

MODULE 3

*Gender-based inequalities
and trade performance*

1 Introduction

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

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

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

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

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

2 Women as “sources of competitive advantage”

2.1 The gender wage gap and “flexibility”

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

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

Table 6

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

Source: ILO (2009).

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

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

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

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

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

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

2.2 The role of gender norms and stereotypes

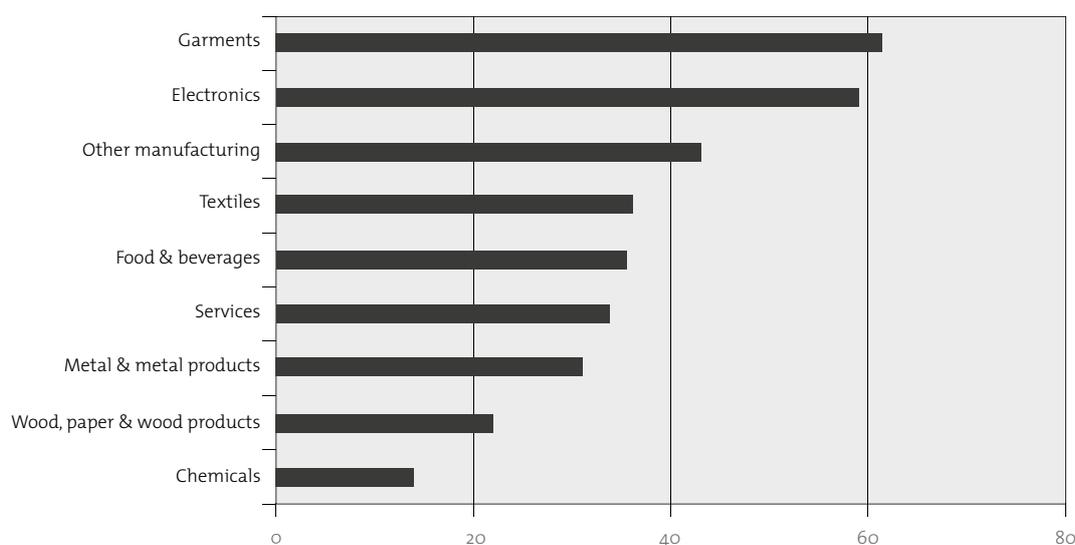
However, the question remains as to why women have become a source of competitive advantage primarily in labour-intensive industries and not in others. Although the gender education gap may have contributed to this phenomenon previously, it has closed almost entirely at the primary level in many developing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

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

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

Figure 4

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



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

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

Table 7

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

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

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

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

2.3 Export competitiveness and economic growth

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

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

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

2.4 The unsustainability of an export strategy based on gender inequality

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

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

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

Box 14

The gender wage gap and the terms of trade

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

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

Source: UNCTAD Secretariat.

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

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

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

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

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

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

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

2.5.1 Implications for women as wage workers

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

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

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

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

2.5.2 Summary

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

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

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

3 Women as under-achievers of competitive advantage

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

3.1 Three domains of inequality

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

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

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

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

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

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

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

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

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

Box 15

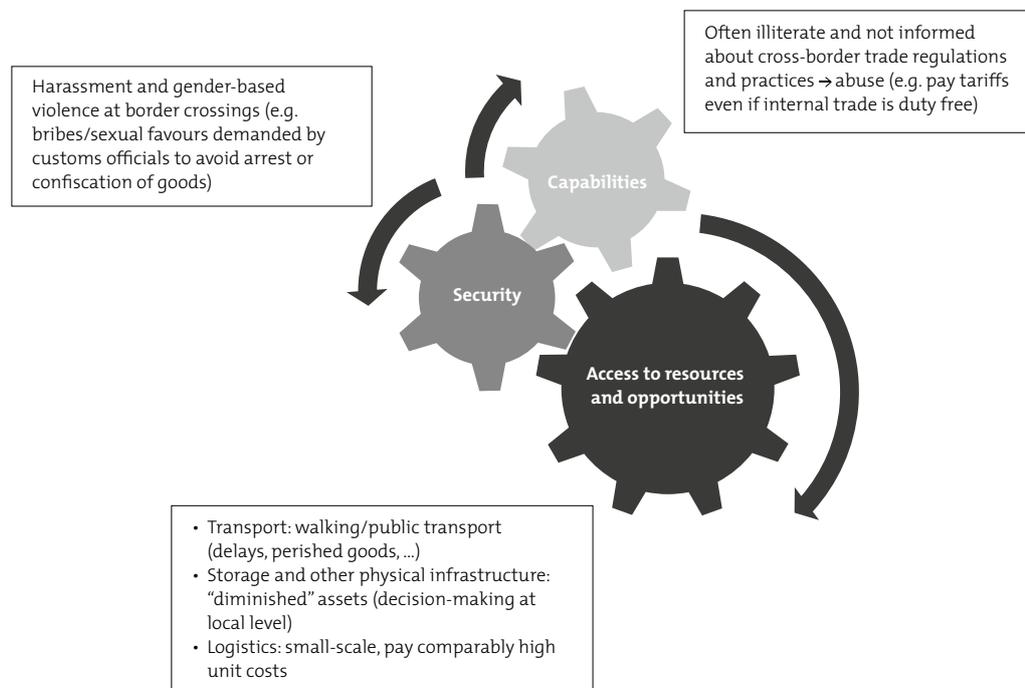
Three domains of inequality: Women as informal cross-border traders

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

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

Figure 5

The multiple challenges faced by female informal cross-border traders



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

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

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

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

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

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

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

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

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

3.2.1 Gendered patterns of employment and implications for trade

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

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

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

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

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

3.2.2 Summary

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

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

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

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

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

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

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

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

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

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

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

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

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

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

3.3.2 Women in cross-border trade

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

3.3.3 Summary

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

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

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

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

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

4 Conclusion

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

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

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

Exercises and questions for discussion

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

ANNEX

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

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

Context

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

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

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

Data and methodology

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

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

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

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

Findings

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

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

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

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

Context

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

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

Box 16

The evidence on the relationship between gender inequality and economic growth

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

Source: UNCTAD Secretariat.

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

Data and methodology

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

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

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

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

Findings

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

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

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

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

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

Context

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

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

Data and methodology

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

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

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

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

Findings

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

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

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

Context

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

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

Methodology

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

Box 17

What is a Cobb-Douglas production function?

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

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

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

Source: UNCTAD Secretariat.

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

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

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

Findings

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

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

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

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

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

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

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

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

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

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V

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

W

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

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

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