UNITED NATIONS CONFERENCE ON TRADE AND DEVELOPMENT

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TEACHING MATERIAL ON
TRADE AND GENDER

VOLUME 1: UNFOLDING THE LINKS

MODULE 4

TRADE AND GENDER LINKAGES: AN ANALYSIS OF COMESA

UNITED NATIONS

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LIST OF ABBREVIATIONS

BPO	BUSINESS PROCESS OUTSOURCING
CAADP	COMPREHENSIVE AFRICA AGRICULTURAL DEVELOPMENT PROGRAMME
CEDAW	CONVENTION ON THE ELIMINATION OF ALL FORMS OF DISCRIMINATION AGAINST WOMEN
COMESA	COMMON MARKET FOR EASTERN AND SOUTHERN AFRICA
EAC	EAST AFRICAN COMMUNITY
EPA	ECONOMIC PARTNERSHIP AGREEMENT
EPZ	EXPORT PROCESSING ZONE
EU	EUROPEAN UNION
FAO	FOOD AND AGRICULTURE ORGANIZATION
GDP	GROSS DOMESTIC PRODUCT
GNI	GROSS NATIONAL INCOME
HS	HARMONIZED COMMODITY DESCRIPTION AND CODING SYSTEM
IANWGE	UNITED NATIONS INTER-AGENCY NETWORK ON WOMEN AND GENDER EQUALITY
ICT	INFORMATION AND COMMUNICATIONS TECHNOLOGY
IFAD	INTERNATIONAL FUND FOR AGRICULTURAL DEVELOPMENT
ILO	INTERNATIONAL LABOUR ORGANIZATION
ISIC	INTERNATIONAL STANDARD INDUSTRIAL CLASSIFICATION
NACE	NOMENCLATURE STATISTIQUE DES ACTIVITÉS ÉCONOMIQUES DANS LA COMMUNAUTÉ EUROPÉENNE (STATISTICAL CLASSIFICATION OF ECONOMIC ACTIVITIES IN THE EUROPEAN COMMUNITY)
NEPAD	NEW PARTNERSHIP FOR AFRICA'S DEVELOPMENT
OECD	ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT
PASET	PARTNERSHIP FOR SKILLS IN APPLIED SCIENCES, ENGINEERING, AND TECHNOLOGY
ROW	REST OF THE WORLD
SADC	SOUTHERN AFRICAN DEVELOPMENT COMMUNITY
SITC	STANDARD INTERNATIONAL TRADE CLASSIFICATION
TFTA	TRIPARTITE FREE TRADE AGREEMENT
TRAINS	TRADE ANALYSIS AND INFORMATION SYSTEM
UNCTAD	UNITED NATIONS CONFERENCE ON TRADE AND DEVELOPMENT
UNDP	UNITED NATIONS DEVELOPMENT PROGRAMME
UNESCO	UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION
UNFPA	UNITED NATIONS POPULATION FUND
UNWTO	UNITED NATIONS WORLD TOURISM ORGANIZATION
WBES	WORLD BANK ENTERPRISE SURVEYS
WDI	WORLD BANK WORLD DEVELOPMENT INDICATORS
WTTC	WORLD TRAVEL AND TOURISM COUNCIL

MODULE 4

Trade and gender linkages: An analysis of COMESA

1 Introduction

This document is the fourth module in the first of two volumes of the teaching manual on trade and gender prepared by the United Nations Conference on Trade and Development (UNCTAD). The manual was developed with the aim of enhancing the capacity of a global audience of policymakers, civil society organizations, and academics to mainstream gender into trade policy.

To tailor the content of the teaching manual to the specific needs and contexts of target regions and promote broader dissemination of the manual's analytical tools, UNCTAD has undertaken the localizations of Volume 1 *Unfolding the links* with an overall approach that focuses on topics that best illustrate and address regional context and specificities. The present module is the first of a series of regional modules and has been developed with the aim of applying the analytical framework presented in Volume 1 to the specificities of the member countries of the Common Market for Eastern and Southern Africa (COMESA).

The previous modules of Volume 1 examined the relationship between trade and gender inequalities. Module 1 introduced the basic concepts indispensable to understanding the trade and gender nexus through a discussion of the economy as a gendered structure, an analysis of the definition of trade, and a presentation of the measures of gender biases. Module 2 described the various transmission channels through which trade liberalization affects women, relying on both theoretical expectations and empirical evidence in the different economic sectors. Module 3 focused on the reverse relationship and exposed how gender inequality influences export competitiveness and trade performance. Building upon the content of the previous modules, Module 4 applies the analytical grid previously developed to the member countries of COMESA. The concepts and transmission mechanisms introduced in the training material are employed to understand and outline the interactions between trade and gender inequalities in COMESA countries.

Since COMESA involves countries that differ greatly in terms of economic structures and social development, this module examines the trade and gender nexus through a thematic lens, focusing on common features across the different economic sectors, namely agricultural, manufacturing, and services.

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

- Interpret critical data about gender inequalities and female labour force participation in COMESA countries;
- Understand the interactions of trade and gender outcomes in the different economic sectors in light of the transmission channels described previously;
- Illustrate how trade integration has influenced gender inequality in COMESA countries in the different economic sectors.

1.1 The COMESA region: An overview

COMESA was formed in 1994 to replace the former Preferential Trade Area for Eastern and Southern Africa that had been in place since 1981. As of July 2016, COMESA was comprised of Burundi, Comoros, Democratic Republic of the Congo, Djibouti, Egypt, Eritrea, Ethiopia, Kenya, Libya, Madagascar, Malawi, Mauritius, Rwanda, Seychelles, Sudan, Swaziland, Uganda, Zambia, and Zimbabwe. COMESA aims to strengthen regional development and integration among its 19 member states through the promotion of cross-border trade and investment, with the creation of a customs union and a full monetary union envisaged by 2025. COMESA is currently the largest free trade area in Africa, and 16 of its members have gradually moved towards the free trade regime established in 2000, providing duty-free and quota-free market access for COMESA-originating products.

The COMESA region has a combined population of over 500 million and includes an extremely diverse group of countries with different levels of socio-economic development and different economic structures. According to the *2015 Human Development Report* (UNDP, 2015), only Mauritius, Seychelles, and Libya are classified as high human development countries. Most COMESA members remain in the low human development group, with Burundi and Eritrea occupying some of the lowest positions among the 188 countries that are ranked. Poverty rates are also quite mixed. The population living below the international poverty line of US$1.25 a day ranges from 1.7 per cent in Egypt to 87.7 per cent in Madagascar and the Democratic Republic of the Congo.[1]

With the exception of Libya, whose economy has been hit severely by the ongoing conflict, GDP has shown modest fluctuations in most COMESA countries. As shown in table 1, average annual GDP growth rates went from 4.8 per cent in 2012 to 5.6 in 2014.

The region relies mainly on the production and

Table 1

COMESA: Selected economic and social indicators

	2010	2012	2014
Total population (millions)	443	462	500
Annual GDP growth (per cent)[a]	4.8	4.8	5.6
Trade (per cent of GDP)	77.5	75.7	73.9
Gross national income per capita (constant 2010 U.S. dollars)[b]	2,429	2,370	2,172
Female labour force participation rate (per cent of the female population ages 15-64)	62.9	63.0	63.2
Primary and secondary school enrolment (Gender Parity Index)[c]	0.9	0.9	1.0
Tertiary school enrolment (Gender Parity Index)[c]	0.8	1.1	1.0

Source: Calculations by the UNCTAD secretariat based on data from the World Bank's World Development Indicators database (accessed on 9 August 2016).

Notes: If not otherwise indicated, figures are expressed in mean values calculated based on available data for selected years.

[a] To avoid distortions, average rates of GDP growth do not include Libya due to the effects of the current political situation on the economy.

[b] Gross national income figures are calculated based on latest available data from Seychelles for 2010.

[c] Figures for the Gender Parity Index on school enrolment refer to 2013 instead of 2014.

export of primary products. Intra-COMESA trade share ranks third after larger international trading partners such as the European Union (EU) and China. (COMESA, 2013). With an average trade-to-GDP ratio of about 74 per cent, trade openness among COMESA members varies significantly. Seychelles, Mauritius, and Libya have the highest levels of integration into the world economy, with trade-to-GDP ratios above 100 per cent. [2]

Per capita gross national income (GNI) ranged from US$213 for Burundi to US$10,200 for Seychelles in 2010, whereas the regional average was over US$2,000. There are large gender disparities in the estimated GNI per capita: as shown in table 2, male GNI per capita is twice that of women (UNDP, 2015).

Gender inequalities are also evident in labour force participation rates. About 63 per cent of working-age women, versus 81 per cent of men, are economically active in the COMESA group. The lowest female labour force participation is found in Egypt (26 per cent), Libya, and Sudan (about 32 per cent each), as opposed to Rwanda, Zimbabwe, Malawi, Burundi, and Eritrea, where participation rates of women in the labour force were above 80 per cent in 2014 (table 2).

The aggregate figures of the Gender Parity Index for primary, secondary, and tertiary education enrolment point to full gender parity achieved in 2014.[3] Yet, when looking at school attainment, the number of years of education of people aged 25 and older remains remarkably lower for women than men in most COMESA countries. As shown in table 2, girls complete on average 4.9 years of school as compared to 6.2 years for boys. Broader inequalities in achievement between women and men in the COMESA group are usefully illustrated in the ranking of the Gender Inequality Index below.

Data on the distribution of the workforce across economic sectors in COMESA countries, summarized in figure 1, show that women predominantly work in the agricultural sector. Although the share of women working in agriculture has decreased over the past 20 years, the proportion remains high (73 per cent in 2015). The increasing share of women involved in the services sector is also worth noting: while 17 per cent of the female workforce was working in services in 1995, this proportion amounted to 22 per cent in 2015, implying a 34 per cent increase over the period.

1.2 Gender mainstreaming in COMESA

Articles 154 and 155 of the COMESA Treaty recognize the importance of ensuring the effective and equal participation of women, men, and youth to achieve sustainable economic and social development in the region. COMESA members adopted the Regional Gender Policy and the Addis Ababa Declaration on Gender in 2002, and committed to mainstream gender across all areas of socio-economic life and regional integration and cooperation. The COMESA Gender Policy provides a comprehensive gender and development strategy to redress gender inequalities and advance gender-responsive measures at the national and

Table 2

Gender inequality indicators in COMESA countries, 2014

Country	Human Development Index (rank)[a]	Gender Inequality Index (rank)[b]	Mean years of schooling		Estimated gross national income per capita (in 2011 purchasing power parity U.S. dollars)		Labour force participation rate (per cent, ages 15-64)[c]	
			Female	Male	Female	Male	Female	Male
Burundi	184	109	2.2	3.1	693	825	84.5	83.0
Comoros	159	..	3.7	5.6	778	2,123	36.1	80.3
Congo (Democratic Republic of the)	176	149	4.5	7.7	597	765	71.5	73.5
Djibouti	168	..	..	..	2,019	4,522	38.7	71.0
Egypt	108	131	5.4	7.7	4,928	16,049	26.0	79.3
Eritrea	186	..	..	..	971	1,290	82.4	90.6
Ethiopia	174	129	1.4	3.6	1,090	1,765	81.0	90.1
Kenya	145	126	5.9	7.3	2,255	3,270	63.1	73.0
Libya	94	27	7.7	7.0	7,427	22,392	31.9	79.7
Madagascar	154	..	6.6	6.1	1,098	1,560	88.0	91.1
Malawi	173	140	3.4	5.2	679	815	84.3	80.9
Mauritius	63	88	8.0	9.1	10,541	24,581	49.3	80.3
Rwanda	163	80	3.2	4.3	1,312	1,612	87.9	86.1
Seychelles	64	..	..	..	..	..	..	..
Sudan	167	135	2.5	3.8	1,882	5,722	32.7	76.5
Swaziland	150	128	7.4	6.8	3,894	7,235	45.7	73.3
Uganda	163	122	4.5	6.3	1,226	1,997	76.5	79.5
Zambia	139	132	5.8	7.3	3,019	4,452	73.3	85.9
Zimbabwe	155	112	6.7	7.7	1,387	1,850	84.9	90.8
COMESA	--	--	**4.9**	**6.2**	**2,544**	**5,713**	**63.2**	**81.4**

Source: Compiled by the UNCTAD secretariat based on data from UNDP (2015).

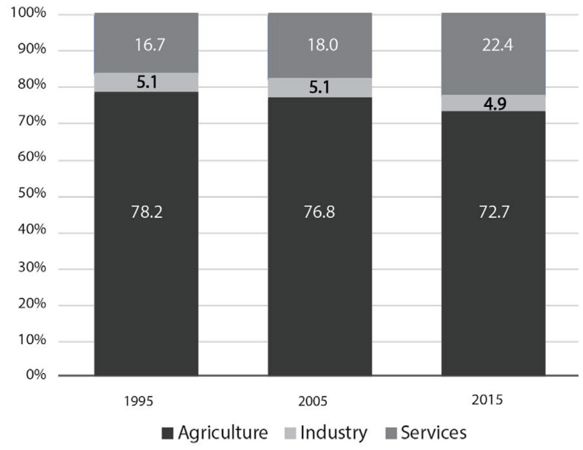
[a] Rankings are out of the 188 countries examined by UNDP (2015).

[b] The Gender Inequality Index measures inequality in achievement between women and men in three dimensions: reproductive health, empowerment, and the labour market.

[c] Data are from World Bank's World Development Indicators database (accessed on 9 August 2016).

Figure 1

Sector composition of the female workforce in COMESA (per cent)



Source: Calculations by the UNCTAD secretariat based on ILO (2015a).

regional levels. It also facilitates the engendering of national legislation by its member states.

In line with these principles, the COMESA Secretariat has been implementing its Gender Mainstreaming Strategic Action Plan since 2009. Sectoral guidelines have been developed and disseminated to provide a practical tool for policymakers to apply gender equality principles to all areas of the regional integration agenda.[4] A specific framework to mainstream gender in the trade sector is also in place to provide insights into measures that help assess the gender redistributive effects of trade. These include strengthening sex-disaggregated data, providing a knowledge base through gender analysis and impact assessments of national and regional trade instruments, formulating a dedicated gender policy for the trade sector, and implementing interventions that advance women's economic empowerment.

2 Trade and gender in the agricultural sector

The gender implications of agricultural trade policy are complex and multidimensional, as discussed in the core training manual (UNCTAD, 2014b; see also UNCTAD, 2016). Trade integration policies do not have clear-cut positive or negative effects on women in agriculture: the effects vary across subgroups of women depending on the agricultural sectors and markets where they are active, and are often double-edged, with different impacts on women as consumers and producers. Note in this respect that the economic roles of men and women in agriculture reflect ingrained socio-cultural norms that vary across and within countries, which adds complexity to the analysis. Furthermore, the competitiveness implications for the sector of gender-based discrimination are complex. As discussed in the core training manual, gender-based inequalities adversely impact women's productivity on-farm and off-farm, turning women into "underachievers of competitive advantage" in their own enterprises. Yet low-cost female labour can also enhance export competitiveness, turning gender inequality into a "source of competitive advantage" for labour-intensive, export-oriented agri-business. Against this backdrop, this section explores the trade and agriculture gender nexus in relation to the COMESA region. Based on descriptive statistics, it briefly reviews the gendered structure of agriculture in the COMESA region; assesses how gender-specific constraints and inequalities impact trade and agricultural trade potential in COMESA (i.e. how gender inequality affects trade); and considers the potential impacts of COMESA's agricultural trade and regional integration on rural women (i.e. how trade affects gender).

2.1 The gender structure of agriculture in the COMESA region

2.1.1 Overview

As shown in table 3, agriculture is the backbone of the economy in the COMESA region: it provides livelihoods for about 80 per cent of the region's labour force and accounts for approximately 65 per cent of foreign exchange earnings. However, even though agriculture is the mainstay of employment and export proceeds, it accounts for a comparatively lower share of value added (32 per cent of COMESA's GDP), which reflects the high persistence of subsistence farming and the incidence of low-value staples in the crop mix.

2.1.2 Gender structure of agriculture

The agricultural sector in the COMESA region is not distinctly female-intensive or male-intensive. [5] At the regional level, men and women are equally involved in agriculture, accounting for an equal share (50 per cent) of agricultural employment (table 4). However, this aggregate figure masks wide variations across COMESA member states: agriculture is female-intensive in Uganda, Zambia, the Democratic Republic of the Congo, Rwanda, Malawi, Eritrea, and Zimbabwe, whereas men prevail in agricultural employment in Libya, Egypt, Sudan, Mauritius, Comoros, and Ethiopia. The aggregate figure also conceals the female-intensive nature of specific sub-sectors and activities: women tend to dominate employment in value chains for high-value products such as fresh fruit, vegetables, and flowers. For instance, women account for about 75 per cent of employment in the flower industry in Kenya and Tanzania. [6] Note also that there has been a slight increase in the proportion of women in total agricultural employment in the region, from 47 per cent in 1995 to an estimated 50 per cent in 2014. In particular, women's share of agricultural employment has risen sharply in some COMESA countries, including Zambia and Uganda, exceeding 60 per cent of total employment (table 4). This indicates a pattern of progressive "feminization" of agriculture that reflects increased female participation in employment and male mobility out of agriculture, among other factors. In particular, while the region is experiencing a declining share of agricultural employment in total employment for both men and women,

Table 3

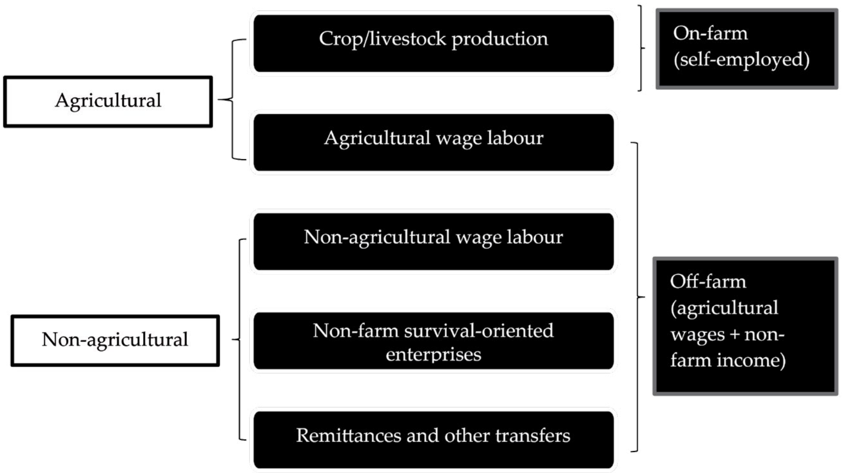
Relative importance of agriculture across COMESA countries (per cent)

Country	Agriculture (per cent of GDP)	Agriculture (per cent of merchandise exports)	Employment in agriculture (per cent of total employment)
	2014 WDI (1)	2011–2013 average value UNCTADStat (2)	2013 ILO (3)
Burundi	39.3	62.35	90.8
Comoros	35.6	42.21	75.4
Congo, Dem.Rep	21.2	3.1	71.9
Djibouti	3.9 (2007)	38.59	...
Egypt, Arab Rep.	11.1	15.71	28.0
Eritrea	14.5 (2009)	28.06	73.4
Ethiopia	41.9	83.47	72.7
Kenya	30.3	54.15	65.8
Libya	1.9 (2008)	0.09	9.7
Madagascar	26.5	39.26	81.9
Malawi	33.3	79.61	78.7
Mauritius	3.2	31.42	7.4
Rwanda	33.1	39.98	76.3
Seychelles	2.3	86.09	...
Sudan	29.2	10.85	52.7
Swaziland	6.3	36.48	41.8
Uganda	27.2	64.13	60.2
Zambia	9.6 (2013)	13.55	55.3
Zimbabwe	14.0	45.65	65.7

Source: Calculations by the UNCTAD secretariat based on:
(1) Data from the World Bank's World Development Indicators (WDI) (accessed on 10 May 2016);
(2) Data from the UNCTADStat database: Merchandise trade matrix - product groups, exports, 1995–2013; Merchandise trade by trading partner and product based on SITC, Rev. 3; Agriculture covers categories "All food items" (SITC 0 + 1 + 22 + 4) + "Agricultural raw materials" (SITC 2 less 22, 27 and 28) (accessed on 16 February 2015); and
(3) Data from the International Labour Organization (ILO, 2015b): Share of employment in agriculture, forestry, hunting and fishing, male and female) (accessed on 17 May 2016).

Figure 2

Income sources in rural areas


Crop/livestock production
On-farm (self-employed)
Agricultural
Agricultural wage labour
Non-agricultural wage labour
Off-farm (agricultural wages + non-farm income)
Non-agricultural
Non-farm survival-oriented enterprises
Remittances and other transfers

Source: Food and Agriculture Organization's RIGA database classification of income sources.
Notes: Note that category boundaries are not clear-cut. Contract farming and modern supply chains for high-value agricultural products, in particular, straddle across on-farm work (though contracted), off-farm agricultural wage work, and non-farm activities (processing and packing segments).

Table 4

Male and female shares of agricultural employment in COMESA countries

	Male share		Female share	
	1995	2014e	1995	2014e
Burundi	45	47	55	53
Comoros	70	66	29	34
Congo, Dem.Rep of	43	39	57	61
Egypt	77	69	23	31
Eritrea	47	44	53	56
Ethiopia	60	59	40	41
Kenya	42	40	58	60
Libya	96	95	5	5
Madagascar	51	50	49	50
Malawi	44	43	56	57
Mauritius	77	70	25	30
Rwanda	44	41	56	59
Sudan	75	72	25	28
Swaziland	49	52	52	48
Uganda	44	37	56	63
Zambia	48	38	52	62
Zimbabwe	45	47	55	53
All COMESA countries	53	50	47	50
World	59	56	41	44

Source: UNCTAD secretariat aggregations based on data from ILO (2015b).
Notes: The male share of agricultural employment is calculated as the total number of men employed in agriculture divided by total agricultural employment; the female share is the total number of women employed in agriculture divided by total agricultural employment. Employment includes wage and non-wage labour. Figures for 2014 are estimates (e).

male agricultural employment rates have declined slightly more, as more men than women find employment out of agriculture.[7] Interestingly, although the total share of agricultural employment is in decline, women tend to cluster in this sector. Socio-cultural gender norms and different types of constraints, including women's limited mobility, reduced access to training, and a disproportionate burden of care work, are some of the key factors that are holding rural women back, hindering their ability to benefit from employment opportunities outside of agriculture on equal terms as men.

Though not female-intensive in terms of labour input, agriculture remains by far the most important source of employment for women in most COMESA countries. Overall, nearly three-quarters of employed women in COMESA work in agriculture. As table 5 shows, in a number of countries, including Burundi, Malawi, the Democratic Republic of the Congo, Rwanda, Eritrea, and Kenya, more than 80 per cent of employed women work in agriculture. The share has declined for the region as a whole, from 78 per cent in 1995 to an estimated 74 per cent in 2014, which reflects some labour mobility of women out of agriculture. Yet, the share of agriculture in total female employment remains consistently high across most COMESA countries, and has increased in a number of them.

2.1.3 Gender patterns of employment in agriculture

When assessing gender patterns in rural employment in the region, it is important to resist oversimplifications. In the COMESA member states, as elsewhere, rural households pursue diversified livelihood strategies by engaging in on-farm and off-farm activities, and in agricultural and non-agricultural work (figure 2). In particular, women work in agriculture as self-employed farmers on their own plots, as contributing family workers on the household plot, as wage labourers on other farms, and in agro-enterprises. Many derive complementary income from non-agricultural sources, including remittances and petty trade. Given this rural diversification of income sources, it is hard to discern clear gender-specific impacts of trade on rural women. Different sub-groups of women are impacted differently

Table 5

Share of employment in agriculture by sex (per cent)

	Female employment in agriculture as a share of total female employment		Male employment in agriculture as a share of total male employment	
	1995	**2014e**	**1995**	**2014e**
Burundi	95	95	86	86
Comoros	83	85	70	71
Congo,Dem.Rep of	91	88	65	55
Egypt	42	43	32	24
Eritrea	87	86	63	61
Ethiopia	78	64	87	79
Kenya	87	85	55	49
Libya	3	2	11	14
Madagascar	80	83	77	81
Malawi	90	90	68	68
Mauritius	10	6	14	8
Rwanda	88	86	72	65
Sudan	56	55	57	52
Swaziland	57	53	36	35
Uganda	78	77	62	43
Zambia	75	72	67	39
Zimbabwe	66	72	48	60
All COMESA countries	78	74	60	55
World	42	33	41	27

Source: UNCTAD secretariat aggregations based on data from ILO (2015b).
Notes: Data for 2014 are estimates (e).

Table 6

Gender wage gap in agriculture (per cent)

Country	**Source**	**1998**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2009**	**2010**	**2011**	**2012**
Egypt[a]	European Commission - Employment, wages and hours of work survey	12	23.9	13.5	25	30.2	53.7					
Ethiopia	Labour Force Survey - Urban employment -unemployment survey										42.5	46.2
Madagascar[a]	Household Survey - Enquête périodique auprès des ménages / Direction des Statistiques des Ménages							9.8				
Mauritius	Labour Force Survey - Continuous multi-purpose household survey								60.4	63		

Source: ILOSTAT database, available at: *http://www.ilo.org/global/statistics-and-databases/lang--en/index.htm* (accessed on 10 May 2016).
Note: Table refers to agriculture, hunting and forestry (ISIC, Rev. 3). The gender wage gap is unadjusted and is calculated as the difference between average earnings of men and average earnings of women expressed as a percentage of average earnings of men.
[a] Includes fisheries.

by trade-led price developments, or the same women are impacted differently in their discrete roles or across their life cycle, due to age-specific patterns within employment in the agriculture sector. For instance, flower farms create employment opportunities for women in contract farming, estate production, and agro-processing, but put a strain on water resources and divert land, often to the detriment of pastoralist herders and subsistence-oriented farmers (men and women). To give another example, cheap food imports as a result of trade liberalization benefit women as consumers, but they may at the same time erode rural women's already meagre earnings as producers in the sector. Thus, given the diversity of women's roles in agriculture, over-generalization does not seem appropriate.

Box 1

Who are own-account workers and contributing family workers?

The International Labour Organization (ILO) defines an *own-account worker* as a person who works on his/her own account and holds a self-employment type of job. Own-account workers may run their own economic enterprise or engage independently in a profession or trade, and do not usually hire employees on a continuous basis. Remuneration is directly dependent on the profit made, thus the category of own- account workers can include entrepreneurial activities with relatively secure earnings as well as more casual activities at the margin of survival.

***Contributing family workers* or *unpaid family workers* also hold self-employment jobs but are engaged in an economic enterprise operated by a family member. They usually receive no remuneration for their work and have no independent access to income.**

Workers in these two categories – own-account workers and contributing family members – typically have no formal work arrangements or access to social protection programmes or other benefits, and do not enjoy decent working conditions. They are thus considered to be in the most vulnerable types of employment. Thus, vulnerable employment is defined by the ILO as the sum of the employment status groups of own-account workers and contributing family workers.

In lower-income countries women are typically more likely than men to be in vulnerable forms of employment. This is mainly due to a much larger share of women in the category of "unpaid family workers," particularly in the agricultural sector. The trend is also found in all COMESA countries where the share of vulnerable employment is higher for women than for men (ILO, 2014).

In spite of this complexity, there are recurrent gender patterns in terms of income sources and conditions of employment that bear importantly on the trade analysis. In four COMESA countries for which data are available (Egypt, Ethiopia, Mauritius, and Madagascar), data show a widening wage gap between men and women in agriculture.[8] Available evidence thus suggests that women are often paid less than men for agricultural work (table 6).

Gender inequalities also exist in terms of vulnerability of employment, as larger shares of women in many lower-income economies, including COMESA countries, are typically employed as contributing family workers and as own-account or casual workers (box 1).

An analysis based on scattered data for two COMESA countries (Rwanda and Malawi) suggests that rural women are less likely than men to have formal work arrangements, as they mainly work as own-account workers and unpaid family workers (on-farm work) (box 2).[9] In addition, when women are formally employed in modern agricultural value chains (off-farm wage labour), they tend to be segregated in jobs characterized by low wages, high job insecurity, and generally poor labour standards.

Most rural women appear to still be significantly concentrated in subsistence-oriented agriculture. This attenuates their exposure to external shocks, as subsistence farmers are relatively shielded from trade shocks and economic downturns. Note, however, that most subsistence farmers complement their income with other jobs, mainly seasonal off-farm work, and are exposed to external developments in these roles.[10] Further, most subsistence-oriented farmers produce a surplus that is marketed locally, or even traded across the borders, and are vulnerable to

Box 2

Gender patterns in rural employment: Evidence from Malawi and Rwanda

Rural women are less likely than men to have formal work arrangements in agriculture, as they mainly work as own-account workers and unpaid family workers. In Malawi, 86 per cent of the rural working population is employed as unpaid/subsistence farmers, and this is especially the case for rural women (93 per cent of women work in the subsistence sector, compared to 79 per cent of men) (FAO, 2011a). In Rwanda, about 62 per cent of workers (72 per cent of employed women, compared to 49 per cent of employed men) work on-farm (independent farming) as their main job, while only approximately 10 per cent (9.7 per cent of women and 10.2 of men) are in wage farming as their main job (UNCTAD, 2014c; Integrated Household Living Conditions Survey 3 - EICV 3). In Rwanda, as in other sub-Saharan African countries, on-farm work is still mainly subsistence-oriented.[1]

When women work in wage agricultural labour, they tend to be segregated in vulnerable employment. This pattern of segregation can be seen in two related respects. First, women outnumber men in part-time/seasonal/casual-wage employment. In Malawi, for example, less than a third of rural women engaged in wage labour as their main job work full-time through the year, compared to nearly half of rural men. When taking into account wage labour as a second job, 88 per cent of women, compared to 65 per cent of men, work in casual, part-time (*ganyu*) work (FAO, 2011a, based on the 2004/2005 RIGA database). In Rwanda, the estimated share of rural women involved in seasonal work is 68 per cent, compared to 52 per cent of men (UNCTAD, 2014c, based on EICV 3). Second, and in a related vein, women tend to be over-represented in low-paid jobs. In Malawi, 61 per cent of rural women in wage employment fall within the low-wage category, compared to 37 per cent of their male counterparts (FAO, 2011a, based the 2004/2005 RIGA database).

The incidence of poverty is particularly high in agricultural wage labour. In Malawi, for example, the poorest households, and in particular female-headed ones, are more likely to be involved in agricultural wage labour (which is likely low paid and casual) than higher-income households (FAO, 2011a, based on the 2004/2005 RIGA database). In Rwanda, 61 per cent of rural workers in wage employment were defined as poor, while the percentage decreased to 46 per cent for own-account farmers (on-farm work) and to 22 per cent for waged workers outside agriculture (UNCTAD, 2014c, based on EICV 3). Poverty in formal wage employment has a discrete gender dimension, as women tend to be over-represented among casual workers under vulnerable employment arrangements.

[1] Subsistence does not mean that production is not marketed. Typically, subsistence-oriented farmers produce a surplus that is marketed locally. In border districts, part of the surplus is even traded across borders. This occurs via highly informal trade across porous borders with neighbouring countries. In most developing countries, the distinction between subsistence (for own consumption) and commercial (marketed) is, at best, artificial.

Source: UNCTAD secretariat based on FAO (2011a) and UNCTAD (2014c).

trade developments to the extent that they have a marketable surplus.

Evidence from Rwanda and Malawi also suggests that vulnerability in agriculture is not only associated with own-account workers and unpaid family labourers (on-farm work): wage agricultural employment (off-farm work) also raises considerable concerns about vulnerability (box 2). Poverty in formal wage employment has a discrete gender dimension, as women tend to be over-represented among casual workers under vulnerable employment arrangements. Given this pattern of job segregation, off-farm agricultural activity does not necessarily offer a pathway out of poverty for rural women. What is crucial for poverty alleviation and inclusive economic growth is promoting decent agricultural off-farm employment by fostering policy dialogue among agriculture, trade, and labour stakeholders. It is also critically important to empower women as small-scale farmers on their own account (on-farm work). As discussed below, this strategy has complex competitiveness implications.

2.2 Gender-based inequalities, competitiveness, and trade

The employment patterns outlined above reflect ingrained social norms, together with market imperfections and failures. These gender structures impact export competitiveness and trade performance in a twofold way. As discussed in Module 3 of the core training manual, gender inequality hinders women's productive and entrepreneurial potential, turning women into "underachievers of competitive advantage." But gender inequality can also be used as a source of competitive advantage, particularly in labour-intensive export agriculture. The following analysis considers how gender inequality impacts trade, with specific reference to the COMESA region. It focuses on major gender-specific obstacles that rural women face in the COMESA context and reviews the competitiveness implications of those obstacles for trade.

2.2.1 The gender gap in agriculture and its underlying factors

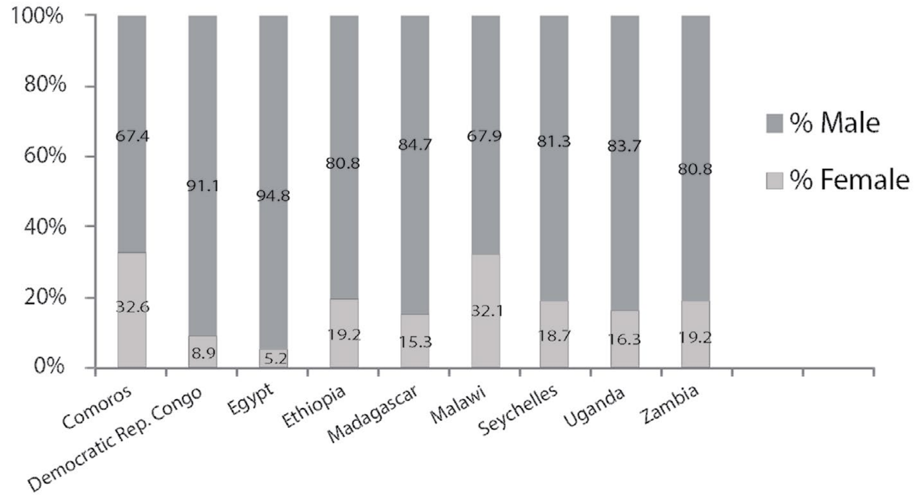
Women farmers and rural entrepreneurs face a wide array of gender-specific obstacles that hinder their productivity and entrepreneurial potential. The multiple challenges that female farmers face have been widely detailed in policy analysis (for an overview, see FAO, 2011b, and UNCTAD, 2015a). Suffice it to recall here the main factors that explain why women tend to be segregated in vulnerable rural employment, with specific reference to the COMESA context.

The burden of domestic care work. At the outset, it is important to stress that women's participation in rural employment is affected by their domestic work burden. Women tend to have the primary responsibility for household duties, including caring for children and the elderly. For example, according to the World Bank and ONE Campaign, female farmers in Ethiopia spend almost nine hours fewer per week working on their farm than males, and this disparity is held to account for 13 per cent of the overall gender gap in agricultural productivity (O'Sullivan et al., 2014). In Rwanda, women devote 27 hours per week to domestic duties, compared to nine hours for men (UNCTAD, 2014c). In Malawi, rural women dedicate more time to domestic activities than men (FAO, 2011a). This pattern is common across other COMESA countries. Women's domestic work burdens limit the number of hours they can devote to productive activities, on-farm and off-farm, and constrain their mobility.

Educational attainment. In some contexts, rural women tend to have lower literacy rates and fewer years of education than men. In Ethiopia, for example, only 37 per cent of rural women are able to read and write without difficulty, compared to 55 per cent of men (Central Statistical Agency of Ethiopia and World Bank, 2015). In Rwanda as well, there are significant gender differences in rural literacy rates: 62.4 per cent of female heads of households in rural areas are illiterate, compared to only 28.7 per cent of male heads of households, according to 2008 survey data from the National Institute of Statistics of Rwanda. In Malawi, rural women in the lowest income quintile have, on average, one year of education compared to four years for their male counterparts (FAO, 2011a) Uganda's female agricultural farm managers complete on average 1.9 fewer years of schooling than male managers (O'Sullivan et al., 2014). Lower literacy rates and education for rural women translate into substantial competitive disadvantages for female farmers and rural entrepreneurs in key respects, including their ability to apply for

Figure 3

Share of male and female agricultural holders in selected COMESA countries (per cent)



Source: Food and Agriculture Organization Gender and Land Rights Database (*http://www.fao.org/gender-landrights-database/en/*, accessed on 15 May 2015) based on data from national agricultural censuses.

Notes: Per cent of female holders: (number of women agricultural holders/total agricultural holders)*100; per cent of male holders: (number of men agricultural holders/total agricultural holders)*100. The agricultural holder is defined as the person who makes the major decisions regarding the use of resources, and exercises management control over the agricultural holding. An agricultural holding is an economic unit of agricultural production under single management. Percentages of women and men holders by country do not always add up to 100 in the event, for example, of joint holdings or unreported gender.

Box 3

Gender-sensitive land regulation and control over land: The case of Ethiopia

In Ethiopia, only 20 per cent of those who exercise control over land (agricultural holders) are women. Yet Ethiopia's legal framework is progressive and gender-sensitive on matters of land tenure in a number of areas:

- **The country has ratified key human rights instruments, including the Convention on the Elimination of All Forms of Discrimination against Women;**
- **The prohibition of gender-based discrimination is enshrined in the Constitution, which supersedes discriminatory customary law;**
- **Women have legal capacity, including to conclude contracts, under the same conditions as men;**
- **The law recognizes gender equality in the right to own or control property regardless of the type of marriage;**
- **Community of property is the default marital property regime and the wife's consent is mandatory for any transaction involving matrimonial property;**
- **Brothers and sisters have equal inheritance rights; and**
- **There are provisions for the promotion of women's rights to land.**

Gender differences in control over land mainly reflect socially ingrained gender norms that may lead women and girls to give up their claims on the family property, or to delegate managerial decisions in practice to the spouse. Lack of awareness of laws and legal venues, or of free legal support in civil procedures, alongside logistical and financial constraints and fear of reprisal or ostracism, further discourage women from seeking legal redress in courts.

Source: Food and Agriculture Organization Legal Assessment Tool for gender-equitable land tenure.

credit, use market information, or meet market requirements such as specifications..

Land ownership. Data from numerous COMESA countries also show a consistent pattern of gender inequality in control over land (figure 3). This inequality generally reflects socio-cultural norms enshrined in customary law and practice, rather than formal discrimination in land ownership and inheritance rights. This is the case in Ethiopia, for example (box 3). In some instances, however, the inequality also stems from discrimination in the law. [11]

Household farm labour. Availability of household farm labour is another major constraint to female farmers' productivity (O'Sullivan et al., 2014). Female-headed households tend to have fewer working members than male-headed households. Likewise, female farmers in male-headed households face difficulties in mobilizing extra labour for their own plots. In Malawi, for example, female-headed households have on average about one-third fewer working members than male-headed households and thus can draw upon a smaller pool of farm labourers than men (FAO, 2011a). Ethiopia's female farm managers live in households with 1.7 fewer members on average than male farm managers, and this difference is held to explain nearly a quarter of the overall gender productivity gap (O'Sullivan et al., 2014). A similar pattern is observed for female farm managers in Uganda (O'Sullivan et al., 2014). Limited availability of household farm labour results in significant labour constraints for female farmers, which holds back their growth potential.

Access to resources and market opportunities. Finally, across different contexts, women consistently face structural biases in access to credit, agricultural inputs, extension services, and markets (COMESA, undated). In Ethiopia, for example, only 6 per cent of rural women have access to credit and only 1 per cent have vocational skills training (UNFPA et al. undated). Another important issue is limited access to farm inputs and lower returns on their use. In Uganda, plots managed by men or jointly with other family members are nearly twice as likely to use pesticides and organic fertilizer as plots managed by women (O'Sullivan et al., 2014). Ethiopia's women farmers generate smaller yield improvements than men even when they apply the same amount of fertilizer on their farms, which suggests that women may receive less effective extension advice or guidance than men (O'Sullivan et al., 2014). Gender biases in transport facilities, logistics, and market information further contribute to marginalizing women in trade.

2.2.2 Implications for competitiveness and trade

The key obstacles and differences outlined above have important competitiveness implications. Two aspects deserve attention: women as underachievers of competitive advantage, and women as a source of competitive advantage.

2.2.2.1 Women as underachievers of competitive advantage

On the one hand, the multiple challenges that female farmers face hinder their productivity. Available data point to a gender gap in agricultural productivity in a number of COMESA countries. Ethiopia's female plot holders produce on average 23 per cent less per hectare (in terms of gross value of output) than men (O'Sullivan et al., 2014). In Uganda, plots run by women managers produce 13 per cent less per acre on average than plots managed by men or managed jointly by other family members (O'Sullivan et al., 2014). In Malawi, plots managed by women produce 25 per cent less per hectare than plots managed by men; for all maize varieties, plots operated by men have higher yields than those operated by women (O'Sullivan et al., 2014; and National Census of Agriculture and Livestock 2006/2007).

Across these countries, the lower production by women farmers compared to men adversely affects women's families, communities, and the entire agricultural sector, considering that women in Ethiopia, Malawi, and Uganda account for between 41 and 63 per cent of agricultural employment. Overall, women account for about half of agricultural employment in the COMESA region. Gender-specific obstacles that hold back their productive and entrepreneurial potential adversely impact the agriculture sector as a whole. In this respect, women remain underachievers of competitive advantage, particularly as small entrepreneurs and self-employed producers. The gender gap is thus a key hindrance to agricultural development and broader growth (O'Sullivan et al., 2014; FAO, 2011b).

Tackling the obstacles that hold back the productivity of female farmers could thus enhance gender equality and marshal broader economic growth (O'Sullivan et al., 2014; FAO, 2011b; UNCTAD, 2015a). According to the Food and Agriculture Organization (FAO), if women worldwide had the same access to productive resources as men, they could increase yields on their farms by 20–30 per cent and raise total agricultural output by 2.5–4 per cent (FAO, 2011b). The FAO estimates that the gains in agricultural production alone could lift 100 million to 150 million people out of hunger.

2.2.2.2 Women as a source of competitive advantage

On the other hand, as discussed in the core training manual, there is a reverse mechanism that turns gender inequality into a competitive advantage. In agriculture, this can be seen in both on-farm and off-farm activities.

As discussed earlier, on-farm women tend to be over-represented as contributing/unpaid family workers on the household plot. In this role, they are an essential component of small-scale agriculture that leverages family ties for survival (subsistence-oriented holdings) or for market competitiveness (commercial-oriented smallholdings, whether independent or contracted). To fully grasp this aspect, it is important to recall some essential features of small-scale farming. A smallholding is an agricultural holding run by a family using mostly, or only, its own labour: smallholder agriculture relies on family labour, with limited reliance on temporary hired labour (Committee on World Food Security, 2013). The economic efficiency of this farming system is found in this use of family labour, which reduces labour costs. Due to the favourable incentive structure in self-supervision, and the significant transaction and monitoring costs of hired labour in estate production, smallholder agriculture is able in some cases to outperform large-scale agriculture. This is notably the case of many high-value crops that require labour-intensive farming, such as fruit and vegetables, but also key labour-intensive staples, such as rice (Committee on World Food Security, 2013; Larson et al., 2012; van der Ploeg, 2008). The underlying challenge, in gender terms, is how to empower women within this family farming model. Gender-sensitive policies in this setting should not be geared to change the smallholder farming model and its labour/supervision structure. The objective should be to empower rural women as family farmers, making them more productive on-farm, and increasing their voice in decision-making and resource allocation. While to some extent this is a matter of intra-household dynamics, and goes beyond the reach of trade policy, complementary measures that enhance women's land rights, improve women farmers' access to productive inputs and extension services, and reduce and redistribute women's care burdens remain crucial instruments to advance rural women's empowerment.

Off-farm, low women's wages can be used as a source of competitive advantage in labour-intensive export agriculture. To the extent that cost-reducing or profit-maximizing strategies concentrate on wage and labour costs, gender inequality can be a source of competitive advantage and drive growth. Notably, export-oriented agro-enterprises integrated into global value chains face significant pressure to meet seasonal demand peaks in foreign markets and deliver under short deadlines. Many of these agro-industries employ large numbers of female work-

Box 4

Competitive advantage is not only about labour costs

A dynamic examination of markets gives a more nuanced picture of competitiveness that goes beyond the costs of labour: "decent work" in the flower industry does not necessarily translate into a disadvantageous competitive position. It has been observed, in this respect, that factors other than labour costs are likely to have major impacts on the competitiveness of companies in the flower business. These factors include climate and weather conditions, currency rate fluctuations, and oil prices (external factors), alongside competitive air freight costs and research and development (internal factors) (Rikken, 2011). In this setting, increased labour costs can be offset by higher yields or efficiency gains in logistics, as shown by the Dutch case. Note also that, in an increasingly complex market environment, competition is no longer restricted to costs and prices. Other factors such as connectivity, quality standards and certifications, innovation, and exploitation of cultural and geographic identity all contribute to the competitive edge of the industry (Rikken, 2011). In particular, the downward pressure on labour costs is, in the cut-flower industry, offset by a countervailing market pressure that stems from the "green" or "fair trade" labelling movement (Davies, 2000). Eventually, the room is open for a "high path" to development, whereby increased labour costs are offset by higher yields and price premiums.

ers, mainly because of women's lower wages and weaker bargaining power, with the result that female workers often remain clustered in seasonal, casual, and temporary work. This issue has been considered quite extensively with reference to the flower industry, particularly in light of the tight margins and labour-intensive nature of the cut-flower segment. Further, international price competition is intense, including among COMESA suppliers,[12] and the price elasticity of demand is relatively high, which translates back into pressures to keep labour costs low. As discussed in the core training module, the relatively lower pay that women receive makes them an attractive labour force for firms that face stiff competition in the international market. To maintain a competitive edge over competitors, some maintain that the industry needs to keep wages low. The same holds for labour-intensive processing of other specialty crops. Yet, this line of reasoning simplifies the complexity of market requirements (box 4).

2.3 Gender implications of COMESA's trade and agricultural strategies

The previous analysis has briefly considered some channels through which gender inequality impacts trade. We now explore the other side of the equation: how trade affects gender, and more precisely, what the consequences are of deeper trade integration for the economic empowerment and well-being of rural women in the COMESA region.

COMESA has endorsed the Comprehensive Africa Agricultural Development Programme (CAADP) as its strategic framework for agriculture.[13] The strategy is geared towards transforming the still largely traditional and subsistence agricultural sector into a productive, high-value, and market-oriented sector with forward and backward linkages to other sectors. In terms of staple foods, the COMESA framework ambitiously seeks to achieve food security through self-sufficiency at the regional level.[14] This assumes two key advances: increased agricultural productivity of crops, livestock, fisheries, and forestry; and a freer flow of intra-COMESA agricultural trade by removing all trade barriers so that commodities will move from surplus to deficit areas in the region driven primarily by market forces. Agriculture in the COMESA region will undergo a significant transformation in order to meet the challenge of achieving regional food security through increased output and more fluid intra-regional flows of food. Investment is being directed towards increasing productivity of food staples, mainly through improved yields.[15] This typically implies more intensive and higher external-input production systems through mechanization and increased use of commercial inputs (fertilizers, higher-value seeds, improved breeds in livestock); more efficient extension advice, coupled with training and backed by agronomic research; and credit/financing schemes. Infrastructure investment is also critical to establish, expand, and connect markets. The focus is on both physical assets (bulking structures for storage, transport, grading, and marketing; feeder roads; transit corridors) and "soft" infrastructure, or operational mechanisms, including credit guarantee facilities, warehouse receipt systems, quality and grading facilities, market information and intelligence services, and cooperative structures. Overall, the trend is towards intensive, high-external-input production systems, scale economies, and proprietary models of knowledge generation and diffusion.

The question is whether rural women will be able to reap the benefit of this trade-led transformation process. As mentioned, different groups of women will be variously affected by deeper agricultural market integration in the COMESA region. More fluid cross-border flows of food staples [16] will create opportunities for female (and male) farmers in food surplus (exporting) areas, but may also adversely affect female farmers (to the extent that they produce a marketable surplus) in deficit (importing) countries by disrupting markets in which they operate. [17] Similarly, the process will likely favour women in modern supply chains (high-value smallholder contract-farming, large-scale estate production, and agro-industrial processing), while diverting resources (including land and water) from, and further marginalizing, women in traditional, subsistence-oriented farming. These redistributive effects are part of the political economy of agricultural trade, which is inherently redistributive and dynamic. [18] Given the diversity of women's roles in agriculture, there is no single answer to the question of whether women will benefit or lose from expanded trade.

As widely discussed elsewhere (FAO, IFAD, and ILO, 2010; Kinyanjui, 2006; UNCTAD, 2015a and 2016), the commercialization process in agriculture may magnify existing gender inequalities, absent proactive gender-sensitive and gender-redistributive measures. Indeed, to reap the full benefit from agricultural trade liberalization policies, farmers must dynamically adapt (UNCTAD, 2009). As discussed, female farmers face a wide array of supply-side constraints and challenges – limited flexibility in terms of time and mobility, limited access to credit, lack of collateral, and small scale, among others – that hinder their ability to upgrade and meet increasingly demanding market requirements. The relatively poor adaptation of women to the challenges and opportunities of integrated markets is among the most important reasons why trade policies pose gender-specific problems in agriculture (FAO, IFAD, and ILO, 2010; UNCTAD, 2009, 2015a, 2016). As stated in the COMESA Gender Policy, "[w]omen are...likely to be inadvertently excluded from the benefits of a Free Trade Area due to complicated procedures such as adherence to rules of origin in order for goods to be excluded from customs duty charges. Most women may not be aware of this requirement due to illiteracy and lack of information while the majority may not qualify for certificates of origin due to the simple production processes used by them. Inadequate access to credit and finance is a major barrier to effective participation in regional and international trade. Collateral requirements disqualify many women, who have limited access to and control over property, from effective and adequate borrowing. The low quality of goods produced by women is another main barrier to their participation in regional trade. This contributes to their inability to compete effectively under the liberalized economy" (COMESA, 2002, 13).

Gender-sensitive policy interventions are thus needed to holistically address the multiple challenges faced by female farmers, and to ease the constraints on their ability to meet market requirements. The COMESA Gender Policy in Agricultural Development and the COMESA Strategic Framework, alongside reports from the World Bank, FAO, and the International Fund for Agricultural Development (IFAD), offer a detailed menu of actions and best practices that governments can consider in their efforts to boost farm productivity for the benefit of women farmers.[19] Key policies include providing community-based child-care centres; strengthening the enforcement of women's land rights; enhancing women's use of tools and equipment that reduce the amount of farm labour; encouraging women farmers to efficiently use agricultural inputs; tailoring extension services to women's needs; leveraging social networks to spread agricultural knowledge; strengthening women's associations to pool resources and production and to scale up; facilitating women's access to and effective participation in markets; and raising the education levels of women farmers. Beyond these supply-side interventions, UNCTAD and the International Trade Centre have offered specific insights on how to leverage trade value chains and meso-level structures (including procurement) to empower rural women in producing countries (UNCTAD, 2014c).

It is also important to raise fundamental questions as to the development pathway to be pursued in agriculture. A transformative pathway towards industrial agriculture (based on mechanization, commercial high-yielding varieties, agrochemicals, etc.) tends to favour commercially-oriented farmers who have easier access to inputs and marketing networks, and crowd out poor, risk-averse small-scale producers. This paradigm has been increasingly questioned on account of its social consequences and negative environmental externalities. Alternative models are being explored that put more emphasis on the competitiveness of smallholder agriculture, the functional complementarities between large and small farms, and the new value-added products and services that leverage traditional agriculture, including the delivery of so-called green and blue services and high-value niche products. These models leverage women's knowledge and farming methods. They are worth being fully explored for their potential to offer a socially inclusive and sustainable pathway out of poverty.

3 Trade and gender in the manufacturing sector

This section focuses on the trade-gender nexus in the manufacturing sector in COMESA countries. Table 7 provides stylized facts on the participation of women in the manufacturing sector of COMESA countries.

Although COMESA countries are relatively diverse along many dimensions (economic size, social development, production structures, etc.), this section concentrates on certain common features in order to understand how trade in manufacturing goods affects women in these countries. First to be explored is existing evidence on how women have been affected by similar export-oriented policies in the manufacturing sector adopted in COMESA countries, namely the setting up of export processing zones (EPZs). Second, the section investigates the consequences of tariff changes on gender labour outcomes in the context of future trade agreements of COMESA countries with the European Union and with the East African Community and the Southern African Development Community.

3.1 The consequences of export processing zones on women in COMESA countries

Starting in the 1960s, a number of developing countries initiated policies aimed at diversifying and boosting their exports. The implementation of EPZs has been critical in that regard. Although EPZs differ across countries, they have in common the promotion of "exports of goods and/or services by offering a more competitive business environment through provision of special incentives including in particular tariff exemptions to inputs either in a geographically defined area or through a specification process" (Engman et al., 2007, 11). Under this regime, firms can be exempted from customs and excise duties for scheduled equipment, and benefit from free repatriation of capital, profits, and dividends. In certain cases, firms operating in an EPZ also take advantage of preferential interest rates and more flexible labour laws, especially regarding overtime and dismissal. Within COMESA, 11 countries have created EPZs: Egypt, Eritrea, Kenya, Madagascar, Malawi, Mauritius, Namibia, Rwanda, Uganda, Zambia, and Zimbabwe (table 8). In all these countries, the predominant sector in the EPZs is textiles and garments. Although most EPZs in COMESA were created in the early 1990s, this strategy remains topical, as illustrated by the ongoing discussions in Zimbabwe on re-introducing of EPZs to foster economic activity.

This section gathers existing evidence about the impact of EPZs in COMESA countries on women's employment, wages, and working conditions.

Table 7

Female share of employment in the manufacturing sector (per cent)

Country	Female share of total employment (per cent)	Share of female employment (per cent of total female employment)
Burundi	n.a.	0.7
Congo, DR	n.a.	4.9
Egypt	7.6	5
Ethiopia	43.7	8
Kenya	18.4	2.3
Madagascar	63.7	8.1
Malawi	n.a.	5
Mauritius	42.6	26.1
Namibia	32.6	5.3
Rwanda	34	2.4
Seychelles	41.3	10.4
Uganda	38.7	4.6
Zambia	27	3.4
Zimbabwe	22.5	3

Sources: ILOSTAT (2016); World Bank (2015); and national authorities.
Notes: Data in the second column refer to the share of women in employment as a per cent of both sexes (from ILOSTAT, 2015). Data in the third column refer to the share of women as a per cent of total female employment (from World Bank, 2015, and national authorities). n.a.: not available.

Table 8

Export processing zones in COMESA countries

Country	Establishment of the first export processing zone	Main sector
Egypt	1989	Textiles, electronic assembling, petroleum
Eritrea	2006	Agro-processing, transport, mining
Kenya	1990	Textiles, agro-processing, services, pharmaceuticals
Madagascar	1989	Textiles, information and communications technology, agro-processing
Malawi	1995	Textiles, rubber, agro-processing, flowers
Namibia	1995	Textiles, electronic assembling, agro-processing
Mauritius	1970	Textiles, agro-processing
Rwanda	2006	Agro-processing, petroleum
Uganda	2002	Agro-processing, steel
Zambia	2006	Horticulture, processed food, mining and mineral processing
Zimbabwe	1995–2006	--

Sources: National authorities.

Box 5

Who are the women hired in the export processing zone in Madagascar?

Relying on a detailed labour survey implemented by the Malagasy National Statistics Office, Glick and Roubaud (2004) investigated at the microeconomic level the individual characteristics of women employed in the export processing zone (EPZ) between 1995 and 2002. The authors find that women employed in the Malagasy EPZ tend to be young (28 years old on average) and younger compared to women working in other institutional sectors (34 years old on average in the private formal sector). In addition, women working in the EPZ are likely to hold a lower educational degree. These patterns are consistent with the characteristics of women involved in EPZs elsewhere (Kusago and Tzannatos, 1998), except for the fact that being married does not appear as a discriminant factor in Madagascar (Seguino, 1997).

3.1.1 Export processing zones and female employment

As discussed in Section 2 of Module 1, the implementation of export-oriented strategies in most countries has been correlated with a massive influx of women into the labour-intensive manufacturing sector, a phenomenon known as the feminization of labour. This shift has been explained by the cost-minimizing behaviour of employers confronted with stiff international competition (Standing, 1989, 1999). In the EPZ setting, hiring women as a source of competitive advantage allows firms to lower their labour costs, owing to the gender wage gap, while increasing their flexibility to respond to demand fluctuations because of the generally minimal bargaining power of workers regarding working conditions, overtime, and social protection (Tejani, 2011). In addition to these factors, gender scholars have stressed the influence of gender stereotypes according to which women are endowed with labour-intensive compliant traits such as dexterity, docility, and submissiveness (Elson and Pearson, 1981).

Existing statistics about female employment in EPZs provide evidence for the feminization of labour in the COMESA countries as well. In Mauritius, the textile sector, the main activity in the EPZ, has attracted an increasing number of women. In 1970, women accounted for 40 per cent of the labour force employed in the Mauritian textile sector; by 1976, this proportion exceeded 70 per cent (Blin, 2008). Between 1983 and 2001, the number of female workers in the manufacturing sector increased from 18,400 to 61,200. Some economists (Milner and Wright, 1998; Subramanian and Roy, 2001) have even argued that the mobilization of women in the EPZ in Mauritius has been a key ingredient in the so-called "Mauritius success story." In Madagascar, data from the National Statistics Office reveal that although the vast majority (87 per cent) of active Malagasy women work in the informal sector, they are predominant in the formal sector only in the EPZ (or *zone franche*), where they constitute two-thirds of the total workforce (box 5). In Kenya, the number of women employed in the manufacturing sector increased by 76 per cent over the 1990–2000 decade, as opposed to 22 per cent in the agricultural sector (Kenya National Statistics Office, 2015). In the Kenyan EPZ, women constituted 60 per cent of the total workforce in 2006 (Tejani, 2011).

Although women were initially preponderant in the EPZ workforce in all developing countries, a declining trend was later observed and designated as a "defeminization process" (Kucera and Tejani, 2014) . This phenomenon is attributed to the shift from labour-intensive to capital-intensive production and to wage increases attracting more men to EPZs. Is this defeminization process occurring in COMESA countries? There exists no systematic evidence for this phenomenon for a wide range of countries due to the poor quality of data on female employment by industry, let alone in EPZs. As a first approximation, figure 4 plots the evolution of the female share in total employment in the manufacturing sector based on data provided by the ILO.

Figure 4 tends to confirm the existence of a declining trend in the share of women employed in manufacturing in COMESA countries. The decline appears in the early 2000s, but its magnitude differs across countries: it is more pronounced in Madagascar and Namibia compared to other countries. Although these data would tend to substantiate the existence of a defeminization process in COMESA countries with EPZs, they should be complemented with data disaggregated at the occupation and sub-sector level and associated with data on female participation in other sectors in order to identify the sources of this decline.

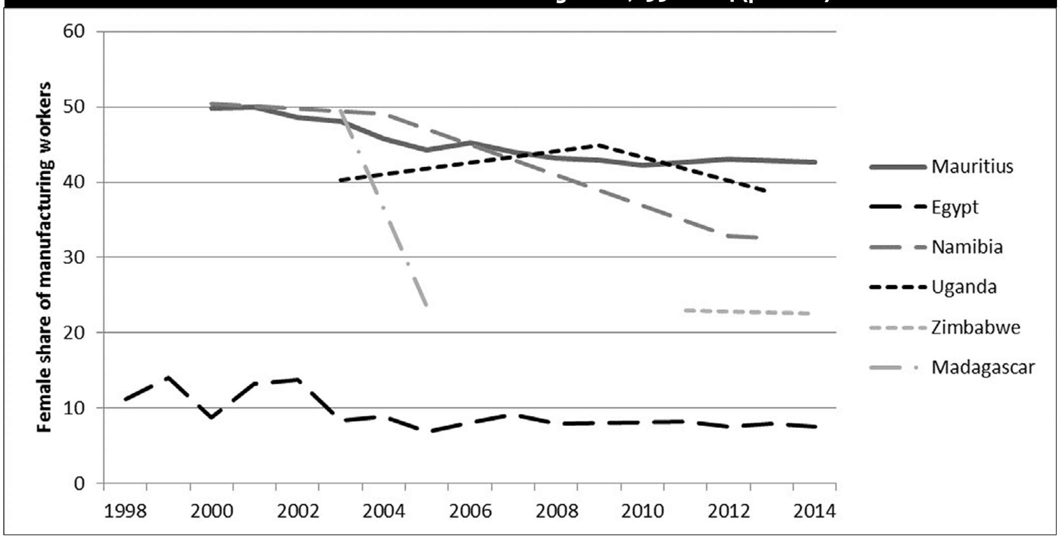
3.1.2 Export processing zones and the gender wage gap

Due to the paucity of statistics on wages differentiated by sector and by gender over several periods in developing countries, undertaking a rigorous analysis of the influence of EPZs on wages is a challenging task. As a consequence, there have been very few attempts in the literature to estimate the causal impact of EPZs on the gender wage gap. Building upon time series data drawn from an urban labour survey of the Malagasy National Statistics Office, Glick and Roubaud (2006) provide the first econometric analysis of the influence of EPZs on women's wages. This comprehensive dataset allows the authors to disentangle the impact of EPZs on salaries from other concomitant factors (such as level of education, age, etc.), therefore contributing to a better understanding of the role of EPZs in the gender wage gap. Relying on the estimation of an augmented Mincer earnings equation [20] on 20,873 individuals working in Antananarivo, Madagascar between 1995 and 2001, [21] the authors find that women working in an EPZ earn significantly higher wages than women working in the informal sector, but that they earn a significantly lower wage than women employed in other sectors (the public sector or the private formal sector). This feature is found in other countries, as highlighted in Section 2 (page 43) of Module 1. Considering that women working in EPZs most likely come from the informal sector, the authors conclude that working in an EPZ implies an improvement in women's salary conditions. Turning to the gender wage gap, the authors find that hourly earnings of men and women employed in EPZs are not statistically different, as opposed to the other sectors of the economy where men earn significantly higher wages than women, even after controlling for the level of education and other relevant covariates. In addition, they conjecture that the substantial shift of women from the informal to the formal sector has prompted upward pressure on wages in the former, where women are preponderant. As a consequence, women in the informal sector may also benefit indirectly in terms of earnings from the EPZ. From these results, the authors conclude that the shift of women from the informal to the EPZ sector implied an improvement in gender earnings equality in Antananarivo during the period surveyed. Cling et al. (2009) replicate the same empirical strategy on an extended database (with data up to 2006) and confirm that the gender wage gap is lower in EPZs compared to the other sectors of the economy.

Although these results are informative for understanding the role of EPZs on the Malagasy labour market, the conclusions may well not be applicable to other COMESA countries, as there are notable differences across their labour markets, economic structures, and EPZ characteristics. In the absence of rigorous statistical analysis for the other COMESA countries, existing descriptive statistics can be used to obtain a broader, and necessarily imperfect, picture of the impact of EPZs on women's wage within the COMESA group. Based on a survey of 75 Kenyan firms in 2003, Fukunishi (2008) shows that although EPZ firms pay lower wages than local firms, the earnings of women and men were not statistically different at any level of occupation (supervisor, worker, or helper), while in local firms female helpers earned significantly less than their male

Figure 4

Female share in the manufacturing sector, 1998–2014 (per cent)



Source: Prepared by the UNCTAD secretariat based on the ILOSTAT (2016).
Notes: Linear fits were estimated for missing values.

counterparts. This corroborates that the gender wage gap tends to be lower in EPZs. Yet, these figures should be considered with caution as they do not take into account individual characteristics (such as education and experience) that may also influence the gender wage gap.

Relying on the results of the Household Budget Survey conducted by the Central Statistics Office of Mauritius in 2001, Khadaroo (2013) investigates the gender pay gap in Mauritius. Contrasting the previous results, the author finds that the gender pay gap is higher in the EPZ sector, where men earn 54 per cent more than women. However, these results are not fully comparable to the previous ones as they result from the direct comparison of the wage of operators (mainly women) to the wage of supervisors (mainly men) and therefore likely overestimate the gender pay gap.

Taken together, these studies highlight the necessity to go further than simple descriptive statistics when estimating the gender wage gap, and suggest that the impact of EPZs on women's wages is likely context-specific. Furthermore, additional research should be done on the impact of EPZs on women's wages in other sectors of the economy and also on how the defeminization process may affect the gender wage gap in the export-oriented sector.

3.1.3 Export processing zones and women's working conditions

Although EPZs have resulted in new formal employment opportunities for women and in certain cases higher earnings, the quality of employment in these free zones has been questioned. That is because the setting up of EPZs is often correlated either with the granting of exceptions in labour legislation, with weak enforcement of national labour laws, or with the interdiction of trade unions. As a matter of fact, overtime is standard in most, if not all, EPZs (Milberg and Amengual, 2008). In Madagascar, Glick and Roubaud (2006) find that on average women employed in EPZs worked 209 hours per month, whereas women in the non-EPZ private sector worked on average 168 hours (and 147 hours in the public sector). Notably, these differences are larger for women than for men. Similarly, in Mauritius, specific labour laws are applied in the EPZs authorizing longer legal working hours (45 hours a week plus 10 hours overtime, as opposed to 35 to 48 hours in non-EPZ firms). This feature of EPZs is particularly problematic for women who are still in charge of care activities at home because it exacerbates their work burden (Blin, 2008). Another characteristic observed in many EPZs is the high rate of turnover (Milberg and Amengual, 2008), which raises questions about the quality of employment in these zones. Using Malagasy data, Cling et al. (2009) calculate that one-fifth of EPZ employees leave their jobs annually, while this proportion falls to one out of 10 in the private sector. Related to these aspects, it is worth noting that in some cases freedom of association and collective bargaining are not guaranteed in EPZs (ICFTU, 2004). Before 2003, Kenyan EPZ workers were banned from joining a trade union. To protest against their harsh working conditions and obtain more rights in the workplace, the EPZ workers, predominantly women, organized massive strikes and eventually obtained from the Kenyan government the right to organize themselves and negotiate collective bargaining agreements. A further recurring criticism of EPZs is the precariousness of employment and the absence of long-term employment opportunities. In Kenya, 85 per cent of female workers are employed on short-term contracts (Akoth, 2006). Glick and Roubaud (2006) use an econometric analysis to estimate the likelihood of promotion in Malagasy EPZs and find that women are statistically less likely than men with similar qualifications to be promoted.

To conclude, EPZs appear to have been instrumental in integrating women into the formal sector in COMESA countries, and studies suggest that at least in two countries (Madagascar and Kenya) the free zones contributed to reducing the gender wage gap. However, anecdotal evidence also suggests that EPZs provide less favourable working conditions and are even likely to worsen women's work burden.

3.2 The impact of trade liberalization on women in COMESA countries

COMESA countries are currently involved in negotiations for the creation of new trade agreements such as the Economic Partnership Agreement (EPA) with the European Union and the Tripartite Free Trade Agreement (TFTA) with the East African Community (EAC) and Southern African Development Community (SADC). The EPA is under discussion with most COMESA member countries. An interim EPA agreement entered into force in 2012 with a limited number of COMESA countries (Madagascar, Mauritius, Seychelles, and Zimbabwe). [22] In July 2016, the EU signed an EPA with Botswana, Lesotho, Mozambique, Namibia, South Africa, and Swaziland that is known as the SADC EPA group." [23]

The TFTA negotiations were launched in 2011, a deal was signed in June 2015, and implementation of the TFTA should follow ratification by each member's parliament. However, very little is known about the consequences of these current and future agreements on gender outcomes. This section relies on the most recent contributions of the economic literature to analyze how changes in the trade environment of COMESA countries impacted women and how that impact may vary across partners. The corresponding results should provide relevant insights about the gender impact of these agreements.

3.2.1 Interaction channels and firm-level evidence

As explained in the core training manual (UNCTAD, 2014b), there are multiple channels of interaction between trade and gender in the workplace. To summarize, trade liberalization entails a pro-competitive effect that renders discrimination more costly and stimulates the upgrading of technology, thereby contributing to a reduction in the gender wage gap. However, liberalization can also induce a change in the sectoral structure of production that can be either beneficial (in the case of reallocation into female-intensive sectors) or detrimental (in the case of reallocation into male-intensive sectors) to women. Hence, there is no clear general pattern in the impact of trade on gender in the workplace. In addition to the production-structure channel, trade may impact gender through the induced changes in the relative prices of goods and services that can affect men and women differently depending on their consumption patterns and livelihood strategies, but also through the variation of tariff revenues, as shown in the core training manual (UNCTAD, 2014b). This section concentrates on the estimation of the first transmission channel, namely the impact of trade on gender in the workplace, as it is more easily identifiable.

Confronted with the difficulty of identifying a one-fits-all model, the literature has started to explore the correlation between trade liberalization episodes and gender outcomes relying on firm-level panel data that better identify the gender-trade relationship. Volume 2 of the training manual (UNCTAD, 2014d) explicitly outlines the benefits of using micro-level data to analyze the effects of trade policy on gender outcomes. This approach allows for more precisely assessing the impact of trade policy changes on gender outcomes within firms (the most disaggregated level of analysis), thereby taking into account sectoral and firm-level specificities. Furthermore, these data also allow for assessing the impact of tariff changes across occupation types. As an illustration, studies conducted by Juhn et al. (2013, 2014) use panel data on Mexican firms to estimate the impact of tariff reductions in Mexico associated with the North American Free Trade Agreement. Their theoretical framework predicts that a reduction in trade costs prompts the most productive firms to start exporting and to upgrade their technology. [24] Due to technological upgrading, women's labour market outcomes in blue-collar tasks improve, as the upgrading increases their productivity, but remain unchanged in white-collar tasks. The empirical results of Juhn et al. (2013, 2014) corroborate their predictions: tariff changes improved women labour outcomes through technological upgrading. A Mexican firm experiencing the average reduction in United States' tariffs increased the female employment share in blue-collar occupations by 20 per cent and women's relative wage bill by 24 per cent (compared to a similar firm confronted with a zero tariff change). These studies highlight the positive effect of trade-led technological upgrading on women compared to men by reducing the needs for physical strength in blue-collar occupations. Employing a different estimation strategy based on state-level data, Sauré and Zoabi (2014) show that the gender consequences of tariff changes may vary according to the level of economic development of the trading partner.

3.2.2 Estimation of the impact of trade changes on women in COMESA countries

Building on these recent developments in the trade-gender literature, this section investigates how tariff changes have impacted women in a sample of COMESA countries through a microeconometric analysis in the spirit of Juhn et al. (2013, 2014). The present analysis goes further in investigating the consequences of tariff changes on women by differentiating the impact across partners, including European partners, partners that are members of the future TFTA, and other country partners. This distinction allows for testing whether the consequences of tariff changes on women's labour market outcomes differ across partners due to differences in traded products or specialization patterns. Therefore, the results of the study will be particularly informative about the expected impact of the trade agreements currently being negotiated namely the EPA and the TFTA. Consequently, this analysis can be interpreted as an ex-ante impact assessment of the consequences of future trade agreements of the COMESA countries on women's labour market outcomes. [25]

3.2.2.1 Data

The present empirical investigation of the consequences of tariff changes on women's labour outcomes relies on data collected in the World Bank Enterprise Surveys (WBES). The WBES provide firm-level information for a number of countries surveyed following the same methodology. These surveys are available in panel (i.e. for more than one period) for five COMESA countries: the Democratic Republic of the Congo (2006 and 2010); Kenya (2007 and 2013); Egypt (2008 and 2013); Uganda (2006 and 2013); and Zambia (2007 and 2013). These surveys are particularly relevant for the present analysis because they include information on the participation of women, distinguished by occupation type (production and non-production tasks), in addition to a large number of economic characteristics of the firms. In the WBES, the only available information on the occupation of employees is the classification between "production" and "non-production" activities. Non-production gathers the activities related to management, sales, administrative tasks, etc. [26] The WBES are designed to be representative at the sectoral, size, and geographical levels, and so conclusions drawn from them can be applied to the countries considered as a whole. Based on this information, female-to-male employment ratios are computed for production and non-production occupations. In addition, tariff changes are measured using UNCTAD's Trade Analysis and Information System (TRAINS) database. More precisely, the average export duties (*export tariff*) faced in the destination countries and the average tariffs imposed on imports (*import tariff*) are computed for each country, each year, and each sector. Detailed descriptive statistics on the female-to-male ratio across sectors and occupation types are provided in table 11 in the Annex.

These data are used for estimating the impact of tariff changes on the gender employment gap, for which the methodology is presented in detail in the Annex.

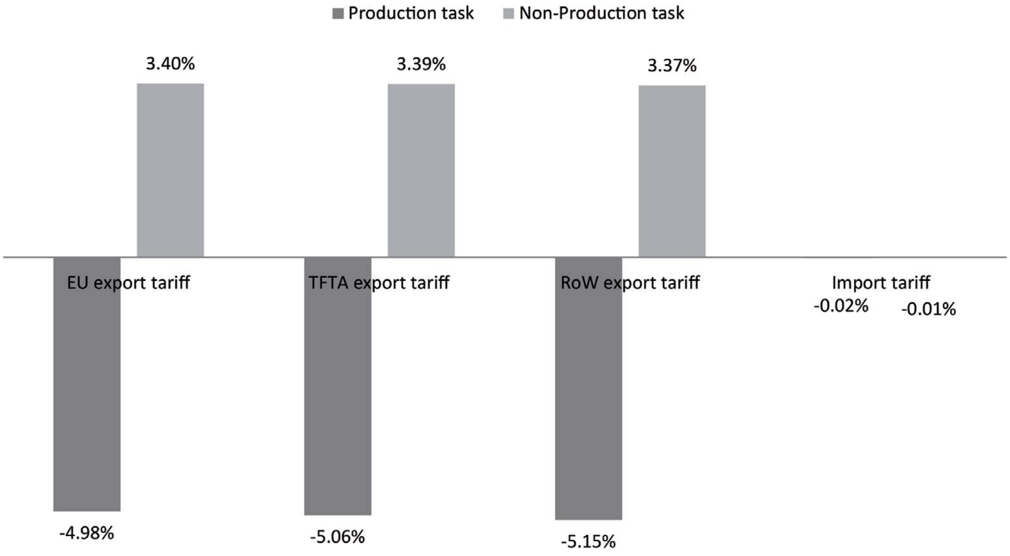
3.2.2.2 Findings

Figure 5 summarizes the results from estimating the impact of tariff changes on gender labour outcomes, differentiated by the partner countries, in exporting firms of a subsample of COMESA countries. This figure relies on the estimated coefficients that are provided in table 13 in the Annex. The results confirm the significant impact of tariff changes on female-to-male labour ratios.

According to the results summarized in figure 5, trade liberalization affects workers differently across categories. Women involved in production tasks are more negatively affected by trade opening than men: a 1 per cent decrease in export duties faced in the destination market is correlated with a 5 per cent decrease in the female-to-male labour ratio in exporting firms. Interestingly, this negative effect of trade liberalization on the female-to-male employment ratio varies little across partners (European countries, future partner countries within the TFTA, and the rest of the world). The negative correlation of trade liberalization with the female-to-male employment ratio in production activities suggests that more trade may coincide with the growth of male-in-

Figure 5

Impact of tariff reductions on the female-to-male employment ratio, by occupation type and partner countries (per cent)



Source: Calculations by the UNCTAD secretariat based on the results of table 13 in the Annex.
Notes: The reported coefficients report the impact of a 1 per cent decrease in the tariff on the female-to-male employment ratio in the exporting firms of a subsample of COMESA countries. Export tariff refers to the average export duties faced in the destination countries. Import tariff refers to the average tariff imposed on imports. EU: European Union; TFTA: Tripartite Free Trade Agreement; RoW: rest of the world.

tensive, export-oriented production activities at the expense of women, contributing to the defeminization of certain sectors, as mentioned in previous works (Kucera and Tejani, 2014). A concomitant explanation for this result is related to the fact that lower export costs prompt exporting firms to upgrade their technology, thereby reducing the opportunities for production workers. This in turn more negatively affects women, who are particularly vulnerable in the workplace.

However, the reverse phenomenon seems to occur in non-production activities: women benefit more than men from trade liberalization: a 1 per cent decrease in export tariffs is correlated with a 3.4 per cent increase in the female-to-male labour ratio in exporting firms. This result can be interpreted in light of previous studies (Galor and Weil, 1996; Juhn et al., 2013, 2014; Weinberg, 2000) that found that women involved in non-production blue-collar activities may benefit from technological upgrading induced by trade opening in the destination market because that upgrading raises those women's relative productivity by reducing the need for physical skills versus cognitive skills.

Another interesting result in figure 5 is the negative impact on women's labour force participation of reducing protectionist import measures. Indeed, the results indicate that a 1 per cent decrease in import tariffs is correlated with a 0.01 per cent decrease in the female-to-male labour ratio in exporting firms. The impact is similar across occupation types, which is not the case via-à-vis export duties. This negative impact, although small in magnitude, might arise from the fact that increased competition with foreign firms in the domestic market negatively affects firms' activities that might be correlated with a reduction in the workforce that primarily affects women.

These findings can be used to assess the potential consequences of the future trade agreements on women. For instance, within the future EPA, manufactured products should be imported into the EU free of customs duties. Based on these estimates, in Zambia, which faces average export duties in the European market of 4 per cent, the signing of the EPA should translate into a 20 per cent decrease in the female-to-male employment ratio in production tasks, and an increase of 13 per cent in the female-to-male employment ratio in non-production tasks, all else held constant. [27] However, the EPA should also translate into a reduction in import tariffs imposed by the COMESA countries. According to our results, this should also affect the gender employment ratio at the expense of women, albeit to a lesser extent (assuming a 20 per cent decrease in import tariffs would translate into a 1.7 per cent decrease in the overall female-to-male employment ratio).[28]

This empirical investigation highlights the important implications of trade liberalization on gender labour outcomes in COMESA countries. Relying on these results, trade liberalization should be accompanied by specific measures supporting women involved in production activities, as these women are disproportionately affected by a reduction in trade barriers. Therefore, policies aimed at raising women's human capital and skills, and at improving the social safety net, could reduce or mitigate the adverse effect of trade liberalization on women in the labour market.

4 Trade and gender in the services sector

COMESA has initiated programmes to promote services trade among its members (box 6). The COMESA Treaty explicitly identifies liberalization of trade in services as central to the community's regional integration objectives. In particular, Articles 4(4)(c), 164, 148, 151, and 152 all present a mandate for COMESA and its member countries to collectively work towards removing barriers to services trade and promoting the free movement of services across the region. In 2009, the Committee on Trade in Services launched efforts to promote services liberalization and adopted the Guidelines for Services Negotiations under the COMESA Regulations on Trade in Services. Furthermore, though at present the TFTA negotiations are focused primarily on merchandize trade across COMESA, SADC, and EAC member states, services can be expected to factor importantly into future discussions.

Given the attention this area is receiving from COMESA governments as well as regional and global development organizations, it is critical to consider the implications of liberalized trade in services on gender and women's economic empowerment.

4.1 Stylized facts on women's participation in the services sector

A principal means through which services trade can benefit women is through employment, both formal and informal. Due to the difficulty of measuring employment in the informal sector, this section essentially focuses on the formal services sector. Globally, the services sector has become the predominant source of jobs for women. By 2015, the ILO estimates that 61.5 per cent of the female workforce was employed in services (ILO, 2015a). In COMESA, however, agriculture remains the principal sector for female employment. ILO data summarized in figure 1 indicate that in 2015, 72.7 per cent of the female workforce in COMESA was employed in agriculture versus 22.4 per cent in services and just 4.9 per cent in industry.[29]

Box 6

Sample of COMESA actions and areas of focus to promote services trade

Facilitate intra-regional trade	• Adopt a business visa to facilitate the movement of businesspersons within the region, with the aim of facilitating trade, investment, and overall business development • Develop practical approaches to addressing labour migration challenges such as the recognition of qualifications, work permits, and social security • Establish a Memorandum of Understanding with Microsoft Africa for future collaboration in the areas of access to technology, development of relevant skills, and fostering of innovation • Establish the Regional Payment and Settlement System to facilitate the settlement of trade and services payments among member states • Support the mobilization of savings and facilitate access to credit for all.
Capacity-building	• COMESA has been actively providing capacity-building programmes among member states that address such topics as the COMESA Rules of Origin and liberalization of trade in services

Sources: Addis Standard (2015); Daily Monitor (2015); MADOTE (2015); Microsoft (2015); and SAIIA (2013).

However, in recent years the services sector has exhibited greater dynamism as a growing source of jobs for women. While the overall size of the female workforce in COMESA increased by 86.8 per cent in the 20 years between 1995 and 2015, the number of women working in the services sector expanded by 152 per cent. This compares to a 94 per cent increase in men working in services over the same period. The ILO estimates that this trend will continue in COMESA, with the growth of female employment in services between 2015 and 2020 (25 per cent) outpacing overall growth in the total female workforce (18 per cent) and the male services workforce (18 per cent) (figure 6).

The dramatic increase in women's participation in the services workforce in COMESA was mostly due to relative movement out of agriculture (participation in industry has remained fairly constant). However, in spite of representing a growing share of the total workforce, women in COMESA are still under-represented in services, as can be seen when examining the male-female ratio of workers.

It is also important to point out the heterogeneity of COMESA member states in terms of the female services workforce, likely owing primarily to variances in the economic structure of the countries. Whereas the services sector accounts for over 80 per cent of women's employment in Mauritius (where travel and tourism accounts for over a quarter of the country's GDP; see WTTC, 2015), services contribute to less than 25 per cent of female employment in nine member states where agriculture remains the overwhelmingly predominant employment sector (figure 7). Women account for a larger portion of the services workforce than the overall workforce in Egypt, Eritrea, Ethiopia, Mauritius, Swaziland, and Zimbabwe. In the remaining member states, however, women are under-represented in the sector.

4.2 The consequences of trade liberalization in services on gender outcomes

The descriptive statistics above give only a broad overview of women's participation in services in COMESA. These trends and figures may provide useful insight into the quantity of jobs and general participation in services, but they say little about the *quality* of those jobs. In practice, the kinds of services women provide matters. Services jobs are often viewed through a high-value lens, with technology, financial, and business services receiving much of the attention surrounding services trade. Indeed, medium- and high-skill services may open new opportunities for women's economic advancement. However, the shift towards services in developing countries, which often coincides with the expansion of the informal sector, is generally taking place at lower income levels than in developed countries (ILO, 2012). In many developing countries, more traditional, non-tradable, and low-productivity services with reduced capital accumulation potential account for the increasing share of services in GDP and employment. These services include such jobs as market vendors, restaurant workers, and domestic helpers. This may in fact have negative long-term economic and welfare implications. The evidence shows that in countries experiencing structural transformation from agriculture to services (bypassing industry) – a characteristic of many least-developed countries in Africa – the rapid growth in services employment is driven by increases in low-productivity and often informal, jobs, leading to a *reduction* in aggregate labour productivity and thus having an adverse impact on economic performance (UNCTAD, 2014e).

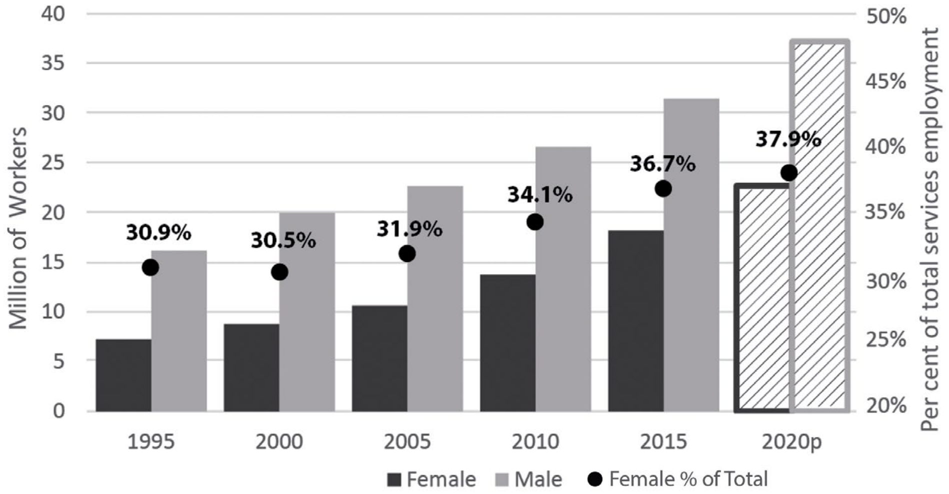
Finally, liberalization of the services sector presents other unique challenges for women that warrant special consideration. The Inter-Agency Network on Women and Gender Equality (IANWGE) Task Force on Gender and Trade identified three areas of concern to be considered when pursuing a services trade liberalization programme: (i) certain vulnerable segments of the population, including women, may be heavier users of essential services and thus more sensitive to how liberalization may impact access; (ii) liberalization may have an impact on non-economic policy objectives related to areas such as health, culture, education, and the environment; and (iii) the balance between long-term objectives and short-term adjustment costs may disproportionately impact women (IANWGE, 2011).

What are the implications of services liberalization on gender outcomes in COMESA countries? With services becoming an increasingly important source of jobs for women in the region, liberalization will potentially have an increasing impact on the position of women in the economy. It is also evident that while the sector offers new opportunities for women, there may be structural factors limiting overall participation, as well as the quality of participation, in services. As with agriculture and manufacturing trade, the effects of services trade on women is not clearly positive or negative, and different segments of populations will be impacted in different ways and to varying degrees.

The remainder of this chapter, therefore, looks into the particular opportunities, challenges, and risks associated with services liberalization in COMESA by focusing on two service industries

Figure 6

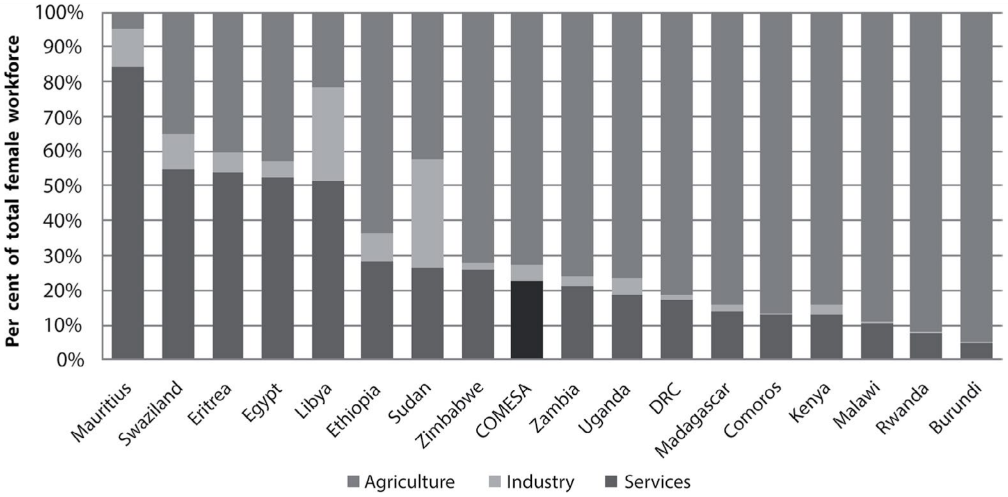
Women's growing participation in the services workforce in COMESA, 1995–2020



Source: Calculations by the UNCTAD secretariat based on ILO (2015a).
Notes: Data for 2020 is projected (p).

Figure 7

Heterogeneity in female services employment as a per cent of total female employment across COMESA countries, 2015



Source: Calculations by the UNCTAD secretariat based on ILO (2015 a).

on different ends of the value-added spectrum: (i) services outsourcing enabled by information and communications technology (ICT), and (ii) tourism. Both services are priorities for COMESA and many of its member states because of their potential to contribute to economic growth and development. While the chapter does not attempt to canvass all relevant service industries, the focus on ICT and tourism should provide a strong framework for analyzing gender/trade dynamics across other important service industries, such as health, education, energy, communications, and finance.

4.2.1 Exports of skilled services enabled by information and communications technology

As part of its trade promotion agenda for services, COMESA identified priority sub-sectors on which to initiate negotiations on services liberalization in the region. Most of these sub-sectors relate to high-skill segments such as business, communications, energy, and financial services. Moreover, the Federation of National Associations of Women in Business in Eastern and Southern Africa (FEMCOM), a COMESA institution, prioritizes in its own strategy the promotion of ICT as an enabler of women in business in the region (Tonda, 2013). Given this focus, it is critical to examine the extent to which women in the region are positioned to benefit relative to men from liberalization or promotion of high-skill ICT services, or whether, conversely, there is a risk that such actions may exacerbate existing inequalities. ICT-enabled trade in services must therefore be looked at not only for its potential to open up new opportunities for educated, highly-skilled women to engage in the global economy in absolute terms, but also for it potential to expose patterns of bias or inequalities that may inhibit women's ability to participate in and gain from opportunities relative to men.

4.2.1.1 Evidence on challenges to gender equality in the ICT sector

Evidence shows that women are less represented than men in the ICT sector (table 9), yet the extent of the gender gap varies greatly across COMESA countries. Relying on data collected from national statistics institutes, the gender employment gap is the largest in Zambia and Rwanda, while Ethiopia and Mauritius are closer to gender equality in terms of employment in the sector.

In addition to the existence of gender disparities in employment, there is a concern that even within high-value services segments, women may still be relegated to low-wage, low-productivity roles. The issue of vertical gender-based segmentation – wherein females are concentrated in lower-salary positions within firms and industries – was cited as a key constraint earlier in this training material series. Women are more likely to be found in lower-skilled jobs such as data entry (UNCTAD, 2014e). For example, in the ICT sector in Ethiopia women account for 84.4 per cent of keyboard operators but just 18 per cent of science and engineering professionals (detailed statistics are provided in table 12 in the Annex).

According to the A.T Kearney Global Services Location Index – which measures the attractiveness of 55 countries for delivering information technology, business process outsourcing (BPO), and voice services – COMESA countries such as Egypt, Mauritius, and Kenya are ranked as a global outsourcing destination (Sethi and Gott, 2016). Kenya alone hopes to create 120,000 BPO jobs by 2020 (*The Economist*, 2010), enabled by the arrival of underwater fibre optic cables in 2009 and 2010. Currently, about 7,000 people work in BPO in Kenya, mostly in services and transactional back-office services. Kenya's "Vision 2030" strategic plan identifies BPO as a key economic pillar for the country's long-term development.[30] Other countries in the region are also looking to position themselves as competitive in BPO in order to generate skilled jobs and diversify exports. Rwanda's government, for instance, has taken an explicit hands-on approach to promoting ICT industries, including BPO, to build a knowledge-based economy and accelerate growth (Mann et al., 2014).

As noted above, however, it is uncertain whether these ICT-driven BPO service strategies will advance women's economic opportunities and equality without concomitant programmes to address other structural and societal barriers. In fact, as pointed out by Antonio and Tuffley (2014, 677), "the discrimination women face in many aspects of social life – employment, literacy and income – replicate the inequalities in ICT." Abagi et al. (2009) carry out an in-depth study of female

Table 9

Distribution of employed persons in information and communication technology by sex in selected COMESA countries (per cent)

Country	Per cent male	Per cent female	Source
Seychelles	62	38	Labour Survey 2011/2012
Zambia	85.5	14.5	Labour Force Report 2008
Mauritius	54.1	45.9	ICT Statistics for 2015
Rwanda	70	30	Labour Force Survey Report – Pilot (February 2016)
Ethiopia	54.6	45.3	Statistical Report on the 2015 Urban Employment Unemployment Survey
Kenya	66	34	Economic Survey 2016

Source: Compiled by UNCTAD secretariat based on national surveys
Notes: In Zambia and Mauritius the information and communications technology (ICT) industry is called "Transport and Communication" and "ICT sector," respectively.

Table 10

Proportion of firms in COMESA countries with at least one woman in the top two management positions

Country	Number of firms surveyed	Percentage of firms with at least one woman in top two positions	Number of exporting firms surveyed	Percentage of exporting firms with at least one woman in top position	Sectors where women are in top position (number of firms)
Burundi	46	13.0	9	11.1	Accountancy (3), Architecture (1), Legal (2)
Comoros	40	25.0	0		Accountancy (1), Architecture (4), Engineering (2), Legal (3)
Congo, DR	60	5.0	20	0.0	Accountancy (2), Engineering (1)
Djibouti	30	10.0	1	100.0	Legal (3)
Egypt	100	5.0	3	0.0	Architecture (5)
Eritrea	40	37.5	3	33.3	Accountancy (3), Engineering (9), Legal (3)
Ethiopia	100	10.0	9	0.0	Accountancy (2), Architecture (2), Legal (6)
Kenya	100	14.0	36	42.9	Accountancy (3), Architecture (5), Engineering (1), Legal (5)
Madagascar	61	42.6	5	40.0	Accountancy (10), Architecture (4), Engineering (3), Legal (9)
Malawi	60	1.7	9	0.0	Accountancy (1)
Mauritius	61	16.4	6	16.7	Accountancy (3), Architecture (2), Engineering (2), Legal (3)
Rwanda	40	25.0	2	50.0	Accountancy (5), Engineering (3), Legal (2)
Seychelles	40	0.0			
Sudan	100	15.0	31	16.1	Accountancy (4), Architecture (1), Engineering (3), Legal (7)
Swaziland	40	30.0	5	20.0	Accountancy (7), Engineering (1), Legal (4)
Uganda	100	9.0	17	11.8	Accountancy (3), Architecture (1), Engineering (2), Legal (3)
Zambia	60	31.7	11	45.5	Accountancy (8), Legal (11)
Zimbabwe	41	19.5	7	14.3	Accountancy (3), Architecture (2), Legal (3)

Source: Compiled by UNCTAD secretariat based on national surveys

Notes: In Zambia and Mauritius the information and communications technology (ICT) industry is called "Transport and Communication" and "ICT sector," respectively.

professionals in the ICT sector in Kenya and find persisting gender stereotyping and discrimination within the industry, noting that even women with technical ICT skills were often still placed in roles that are typically regarded as more traditionally feminine, such as public relations or marketing.

Coste and Dihel (2013) analyze data on over 500 professional services firms in COMESA countries to shed light on the participation of women in professional services trade in the region. The analysis reveals significant gender imbalances across all professional services and highlighted in particular the comparatively low number of women holding senior management positions in the services firms (table 10). Furthermore, among those firms that are female-run, the authors found lower levels of export participation and performance compared to similar firms in other regions, perhaps in part because these firms also appear more highly constrained by access to finance and other support services, which the authors note is not a characteristic observed globally. Finally, there is significant variability in the region. Countries like Eritrea, Rwanda, Madagascar, and Zambia exhibit higher levels of female management, while in other countries like the Democratic Republic of the Congo, Egypt, and Malawi, female management in professional services is practically absent.

4.2.1.2 Educational disparities as a determinant of gender inequalities in ICT employment

Irrespective of structural biases in ICT and professional services employment, participation in high-skill services is often viewed as requiring high levels of education and training. In the earliest stages of Kenya's BPO sector, for instance, recruitment by firms emphasized preference for those who had completed, or were working towards completing, a university education (Free, 2015). Even in BPO services occupations in which university education or technical expertise is not a requirement, firms typically require a minimum level of digital literacy. If women face disproportionate barriers to educational access and digital competency, then their capacity to participate in and benefit from growth in the sector will be severely limited. Indeed, inequality in access to education will then be transmitted to greater economic and professional inequalities as unskilled workers lose out on higher-paid, higher-value opportunities. As stated by Melhem et al. (2009, 20): "women and girls are poorly placed to benefit from the knowledge society because they have less access to scientific and technical education specifically and to education in general."

Evidence suggests that participation rates of women in higher education across the COMESA region are extremely low. Tertiary enrolment across Africa is heavily skewed toward the humanities and social sciences, with barely 25 per cent of students opting for science, technology, engineering, and mathematics disciplines. Among those who do, few are women (World Bank, 2015). In Ethiopia, for example, there are very few women who are professionally active in these fields: data from a census conducted in 2010–2011 by the Ministry of Education on tertiary education in public and private universities shows that women made up only 21 per cent of the graduates in physics, mathematics, informatics, and engineering. Among those who graduated, very few had obtained a master's or PhD degree. [31] In Egypt, women who graduated during 2012/2013 in industrial technical institutions represented 27 per cent of total graduates in these fields. [32] Furthermore, data point to the existence of a positive correlation between the female share of graduates working in the services sector and the percentage of firms in COMESA countries with at least one woman in the top two positions, as demonstrated in figure 8.

Without targeted efforts and policies in the region designed specifically to encourage women's participation in higher education and promote overall digital literacy, it is unlikely that women will be able to take advantage of higher-skilled ICT-enabled services at the same level as men. And indeed, the promotion of these service industries may widen gender inequalities as skills gaps between the sexes become more pronounced. Governments, regional bodies, development organizations, and the private sector all have roles to play in encouraging the education and training needed for women to fully participate in ICT-enabled services.

Beyond particular programmes, however, it is crucial that gender issues be fully incorporated into national ICT and services liberalization initiatives in order to overcome the educational divide between men and women. Box 7 presents examples of ICT educational programmes that have been undertaken to date.

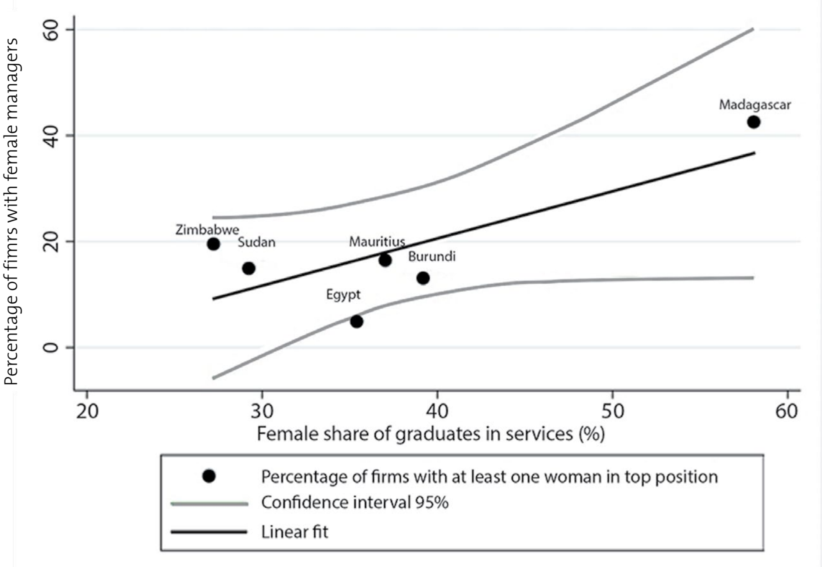
4.2.2 Tourism and gender in COMESA

Most women employed in the services sector do not operate in the high-value segment of the sector, but rather in low-skilled service jobs such as vendors at markets, housekeepers, and cooks or wait staff in restaurants and hotels. Trade policies and initiatives in the services sector that focus only on the high-skill segment may fail to address the needs of the millions of low-income women engaged in low-value services. [33] Tourism is a services sub-sector important to the region that provides an illustrative case in the low-skilled services trade and gender dynamics at play in the region.

Furthermore, COMESA and many of its member countries, such as Zambia and Kenya, have prioritized the promotion of international tourism as a source of economic growth and foreign exchange. [34] Indeed, the organization has recognized tourism as a key strategic pillar in the overall development of the region. [35] COMESA member states are endowed with geographic wonders, exotic wildlife, and unique cultural heritage that attract travellers from around the globe. According to estimates from the World Travel and Tourism Council, in 2015 tourism provided a direct contribution of US$74.3 billion to Africa's GDP and a total of over 21 million jobs, most of which go to unskilled workers (WTTC, 2016). In many parts of the region, tourism provides women with opportunities for direct and indirect employment in a variety of services, from tour guides and travel agents to hotel staff, restaurant workers, and artisans. For many women, the tourism sector also offers a means to transition from informal work to formal employment (UNCTAD, 2013) and can lead to greater social and economic autonomy and empowerment (Boona-

Figure 8

Correlation between firms with female managers and female graduates working in the services sector



Source: Calculations by the UNCTAD secretariat based on World Development Indicators database, World Bank (last accessed in April 2016).
Notes: The percentage of female graduates by field of study in tertiary education is calculated by dividing the number of female graduates in a given field of education from tertiary education by the total number of graduates in the same field. Data on the percentage of firms with at least one woman in the top two positions refer to table 10. Linear fit refers to the estimation of a simple linear regression where the percentage of firms with at least one woman in a top position is a function of the female share of graduates in services. Confidence intervals correspond to the estimated range of values for the coefficient estimated.

Box 7

Gender-sensitive educational programmes for information and communications technology in Africa

- **Intel, the global microprocessor company, has established a "She Will Connect" women's education programme that combines digital literacy training, an online peer network, and gender-specific content to support the closing of the gender gap. The programme began with pilots in Kenya, Nigeria, and South Africa, and a stated goal to reach 5 million women in Africa so that they "have the opportunity to acquire or improve digital literacy skills and expand their understanding and use of technology so that they can connect to health, government, and educational information, economic opportunities, and gender specific resources."[1]**

- **The Partnership for Skills in Applied Sciences, Engineering, and Technology (PASET) was launched in 2013 in sub-Saharan Africa with support from the World Bank to build scientific and technical capability in Africa through knowledge generation and dissemination; partnership development; and financing. PASET brings together African governments and the private sector as well as new partners who have been investing heavily in Africa, including Brazil, China, India, and the Republic of Korea. The aim is to work together to harmonize efforts aimed at building human capital in sub-Saharan Africa. The African Virtual University, launched in 1997 as a World Bank project and transferred to Kenya in 2002, provides support to women in the services sector. With more than 15 years of experience in Africa, the university has established a Gender Mainstreaming-Scholarship Fund with the aim of upgrading the information and communications technology (ICT) skills of pre-service and in-service teachers.**

- **All-Girls ICT Training Camps are a capacity-building/mentoring initiative of the African Centre for Women, Information, and Communications Technology. The camps operate during every school holiday and are aimed at promoting science and technology as a career path for young women in high school. The camps help the participants improve their performance in mathematics and science subjects and acquire ICT skills, including Internet training.**

[1] See Intel's She Will Connect website at *http://www.intel.com/content/www/us/en/technology-in-education/technology-empowerment.html* (accessed on 11 November 2016).

baana, 2014). However, though not a comprehensive survey of cases in the region, the examples in the following section show that the potential for women to take advantage of opportunities presented in tourism can be constrained by structural or cultural biases that lead to wage gaps, mistreatment, and gender-based segmentation into low-value and higher-risk roles.

4.2.2.1 Challenges to gender equality in tourism employment

Female tourism workers in the COMESA region are often concentrated in lower-skilled jobs such as hotel receptionists, maids, gift shop attendants, and waitresses (for the Kenya example, see box 8). In contrast, higher-paid jobs as tour operators and managers of travel agencies are more likely to be occupied by men. For instance, in an assessment of Egypt's travel and tourism sector, Ragab (2007, 51) finds that "most women are confined to low-level jobs, and they are often relegated to traditional professions or support functions. Women tend to be in occupations with low career development prospects whereas managerial positions are male dominated. As a result, the degree of occupational segregation by gender is quite apparent in the tourism labour market."

Furthermore, due to domestic responsibilities that compete for women's time or to women's education gaps,[36] women are more likely to hold part-time or informal jobs supporting the tourism sector, creating greater vulnerability to reductions in hours or pay, or outright job loss, during slow seasons and downturns in the industry. It is in these positions that women are also more vulnerable to poor treatment and working conditions and, at times, sexual harassment.

Women, therefore, must often find ways to work with or around existing obstacles in order to realize the benefits that tourism can bring. In Mukono Parish in Southwestern Uganda, for example, Boonabaana (2014) finds that to participate in the area's burgeoning tourism industry, women have had to overcome myriad gender-related constraints that include burdensome domestic responsibilities and norms that limit women to the domestic space unless permission is granted by a male. Despite ongoing obstacles, however, women are finding increased social and economic agency within their households and communities. Before tourism arrived in the area, women were largely dependent upon men and thus in a state of vulnerability. The author notes that "when men were unwilling to provide or lacked the money to do so, family tension and feuds often ensured, sometimes culminating into domestic violence and separation. With tourism earning opportunities, [however], these tensions have [been] reduced given that women can now fend for themselves" (Boonabaana, 2014, 33).

In addition, tourism is often viewed as a means through which local populations near attractions can access jobs and thus benefit, but analysis suggests that most of the real value generated by tourism accrues not to the local communities where women play a more prominent role, but to larger tour operators and brokers located in capital cities or outside the country. In a case study on Cape Verde, for instance, UNCTAD (2011) finds that gains from tourism are not significant in poorer households, but rather are concentrated in the wealthier segments of the population. The study suggests that the country could achieve more broad-based gains from tourism by promoting cultural and community-based tourism and suggests that "women's participation in tourism education and training would allow them to have access to more qualified, stable and better paid positions, including managerial ones" (UNCTAD, 2011, 9). Another strategy, tourism revenue-sharing schemes, if designed and executed properly, transmit benefits of tourism back into local communities and promote local buy-in for the conservation and protection of tourism assets (such as wildlife and ecological parks). Rwanda, where the government established training and skills development programmes and set up a system of revenue-sharing with local communities, may provide an example for ensuring the distribution of gains from tourism (UNCTAD, 2014c). The Rwanda Development Board sends 5 per cent of national park entry fees back into the local communities to support community development projects. A study by Kamuzinzi et al. (2015) on the effectiveness of Rwanda's tourism revenue-sharing programme around Nyungwe National Park, finds that the programme led to the construction of health centres and schools, improved access to clean water supplies, promoted local business, and encouraged the conservation of the park's natural resources.

5 Conclusions

This module has applied the analytical framework presented in the other three modules of Volume I of this training manual (UNCTAD, 2014b) to the specificities of the member countries of COMESA. In consideration of the fact that the regional group involves countries at different levels of social and economic development, this module has examined the trade and gender nex-

Box 8

Case study on gender in the Kenyan tourism industry

In a study of gender in the tourism industry in Kenya, Christian et al. (2013) explore the gender dimensions of three primary segments of the tourism value chain: tour operations, excursion packages, and accommodation providers. The aim is to better understand how gender inequalities affect the sector's competitiveness and its potential to generate a positive development impact. As summarized below, the authors find distinct structural and cultural/societal forces constraining the ability of women to fully participate in and benefit from Kenya's dynamic tourism industry, and they present recommendations, applicable beyond the Kenyan context, to improve conditions for women in the sector.

Across all three value-chain segments, there is notable gender-based occupational segregation that concentrates women into higher-risk, lower-value, and lower-skilled roles. Overall, two-thirds of those employed in tourism are men. Tour operations are predominantly male-owned, especially those which are most profitable and have the best access to financial capital, exclusive destinations, and lucrative foreign clientele. In fact, the study finds that of the 31 tour operations considered "Category A" by the Kenya Association of Tour Operators, only two are run by women. Specific occupations are highly gendered, with higher-profile roles as safari guides and drivers considered most appropriate for men (at the time of the study, all Kenya Professional Safari Guides Association "gold-certified" guides were men). Women, on the other hand, were far more likely to be found as ticketing agents, receptionists, and hospitality workers. Women also are more concentrated in casual, part-time, or seasonal positions that are less flexible, less stable, and less protected by labour arrangements and unions. The authors find, for instance, that sexual harassment protections embedded in labour laws, such as the Employment Relations Act of 2007, lacked proper recourse and enforcement mechanisms. There is also concern that maternity leave requirements have disincentivised the hiring of women.

Legal, cultural, and societal norms further limit women's participation. Responsibilities in the home as well as cultural norms discourage women's work in more remote destinations, including safari camps. Many smaller tourism-related businesses are family-owned, and the father or sons occupy higher roles while the women in the family are expected to provide support. Women from ethnic-tribal groups, such as the Maasai, often lack adequate education and are thus limited to roles as artisans or cultural performers. Land ownership policies that allow exemptions for customary laws which restrict women's access to land titles were found to directly disadvantage women's ability to capitalize on leasing arrangements, tourism development funds, and conservation fees.

Finally, the marketing of package tours typically favoured male-dominated aspects of the sector. Christian et al. (2013) find that tourism marketing often featured imagery and themes that reinforced racial and gender stereotypes, appealing to the "white hunter" narrative while downplaying areas such as cultural experiences, in which women are more participatory.

A number of recommendations emerge from this case study:

- *Mainstream gender issues into national tourism policy:* In their efforts to promote and develop the tourism sector, national and regional governments should be sensitive to and fully incorporate gender issues. Community-based and cultural tourism should be featured in strategic plans. Tourism policies should explicitly seek to protect women's labour rights and promote female participation in the sector.
- *Promote gender parity through national and international industry associations:* Private sector and non-governmental groups should play a critical role in the promotion of gender equality through gender-sensitive hiring practices and certification or training programmes that explicitly incorporate gender issues.
- *Target training of women to increase and diversify skills:* Efforts should be made to target women and local communities for training in tourism-related skills, particularly training that would facilitate greater participation by women in what are now male-dominated occupations that are more high-value and stable.
- *Promote and market pro-women activities and commercial activities:* Governments and industry should feature these activities prominently and respectfully in marketing campaigns, promoting cultural or community tourism, structuring itineraries to include activities that promote women's commercial activities, and sourcing souvenirs for gift shops from women's artisan collectives.

Source: Christian et al. (2013).

us focusing on common features in agriculture, manufacturing, and services.

Following the approach presented in the core modules, this module has noted that in agriculture women can be both a source of competitive advantage and underachievers of competitive advantage. Female farmers are underachievers of competitive advantage because of the multiple challenges they face that hinder their productivity. These include the burden of domestic care work, gaps in educational attainment, gender inequality in control over land, scarcity of household farm labour, and limited access to resources and market opportunities. Tackling the obstacles that hold back the productivity of female farmers could both enhance gender equality and boost broader economic growth. On the other hand, women can be a source of competitive advantage. On-farm women tend to be over-represented as contributing/unpaid family workers on the household plot. The economic efficiency of this farming system is found in the use of family labour, which reduces the cost of labour. The underlying gender challenge is how to empower women within this family farming model, making them more productive, and increasing their voice in decision-making and resource allocation. Off-farm, low women's wages have been used as a source of competitive advantage in labour-intensive export agriculture. To the extent that cost-reducing or profit-maximizing strategies concentrate on wage and labour costs, gender inequality can be a source of competitive advantage and drive growth. However, considerations other than cost are playing an increasing role in shaping competitiveness. In the horticultural sector, for example, the downward pressure on labour costs is balanced by a countervailing market pressure that stems from the "green" or "fair trade" labelling movement.

Moving to manufacturing, as described in previous modules, the implementation of export-oriented strategies has been correlated with a massive influx of women in the labour-intensive manufacturing sector, a phenomenon known as the feminization of labour. This shift has been explained by the cost-minimizing behaviour of employers confronted with stiff international competition. This module has looked more specifically at women employed in the EPZs in a number of COMESA countries and has reached the conclusion that the impact of EPZs on women's wages is likely context-specific. In Madagascar, for example, data show that women working in an EPZ earn a significantly higher wage than women working in the informal sector, but also significantly lower wages compared to women employed in the public or private formal sectors. In the case of Kenya, a survey of 75 firms illustrated that although EPZ firms pay lower wages compared to local firms, the earnings of women and men were not statistically different, contrary to the situation in local firms, thus corroborating that the gender wage gap tends to be lower in EPZs. Contrasting results were presented for Mauritius, where the gender pay gap is higher in the EPZ sector than in other sectors. Anecdotal evidence presented in the module regarding women's working conditions in the EPZs suggests that the free zones provide less favourable working conditions and even likely worsen women's work burden.

This module has also explored the likely consequences for women's labour outcomes of tariff changes due to COMESA countries becoming parties to new trade agreements, namely the EPA and the TFTA. In other words, through an ex-ante assessment, the module assessed the likely impact of new trade measures on gender in the workplace. As expected, the results show that trade liberalization affects workers differently across categories. For example, women involved in production tasks are more negatively affected by trade opening than men. This suggests that more trade may coincide with the growth of male-intensive, export-oriented production activities at the expense of women, thus contributing to the defeminization of certain sectors. A concomitant explanation offered in the module is that lower export costs prompt exporting firms to upgrade their technology, thereby reducing the opportunities for production workers. This in turn more negatively affects women, who are particularly vulnerable in the workplace. In the event of adverse effects of trade liberalization on women, the module recommends that trade liberalization be accompanied by specific measures supporting women involved in production activities, as they are disproportionately affected by a reduction in trade barriers.

Finally, in the services sector, the module has looked into the particular opportunities, challenges, and risks associated with services liberalization in COMESA countries by focusing on two service industries: ICT-enabled services outsourcing and tourism. Both of these industries have been prioritized by COMESA and many of its member states because of their potential to contribute to economic growth and development. Despite the opportunities that ICT-enabled services outsourcing and tourism can offer to advance women's economic empowerment and gender equality, the module has shown that vertical gender-based segmentation persists in several COMESA countries, with women found in lower-skilled jobs. While in some cases labour market segmentation is the result of gender discrimination, in others disparities in education and training between men and women in general (and more specifically in science, technology, engineering and mathematics disciplines for ICT-enabled services) are key determinants of gender inequalities in employment. It is thus crucial that gender issues be fully incorporated into national ICT and tourism strategies and in services liberalization initiatives at the national and regional levels.

Exercises and questions for discussion

1. Is agriculture in the COMESA region "female-intensive" in terms of employment? How is female- or male-intensity calculated?

2. Where do women work in agriculture? Why is it difficult to identify the gender-specific effects of trade on rural women? Give examples of on-farm and off-farm activities and of agricultural and non-agricultural sources of income for rural women in COMESA countries.

3. Are there discernible patterns of gender segregation in rural employment? Elaborate with reference to both on-farm activities (gender productivity gap) and off-farm activities (indicators of vulnerability in wage employment). What are the main drivers underlying these patterns?

4. What are the main factors responsible for the gender productivity gap in agriculture? What is meant by women as underachievers of competitive advantage as farmers, small entrepreneurs, and self-employed producers?

5. When and how can gender inequality be used as a source of competitive advantage and what are the counterarguments?

6. What are the key gender concerns surrounding the COMESA agricultural strategy?

7. What are the channels through which the implementation of export-oriented policies, such as export processing zones, affects women and gender inequality?

8. In COMESA, a reduction in import tariffs has a different impact on women than a reduction in export tariffs that COMESA faces in the destination market. Explain this difference.

9. What are the expected consequences for female employment of tariff reductions in destination markets? Please distinguish between the impact on women involved in production and non-production activities.

10. What are the current trends for women's employment in services in the COMESA region? What are some of the key metrics for understanding and measuring female participation in services?

11. Does increased participation of women in services employment necessarily indicate that further growth in the sector will lead to better outcomes for women in terms of economic empowerment and equality? Why or why not?

12. Are women in COMESA more active participants in high-value or low-value services, and what are the implications for women's empowerment and development more generally?

13. What are the principal impediments to women being able to leverage opportunities in ICT-enabled service sectors to achieve enhanced economic equality?

14. What are the main reasons why a government should integrate gender considerations and gender-specific policies into its tourism promotion or development strategy?

ANNEX

A.1 Descriptive statistics on women's participation in the labour force in COMESA countries

A.1.1 Manufacturing

Table 11 provides detailed statistics on the gender employment ratio within manufacturing firms in a selection of COMESA countries surveyed in the World Bank's Enterprise Surveys, differentiated across sectors and occupation type.

Figure 9 plots these descriptive statistics using boxes. From this figure, the under-representation of women in the workplace appears clearly in (almost) all sectors. A notable exception is garment-related activities, where the median is just below 0.5, implying that around half of the firms in the garment sector employ more than 50 per cent women in their total workforce.

A.1.2 Information and communications technology

Table 12 provides stylized facts on the participation of women in the ICT sector in Ethiopia.

A.2 Methodology to estimate the impact of trade changes on women in COMESA countries

A.2.1 Methodology

The results reported in table 13 originate from the estimation of the following reduced form equation [37]:

$$\Delta\text{Female ratio}_{i,c,s,t} = \beta_1\Delta\text{ExportTariff}_{c,s,t} + \beta_2\Delta\text{ImportTariff}_{c,s,t} + \gamma_x X_{i,t} + \vartheta_t + \rho_i + \Delta\varepsilon_{i,s}$$

where *i* refers to the firm, *c* the country, *s* the sector, and *t* the year of the survey. $\Delta \textit{Female ratio}_{i,s}$ denotes the log change in the ratio of female-to-male employment. Employment is defined as the yearly number of workers reported by the firm. In the empirical test, three different versions of the *Female ratio* are tested: the overall female ratio (equal to the ratio of total female to total male employment); the *Production female ratio* (referring to the previous ratio computed exclusively for production tasks); and the *Non-production female ratio* (referring to the previous ratio computed exclusively for non-production activities). $\Delta \textit{ExportTarif}_{c,s,t}$ is the sectoral change in export duties faced in foreign markets by year and country. $\Delta \textit{ImportTarif}_{c,s,t}$ refers to changes in

Table 11

Descriptive statistics on female-to-male ratios within firms by sector

NACE sector[a]	Overall female-to-male employment			Production female-to-male employment			Non-production female-to-male employment		
	Mean	Min	Max	Mean	Min	Max	Mean	Min	Max
Food	0.31	0	5.0	0.33	0	8.1	0.41	0	14.0
Textiles	0.88	0	17.0	0.50	0	9.0	0.25	0	3.0
Garments	1.03	0	17.5	1.08	0	17.5	0.55	0	4.0
Leather	0.48	0	1.6	0.45	0	1.71	0.62	0	3.0
Wood	0.04	0	0.46	0.02	0	0.36	0.14	0	1.5
Paper	0.33	0	1.69	0.32	0	1.9	0.76	0	4.0
Publishing	0.42	0	3.25	0.54	0	10.0	0.59	0	3.0
Refined petroleum	0.66	0.03	1.31	0.57	0	1.5	0.69	0.14	1.0
Chemical	0.31	0	3.0	0.36	0	7.0	0.39	0	5.0
Plastics	0.18	0	2.54	0.26	0	7.0	0.22	0	1.33
Mineral	0.15	0	3.33	0.22	0	10.0	0.27	0	1.71
Basic metals	0.26	0	0.75	0.20	0	0.71	0.50	0	1.33
Fabricated metals	0.09	0	1.75	0.17	0	14.0	0.14	0	1.3
Machinery	0.21	0	0.67	0.23	0	1.0	0.39	0	2.0
Electronics	0.31	0	5.0	0.06	0	0.33	0.45	0	1.0
Furniture	0.12	0	1.6	0.10	0	2.4	0.26	0	3.0

Source: World Bank Enterprise Surveys.

Notes: This table provides summary statistics for the Democratic Republic of the Congo, Egypt, Kenya, Uganda, and Zambia.

[a] NACE refers to the Statistical Classification of Economic Activities in the European Community (Nomenclature statistique des activités économiques dans la Communauté européenne).

Table 12

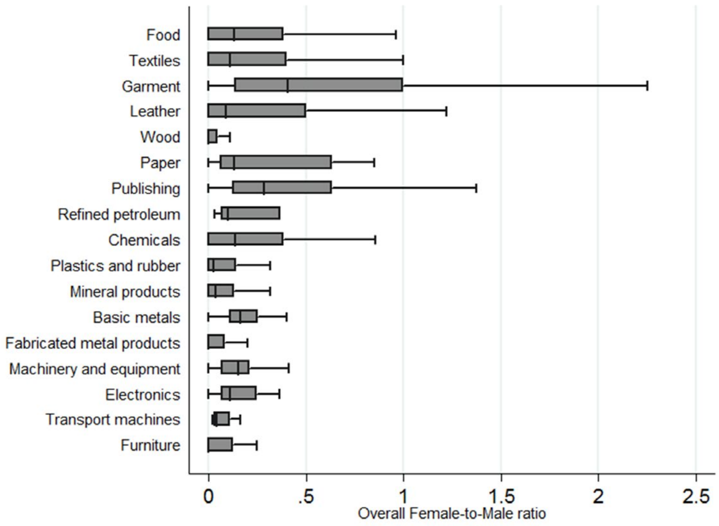
Distribution of employed persons in information and communications technology (ICT) by occupation in Ethiopia

Industry	Male (per cent)	Male (per cent)	Total male and female (number)
ICT service managers	100	0	521
Science and engineering professionals	82	18	60,931
Electro technology engineers	63	37	5,950
ICT professionals	69	31	9,963
Science and engineering associate professionals	80	20	66,794
ICT technicians	57.3	42.7	16,731
ICT operations and user support technicians	57.8	42.2	12,314
Keyboard operators	15.6	84.4	47,919

Source: Ethiopia Central Statistical Agency, Statistical Report on the 2015 Urban Employment Unemployment Survey.

Figure 9

Female-to-male employment ratio across sectors



Source: Calculations by the UNCTAD secretariat based on the World Bank's Enterprise Surveys.

Notes: This figure can be read as follows: the box gathers the majority of the observations (precisely from the first quartile to the third quartile). Within the box, the vertical line corresponds to the median observation. The horizontal lines link the box to the smallest and largest observations (non-outliers) in the dataset

the average tariff imposed by country c on its imports in sector *s* in year *t*. $X_{i,t}$ includes a set of firm characteristics that aims to capture the effect of firm size (in terms of total sales), foreign ownership, and trends in supply characteristics. ϑ_t represents time-specific fixed effects to capture any shocks common to all countries but unrelated to tariff changes, and ρ_i refers to firm-level fixed effects to take into account time-invariant firm specificities affecting gender labour outcome.

The fixed-effect dimension is critical in the present analysis because it allows for the capture of the invariant characteristics at the firm level that might affect gender labour outcomes while being unrelated to changes in the trade environment. Therefore, the results of the analysis can be interpreted as within-firm effects of tariff changes on the labour ratio of women.

A.2.2 Results of the estimation

The corresponding results of the estimation of the impact of tariff variations on female-to-male employment ratios are reported in table 13.

Table 13

Estimation of the impact of tariff variations on female-to-male employment ratios

Dependent variable: growth in female-male labour ratios	**Overall**		**Production tasks**		**Non-production tasks)**	
Sample of firms	All (I)	Exporting (II)	All (III)	Exporting (IV)	All (V)	Exporting (VI)
Δ Export Tariff - EU	1.731***	4.010***	1.147*	4.982***	1.738	-3.402***
	(0.295)	(0.096)	(0.479)	(0.0731)	(1.127)	(0.061)
Δ Export Tariff -TFTA	1.711***	4.027***	1.138*	5.057***	1.668	-3.393***
	(0.337)	(0.107)	(0.431)	(0.006)	(1.115)	(0.0695)
Δ Export Tariff - RoW	1.711***	4.086***	1.163*	5.150***	1.659	-3.368***
	(0.268)	(0.156)	(0.523)	(0.055)	(1.138)	(0.089)
Δ Import Tariff	0.0019	0.0859***	0.0044	0.0157***	-0.0021	0.0052***
	(0.0023)	(0.0007)	(0.0032)	(0.00163)	(0.0079)	(0.0004)
Observations	1,116	302	1,134	311	1,032	290
Firm fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes

Source: Calculations by the UNCTAD secretariat based on World Bank Enterprise Surveys (WBES) and UNCTAD's Trade Analysis and Information System (TRAINS) database.

Notes: Robust standard errors in parentheses (clustered at the exporter level). The panel gathers firms from the Democratic Republic of the Congo, Egypt, Kenya, Uganda, and Zambia. Δ *Export Tariff* refers to the variation in sectoral tariffs (NACE classification) applied by the destination countries to the exports between the two years of the survey. Δ *Import Tariff* refers to the variation in sectoral import tariffs (NACE classification) applied by the surveyed country between the two years of the survey. The overall female-male labour ratio indicates the growth in the female-to-male employment ratio between the two years of the survey. The production female-male labour ratio indicates the growth in the female-to-male employment ratio in production tasks between the two years of the survey. The non-production female-male labour ratio indicates the growth in female-to-male employment ratios in non-production positions (such as managers, administration, sales, etc.) between the two years of the survey. All columns include the following firm-level variables: the size of the firms in terms of employment, a dummy taking the value of one if the firm was more than 10 per cent owned by a foreign investor, and the trend in supply characteristics. EU: European Union; NACE : Statistical Classification of Economic Activities in the European Community (*Nomenclature statistique des activités économiques dans la Communauté européenne*) ; RoW: rest of world ; TFTA : Tripartite Free Trade Agreement. *** Significant at the 1 per cent level. ** Significant at the 5 per cent level. * Significant at the 10 per cent level.

A.3 Case study in Egypt: Al Azzawi (2014)

A.3.1 Context

In the 1990s, Egypt implemented a series of trade reforms aimed at opening its domestic markets to foreign goods. The extent of the trade liberalization episode was considerable: average tariff rates were cut from 42 per cent in 1991 to 20 per cent in 2005, while non-tariff barriers were largely reduced. Yet, poverty rates and inequality levels surged during the same period, raising questions about how women might have been affected. Al Azzawi (2014) looks at the impact of these trade reforms on gender discrimination. Three main questions are addressed. First, did trade reforms have an impact on the gender wage gap in the manufacturing sector? Second, did the female share in employment, hours of work, or the total number of female workers change in industries that lost protection? Third, what is the estimated magnitude of the impact of tariff reductions and increased trade volume on the gender wage gap and on female employment in manufacturing industries?

A.3.2 Data and methodology

Al Azzawi (2014) uses a two-step estimation method to address these questions. First, Mincer earnings equations are estimated to explain the respective wages of men and women. The estimation relies on the data provided in two representative labour force sample surveys implemented at the national level in Egypt in 1998 and 2006, respectively, that allow for tracking individuals across periods. The difference between the average male and female wages in each industry is then decomposed into a portion due to observable characteristics and a residual commonly identified as the unexplained or discrimination component of the gender wage gap.

Second, this residual wage gap is used as the dependent variable in regressions that control for exposure to trade openness as well as other time-varying industry characteristics that have affected the Egyptian economy and are likely to influence the gender pay gap during the period. Exposure to trade openness is approximated using two main measures: the import-weighted average tariff as a trade policy variable, and the trade volume. Tariff data are taken from the World Trade Organization's tariff profile based on Egyptian Customs Authority data. To ensure that tariff rates for categories that are more important in terms of total imports receive a greater weight in the constructed average industry-level tariff, a weighted average tariff is computed using imports as the weight. Export and import data are from the World Integrated Trade Solution database and are used to construct the indices of import penetration and export intensity. Import penetration in a given industry is calculated as the ratio of imports to domestic consumption in that industry. Export intensity is calculated as the ratio of exports to the output in that industry.

The effect of trade reforms on female employment is then investigated using three different measures of female employments: the share of women in full-time employment, the average hours per week of female full-time employees, and the number of female full-time employees.

A.3.3 Findings

Relying on wage data, Al Azzawi (2014) provides detailed information on the evolution of the gender pay gap during the period. The descriptive part of the study reveals the significant increase in the gender pay gap between 1998 and 2006 in the manufacturing sector. Decomposing this difference into an explained and unexplained portion, the results indicate that in 1998, the difference was mainly due to differences in worker characteristics, while in 2006 the large significant difference in favour of males was mainly explained by unobserved factors (discrimination) that accounted for more than 77 per cent of the wage gap. This term quantifies the change in women's wages when applying the men's coefficients to the women's characteristics, and indicates that women would in fact have seen their wages rise considerably if they had been treated the same way as men.

The results about the impact of trade reforms on the gender wage gap indicate that import penetration is significantly correlated with an increase in the industry gender wage gap, suggesting that increased competitive pressures force firms to cut costs at the expense of workers with lower bargaining power. The results also show that industries that witnessed a rise in their level of export intensity also saw their gender wage gaps decline over time. To summarize, these results point to the harmful impact of import competition on the gender wage gap, while women seem to fare relatively better in those industries that managed to significantly raise their export intensity. Furthermore, the results confirm that the negative effect of trade liberalization on the gender gap comes from a reduction in the number women employed in full-time employment[38], implying that lower tariffs and higher imports had a detrimental effect on female employment. Al Azzawi (2014) provides robust evidence that the trade liberalization episode in Egypt has largely had a negative impact on women's relative wages and employment. Yet, it also shows a positive impact on women involved in the restricted number of firms that managed to increase their export intensity. The decomposition analysis highlights that most of the gap can be explained by the discrimination component, thereby justifying stronger enforcement of existing anti-discrimination legislation as well as a broader social effort to change stereotypes that hinder women's participation in the labour market.

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ENDNOTES

[1] Data refer to the most recent year available during the 2002–2012 period and exclude Mauritius, Seychelles, and Eritrea.

[2] In the case of Libya, integration into the world economy is mainly due to oil exports.

[3] The Gender Parity Index for the gross enrolment ratio in primary, secondary, and tertiary education is the ratio of girls to boys enrolled at primary, secondary, and tertiary levels in public and private schools.

[4] COMESA manuals for gender mainstreaming cover the sectors of infrastructure development; investment promotion and private sector development; information and communication; gender and environment; health and HIV/AIDS; peace and conflict resolution; and COMESA institutions. A regional strategy for mainstreaming gender into agriculture and climate change was in place for the period from 2011–2015.

[5] The female intensity of agriculture is calculated here as the share of female employment in total agricultural employment.

[6] SOFA Team and Doss (2011).

[7] Based on the data series on male and female employment, and male and female employment in agriculture, in ILO (2015b).

[8] For a discussion of the wage gap, see box 5 in Module 1 and box 11 in Module 2.

[9] As discussed, however, women tend to prevail in formal wage employment in several value chains for high-value products such as fresh fruit, vegetables, and flowers.

[10] In a related vein, there is relatively more diversification in terms of income sources among rural men than rural women. In both Malawi and Rwanda, men in rural areas are more likely than women to be employed in non-agricultural work, including non-agricultural wage employment and non-farm enterprises (UNCTAD, 2014c; FAO, 2011a). This reflects imperfections in the functioning of local labour and credit markets (see section below), which perpetuates patterns of gender segregation in rural employment.

[11] For a review of country legislation, see also the United States Agency for International Development's Land Tenure and Property Rights Portal at *https://www.land-links.org/* (accessed on 10 November 2016).

[12] Kenya, Ethiopia, and Uganda are competing with each other on the same export markets, particularly Europe, Russian Federation, and North America.

[13] CAADP, which is an integral part of the New Partnership for Africa's Development (NEPAD), is Africa's policy framework for agricultural transformation, wealth creation, food security and nutrition, economic growth, and prosperity for all.

[14] This strategic objective underlies many on-going agricultural sector programmes of the COMESA Secretariat, including the Agricultural Market Promotion and Regional Integration Project; Irrigation Development in the COMESA Region Project; Regional Food Security/Food Reserve Initiative; Food Security Policy and Vulnerability Reduction Programme; Coordinated Agricultural Research and Technology Interventions; Regional Approach Towards Biotechnology; Pan African Tsetse and Trypanosomiasis Eradication Campaign; Livestock Sector Development; Fisheries Sector Development; CAADP, which is part of the New Partnership for Africa's Development (NEPAD); Crop Crisis Control (C3) Project; Action Plan for the Environment; and interventions to mitigate the impact of HIV/AIDS among smallholder farmers. Other COMESA agricultural marketing and regional integration activities linked to its food security programmes include the Food and Agricultural Marketing Information System, the Regional Agricultural Trade Expansion Support Project, and the Commodity Exchange Initiative.

[15] Higher crop intensity and a higher-value crop mix are other aspects of increased productivity.

[16] Fostering intra-COMESA trade integration in agriculture envisages regional trade development corridors linking food-surplus Northern Mozambique to deficit markets in Zimbabwe, and intermittently to southern Malawi and Eastern Zambia; linking food surplus zones in Eastern Uganda and Northern Tanzania to deficit markets in Kenya, and linking surplus cassava and maize producing areas of Northern Zambia to the deficit mining towns in the Katanga and Kasai provinces in the Democratic Republic of the Congo.

[17] There are important caveats and qualifications, though. Notably, remote markets will likely remain significantly segregated and shielded from import competition. Furthermore, cheap imports may benefit women as net consumers, while eroding their margins as producers.

[18] This also holds true for export (extra-COMESA) trade. In a context of over-supply and saturated markets in the flower sector, the export dynamism of one exporter (e.g., Ethiopia) may be to the detriment of traditional suppliers (e.g., Kenya), that is, employment expansion in one country is offset by layoff schemes in the other.

[19] See FAO, IFAD, and ILO (2010), FAO (2011b), and World Bank, FAO, and IFAD (2009).

[20] The Mincer earnings function is a widely used model in empirical economics to explain wages as a function of schooling and experience. It is typically written as follows: $\ln y=\alpha+\beta S+\gamma_1 X+\gamma_2 X^2$; with *y* the wage, *S* the years of schooling, and *X* the years of experience.

[21] The surveys used by the authors were limited to the capital of Antananarivo because the data were available throughout the years only for this city. However, according to the author, the corresponding results remain instructive, as EPZs were found exclusively in the capital, with one exception (in Antsirabe).

[22] For more details on the current state of the negotiations, see the European Commission's website on trade at: *http://ec.europa.eu/trade/policy/countries-and-regions/regions/esa/*.

[23] For more details: *http://trade.ec.europa.eu/doclib/press/index.cfm?id=1509*.

[24] Their model builds on a trade model in a monopolistic setting with firm heterogeneity, i.e. firms differ in their productivity. In this model, occupations are divided into two broad categories: blue collar, referring to menial work such as specialized production workers and general workers, and white collar, referring to supervisors and managers.

[25] The interpretation of the empirical investigation as an ex-ante impact assessment relies on the assumption that the behaviour of firms would not change after the signing of these trade agreements.

[26] Note that this classification is different from the usual distinction between white- and blue-collar occupations. While the production category likely coincides with the traditional blue-collar category, the non-production category is not exclusively made up of white-collar-type activities. For example, a vendor would also be included in this group.

[27] The 20 per cent (13 per cent) is obtained by multiplying the estimated marginal effect, namely 4.98 per cent (-3.4 per cent), with the anticipated reduction, i.e. the full removal of export duties in the EU (currently at 4 per cent).

[28] Note that decomposing the effect of import tariffs across partners does not yield significant differences.

[29] Of the COMESA member states, Djibouti and Seychelles are not represented in the ILO (2015a) data.

[30] For more information on Kenya's Vision 2030 plan, see *http://www.vision2030.go.ke/* (accessed on 11 November 2016).

[31] See the Ethiopian Ministry of Education's *Education Statistics Annual Abstract 2010-2011*, available at *http://info.moe.gov.et/emdocs/esaa03.pdf* (accessed on 6 November 2016).

[32] See the Egypt country report for the 2014 Ministerial Conference on Youth Employment, available at *http://www.adeanet.org/min_conf_youth_skills_employment/sites/default/files/u24/Egypt%20Country%20Report_0.pdf* (accessed on 6 November 2016).

[33] See UNCTAD (2015b), which shows how gender inequalities and other constraints have severely limited many women retail traders' ability to take advantage of increased trade openness relative to men.

[34] See, for instance, the COMESA Sustainable Tourism Development Framework, Zambia's Revised Sixth National Development Plan, and Kenya's Vision 2030.

[35] See COMESA's development strategy, including a discussion of tourism, at http://www.comesa.int/comesa-strategy/ (accessed on 11 November 2016).

[36] The United Nations World Tourism Organization identifies a lack of access to specialized training as an impediment to women finding formal and professional employment in tourism (UNWTO, 2011).

[37] The empirical estimation is done using the Stata statistical package. For an introduction to Stata, see Volume 2 of the training material (UNCTAD, 2014d).

[38] This distinction is important because employment for both males and females may have increased while the share of female employment could have remained the same, or declined. In that case the negative association between higher trade volume or lower tariffs and the share of female employees might not reflect the actual employment gains for women as a result of trade liberalization.

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