areas of concern: poverty, education and training, health, violence against women, armed conflict, the economy, power and decision-making, institutional mechanisms for the advancement of women, human rights, the media, the environment, and the girl-child.

MDG3 is the Millennium Development Goal that specifically focuses on gender equality and the empowerment of women. The target for Goal 3 is to "eliminate gender disparity in primary and secondary education, preferably by 2005, and at all levels of education no later than 2015". This target is measured as the ratio of girls' to boys' enrolment in primary, secondary and tertiary education. The three other indicators added to MDG3 are: the ratio of literate females to males among 15–25 year olds, the share of women in wage employment in the non-agricultural sector, and the proportion of seats held by women in national parliaments. MDG3 has been subject to some criticism for its narrow (mainly social) interpretation of gender equality and women's empowerment, and for the limited attention paid to the impact of economic factors on women's well-being.

Source: UNCTAD Secretariat.

It is important to clarify here the difference between gender equality and women's empowerment; the two concepts are closely related but quite distinct. Gender equality is about women's status relative to men's status, while empowerment refers to whether women have the ability to exercise control, and have options and choice over practical and strategic decisions. Women can be empowered, for instance, by allowing them to make their own decisions regarding the use of their resources and income (economic empowerment); to access good quality education (social empowerment) and to participate in political life (political empowerment). Women's empowerment is a more controversial concept and more difficult to measure than gender equality because it entails many complex dimensions, such as social norms and institutions, which are highly context-specific.

3.1 Three domains of gender equality indicators

The Millennium Project Task Force on Education and Gender Equality has developed a useful operational framework that distinguishes between three domains of gender equality: (a) capabilities, (b) access to resources and opportunities, and (c) security (UN Millennium Project, 2005):

- (a) The **capabilities** domain refers to basic human abilities, such as knowledge and health. These are fundamental to individual well-being and generate the preconditions for engaging in production and economic decision-making. They are usually measured by various education, health and nutrition indicators.
- (b) The **access to resources and opportunities** domain refers to conditions that enable individuals to earn adequate livelihoods for themselves and their families by accessing economic assets and resources and exercising political decision-making. Land, other property and infrastructure are measures of economic assets. Income and employment are commonly used as measures of access to economic resources. Women's share of managerial and leadership positions in cooperatives, businesses and governing bodies can be taken as an indicator of political opportunities.
- (c) The **security** domain refers to vulnerability to violence and conflict. Violence and conflict cause physical and psychological harm and undermine the ability of individuals and communities to fulfil their potential. Security can be measured by indicators such as prevalence of rape, sexual harassment or female trafficking.

Module 3 recalls and draws upon this framework to sketch patterns of gender inequality that may influence a country's export competitiveness.

3.2 Relative and absolute measures of gender inequality

Gender inequalities can be measured in relative and absolute terms.

In relative terms, gender inequality can be assessed in different ways, including the following: One approach is to construct a ratio of female to male achievement which can be called the gender parity index (GPI). It is calculated as:

$$GPI_i^t = \frac{F_i^t}{M_i^t} \quad (1)$$

where F_i^t and M_i^t are the female and male values of indicator i at time t , respectively. The GPI is usually used to measure the relative access of males and females to education; for instance, gender parity indices can be computed for enrolment rates, completion rates, and literacy rates. The GPI of enrolment rates, for example, is calculated by dividing the female enrolment rate by the male enrolment rate for a given level of education. A GPI of 1 indicates parity between the sexes. A GPI that varies between 0 and 1 suggests a disadvantage for females.¹⁷

A second approach is to calculate the relative gap as the difference between the number of males and females of a given indicator (e.g. literacy rates, employment rates, etc.), which in percentage is given by the formula:¹⁸

$$Relative_Gap_i^t = \frac{M_i^t - F_i^t}{M_i^t} * 100 \quad (2)$$

where M_i^t and F_i^t are defined as above. The relative gap can also be measured in terms of wages and, in this case, it is usually referred to as the gender wage gap (or gender pay gap). This relative measure of gender inequality has been the subject of numerous studies, especially with regard to the gendered effects of trade. Module 2 will explain the transmission mechanisms from trade to gender and consider the gender wage gap as well. To set the stage for that analysis, see Box 5 for a detailed description of the gender wage gap.

In absolute terms, gender inequality can be calculated as the absolute difference between the number of males and females in a given sphere of their economic and social lives (e.g. school enrolment); this would be computed by subtracting the number of females from the number of males.

Box 5

The gender wage gap

The gender wage gap is a relative measure of gender inequality in earnings. It refers to the difference between male and female average wages expressed as a percentage of male average wages. In equation (2) above, the indicator i therefore stands for average wages. In this sense, the gender wage gap indicates the disadvantage or advantage that females have in terms of males' average earnings. For example, a gender wage gap of 30 per cent indicates that females earn 30 per cent less than men and are thus in a position of disadvantage; a gender wage gap of -10 per cent suggests that females earn 10 per cent more than men and are thus in a position of advantage. This is the total observed gender wage gap, which is commonly referred to in the literature as the "raw gender wage gap".

However, to gain a full understanding of what the gender wage gap is and how to measure it, further explanations are necessary. Researchers and analysts use and measure the gender wage gap in different ways according to the purpose of their study and data availability. This explanation attempts to provide the reader with some clarifications by following two steps.

The first step is to identify the composition of the gender wage gap or the kind of wage measure one wants to use. Usually, if data are available, the best measure to use would be hourly wages. Because women work fewer hours than men, using monthly or weekly wages could bias (and inflate) the gender wage gap. Using hourly wages not only makes more sense statistically because we are correcting the gender wage gap for hours worked, but can also reveal the real improvements made by women in the labour market.

The second step is to decompose the raw gender wage gap into an explained and unexplained (or residual) component. The former refers to that portion of the gender wage gap that can be explained by factors influencing workers' wages other than hours worked; they include human capital variables, such as education, experience, occupation and union status. The latter indicates the portion of the gender wage gap that remains unexplained after this exercise and that is attributed to gender discrimination or labour market variables that are difficult to account for. For instance, labour market segregation plays a big role in the gender wage gap. In a study on Madagascar (Nicita, 2006), for example, it was found that the textile industry hired equally qualified men and women when it expanded and became internationally competitive. However, while men got high-skilled and better paid positions, women were concentrated in the lowest nodes of the textile production. As a consequence, the gender wage gap increased. Different statistical techniques have been developed to decompose the gender wage gap into its explained and unexplained portion (see e.g. Juhn and Murphy, 1989, or the Blinder-Oaxaca decomposition of 1973).

Source: UNCTAD Secretariat.

Female to male ratios, referred to in the first approach, appear to be the most commonly used measure of gender disparities. It is important, however, to be aware of the drawbacks of such indicators. A problem with ratios is that there may be some cases where a ratio of one, indicating gender parity, is misleading. For example, Klasen (2004) noted that a ratio of one for infant mortality rates would actually be an example of gender bias favouring males rather than equality of survival since it is well known that females enjoy a biological survival advantage over males in infancy. An even more serious limitation is that ratios say nothing about the context in which the change happens and the direction of its individual components. For an accurate interpretation of changes in ratios, information on the data used to construct the different measures must be available. Taking as an example the ratio of female-to-male wages, increases in female-to-male ratios do not necessarily derive from an increase in female wages but can for instance result from either a fall in male

wages, with female wages remaining constant, or a decline in both female and male wages, with male wages declining faster. Without additional information, the researcher would be able to say nothing on whether improvements in the ratio reflect increases in women's wages (desirable) or decreases in men's wages (undesirable). Therefore, a correct interpretation of ratios requires trend analysis of the underlying indicators.

As opposed to relative measures, absolute measures use a fixed threshold against which outcomes are measured. For example, maternal mortality is measured against the benchmark of maximum achievement, in other words, the country with the lowest mortality rate.

3.3 Availability and quality of sex-disaggregated data

The best sources of sex-disaggregated data are household surveys and labour force surveys.

While the former provide extensive information on the living conditions of the household, as well as data on age, marital status, family role, education, employment status, earnings and expenditure for each member of the household, the latter concentrate on labour market statistics (which can also be collected by household surveys), such as wages, hours worked and individuals' union membership. Household and labour force surveys are usually designed and implemented by national statistical offices although there are some surveys sponsored by international organizations (such as the Living Standard Measurement Survey – LSMS – by the World Bank). Listing all the available sources of sex-disaggregated data is not the purpose of this module but we would like to reassure the reader about the question of the patchiness of data raised in Section 2. Despite the paucity of data and lack of standardization across countries that may restrict the capacity to develop appropriate gender indicators for use in gender-aware research and policy, developing countries are strengthening their capacity to develop valid sources of gender-disaggregated statistics. Hopefully, in a few years, improved data, both in terms of quantity and quality, will become available in each domain of gender inequality. As of now, the problem of data availabil-

ity is more acute in some domains than in others (and in some developing regions more than others). The capability domain contains the largest number of comparable cross-country indicators. Very few reliable indicators are however available for the security domain, and data gaps are also prevalent in the domain of economic opportunities. For example, the recent report on progress in statistics of the *World's Women* (UNDESA, 2010) shows that most countries of sub-Saharan Africa and South Asia are missing data on the share of women in non-agricultural wage employment, and even fewer have information on women's relative earnings.

In addition, a frequent problem with many low-income countries' statistics, especially on employment, is that they lack the level of sectoral disaggregation (in agriculture, as well as manufacturing) that is commonly used in trade classifications. This undermines the capacity to carry out comprehensive gender impact assessments of trade liberalization, for example. More general limitations of current household and labour force surveys have to do with the irregularity with which they report details on qualitative aspects of work, such as workplace conditions, benefits, hours of work and earnings.

Box 6

The category of female-headed households

Sex-disaggregated data are often collected on the basis of the distinction between female-headed and male-headed households. Frequently, such data are the only sources available for conducting a gender-sensitive analysis; however, some caution should be used when utilizing them.

Female-headed households may include different situations: one-person households, households where the only adult is a woman, or households where there are two adults – a man and a woman – and the woman is considered the household head. Moreover, women can be household heads on a regular or temporary basis if the male partner is only temporarily absent.

Traditionally, the household head is considered to be the person who is economically responsible for the household and has authority over it. However, this concept loses its relevance in circumstances where both spouses/partners provide economic support to the household and both have responsibilities and authority within the household. The assumption that the male adult in the household is by default the head of the household is misleading and may distort the facts, although such an assumption has been largely used in gender analyses.

Using different criteria to identify the head of the household has an impact on how different kinds of households are associated with different poverty rates. For example, data from Panama, based on the 1997 LSMS, distinguished between three different kinds of female-headed households, namely: (a) households where women reported to be the head of the household; (b) households where women were defined as “potential” household heads since no adult males were present; and (c) households where a woman was providing more than half of the total household labour hours worked. According to the analysis, the overlap between the three categories of households was low and the corresponding poverty rates were different: 29 per cent for the self-declared female-headed households; 23 per cent for the “potential” female-headed households; and 21 per cent for the households mainly relying on a woman's work.

Source: UNDESA (2010).

3.4 Gender indicators for employment, income and assets

The remainder of this section discusses strengths and weaknesses of a few selected variables in the domain of economic opportunities, which are the most commonly used indicators in studies of the relationship between gender and trade. Other indicators of well-being, such as educational attainment or health status, are also relevant to our understanding of the interactions between gender differences and trade changes, however. The reader is encouraged to consult sources such as Buvinic *et al.* (2008) for an extensive list and a comprehensive discussion of all the indicators that have been used by the United Nations and other specialized agencies for monitoring gender equality on a global basis. The UN has also compiled a “minimum set” of 52 gender indicators in different areas, including economic structure and health, and created a directory of UN Resources on Gender and Women’s Issues that interested readers can explore.¹⁹

A number of indicators can be used to capture gender inequality in the domain of economic opportunities (see Table 3 for a summary of these indicators). For paid employment, such indicators include labour force participation, the female share of paid non-agricultural employment and unemployment. For unpaid work, indicators include the female and male shares of non-market time devoted to care. Indicators that capture conditions of and returns from work are female and male shares of vulnerable employment, occupational segregation, and female to male earnings. Other indicators of access to resources may consist of, among others, women’s ownership and control over productive assets, such as land or housing. Some of these indicators are examined in detail below.

(a) The **labour force participation rate** is one of the most widely used indicators of gender inequality in paid work. The rate measures the number of persons in the workforce as a percentage of the population in working age, and is usually disaggregated by sex and age. Both those who are employed and those who are unemployed but looking for jobs are included. Typically, “working-age persons” are defined as people between the ages of 15 and 64. This measure however says nothing about the quality of work and gives no indication as to whether women are entering the paid labour market out of choice or need. Higher female participation in the paid labour force can reflect women’s free choice to take up new opportunities but can also represent “distress sale” of labour by women who are pushed to take up jobs because of the falling earnings of

other household members. Another potential drawback relates to the fact that labour force participation data may undercount workers who only work for a few hours or in their homes. Females are more frequently found in these types of employment than males.

- (b) The **female share of paid non-agricultural employment** is calculated as the number of women in paid non-agricultural employment divided by the total number of persons in paid employment in the non-agricultural sector, and is used for monitoring progress on the achievement of MDG3. One problem is that, in many countries, especially in South Asia and sub-Saharan Africa, non-agricultural wage employment represents only a small portion of total employment. Moreover, this measure does not capture the quality of work. For example, it does not reveal the different types of non-agricultural wage employment, some of which (e.g. domestic services) can be worse than agricultural work in terms of earnings or social protection. If the increase in female non-agricultural employment is driven by an increase of the share of women in low productivity and precarious types of jobs, this should evidently not be interpreted as emancipatory for women.
- (c) **Unpaid work** is classified by the 1993 UN System of National Accounts (SNA) into three categories: (a) housework, childcare and other family-related services not recognized by SNA as economic activity; (b) subsistence and non-market activities, such as agricultural production for household consumption and imputed rent of own-occupied dwellings; and (c) household enterprises producing for the market for which more than one household member provides unpaid labour. An indicator for gender gaps in unpaid work could be the ratio of female hours per week spent on unpaid work to male hours per week spent on unpaid work. A ratio greater than one would mean that women do more such work than men. As already mentioned in this section, time use data, which are essential for the construction of an indicator of gender gaps in unpaid work, are being collected in a growing number of developing countries. However, these data are unfortunately not regularly available and are rarely updated periodically.
- (d) **Unemployment rates**²⁰ disaggregated by sex are important indicators of labour market performance in industrial countries, but are much less useful in low-income economies where the majority of the population is in-

volved either in informal work or self-employment. Unemployment has different meanings in countries that have unemployment insurance, as compared to those that do not. In the latter, most people cannot afford to be unemployed. This is the case for the majority of countries in the less developed regions where visible unemployment may be low but is often disguised as underemployment. In addition, discouraged workers may no longer seek work and are therefore excluded from the count of unemployment. Both underemployment and discouraged worker effects are likely to have distinct gender patterns across countries, and even within countries.

- (e) **Occupational segregation** (i.e. the separation of women and men into different occupations) can reflect different opportunities available to female and male workers and can be useful to capture the rigidity of occupational hierarchies and “job ladders” for women. Occupational segregation is usually measured by the index of dissimilarity (*ID*). This index can vary from 0 (no segregation, implying an equal percentage of women in each occupation) to 1 (maximum segregation, implying that all female workers are in occupations where there is no male worker) and is measured as the sum of the ab-

solute difference in women’s and men’s distribution over occupations. It is calculated as:

$$ID = \frac{1}{2} \sum \left| \frac{M_i}{M} - \frac{F_i}{F} \right| \quad (3)$$

where M_i is the number of males in the occupation i , M is the number of males in the workforce, F_i is the number of females in the occupation i , and F is the number of females in the workforce. The index score can be interpreted as the percentage of workers that would have to change jobs to obtain equal distribution of employment. The index of dissimilarity does not measure discrimination itself, but rather the tendency of labour markets to be segmented along gender lines. Another drawback related to data availability is that occupational segregation may not cover informal employment.

A good source of data for occupational segregation is the ILO SEGREGAT dataset which contains employment statistics for detailed occupations by sex (see Box 7). Although employment information is provided for more than 80 developed and developing countries, data are not always comparable across countries and points in time because of differences in data sources, data coverage and national classifications used across countries.

Box 7

ILO SEGREGAT dataset

The ILO SEGREGAT dataset contains disaggregated employment information by sex at the three-digit occupational level. Statistics are provided in different occupational classifications depending on how data are collected by the country; however, for most countries, employment information is available at the ISCO-88 three-digit occupational level.²¹ Employment is defined by the total number of people employed and in search of employment (depending on the source of information at the country level) in a specific occupation.

Source: UNCTAD Secretariat.

- (f) **Earnings** are a key factor affecting inequality in economic opportunities. The gender wage gap falls in this category and, as mentioned above, reflects inequalities that almost invariably affect women. In particular, women’s earnings tend to be lower than men’s because of occupational segregation in lower-paid positions or direct earnings discrimination. Yet, the wage gap may also reflect individual choices: women are often prepared to accept lower pay as a result of lower aspirations with regard to earnings. A major drawback of the gender wage gap is that earnings data disaggregated by sex are not provided by many countries. When they exist, they are mostly available only for non-agricultural work and often only for the formal manufacturing sector. Accurate information on remuneration from informal employment, for instance, is rarely available.

Comparability of wage data across countries is further affected by the inclusion or exclusion of overtime pay, bonuses, payments in kind and other allowances, as well as the unit of time used. Earnings are mostly reported as average earnings per month, which further complicates comparison between male and female wages when data on hours of work are not available, since women tend to work different hours than men. Limited data on gender-disaggregated wages is a serious problem that undermines the analysis of trends over time and across countries.

- (g) **Distribution of assets.** In agricultural societies, access to assets, such as land and credit, may be more salient as an indicator of gender equality than wages and employment (as noted by Agarwal, 2003). Yet sex-disaggregated data on

the distribution of land and housing ownership or on credit access are even more patchy than data on wages. In Africa and Asia, most of the information on the distribution of land ownership by gender comes from scattered household surveys. Some of the LSMS managed by the World Bank include questions on individual ownership of land, but the frequency is low. Even when legal data on women's access to land, house titles or credit are available, this is not sufficient to gauge whether they

have control over such resources in practice, due to social pressures and conventions. Efforts are currently under way to support the revision of the definition of agricultural holder in agricultural censuses so as to allow for the collection of data that reflect the possibility of multiple ownership of land and multiple decision-making in rural households (FAO, 2010). This is a promising step, but, for the moment, assessments of gender equality in agriculture-based economies remain challenging.

Table 3

Summary of gender indicators for employment, income and assets					
Indicator	Category	Domain	Description	Strengths	Weaknesses
Labour force participation rate (LFPR)	Paid employment	Access to resources and (economic) opportunities	$LFPR_i^t = \frac{EMP_i^t + U_i^t}{POP_i^t} * 100$ <p> EMP_i^t = number of employed of gender i at time t U_i^t = number of unemployed but seeking employment of gender i at time t POP_i^t = population in working age of gender i at time t </p>	<ul style="list-style-type: none"> • Most widely used indicator of gender inequality in paid work • Data availability 	<ul style="list-style-type: none"> • No information on quality of work • Does not account for workers who work only for a few hours or household workers
Female share of paid non-agricultural employment (FPNAE)	Paid employment	Access to resources and (economic) opportunities	$FPNAE^t = \frac{FNAE^t}{NAEMP^t} * 100$ <p> $FNAE^t$ = number of female in paid non-agricultural employment at time t $NAEMP^t$ = total number of female in paid non-agricultural employment at time t </p>	<ul style="list-style-type: none"> • Monitors progress on MDG3 	<ul style="list-style-type: none"> • Does not capture quality of work • In developing countries, paid non-agricultural work only represents a small fraction of employment
Domestic work ratio (DWR)	Unpaid employment	Access to resources and (economic) opportunities	$DWR^t = \frac{DF^t}{DM^t}$ <p> DF^t = female hours per week spent on housework at time t DM^t = male hours per week spent on housework at time t </p>	<ul style="list-style-type: none"> • Accounts for the part of domestic work that falls disproportionately on women's shoulders 	<ul style="list-style-type: none"> • Time use surveys not readily available and rarely updated
Unemployment rates (UR)	Paid and unpaid employment	Access to resources and (economic) opportunities	$UR_i^t = \frac{U_i^t}{EMP_i^t + U_i^t}$ <p> U_i^t and EMP_i^t as above </p>	<ul style="list-style-type: none"> • Important indicator of employment and unemployment, especially in developed countries 	<ul style="list-style-type: none"> • Does not account for self-employed, underemployed or those employed in the informal sector
Index of dissimilarity (ID)	Occupational segregation	Access to resources and (economic) opportunities	$ID = \frac{1}{2} \sum \left \frac{M_i}{M} - \frac{F_i}{F} \right $ <p> M_i = proportion of males in occupation i F_i = proportion of females in occupation i M = number of males in the workforce F = number of females in the workforce </p>	<ul style="list-style-type: none"> • Measures the distribution of occupations across genders 	<ul style="list-style-type: none"> • It is not an exact measure of discrimination • Data availability • Does not take into account informal employment
Gender wage gap (GWG)	Earnings	Access to resources and (economic) opportunities	$GWG = \frac{W_m^t - W_f^t}{W_m^t} * 100$ <p> W_m^t = males' (hourly) wages at time t W_f^t = females' (hourly) wages at time t </p>	<ul style="list-style-type: none"> • Conveys the extent of gender-based discrimination in wages when human capital variables are accurately controlled for 	<ul style="list-style-type: none"> • Data availability • May not capture gender inequality in agriculture-based economies
Distribution of assets	Access to resources	Access to resources and (economic) opportunities		<ul style="list-style-type: none"> • More accurate measure of gender inequality for agricultural economies 	<ul style="list-style-type: none"> • Data availability

4 Trade: Definition and measurement

In the previous section, we have seen that gender (in)equalities can be defined and measured in various ways. This section analyses the concept of “trade”; its aim is to clarify what we identify as trade and how it can be measured. Indeed, just when looking at the literature on trade and gender, there are many different interpretations of trade depending on the purpose of the study, and the use of one measure or another may sometimes lead to very different conclusions. It is thus important to be clear about which measure of trade is being used and to be aware that the validity of the statements depends on the choice of the indicator. In the remainder of this teaching material, we will also use “trade” to refer to different phenomena. But before explaining what we mean by trade, it is useful first to make some paramount distinctions and disentangle the different levels of analysis involved.

4.1 Some preliminary distinctions

At the outset, it is important to distinguish between “trade” and “trade policy”. “Trade” refers to the international flow of goods and services, or the exchange of goods and services across international borders. “Trade policy” refers to laws, regulations and requirements affecting trade. Both concepts deserve closer scrutiny.

4.1.1 Trade

When assessing the relationship between trade and gender, two structural aspects of trade are frequently considered, separately or together: the degree of trade openness of an economy, and patterns of structural transformation in the composition of trade.

(a) Trade openness

The first issue – trade openness, or more precisely, “trade openness in practice” – indicates a country’s degree of integration into the world economy. In other words, trade openness gauges the importance of international transactions relative to domestic activities and is usually measured by actual trade volumes in a specified period of time. Specific indicators include either exports or imports, or both.²² These can be recorded either in absolute terms or as a share of a country’s gross domestic product (GDP).

Trade openness “in practice” shall be kept distinct from a different though related notion of “openness in policy” (see Table 4). The latter is concerned with the existence and extent of measures designed to restrict or enhance trade (McCulloch *et al.*, 2001), an issue discussed below under “trade policy”. Some of the most commonly used indicators include simple or trade-weighted average tariff levels, collected tariffs, the effective rate of protection, non-tariff barriers (NTBs) and various composite indices. Openness in practice is not necessarily linked to trade openness in policy as it may also be the result of non-policy factors such as the size of the country, natural resource endowments and other determinants of comparative advantage²³ (McCulloch, 2001). This is why it is important to recognize the difference between the two measures. Governments may not be able to determine or control openness in practice. Higher or lower exports and imports are not necessarily the result of policies. Geography, size and income are important determinants of a country’s external sector as well. For example, trade generally accounts for a much larger share of GDP in small countries than in large countries. Countries that are open in practice may not be open in policy and vice versa. In addition, trade policy may not translate into the desired trade outcomes for various reasons. These include limited physical infrastructure (such as ports and roads), weak productive capacity and lack of resources and measures to stimulate their development, distorted markets, restricted access to information and productive resources. Most of these impediments affect vulnerable women in particular. We will further discuss this point in the next modules, especially in Module 3. Obstacles can also exist at the international level (and be beyond the control of a country’s government), such as when market access is restricted by trading partners, volatility in world prices of a country’s main export is high, or competition from other countries increases.

An ideal measure of a country’s openness would be an index that includes all measures that distort international trade. Researchers have tried to construct various indices of trade restrictiveness (Leamer, 1988; Sachs and Warner, 1995; Kee *et al.*, 2006, etc.) and rank countries according to them, but the emerging consensus is that these indices have important shortcomings.

Table 4

Measures of trade openness	
Openness in practice	
Measure	Definition
Volume of exports and/or imports	Volume (in quantity or value terms) of exports and/or imports in a specific point in time, usually a year.
Total trade	Sum of exports and imports in a specific point in time.
Trade share	Ratio between exports (and imports) and the country's GDP in national currency: $\text{Trade} = \frac{\text{Exp (+Imp)}}{\text{GDP}}$ Sometimes imports are not included, depending on the purpose of the analysis.
Adjusted trade shares	Ratio between exports and imports and the country's GDP in purchasing power parity (PPP). This measure is useful for correcting for the different prices of tradables and non-tradables in countries at different stages of development.
Growth rate of exports/imports, total trade/trade share	Change from one point in time to the next (usually a year) of the respective indicator.
Openness in policy	
Measure	Definition
Tariff averages (simple or trade-weighted)	Simple average tariffs are calculated by adding up all the tariffs and dividing by the number of import categories. The simple average tends to overstate protection; the weighted average – calculated by weighing each tariff by the value of imports in the respective category – is therefore used to overcome this problem. This may however lead to the opposite problem, that of understating protection, since, for instance, prohibitively high tariffs would be underrepresented.
Effective rate of protection	By taking into account the effects of tariffs on inputs to production as well as on the output, the effective rate of protection estimates how a country's tariff structure protects the value added of industries at different stages of production. The idea is that the effective protection of a good is equal to the sum of protection applied to its components.
Collected tariff ratios	Collected tariffs, defined as the ratio of actually collected custom duties to import values, are one of the most direct indicators of trade restrictions. Pritchett and Sethi (1994) documented the wide divergence between collected rates and official tariff rates and argued that to use collected rates as “effective” tariffs might be more appropriate. The relevance of this indicator is likely to depend on the factors that cause the divergence between the two rates.
Coverage of quantitative restrictions or other non-tariff measures	Another measure is the percentage of goods covered by quantitative restrictions (quotas) or other NTBs, such as export subsidies or import incentives.

Source: Based on definitions in Edwards (1993) and McCulloch *et al.* (2001).

(b) Structural composition of trade

When assessing a country's trade stance, it is important to move beyond an assessment of trade openness, and explore some structural or qualitative aspects of a country's foreign trade. Two important aspects in this respect are the degree of export diversification/concentration and the technological intensity of a country's foreign trade. Both of them may have important gender ramifications. For example, an increase in labour-intensive exports with low technology intensity, such as clothing or light assembly manufacturing, is often accompanied by an increase in female wage employment in the formal sector. A number of country case studies by UNCTAD (e.g. on Lesotho and Angola) assess the gender ramifications of structural changes in output and trade.

The degree of concentration/diversification of a country's foreign trade is captured through different measures, including: the number of products traded internationally by a country (a very simple measure of diversification); concentration indices, which show how exports and imports of individual countries or a group of countries are concentrated on a limited number of products or otherwise distributed in a more scattered manner among a series of products; and the diversification index, which reveals the extent of the differences between the structure of trade of the country or country group and the world average.²⁴ Measures of technology intensity aggregate and classify goods by technology content.²⁵

Before moving on to consider the second term – trade policy – it is important to recall that there are static and dynamic measures of trade. The for-

mer indicate the state of trade at a specific point in time, such as the amount of export volumes of a country in a given year, and convey the level of integration of a country. Dynamic measures of trade identify changes in trade over time such as the growth rate of exports. Changes in trade may be the result of trade reforms but can also reflect changes in prices when trade flows (i.e. exports and imports) are measured in values, or changes in the industrial policy of the country. Changes in trade may also be the result of demographical changes (i.e. a growing population has bigger consumption needs) or switches in consumption patterns (e.g. the introduction of more meat in the diet, partially replacing cereals).

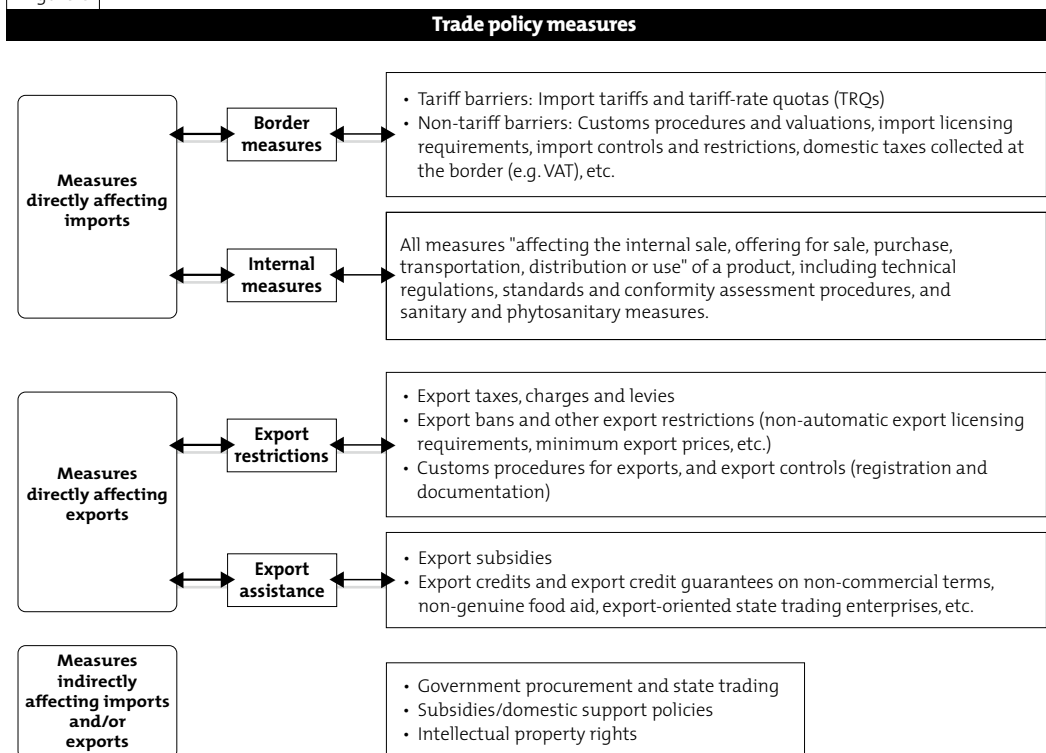
4.1.2 Trade policy

The term “trade policy”, as mentioned above, covers laws, regulations and requirements affecting trade. We often talk of “trade policy in practice”. Indeed, what matters is not only the rule as such, but the way the rule is applied in practice.

To substantiate the notion, it is important to distinguish between the two sides of the trade policy equation: policy measures affecting imports,

on the one hand, and policy measures impacting exports on the other (see Figure 3). The first type of measures relates to the degree of a country’s import trade openness, or in other words the degree of market access it grants. The second type of measures shapes a country’s export competitiveness (e.g. export subsidies), among other things, but it may also serve domestic policy purposes, such as food security (e.g. export restrictions on domestically consumed staples). For trade policy purposes, it is also important to distinguish between border and internal measures (as a matter of fact, a rather intractable distinction – internal measures are often enforced at the border); and between tariffs and non-tariff barriers. We shall also consider a wide spectrum of trade policies and instruments that affect domestic production and trade (from domestic support to state trading) although they are not specifically focused on the regulation of trade flows. Trade policy covers all these aspects, which are in practice complexly intertwined. It is also important to stress that the term “trade policy” is neutral in terms of policy direction: it covers both trade liberalization measures – aimed at the removal or reduction of tariff and non-tariff barriers on the free exchange of goods and services – and protectionist measures.

Figure 3



Source: UNCTAD Secretariat.

Trade measures, and particularly tariffs, can be analysed at various levels of aggregation. On the one hand, aggregate measures provide general information on a country's trade openness, including its trade partners, and can be useful at an initial stage of a trade-related analysis. On the other hand, disaggregated measures focus on a country's trade openness at the sectoral, product or firm level and this micro-level information becomes more useful for a detailed trade-related analysis, such as when investigating the

gendered distributional impacts of trade. As a general rule, in reviewing a country's trade policy, it should be borne in mind that "the devil is in the detail": meaning that to yield meaningful insights, the analysis of import and export-related measures should be conducted at a disaggregated level (ideally by product, at the HS 6-digit level), taking into due account a country's bilateral trade flows (major exports and imports by destination and source country). Box 8 provides a description of the classification of traded goods.

Box 8

International systems of classification of traded goods

The Harmonized Commodity Description and Coding System (HS) is an international nomenclature for the classification of products developed by the World Customs Organization (WCO) in 1988. It has been adopted by most countries worldwide and is currently used to classify over 98 per cent of world merchandise trade. The classification has undergone several updates since its inception to reflect developments in technology, changes in trade patterns and the needs of users. The HS comprises about 5,300 product descriptions that appear as headings and subheadings, arranged in 99 chapters, grouped in 21 sections. At the international level the HS is a 6-digit code system. Additional digits may be added at the country level.

The Standard International Trade Classification (SITC) was developed by the United Nations, with the intention of classifying traded products not only on the basis of their physical properties, but also according to the stage of processing, their economic use and their technological properties. The overall aim of the SITC is to facilitate economic analysis. The SITC maintains a correspondence with the HS and this is why it has undergone four revisions (revision 4 was adopted in 2006) to maintain consistency with the development of the HS. SITC classifies merchandise in approximately 3,000 commodity groups and is less detailed than the HS.

Source: UN Statistics Division.

With the progressive removal of formal trade barriers, other issues have gained importance. These include trade facilitation as well as tackling non-official market entry restrictions.

Narrowly intended, trade facilitation refers to the simplification of trade procedures (e.g. procedures for customs clearance). More broadly intended, trade facilitation is concerned with: the establishment of trade-related infrastructure (e.g. transport and storage); the delivery of supply-side services to enhance productive capacity (e.g. market information services or agronomic extension services); and the delivery of aid for the implementation of trade policy reforms. Trade facilitation is currently part of trade policy. To some extent, there has been a shift in emphasis in trade policy from "trade liberalization" to "trade facilitation". For instance, the gains that the African, Caribbean and Pacific (ACP) countries could obtain from signing the European Partnership Agreements (EPAs) with the EU are more linked to trade facilitation than market access.²⁶ At the Bali World Trade Organization (WTO) Ministerial Conference in December 2013, WTO members reached a consensus on a Trade Facilitation Agreement as part of a wider "Bali Package". The agreement contains provisions

focused on measures and policies aimed at simplification, harmonization and standardization of border procedures, along with provisions for technical assistance and capacity building in this area.

Market entry barriers are barriers to trade that arise from the structural characteristics of supply chains and markets. Indeed, the actual ability to enter an export market is not only affected by government regulations that determine market access conditions. Important trade barriers arise from entry conditions posed by private actors, e.g. private standards set by large distribution networks (UNCTAD, 2003). These issues, which fall beyond the remit of the WTO, may possibly be tackled within the framework of trade facilitation initiatives.

4.2 The use of the concept of trade

We will now discuss the particular concept of trade used in this teaching material.²⁷

In Module 2, where we will describe the transmission mechanisms from trade to gender, you will notice that the most frequently used trade-related terms are:

- **Trade policy**, which refers to a set of policy measures affecting international trade, including changes in tariffs and non-tariff measures. As discussed, trade policy can either indicate a fall or an increase in trade barriers; the decision of a country on which kind of trade policy to implement depends on both domestic (e.g. industrial policy) and external factors (e.g. pressure from the international community, surge of exports).
- **Trade liberalization**, which indicates the reduction or removal of trade barriers in the form of tariffs and non-tariff measures, including quantitative restrictions. Trade liberalization is one of the options available for trade policy formulation (as opposed to trade protectionism). It may be the result of bilateral, regional or multilateral commitments taken by a country, or may be pursued unilaterally. Following our classification above, trade liberalization falls in the category of “trade openness in policy”. However, trade liberalization is often confused with “openness in practice” because of the causality effect linking the two concepts. A reduction in trade barriers encourages and often leads to an increase in trade flows but, as we have seen above, this is not always the case.
- **Trade protectionism**, which refers to restrictions on imports by means of tariffs and non-tariff measures meant to protect domestic producers from competition with imported goods.
- **Trade integration**, which refers to the process of increasing a country’s participation in the world market through trade, accomplished by trade liberalization.
- **Trade flow**, which indicates the quantity or value of a country’s trade with another country within a certain period of time.
- **Trade share**, which refers to either imports or exports (or their sum) as a percentage of GDP.
- **Trade regime**, which refers to the laws and practices that govern a country’s international trade.
- **Free trade**, which refers to a situation where there are no barriers to trade.
- **Trade performance**, which is quantified in terms of export flows. We say that a country has improved its trade performance when it has experienced an increase in the quantity

of exports. This may be the result of a reduction in trade barriers by a trading partner or of an export-led growth strategy promoted by the country itself. Identifying an increase in the value of exports as an improvement in trade performance may however be incorrect, depending on whether it is the prices or the quantity of exports that have increased.

In Module 3, where we will analyse the effect of gender on trade, we will refer to trade in terms of trade (ToT) performance and/or export competitiveness. In the latter case, a country’s export competitiveness is measured in terms of lower prices of its exports compared to the prices of its international competitors. Improved export competitiveness may translate into increased trade performance and create positive spillover effects on a country’s economy as a whole. We will further elaborate on this point in Module 3 and explain the historical role of gender inequality in increasing export competitiveness in some South-East Asian countries.

5 The trade-gender relationship

5.1 A two-way relationship

Changes in a country’s trade patterns and volume (whether resulting from domestic trade policies or from trends at the international level, such as instability in world prices of exports and imports) take place in the context of economic structures and institutions that tend to be shaped by gender bias. This has two implications.

The first implication is that the distributional outcomes of trade vary by gender: within a country, men and women tend to be affected by changes in trade patterns and volumes differently, as discussed in detail in Module 2. Furthermore, the effects of trade are likely to vary among women themselves, depending on their ethnicity, age, income, educational level, migration status, as well as the social obligations prevailing in their households and communities. Module 2 elaborates on the discrete impact of trade and trade policy on women and men (the first side of the equation of the trade-gender relationship).

The second implication is that gender inequalities tend to affect trade strategies for competitiveness and the extent to which a particular set of trade measures will translate into the desired economic performance. Possible reasons for bottlenecks between trade policy and trade performance include inadequate productive capacity, restricted access to information and markets, limited availability

of productive resources, such as skills or credit, as well as weak infrastructure. All these factors can be said to be “gender intensified” in the sense that they reflect asymmetric distributions which can in principle limit men’s opportunities as well as women’s, but which usually bear down more heavily on women. Module 3 discusses the impact of gender bias on a country’s competitiveness and export performance (the second side of the equation of the trade-gender relationship).

5.2 Gender-sensitive frameworks for the analysis of the trade-gender relationship

A number of analytical frameworks exist that could help in organizing our thoughts about the interaction of trade with gender inequalities. An approach frequently used in gender analysis, but which can also be applied to the links between trade and gender, is to distinguish between the “macro”, “meso” and “micro” levels (Elson *et al.*, 1997). Macro-level analysis examines the gender division of the labour force between the productive market sectors and reproductive sectors. Meso-level analysis looks at the institutions and frameworks responsible for the distribution of resources, the provision of public services and the functioning of labour, commodity and other markets. Micro-level analysis provides an in-depth analysis of the gender division of labour, resources and decision-making, particularly within the household (UNICEF, 2011).

Our analysis of the channels of interaction between trade and gender suggests that trade can affect gender inequalities at all these three levels. For example, gender gaps in market participation may narrow if the expanding sectors are more female-intensive than the contracting sectors (macro); public provision of social services that favour women (such as health and education) may be undermined if the loss of government revenue from reduced tariffs leads to cuts in such services (meso); female control over household spending may be reduced or extended, depending on whether trade liberalization destroys or creates sources of independent income for women (micro). Employment, public provision and consumption effects may in turn have consequences for the level and gender distribution of unpaid work at both the micro level (among household members) and macro level (between households and public institutions).

Another useful distinction when analysing the gender impact of trade is the difference between practical and strategic gender needs (Moser, 1989). Moser argues that it is important not only to assess the impact on women’s current mate-

rial status, given their tasks and responsibilities under the established gender division of labour (practical needs), but also to examine whether outcomes contribute to more egalitarian gender relations in the long term, by reducing the basis of women’s economic disadvantage and widening women’s options (strategic needs). An assessment of trade interventions through the practical versus strategic needs lens would lead, for example, to prioritizing interventions that enhance the economic participation of vulnerable women in new sectors (for instance, by promoting training that boosts their upward mobility in technical jobs) over measures that are confined to supporting a few traditionally “female” industries, such as textiles.

Another important contribution to conceptual frameworks for the analysis of trade and gender is provided by Elson *et al.* (2007) who draw on heterodox trade theories to develop a critique of the concept of comparative advantage and highlight that the acquisition of competitive advantage is a gendered process. They refer to post-Keynesian and Marxist theories that maintain that trade is based on absolute advantage rather than comparative advantage and that competition should be understood in terms of a proactive search for competitive advantage where each actor (e.g. firms) uses strategies to dominate other actors. We will see in the following section how this theoretical framework can be used to analyse the channels of interaction from gender to trade.

5.3 Channels of interaction between trade and gender

We start by describing how trade affects women’s economic empowerment and well-being. Trade alters the distribution of income and resources between different groups of women and men through different channels, and affects them in their multiple roles as workers and producers, consumers, and tax payers entitled to public services.

First of all, trade may lead to changes in the structure of production, with sectors producing for export expected to expand and other sectors sensitive to import competition expected to contract. This, in turn, causes changes in the level and distribution of employment of different categories of workers (employed in different sectors with different intensities), as well as in their remuneration. The economic volatility often associated with production for world markets is also likely to affect the quality and security of employment for various groups of workers and producers differently, with small-scale producers and low-skill workers more often bearing the brunt.

Second, trade-induced changes in the relative prices of goods and services bring about changes in real incomes that affect groups differently, depending on their consumption patterns and livelihood strategies. This will have implications for both resource and time allocations within different types of households.

Third, trade openness is also likely to reduce tariff revenues, and this, in turn, may have gender-specific effects on the size and composition of government expenditure (for example, via the availability of government resources for social programmes and infrastructure). Even if the government manages to replace tariffs with alternative direct or indirect taxes, these may have a gender-differentiated impact.

The theoretical framework provided by Elson *et al.* (2007) mentioned in Section 5.2 is useful to understand how gender inequality affects trade. The authors argue that gender inequality positions women more as sources of competitive advantage than achievers of competitive advantage (see Box 9 in Module 2). The former refers to women as unpaid family workers and wage workers contributing to businesses run by others; the latter refers to women as owners of businesses employing other people or as own-account self-employed producers. They observe that to achieve competitive advantage producers need access to land, technology, knowledge, freedom from other demands on their time, markets and a favourable policy environment. Many barriers prevent women from using these resources to compete with men. When female business owners or producers achieve competitive advantage, it is usually in a niche market, at the local level.

On the other hand, because of gender gaps in power in labour markets and households, women are a source of competitive advantage for producers using labour-intensive production methods. Gender bias in labour markets enables these producers to pursue a strategy that combines modern technology in transport and marketing with the use of cheap labour. Although export expansion in labour-intensive goods, both in manufacturing and agribusiness, seems to advantage women in terms of the availability of wage employment, the competitive advantage of firms that employ them depends on women's lower pay and poor working conditions.

Elson *et al.* (2007) conclude by noting that such strategies are not only bad for gender equality but also counterproductive for business as a whole in the long run, in that they undermine the conditions for a healthy and skilled labour

force. We will provide more details on the transmission mechanisms from gender inequality to trade in Module 3.

6 Case study on gender and trade: Angola²⁸

We now present a country case study to understand more concretely the issues we have addressed in an abstract manner so far. The country we look at, Angola, has a specific gender pattern of employment which is a reflection of the country's socio-economic structure. The case study provides insights into the gender ramifications of trade-led structural changes in an oil-dependent country. Our choice of country was not accidental; indeed, by describing the Angola experience, our aim is to make the reader aware of the complexities that arise when investigating the relationship between trade and gender, as well as recognize that the outcomes are country-specific and cannot be generalized, though some policy implications can indeed be drawn and good practices identified.

At the end of this module, we will suggest a set of questions encouraging the reader to explore the issues related to trade and gender. At the same time, these are the questions that researchers and/or policymakers should think about when undertaking an empirical country-specific analysis on the interplay between trade and gender, or when assessing theoretical models about the ways trade and gender interact.

6.1 Basic facts about the economy

Angola is a country rich in natural resources, particularly mineral and oil resources. There are also rich fishing resources, and the abundance of arable land and favourable climatic conditions facilitate the growth of a variety of agricultural crops and the raising of livestock. However, the favourable land and environmental conditions enjoyed by the country have not yet translated into opportunities that would enhance the well-being of the population. The country faced forty years of armed conflict, which started in 1961 with the struggle for independence from Portugal and continued with the civil war that erupted immediately after Angola gained independence in 1975. Peace was only finally achieved in 2002. As a consequence of the long period of armed conflict, the agricultural and manufacturing sectors were seriously disrupted. A decade after the end of the war, Angola has made substantial progress in economic and political terms, but the distortions generated by the long internal conflict still affect the economy and society and have specific repercussions on women.

During the decade that followed the end of the armed conflict (2002–2011), Angola experienced an average annual growth rate of 12 per cent, making it one of the fastest growing economies in the world. Growth has been spurred by the massive reconstruction projects as well as high international oil prices. However, the combined effect of peace and high rates of economic growth have had a limited impact on the reduction of poverty. Inequality and levels of extreme poverty remain quite high: according to the World Bank, 67.4 per cent of the population lived on less than \$2 per day (in PPP) in 2009. Poverty is greater in female-headed households, especially in rural areas. Angola remains one of the most unequal countries in the world. In addition to overall inequality, there is a large cleavage between the rural and urban areas.

Regarding Angola's production structure, the extractive sector is predominant, with around 64 per cent of GDP in 2009. Services contributed to around 25 per cent of GDP, agriculture and fishing to around 8 per cent and manufacturing only to around 4 per cent. Despite the poor performance of agriculture, the sector remains the main source of income for the majority of the population and accounts for over 80 per cent of all jobs generated in the country. Female workers represent 70 per cent of all persons engaged in agricultural activities.

Angola is characterized by one of the largest informal economies in the developing world, the so-called *candonga*. Informal activities are estimated to contribute to approximately 45 per cent of the Angolan GDP and to provide a living to a significant proportion of the Angolan population, especially women.

6.2 The gender profile of Angola

The situation of women in Angola is still fraught with challenges inherited from the legacy of nearly forty years of conflict. This puts women at a disadvantage in terms of health, educational attainment and access to vital resources, such as land. As regards health, lack of access to reliable and consistent medical services puts women's health at risk and reduces their ability to participate in society and in the economy because of time spent taking care of the ill and old members of the family. Gender-based violence has been a serious problem in Angola, both during and after the conflict, and it aggravates women's precarious social status. Gender imbalance is marked in education: the adult literacy rate is 82.7 per cent for men and only 58.1 per cent for women. Seventy-eight per cent of girls and 98 per cent

of boys are enrolled in primary school. As a result, Angolan women face significant barriers in terms of resource and time availability in order to participate meaningfully in the country's social and economic development. On an encouraging note, however, women are well represented in decision-making positions.

The principles of gender equality and non-discrimination against women are enshrined in the Constitution and in the major laws of the country. The analysis of domestic policies shows evidence of Angola's commitment towards gender equality and of the government's resolve to consider gender issues and women's empowerment as a fundamental component of the national development strategy. Angola has a dual legal system based on Portuguese civil law and customary law. Customary law in Angola – as well as in several other African countries – may have a discriminatory effect on women, for example in terms of limiting their rights to property. At the international level, Angola is a party to the main regional and international conventions related to the advancement of women and the promotion of gender equality.

6.3 Basic facts about trade and trade policy

6.3.1 Trade structure and trade partners

The resource-based nature of the Angolan economy has determined both economic and political dynamics in the country. In 2011, Angola was Africa's second largest oil producer and the fifth largest diamond producer in the world. The expanding production of natural gas and other minerals has a great potential to boost exports.

The evolution of commodity exports in Angola since 2004 presents two important features: (a) the dominance of extractive activities, which in 2010 accounted for more than 99 per cent of all exports; and (b) a significant stability of the structure of exports over time, with products other than oil and diamonds showing limited dynamism and very low value. The country's integration into the world economy, mainly as an oil and to some extent a diamond exporter, has not contributed to diversify the economy, making it extremely difficult to develop domestic import-competing or export-oriented sectors and reinforcing the primary extractive character of the economy.

Angola is highly dependent on imports: during 2004–2010, imports experienced an annual average growth rate of 13.5 per cent. Import penetration is significant in most sectors.

As far as services are concerned, while imports show a very high annual average growth rate, exports, except for tourism, have demonstrated limited dynamism and low export value. The contraction of commercial services has suggested no diversification of service export activities of the types that have emerged in other developing countries and that represent a potential source of employment for the female labour force, such as health and information and communications technology (ICT) services.

Intra-regional trade remains very limited, as only 2.4 per cent of Angola's exports are destined to other South African Development Community (SADC) countries, mainly South Africa. In 2011, China and the United States accounted for the bulk of Angola's exports, with 37.7 per cent and 21 per cent of total exports, respectively. Imports mainly originated from Portugal and China, accounting for 19 and 16.3 per cent of total imports, respectively.

6.3.2 Trade-related arrangements and policies

Angola is a founding member of the WTO and, as a developing and a least developed country, it enjoys Special and Differential Treatment (SDT) with respect to WTO obligations and commitments, and benefits from non-reciprocal preferential treatment under a number of bilateral arrangements, such as the United States' African Growth and Opportunity Act (AGOA) and the European Union's Everything But Arms initiative.

In terms of tariffs, Angola has a high level of protection of domestic production in some sectors, with the overall goal of supporting the gradual process of import substitution for essential goods and boosting exports from the non-oil sectors. The highest average most-favoured-nation (MFN) applied rates affect tobacco, petroleum, fish and fish products, coffee, tea, and clothing. All remaining product groups face an average tariff close to or below 10 per cent. The average tariff levied on capital goods – traditionally linked to the extractive sector – is very low.

The protectionist policies implemented by the government of Angola to promote industrialization and enhance agricultural production, however, have so far not generated significant results. The domestic currency appreciation policy, which resulted from the "hard-kwanza"²⁹ policy pursued since 2002 in the framework of stabilization attempts, and the effects of the so-called "Dutch Disease"³⁰ artificially lowered the price of imports, while increasing the prices of non-tradable goods within the domestic economy. This con-

strained the diversification of the economy and created challenges of a structural and systemic nature for the country.

6.4 Trade and gender interactions

The participation of women in the economy and the female intensity of employment depend on the overall structural change in the economy, in particular the growth and decline of different sectors that can also be led by trade. To the extent that structural change generates job opportunities that match the skill level of the female workforce, a feminization of work can take place.

To understand how trade-led structural changes in Angola can impact the female workforce, it is necessary to look at the sectoral participation of women in the labour market. Women are concentrated in the agricultural sector, including fisheries, which is still a low-productivity sector. The urban informal sector is the second most important source of employment for the female workforce nationwide. The absolute number of women working in other sectors is very limited. In the formal economy, the main employers of women are the state, i.e. central and local administration, and traditional services such as health and education, which have a high propensity to hire female workers.

The small amount of disaggregated and time-series data available for Angola presents a serious limitation to the analysis of the effects of a trade-led transformation of the production structure on the feminization of labour in the country. Evidence based on the available data suggests that the limited structural transformation experienced by the Angolan economy since the end of the civil war in 2002 did not promote the empowerment of women. As a matter of fact, in the formal sector, the female workforce remains confined to non-tradable and low-productivity activities. The informal sector represents an important channel for the imports of goods in the country and has benefited from trade liberalization. The majority of women in Angola are employed in the informal sector and the trade-led expansion of informal activities has given them a chance to make a living.

As explained in Section 6.3, Angola's integration into the world economy mainly as an oil exporter has resulted in macroeconomic distortions (i.e. the excessive appreciation in the real exchange rate), tending to crowd out productive activities, such as agriculture and light manufacturing, which could absorb the female workforce and provide women with decent incomes. This challenges the stance

that structural issues (e.g. the “Dutch Disease”) are gender-neutral (UNCTAD, 2013).

Against this background, policymakers face the challenge of designing and implementing a set of policies aimed at reactivating the non-oil export sectors – particularly agriculture and light manufacturing – and spur the development of domestically competitive production. From a gender perspective, export diversification towards agriculture and light manufacturing can reward the female workforce, if gender-based constraints are acknowledged and redressed by means of gender-specific and, as warranted, redistributive measures.

Angola displays a significant growth and diversification potential in a number of staple foods and cash crops for export. As female workers comprise 70 per cent of all persons engaged in traditional agricultural activities, agricultural exports are expected to positively impact women’s welfare. For this to happen, however, sectoral policies that take into account the specific needs of women and gender division of labour should be put in place. They include access to rural finance through microfinance schemes backed by governments or non-governmental organizations (NGOs); access to agricultural extension services, in particular agriculture production techniques, marketing of produce and basic business management; access to inputs (e.g. improved seeds varieties and fertilizers) and facilities (e.g. warehouses); secure land tenure for women, including user rights to communal property; and restoring markets and marketing networks, which includes encouraging women’s associations and cooperatives.

The fisheries sector has significant potential for job creation in Angola and the experience of other developing countries suggests that women usually carry out many fishing activities. Policies geared at developing an export-oriented fisheries sector should ensure that women have access to upgraded facilities and receive training on fish handling/processing techniques and on micro-business administration.

Economic liberalization in Angola has so far not promoted the development of export-oriented manufacturing activities. The potential exists to reactivate Angola’s manufacturing capacity in sectors that have a comparative advantage. The production of differentiated, high-value and processed food products can offer significant opportunities of formal employment for relatively unskilled women.

Additionally, tourism is increasingly regarded as a sector with significant economic potential that could contribute to the diversification of the Angolan economy. However, excessive currency appreciation and lack of adequate infrastructure and skilled personnel constitute major challenges that hamper the development of the sector. Women’s participation in the services sector, particularly in tourism-related activities, is relatively low compared to other countries. In view of the high potential for women’s employment in this sector, initiatives could be put forward to bridge the gender gap in education and vocational training and encourage skill development. Most notably, by transferring a portion of the proceeds of the oil/diamond industry to dedicated funds, the government could leverage these revenues to unleash the commercial potential of sectors in which Angola has a comparative advantage, and to fund pro-poor and gender-sensitive social policies.

7 Mainstreaming gender in trade policy

The topic of gender and trade is receiving increasing attention in policy circles, but what are the concrete measures that could effectively contribute to gender-mainstreamed trade policies? This section aims to shed some light on the issue.

Mainstreaming gender in trade policy means ensuring that due consideration is given to gender inequalities and implications at every stage of the trade policy process: (a) the stage of generating relevant evidence to inform decisions on trade policy; (b) the stage of designing policies based on such evidence; and, later, (c) the stage of supporting interventions on the ground to enable their successful implementation. Below, we will provide examples of the kind of actions that may be needed to strengthen gender perspectives in trade policymaking at each of these three stages, especially when the negotiation of trade agreements is at stake. While the focus is on trade agreements, trade liberalization may also be pursued on a unilateral basis; therefore, similar actions would also be of relevance in such a case. Many actors have a role to play in this endeavour: the international community, ministries and other government agencies, trade negotiators, researchers and statisticians, as well as civil society organizations. One of the main challenges is to make sure that all of these actors get involved and that their actions are interconnected and well coordinated.

7.1 Comprehensive ex-ante gender impact assessments of trade agreements

Some countries/regions (mostly from the high-income group, such as the United States, Canada and the European Union) routinely undertake assessment studies before negotiating a trade agreement. These assessments tend to vary in scope and purpose, but could include, as standard practice, some sex-disaggregated analysis of the likely distributional effects of the trade measures that are being considered.

There is scope for the international community to offer assistance to developing countries interested in conducting gender assessments of trade agreements. UNCTAD already plays an important role in this area by promoting a range of initiatives in the area of technical support and capacity building. For example, through country-based analysis, such as the one presented in Section 6, it supports developing and least developed countries in mapping women's roles in the economy and examining the impacts of trade policies on women. Hands-on support is provided on the methodologies that can be used to gauge the impact of trade policy on women. Such activities enhance the research capacity in developing countries that forms the basis for assessing the potential gender-related implications of trade agreements.

Quality sex-disaggregated statistics and research capacity are the two key ingredients required for rigorous and comprehensive gender impact assessments. Both can be supported through a combination of actions at various levels. For example, technical and financial assistance to statistical offices should be aimed at promoting the collection of sex-disaggregated data on a more regular basis and for a wider range of relevant variables and dimensions. Local women's organizations could play a role by running economic literacy courses (which could encompass the basic concepts and tools for trade analysis) and work closely with statistical offices and government officials to encourage regular use of gender statistics in economic policymaking. The donor community could support independent trade research in key gender-relevant areas, including both qualitative and quantitative studies. Analytical capacity relevant to gender-aware economics needs to be built not only among researchers but also within ministries, and in those related to trade.

7.2 Negotiations of trade agreements

Two different issues should be addressed here: (a) possible inclusion in trade agreements of gen-

der-related provisions; and (b) the need to ensure that liberalization commitments are crafted in a way that also reflects the interest of women.

Some trade agreements make open reference to gender equality goals. The Cotonou Agreement,³¹ for example, states that parties must respect international conventions regarding women's rights and urges the inclusion of a gender perspective in all areas of cooperation. Most of the ensuing *interim* or final EPAs signed in recent years, though, do not contain explicit gender-related provisions.

Would the use of specific provisions be an effective way of mainstreaming gender in trade agreements? The issue of social clauses based on core ILO conventions in trade agreements is quite a controversial topic. Those arguing for it believe that social clauses are important in that they establish internationally agreed universal rights which can be made to apply to all workers irrespective of country (e.g. Çağatay, 2001). Those arguing against (e.g. Kabeer, 2004) contend that they represent a new form of protectionism to keep imports from developing countries at bay and protect jobs in the North.

The evidence so far appears to be that when a labour side agreement is attached to a trade agreement, the enforcement mechanisms are weak. This is for instance the case of the North American Free Trade Agreement (NAFTA) signed in 1994 by Mexico, the United States and Canada, which includes a number of side agreements. The related North American Agreement on Labour Cooperation is the first case of workers' rights considerations, including the equality of women and men in employment and pay, being ever linked to a trade agreement in more than a passing manner. However, between the entry of the agreement into force and 2010, only 39 petitions were filed regarding labour rights violations by one of the NAFTA countries; of those around 70 per cent were accepted for review, while the others were rejected. All the cases reviewed ended in ministerial consultations and none reached more concrete levels of arbitration. In other words, trade sanctions were never used. It seems that no concrete improvements in the labour practices of the countries involved in the disputes have taken place as a result of the petitions, and the whole system has therefore proved rather ineffective (Nolan Garcia, 2010).

A study by UNCTAD (2009) highlights the similarities between the ongoing debate about the inclusion of gender clauses in trade agreements and the debate that was spurred in the 1990s

about the inclusion of environmental requirements. The debate saw developed and developing countries holding rather different positions. The latter were cautious about incorporating environmental considerations into trade agreements because they might result in trade barriers and because their implementation might represent a heavy burden in terms of financial costs and human resources. An additional argument invoked was that the size and economic weight of the country wishing to include environmental considerations in a trade agreement might play a disproportionate role in the outcome of the discussion. Moreover, some developing countries invoked the fact that they were called to negotiate environmental chapters in trade agreements while their national environmental frameworks were still in their infancy and needed further development. Similar arguments may be used as far as gender clauses are concerned. But which specific gender provisions could actually be included in a trade agreement? Possible examples are specific gender-related standards, such as equal working conditions for men and women, and enforcement and dispute-settlement mechanisms concerning compliance with gender-related provisions.

While the arguments presented above about the inclusion of environmental considerations in trade agreements truly reflect the constraints faced by many developing countries, raising the issue has also had some positive effects. These include: (a) increased awareness of the importance of environmental issues for development; (b) a broader participation of civil society in the negotiation and implementation of the agreements; and (c) easier channels (e.g. the Global Environment Facility) for developing countries to access funding for environment-related activities. In particular, point (c) further leads to enhanced dialogue and cooperation on environmental issues among the countries that are parties to the agreements as well as enhanced technical cooperation and capacity building on relevant environmental issues for developing countries that are parties to the agreement. Something similar may be expected should gender considerations be included in trade agreements. In any event, gender-related requirements need to be balanced and realistic, and take into account the economic and social contexts of all countries that are parties to the agreement.

With regard to the second issue mentioned above – the need for gender-sensitive content of the liberalization commitments – it is important to note that broad-based participation in trade consultations and negotiations is likely to increase

the chances that gender concerns are taken into account. Fostering collaboration among various government departments (trade, planning, women's ministry, statistical bureau, etc.), and enhancing the capacity of civil society organizations with regard to gender equality are important in this regard. Trade negotiators could, for example, be provided with a list of gender-sensitive sectors where trade liberalization should be expedited, delayed or exempted, to enhance female employment and empowerment. Ultimately, the commitments that a party is ready to take in the framework of a trade agreement should be beneficial to all segments of the population, including women.

7.3 Development assistance after the entering into force of trade agreements

As briefly discussed in Section 7.2, gender-sensitive interventions are crucial to enable vulnerable women and men to take advantage of newly emerging trading opportunities. Interventions should not be limited to protecting a few traditionally “female” industries, such as textiles, or supporting well-established export sectors. They should also be aimed at enhancing the economic participation of women as a whole, and in particular in the production of goods with higher value-added content. Measures, especially in the areas of trade-related infrastructure and building of productive capacity, should be context-specific and could include, among others: financing road and other physical infrastructure projects that reduce women's time and energy burdens; designing agricultural vocational training and extension services to meet the specific needs of female farmers; conducting gender audits of trade-related administrative procedures; promoting institutional mechanisms at the government level that foster women's economic advancement and participation in the labour market, particularly focusing on small producers and traders; or ensuring that decisions on public expenditure and taxes in response to tariff revenue loss are based on a sound understanding of the gender implications of fiscal policies.

Multilateral development cooperation frameworks could also be used to support gender-sensitive interventions in trade-related areas. Programmes such as the Enhanced Integrated Framework (EIF) and the Aid for Trade Initiative (AFT) can play an important role in operationalizing gender mainstreaming and supporting governments in the implementation of gender equality goals within their trade strategies. For example, the Gambia's Diagnostic Trade Integra-

tion Study update, completed in 2013 within the EIF, may play a catalyst role in driving funds towards gender-sensitive projects in the fisheries sector. AfT and EIF resources are meant to be used following the principles agreed upon in the Paris Declaration on Aid Effectiveness,³² in particular the principle of national ownership; it is the prerogative of the receiving countries to design their national development strategies and single

out the programmes and projects that will be instrumental in their achievement. The upgrading of facilities mainly used by women, the provision of training tailored to women on issues such as financial literacy and business planning, the setting up of e-platforms to enhance the capacity of female small operators to understand market requirements, are examples of activities that could be financed through EIF and AfT.

Exercises and questions for discussion**General questions**

1. How can one examine the gender profile of an economy?
2. What are the most common indicators of gender inequality and which gender variables are the most relevant for trade analysis?
3. Some dimensions of gender inequality are not sufficiently captured in the analysis. Explain what they are and why it is difficult to include them in the analysis.
4. A number of indicators can be used to capture gender inequality in the domain of economic opportunities, one of them being the gender wage gap. Explain the different reasons for why a gender wage gap might be observed and the complications of measuring it.
5. Gathering reliable and updated sex-disaggregated data is difficult since many countries do not collect these data on a regular basis. An additional problem is that sometimes sex-disaggregated data are collected on the basis of criteria that are not completely adequate to capture reality, such as distinctions between female-headed and male-headed households. Explain why it is important to collect sex-disaggregated data and suggest some measures that could be used to improve the quality of data and their usefulness in carrying out gender analysis.
6. Trade openness “in practice” is distinct from trade openness “in policy”. Explain why these two concepts are different. Are countries that are open in practice necessarily also open in policy and vice versa?
7. What are the various measures and interventions included under the broad label of “trade policy”? Explain the difference between trade policy and trade liberalization.
8. What are the channels through which trade affects women’s economic empowerment and well-being? And what are the channels through which gender inequality affects trade outcomes? Which analytical frameworks are most useful to explore these linkages? What are the empirical findings?
9. Can one unambiguously establish that trade is good or bad for gender equality in a particular country? Are different country experiences comparable? Can we draw “general lessons”?
10. Beyond gender, what are the other most common sources of disadvantage that people may experience, and how do they intersect with gender-related disadvantages?
11. In your opinion, how easy is it to disentangle trade impacts from impacts of other policies that usually accompany trade liberalization, such as financial liberalization, public expenditure cuts or privatization?
12. Based on your knowledge, why do you think that fiscal policy is important to achieve gender equality, and when does fiscal policy become a source of discrimination?
13. In trade policy analysis, “the devil is in the detail”. How would you proceed if you were asked to assess the level of protection enjoyed by farmers in the specific staples that they produce or to evaluate the tariff and non-tariff barriers that may be faced in the export markets?
14. If gender-related requirements are included in the text of a trade agreement, all parties are bound to comply with such requirements. Explain the pros and cons of including gender requirements in trade agreements.
15. Beyond trade policy instruments, which other policies/measures (and in which areas) do you think may be needed to ensure positive economic and social outcomes for women? What kind of institutional mechanisms do you think would be needed for this to happen?

Exercises and questions for discussion**Specific questions arising from the country case study**

The country profile of Angola sketched in Section 6 introduces a range of issues that deserve careful attention in a gender-aware analysis of trade.

1. Read carefully the country case study again and identify:
 - (a) The different roles women play in the economy;
 - (b) The sectors where women are mostly concentrated;
 - (c) Whether women are suffering from gender bias and if so, what type of gender inequality affects women and in what domain (i.e. capabilities, security, and access to and control over resources); (Hint: Keep in mind that women may suffer from different forms of gender bias according to their socio-economic roles and/or sector in which they work.)
 - (d) The trade policy context;
 - (e) The trade and gender interactions.
2. Suppose the government of Angola decides to implement an export-led growth strategy aimed at developing the agricultural sector. What policy measures would you suggest so that women might benefit from increased agricultural exports? Besides the agricultural sector, which other sectors could generate beneficial effects for women?
3. Angola is an oil-exporting country. Do you think it would be feasible to use revenues from the oil industry to promote women's empowerment? If yes, what measures would you propose?
4. How could the "Dutch Disease" impact women in Angola?

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MODULE 2

*The effects of trade on women's well-being
and economic empowerment:
Evidence and research methodologies*

1 Introduction

Although manufacturing has historically been a male preserve, the adoption of export-oriented policies by developing countries from the 1960s and 1970s onwards saw a massive influx of women workers into labour-intensive manufacturing production. They constituted between 70 to 90 per cent of the workforce in countries such as Mexico, Puerto Rico, the Republic of Korea and Singapore, and most of them were obtaining formal non-agricultural employment for the first time. The literature on the “feminization of labour” has explained this unprecedented preference for female labour in export-oriented production as a result of intense international competition that demanded the use of relatively cheap labour to cut costs. Standing (1989, 1999) even argued that the implementation of SAPs, including trade liberalization, had led to a “global feminization of labour”. Although this claim has been debated and a number of scholars have shown that feminization can reverse itself over time, it is clear that trade has significant gendered consequences.

Building on the concepts introduced in Module 1, this module focuses on the impact of trade liberalization on women's economic empowerment and well-being. Module 3 then examines the ways in which gender inequality can affect trade performance. Trade has many different aspects that are reflected in terms such as trade policy, trade liberalization, trade protectionism, etc., introduced in Module 1. In this module, we are mainly concerned with trade liberalization, or the removal of trade barriers in the form of tariff and non-tariff barriers that obstruct the free flow of goods and services, and its impact on women's economic empowerment. We also discuss the impact of trade expansion that may accrue, for example, due to improved trade logistics.

Trade affects economies by altering the structure of production, employment patterns, income and the relative prices of goods and services. Each of these has a gender dimension that must be considered while designing and implementing trade policy. Here, we account for these dimensions by examining how trade liberalization affects women in the market sphere as wage workers, producers, traders, consumers and tax payers, as the impact of trade will vary based on women's roles in the economy. There is, of course, an overlap between these roles, and ideally a researcher should assess the net impact of trade policy to ascertain the final outcomes. For the interested reader, we also provide brief summaries of research papers that illustrate the various approaches and meth-

odologies that can be used to analyse the effects of trade on women's share of employment³³ in an Annex at the end of the module.

At the end of this module, students should be able to:

- Illustrate the full range of channels and interactions through which trade liberalization can affect women as wage workers, both in terms of employment and earnings, as producers, traders, consumers of imported goods and of public services, and tax payers;
- Distinguish between the predictions of standard trade theory as applied to the question of gender inequality and those of the heterodox framework;
- Critically review research papers that explore various dimensions of the gender effects of trade and assess their strengths and weaknesses.

2 Women as wage workers

Most of the research on the impact of trade liberalization focuses on women in wage employment and assesses how their employment and income are affected through an increase (or decrease) in exports and imports. Because trade theory makes categorical predictions about how employment and income will shift when a country liberalizes trade, there has been significant research interest in whether these predictions are confirmed empirically. Trade theory can also be interpreted as having specific predictions for gender equality with respect to employment and wages. Since the research on gendered employment and wage effects is vast, the section on women as wage workers is longer than the others. We first present the employment effects of trade liberalization, including the quality and patterns of employment, followed by wage effects.

2.1 Employment effects

2.1.1 Theoretical expectations

2.1.1.1 Standard theory³⁴

Standard trade theory asserts that a country's comparative advantage in trade is based on its factor endowments (labour or capital) and that it will export those commodities that use its relatively abundant factor most intensively. Accordingly, the Heckscher-Ohlin-Stolper-Samuelson (HOSS) theorems predict that returns to the relatively abundant factor that is used more intensively in exports will rise as the demand for

it increases (Heckscher and Ohlin, 1991; Stolper and Samuelson, 1941). Since developing countries are abundant in labour rather than capital, the returns to labour (wages) are expected to rise when trade is liberalized. Another way to think about this framework is in terms of skill level: If rich countries are abundant in high-skill labour and poor countries in low-skill labour, trade will increase the returns to low-skill labour in the latter. If women are assumed to form a bulk of the low-skill labour pool, then trade liberalization should increase the demand for women's labour and lower the demand for male labour. Female wages are expected to rise while male wages are supposed to fall, leading to a lower gender wage gap. This interpretation of standard trade theory leads to the prediction that trade liberalization promotes gender equality.

These arguments have been challenged on both theoretical and empirical grounds.³⁵ To start with, "endowments of female unskilled wage labour" characterize a number of developing countries but not all of them (e.g. some countries are relatively rich in agricultural resources; in others women are relatively well educated). Moreover, since gender discrimination cannot be assumed to be natural, it is hard to use the natural factor

endowments model as a basis for the analysis of a phenomenon so influenced by social norms (Tejani and Milberg, 2010).

2.1.1.2 Heterodox perspectives

Heterodox theorists have argued that trade is based on absolute or competitive advantage as elaborated by Adam Smith (1776/2009) rather than on comparative advantage (see Box 9). That is, a country that produces a good more cheaply will dominate the international market and outdo its competitors. International competition is the main driver in this narrative and it stimulates the search for lower cost labour as firms compete on absolute unit costs rather than relative costs.³⁶ Firms seize on existing gender inequalities such as the gender wage gap and hire women to bring down the costs of production, particularly in labour-intensive activities for which they are considered suitable. Women thus serve as a source of competitive advantage for export-oriented firms that face intense competition in the international market, and the demand for their labour rises. As we will see in the section on wages (Section 2.2), it is not necessary that women's wages rise as a result; trade may perpetuate or even exacerbate existing gender inequalities.

Box 9

Comparative advantage vs. competitive advantage

The principle of comparative advantage suggests that countries compete on relative unit costs. Accordingly, a country exports the goods and/or services it can produce at a relatively lower cost at home, and imports those goods that it can buy at a relatively lower cost from abroad. In the simplest trade setting (i.e. the Ricardian one), trade occurs as long as the parties have different relative efficiencies. Take for example two countries, *Rich* and *Poor*; and two goods, airplanes and footwear. Assume that *Rich* can produce airplanes at a relatively lower cost than footwear – that is, it has a comparative advantage in the production of airplanes. *Poor* can produce footwear at a relatively lower cost than airplanes – that is, it has a comparative advantage in the production of footwear. In a closed economy, both countries produce both goods. But when they lower their barriers to trade, it will be efficient for both of them to specialize in the production and export of the good they can produce domestically at a relatively lower cost. Country *Rich* will specialize in the production and export of airplanes while abandoning the production of footwear, which it will import from *Poor*; country *Poor* will specialize in the production and export of footwear and abandon the production of airplanes, which it will import from *Rich*.

In this setting, inequalities emerging from trade liberalization are purely transitional and not accounted for. Empirical evidence has however shown that trade liberalization may result in patterns of specialization (and persistent trade imbalances) that systematically disadvantage one country in relation to the other. Heterodox economists have instead proposed the principle of competitive or absolute advantage to better capture these trade patterns and outcomes. In this framework, countries compete on absolute unit costs (rather than relative costs) and use different strategies such as unit cost reduction and price-cutting to outperform their competitors and gain market share. Take the example used above and assume that country *Rich* enjoys lower absolute unit cost in the production of both airplanes and footwear – that is, it has a competitive advantage in both goods. Then, *Rich* exports both airplanes and footwear and *Poor* stands to have its domestic industry undermined by competition or even to become a net importer of both goods if trade is liberalized. (In such a case, *Poor* can choose to promote and strengthen domestic production capacity before it liberalizes trade to ensure that its industries can compete, of course within the limits of WTO rules if it is a WTO member.)

Source: Shaikh (2007).

When compared to comparative advantage, it means that even if a country can produce a labour-intensive good more efficiently than a capital-intensive good (it has a comparative advantage in the former) it might not be able to export, and could even have its industry decimated through trade if its trading partner produces both goods more cheaply.

2.1.2 Existing evidence

In this sub-section, we present the findings of numerous studies that have analysed the gendered employment effects of trade. Trade liberalization brings about changes in the structure of production of a country, with some sectors expanding (e.g. export-oriented production) and other sectors contracting (e.g. import-competing production). Women and men work in different economic sectors, with women clustered in fewer sectors and men more evenly distributed across occupations and productive activities. Gender roles in both households and labour markets also tend to be rigid (although not unchangeable). Female workers and producers are less likely to enter the expanding sectors – unless these are traditionally female sectors such as garments – due to entrenched gender norms and limited access to productive resources and training. Trade may or may not contribute to gender equality in employment and an improvement in working conditions, depending on a range of factors, including economic structure, trade composition and labour market institutions.

A comprehensive assessment of the gender-differentiated employment effects of trade should distinguish impacts across agricultural, manufacturing and service sectors as well as between different employment statuses (e.g. wage work vs. self-employment). The effects of both export expansion and import displacement should be taken into account. When considering expanding sectors, the analysis should examine changes in the quality of jobs as well as their quantity, by exploring for instance the gendered nature of informalization processes and work vulnerability associated with increased international competition. A further question might be whether the new jobs created for women are available only in traditionally female sectors and occupations (such as textile production) or whether they reduce either vertical or horizontal gender segregation. Finally, it will be important to understand whether the jobs generated by trade offer sustainable gains in the long term. Overall, employment effects from greater trade openness are expected to be gendered because of the different distribution of women and men across tradable

and non-tradable sectors, combined with limited substitutability between female and male labour due to rigid gender roles.

2.1.2.1 Agriculture

The limited evidence, both from sub-Saharan Africa and elsewhere, shows that the impact of growing agricultural exports is generally less favourable to female than to male farmers. There is evidence that even when a crop is traditionally female-intensive, its commercial exploitation causes men to enter the sector and take over production and/or marketing. This was the case for groundnuts in Zambia (Wold, 1997), rice in the Gambia (von Braun *et al.*, 1994) and leafy vegetables in Uganda (Shiundu and Oniang'o, 2007).

Women in agriculture-based economies seem to be benefiting from incorporation into international trade more through wage employment opportunities on estate farms or packing houses than directly through product markets. Women are often preferred for this type of work as they are seen as secondary workers and relatively easier to lay off due to their lower bargaining power (Barrientos *et al.*, 2004). Their employment on commercial farms, on the other hand, tends to vary greatly by crop (Chan, 2013).

Wage employment in non-traditional agricultural export (NTAE) production has emerged as a significant source of employment for rural women, particularly in Latin American countries such as Colombia, Ecuador, Brazil, Chile, Mexico and Peru as well as in some African countries such as Kenya, Uganda, Zambia, South Africa and, more recently, Ethiopia. Still, the NTAE sectors employ a very small share of the rural labour force in general and the scope for their future expansion is limited (Fontana and Paciello, 2009). There are also regional differences in how NTAEs affect gender equality. In sub-Saharan Africa, the rise of cash crop exports has resulted in more employment opportunities for men rather than women (Wamboye and Seguíno, 2012).

In terms of policy, dynamizing the traditional crop sector can be a way to address existing gender inequalities in agriculture, for women are over-represented in the production of staple foods and in local marketing activities. Linking smallholders to public stockholding schemes for food security, e.g. to require that government or international agencies procure foodstuff from local producers rather than meet requirements through imports (UNCTAD, 2009), could be one way forward. Yet, to be socially inclusive and gender-sensitive, rather than exclusionary, strategies geared to dynam-

ize the traditional subsistence-oriented sector should also effectively acknowledge and tackle gender-specific obstacles that hinder the ability of women to efficiently engage in commercially oriented agriculture. Training women in some of the capital-intensive activities in commercial agriculture, such as operating computerized irrigation and cooling systems and driving tractors, can increase their participation, particularly in higher-paid and permanent jobs (Barrientos *et al.*, 2004). In sub-Saharan Africa, while trade has had mostly negative effects on women's relative and absolute employment, higher investment in infrastructure that reduces women's care burdens has had a strong positive effect, highlighting again the importance of reducing and redistributing care work to enable women to respond to employment opportunities (Wamboye and Seguíno, 2012).

The feminization of employment through export orientation appears to be more common in the manufacturing sector and in semi-industrialized economies than it is in agriculture-based economies or in mineral resource-rich countries, as we will see in the next sub-section.

2.1.2.2 Manufacturing

Several studies have documented a positive relation between the share of basic manufactures in exports and the female share of employment in a number of developing countries (Wood, 1991; Joekes, 1995; Seguíno, 1997, 2000). This trend found in earlier studies continues to hold for middle-income countries, but only on average, for there are important differences across regions, industrial structures and processes (see e.g. Tejani and Milberg, 2010). An overwhelming characteristic of this increase in female employment is that it is concentrated in labour-intensive, low value added and low wage export industries such as garments, textiles, leather and toys where the quality of jobs and prospects for advancement are limited. In fact, the term "feminization of labour" has been used to refer not only to the increase in women's share of employment but also to the extension of insecure working conditions, which traditionally characterized female jobs, to male jobs (Standing, 1989, 1999).

In the early stages, female employment gains in manufacturing employment were particularly strong in Asia, especially in the four East Asian "Tigers",³⁷ but also Bangladesh and Sri Lanka in South Asia, and Malaysia, Indonesia, Thailand and the Philippines in South-East Asia. Expansion was more limited in Latin America, most notably Mexico, but also Central America and the

Caribbean (Fontana, 2007). In sub-Saharan Africa, Mauritius experienced a tenfold growth in female employment in manufactures between the 1980s and early 1990s (Pearson, 1999). In Lesotho, as described in Box 10, jobs in the apparel sector grew from around 10,000 in 1999 to 48,000 in 2004 and most of them were filled by women (UNCTAD, 2012). Madagascar experienced a remarkable expansion of about 150,000 jobs in the apparel sector during the period 1997–2003, more than doubling the value of its exports (from \$200 million to almost \$500 million). The industry experienced a downturn following the phasing out of the Multi-Fibre Arrangement (MFA),³⁸ but exports picked up again in 2006, reaching about \$600 million in 2007. The expansion of the garment industry provided significant employment opportunities for women, as more than 80 per cent of the new jobs were filled by female workers (UNCTAD, 2008).

The employment gains of women in some countries should not obscure the fact that these may have come at the expense of women workers in other countries. In the 1980s and 1990s, the increase in labour-intensive manufacturing exports produced mostly by female workers in developing countries also resulted in the destruction of jobs held by women in high-income economies, due to import competition. Kucera and Milberg (2000) found, for example, that the expansion of OECD trade with developing countries over the 1978–1995 period resulted in disproportionate job losses for women in OECD countries, who constituted the majority of workers in import-competing industries such as textiles, footwear and leather goods.

Moreover, export-oriented jobs are highly dependent on the trade policy environment, and changes in preferential market access, tariff rates, exchange rates and wage rates can lead to large export declines or even trigger the wholesale relocation of industries to other countries. The end of the MFA, which had partially shielded African exporters from more competitive Asian suppliers, led to large export declines in a number of low-income African countries; currency appreciation and higher wage costs resulted in a massive relocation of labour-intensive manufacturing from the East Asian first-tier countries to South-East Asia in the 1980s. The apparel industry in Lesotho is highly dependent on the preferential tariff rates and special rules of origin under the Africa Growth and Opportunities Act, a trade agreement with the United States (see Box 10). If the agreement and particularly the rules of origin are not renewed in 2015, it can potentially decimate the apparel industry and

seriously impact the livelihoods of the predominantly female workforce (UNCTAD, 2012).

The intensified trade competition among developing countries following the complete phase-out of MFA quotas under the terms of the ATC in 2005 also brought about a shift of related exports and employment from Central America and Africa to

Asia, and especially to China. China and India increased their shares of imports to the European Union and the United States while economies such as the Dominican Republic, El Salvador, Fiji, Nepal, South Africa and Mauritius, among others, experienced absolute declines in their textile and garment exports, with female jobs being especially affected (Berik, 2011; Otobe, 2008; Valodia, 1996).

Box 10

Trade, structural change and employment implications for women: The case of the apparel sector in Lesotho

There have been major changes in Lesotho's structure of production and trade over the past thirty years – most notably the fast expansion of supply capacity in the apparel sector and a relative shift in the composition of exports towards apparel. These structural developments are largely the outcome of trade policy.

One instrument in particular has been critical in shaping Lesotho's competitive edge in apparel exports: unilateral, non-reciprocal duty-free and quota-free access to the United States for Lesotho's apparel products under the African Growth and Opportunity Act initiative, coupled with a relaxation of the rules of origin under AGOA to permit the use of inputs from third countries in the production of these apparel exports to the United States. Under AGOA, Lesotho's apparel exports to the United States almost tripled between 2001 and 2004.

The study argues that the trade-led expansion of Lesotho's apparel industry has created opportunities for women's empowerment and well-being through job creation in export-led sectors, but it has also contributed to new patterns of inequality and vulnerability. Under AGOA, Lesotho's clothing industry grew to be the country's single largest employer with some 48,000 jobs in 2004, compared with only about 10,000 in 1999. Women still make up the bulk of this workforce. The Lesotho case study shows that trade policy (in this case, preferential access to markets in the United States) can play a catalytic role in job creation for women. Most significantly, trade-led developments have created a large number of new jobs for underprivileged, relatively unskilled women who would otherwise have little chance of being formally employed.

However, there are qualifications to be made and some aspects that need to be critically assessed. Some of the major areas of concern raised by the study include the quality (wages, working conditions and potential for skill development) of the jobs created, spillover effects within the economy and new patterns of vulnerability to external shocks. Above all, wages in the textile and apparel sectors are low in real terms and allow for the coverage of basic subsistence expenses only. Working conditions are hard. Furthermore, segregation of women in the unskilled/labour-intensive nodes of production and the segregated nature of tasks within each node have significantly limited skill development.

Source: Musselli and Zarrilli (2012) and UNCTAD (2012) for the study on Lesotho.

2.1.2.3 Services

The expansion of exportable services appears to have become another source of employment for women, especially in the information technology (IT) sector in countries like India, the Philippines, Jamaica and Mexico (Mitter *et al.*, 2004; Prasad and Sreedevi, 2007). Evidence however points to a marked occupational segregation by gender in this sector, with women mostly concentrated in data processing and men dominating the better paid high-skilled positions such as programming (Wajcman and Lobb, 2007; Patel and Parmentier, 2005). In the IT sector in India, for example, women are reported to account for about half

of the workforce employed in business process outsourcing, but for only a quarter in the higher value-added software development segments (Sengupta and Sharma, 2009).

2.1.3 Quality of trade-related employment

Do these newly created jobs for women comply with labour standards? As we have already mentioned, they do not appear to provide secure or long-lasting employment opportunities. Most of the evidence on the quality of trade-related female jobs comes from case studies of Export Processing Zones (EPZs) and, to a less extent, NTAE sectors.

EPZs have been integral to the export-led growth strategy of many industrializing countries. According to ILO statistics, women workers constituted around 70 per cent of EPZ employment in 2006, ranging from a low of 10 per cent in Bahrain to 90 per cent in Jamaica and Nicaragua (Boyenge, 2007). Employers in EPZs often segregate women in unskilled positions that do not provide opportunities for training and promotion and suppress their union rights (Doraisami, 2008; Berik, 2006). Especially in apparel and footwear industries, where suppliers face tight shipping deadlines and seasonal peaks in demand, excessive overtime is widespread (Berik and Rodgers, 2010; Amengual and Milberg, 2008). Working conditions are often very poor and factories do not observe basic fire and safety regulations as the building collapse and fires in 2013 in some Bangladeshi garment export factories showed.

Local firms producing for global supply chains increasingly hire home-based workers to cut costs. These workers tend to be more vulnerable than other categories of workers and are unable to improve their terms of employment. While home-based work predominantly draws on women's labour, men have also been increasingly employed to work from home, for instance in India's import-competing manufacturing sectors (Rani and Unni, 2009).

Similar situations of vulnerability are found in NTAEs where women wage workers appear to be working in more precarious positions than men. For instance, in Tanzania, 85 per cent of the casual workers engaged in planting, harvesting and grading on flower farms are women, while men occupy managerial positions (Fontana and Paciello, 2009). In Bangladesh, women fry catchers and sorters receive around 64 per cent of what men earn and tend to be segregated in the most insecure nodes of the shrimp chain (Gammage *et al.*, 2006). Working conditions in packing plants in the lemon sector in northern Argentina also remain rather poor, despite increasing pressures to comply with better standards (Ortiz and Aparicio, 2007).

There have been a number of multi-stakeholder initiatives to improve the quality of export-related jobs as a result of consumer pressure, such as the Ethical Trade Initiative (in the United Kingdom) and the Apparel Industry Partnership (in the United States) that involve the adoption of voluntary codes of conduct by firms in the North while sourcing from suppliers in the South (Barrientos, 2001; Barrientos and Smith, 2005). Suppliers are required to observe some core labour

standards, and monitoring and reporting is done on a regular basis to ensure compliance. However, voluntary initiatives cannot replace the legal enforcement of core labour rights and standards within countries. In many cases, developing countries have the requisite laws to protect labour rights on the books but their implementation and monitoring need to be significantly improved. The Better Work programme, launched by ILO and the International Finance Corporation, ensures that core labour standards and national labour laws are observed in factories by conducting regular audits, facilitating dialogue between workers and management and building stakeholder involvement and support for its activities with government agencies and unions. The Better Work programme is currently run in nine countries and the Better Factories initiative in Cambodia has been particularly noted for its success.³⁹

2.1.4 Impact on gender-based employment segregation

In most developing countries, employment segregation by gender has only marginally declined over the last three decades, despite the increase in female labour force participation. Female workers have remained in traditionally female jobs, with little chance to enter previously male-dominated sectors and occupations (Fontana, 2009) that are better paid and offer greater chances for advancement. Gender segregation is widely prevalent in horticultural and commodity value chains: vertically, women are crowded in low value-added work while men are generally in better paid and more secure jobs; at the horizontal level, women predominate in harvesting, slicing, grading and packing fruit while men operate machinery and do loading and other heavy work (Chan, 2013).

In the manufacturing sector, women are concentrated in very few industries, namely garments, textiles and electronics, while their share of employment in sectors such as chemicals, wood products and metallurgical industries is much lower. This kind of gender segregation or crowding in a few industries also serves to keep women's wages low. In Bangladesh, for example, women have remained highly concentrated in one single subsector – ready-made garments – while other textile subsectors that are more capital-intensive are still dominated by men (Fontana, 2007). In knitwear, the sector with the seemingly best prospects in the post-MFA phase, women constitute only 14 per cent of the labour force (Kabeer and Mahmud, 2004; Bhattacharya *et al.*, 2008). In Mexico, maquila employment (i.e.

assembling imported material to be exported as final product) for men has risen significantly more than for women in recent years because of the increased importance of industries such as transportation equipment.

Recent trends appear to suggest that the process of the feminization of manufacturing export employment may decline over time as economies shift to the production of higher value-added goods. The study by Tejani and Milberg (2010), reviewed in the Annex, offers fresh evidence on this phenomenon in middle-income countries in both South-East Asia and Latin America. The authors find that trends in the female share of employment in manufacturing are strongly correlated with technological conditions or the labour productivity and capital intensity of production. That is, women are preferred for low productivity jobs and the female share of employment tends to decline as countries upgrade their manufacturing sectors and labour productivity rises. The authors found that this was the case in South-East Asia from 1985 to 2007, while Latin America displayed the opposite trend during the same period: the female share of employment rose as labour productivity and capital intensity of production fell. Women made impressive gains in terms of education in both regions during this period, so skill differences between men and women cannot be the primary reason why technical change is associated with defeminization. The authors rather emphasized that persistent gender norms and stereotypes segment women into "gender appropriate" activities that tend to be low skilled and with low value added.

In many developing countries, the gender gap in education has closed rapidly in primary education and to a lesser extent in secondary education though drop-out rates for girls continue to be a problem as does the quality of education. Although women might now be better educated, they may still lack job-specific technical skills because they do not receive on-the-job training, because they are segregated into activities that do not have much opportunity for skill development or because of gender segregation in vocational or technical training programmes. This problem can be addressed in different ways in terms of policy. First, relevant government authorities (such as EPZs) can co-finance or offer partial rebates to firms that mandate the participation of women in training programmes for higher-skilled activities. Second, governments can take steps to reduce gender biases in admission policy and instruction in technical training programmes and promote the participation of women in traditionally male-dominated vocations (Tejani, 2011).

2.2 Wage effects⁴⁰

Female labour is on average rewarded less than male labour. This is true for all countries for which data exist (Oelz *et al.*, 2013). There are two main reasons for why women's average wages remain lower than men's universally, though the gender wage gap has shrunk in some countries over time.⁴¹ First, women are paid less than men for work of equal value due to gender-based discrimination (FAO *et al.*, 2010), including norms that designate men as breadwinners and women as secondary workers.⁴² Second, women tend to be crowded or segmented into stereotypical "feminine" activities like nursing and teaching and labour-intensive manufacturing industries, such as textiles, garments and electronics, due to entrenched gender norms and stereotypes about women's abilities and the types of work that are "suitable" for them (Oelz *et al.*, 2013). This segregation creates downward pressure on wages and reduces women's average earnings relative to men's, thus contributing to the gender wage gap. In addition, these activities are considered low skill and tend to attract lower remuneration, though the designation of work as high and low skill is itself a contentious matter.

We have seen that greater trade integration has led to a rise in women's access to paid employment in some developing countries, but what about their earnings? Have trade-related jobs offered women higher wages relative to alternative jobs available to them? Have they contributed to the narrowing of the gender wage gap?

2.2.1 Theoretical expectations

Standard and heterodox approaches offer different predictions as to the effects of trade on pay differentials between women and men in developing countries.

2.2.1.1 Standard theory

Within neoclassical economic theory, two arguments suggest gender equitable effects of trade expansion: standard trade theory (the HOSS theorem) and Gary Becker's theory of labour market discrimination (Becker, 1959). As outlined in the previous section, according to HOSS, trade expansion in developing countries is expected to increase the demand for relatively abundant, lower-skilled labour and reduce wage disparities among groups of workers.⁴³ To the extent that women workers predominate in lower-skilled jobs and men cluster in higher-skilled jobs, this theory predicts rises in women workers' wages in unskilled jobs relative to men in skilled jobs, and hence a decline in the gender wage gap.

Trade liberalization may influence wage disparities not only by affecting the relative demand for various types of workers but also by influencing discriminatory practices. Reinterpreting Becker's theory (1959) in an open economy context, some scholars (for instance Black and Brainerd, 2004) assert that liberalization is likely to lead to competitive pressures that will reduce the scope for employers to discriminate, including discriminating against women. Female workers in this framework are assumed to be equally skilled/productive as male workers. Firms pay male workers a "wage premium" or a wage that is higher than the marginal product of labour because of their gender; discrimination here is conceptualized as a cost to the firm rather than an advantage. The prediction is that import competition will induce firms in concentrated industries (i.e. those industries in which a few large firms take up a large percentage of the market) to cut the wage premium to male workers. This will reduce the gender wage differential.

2.2.1.2 Heterodox perspectives

By contrast, according to the heterodox perspective, persistent discrimination is consistent with a competitive economy (see e.g. Darity, 1989; Darity and Williams, 1985). In this approach, wages are determined by the relative bargaining power of groups of workers, which are shaped by worker skills and job characteristics. In the context of a hierarchy of jobs and the threat of joblessness, certain groups of workers are better placed to bargain for and maintain favourable employment conditions. Firms may also find it advantageous to keep a lower wage workforce with weaker bargaining power while paying higher wages to a small group of more skilled workers at the same time. When exports expand, on the other hand, women may experience job gains but not necessarily a decline in wage discrimination, since discrimination may be a conscious employer strategy to boost profits.

In the case of import expansion, job competition among workers in import-competing industries is likely to adversely affect the wages of workers who are in a weaker position in terms of their seniority, skills or sector of employment. In this context, women workers may be more vulnerable to job losses. In sum, the heterodox approach gives more attention to unequal power between workers and employers, as well as between different workers, and is less optimistic about the possibility that gender wage gaps would narrow even when female workers gain access to new jobs.

2.2.2 Existing evidence

There are numerous studies that have shed light on the effects of trade liberalization on women's relative wages; the results vary according to the country and sectors studied. Evidence on changes in female and male wages associated with trade liberalization however tends to be rather scarce and limited to formal manufacturing and a few (mainly middle-income) countries. Data mostly exclude the informal sector and sometimes also small businesses in the formal sector, which is where many women work, thus providing a somewhat incomplete picture of the manufacturing sector (Fontana, 2007). The information on wages is often not comparable over time and across countries because of differences in definitions. For example, some surveys report daily wages while others measure monthly or annual wages. Different studies often use wages from different sectors of the economy or occupations, and often (and surprisingly) wage data for males and females are not disaggregated by skill level. Overall, the gender wage gap is still large in most countries even when there has been rapid growth in exports that employed female labour – a fact for which there are different interpretations (Fontana, 2007).

2.2.2.1 Trends in female wages linked to trade

Empirically, two broad sets of studies linking gender pay differentials with trade can be distinguished in the literature: studies that analyse levels in female wages and their trajectory over time, and studies that examine female wages relative to male wages, i.e. the gender wage gap. Some research shows that wage levels and non-wage benefits are generally better in EPZ factories than in alternative employment in the economy and suggests that monthly earnings from employment in EPZs are high enough to keep households above the local poverty line (e.g. Glick and Roubaud, 2006, for Madagascar; and Kabeer and Mahmud, 2004, for Bangladesh).

Studies of EPZs in Mauritius, Mexico and Central America however provide some contrary evidence. In Mauritius, real monthly earnings in large EPZ establishments have tended to be below average earnings in large non-EPZ establishments; in addition, during 1991–2004, the gap between EPZ earnings and non-EPZ earnings widened (Otoabe, 2008). Similarly, a study that examined trends in wages in export-oriented assembly factories in Mexico (*maquilas*) after two decades of operation found that EPZ workers constitute the lowest paid workers in the local labour market (Fussel, 2000). It shows that, over time, *maquiladoras'* employers reduced average

real wages and increasingly drew on a workforce of older married women with low schooling (and hence weaker bargaining power than other female workers with better alternatives).⁴⁴

These divergent findings may partly stem from the way wages have been measured in these studies which mostly use either monthly or an-

nual data. The use of monthly or annual wages in comparing export-oriented sectors and other sectors without taking into account working hours is likely to overstate the relative advantage of EPZs over other employment since long hours and excessive overtime are endemic in the EPZs. Ideally, studies should use hourly wages as standard practice but this type of data is rarely available.

Box 11

How are wages measured?

According to the ILO definition, “wage” refers to total gross remuneration, including regular bonuses received by employees during a specific period of time worked as well as time not worked, such as paid annual leave and paid sick leave. Employees include regular employees, workers in short-term employment, casual workers, outworkers, seasonal workers and other categories of workers holding paid employment jobs. In practice, especially in low-income countries, the wage statistics that are collected do not fully reflect all these components.

Wages can refer to all employees, in which case we call them “economy-wide wages”, or to a subset, such as employees in manufacturing or full-time employees. Gender differences in economy-wide wages can result from various effects: a “sectoral employment effect” that reflects the fact that a higher number of women than men tend to work in low-paying jobs; and a “female wage effect” that reflects gender pay differentials within sectors, resulting from either direct or indirect discrimination. The fact that women in many countries tend to crowd into few relatively low-paying jobs can also be a form of discrimination.

Wage data are most commonly available on a monthly basis but hourly wages are preferable as the amount of working hours performed by women and men in a month can vary a great deal (e.g. in many developed countries, more women than men work in part-time jobs).

“Raw gender wage differentials” do not control for productivity as measured by job tenure and education, for example, or by other personal worker characteristics. This omission is often criticized but the key goal in comparing raw wage gaps is not to assess whether employers pay employees fairly but to get an estimate of the structural barriers to gender equality in paid labour, whether through pre-market discrimination in education and training, or within labour markets, via job segregation and wage discrimination.

Most of the studies reviewed in Section 2.2 of this module do indeed control for productivity. They use the “residual gender wage gap”, which is that part of the wage gap that remains unexplained even after accounting for differences between the educational and work experience characteristics of female and male workers. The studies use the “unexplained” gender wage gap because their interest is in measuring possible direct earning discrimination associated with trade.

For further details on measurement issues regarding gender wage differentials, you can also refer back to Section 3 in Module 1.

Source: UNCTAD Secretariat.

2.2.2.2 Trends in gender wage gaps linked to trade

As far as analyses of gender wage gaps are concerned, most existing studies examine Becker’s hypothesis (outlined in Section 2.2.1.1) and generally find no support for the argument that trade competition reduces gender wage discrimination. A cross-country analysis of gender wage gaps for 161 detailed occupations and 83 countries during the 1983–1999 period (Oostendorp, 2009) found no evidence that the gender gap declined with trade expansion in low- and lower-middle

income countries. Some evidence in this regard is found only in high-income economies.

One of the first studies to test the open economy version of Becker’s theory found that in the United States, during the 1976–1993 period, import expansion indeed contributed to the decline in gender wage discrimination in less competitive manufacturing industries (Black and Brainerd, 2004). This conclusion was challenged by showing that the decline in the residual manufacturing gender wage gap in the United States during that period was driven by changes in the

composition of the female labour force rather than by a reduction of discrimination against women (Kongar, 2005). In other words, it was the departure of low-skilled women workers rather than the decline in wage discrimination against them that increased average female wages relative to male wages in concentrated industries. By contrast, in the competitive industries, the female share of low-wage production occupations augmented while average female wages deteriorated.

Research related to developing countries has mostly produced evidence contrary to Becker's hypothesis. In the case of Taiwan Province of China, increased import expansion was associated with a rise in the gender wage gap between 1980 and 1999 (Berik *et al.*, 2004). The authors interpreted the adverse impacts of import expansion on gender wage gaps as the outcome of disproportionate lay-offs of women workers in the manufacturing industries, such as textiles and electronics, and noted the institutional resistance to reducing discrimination against women in the labour market.

Becker's hypothesis was tested for India for the period 1983–2004 and it was found that the country's industrial and trade liberalization policies since 1991 were associated with wider gender wage gaps in manufacturing industries (Menon and Rodgers, 2009). In Mexico, the residual gender wage gap declined in concentrated industries over the period 1987–1993, once differences in human capital characteristics were accounted for (Artecona and Cunningham, 2002). Yet, there are questions as to whether the results in the paper are statistically significant. The authors also found that greater exposure to trade increased the economy-wide gender wage gap.

Other studies of major exporting countries with strong demand for women's labour seem to

suggest that the discriminatory portion of the gender wage gap increased between 1995 and 2005.⁴⁵ In Bangladesh, for instance, female wages in apparel industries went from 66 per cent of male wages in 1990 to 50 per cent in 1997 (Paul-Majumder and Begum, 2000). When controlling for worker skills, the female to male wage ratio was 95 per cent in 1991–1995 but declined to about 75 per cent by 2006 (Bhattacharya *et al.*, 2008). In China, the discriminatory portion of the gender wage gap also widened in the 1990s (Maurer-Fazio *et al.*, 1999).

In sum, the available research suggests a much slower narrowing of the gender wage gap in developing countries than standard trade theory would predict. As it was observed earlier, women's lower education compared to men's as an explanation of female workers' inability to move into higher-paying jobs appears increasingly weak in light of women's educational gains in recent years. However, women's limited access to vocational training is still likely to be valid as an explanation. In addition, skills are filtered through gender norms: stereotypes about women's and men's suitability for certain types of work and perceptions of women's and men's abilities influence employer hiring practices. For example, in the context of industrial upgrading, women may not be able to shake off their association with unskilled work, and with the relative growth of the service economy they may be perceived as more suitable for lower-paying occupations such as caring jobs that are consistent with gender norms (Berik, 2011).

Other factors, such as the increased mobility of foreign investors in the context of decentralized global production and the related weakening of labour rights that have often accompanied trade liberalization in developing countries, are likely to also play a role in inhibiting greater equality in pay between female and male workers.

Box 12

The impact of trade liberalization on women as workers: A summary

Trade liberalization impacts women in their role as workers by influencing their employment and wage patterns. Both standard and heterodox theories have accounts of how trade affects gender differentials in employment and wages but they differ on the channels through which this takes place and in their conclusions.

(a) In the standard view, changes in prices are the main channel through which adjustments occur. Building on the notion of comparative advantage, standard trade theory (the HOSS theorem) suggests that developing countries specialize in and export lower-skill intensive goods because they have abundant low-skill labour and can produce this type of good relatively cheaply. When trade is liberalized, higher global demand raises the price of this good and boosts income. Under the assumption that female workers in developing countries have lower average skills than male workers, standard theory can be interpreted as predicting that firms demand more female labour as a result of trade. While women's wages increase, men's wages decrease and, consequently, the gender wage gap narrows.

Box 12

The impact of trade liberalization on women as workers: A summary

(b) In the heterodox view, forces of competition drive the analysis. Trade liberalization intensifies international competition and rival firms increasingly rely on existing gender inequalities to reduce unit costs in order to survive. Although firms demand more (cheap) female labour as a result, this does not necessarily translate into an increase in female wages as the standard theory suggests. Women's wages may or may not rise as firm competitiveness depends on keeping labour costs low. Additionally, under the assumption that female labour supply is relatively elastic, it is impossible to know *a priori* whether the gender wage gap will widen or narrow.

Country case studies show that the impact of trade on women as workers also differs according to the sector of economic activity. Women have particularly gained from trade in the labour-intensive manufacturing sectors through increased employment opportunities: the so-called "feminization of labour". In the agricultural sector, trade liberalization has resulted in fewer opportunities for women as compared to men. Trade in services has also expanded job opportunities for women though they remain segmented in low value-added work. The gains in all sectors need to be assessed against the job losses resulting from import-competing sectors. Moreover, the quality of jobs created and persistent gender segregation are also relevant issues to be considered when assessing the impact of trade liberalization on women's employment.

Source: UNCTAD Secretariat.

3 Women as producers

Now that we have seen how women as wage workers might be affected by trade liberalization in terms of shifts in employment patterns and income, we turn our attention to the possible impacts on women farmers and small-scale entrepreneurs in the manufacturing sector. Though many women have gained employment as wage workers in export-oriented production, we will see that the impact of trade on women producers can be quite different.

3.1 Theoretical expectations

The HOSS model suggests that countries gain from trade because it shifts relative prices and allows each country to produce more efficiently and consume more goods than before. Consider the case in which two countries produce two goods with two factors of production (labour and capital). Under free trade, a country will produce that good in which it has a comparative advantage, or the one that uses its abundant factor more intensively. Accordingly, the domestic price of the good in which the home country has a comparative advantage (or its export good) will rise. This is because under free trade, excess demand for this good in the foreign country will cause its world equilibrium price to rise.⁴⁶ Exporters in the home country stand to benefit from expanded markets and better prices for their products. Thus women as producers also stand to gain if they can avail of opportunities to export their products.

Next we must consider the effects of the elimination of import tariffs on domestic producers.

Tariffs reduce import demand and allow domestic producers to both increase supply and sell a good at a price higher than the world price, thus making a surplus in the process that is equal to the price difference times the additional supply. When tariffs are eliminated under free trade, domestic producers will face a fall in revenues due to the loss of this "producer surplus".

Some productive activities can be rendered unviable as domestic producers cannot compete with the fall in prices due to import competition and are driven out of the market altogether. Trade alters the structure of production by expanding some sectors and contracting others, thus generating significant adjustment costs that are higher if the production base is narrower and the export potential is lower (Beviglia-Zampetti and Tran-Nguyen, 2004).

3.2 Existing evidence

3.2.1 Agriculture

A large number of women in developing countries are crowded in the agricultural sector where they are likely to be small and marginal farmers or work as unpaid labour on family farms. Women most often work in subsistence agriculture and produce staples for own consumption. Generally, agricultural productivity in many developing countries tends to be low and underemployment in the sector is high. When examining the gender ramifications of trade policy in agriculture, it is useful to distinguish between the subsistence-oriented staple food segment on the one hand, and export cash crops on the other.

3.2.1.1 Subsistence-oriented staple food production

There are two discrete trade policy issues related to import penetration and the “modernization” of the subsistence sector to increase its commercial orientation.

(a) Import penetration

Cheap food imports as a result of trade liberalization can reduce the domestic price of agricultural produce and erode women's already meagre earnings in the sector. This was the case in the Philippines where over a third of the women in agriculture were engaged in rice farming. Liberalization of the rice market between 2001 and 2005 led to a reduction in the domestic price of rice and reduced incomes for both men and women small-scale farmers in the rice value chain (UNCTAD, 2008). Tariff protection for crops that are vital for food security and for the livelihoods of poor households can be used as a policy instrument here, though compatibility with WTO trade rules needs to be worked out. It should be stressed, in this respect, that in most developing countries, the gap between the bound and applied MFN rates (the so-called “binding overhang”) is fairly large for agricultural products.⁴⁷ This allows for significant leeway in adjusting border protection to stimulate domestic staple food production. Constraints in manipulating import levies, however, may arise from regional agreements.⁴⁸ Domestic support measures can also be proactively used to stimulate production. Such measures include price support, though within the *de minimis* threshold.⁴⁹ Compensation for the “losers” from trade can also be considered although this is a short-term solution and does not address the question of alternative livelihoods for the concerned producers.

When assessing the extent to which domestic staple food production is displaced by cheap imports, it is also important to consider the degree to which local markets are insulated from competition. Poor transport and trade logistics, among others, increase transaction costs and tend to insulate more remote markets. If we take the example of Rwanda, most food imports are directed to Kigali and few urban areas; rural markets in remote areas continue to be mainly supplied by subsistence-oriented farmers. Yet, infrastructure constraints are being removed quickly through coordinated investment in roads, electrification and cold-chain storage, and import penetration is likely to increase in rural regions (UNCTAD, 2014).

(b) Modernization of the traditional subsistence-oriented sector

In the long term, the goal of many primarily agrarian societies is to move from a largely subsistence-oriented agricultural sector to a more commercially-oriented one, sustaining growth and adding value to products through processing (e.g. the case of Rwanda). From a gender perspective, questions arise as to whether the modernization of agriculture would imply a change in mode or scale of production: from small scale to large scale, from labour intensive to capital intensive. This shift may pose significant challenges for rural women who tend to be relatively disadvantaged compared to men in terms of capabilities (lower literacy rate of rural female heads of households) and access to productive resources (land, credit, etc.). Proactive measures are needed to ensure a gender-sensitive modernization of the traditional staple food sector.

A related issue is land diversion. Agricultural modernization schemes typically envisage land consolidation and acreage expansion for a few prioritized crops (typically the major internationally traded cereals, like maize, wheat and rice). This may occur at the expense of the so-called “secondary crops” (roots and tubers, such as cassava and pulses) that have significant local importance in dietary terms and that tend to be “female” crops in many contexts. The same problem arises with respect to agribusiness expansion. Poor farmers in many developing countries are also increasingly abandoning or selling their farms, leading to land concentration in the hands of a few large commercial enterprises, including foreign companies. For example, in the Philippines, a study reports that rural women have been pushed by large NTAE businesses into increasingly less fertile land or even been displaced to cities and tourist zones, where they work as domestic workers or sex workers (Beviglia-Zampetti and Tran-Nguyen, 2004).

3.2.1.2 Cash crops for export, with a focus on non-traditional segments

Trade liberalization can benefit women farmers by providing expanded markets for export as well as opportunities to integrate into global supply chains as producers.⁵⁰ Emerging trends seem to indicate that small farmers, many of whom are women, are often not in a position to compete in overseas markets. They face a particular set of constraints relating to land tenure systems, poor infrastructure, limited access to credit and often a lack of the technical expertise required to comply with regulations and output standards (Fon-

tana and Paciello, 2009). Evidence that women as producers face more severe challenges in accessing international markets than their male counterparts, and that women traders tend to be confined to local markets, can be found in Samoa, Mozambique and other sub-Saharan African countries (Carr, 2004; Beviglia-Zampetti and Tran-Nguyen, 2004). In addition, women producers face various market access constraints related to phytosanitary standards, technical barriers to trade, and product and process regulations that they find difficult to meet (Beviglia-Zampetti and Tran-Nguyen, 2004). They also face market entry barriers, such as private standards or voluntary labelling requirements. Not only do these market access and entry barriers have to be eased, women producers also need technical expertise and training to deal with them.

A related development, particularly in NTAEs, is production under contract farming and other out-grower schemes. Under these contractual arrangements, the farmer agrees to supply a specified quantity and quality of a specific agricultural product at an agreed time; the buyer (typically a processor, trader or retailer chain “off-taker”) commits to purchase the product and, in some cases, advances finance or supply inputs and provides extension services, the costs of which are deducted from the final settlement payment. The gender ramifications of these schemes are not straightforward. On the one hand, off-takers often prefer to source from the most commercially oriented farmers so as to reduce transaction costs of supervision and counterparty risks. This tends to crowd out marginal and vulnerable rural smallholders, many of whom are women. For instance, women farmers get a very small share of contracts from agro-processing firms to grow export crops: during the 1990s, they obtained only 3 per cent of contracts in Guatemala and less than 10 per cent in Kenya (Kabeer, 2012). On the other hand, some buyers may structure their procurement to enable the participation of women, particularly when reputational or sustainability issues are at stake (especially if the produce is sold as “socially sustainable” in high-income consuming countries). In this case, the buyers may act as catalysts for the empowerment of rural women. Beyond gender considerations, contract farming and other models of structured supply chains raise concerns about over-dependence and abuse of position. These concerns can be more effectively addressed when local authorities step in and “frame” the broad terms of the bilateral deal: which suggests a shift from bilateral contractual relationships (between farmers and off-takers) to triangular public-private partnerships (involving farmers, off-takers and the public sector).

Nevertheless, there are numerous successful cases in which women producers have been able to take advantage of export opportunities for agricultural produce and increase their earnings, often by forming local associations and obtaining the right technical and financial assistance. For instance, the government of Burkina Faso along with international NGOs and the UN initiated a project to assist women shea producers in the country to improve their production of the crop and link them up to export markets. Women's producer associations pooled resources to buy machinery so that they could sell more profitable shea butter instead of raw nuts and successfully linked up to global markets. They receive regular technical training to observe export quality standards and attend trade fairs to make contact with buyers (UNCTAD, 2008). In Uganda, women produce 80 per cent of NTAEs and have been successful in expanding their businesses and getting access to credit because they own land (Randriamaro, 2005), which highlights the importance of strengthening women's property rights and their entitlements to land. Because it is easier for small-scale farmers to gain access to global value chains when they form cooperatives or producer organizations, it is important for policymakers to enhance women's access to these organizations as they tend to be male-dominated or to promote women producers organizations (Fontana and Paciello, 2009).

Ultimately, the ability of rural women to effectively integrate into global supply chains depends on the corrective action taken by governments to redress gender-based inequalities and constraints as well as the incentives that off-takers in structured chains have to source from women.

3.2.2 Manufacturing

Aside from agriculture, women are also engaged as small-scale producers or home-based micro-entrepreneurs of manufactured items such as handicrafts, garments, textiles, food products, etc. These enterprises typically have a low capital base, low productivity and are often based on home premises. That is, women's enterprises tend to be mostly informal and “survival-oriented” rather than formal and “accumulation-oriented” (Kabeer, 2012). As in agriculture, gender-based constraints in small-scale production, such as lack of access to capital, technical and business training, marketing skills, education and heavy care burdens that have to be managed simultaneously, mean that enterprises run by women often tend to grow more slowly and are generally less profitable than those run by men (Kabeer, 2012).⁵¹

Trade integration transforms nearly every aspect of business and puts pressure on small-scale producers to upgrade their technologies, increase productivity and compete with cheaper and often better quality imported goods. Trade liberalization is often associated with industry consolidation and expansion as large and/or foreign firms make incursions into traditional and local markets in which SMEs may have found a niche (OECD, 2004). Given their constraints, women entrepreneurs in particular find it difficult to cope with the higher competition and may have their livelihoods eroded as a result, which was the case in Viet Nam (Tuyet Mai, 1998) and in Samoa (AusAID, 2008), for instance. In such cases, trade protection for items of particular relevance for SMEs can be a policy option; sector specific industrial policy including preferential terms of credit, technical support and export subsidies can also address some of the problems faced by small entrepreneurs. For enterprises that go out of business, reskilling programmes might be necessary to reintegrate owners into the labour market as workers.

On the other hand, trade liberalization can also give women entrepreneurs the opportunity to access new export markets and increase their earnings. However, for the same reasons discussed above, women-owned enterprises are much less likely to acquire the necessary technical and legal expertise and the ability to market their products effectively. Rather, formal and accumulation-oriented enterprises are more likely to take advantage of export markets.

In some countries, small- and medium-scale formal sector enterprises owned by women have benefited from selling in export markets though, as in the case of Kenya, where these businesses tend to be owned by women with university education, entrepreneurial backgrounds, some managerial experience and supportive husbands (Stevenson and St. Onge, 2005). Women entrepreneurs from different industries in Ethiopia have also successfully established export associations to pursue their business interests, promote their products, participate in trade fairs, build capacity of their members and mobilize resources (Solomon, 2008). However, as was the case in agriculture, the ability of women entrepreneurs to take advantage of export opportunities will depend in part on the policy support they receive to foster competitiveness and increase productivity, output and access to new markets. For instance, making working capital and finance available for expansion, introducing women entrepreneurs to buyer networks, providing training on business management and

marketing skills as well as expertise on product standards, labelling requirements and trade regulations can significantly enhance the export potential of small-scale enterprises.

4 Women as traders

4.1 Theoretical expectations

Theoretically, as outlined earlier, trade liberalization is expected to reduce the price and increase the availability of imported goods. For women who trade in local and domestic products, trade liberalization can displace their means of livelihood and erode their incomes while women who sell imported goods can be expected to benefit. On the other hand, trade liberalization is expected to provide exporters and potential exporters the opportunity to access new markets and fetch better prices for their goods.

4.2 Existing evidence

In many countries, women are crowded in the services sector as petty traders of goods and services, such as street vendors, itinerant sellers and small shop owners. These occupations tend to be highly informal and insecure and act as a buffer for women who have little education, who are displaced from agriculture or are not able to find alternative employment. Trade liberalization can affect the prices of the goods they sell, the markets they can access and the income they earn. In countries where women sell locally produced, traditional or other domestic goods, the availability of cheap imports can erode their income and livelihood and shrink their markets. However, cheap imported goods can also become a source of livelihood for women who sell these goods in the domestic market for a living. For instance, in Angola, women in urban areas trade cheap imported goods informally, since oil-induced macroeconomic distortions in the country – particularly the excessive appreciation in the real exchange rate – tend to crowd out productive activities such as agriculture and light manufacturing that could absorb the female workforce and provide women with decent incomes. In some cases, women have also established cooperatives and travel to China, South Africa and Brazil to buy cheap goods and resell them in the domestic market (UNCTAD, 2013).

Women tend to dominate informal cross-border trade particularly in Africa; gender-sensitive trade facilitation policies therefore have a critical role to play in empowering women. Gender-spe-

cific obstacles create significant competitive disadvantages for female cross-border traders and they need to be tackled so as to unleash women's full entrepreneurial potential, which is in turn likely to promote export competitiveness, trade expansion and economic growth (an issue dealt with in Module 3).

Some scholars have suggested that regional trade agreements might be best suited to benefit women because neighbouring markets are likely to be more familiar and easier to deal with (Carr, 2004, as cited in Randriamaro, 2005). However, some regional trade agreements explicitly discriminate against small-scale traders and disadvantage women in the process. Jamaica's integration into the Caribbean Single Market and Economy allows the free movement of only certain categories of skilled workers in the area and therefore limits the opportunities of unskilled workers, which include many women, to provide their services in the region (UNCTAD, 2009). This is also likely to magnify existing cleavages between skilled and unskilled workers.

The evidence suggests that women traders have greater difficulty in accessing export markets than their male counterparts not only because they lack information and networks but because they are crowded in petty and local trading activities that do not offer much potential for expansion and growth when trade is liberalized. For instance, in the Gambia, women in the fisheries sector are small-scale traders who buy and sell fresh produce locally while men predominate in exports of frozen and smoked fish and commercial fishing. Dynamization of the fisheries sector through the expansion of trade runs the risk of excluding women who are not well positioned to be integrated into supply chains or of endangering their access to fresh fish supplies (UNCTAD-EIF, 2014).

5 Women as consumers

5.1 Consumers of imported products

5.1.1 Theoretical expectations

According to standard trade theory, one of the advantages of trade liberalization is the welfare enhancing effect it has on consumers. With the imposition of a tariff, consumer demand for a good shrinks because its domestic price rises. However, with the removal of a tariff, consumers can consume more of this good at a lower price and both import demand and supply increase at the new lower price. Thus women as consumers can also be expected to benefit from trade liberalization.

5.1.2 Existing evidence

Women in general earn lower incomes and have higher rates of poverty than men, and basic consumption goods form a large proportion of their consumption basket. If trade liberalization lowers the price of basic consumption goods it will impact women differentially to that extent. For Cape Verde, a study by UNCTAD (2011a) found that the elimination of tariffs on food products had a pro-poor bias and significantly impacted the welfare of female-headed households who spend a large share of their income on food. With a 10 per cent decline in the price of basic foodstuff, the proportion of people below the poverty line declined by 2.6 percentage points. In Ghana, trade liberalization in agriculture benefited urban women who were net buyers of food but hurt women farmers who saw their incomes decline due to competition from cheaper imports (Randriamaro, 2005).

Similarly, in Bhutan, it was found that the reduction of the import tariff on rice also had a pro-poor bias because the share of income spent on purchasing rice fell sharply as income rises. However, this needs to be netted against the impact on rice producers in the country who were not part of the study (UNCTAD, 2011b). It should be noted, however, that the impact of tariff reduction on food imports can be limited to the extent that women are subsistence farmers and consume mostly what they produce.

5.2 Consumers of public services

Because trade integration can affect women in a myriad of ways, it is important to investigate all likely impacts and assess the net impact of policy changes. In addition to the direct impact on prices, wages and employment, tariff reductions can also affect women indirectly as consumers of public services. Revenue losses for governments due to the elimination of tariffs or a reduction in trade taxes⁵² can lead to cutbacks in social expenditure that disproportionately affect women due to their domestic and reproductive roles and responsibilities. Trade policy can thus lead to shifts in fiscal policy that in turn have gendered consequences.

5.2.1 Theoretical expectations

As outlined in Module 1, gender-aware macroeconomics brings the sphere of non-market work, including unpaid care work, domestic work and reproduction, into the macro-level analysis. National output here is considered as a product of four interdependent sectors: the private,

public, domestic and voluntary sectors. Market production would not be possible without the unpaid domestic and care work done by women in the household because it creates vital human and social capital (Elson, 2002). Therefore, it is important that any trade or macroeconomic policy shifts analyse the implications for the domestic sector as well.

For instance, in a simple economic model where injections of aggregate demand (government spending, investment and exports) equal leakages (savings, taxes and imports), gender equality can improve if government spending specifically benefits females, such as through investing in education or reducing the care burden. This would be an expansionary and “gender cooperative” effect of fiscal policy, while a decline in such spending would be contractionary and “gender conflictive” (Seguino, 2012).

5.2.2 Existing evidence

Trade taxes are an important source of revenue for African countries. During the 1990s, they provided 28 per cent of the region's total revenue, for instance, while tariff revenues comprised 2 per cent of GDP in the median sub-Saharan African country and up to 4 to 6 per cent in non-median countries (UNECA, 2004). Trade liberalization created serious fiscal challenges for the region and was consistent with successive declines in public investment starting from the 1980s until the 2000s (UNECA, 2004). Zouhon-Bi and Nielsen (2007, as quoted in UNCTAD 2011a: 26), found that in Cape Verde tariff liberalization as part of the EPAs would lead to a reduction of 80 per cent in tariff revenue and a 16 per cent fall in government revenue overall, a very significant drop.

If governments reduce expenditure on health-care, social services and programmes or education to make up for these losses in revenue it means that women's care burdens and their expenditure on basic services will increase. Women already bear the bulk of responsibility for household tasks, child-rearing and other care work as compared to men and face considerable time poverty. These additional burdens could mean that they have to drop out of the labour force or forego opportunities to earn income and time

for rest and leisure. Alternatively, the additional responsibilities can spill over to young girls at home whose education might suffer as a result (Elson, 1993). With higher rates of poverty in general, the additional expenditure on basic services can have deleterious effects on living standards, health and well-being as they require that tough choices be made on spending priorities. In the gender-aware macroeconomic framework, such reductions in social spending would be contractionary and “gender conflictive.”

The scaling back of public infrastructure spending, including electricity and water, can seriously disrupt productive and household activities, leading to a loss of income, longer hours spent on domestic work and possible public health problems. Revenue losses and resulting fiscal austerity policies can also constrain the ability of governments to put in place social protection mechanisms and safety nets to contain some of the negative effects of liberalization (Randriamaro, 2005) or to implement cash transfer programmes and daycare facilities that benefit poor households and women in particular.

Women's care burden may increase as a result of privatization programmes implemented unilaterally or in the framework of agreements on trade in services liberalization. Some developing countries have privatized the provision of water, sanitation and other public services, with the hope of achieving greater efficiency or as a precondition for obtaining loans from international financial institutions. The results of these experiences are mixed. While in some cases private participation has contributed to increasing the availability and quality of services, in other cases the opposite has happened, with non-profitable regions and poor communities being particularly penalized.

It is clear from this discussion that macroeconomic and trade policies have effects on the market as well as non-market spheres. Specifically, economic policy brings about resource reallocations that place (or ease) obligations and constraints on households but also affects gender dynamics within households. A small but growing body of research focuses on the impact of trade policy on intra-household dynamics; the interested reader can learn more about key ideas and research papers in the literature from Box 13.

Box 13

Trade policy and intra-household dynamics: A brief note

Sociologists and anthropologists have long called attention to the fact that men and women have different rights and responsibilities within households and that gendered norms have an impact on decision-making processes and intra-household allocation of key resources such as food and time.

It is only recently, however, that economists have started to look inside the households and acknowledged the importance of different constraints and preferences among family members. Still, the impact of trade policy on intra-household dynamics is the least studied topic within the trade and gender literature. The following are some of the channels through which trade expansion affects intra-household dynamics:

- (a) Trade expansion may create or destroy sources of independent income for women and hence affect their influence over household decisions.
- (b) Since men and women have different expenditure patterns, who the earning member is determines which goods are purchased and whom they benefit in the family. For instance, women tend to spend a higher amount of their income on food, education for children and basic necessities while men tend to spend higher amounts on alcohol and tobacco.
- (c) Trade causes changes in the prices of goods consumed by the household and this is also likely to have gender-specific effects. Higher prices of foodstuff may make it difficult for all members of the household to be fed adequately and the preference may be to feed men and boys over female members of the family.
- (d) Increases in trade-related employment affect how the family members spend time on non-market care work: women who are employed may have less time for rest; some of the care work may be redistributed to men or other members of the family; children, and especially girls, may also have to take on their mothers' domestic responsibilities.
- (e) Trade liberalization leads to changes in tax revenues and this in turn may affect the public provision of social services. Younger and older, male and female members of households need these services to different degrees.

For more information on the impact of export-oriented agriculture on intra-household dynamics see von Braun and Kennedy (1994), Katz (1995), Elson *et al.* (1997), Newman (2002), Fontana (2003), and UNCTAD (2011a). For studies related to the manufacturing sector, see Hewett and Amin (2000), Kabeer (1995, 2000), Sender and Smith (1990), Sender (2002), Gates (2002), Dominguez *et al.* (2010), and Kuttner *et al.* (2012).

Source: UNCTAD Secretariat.

6 Women as tax payers

As in the case of women as consumers of public services, we consider here another indirect effect of the fall in tariff revenues as a result of trade liberalization. Apart from cutting social spending, governments may try to offset the fall in revenue by increasing taxes. However, taxation policy is also not gender-neutral and we need to analyse how a shift in the tax structure or regime affects women differentially.

6.1 Theoretical expectations

The gender dimension of taxation is a relatively new field and concepts in this area are still being developed. Here we rely on the framework offered by Stotsky (1997) and developed further in Elson (2006) and Grown and Valodia (2010). Because women and men have different positions in the economy, which is itself a gendered structure (refer to Module 1), tax policies affect them differently. Stotsky (1997) pointed out that tax policy can have explicit or implicit biases

against women. In the first case, tax regulations themselves treat women differently, such as in personal taxation, while in the second case, they impact women inadvertently due to their social and economic location. Elson (2006) went a step further and made the case that personal income tax systems should not simply be "unbiased" but rather seek to transform inequitable gender roles in society by eliminating incentives for their continuation and by redistributing care work.

6.2 Existing evidence

Over 125 countries now apply indirect VAT (Bird, 2005, as cited in Grown and Valodia, 2010). It is well known that the use of VAT on basic consumption goods, or an increase in the VAT rate, will have a regressive effect on income distribution because it affects the poorest households that spend the highest share of their income on basic goods the most. As we have already outlined, women in general earn less than men and have higher rates of poverty so a VAT will have a gender-biased impact. In a set of simulation

studies that reduced or zero-rated key items in the basic food consumption basket of different countries, Grown and Valodia (2010) reported that poor and female-headed households in Argentina, Morocco and Uganda experienced a decline in their tax incidence as a result. India was the only exception in which the tax incidence of poor female-headed households did not decrease. Correspondingly, it can be expected that a rise in VAT will also have significant gender-adverse effects if it is used to compensate for losses in tariff revenues.

On the other hand, direct taxes on income usually affect men more than women, since men tend to own more wealth and have higher incomes. If governments try to compensate for the loss of tariff revenues by increasing income taxes, this may have an indirect adverse effect on women. When taxes are applied to joint household income rather than individual income, it increases

the applicable tax rate and creates disincentives for women to enter the labour market (Huber, 2005; Tax Justice Network, 2011). Alternatively, it may encourage women to drop out of the labour force if they are already working. Additional increases in the income tax rate will exacerbate these disincentives. For example, dual earner households in Argentina pay higher taxes than male breadwinner households and the system of deductions in the personal income tax structure creates disincentives for women to enter the labour market (Grown and Komatsu, 2010).

If governments must raise taxes *in lieu* of the loss in tariff revenues, evidence suggests that increasing taxes on luxury goods such as cars, boats and electronics while reducing or maintaining rates on basic necessities such as food, fuel and children's clothing can have a pro-poor and gender equitable impact (Grown and Komatsu, 2010).

Table 5

Summary of channels of interaction from trade to gender

Women's economic role	Channels		Possible effects
Workers	(1a) Standard theory (HOSS): Prices of low-skilled goods in developing countries rise as a result of trade.	Employment and wages	(1a) Demand for female labour rises as women are considered low-skilled. Demand for male labour falls as they are considered high-skilled. Women's wages rise, men's wages fall and the gender wage gap decreases.
	(1b) Standard theory (Becker): International competition makes it costly to hire men when it is cheaper to employ women.		(1b) Demand for female labour rises due to competition. Demand for male labour falls as it is relatively more costly to hire them. Women's wages rise, men's wages fall and the gender wage gap decreases.
	(2) Heterodox theory: International competition drives firms to using existing inequalities to reduce unit costs.		(2) Demand for cheaper female labour rises due to the gender wage gap. Women's wages may or may not rise as firm competitiveness depends on keeping labour costs low. Labour supply is considered relatively elastic. The gender wage gap may increase or decrease.
Producers and traders	(1) Increased competition from imported products.	Livelihoods	(1) Lower income for women producers who face competition from cheaper imported products (unless they produce for own consumption).
	(2) Lower import prices as a result of tariff cuts.		(2) Lower income for women who are petty traders of locally produced goods due to higher competition; higher income for women traders who sell cheaper imported goods on the domestic market.
	(3) Higher prices for export goods.		(3) Higher income for women producers and traders if they are able to export.

Table 5

Summary of channels of interaction from trade to gender			
Women's economic role	Channels		Possible effects
Consumers	(1) Lower import prices of consumption goods as a result of tariff cuts.	Welfare	(1) Increase in poor and female-headed households' welfare if the resulting cheaper goods form a part of the basic consumption basket.
	(2) Higher prices of basic services as a result of trade in services liberalization.		(2) Reduction in women's access to basic services due to higher prices.
	Lower government spending – social expenditure – as a result of tariff cuts.	Public social services	Reduction in the supply of public and social services to the detriment of women.
Tax payers	Governments raise taxes to compensate for a loss in revenues as a result of tariff cuts.	Taxation	(1) Higher direct and indirect tax incidence. (2) Women fall out of and/or are discouraged to enter the labour market.

Source: UNCTAD Secretariat.

7 Conclusion

In this module, we have learned about the likely impacts of trade liberalization on women's economic empowerment as predicted by standard and heterodox theories, as well as reviewed existing empirical evidence on the topic. It is clear by now that trade liberalization affects women differently depending on their position in the economy. For instance, women as workers might find increased employment opportunities in export factories but women who are small and marginal farmers may suffer as a result of cheap food imports. There is some overlap between these roles: women as consumers may also benefit from the availability of cheaper food items. Thus, it is important to conduct a comprehensive assessment of the net impact of trade liberalization policies on different groups (including women) before

their implementation so as to ensure that trade plays the role of reducing and not exacerbating existing inequalities. It must also be borne in mind that although trade liberalization creates jobs and income for women in labour-intensive manufacturing, they are generally poor in quality, limited to some industries and with few opportunities for advancement. On the policy front, more needs to be done to improve the quality of export-oriented jobs as well as to ensure that women who are producers and traders are able to take advantage of potential export opportunities. Policies to compensate the "losers" in the process of trade integration or to reskill workers who were employed in industries that got adversely affected by trade are also important. On the other hand, trade protection for particular sectors that are critical for food security and poverty alleviation is also a viable policy option.

Exercises and questions for discussion

1. Describe the channels through which trade can impact women's economic empowerment. Do the effects of trade policies and/or trade expansion on women's employment and income differ according to the different roles women play in society? If yes, how?
2. What are the effects of export expansion on the gender patterns of employment? Could these effects be sector specific? And if so, how does export expansion impact women employed in the sector experiencing it? Also, illustrate the possible gender employment effects of an increase in imports.
3. Explain the concept of "occupational segregation". Do you think that women suffer more from occupational segregation? If yes, explain why. Does trade exacerbate women's segregation in particular types of occupations?
4. What is the gender wage gap and what are its implications for women and for the labour market? What is the role that gender segregation plays in the gender wage gap?
5. Explain the concept of "feminization of labour" and its implications for women and for sector/country competitiveness.
6. How do we expect trade to influence gender patterns of intra-household allocation of resources and time?
7. The gendered employment effects of trade may or may not contribute to gender equality, depending on a range of factors and preconditions. Discuss what these factors and preconditions may be in relation to two countries of your choice.
8. Suppose that female employment has recently increased in your country, mostly because of the development of a new EPZ. At the same time, there is also evidence of poor compliance with labour standards. What sort of recommendations would you put forward to your government to address this problem and still maintain international competitiveness?
9. A large number of women in developing countries are crowded in the agricultural sector. Explain the impact that increased imports of agricultural and food products could have on women as agricultural producers and consumers of food products. Explain why the impact may vary depending on whether women produce for own consumption or for the market.
10. Only a small share of women in developing countries is involved in formal employment and receives wages. Many poor women in particular tend to receive income from other sources such as informal employment in non-tradable services, or profits from small-scale self-employment in agricultural or non-agricultural activities. How will trade expansion affect their earnings?
11. Imagine your country is in the process of negotiating a trade agreement. How would you go about assessing the import competition effects on both production and consumption? What sort of evidence would you need to generate to expose the gender characteristics of production and consumption in those sectors that are likely to be affected?
12. Tariff reductions due to trade liberalization may affect women indirectly as consumers of public services. Explain why women are likely to be affected more than men. Explain the distinct effect that changes in fiscal policy (for example changes in the rates of income taxes or indirect taxes, such as the VAT) could have on women and men.

ANNEX

Review of selected approaches and methodologies

This Annex reviews a set of studies that illustrate the range of approaches and methodologies available to researchers who would like to analyse the impact of trade liberalization on employment, one of the best researched topics in the field. Of the four papers presented here, all except the first (which analyses economy-wide labour market participation) examine trends in manufacturing, reflecting the relative abundance of empirical work and data in this sector.

As the reader will observe, the question of how changes in trade patterns affect gender inequality in employment has been tackled in various ways. Researchers have chosen different lines of inquiry as well as scopes of analysis and used different measures for the variables of interest.

A1 Wamboye and Seguíno (2012): “Economic structure, trade openness and gendered employment in sub-Saharan Africa”

Context

This paper investigates whether greater trade integration has increased women's employment opportunities in sub-Saharan Africa. It considers women's overall access to work both in relative and absolute terms (but with no detail for specific economic sectors) and measures openness in practice.

The authors indicate that, given women's lack of resources to facilitate their mobility between sectors in export production in sub-Saharan Africa, men's employment opportunities may have increased more than women's, in contrast to outcomes in semi-industrialized economies.

The authors are interested in the impact of trade on women's employment opportunities not only through export expansion but also through import liberalization, and hence disaggregate the trade openness variable by using exports and imports as a percentage of GDP separately in some of their regressions.

Another valuable contribution of the paper is that it attempts to differentiate effects on countries with different structures of production and trade (such as oil producers, mineral exporters

and non-mineral exporters) and pays attention to other factors likely to influence women's labour supply, such as a country's physical infrastructure (including electrification, clean water and transport that could reduce the time women spend doing unpaid work).

Data and methodology

The paper uses two estimation methods: fixed effects (FE) and two-stage least squares (TSLS). These are applied to an unbalanced panel including data for 38 economies over a twenty-year period (1990–2010). FE estimation captures country-specific factors that influence gendered employment and that are not otherwise captured by the independent variables. The authors use TSLS as a robustness check and to address the potential endogeneity of the regressor; the degree of gender equality may itself influence the rate of economic growth and may also respond to changes in the trade share.

The dependent variables are measured as: (a) the female minus the male employment-to-population ratio for those 15 years and over; and (b) the female employment-to-population ratio. The employment-to-population ratio is a broad measure of access to work and allows one to capture economy-wide changes in job gains relative to the population. It has the added advantage of being an easily available indicator. However, it offers no sector-specific information and it is important to note that increases in (a) can occur due to higher female employment ratios or lower male employment ratios.

The independent variables include: (a) trade openness, measured as the sum of exports and imports as a percentage of GDP, or just exports or imports as a share of GDP; (b) the growth rate of real GDP per capita to capture the effects of aggregate demand on gendered employment; (c) manufacturing and agriculture value added as a share of GDP to account for gendered effects on employment stemming from changes in sectoral demand and in economic structure; and (d) physical infrastructure to account for factors that may affect the time women spend in unpaid work and their labour market supply (this is captured by two variables: the proportion of the population with access to improved sanitation facilities and the number of telephone lines per 100 people).⁵³

The analysis compares outcomes in oil-exporting countries and two groups of non-oil exporters: mineral-exporting countries (MECs), and non-mineral-exporting countries (NMECs).

Findings

The estimation results offer a mixed picture. Constant other factors, trade liberalization negatively affects women's absolute and relative employment in NMECs. The effects are positive in MECs but not robust across estimation methods. If we disaggregate trade variables into exports and imports and then further into subgroups, gender effects vary across sectors and countries with differing economic structures. For example, both imports and exports have a negative effect on women's relative employment rates in NMECs and MECs; yet, imports have a positive effect in MECs. At a greater level of detail, the authors find that "food imports and exports produce a neutral gendered employment effect" but manufacturing imports and exports lower women's employment relative to men's (in other words, men appear to gain more). While trade has mostly negative effects, infrastructure has a strong positive effect both on women's relative and absolute employment. The results are robust to different estimation techniques, model specifications and samples. The authors conclude that infrastructure improvements may play an important complementary role to improve women's access to employment created by trade expansion.

There are limits to what can be observed from aggregate cross-country analyses. To better understand channels of transmission, such studies must be supplemented by country-specific analyses.

A2 Kucera, Roncolato and von Uexkull (2012): "Trade contraction and employment in India and South Africa during the global crisis"

Context

This paper explores a different question than Wamboye and Seguino (2012), focusing on single countries and following a simulation rather than an estimation approach. The recent global crisis of 2008–2009 is estimated to have led to a significant, albeit temporary, decline in global trade (WTO, 2010). The authors set to investigate the employment effects of the crisis in South Africa and India resulting from reductions in exports to the EU and the United States around 2009. They do so by looking at direct (e.g. job destruction in export-producing sectors), indirect (e.g. job changes in other sectors of the economy linked to the export-producing sectors through backward

or forward linkages) and induced employment effects (e.g. job changes resulting from changes in household expenditure) by differentiating the impact on workers by gender and skill. In other words, they ask: If one could isolate the effects of trade contraction from other simultaneous events, what would the job losses across all industries in the concerned economy be, disaggregated by gender? Would the overall employment changes be gender- (and skill-) neutral?

The main contribution of the paper is to develop a method to calculate gender-specific job losses not just in the sector directly affected by the crisis but through repercussions in all other sectors of the economy. Even if global trade has already begun to recover, the authors argue that their exercise is still useful as it offers a comprehensive assessment of the potential costs associated with greater openness in countries such as India and South Africa, which have dramatically increased their engagement with the world economy in the last decade. Their approach helps in identifying particular industries and workers that may be especially at risk and hence could usefully inform government crisis responses in the future. The same approach could in principle be applied to the study of other policy changes such as trade liberalization episodes or tax reforms. Its value lies in underscoring for policymakers the importance of not targeting only those sectors that are directly affected by a shock.

Data and methodology

As ever, the extent to which an issue can be accurately explored is determined by the availability of data. The authors can rely on rich data on the structure of both the Indian and the South African economy (including employment patterns) in the form of social accounting matrices (SAMs). For their trade data, however, because of the lack of up-to-date export statistics at the detailed industry level for both India and South Africa, they use mirror statistics on imports from the two countries reported by the EU (Eurostat) and the United States (United States International Trade Commission) but they do not include trade in services (which would be substantial) because of a lack of sufficient information.

A SAM can be described as an extended input-output table with much greater institutional detail. It includes not only information about productive activities in the economy but also incorporates other institutions and markets such as factors of production (i.e. labour, land and capital) and different household types. Each of the accounts in the SAM can be constructed and dis-

aggregated in such a way as to provide insights into the roles of different socio-economic groups in the generation and distribution of income in a country. The SAMs for South Africa and India cover formal as well as informal establishments and workers and provide a fine level of detail for the gender and skill composition of employment in specific industries, enabling one to separate out, for example, female-intensive sectors from male-intensive ones.

The modelling approach of Kucera *et al.* (2012) consists of a Leontief multiplier analysis in which a change in demand is represented by a change in exports from India and South Africa to the EU and United States, respectively. These changes cause changes in production, which in turn cause changes in employment.

In developing countries with extensive informal employment and underemployment, the estimation of changes in employment via changes in production is not straightforward. The authors note that what they refer to as employment declines represented in terms of full-time equivalent jobs may in fact translate in many cases into movements from formal into informal employment or increases in underemployment. Thus their results should be seen simply as an average measure of the negative impact on workers through some combination of job and income losses.

Employment changes for both women and men are proportionate to actual female and male shares of employment in the SAM base years. In other words, the assumption is that employers would not make distinctions by gender (or education) in the face of job destruction or creation, maintaining the same ratios of men and women in their workforce. This is, by the authors' own admission, a somewhat strong assumption that however does not detract from the main objective of the exercise. This consists of broadly identifying, by gender, sectors and groups of workers that could be either directly or indirectly vulnerable to a particular form of trade contraction.

Findings

The simulations show that India and South Africa have experienced substantial employment declines as a result of the crisis in Europe and the United States alone. A large share of these declines has occurred in the sectors not immediately exposed to trade, resulting from income-induced effects. In South Africa, industries with higher shares of male workers have been disproportionately affected by employment declines,

while no evidence of gender bias (in either way) is found in India.

This study usefully illustrates how a shock originating in the tradable goods sector can have wide-ranging spillover effects and shows the gender composition of the labour force that may be affected by such a shock.

A3 Rani and Unni (2009): "Do economic reforms influence home-based work? Evidence from India"

Context

This paper chooses yet another way of looking at issues related to gendered employment in the manufacturing sector. While the studies reviewed so far do not distinguish between different employment statuses, Rani and Unni focus specifically on home-based workers, one of the most vulnerable categories of workers usually hidden from official statistics. They investigate whether greater integration in global production chains and higher competition in India have led to the reorganization of work, with an increase in sub-contracted workers of the home-based variety, and whether women and men workers have been affected differently by these changes. Rani and Unni use a quantitative approach and look at the issue from both a macro and a micro perspective.

Data and methodology

At the macro level, the authors estimate simple ordinary least squares (OLS) regression equations to analyse factors explaining changes in the share of home-based work in the Indian manufacturing sector. They include a cross-section of 54 industry groups at the three-digit industry level of the International Standard Industrial Classification (ISIC) and broadly cluster these industry groups based on whether they are export oriented, import competing or mostly non-tradable. The dependent variable in the model is calculated as percentage change in the share of home-based workers during the 1995–2000 period and is constructed separately for male and female workers. Independent variables include: changes in value added, capital intensity and wage rates for each of the industry groups, and two trade policy variables to capture openness in practice. These two variables are: (a) the change in the import-weighted average tariff rate applied on goods entering the country, and (b) the change in non-tariff barriers (price control measures, finance control measures and

quantity control measures) calculated from the Nicita and Olarreaga dataset (Nicita and Olarreaga, 2006).

Conventional sources of data on employment such as population censuses and labour force surveys do not capture home-based workers well. Information on this employment group is generally not easy to find but India is an exception. The authors use a number of employment and unemployment surveys produced by the Indian National Sample Survey Organisation that, for the first time in 1999, introduced a question on place of work (including one's home as a place of work to identify home-based workers).

The microanalysis involves the use of a multinomial model with one categorical dependent variable, which is the choice of undertaking home-based work relative to working elsewhere or not working at all. Explanatory variables range from educational level to religion, caste, location, age, having children or not, and other family circumstances. The main purpose of this component of the empirical investigation is to identify the most important determinants of women's participation in home-based work.

Findings

The authors find that only men's home-based work increased during the period of trade policy reforms while women had been working as home-based workers in large numbers over a long period of time and were less affected by the recent episode of trade liberalization than men. The authors conclude that the historically high share of women in home-based work, which did not show much change during the reforms, suggests that female participation in such work in India is more likely to have been determined by cultural and social norms than by the recent liberalization process. The findings from the micro-model show that women's decision to participate in home-based work is associated with low levels of education, lower caste status and religion. Moreover, participation in home-based work is higher among female heads of households and women with school-age children (compared with women having younger children).

Interestingly, the results show diverging patterns for export-promoting and import-penetrating industries. Export-oriented industries such as apparel and chemical product industries, which employ a large share of female workers in general and home-based work in particular, experienced a decline in the share of home-based work (though the number of home-based workers still

increased in absolute terms due to the overall growth in the sector). Import-penetrating industries such as machinery, TV and radio equipment saw an increase in the share of (mostly male) home-based workers. The finding from the macro-model that a growth in wage rates had a positive effect on the share of home-based work for males appears to corroborate the authors' hypothesis that the shift to this form of production in industries facing severe competition from imports could be a cost-cutting strategy. Because of high and rigid levels of gender employment segregation that preclude women's access to sectors like machinery and other technical equipment, the informalization of working conditions is thus extending to men.

A4 Tejani and Milberg (2010): "Global defeminization? Industrial upgrading, occupational segmentation and manufacturing employment in middle-income countries"

Context

The paper by Tejani and Milberg (2010) takes a cross-country perspective and asks whether the feminization of manufacturing employment associated with trade expansion in developing countries in the past still continues or if defeminization is becoming the new trend in middle-income countries in Latin America and South-East Asia.

The authors look at many facets of this question by exploring a number of reasons for a possible shift in the female intensity of manufacturing employment and by identifying differences in patterns between the two regions. They use a combination of descriptive statistics (looking at changes over time in a set of variables), simple correlations and scatterplots and examine broad regional trends as well as trajectories of particular countries. The study offers good insights into the direction that further investigations could take.

Findings

The paper describes trends in the female intensity of manufacturing employment over the period 1985–2007 for a sample of 60 high- and middle-income countries. It focuses on South-East Asia and Latin America and finds that these two regions have contrasting trends: While the Latin American and Caribbean middle-income countries in the sample experienced rising fe-

male intensity, most South-East Asian countries experienced a defeminization beginning in the mid-1980s (and starting from a relatively high level of female intensity compared to other industrialized countries).

Both regions experienced strong growth in merchandise exports over the period, which suggests that export growth *per se* does not determine shifts in the female intensity of employment. More specifically, using the latest ILO data, the authors find that there is no clear relationship between the average growth rate of exports and the rate of feminization. Most countries in their sample experienced export growth rates of 2–5 per cent per annum but this narrow range was associated with a broad range of changes in female intensity, including some rapidly feminizing countries (such as Brazil and Venezuela) and other rapidly defeminizing countries (such as Malaysia). They conclude that it is important to go behind export performance and explore underlying changes in industrial structure and labour market institutions to explain changes in the female intensity of employment.

The authors hence look further at the correlation between gender wage ratios and female employment intensity (for a smaller number of countries since wage data are not available for all the countries in their sample) and find again no consistent pattern.

They note that South-East Asia and Latin America underwent different industrialization processes, which might explain the divergent feminization

patterns in the two regions. While South-East Asian countries used exports to upgrade their manufacturing sectors into higher value-added activities, in most of Latin America, import substitution industrialization remained the primary policy approach throughout the 1970s and, after the crises of the 1980s, growth in manufacturing remained sluggish.

The authors test this hypothesis by measuring industrial upgrading as (a) capital intensity, and (b) value added per worker. The two regions show broadly symmetric patterns: in South-East Asian production, capital intensity is increasing while in Latin America, it is decreasing. The authors find that the growth of manufacturing productivity is negatively correlated to the growth of female intensity of employment and that higher levels of capital intensity in production are also associated with lower levels of female intensity.

The authors then go on to present data on the gender gap in education. They show that the gains in education for women at all levels are impressive in the two regions and that, especially in Latin America, women's enrolment in tertiary education exceeds that of males. Thus the argument of a skill mismatch (or a lack of education) as a key explanation for why the female share of employment tends to fall with higher skill intensity is not tenable. The authors emphasize that persistent gender norms and stereotypes that deem women to be unsuitable for technologically advanced or heavy work seem to be a more feasible explanation.

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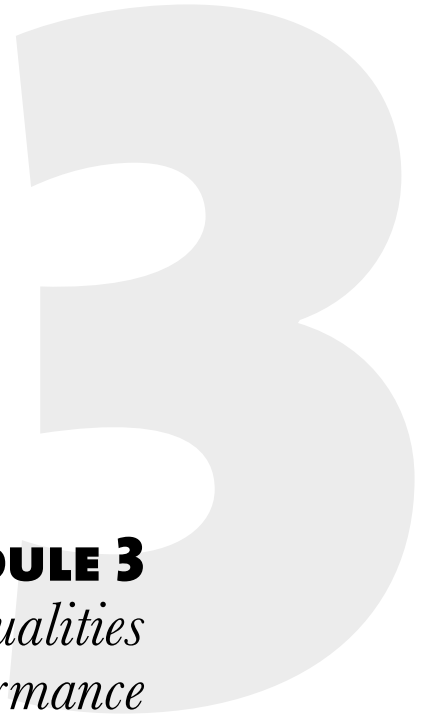
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MODULE 3

*Gender-based inequalities
and trade performance*

1 Introduction

In Module 1, we conceptualized the economy as a gendered structure and have seen that women face gender-related obstacles in the various roles they play in society and the economy. In Module 2, we discussed how trade integration impacts women as wage workers, producers, traders, consumers (and users of public services) and tax payers. We have seen that trade liberalization in many developing countries has led to a considerable “feminization of labour” in labour-intensive manufacturing while in agriculture, the impact on women has been much more mixed. We have also learned that women as producers and traders have not been able to take advantage of new export markets and, in fact, might have been adversely impacted by import competition.

This module examines how gender-specific inequalities impact export competitiveness and trade performance. We analyse the reasons why women have been preferred for low-wage, low value-added jobs in labour-intensive manufacturing. We also discuss further the reasons why women who are self-employed as entrepreneurs and traders are often not in a position to achieve export competitiveness. That is, we look at trade and gender inequality in two dimensions: (a) how gender inequality is itself used to enhance export competitiveness which in turn leads to higher economic growth, and (b) how gender inequalities prevent women from becoming exporters and thus limit trade performance. For this purpose, we employ the categories provided by van Staveren *et al.* (2007) and Elson (2007) that describe women as “sources of competitive advantage” for export-oriented firms and as “underachievers of competitive advantage” in their own enterprises.⁵⁴ We illustrate these processes using related country case studies in each case. Finally, in an Annex, we briefly review some research papers that analyse the impact of gender inequality on trade, both from an empirical and theoretical perspective.

In this module, we refer mostly to the export dimension of trade and we also discuss the link between export growth and economic growth.

At the end of this module, students should be able to:

- Identify how gender inequality can influence export competitiveness and trade performance as well as understand the transmission mechanisms of this influence;
- Give examples of how gender inequality affects trade performance and export competitiveness.

2 Women as “sources of competitive advantage”

2.1 The gender wage gap and “flexibility”

As outlined in Module 2, women have been employed in large numbers as workers in labour-intensive export production in many developing countries. The female share of employment in EPZs in particular tends to be very high and most zones remain concentrated on light manufacturing and assembly-type operations in garment, leather, toys and electronics. How have women become a source of competitive advantage for these firms? The main reason cited in the literature is the almost universal existence of the gender wage gap (Oelz *et al.*, 2013).⁵⁵ The relatively lower pay that women receive for similar work due to discriminatory norms and practices makes them an attractive labour force for firms that face stiff competition in the international market. For labour-intensive products in particular, international price competition tends to be intense and the price elasticity of demand is relatively high. Since labour costs make up a large share of total costs in this case, feminization of the labour force becomes a viable strategy to cut costs. Table 6 presents the gender wage gap for a small sample of countries in South-East Asia and Latin America. It is clear that a significant gender wage gap exists for all the countries listed. In Indonesia and El Salvador, the gap has increased over time. It is important to note that the gender wage gap is not only a developing country phenomenon; substantial differences in women’s pay relative to men exist even in developed countries.⁵⁶

Seguino (2000) showed that the gender wage gap contributed significantly to economic growth by expanding exports and investment for a sample of developing countries between 1975 and 1995. Similarly, Busse and Spielmann (2006) found that gender wage inequality is strongly associated with higher comparative advantage in labour-intensive production or, in other words, those countries that have higher gender wage gaps have higher exports of labour-intensive goods.

Table 6

South-East Asia and Latin America ratio of manufacturing wages, female to male (per cent)				
	Start year	Wage gap	End year	Wage gap
South-East Asia				
Indonesia	2001	91.9	2008	68.3
Malaysia	1985	49.3	1997	62.9
Philippines	1994	74.7	2007	91.3
Thailand	1991	63.7	2003	75.4
Latin America				
Brazil	1988	50.8	2002	61.2
Costa Rica	1984	73.3	2005	81.7
El Salvador	1984	87.6	2008	83.8
Mexico	1995	68.0	2008	71.8

Source: ILO (2009).

Many of these export-oriented firms, usually situated in developing countries, are integrated into the low value-added segments of global value chains (GVCs) and are under great pressure to deliver under short deadlines and meet seasonal demand peaks in foreign markets, for which they recruit female labour. For instance, in horticultural value chains, women form the core of the “flexible”⁵⁷ workforce and are concentrated in seasonal, casual and temporary work in Chile and South Africa while men predominate in the core permanent workforce (Barrientos, 2001). Thus firms might consciously choose a dual strategy and hire a lower wage workforce with weaker bargaining power on the one hand and pay higher wages to a smaller group of more skilled workers as a strategy to boost profits. This strategy has also been used by the garment industry in Morocco, which employs unskilled informal and generally female workers for activities such as packing and loading but maintains a core group of skilled workers to manage the quality of production (Rossi, 2011).

As discussed in Module 2, aside from employment in export factories, women also make a living as home-based workers, a category that includes independent own-account producers and dependent subcontract workers (Carr *et al.*, 2000). The latter category, called “homeworkers” and consisting of workers who are poorly paid and lack benefits or social security, also plays an important role in GVCs. Over one-third of electronics, apparel and textile companies in Malaysia subcontract to homeworkers (Ghosh, 2002; Sim, 2009), while in Turkey, a leading exporter of garments, subcontracting piece-rate work to mostly female homeworkers, is widespread and has led to a greater informalization of the female workforce (Dedeoğlu, 2010). By subcontracting labour-intensive or assembly-type work to homeworkers, producers in the lower segment of GVCs

can cut wage, non-wage and overhead costs and transfer risk to homeworkers who buy machinery and pay for rent and electricity (Carr *et al.*, 2000). Thus female labour, it has been argued, has a structural impact on the value chain hierarchy because it facilitates the transfer of rents to the lead firms in developed countries (Tejani, 2011).

Producers use existing gender inequalities to cut costs but they in turn create new forms of inequalities, such as crowding of women in low-paid, low-skilled jobs in expanding export sectors. This gender segregation combined with women’s lower bargaining power serves to keep wages low. For instance, in her study on the development in the Republic of Korea, Seguino (1997) showed that gender wage differentials were an important factor in the competitiveness and success of the country’s exports. She found that women’s segregation in major export industries was related to the persistence of the gender wage gap. The hiring, training and promoting practices also weakened their fall-back position and restricted their ability to bargain for higher wages. Similarly in Bangladesh, Kapsos (2008) found that nearly one-third of the total gender wage gap is accounted for by the “segregation effect”. Higher wages in male-dominated occupations in 14 countries lead to a wage differential of between 5 to 43 per cent (ILO, 2009, as cited in Kabeer, 2012).

In agriculture-based economies, women are usually engaged as unpaid family workers in cash crop production. Male relatives usually own the land and women do not have access to or control over the resources employed by the family business; they have little decision-making power and do not have control over their earnings, which are often paid out to the male relative. Production and income associated with traditional cash crops can expand with

new export opportunities when trade is liberalized, although it is unclear whether women will benefit as a result (UNCTAD, 2004, as cited in Elson, 2007). Although the benefits accruing to women are uncertain, their unpaid labour is important in reducing the cost of cash crop exports and increasing export earnings. Additionally, if women are deprived of markets for their surplus production due to competition from cheaper imports, their reservation wage will decrease and they will be more willing to work as unpaid family workers (Elson, 2007).

2.2 The role of gender norms and stereotypes

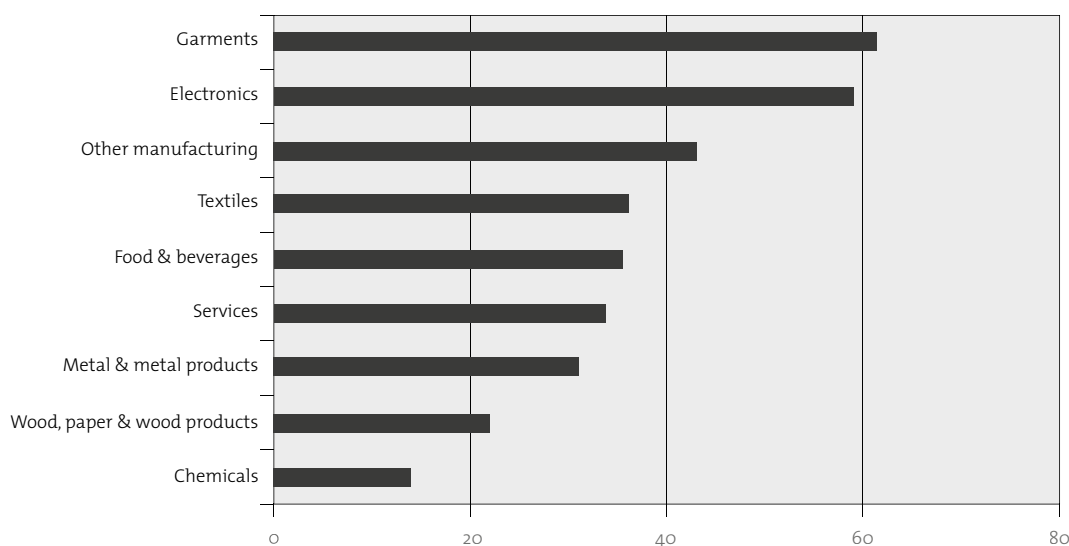
However, the question remains as to why women have become a source of competitive advantage primarily in labour-intensive industries and not in others. Although the gender education gap may have contributed to this phenomenon previously, it has closed almost entirely at the primary level in many developing countries. In secondary and tertiary education as well, progress in upper-middle-income countries has been impressive and in some countries in South-East Asia and Latin America, female achievement at these levels has exceeded male’s (Tejani and Milberg, 2010). Indeed, in a few studies, the education variable has been found to be statistically insignificant in explaining shifts in the female share of employment in manufacturing in Indonesia (Caraway, 2007) and in Latin America and South-East Asia (Tejani and Milberg, 2012). It is true however, that women may lack on-the-job training and access to technical and vocational training programmes,

which might affect their participation in higher value-added jobs, as discussed in Module 2.

The important role of gender norms and stereotypes in facilitating the feminization of (or the segregation of women in) labour-intensive production is unmistakable and has been emphasized by a number of feminist scholars. Distinct notions of “men’s work” and “women’s work” tend to sort men into capital-intensive and heavy work and women into labour-intensive jobs. Stereotypes about women’s docility, submissiveness, dexterity and reluctance to join unions have contributed a great deal to their preference as wage workers in labour-intensive jobs (Anker, 1998; Caraway, 2007). Women are generally viewed as being suitable for repetitive, detailed and caring work because of “natural proclivities” based on gender. As a result, the female share of employment in metal products and chemicals is a fraction of that in garments and electronics in EPZs in a cross-country sample of developing countries, as evidenced in Figure 4. In the services sector, women tend to crowd into lower-paid occupations including caring work such as teaching and nursing, which are considered “feminine” activities, or clerical work, tourism or informal activities including domestic work and petty trading. In agriculture too, we have seen that women are most often employed as seasonal workers for activities such as packing and harvesting or as flexible workers in the production of NTAEs. Table 7 provides a descriptive summary of the nature of segregation in the horticultural, tourism and call centre industries.

Figure 4

Female share of employment in EPZs by sector, selected countries, 2009



Source: World Bank (2009–2010), as reproduced in Tejani (2011).

Note: The countries examined include Bangladesh, the Dominican Republic, Honduras, Ghana, Kenya, Lesotho, Nigeria, the United Republic of Tanzania, Senegal, and Viet Nam.

Table 7

Examples of job segregation in different industries	
Sector	Job segregation patterns
Horticulture	Women are concentrated in the packing segment, where they generally work as wage labour, and in the production segment, where they work as unpaid family labour in smallholder operations. Few women participate as entrepreneurs who independently cultivate crops.
Tourism	Women are overrepresented in the accommodation and excursion segments. Within these segments, they work mostly as low- to mid-skill employees in hotels (housekeeping, laundry, food and beverages, clerical work), as own-account workers or entrepreneurs, as artisan or retail vendors, and in family restaurants.
Call centres	Women are concentrated at the agent level, while employment in higher-value segments and management typically is male dominated. Only few female entrepreneurs run their own call centres.

Source: UNCTAD (2014a), elaborated from Staritz and Reis (2013).

Similarly, norms that identify men as breadwinners and women as secondary earners reserve higher wages and more secure jobs for men. Labour market institutions, especially male-dominated unions, and employment policies adopted by both the state and employers have also been a contributing factor for the gender segregation of occupations (Cheng and Hsiung, 1998; Seguino, 1997). For example, gender-specific job advertisements may exclude women from entering higher-paid skilled jobs (Berik, 2005). However, the employment share of women in labour-intensive manufacturing increases only if the producer thinks that women have the attributes required for the job: in other words, what matters is not the veracity of stereotypes but whether employers believe in them (Caraway, 2007, as cited in Tejani and Milberg, 2010).

That gender norms and stereotypes have a tremendous currency in hiring decisions is evident in the fact that women have not been a preferred source of labour when industries have upgraded to higher value-added production. This has led to trends of defeminization in manufacturing even in female-intensive sectors such as garments and textiles, for instance in the East Asian “Tiger” economies (Barrientos *et al.*, 2004). We will study the case of Taiwan Province of China in particular in more detail in Section 2.5. Narrowing of the gender gap can also be another reason for a fall in the relative demand for female labour and consequent defeminization, which was the case in the Republic of Korea.

2.3 Export competitiveness and economic growth

Increased export competitiveness may ultimately stimulate economic growth. There are different channels linking export growth and economic growth. First, export revenues allow access to imports of intermediate and capital goods that

embody new technology and permit economies of scale⁵⁸ and specialization; these factors raise aggregate productivity and therefore output. The revenues coming from exports can be spent, for instance, on research and development (R&D). As modelled in Barro (1996), technological advance resulting from R&D activity helps to maintain positive growth rates in the long run. However, as illustrated by Romer (1990), to absorb the new technologies it is necessary for the country to have a large stock of human capital (i.e. educated/skilled workforce) as well as a trade structure based on imports of intermediate goods and capital goods which can create technological spillover effects on productivity and output growth.⁵⁹ If these conditions hold, exports can spur further economic growth. Second, revenues of exporting firms increase the availability of capital for investment. As argued by Ertürk and Çağatay (1995), if a smaller amount of the firms’ revenue is allocated to pay female labour, more resources can be allocated for capital accumulation and thus investment, which is among the primary engines of economic growth (Alesina and Perotti, 1996).

Moreover, macroeconomic policies that promote openness to trade are also considered to be growth enhancing. Indeed, economic openness is argued to contribute to a competitive economic environment, promoting efficient allocation of resources, and thus enhancing output per worker (Seguino, 2000).⁶⁰ These features have been observed in most developing countries that have strongly relied on foreign demand as a growth strategy (Seguino, 2010; Berik, 2005).

2.4 The unsustainability of an export strategy based on gender inequality

Although gender wage differentials have been a crucial element of the competitiveness some developing countries have achieved in labour-inten-

sive exports, it is not a sustainable strategy in the long run. For instance, if this strategy is adopted by all countries, it may adversely impact their terms of trade *vis-à-vis* capital-intensive exporting countries (Çağatay, 2001). Box 14 discusses the negative effect on the terms of trade of gender

inequalities in wages. Moreover, the reliance on gender inequality contravenes international labour standards as set out by the ILO conventions on equal remuneration or on discrimination, among others,⁶¹ and is also problematic from a human rights perspective.

Box 14

The gender wage gap and the terms of trade

Osterreich (2007) investigated the effects of gendered labour markets on the ToT and demonstrated that the gender wage gap is negatively related to the ToT for manufactured goods in semi-industrialized countries. That is, higher gender wage differentials lead to lower export prices and a deterioration of the terms of trade. This, in turn, negatively affects the country in the sense that it can buy fewer imports for any given level of exports.

ToT are defined as the relative price of a country's exports in terms of its imports and are calculated as the ratio of export prices to import prices. In their pioneering work, Prebisch (1950) and Singer (1950) argued that for commodity-exporting economies, mainly developing countries, ToT tend to deteriorate since the prices of commodity exports fall relative to the prices of more sophisticated manufactured products imported from developed countries. In the 1970s and 1980s, however, some newly industrialized countries (NICs)⁶² achieved significant industrialization and started exporting manufactured products as well. The ToT of these countries were strongly influenced by the relative prices of their manufactured goods exports *vis-à-vis* their manufactured goods imports from developed economies. Despite the change in the export structure of NICs, evidence suggests that the Prebisch-Singer hypothesis is still valid: manufactured goods exported by these countries are often of lower quality in terms of technological sophistication (Lall, 2000) than those produced in advanced industrialized economies and therefore fetch lower prices. ToT of NICs thus remain unfavourable for these countries. As asserted by Osterreich, the gender wage gap would only contribute towards this phenomenon.

Source: UNCTAD Secretariat.

Further, although many countries have ratified the ILO's core labour conventions⁶³ covering discrimination, equal remuneration, freedom of association and collective bargaining, there is a big gap between policy and practice. It is critical that countries enforce and monitor labour standards more effectively to prevent discrimination against women. However, there has to be a global push to implement these standards so as to prevent capital flight and firm relocation as a way to hedge labour costs. As some authors have emphasized, there is a "low road" to international competitiveness that is characterized by cost cutting, limited social policy and labour and management discord, and a "high road" characterized by high productivity growth, higher wages, collective bargaining and effective social protection (Milberg and Houston, 2005). Indeed, the authors find that higher social spending and cooperative labour-management relations are not systematically linked to poor performance at the international level. This suggests that countries can use a mix of enlightened policies to ensure that "economic upgrading" leads to "social upgrading", defined broadly as salutary changes in employment and wages and respect for labour standards.⁶⁴

Moreover, the evolution of social norms and traditions in parallel with economic development is bound to make gender inequalities increasingly unacceptable over time: inequalities may then become a source of social conflict and destabilize the social and economic environment in the countries concerned. The social setting characterizing some developing economies (e.g. Taiwan Province of China and the Republic of Korea) may have prevented social conflict over low wages (Hsiung, 1996). Although in the Republic of Korea women did engage in protests against their low wages and working conditions in the 1980s which led to an increase in wages across the board, it also contributed to the relocation of labour-intensive production to lower labour cost countries to the detriment of unskilled workers, including women (Murayama and Yokota, 2008).

Finally, gender inequalities may reduce the appeal of products for consumers in destination markets.⁶⁵ Consumers in importing countries who pay attention to the labour standards and other ethical parameters adopted in the manufacturing process may be discouraged to buy items that reflect indecent working conditions,

including gender discrimination. In conclusion, a strategy that is *de facto* based on gender inequality, although aimed at spurring growth and development, is neither desirable nor sustainable.

2.5 Case study of Taiwan Province of China: Leveraging gender inequality to achieve competitive advantage⁶⁶

In what follows we present the country experience of Taiwan Province of China, a highly open economy where improved export competitiveness occurred simultaneously with an increase in the gender differential in earnings.

In the early 1960s, most of Taiwan Province of China's labour force was employed in agriculture. During the following three decades, the country implemented a three-stage growth strategy based on the expansion of its exports. In the first stage, this export-led strategy relied on labour-intensive manufacturing; in the second stage, capital/technology-intensive sectors were developed and product quality was upgraded in order to maintain the country's international competitiveness. During the third stage (from the mid-1980s onwards), larger firms operating in high-technology industries started seeking more skilled workers to adopt the new technologies and a "job restructuring" process took place. These policies spurred the country's growth as anticipated but coincided with a dramatic change in employment patterns, especially for women.

2.5.1 Implications for women as wage workers

In the first stage of the country's export-oriented growth strategy starting in the 1960s, women provided low-wage unskilled labour for export manufacturing. This resulted in gender earning inequalities that persisted throughout the 1980s and early 1990s (Berik, 2005). In the mid-70s, women represented about 80 per cent of the total workforce in EPZs. Export factories recruited women from school, thus cutting short their education, and from rural areas. In addition, gender-specific job advertisements prevented women from entering high-paid skilled positions; they were also excluded from access to training (Berik, 2005). Initial wages for women were set at 10 to 30 per cent below that of men working in the same occupation. By the 1960s, the country's labour-intensive manufacturing sectors relied on a massive pool of low-paid, low-skilled unmarried women to feed the labour-intensive phase of export-led industrialization.

Despite the increase in female employment rates, gender wage inequality as well as the segrega-

tion of women into unskilled jobs persisted in Taiwan Province of China throughout the 1960s. Later in the 1970s, married women were also encouraged to enter the manufacturing labour market through programmes that promoted their inclusion in employment by granting flexible working arrangements that allowed them to comply with household duties (Chu, 2002).

Taiwan Province of China began its move to the second stage of its export-led strategy in the late 1970s. This was the start of a gradual transformation of the country's productive base from manufacturing to higher technology products, meaning that firms demanded higher skills. However, earlier recruitment practices prevented women from acquiring the necessary skills to enter high-technology firms and benefiting from better employment opportunities. As discussed in Section 2.2, gender norms that identified women with labour-intensive tasks also prevented them from accessing jobs in capital-intensive sectors. Starting from the mid-80s, the third stage of Taiwan Province of China's export-led strategy was characterized by the relocation of Taiwanese labour-intensive firms to countries with lower labour costs. This dismantled most labour-intensive manufacturing production in the country and women suffered the most from layoffs in the process: the decrease in female labour demand resulted in a steady decline of women's share of employment and a widening of the gender wage gap.

2.5.2 Summary

Taiwan Province of China is undoubtedly one of the most notable successful practitioners of the export-growth model. Industrial policies were geared at promoting domestic firms' export growth by keeping low export prices. Cheap labour-intensive export products rely, among other factors, on cheap labour. In Taiwan Province of China, this translated into an increase in the demand for a female workforce, particularly young unmarried women who provided a low-skilled and low-paid labour force.

Despite the increase in female employment, women's wages remained low relative to those of their male counterparts. This phenomenon was mainly due to a surplus in female labour supply and to the ensuing crowding of women in lower productivity sectors. At the same time, only limited attempts were made to grant women higher wages or enter higher-skilled jobs. There is therefore evidence that the country relied on low-wage female workers to achieve competitive advantage in labour-intensive manufacturing

production in foreign markets. When Taiwanese industry upgraded and finally relocated, a defeminization of labour ensued.

3 Women as under-achievers of competitive advantage

We now examine why women remain under-achievers of competitive advantage as small entrepreneurs and self-employed producers.

3.1 Three domains of inequality

In many poor countries, women participate in production activities as small entrepreneurs or as self-employed producers. In most of the developing world except for Latin America and the Caribbean, women systematically account for a lower share of wage employment than men (ILO, 2012). Globally, a significant proportion of women are own-account workers (25.5 per cent), classified by the ILO as belonging to the vulnerable employment category, although in sub-Saharan Africa and South Asia, the shares are much higher, at around 45 per cent.⁶⁷ As noted in Module 2, most of the enterprises that women own are small-scale and “survival-oriented” rather than “accumulation-oriented” (Kabeer, 2012). In sub-Saharan Africa, Hallward-Driemer (2011, as cited in Kabeer, 2012) found that women-owned enterprises are concentrated in lower value-added industries such as garments and food processing as compared to men who were in metals and manufacturing activities. The author found that the informal nature of female-owned enterprises leads to their lower productivity as compared to male-owned enterprises, although the question remains as to why women’s enterprises remain informal.

We have some idea by now of the various types of discrimination women face as a result of patriarchal norms, traditions and customary laws. This discrimination leads to inequalities that have been classified into three domains (UN Millennium Project, 2005).⁶⁸

(a) **Capabilities.** In poor countries, health and nutrition deficiencies tend to have a disproportionate impact on women (see, for instance, the case of sub-Saharan Africa where, in 2003, 57 per cent of all HIV-positive adults were women (ILO, 2004)). Although the primary education gap has been bridged in many developing countries,⁶⁹ women still have limited access to technical and vocational training. In many low-income countries, families often prefer to send boys to school while girls

are usually married at an early age and tied to their social roles as mothers and care-givers. Women face important time⁷⁰ and mobility constraints that affect their ability to fully engage in formal work, as they are usually solely responsible for household work. This “time squeeze” also has repercussions on their health since they can devote little time to rest and leisure.

(b) **Access to resources and opportunities.** There is extensive evidence that women producers in poor countries tend to have:

- Limited land ownership;
- Relatively little control over their income;
- Limited access to financial resources and external credit and, therefore, insufficient cash flow to purchase agricultural inputs and/or to expand their businesses;
- Insufficient access to extension services (e.g. training);⁷¹
- Limited access to basic processing and storage of perishable goods;
- Poor quality of public transport infrastructure to market their products;
- Logistics constraints, added to transport challenges.

(c) **Security.** Women often have to cope with gender-based violence from male members in the family, in conflict areas and in the labour market. For example, a study on women cross-border traders in Liberia found that 37 per cent of respondents had experienced sexually based violence at border crossings, and 15 per cent reported to have been raped or forced to have sex in exchange for favours (Randriamaro and Budelender, 2008, in UNECA *et al.*, 2010). A survey on cross-border traders conducted in 2010 at the border posts between the Democratic Republic of the Congo, Rwanda and Uganda found that 54 per cent of respondents had been victims of acts of violence, threats and sexual harassment, 38 per cent had experienced rude behaviour, verbal abuse and insults, and 85 per cent had been forced to pay bribes (World Bank, 2013).

Although there are intrinsic reasons for which these inequalities must be tackled and redressed, they also seriously impair women’s income-earning possibilities. For instance, women who are small-scale entrepreneurs often lack access to capital, training, market networks and improved production techniques (Kabeer, 2012). When trade is liberalized, they are often unable to scale up production and take advantage of export markets, as discussed in Module 2. In agriculture, women remain tied to subsistence farming with

little value added and low earnings. This in turn may affect the export competitiveness of the sector where women work, if it is female-intensive. Put another way, the export response as a result of trade liberalization might be greater if the obstacles that prevent women entrepreneurs and producers from achieving export capacity are addressed.

Box 15

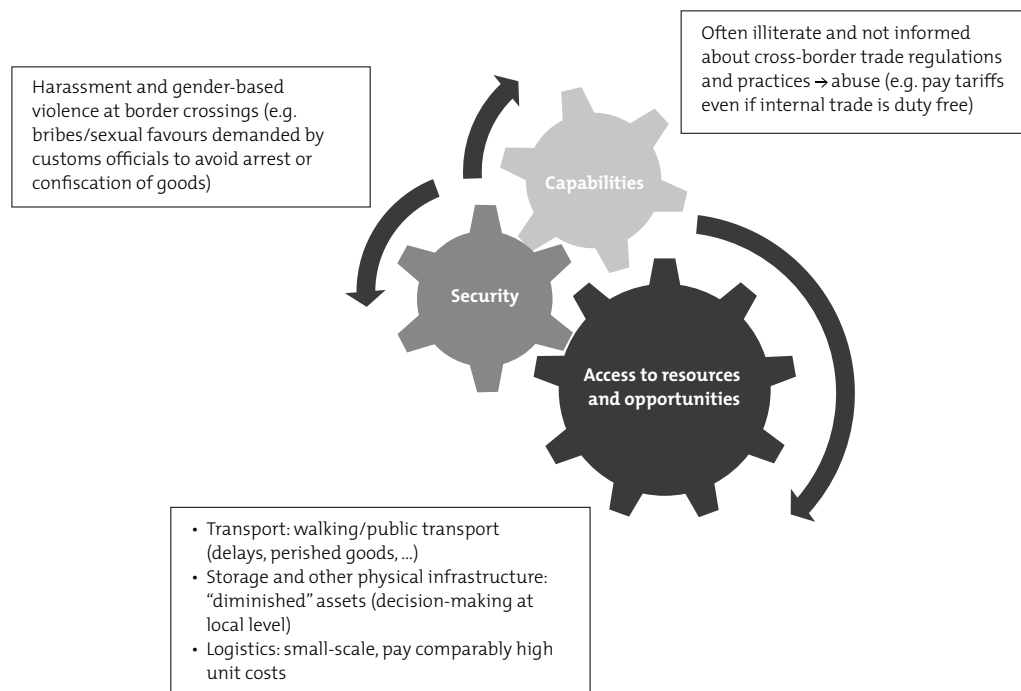
Three domains of inequality: Women as informal cross-border traders

Women traders across Africa face obstacles similar to those faced by women in the agricultural sector. Gender-specific constraints exist in the three areas described above: capabilities (particularly knowledge and health), access to resources and opportunities, and security. With regard to capabilities, informal women traders are often illiterate or have little information and knowledge about cross-border trade regulations and procedures, which may lead to abuse. For example, they continue to pay tariffs even if trade with neighbouring countries is duty free or continue to use illegal routes to move goods across borders (Higgins, 2012). Gender-based inequalities in access to productive resources cover many different dimensions and include the following: (a) Women have to either walk or rely on public transport to get their products to market as compared to men. Given the poor quality of public transport infrastructure, this results in delays, missed market days and perished goods, and hence increased transaction costs and competitive disadvantages (Higgins, 2012). (b) Women face logistical constraints that translate into higher unit costs for logistics services (for example, a single woman cannot fill a container). (c) Women have poor access to credit to purchase goods to resell at the border and rely on their own and meagre savings to finance themselves, which seriously limits possibilities for expansion. (d) Women have limited opportunities to attend training courses to improve their trading skills as their time is allocated between trade and household care, with little time left for other activities. Vulnerability to violence and conflict (the security constraint) is another aspect of the gender-specific challenges that female informal cross-border traders face. Female traders are particularly exposed to gender-based violence at border crossings. These include, for example, requests for sexual favours by customs officials – who tend to be men – to avoid arrest or confiscation of goods (Higgins, 2012; Brenton *et al.*, n.d.). Women are also often asked to pay bribes to these officials.

Source: UNCTAD Secretariat, based on Higgins (2012) and Brenton *et al.* (n.d.).

Figure 5

The multiple challenges faced by female informal cross-border traders



Source: UNCTAD Secretariat, based on Higgins (2012) and Brenton *et al.* (n.d.).

We will now use case studies to document gender bias in agriculture-based developing countries in order to illustrate how it hampers a country's trade performance. We present two country case studies addressing women working in different economic sectors, thus adding diversity and nuance to the discussion. First, we look at the case of the Gambia, a country where fisheries is a female-dominated sector. This study illustrates the gender-specific obstacles that women face as self-employed producers, and how these impediments affect both their and the sector's performance as a whole. Second, we look at the case of Rwanda where women are mostly employed in subsistence agriculture and informal cross-border trade. This gives us the opportunity to examine how gender-based inequalities constrain women's income-earning capacity as producers and informal cross-border traders and limit the overall competitiveness of two sectors of the economy – staple food production and informal cross-border trade. We will also discuss some policy measures to address these inequalities in each case.

3.2 Case study of the fisheries sector in the Gambia: How trade policy can exacerbate gender inequality⁷²

In the Gambia, agriculture, fisheries and forestry represent 30 per cent of GDP and account for more than 70 per cent of employment. They are also the sectors where the poor are concentrated, since household heads employed in the agricultural and fishing sectors exhibit higher poverty rates compared to household heads employed in other sectors. In 2010, 48.9 per cent of the population was living below the \$1.25 per day poverty line.

The Gambia enjoys rich fishing resources both in terms of abundance and species' diversity, thereby making fisheries a sector with great potential for socio-economic development, if fish resources are managed sustainably. The fisheries sector consists of an artisanal subsector and an industrial subsector.

The artisanal one is by large the dominant sector, accounting for 90 per cent of total national fish consumption and supplying about 80 per cent of the fish input to the industrial fish processing plants. It is estimated to employ, either directly or indirectly, between 25,000 and 30,000 people and to contribute to the livelihoods of around 200,000 people.

The industrial subsector employs high-cost production and processing systems and is concen-

trated along the Atlantic coastline. Industrial fisheries account for only 10 per cent of total national fish consumption and an estimated 20 per cent of locally processed fish. This is due to the fact that over 90 per cent of the fishing vessels legally operating in Gambian waters are foreign owned and land their catches abroad. The subsector also includes downstream fish processing plants – mainly supplied by the artisanal catch.

Dynamizing the fisheries sector and, in particular, export-oriented fish processing can be a way to alleviate poverty and to provide greater employment opportunities for unskilled women downstream. However, such a policy option can also lead to greater social polarization and exclusion in terms of gender if existing gendered patterns of employment are not taken into account.

3.2.1 Gendered patterns of employment and implications for trade

Patterns of employment in the Gambian fisheries sector are highly gendered. The first important gender distinction is between upstream activities (fisheries narrowly defined, i.e. the capture or culture of fish) and downstream activities (fish processing and distribution). Fish harvesting is essentially dominated by men, though women are present in some subsectors (oyster and cockle harvesters are mainly women). Women tend to be overrepresented in downstream activities: an estimated 80 per cent of fish processors and 50 per cent of fish traders are women.

Second, within downstream activities, men and women tend to produce rather distinctive products, operate on different scales and serve different markets. This results in quite specific gender-based trade patterns throughout the chain. To simplify, women tend to operate on a relatively small scale and are the predominant dealers involved in the domestic marketing of fresh and cured fish products. Men tend to operate on a larger scale and are more involved in distance/export trade where the profit margins are higher. Similarly, large-scale fish suppliers of fresh fish to processing factories for export to the overseas market (mainly the European Union) tend to be men.

Upgrading the export-oriented segment of the chain will benefit men who already dominate in this trade and exclude women who are domestic fresh and cured fish sellers. Their fresh fish supplies may also be endangered due to the higher demand. Similarly, upgrading can magnify existing cleavages between large-scale and small-scale traders unless specific corrective measures

to address this gendered division of labour are put in place.

This division of labour reflects deeply embedded social roles – most notably, the time and mobility constraints that women face as primary care-givers. This is a matter of social, cultural and biological structures/institutions. Yet, the situation also reflects gender biases in access to and control over resources, which in turn reflect contingent market and governance failures. Observations at selected landing sites, for example, have evidenced women's unequal access to community-managed facilities: women tend to occupy units (smoking houses, drying stalls, etc.) in need of rehabilitation for which they pay a rent with virtually no service provided. As in other contexts, the overall tendency seems to be that women tend to receive “diminished” assets, while sectors that attract investment tend to “defeminize”. Whatever their role, women constantly struggle to maintain their position in the fisheries sector. Women who unload fish from the canoes and carry them to local markets are increasingly competing with men who are quicker and more able in these tasks because they are better equipped (men can afford wheelbarrows while women can only afford head pans). Consequently, women risk being pushed out of the business and lose an important source of income. Women processing the fish do not have access to high-level technologies and operate on a rudimentary basis, which reduces their productivity. Women traders often lose part of their product while transporting it to the local market because of poor quality storage systems and thus suffer significant financial losses.

3.2.2 Summary

The case study of the Gambia shows how trade policy measures to dynamize a sector can exclude women and lead to greater social polarization if existing gendered patterns of employment are not taken into account. Measures to help women increase their productivity must include ensuring access to credit and finance, higher quality/technology infrastructure and facilities, training on the fish value chain and on small business management, as well as hygiene and marketing of food products. In order to ensure that women receive access to upgraded facilities, quotas and procedures for informal complaints may also be introduced.

High-value product niches in the fisheries market that can generate value added for women, for instance shrimp farming and oyster culture, can be developed for export to segments of the European market. Ways to build up larger-scale trad-

ing activities for women such as serving hotels and restaurants can also be considered though more working capital and better cash flow are required for this purpose.

Initiatives aimed at identifying and addressing gender-based constraints would have important poverty alleviation effects as well since fish and fish products represent the main source of protein for the majority of the population. Since the fisheries sector consists largely of self-employed women, growth in the sector can be achieved only by tackling the obstacles women face in developing their own businesses.

Women in the industrial sector would benefit from flexible work arrangements to meet family needs as well as training on handling and processing fish. Finally, studies on the health implications of working in the fisheries sector and resulting corrective measures for the improvement of women's well-being are also needed.

3.3 Case study of the agricultural sector in Rwanda: Gender inequality as a barrier to growth⁷³

The remarkable growth of Rwanda's economy comes after a long and protracted conflict and a genocide that took thousands of lives, decimated the economy and severely impoverished the population. In the post-conflict period, Rwanda was quite successful in rebuilding its economic and social infrastructure. The country also achieved progress in poverty reduction: according to the 2012 data from the National Statistical Institute, in 2010–2011, the poverty rate⁷⁴ fell to 44.9 per cent compared to 58.9 per cent in 2000–2001. Similarly, the poverty headcount ratio of \$1.25 per day fell from 74.5 per cent of the population in 2000 to 63.2 per cent in 2011.⁷⁵

Rwanda has strongly committed to a gender-inclusive post-conflict reconstruction and is an example of successful integration of gender considerations in government programmes and laws, as well as the plans and strategies that form the country's development framework. In seeking to become a more prosperous and competitive nation, Rwanda has acknowledged the importance of women's participation and placed an emphasis on gender equality. In 2008, it became the first country in history to have more women members than men in its Parliament. At present, women hold 63.8 per cent of the seats in the Lower House and 38.5 per cent in the Upper House (Inter-Parliamentary Union, 2014). In addition, Rwanda has made impressive progress in educational attainment for its population in general, and for women

in particular: enrolment in primary education for girls in the relevant age group was 98 per cent in 2012, higher than the boys' rate. There remains work to be done, however, particularly with regard to access to economic assets and resources, particularly for rural women (UNCTAD, 2014b). These gaps translate into important competitive disadvantages for women and tend to affect the competitiveness of female-intensive sectors. Two examples are given below.

3.3.1 Women in agriculture: Gender-biases in access to productive resources

Despite the limited availability of arable land, Rwanda can be defined as an agriculture-based economy: the sector employs over 70 per cent of the population and represents the main source of income for the majority of the population. Agricultural activities are mainly based on subsistence staple food production although Rwanda exports tea and coffee; these exports represented 40 per cent of total export earnings in 2012. One way for Rwanda to achieve economic growth could be to upgrade and dynamize its agricultural sector, both the export-oriented component and the traditional segment. However, there are constraints that prevent the expansion of agriculture.

Over eight out of ten female workers are employed in agriculture – as unpaid family workers, casual wage workers or independent farmers. Women participate in subsistence staple food production to a greater extent than men. Therefore, the development of agriculture strongly depends on women's ability to effectively engage in production and marketing. Gender disparities in the agricultural sector are many and include the fact that women have limited control over land due to traditions and customary laws that privilege men as owners of assets (e.g. income) and designate women as being responsible for the household; the persisting high levels of illiteracy among rural women, which are comparatively higher than for men (62.4 per cent of rural women heads of households cannot read or write, compared to 28.7 of male heads); or the difficulty for rural women to access credit. Rural women in Rwanda often lack the needed collateral to secure credit, as well as the ability to articulate a business plan or complete a loan application process, and are often not aware of available microcredit facilities. Women also have lower access to durables (e.g. radios, mobile phones, and bicycles) than their male counterparts, which increases their transaction costs in accessing markets. For instance, this negatively affects women employed in the coffee export sector since market information is disseminated

by radio or mobile phones, and bicycles represent a convenient and fast means to transport coffee to the washing stations. In Rwanda, as in many other developing countries, women have limited access to extension services and training, which tend to be male-dominated and are not designed to meet women's time constraints. Finally, women's cooperatives and organizations tend to be weakly organized and managed.

These patterns are reinforced by gender-based norms that encroach on women's ability to profitably engage in the market economy at least in two important respects: first, women's double burden of unpaid care work and productive activities resulting in significant time shortage; and second, women's limited control over the household income that affects for example their ability to set aside savings for business ventures. In addition, gender-based violence, including domestic violence, is still an important issue in Rwanda.

3.3.2 Women in cross-border trade

In Rwanda, as elsewhere, the majority of informal cross-border traders are women. Traded goods consist of fish and agricultural commodities as well as textile and retail shop products. Women traders usually obtain goods from their own farming activity or buy the goods from small-scale local businesses. Goods sold via the informal channel are usually cheaper than those sold through formal trade. Therefore, women's trading activities not only provide them with income but also sustain the livelihoods of many more, particularly their poor clientele and self-employed women. For example, women engaged in tailoring activities who produce for the local market sell their products to women traders who then sell them elsewhere. In addition, women traders often run their own businesses, such as pharmaceutical shops, or are involved in the processing of the commodities they buy in order to resell.

3.3.3 Summary

Agriculture in Rwanda is female dominated and mostly involves production at subsistence level. The development of the agricultural sector entails the shift to higher value added and export-oriented production. Despite Rwanda's limited availability of arable land, there is potential for the agricultural sector to grow, especially if women are provided with the necessary resources and tools to do so. Greater land security for women is an important area of intervention and there is already some work being carried out in Rwanda

in this regard, including awareness raising and sensitization about women's land rights at the village level, as well as training for local officers such as land officers and community development officers. In the registration and titling process of land, gender awareness is necessary to ensure joint titling of land and assignment of land to women-headed households. Providing women with access to inputs and basic technologies to enhance the productivity of land is also important. For instance, water pressure pumps and harvesting tools such as cutters, weeders and threshing and cleaning equipment can help women increase productivity as well as manage their roles as farmers and care-givers by reducing their time burden. Advisory and extension services on crop husbandry and input management should take women's time constraints and limited access to ICTs into account. The gender balance among extension officers and agronomists also needs to be improved.

In addition, strengthening existing cooperatives and women's associations through capacity-building measures and linking them with input distribution networks, post-harvest facilities and marketing outlets can enhance women's access to markets significantly. Public procurement (e.g. school feeding programmes, catering for public administration) could offer opportunities for staples locally processed by women. These measures can also boost food security for the poor as most women are subsistence farmers.

Educating Rwandese informal cross-border traders on their rights and obligations can be a way to empower them in their daily activities. Moreover, creating a gender balance among customs officials as well as offering them gender awareness training could contribute to reducing gender-based harassment at border crossings. Reducing the red tape with regard to procedural clearances required for cross-border traders can improve efficiency and provide incentives for expansion. As in agriculture, promoting cooperatives among women traders can reduce risks and costs for these informal workers.

Gender-specific constraints affecting Rwandese women adversely impact their ability to expand their production of agricultural goods, and trading activities and income. This in turn limits the performance of the agricultural and trading sectors as a whole. Gender-specific measures are needed to remove these obstacles and unleash the potential of women as agricultural producers and traders, which can in turn be expected to enhance growth in the respective sectors in which they work.

4 Conclusion

In this module, we have seen how gender inequality can shape a country's international competitiveness. We have seen that women are more likely to be sources of competitive advantage in their role as wage workers, homeworkers and unpaid family workers rather than achievers of competitive advantage as owners of businesses and self-employed producers. The existence of a nearly universal gender wage gap has made women an attractive workforce to keep labour costs low, particularly in labour-intensive export production where price competition is intense. At the same time, entrenched norms about "gender appropriate" work and "feminine skills" have facilitated the large-scale entry of women workers primarily into the low value-added segment of export production and not others. Thus, while most dimensions of gender inequality indirectly hinder trade performance, wage inequalities appear to have a positive impact on export growth (Çağatay, 2001; Seguino, 1997; UNCTAD, 2012). Relatively cheap and flexible female labour has also been important in meeting the requirements of GVC production where demand tends to be volatile and delivery times short. Homeworkers are perhaps the most vulnerable group in this regard and tend to bear most of the risks of production, with very little pay and security.

Gender-based inequalities also dampen women's output and productivity as self-employed workers and prevent them from becoming achievers of competitive advantage. This in turn hampers the growth of the sector – if female-intensive – and the successful export performance of the economy as a whole. Gender inequalities lie in the dimensions of access to and control over resources, capabilities and security. For instance, women own very little land, they often do not control their own income and lack access to financial and other support services that might help them to expand their productive activities. In terms of capabilities, women tend to have poorer health and nutrition, face considerable time poverty and experience hindrances in mobility that affect their position as producers. Finally, women face different forms of gender-based violence through their life cycles, both within the family and in the labour market. This violence is reprehensible in its own right though it also has consequences for women's ability to earn a livelihood and indeed to expand their economic activities and prosper.

Specific policy measures to take these gender-based inequalities into account are necessary while designing trade policies, or it is likely that existing gender biases may be reproduced or even exacerbated as a result.

Exercises and questions for discussion

1. Firms can import know-how and technologies through Foreign Direct Investment (FDI). In your opinion, what could have been the potential impacts of increased FDI into Taiwan Province of China on the labour-intensive manufacturing sector? Could women have benefited from it? If yes, how?
2. What types of policies would you recommend to governments to overcome women's segregation into low-paid, low-skill labour? Explain the arguments against the use of gender inequality as a tool for export growth.
3. In the 1990s, firms in Taiwan Province of China started shifting production to lower labour cost countries. What do you think are the gender implications of this type of cost-cutting strategy for all the countries involved?
4. Look again at the case study of the Gambia. Explain how addressing women's constraints in the fisheries sector could improve the country's export competitiveness. Keep in mind that women in the Gambia are mostly concentrated in the artisanal fisheries sector, which is more domestic oriented. What do you think would be the effects on women if the exporting industrial fisheries sector were to be the only focus of an export growth oriented strategy? What would the position of women be in this case?
5. In the case of Rwanda, how do gender obstacles for women as agricultural workers and informal cross-border traders affect the country's export performance?
6. As we have seen, women in Rwanda are also actively involved in informal trading activities. What do you think would be the effects on the formal trade channel if the Rwandese government implemented measures to protect and empower women as informal cross-border traders?
(Hint: Remember that informal cross-border trade in the case of Rwanda usually takes place only with its neighbouring countries which are at the same level of development as Rwanda.)
7. What do you think are the main constraints in agriculture-based developing countries and semi-industrialized economies that hamper the economic empowerment of women? What are the similarities and differences? How would you address them if you were a policymaker?
8. For each of the country case studies presented, explain in detail the areas in which gender inequality is experienced.

ANNEX

The aim of this Annex is to provide a brief overview of some key and/or innovative papers that investigate the impact of gender inequality on exports or export-led growth in order to illustrate the central concerns of the authors, the methodology used and the main findings. The second volume of this teaching material will provide a more in-depth overview of empirical methods used to analyse the links between gender and trade.

A1 Seguino (1997): “Gender wage inequality and export-led growth in South Korea”

Context

The paper fills the gap in the literature on the role that gender played in boosting export-led growth in the Republic of Korea. Until then, the Republic of Korea’s economic success was explained either as the result of market-oriented policies and trade liberalization or as the outcome of effective industrial policy, depending on the theoretical persuasion of the authors, without paying much attention to the gender aspect of the process. Seguino’s paper is the first to make an explicit link between the gender wage gap and export growth in the Republic of Korea and to test this link empirically. In effect, this paper highlights the critical role of gender wage inequality in the process of export-led growth.

The study is also important as it delves into the reasons for which the gender wage gap in the Republic of Korea narrowed only slightly during the period 1978–1989, despite the high demand for female labour. Segregation of women in labour-intensive production are found to be important.

The aim of the econometric analysis in the paper is twofold: first, to assess whether women’s employment segregation in the country’s export industries is linked to females’ lower wages; and second, to provide evidence on the Republic of Korea’s use of low-paid female employment as a source of competitive advantage.

Data and methodology

The econometric analysis uses cross-sectional time series two-digit and three-digit ISIC manufacturing data for the period 1978–1989 in order to test the first question of whether women’s segregation in export industries is linked to lower wages. The data come from different sources: monthly earnings are from the Republic

of Korea’s Ministry of Employment and Labor’s monthly labour survey, employment data come from ILO, and value-added data are published by the Bank of Korea and used only in the augmented equation.

The question is addressed by analysing the link between the industry’s relative wage and the proportion of women in an industry while controlling for other relevant variables such as productivity levels. The model includes a standard wage equation and an augmented one (where the author also controls for value added).

The second empirical question of whether gender wage differentials led to export growth in the Republic of Korea is answered by estimating a benchmark standard export function as well as a modified one for the period 1975–1990. Data are compiled from the Bank of Korea and ILO. In this case, the dependent variable is manufactured exports and the independent variables are (a) foreign income,⁷⁶ (b) relative prices, and, in the modified function, also (c) relative (female-male) wages.

Findings

The findings from the first model confirm the hypothesis that women’s segregation in low productivity jobs is related to their lower wages, providing one explanation for why the country’s gender wage ratio did not improve in response to the increase in female labour demand. That is, when the female share of employment in an industry rose, the relative wage in that industry fell, thus demonstrating the effect of crowding on wages. However, the coefficient on the female employment variable is smaller when value added is controlled for, which indicates that women’s lower relative wages are also explained by their concentration in low value-added industries.

The findings from the second model also confirm that gender-based wage inequality stimulated the country’s exports. In other words, as the ratio of female to male wages fell, export demand increased. The coefficient for the gender wage ratio is negative and statistically significant and improves the explanatory power of the export function.

In conclusion, the paper both explains the reasons for the observed stability of the gender-wage gap over time, namely segregation of women in low-paid jobs, and provides evidence that women’s low wages have improved Republic of Korea’s export competitiveness.

A2 Seguino (2000): “Gender inequality and economic growth: A cross-country analysis”

Context

The focus of the paper is the impact of gender wage inequality on economic growth via its effect on exports and investment in a sample of semi-industrialized economies (SIEs) that used export-led strategies (with high proportions of female labour) to boost growth. In a sense, this paper builds on Seguino (1997) and explicitly links gender wage inequality not only to export

expansion but to economic growth *per se*. This it does by “gendering” standard growth accounting methodology⁷⁷ that is used to model the determinants of output growth at the aggregate level. Indeed, according to the author, previous growth accounting studies were “virtually devoid of a gendered perspective”. The causal links are as follows: Gender inequality leads to export expansion which in turn generates technical change and contributes to economic growth. In terms of the effect of gender inequality on investment, the author argues that low labour costs imply a higher profit share for firms, which may in turn stimulate higher capital investment.

Box 16

The evidence on the relationship between gender inequality and economic growth

There is an ongoing and unresolved debate on whether gender inequality should be considered a drag or a stimulus to economic growth. Empirical evidence so far has shown that the effect varies depending both on the measure of gender inequality used and the structure of the economy analysed. For instance, Klasen and Lammanna (2008), using cross-sectional analysis for different world regions over the period 1960–2000, find that gender inequality in employment and education reduces economic growth. Seguino (2010) further expands the discussion and assesses the effect of gender inequality both in wages and education on economic performance in two types of economies, namely low-income agricultural economies (LIAEs) and SIEs. The author finds that while in LIAEs greater gender equality both in wages and education contributes to economic growth, in SIEs gender equality in wages slows economic growth but gender equality in education stimulates growth.

Source: UNCTAD Secretariat.

The study is also noteworthy in that it provides contrasting results to works that have shown that income inequality slows growth because of the social conflict it generates, thus negatively affecting investment (Alesina and Rodrik, 1994; Persson and Tabellini, 1994; Larraín and Vergara, 1998).

Data and methodology

Countries come from a sample of SIEs selected on the basis of a semi-industrialized export orientation (SIEO) index⁷⁸ constructed for the purpose of the study. From the group of economies drawn according to the SIEO index, countries with available gender-disaggregated wage data were selected. Data were taken from the ILO’s Yearbook of Labour Statistics and various country specific sources.

The paper uses a standard growth accounting methodology and genders it in two ways: (a) the human capital term in the neoclassical production function is disaggregated by gender, and (b) the gender wage gap is introduced as a determinant of technical change via its effect on export growth. Based on this growth model, the author carries out cross-country regressions using period averages for 1975–1995. In order to capture

changes in variables within countries over time, the paper uses panel data analysis with five-year averages; in this case, the estimation is carried out with a least square dummy variable model to capture both country and time effects.

The dependent variable is represented by GDP growth rates and the independent variables are: (a) the growth rate of technological change (measured as the growth rate of gross domestic fixed capital formation), (b) the gender wage gap (estimated in three different ways),⁷⁹ and (c) different measures of female and male human capital.⁸⁰ Industry-specific fixed effects are also added to the model. To test the hypothesis that gender wage inequality might foster economic growth by increasing investment, Seguino also estimates the effect of the gender wage gap on investment as a share of GDP using period averages.

Findings

The first set of cross-country regressions that assess the impact of gender wage differentials on GDP growth via the exports channel shows that all three measures of the gender wage gap are positively and statistically significant; these findings are confirmed in the panel data estimation using five-year averages. The two sets of regressions pre-

sented thus provide clear evidence on the positive role of gender wage differentials in GDP growth through their effect on export expansion.

Gender wage inequality is also found to be positively and statistically significant in the cross-country regressions on investment. That is, the results confirm the hypothesis that gender wage differentials contribute to economic growth by stimulating investment.

In conclusion, Seguino's paper provides robust evidence on the contribution of gender inequality to economic growth. In particular, it confirms the assumption that the gender wage gap affects GDP growth rates via its effect on exports and investment.

A3 Busse and Spielmann (2006): “Gender inequality and trade”

Context

This paper looks at the relationship between gender bias and trade flows in a sample of 92 developed and developing countries. More specifically, the authors assess whether gender inequality leads to a comparative advantage in labour-intensive manufactured goods. The paper uses a broader definition of gender inequality, including wage, labour market access and educational inequality as compared to the previous papers we reviewed, which focused only on wage inequality. The authors argue that gender bias is more likely to affect the composition of exports than the amount of export flows. Moreover, they acknowledge the fact that improved export performance in labour-intensive products might tie the country to the production of such commodities and prevent the switch to higher value-added products. Contrary to Seguino (2000), the authors find that comparative advantage in labour-intensive products does not necessarily translate into higher growth rates.

One of the problems in the analysis, however, is limited data availability for the gender wage gap. This implies that the findings related to this dimension of gender inequality should be interpreted with some caution, as they are unable to provide a full assessment of the relationship between gender inequality and comparative advantage in labour-intensive industries.

Data and methodology

The data used for the empirical analysis come from international organizations' statistics. To

ensure consistency in the data, the measure for wage inequality is constructed using two ILO sources, namely the 2003 Yearbook of Labour Statistics and the 2004 October Inquiry. The information on employment and education is taken from the World Bank's World Development Indicators 2004. The trade data come from the United Nations Commodity Trade Statistics Database (UNCOMTRADE).

In order to determine whether gender inequality is related to comparative advantage in labour-intensive manufacturing goods, the authors first conduct a cross-sectional analysis using data for the year 2000. They then pool data for some years to create a panel and apply country-fixed effects to assess changes over time. The benchmark model includes different trade indicators as dependent variables and three dimensions of gender inequality as independent variables. The trade indicators include: (a) the ratio of labour-intensive exports to total exports for labour-intensive goods, and (b) revealed comparative advantage⁸¹ in labour-intensive goods. Gender inequality is measured by indicators that capture the difference between male and female wages, labour market access and educational attainment.

Additionally, the model incorporates a set of control variables including: (a) a measure for relative capital endowment, (b) a measure for relative labour endowment, (c) equivalent aggregated variables used to measure gender inequality (i.e. total educational attainment when using gender inequality in access to education as an explanatory variable), as well as (d) regional dummies to account for differences in regional characteristics.

Findings

The findings from the cross-sectional regression suggest that gender inequality in wages is positively associated with comparative advantage in labour-intensive goods. This result holds in the panel estimations, indicating that the positive relationship holds over time.

In contrast, gender inequality in access to employment and in educational enrolment lower trade performance. Results for both the cross-sectional and panel data analysis suggest that higher female participation in the labour market enhances labour endowment and thus comparative advantage in labour-intensive goods. Similarly lower differences in education between males and females positively influence comparative advantage in labour-intensive industries.

A4 Darity (1995): “The formal structure of a gender-segregated low-income economy”

Context

This paper is based on research about the nature of gender-based division of labour in agrarian regions of sub-Saharan Africa. It is innovative in that it builds a theoretical model in order to capture the pronounced gender distribution of occupations in this region. Building upon the assumption that men and women differ in their responsibilities and tasks, the model shows how gender-based division of labour can lead to inefficient outcomes in terms of both export cash crop production and “subsistence” household production. Another interesting

contribution of the paper is that it sheds light on the effects of SAPs⁸² promoted by the IMF and the World Bank.

Methodology

The economy is assumed to be composed of two production sectors: (a) a “subsistence” household sector, which employs only females; and (b) a cash crop exporting sector, where males are devoted to land preparation. This is referred to as “men’s work” while activities such as transplanting and weeding are referred to as “women’s work”. A Cobb-Douglas production function that accounts for the quantity of a cash crop produced is modelled by male labour in cash crop production, female labour in the same sector and fixed capital used in the cash crop sector.

Box 17

What is a Cobb-Douglas production function?

A Cobb-Douglas production function describes the technology and the way inputs are combined for the production of goods and/or services. It usually takes the following form:

$$Y = AK^{\alpha}L^{\beta}$$

where Y represents the good/service produced, A is a labour-augmenting factor (commonly referred to as “total factor productivity”), K stands for capital (usually fixed in the short term) and L is labour. α and β represent the elasticities of production to capital and labour, respectively; according to the sum of α and β , the production function has either increasing, decreasing or constant returns to scale.

Source: UNCTAD Secretariat.

Women’s labour supply is allocated between household work, cash crop production and leisure time. The amount of female labour supply in cash crop production is modelled by: (a) the level of control men have over women’s time allocation decisions with respect to the export sector and housework; (b) the extent of women’s cooperation in their husbands’ or fathers’ efforts to raise output in the cash crop export sector; and (c) the real wage paid by men to women for working in the export sector.

lecting the amount of time they work in the export sector and the wages paid to women.

Besides the production sectors, the model includes a market where consumer and investment goods can be exchanged. Finally, the model studies the effects of a devaluation of the domestic currency as part of a structural adjustment strategy to promote foreign demand for goods exported by the country.

Findings

The higher the males’ coercive power on females’ labour allocation, the stronger are women’s cooperation efforts; and the higher the compensation paid by men, the higher is the amount of work time women spend in cash crop production and vice versa. In some cases, women are not willing to offer any uncompensated labour for cash crop production because they are not forced to do so by their male counterparts.

As women devote more time to unpaid cash crop production, for instance because of men’s higher coercive power, their labour productivity declines. Increased time dedicated to cash crop production comes at the expense of women’s leisure time because the model relies on the strong assumption that women are the only ones engaged in housework. They need to accomplish a minimum of work in the “subsistence” household sector to comply with tradition and customary standards and thus cannot reduce work related to household maintenance. If women are excluded from or are not adequately rewarded for their work in the cash crop sector, they may risk suffering

Males seek to maximize their income which is given by the difference between their revenues, represented by the value of the cash crop, and its costs, represented by compensation paid to women. Men will maximize their income by se-

from gender-specific nutritional deficiencies because with the little money they earn, they can only afford subsistence goods. These deficiencies can even arise during an export boom, when women's work days will be longer because they need to work more hours in the cash crop producing sector to meet the higher demand for export goods. If the pressure on female labour time cannot be offset by resources purchased with incomes generated in the export sector, women's productivity falls in both the subsistence and cash crop exporting sector, thus affecting export performance.

To boost foreign demand for the country's exports, the model then assumes an IMF-mandated local currency devaluation. The direct effect of such currency devaluation is to raise domestic prices⁸³ and therefore the money price of cash crops as well. This leads to two simultaneous outcomes: (a) an increase in men's work hours dedicated to the export sector to increase cash crop production and income; and (b) an increase in wages paid to women for their work in the fields because men are more willing to offer compensated work to women in the export sector.

As a result, the time women allocate to the export sector will increase, putting even more pressure on the subsistence household sector. Women will bear the brunt of a reduction in subsistence output. Gender-specific health dis-

advantages can once more jeopardize the efficiency of the cash crop exporting sector unless women's greater access to resources (i.e. wages received from working on cash-crop production) can offset this effect.

Darity's model shows how women's limited access to wages in an agrarian economy with gender-based socio-cultural stereotypes can inhibit export performance. It also accounts for gender inequalities in capabilities (health and nutrition), as well as security (modelled by men's coercive power over women).

In the concluding part of the paper, Darity explains the implications of a reduction in men's coercive power as one way to achieve greater gender equality in the distribution of labour. In this case, men would prefer to work longer hours in cash crop production and would pay higher wages to women since they would only be available to supply their labour if they are compensated for it. Therefore women would have greater access to income and could more easily take part in the consumption of subsistence goods. Women would be less drawn into unpaid work in the export sector allowing them to devote more time to subsistence production and leisure. Women would be able to enjoy a healthier lifestyle, accumulate savings for the education of their children and start up their own businesses in cash crop production.

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GLOSSARY

A

Absolute measure: Metric expressed in absolute units. For example, the number of people living in poverty, total export value in local currency, difference between the number of females and males enrolled in primary education. See also “Relative measure”.

Agreement on Textiles and Clothing (ATC): Sector-specific WTO agreement on trade in textiles and clothing which entered into force on 1 January 1995. Its main purpose was to secure the phasing out of restrictions on imports of textile and clothing products – set by the Multi-Fibre Arrangement (MFA) – over a transitional period of ten years, thereby integrating the textile and clothing sector into the standard rules and disciplines of the WTO by 2004. See also “Multi-Fibre Arrangement”.

Agricultural extension services: Activities aimed at educating and training rural workers on agricultural practices, including farming methods and techniques.

Agro-climatic zones: Territorial areas that share similar land, soil and climate characteristics and where the same kind of vegetation is found and the same crops are cultivated.

B

Bargaining power: Relative capacity of one party to exert influence over another party during a negotiation or a dispute. The party with a stronger bargaining power is able to secure an agreement closer to its own terms thereby achieving a more desirable outcome.

C

Capital intensity: Ratio of the amount of capital and labour used in production. It is commonly measured as the ratio of net fixed capital stock to the number of workers. See also “Labour intensity”.

Cash crop: Agricultural crop grown for sale and not for the farmer’s own consumption. See also “Subsistence crop”.

Comparative advantage: The efficiency with which a country can produce one good relative to another in the standard theory of international trade. It is generally measured as the ratio of unit labour costs. Trade between countries occurs if their relative efficiencies in producing two goods are different. If a country *A* can produce product *X* at a relatively lower cost than country *B*, it has a comparative advantage in producing *X*. By exporting *X* and buying product *Y* from its trading partner country *B* at a relatively lower cost, it can get more *Y* and at a lower price through this exchange than if it produced both goods nationally. See also “Competitive advantage”.

Competitive advantage: The idea that countries compete on absolute unit costs (rather than relative costs) and use different strategies such as unit cost reduction and price-cutting to outperform their competitors and gain market shares. The country that produces a good more efficiently (or at a lower cost) as compared to the other captures the export market, regardless of the relative cost of production of goods within the country. This contrasts with the standard trade theory based on comparative advantage in which trade is based on the relative cost of production within countries. See also “Comparative advantage”.

Contract farming: It can be defined as agricultural production carried out according to an agreement between a buyer and farmers, which establishes conditions for the production and marketing of a farm product. Typically, the farmer commits to provide agreed quantities of a specific agricultural product, which should meet the quality standards of the purchaser and be supplied at the time determined by the purchaser. In turn, the buyer commits to purchase the product and, in some cases, to support production through, for example, the supply of farm inputs, land preparation and the provision of technical advice (FAO, 2012).

Contributing family worker: The term refers to a self-employed individual in a market-oriented establishment managed by a related person living in the same household. Contributing family workers cannot be considered as co-workers, because their degree of commitment to the operation of the establishment, in terms of working time or other factors, is not comparable to that of the head of the establishment (ILO, 1993).

Cross-border trade: Buying, selling and related activities, of goods and services between individuals or companies (traders) in neighbouring countries, with the seller(s) in one country and the buyer(s) in the other country. See also “Informal cross-border trade”.

Customary law: An established practice that has become part of the accepted and expected conduct in a given social setting due to convention, tradition or social norms. Customary practices are enforced and accepted as law.

D

Defeminization of labour: The decline in the share of female employment in any given sector or industry. Some of the factors that may contribute to the defeminization of labour include: the shift to capital-intensive production (if women are concentrated in labour-intensive production); export contraction (if women are strongly present in exporting industries, such as manufacturing); higher wages in female-intensive production, which may attract men and contribute to push women out of employment (ECLAC, 2001). See also “Feminization of labour”.

Downstream activities: Later stages of the production process that include the processing of raw materials into finished products and their distribution, through marketing and sale, to end-consumers (businesses and/or individuals). In the case of the fishing sector in the Gambia, downstream activities involve, for example, the processing (e.g. smoking) of fish.

Dutch Disease: A situation when the discovery of new natural resources in a country or a boom in prices of such resources lead to a real appreciation of the country’s currency, which in turn makes the country’s non-natural resources exports less price-competitive on the world market, thus hampering the growth of manufacturing or other tradable sectors. Dutch Disease is often considered to be a temporary problem. In contrast, the so-called “resource curse” is the possible negative longer-term impact of Dutch Disease on technical progress in the country, mainly in manufacturing, caused by the diversion of financial resources from productive, growth-oriented use, due to rent-seeking behaviour (UNCTAD, 2012).

E

Efficient allocation: Distribution of assets and/or resources between economic actors (e.g. individuals and firms) that achieves the best outcome possible and makes everyone better off: each actor can only gain from a redistribution of assets and/or resources at the expense of someone else.

Export Processing Zones (EPZs): Areas generally set up in developing countries to attract foreign direct investment. The advantages offered by EPZs to firms (usually foreign owned) include: duty-free imports of raw and intermediate inputs for the processing of export products, facilitated licensing or building permits, reduced customs constraints, and overall fiscal advantages. Potential benefits of EPZs for the host country include: increase in foreign capital inflows, expansion of exports, transfer of technology and overall positive spillover effects on the domestic economy.

F

Factor endowments: Amount of production factors, typically land, labour and capital, which are available and can be exploited for the production of goods and/or services within a country.

Female (male) intensity of employment: The concentration of female (or male) employment in any given industry, sector or at the aggregate level. It is measured as the female (male) share of total employment. For example, EPZs display a high female intensity of employment, reaching up to 90 per cent in some countries. See also “Feminization of labour”.

Feminization of labour: The increase in the share of women employed in wage work in a given sector. For example, the expansion of the manufacturing sector following a free trade agreement or foreign investment inflows may provide new work opportunities for women. See also “Defeminization of labour”.

Foreign Direct Investment (FDI): “[FDI] is defined as an investment involving a long-term relationship and reflecting a lasting interest and control by a resident entity in one economy in an enterprise resident in an economy other than that of the foreign direct investor. FDI implies that the investor exerts a significant degree of influence on the management of the enterprise resident in the other economy. Such investment involves both the initial transaction between the two entities and all subsequent transactions between them and among foreign affiliates, both incorporated and unincorporated. FDI may be undertaken by individuals as well as business entities” (UNCTAD, 2013c).

G

Gender: Defines the socially constructed set of attributes, roles and opportunities ascribed to male and female sex categories. Aspects of gender vary greatly across socio-cultural contexts and determine what is the expected, valued and allowed behaviour in men and women. Substantial gender differences and inequalities can be found in most societies. See also “Gender equality”.

Gender equality: The enjoyment of equal rights, opportunities, access to resources and decision-making power across different sex categories and genders in social, economic and political life. See also “Gender parity”.

Gender mainstreaming: The process of taking gender considerations into account in different institutions with the objective to promote gender equality. The United Nations Economic and Social Council defined the concept as: “the process of assessing the implications for women and men of any planned action, including legislation, policies or programmes, in any area and at all levels. It is a strategy for making the concerns and experiences of women as well as of men an integral part of the design, implementation, monitoring and evaluation of policies and programmes in all political, economic and societal spheres, so that women and men benefit equally, and inequality is not perpetuated. The ultimate goal of mainstreaming is to achieve gender equality” (United Nations Economic and Social Council, 1997).

Gender parity: Equal representation of men and women. Gender parity can be achieved in employment (e.g. parity in all the professional levels of the workplace), in education (e.g. parity in enrolment rates, completion rates and literacy) or in political participation (e.g. parity in all the levels of government and decision-making bodies). See also “Gender equality”.

Gender segregation: Unequal distribution of men and women in different occupations and functions produced by gender bias. Gender segregation in employment can be vertical (where men are typically concentrated at the top of the occupational hierarchy, while women at the bottom) or horizontal (where women and men carry out different tasks across occupations).

Gender wage gap: Difference between men’s and women’s pay as a result of discrimination and/or concentration in different occupations. It can be measured in various ways, including the difference between male and female average earnings expressed as a percentage of male earnings.

Global supply chains: The chains of supply of raw materials and components that contribute to production systems globally. Global supply chains integrate inputs originating from several countries, with each country specializing in a given stage of the production process that transforms raw materials and components into a finished product and delivers it to final customers (UNCTAD, 2013b).

Global value chains (GVCs): GVCs comprise the set of different activities, involving two or more countries, which are needed to bring a product or service from conception, through the intermediary phases of production, delivery to final consumers, and final disposal after use. A typical GVC producing any end-product for final consumption will involve activities across multiple sectors and industries – from extractive industries or primary sector activities, to manufacturing and services – incorporating value added along the chain (UNCTAD, 2013c).

H

Heterodox economics: Heterodox economics is an umbrella term that is used to loosely describe non-neoclassical approaches to economics such as Keynesian, Marxist, feminist and institutionalist schools that are generally critical of the standard approach and based on different theoretical foundations. See also “Orthodox economics”.

I

Informal cross-border trade: Informal cross-border operators can be classified into three categories: (a) unregistered traders operating entirely outside the realm of formality; (b) traders who are registered but who fully evade trade-related regulations and duties; and (c) operators who are registered but who partially evade regulations by resorting to illegal practices. Informal cross-border trade covers a wide spectrum of agricultural and manufactured items and refers to both small volumes of goods transported across the border on foot or by bicycle, and large volumes transported by land, sea or air. See also “Cross-border trade”.

Informal economy: It refers to all economic activities by workers and economic units that are – in law or in practice – not covered or insufficiently covered by formal arrangements. Their activities are not included in the law, which means that they are operating outside the formal reach of the law; or they are not covered in practice, which means that – although they are operating within the formal reach of the law, the law is not applied or not enforced; or the law discourages compliance because it is inappropriate, burdensome, or imposes excessive costs” (ILO, 2002).

Informal employment: Work without legal or social protection inside or outside informal enterprises (Chen and Vanek, 2013).

Labour intensity: Ratio of the amount of labour and capital used in production. It is commonly measured as the ratio of the number of workers to net fixed capital stock. See also “Capital intensity”.

Labour standards: A set of international conventions on labour and social policy that safeguard the rights of working persons. Core labour standards are basic human rights and include principles related to freedom of association and the right to collective bargaining, forced labour, equality of opportunity and treatment, and child labour (ILO, 1998). Core labour standards are defined in the Declaration on Fundamental Principles and Rights at Work, adopted by ILO member states in 1998.

M

Macroeconomic analysis: Branch of economics dealing with the study, forecast and research of the economy as a whole (at the national, regional or global level) as opposed to individual markets. It focuses on economy-wide indicators such as GDP, unemployment and inflation. See also “Microeconomic analysis”.

Maquila (or maquiladora): Mexican export-oriented assembly factories operating in the EPZs on the border with the United States. The term *maquila* (or *maquiladora*) is also used with reference to similar factories in other countries in Latin America and Asia. See also “Export Processing Zones (EPZs)”.

Market access: The conditions, i.e. tariff and non-tariff measures (e.g. quotas, subsidies, technical regulations, etc.), for the entry of goods into national or regional markets. From an exporter’s perspective, the level of market access depends on: (a) the disadvantages or advantages that exporters face as compared to domestic producers; and (b) the relative advantages or disadvantages that exporters have over other external competitors.

Market entry: The ability of exporters to meet necessary requirements to enter a market. Market entry conditions may refer to product characteristics – including quality, appearance, or taste; safety – for example the presence of pesticide or artificial hormone residue; and authenticity – such as guarantee of geographical origin or use of a traditional production process. Other parameters may relate to the nature of the production process (e.g. with respect to workers’ health and safety, or environmental impact), prices and speed of delivery. Market entry conditions are not mandatory by law, but are usually

imposed by large distribution networks and large commercial customers. Failure to satisfy market entry conditions would result in *de facto* market exclusion (UNCTAD, 2003).

Micro-business: A business operating on a small scale and employing a limited number of people. Most microenterprises specialize in goods and services that are provided within a limited area and are a common feature in developing countries where they play a key role in job creation and poverty alleviation.

Microeconomic analysis: Study, forecast and research of the behaviour of economic entities (e.g. consumers, producers and firms) in the allocation of available and limited resources. It includes the study of the determinants of demand and supply, which in turn determine market prices. See also “Macroeconomic analysis”.

Millennium Declaration: The United Nations Millennium Declaration, adopted at the Millennium Summit on 8 September 2000, aimed to shape the international agenda for the 21st century, calling for policies and measures to respond to the needs of developing countries and economies in transition. The Declaration set out a series of time-bound targets – with a deadline of 2015 – that are known as the Millennium Development Goals (MDGs).

Multi-Fibre Arrangement (MFA): International trade agreement of 1974 that governed trade in textile and clothing through quotas negotiated bilaterally between developed and developing countries. This meant that selective quantitative restrictions were applied when surges in imports of particular products caused, or threatened to cause, serious damage to the industry of the importing country. On 1 January 1995, the MFA was replaced by the WTO Agreement on Textiles and Clothing. See also “Agreement on Textiles and Clothing (ATC)”.

N

Non-tradable sectors: Sectors producing goods and/or services that cannot be traded on international markets because of their nature, high trading costs or logistical reasons. Their prices are largely determined on the domestic market. For example, infrastructure and haircutting services are non-tradable sectors. See also “Tradable sectors”.

Non-market activities: Refers to the production of goods and services that household members produce for their own consumption (e.g. subsistence agriculture), or reproduction and unpaid care work (such as taking care of children, the elderly, ill and able-bodied adults). See also “Reproductive sphere”.

Non-tariff measures (NTMs): NTMs are policy measures, other than customs tariffs, that can potentially have an economic effect on international trade in goods, changing quantities traded, their prices or both. They can be divided into three categories: (a) measures which are directly trade-related (e.g. import quotas, import restrictions, licences, anti-dumping measures); (b) measures which have a link to trade in as far as their implementation is monitored at the border (e.g. labelling, packaging, sanitary and phytosanitary requirements, technical specifications); and (c) measures arising from general public policy (e.g. government procurement, investment restrictions, subsidies, extent of intellectual property rights protection) (UNCTAD, 2013a). See also “Tariffs”.

O

Orthodox (standard) economics: “Traditional” economic theory taught in most universities that is based on the assumptions of a utility-maximizing individual with rational preferences and expectations, and full information about the market. Orthodox economists often use mathematical models including calculus, optimization and comparative statistics to describe individuals’ behaviour. See also “Heterodox economics”.

P

Patriarchal social system: A social system based on the authority of elder males. Broadly, patriarchal society is a system where women are subordinate to men, who have authority and privilege in the family, politics and society. It also includes social mechanisms that reproduce male dominance and privilege.

Perfect competition: A type of market structure characterized by: (a) a large number of small producers (firms) and consumers; (b) price-taking behaviour; (c) production of homogeneous goods and/or services; (d) free entry and exit of producers from the market; and (e) availability of complete information on prices and quantities produced.

Productive capacity: The productive resources, entrepreneurial capabilities and production linkages that together determine the capacity of a country to produce goods and/or services and generate productive employment. Productive capacity determines the type and quantity of goods and services a country can export. Productive capacity is influenced by trade through, for example, economies of scale, more efficient use of resources and acquisition of technology (UNCTAD, 2006).

R

Relative measure: A metric that compares two absolute measures. For example, a ratio of female to male primary enrolment of 63 per cent indicates that there are 63 females enrolled in primary education for every 100 males. See also “Absolute measure”.

Reproductive sphere: Refers to the domestic realm and is associated with family and household tasks, including childbearing and childrearing responsibilities, food preparation, housekeeping, water and fuel collection.

S

Sex-disaggregated: Compilation of statistical and analytical information (e.g. education, employment, health) by sex. Sex-disaggregated data are essential to assess differences in the conditions of women and men and determine whether or not such conditions change over time.

Skill level: Defines the complexity and range of tasks and duties to be performed in an occupation. It is measured by considering the nature of the work performed, the level of formal education required for a given occupation, and the amount of informal training and/or previous experience required to carry out the tasks and duties involved. The International Standard Classification of Occupations (ISCO) defines four skill levels: these range from occupations involving simple and manual tasks and requiring basic literacy levels (low-skilled), to occupations involving complex problem-solving and decision-making for which high levels of education and training are required (high-skilled) (ILO, 1990).

Spillover effect: Consequences resulting from an economic activity or process that spread into areas not directly in its sphere. For example, investment in infrastructure can have positive spillover effects by stimulating the economy through employment, improved labour mobility and increased demand of related productive sectors.

Structural Adjustment Programmes (SAPs): Set of economic policies prescribed by the World Bank and the IMF and implemented in many developing countries since the 1980s as part of a loan package to countries that were in economic difficulty. SAP guiding principles included export-led growth; privatization and liberalization; and the efficiency of the free market. To achieve these objectives, countries were required to take several of the following measures: devalue their currencies against the dollar; lift import and export restrictions; balance their budgets; and remove price controls and state subsidies. Due to the criticisms surrounding SAPs, in 1999, it was determined that concessional lending would be negotiated under nationally-owned poverty reduction strategies (Poverty Reduction Strategy Papers – PRSPs).

Structural barriers/constraints: Fundamental impediments to the achievement of a specific goal, rooted in the economic, political, cultural and social systems in which the actor operates. For example, gender bias in educational institutions about women’s limited technical abilities can translate into discriminatory admissions policies.

Structural transformation: The shift of output and employment in an economy from agriculture to manufacturing and services that is characteristic of the development process. It is usually accompanied by rising urbanization and the growth of a modern industrial and service-based economy.

Subsidized credit: Loans and/or cash payments provided at more favourable conditions than normally applied market rates. They are usually granted by governments to promote particular forms of economic activity. For example, subsidized credit can be targeted at small and own-account farmers in agriculture-based economies to expand production.

Subsistence crop: Agricultural crop grown for the farmer's and his/her family's own consumption. See also "Cash crop".

T

Tariff: Tax imposed on goods imported into a country. A tariff is specific when it is imposed as a fixed sum per unit of the imported good. A tariff is ad valorem when it is calculated as a percentage of the value of the imported good. Mixed and compound tariffs are combinations of specific and ad valorem tariffs. Bound tariff rates are those that are negotiated by countries under bilateral, regional or multi-lateral trade agreements. Once agreed upon, they represent the maximum level of tariffs the parties are authorized to use in relation to imports from countries. The applied tariff rates are those *de facto* used by countries; they are generally lower than the bound rates (UNCTAD, 2001).

Tariff escalation: Tariffs escalate when they increase with the level of processing: tariff rates on semi-processed and processed products are thus higher than on unprocessed products and raw materials. Tariff escalation protects the processing industry in the importing country against foreign competition as it makes it difficult for suppliers of raw materials or unprocessed products in the exporting country to move to higher stages of processing and diversify their production.

Tradable sectors: Sectors producing goods and/or services that are or can be traded between countries. Their prices are largely determined in the world market. Most goods and several services are tradable. See also "Non-tradable sectors".

Trade liberalization: Removal or lowering of barriers and restrictions to international trade. Measures of trade liberalization include removal or lowering of tariff (e.g. import duties) and non-tariff obstacles (e.g. quotas, import licensing rules, etc.). See also "Trade protectionism".

Trade openness in policy: Set of government measures including laws, regulations and requirements determining the degree to which countries are open to international trade. Openness in policy is defined in relation to barriers to international trade imposed by governments, which may include tariff and non-tariff measures (such as quotas, import licensing systems, sanitary regulations, prohibitions, etc.).

Trade openness in practice: Indicates a country's degree of integration into the world economy, and thus, the importance of international trade relative to domestic activities. Measures of trade openness in practice include either import or export values, or both as shares of GDP.

Trade protectionism: Restrictions of trade meant to protect domestic producers from competition originating from imported goods. Protectionist measures may include tariffs on imports, restrictive quotas, subsidies and tax cuts. See also "Trade liberalization".

Trade reforms: Change in laws and practices that govern a country's international trade. Generally speaking, trade reforms can include both measures directed towards liberalization and protectionism.

U

Upstream activities: Initial stages of the production process which include searching for, collecting, gathering and extracting raw materials. In the case of the fisheries sector in the Gambia, for example, upstream activities involve the fishing of the fish. See also "Downstream activities."

V

Vocational training: Education and training aimed at providing workers with specific professional skills to perform successfully in a given occupation. Examples of professions requiring vocational training include: IT specialist, electrician, or cook.

W

Women's empowerment: The process of enabling women to participate fully in the economic, social and political life and to ensure that they can exercise their right to make independent choices, to have access to opportunities and resources and to have control over their own lives, both within and outside the domestic sphere. See also "Women's economic empowerment".

Women's economic empowerment: Women's ability to enjoy full economic rights and independence. This includes access to employment; appropriate working conditions; equal pay for equal work; access to training, information and technology; access to markets; control over economic resources; and the ability to influence economic decision-making, including the formulation of financial, monetary, commercial and other economic policies. See also "Women's empowerment".

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ENDNOTES

- 1 See <http://www.un.org/womenwatch/osagi/conceptsanddefinitions.htm>.
- 2 Same as above.
- 3 See Razavi and Hassim (2006), Gideon (1999) and Elson (1999).
- 4 See for instance Darity (1995), in Module 3 of this teaching material, who built a model of gender segregation in a low-income country and examined how gender segregation can negatively affect the productive capacity of the economy.
- 5 See Antonopolous (2009), Razavi and Staab (2008), and the website of the United Nations Office of the High Commissioner on Human Rights at: <http://www.ohchr.org/EN/Issues/Poverty/Pages/UnpaidWork.aspx>.
- 6 Informal jobs are those where the employment status of the person employed is not, in law or in practice, subject to national labour legislation, income taxation, social protection or entitlement to employment benefits (e.g. advance notice of dismissal, severance pay, paid annual or sick leave, etc.).
- 7 Horizontal segregation refers to a situation in which the workers of a specific industry or sector are mostly made up of one particular gender. For example, construction in many countries is a male occupation whereas childcare is almost exclusively a female occupation.
- 8 Vertical segregation refers to hierarchies between individual occupations. It means that opportunities for career progression within a company or sector for a particular gender are restricted. In the literature, vertical gender segregation is also referred to as the “glass ceiling effect”, which indicates the existence of visible and/or invisible barriers that prevent women’s ascent to higher-level positions.
- 9 The ILO definition of “contributing family workers” includes those workers who hold a self-employment job in a market-oriented establishment managed by a related person living in the same household who cannot be considered as a co-worker. This is because their degree of commitment to the operation of the establishment, in terms of working time or other factors to be determined by national circumstances, is not at a level comparable to that of the head of the establishment. See <http://laborsta.ilo.org/applv8/data/icsee.html>.
- 10 The ILO definition of “vulnerable employment” includes both contributing family workers and own-account workers. We prefer to focus on contributing family workers only. The category of own-account workers is rather heterogeneous and some of the jobs included in it do not carry a high economic risk. Across the world, more men than women on average are own-account workers and more women than men are contributing family workers.
- 11 OECD defines informal cross-border trade as “trade in legitimately produced goods and services, which escapes the regulatory framework set by the government, as such avoiding certain tax and regulatory burdens” (OECD, 2009: 9). For more details, see Glossary.
- 12 Unfortunately, many datasets and policies dealing with these issues continue to treat households as if they were homogeneous units made up of people with the same preferences and the same decision-making power. Treating households as single homogenous units is not only based on the assumptions of homogeneity of preferences and decisions but it avoids modelling heterogeneity within the household. Although most of the household data have disaggregated information, little research has been able to cope with difficulties arising when treating households as heterogeneous entities, such as simultaneity and time schedule of decisions. Such heterogeneity is not an easy issue to deal with and research is ongoing to find proper ways of addressing it. Nevertheless, information on allocation of resources within the household is still scattered and limited to small *ad hoc* surveys. More systematic documentation of this kind would significantly improve the ability of policymakers to design policies that take these dynamics into account. For further discussion, see IFPRI (2003), and, for more recent evidence, see e.g. UNDESA (2010) Chapter 8, Part B.
- 13 For more information on the gender dimension of taxes, see Barnett and Grown (2004) and Huber (2005).
- 14 However, if purchases from lower income groups are concentrated on goods with a lower tax rate, the higher tax incidence is not necessarily observed.
- 15 Casual workers are individuals who are called in to work only as and when they are needed. Their activity is therefore dependent on the level of their employers’ workload and on its fluctuations. Women more than men tend to be recruited as casual workers.
- 16 Aggregate indices of gender equality include: the Gender-Related Development Index (GDI) and the Gender Empowerment Measure (GEM) produced yearly by the United Nations Development Programme (UNDP) in the Human Development Report; the Gender Gap Index (GGI) introduced by the World Economic Forum (WEF) in 2006; and the Social Institutions and Gender Index (SIGI) launched in 2009 by the Organisation for Economic Co-operation and Development (OECD).
- 17 Despite being a useful measure, the GPI is scarcely used in the literature and we will therefore not concentrate on it in this teaching material.
- 18 Rearranging terms, the relative gap can also be calculated as 1–GPI. Therefore, the closer the relative gap is to 0, the greater the parity between the sexes.

- 19** See <http://genderstats.org> for the minimum set of 52 gender indicators, and http://www.un.org/womenwatch/directories/statistics_and_indicators_60.htm for the directory of UN Resources on Gender and Women's Issues.
- 20** The unemployment rate measures the number of unemployed persons in the labour force who are officially looking for jobs as a percentage of the labour force.
- 21** ISCO-88 is the International Standard Classification of Occupations approved and adopted by the ILO Governing Body in 1988. It is gradually being replaced by its more updated version, the ISCO-o8.
- 22** The best is probably to use both exports and imports. Yanikaya (2003) notes that both are important for economic performance. Standard international trade theory suggests that trade leads to a more efficient use of a country's resources not only through the production of goods that use intensively the country's abundant factors of production but also through the imports of goods and services that otherwise are too costly to produce within the country. However, a lot depends on whether one is looking at economic performance in terms of cheaper access to goods, in which case imports are important, or in terms of economic development where the evidence is more on the side of exports increasing GDP while there is little evidence about the same with respect to imports.
- 23** For an explanation of the concept of comparative advantage see Box 9 in Module 2.
- 24** For an example, see UNCTAD's database on international trade in goods and services at: <http://unctadstat.unctad.org/ReportFolders/reportFolders.aspx>.
- 25** For an example, see the UN classification of products grouped by technology-intensiveness at: <http://unstats.un.org/unsd/tradekb/Attachment64.aspx>.
- 26** Note in this respect that about half of the ACP countries have an LDC status. These countries already enjoyed duty-free and quota-free access to the EU for all their exports, with the exception of arms. There may however be further market access gains, even for LDCs, in terms of less stringent rules of origin for some products. Much depends on the pattern of trade specialization of the country concerned. See for example South Centre (2012), Naumann (2010), and UNCTAD (2011) for a review of trade facilitation provisions in selected EPAs.
- 27** For a comprehensive list and definition of trade terms, see Deardorff (2006).
- 28** The analysis draws extensively on UNCTAD (2013).
- 29** Kwana is Angola's currency.
- 30** The term "Dutch Disease" refers to the large inflow of foreign currency due to the discovery of new natural resources or a boom in resource prices that leads to a real appreciation of the country's national currency, which in turn adversely affects the competitiveness of other export-oriented sectors, in particular manufacturing, and hampers the country's efforts to develop and diversify domestic production.
- 31** The Cotonou Agreement, signed between the EU and the ACP countries in 2000, is a broad trade and development treaty whose declared aim is to help reduce poverty, and contribute to sustainable development and an integration of ACP countries into the world economy.
- 32** The Paris Declaration on Aid Effectiveness, endorsed in 2005 by more than 100 signatories – developed and developing country governments, multilateral donor agencies, regional development banks and international agencies – adopted five central principles aimed at improving the effectiveness of aid. These principles include ownership, alignment, harmonization, managing for results, and mutual accountability. More information is available at: <http://www.oecd.org/dac/effectiveness/parisdeclarationandacraagendaforaction.htm>
- 33** Defined as female employment over total employment.
- 34** Standard (orthodox) economics and heterodox economics are broadly two schools of economic thought that differ in their assumptions, methods and topics. Standard economics refers to neoclassical economic theory taught in most universities, which builds on the main assumptions of a utility maximizing individual with rational preferences and full information about the market. Heterodox economics is an umbrella term that is used to loosely describe non-neoclassical approaches to the field, such as Keynesian, Marxist, feminist and institutionalist schools that are generally critical of the standard approach and based on different theoretical foundations. They do not generally ascribe to the idea of perfect markets and disavow methodological individualism. These are only rough definitions however and the interested reader is advised to refer to other sources (e.g. Dequech, 2007; Lawson, 2013).
- 35** A full account of the main critiques to the HOSS model in general is beyond the scope of this module. Here we focus only on aspects that are particularly relevant to its application to a gender perspective.
- 36** See Shaikh (2007) and van Staveren *et al.* (2007) for a more in-depth overview of competitive advantage.
- 37** These include Hong Kong (China), Taiwan Province of China, Singapore and the Republic of Korea.
- 38** For twenty years (1974–1994), the MFA ruled most trade in textiles and clothing on the basis of quotas negotiated bilaterally between developed and developing countries. The MFA represented a major departure from the basic General Agreement on Tariffs and Trade (GATT) rules and particularly the principle of non-discrimination. On 1 Janu-

- ary 1995, the MFA was replaced by the WTO Agreement on Textiles and Clothing (ATC) that set out a transition process for the ultimate removal of these quotas. The ATC expired on 1 January 2005.
- 39** For more information on Better Work, see <http://www.ilo.org/washington/areas/better-work/lang--en/index.htm> and <http://betterwork.org>.
- 40** This section mostly draws on Berik (2011) and Fontana (2009).
- 41** For a discussion on the measurement of the gender wage gap, refer to Box 5 in Module 1.
- 42** This would be the “unexplained residual” in the decomposition of the raw gender wage gap (see Box 5 in Module 1).
- 43** A good account of the Heckscher-Ohlin theory of trade as well as the debate on trade and wage inequality can be found in the UNCTAD *Virtual Institute Teaching Material on Trade and Poverty* (2010), specifically in Sections 1.2.3 and 2.2.3.
- 44** Tiano (1994), Barrientos *et al.* (2004) and McMichael (2012) also discuss the decline in the female share of employment in Mexico, and Fleck (2001) refers to the increasing employment of older married women in *maquiladoras* in Mexico over time.
- 45** More recent wage data are not yet available.
- 46** Note that the reverse but equivalent results hold for the foreign country.
- 47** According to WTO rules, a country can raise its applied tariff rates up to the level of its bound tariff rates without infringing its WTO obligations.
- 48** For example, a country like Rwanda is not allowed to levy duties on imports originating from other members of the East African Community (EAC), and applies the EAC common external tariff on imports from outside EAC.
- 49** For developing countries, 10 per cent of the value of total agricultural production (for non-product specific support) and 10 per cent of the total value of production of the agricultural product in question (for product-specific support).
- 50** If they are not directly involved in export production, women often increase the amount of time they contribute to their husbands’ commercial crops, leading to higher female unpaid work burdens. In spite of their significant contribution in this regard, women often have no control over the income generated from their work, as studies on NTAEs in India, Kenya, Senegal and Guatemala show (Singh, 2002, for the Indian Punjab; Dolan, 2001, for Kenya; Maertens and Swinnen, 2009, for Senegal; Katz, 1995, for Guatemala).
- 51** It is important to note though that once enterprise characteristics such as size, formality and capital investment are controlled for, the gender productivity differential between male- and female-owned enterprises disappears (Kabeer, 2012).
- 52** According to the World Bank, “Trade taxes include import duties, export duties, profits of export or import monopolies, exchange profits, and exchange taxes.” See <http://data.worldbank.org/indicator/GC.TAX.INTT.RV.ZS>.
- 53** The authors explain their choice of capturing infrastructure by the percentage of the population with access to improved sanitation facilities and telephone lines per 100 people in the following way: Improved sanitation is expected to have a positive effect on the gap between female and male employment through, for example, improved overall health outcomes and reduced time spent by women as care-givers. The effect of telephone lines on relative access to employment is indirect and this variable serves as a proxy for other direct measures of time-saving infrastructure improvements for which data are sparser.
- 54** See Module 2 for an explanation of the concept of competitive advantage.
- 55** See Module 1 for an explanation and definition.
- 56** See http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/Gender_pay_gap_statistics for data on the European Union, for instance.
- 57** We use the category “flexible” labour in the sense that Standing (1989) does. Flexible labour implies short-term contractual, temporary, casual and/or informal labour, generally with no benefits as opposed to permanent and formal labour.
- 58** Economies of scale refer to the decrease in costs per unit of output that a firm experiences because its fixed costs can be spread over more units of output.
- 59** Imports of raw commodities would not have the same technological spillover effects.
- 60** However, not everyone agrees with this view and the debate on the link between trade liberalization and economic growth is still open. See Winters *et al.* (2004) for a survey of the literature on this topic.
- 61** See [http://www.ilo.org/gender/Aboutus/ILOandGenderEQuality/lang--en/index.htm](http://www.ilo.org/gender/Aboutus/ILOandGenderEquality/lang--en/index.htm) for the ILO’s mandate on gender inequality.
- 62** Group of countries that underwent rapid industrial growth between the 1970s and 1980s, such as the Republic of Korea, Singapore, Hong Kong (China) and Taiwan Province of China.
- 63** See http://www.ilo.org/wcmsp5/groups/public/---asia/---ro-bangkok/---ilo-islamabad/documents/policy/wcms_143046.pdf for a list of the core ILO conventions.

- 64** See <http://www.capturingthegains.org/about/index.htm> for an overview of the research programme on economic and social upgrading in GVCs.
- 65** However, consumers' awareness does not always translate into better working conditions for vulnerable workers. See for example Basu's (1998) paper on child labour.
- 66** This section draws on Berik (2000).
- 67** Note that men's share of own-account work is higher than women's, but more women than men work as unpaid family labour, which increases the women's share of vulnerable employment globally (ILO, 2012).
- 68** Refer to Section 3.1 in Module 1. For a full report on the underlying causes of gender inequality by region see OECD (2012).
- 69** We also need to keep in mind that in general, girls have a higher school dropout rate than boys and that the education they receive is often of lower quality and lacking in adequate learning resources, infrastructure and facilities (UNESCO, 2012; UNICEF, 2000). Overall, the lack of adequate education and schooling may diminish opportunities for women.
- 70** The issue of women's time poverty was discussed in Module 1.
- 71** In this case, the bias against women is indirect. Extension services typically target export-oriented cash crops that tend to be male-dominated. Furthermore, in their design and implementation, extension services often do not acknowledge the gender-specific obstacles that women may face (such as limited access to radios and mobile phones, time constraints, mobility constraints, etc.).
- 72** The following section draws on UNCTAD-EIF (2014).
- 73** The following section draws on UNCTAD (2014b).
- 74** Poverty rate refers here to the national poverty line of 64,000 Rwandan francs per adult equivalent per year, in January 2001 prices (National Institute of Statistics of Rwanda, 2012).
- 75** Data from the World Bank World Development Indicators, available at: <http://data.worldbank.org/data-catalog/world-development-indicators>. The headcount ratio measures the percentage of the population living on less than \$1.25 per day at 2005 international prices.
- 76** Foreign income is a trade-weighted average of inflation-adjusted gross national product (GNP) data for the United States, the United Kingdom, Japan and Germany.
- 77** Introduced by Robert Solow in 1957, growth accounting measures the contribution of each economic factor to economic growth and defines the "residual" as the productivity differences achieved due to technological progress. After the pioneering work of Solow, many economists have worked on enhancing Solow's model with further economic variables that can explain economic growth, such as human capital (education), government expenditure, etc.
- 78** The SIEO index was calculated as the sum of the share of exports in GDP, the ratio of machinery and transport goods to non-oil primary commodities in exports, and the share of manufacturing in GDP. The first term is an indicator of export orientation while the second and third terms indicate the status of a country as a semi-industrialized one. Countries with SIEO values above 1 are classified as semi-industrialized. For example, according to Seguino's calculations, between 1980 and 1993, Paraguay had a SIEO index of just below 2, while Taiwan Province of China and Singapore had a SIEO index of around 10.
- 79** One measure is a basic wage gap variable, namely the difference of the logarithm of male and female wages. A second measure refines the basic wage gap index and is calculated as the difference between the logarithm of the ratio of wages to years of secondary education for males and females of 15 years of age and above. The third measure is the interaction of the refined wage gap measure with average educational attainment in the economy. In this case, the wage gap should also capture the effect of skills required to adopt new technologies.
- 80** These include the percentage of females and males of 15 years of age and above who have completed secondary education and the growth rate of secondary school attainment by sex.
- 81** Revealed comparative advantage is an index that calculates the relative advantage or disadvantage a country has in a particular category of goods and/or services by comparing it with world exports or imports of the same category. Busse and Spielmann (2006) calculate it as the ratio of exports of labour-intensive products to imports of labour-intensive products over the ratio of total exports to total imports.
- 82** See Module 1 for a definition of SAPs.
- 83** Although export prices decrease and the country becomes more competitive in foreign markets, a currency devaluation can increase domestic prices by increasing the price of imports and aggregate demand for the domestic good.