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TRADE AND WOMEN

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Abstract

This paper outlines the various channels through which women are part of the global trading economy. It focuses on women as consumers, workers, business owners, and informal cross-border traders. Trade theory offers rich implications for the relationship between gender and trade, but depends on patterns of consumption and production that may differ across countries. As an example, we examine the case of agricultural products, a sector in which products are consumed relatively more intensively by women than by men. The evidence shows that tariffs are higher in this sector, which means that women consumers are disadvantaged relative to men. On the other hand, the extension of export opportunities in developing countries in light manufacturing industries, such as apparel, can offer important prospects for women workers; these opportunities are often their entry point into the formal labor market, and provide an independent income that can change household power dynamics in a favorable way. New empirical evidence from developing country firms shows that internationally engaged firms tend to employ a higher proportion of women workers. However, much remains to be done. Discriminatory norms are deeply engrained in all countries, and are reflected in a global gender wage gap. Moreover, women-owned businesses, although active in the international economy, face specific obstacles that make it harder for them to grow and succeed. Although trade has the potential to support gender-inclusive growth and development, it will be important to get domestic regulatory settings right, so that a positive cycle can result.

JEL Classification: F15; J16

Contents

1.	INTRODUCTION	1
2.	TRADE AND WOMEN: POTENTIAL CHANNELS	3
2.1	Women Consumers	3
2.2	Women Workers	5
2.3	Women-Owned Businesses	6
2.4	Women Informal Cross-Border Traders	7
3.	EMPIRICAL EVIDENCE	8
3.1	Findings from Previous Literature	8
3.2	World Bank Enterprise Surveys	10
4.	CONCLUSION: MAKING TRADE GOOD FOR WOMEN.....	13
	REFERENCES	15

1. INTRODUCTION

Achieving gender equality is an important part of the 2030 Sustainable Development Goals (SDGs). Specifically, Goal 5 commits countries to achieve gender equality and empower all women and girls. It is entirely appropriate to give gender equality and the redressing of historical and present discrimination high billing in the SDGs as women play a central role in economic and social development. This study examines trade as a means of economic empowerment for women in a developing economy context. This perspective is one that attempts to identify the scope for trade to contribute to positive outcomes for women, as well as gain an understanding of cases in which the opposite might be true, and the kinds of complementary policies that—together with trade policy—can help promote gender equality.

The problem of gender inequality in the workplace is a well-established phenomenon (see OECD [2012] for a recent review). The disparity runs across issues ranging from job choice to access to, and control over, resources (notably credit), information, and technologies (IANWGE 2011). These affect both developed and developing economies. Levels of ownership, employment, and wages are all lower for women (OECD 2012). According to the International Labour Organization (ILO 2010), out of the 3 billion people employed in 2008, 1.2 billion (40.4%) were women. Over the past 20 years, the labor force participation rate for women has declined slightly, leading to a decline in employment opportunities across the board (ILO 2016). In that time, women have gravitated away from the agriculture sector and moved overwhelmingly into services. In 1995, approximately 42% of working women were in the agriculture sector. In 2015, that had fallen to 25%, with East Asia experiencing the largest decline of more than 30 percentage points (ILO 2016). Agriculture's share in men's employment fell as well. However, while women went into the services sector, men moved to both industry and services. The share of women employed in the services sector increased from just over 40% in 1995, to well over 60% in 2015.

These statistics imply much about the opportunities afforded to women through trade liberalization and access to international markets. Given the large increase in the share of intermediates trade in the past 20 years, the downward trend in the share of female employment in industry does not imply that women gain from these expanding trade opportunities. There has also been concern that women's gains from trade liberalization are reversed as countries upgrade their industries to higher value added and more technologically sophisticated production. The observation that has caused this concern is that the share of women in employment has declined in these industries as they become more sophisticated (Nordås 2003). However, at the same time, the wage gap between men and women in the economy as a whole has narrowed in the East Asian countries where industry upgrading has been most prominent (Lim 2000). Moreover, there is evidence of a negative correlation between women's share of employment and women's relative wages, indicating that as the industrial structure changes towards higher value added industries where employment seem to be less gender-biased, the process may lead to an improvement in women's relative earnings (Nordås, 2003).

In general, an enlargement in trade can increase the number of jobs available for women. However, the quality of these jobs is less clear. Black and Brainerd (2004) show that increased competition from trade benefits female workers by reducing an employer's power to discriminate. However, Berik et al. (2003), examining the trade performance of the Republic of Korea and Taipei, China, find that competition from trade is positively associated with age discrimination against women. Finally, Busse

and Speilman (2006) find that the concentration of females in export-oriented industries in special economic zones can reduce bargaining power and result in lower wages and employment opportunities than in the rest of the economy.

Another major trend in trade has been shown to have a differential effect on women. The rise of global value chains (GVCs) has changed trade patterns and increased opportunities for more countries to engage in trade. For developing economies, entering a GVC usually occurs at the lower end of value added. Thus, the opportunities to gain through the expansion of GVCs might also be more limited with respect to women. Women have been concentrated in those manufacturing jobs that are more labor intensive, such as the textile and apparel industries. The expansion of these industries has increased female employment in these sectors (ILO 2016). Although not without problems, this kind of expansion can be beneficial if it brings women into the formal labor force and out of sectors like subsistence agriculture. However, even that is changing as new technology, particularly in East Asia, has led to the global defeminization of the manufacturing sector by shifting production in the manufacturing sector from more labor-intensive to more capital-intensive activities (Kucera and Tejani 2014).

In a more general sense, as GVCs tend to import more than average firms, and importing firms tend to hire more women, it can be inferred that GVCs hire more women. The data examined in the remainder of this paper tend to support that contention. But evidence from the literature shows that the wage gap in these firms can be higher and some of the jobs created may not have permanent contractual status.

While the growth of GVCs led to an increase in trade in intermediate parts and components, more recently, trade growth in services has been stronger than that in goods (UNCTAD 2014). This has the potential to improve the opportunities of women who are over-represented in the services sector. While women are often engaged in services that were traditionally considered non-tradable, that is changing as well, as supply through the major General Agreement on Trade in Services modes opens up, with the exception of Mode IV (temporary movement of service providers).

Trade can affect women through a variety of channels. On the one hand, women are consumers, and so are affected by the relative price changes that trade brings about. However, they are also producers, and are therefore liable to be affected by the expansion or contraction of various sectors that increased openness to trade can cause. In particular, trade can alter the labor market incentives women face, and change the trade-off between home-based and formal sector work. Increased openness can also alter the incentives facing women traders, who often work informally. Changes such as these have far-reaching social implications that are outside the scope of this study. The purpose here is simply to elucidate different ways in which trade can affect women's growth and development experiences.

To provide some preliminary data analysis on the issues that arise in the context of trade and gender, we use the World Bank's Enterprise Surveys dataset. The World Bank collects the data at the firm level in over 100 developing and transition economies, covering more than 100,000 firms in total. In the standardized version of the dataset, it is possible to distinguish between firms that have at least one female owner and those that do not, as well as to identify the proportion of employees who are women. We use these splits in the data to examine the ways in which developing country women participate in trade and to highlight some of the potential questions that deserve further analysis.

The paper proceeds as follows. The next section addresses a number of ways in which increased openness to trade can affect women: as consumers, as workers, as business owners, and as traders. Section 3 takes a preliminary look at the available empirical evidence—which is scant; indeed, a major priority over the coming years should be the examination of the links between gender and trade at a fine level of disaggregation. The final section concludes and presents policy implications.

2. TRADE AND WOMEN: POTENTIAL CHANNELS

Women interact with the global trading economy in a number of capacities. The net effect of trade integration on particular groups of women depends on the net outcome of a number of different effects. This point has perhaps not been made clearly enough in the policy literature, which tends to focus on interactions between women and trade on the production side, most frequently looking at women as workers, and sometimes as business owners. But women are also consumers—indeed, there are more women consumers in any economy than producers, at least in the market economy. Although consumption effects may be small in individual terms, the net effect can be large. The following sections consider a number of important ways that women can interact with the trading economy and the ways in which their development outcomes can be affected.

2.1 Women Consumers

Women play an important role in all economies as consumers, including of imported goods. National policies that seek to liberalize the trading environment can therefore impact women through a consumption channel, by changing the relative prices of goods they purchase. The primary channel for consumption effects is through imports: increased openness facilitates international trade, which should push down prices and increase variety in import-competing industries. A secondary effect occurs in export industries when markets open abroad through the logic of reciprocity: prices can increase as a greater proportion of output is shipped overseas. Women consumers can be affected by trade through both channels, which are now discussed in more detail.

The import channel is well known from general trade theory. There is extensive empirical evidence of the effect that trade openness can contribute to lower prices and increased variety for consumers. These analytical results were built up using representative consumer models that do not distinguish between men and women. The general point is indeed true for men and women alike, but its implications in particular country contexts can be very different depending on the different consumption patterns of men and women. Specifically, the relative sizes of the price and variety effects for the typical consumption baskets of men and women affect the relative distribution of gains from increased imports. To be clear, increased trade openness benefits women as well as men in their role as consumers, but the relative distribution of gains is also important. Given the historical and current discrimination against women, it would be consistent with the SDGs that when trade barriers are removed selectively, as is typically the case, priority should be given to goods that are relatively more important in women's consumption baskets.

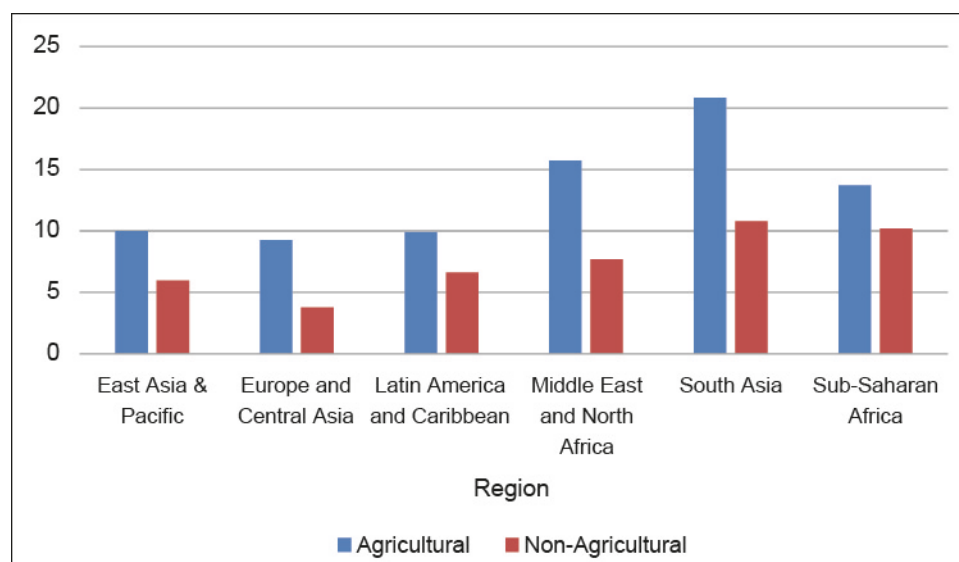
Unfortunately, there is little data available on the consumption baskets of women in developing countries. The standard data sources are typically aggregated at the household level, and although they may distinguish between female-led households and male-led households, they are insufficiently granular to allow us to identify differences in consumption patterns between men and women, which could then be

combined with information on trade flows and policy measures to develop indicators of the potential consumption impacts of increased openness on women.

Despite this paucity of data, one important example can make the point—food. According to the Food and Agriculture Organization of the United Nations, women tend to spend a higher proportion of their income on food for the household than men do.^{*} Women consumers in developing countries, therefore, have a particular interest in access to low cost, healthy, and nutritious food. However, world food markets are notoriously distorted, including on the import side in many developing countries. One effect of such policies is to push consumption prices up, which has a disproportionate impact on women consumers. From a gender equality standpoint, trade liberalization should emphasize food markets. This emphasis coincides in most countries with the markets that are most distorted, so it also makes sense from an efficiency standpoint. This is one example of a way in which trade can be leveraged to promote the SDGs, in a way that is consistent with a policy stance that can also promote sustained economic growth and development.

Tariff data from WITS-TRAINS give an idea of the level of trade restrictions imposed on imported agricultural products relative to industrial goods, using World Trade Organization classifications.

Figure 1: Simple Average Applied Tariff Rate on Agricultural versus Non-agricultural Products, by Developing Region, Latest Available Year (%)



Source: WITS-TRAINS.

Figure 1 summarizes the WITS-TRAINS data by developing (low and middle income) region. All regions have higher tariffs on agriculture than on non-agricultural products, which translates into a greater burden of trade policy on women than on men due to their different consumption patterns. The differences are often substantial. For example, average tariffs on agriculture are at least double the level of non-agricultural tariffs in South Asia, the Middle East and North Africa, and Europe and Central Asia. Although many factors go into the persistence of agricultural protectionism around the

^{*} See Food and Agriculture Organization. *Women and Sustainable Food Security*. <http://www.fao.org/docrep/x0171e/x0171e02.htm> (accessed December 2016).

world, including in high-income countries excluded from the figure, one effect that deserves further attention in the literature is the regressive effect these policies have on women.

The trade measures considered here are effectively an extra tax burden imposed on women due to differences in consumption patterns. Trade liberalization in agriculture would go some way towards removing this differential. To the extent that trade liberalization is typically undertaken on a selective basis, it would be in line with the importance the SDGs attach to gender equality to act swiftly to remove import measures affecting agricultural products, and thereby lower prices and increase availability for women in developing countries. This case demonstrates the potential for good trade policy to promote the interests of women, again as consumers.

2.2 Women Workers

The most analyzed set of linkages between women and trade is on the production side, specifically through the labor market. Women work in a variety of sectors that can be affected by trade, with corresponding implications for the level of female employment, relative wages, and the gender pay gap. The key mechanism here is comparative advantage, so the remainder of this section explores the ways in which its operation can have particular implications for women workers.

As countries open to trade, they specialize according to comparative advantage, a process that is reinforced by reciprocal market opening abroad. Sectors with comparative advantage expand, while those with comparative disadvantage contract. This process has implications for women workers; if they tend to be concentrated in comparative advantage sectors, relative demand for female labor will increase, which can lead to higher levels of employment and income. If, on the other hand, they are concentrated in sectors that contract as a result of trade opening, demand will fall, which has implications for sectoral unemployment and wages.

Of course, many factors can impede the operation of this mechanism, or at least complicate the analysis of its effects on women workers. One is informality. In many poorer developing countries, women are concentrated in small-scale agriculture, where they typically work informally. When labor is supplied outside formal market structures, for example within a household or extended family framework, sectoral comparative advantage may not translate into income gains for women. The distribution of gains from increased demand for output depends on bargaining power within the household, where in many countries women are at a disadvantage. As a result, income gains may not be spent on goods that women value, but may be channeled into areas that primarily reflect men's preferences. This dynamic highlights the fact that complementary policies are necessary to improve women's position within the household so that income gains can be distributed more consistently with gender equality objectives. Empowering women is crucial from a labor market standpoint.

A related labor market mechanism can be understood through Stolper-Samuelson logic. Opening to trade will tend to increase the relative price of the comparative advantage product, and thereby increase the relative return of the factor used relatively intensively in its production. The usual exposition of the theorem requires restrictive circumstances to hold, but more complex models also exhibit variants of this behavior. From the point of view of women workers, the logic is important because it suggests that if female labor is used relatively intensively in comparative advantage sectors that benefit from trade opening, one result might be an increase in the female wage rate relative to the male wage rate. In particular country circumstances, there needs to be a detailed consideration of comparative advantage and disadvantage sectors and their

corresponding use of female and male labor. It is plausible that at least in some countries, this logic may indeed play out in practice. For example, light manufacturing, such as of garments and apparel, is a comparative advantage sector in some lower-income developing countries. The sector is known to be relatively intensive in its use of female labor. By contrast, in those same countries, heavy manufacturing may be a comparative disadvantage sector, but one that is relatively intensive in its use of male labor. As a result, opening to trade could plausibly put upward pressure on the female-to-male wage ratio. Of course, such a result depends on un- and under-employment not being too high, so that wage effects can be felt. In the perhaps common situation where there is considerable slack in the market for female labor due to unduly low participation rates, the effect will be felt through increased employment instead.

Even where women are involved in the formal labor market and stand to gain from increased demand due to the operation of comparative advantage, discrimination may prevent those gains from being realized by individual women. All countries exhibit a gender wage gap, i.e., a difference in wages in men's favor, after controlling for other factors. As in the household case, women may be at a bargaining disadvantage in many developing countries, which prevents them from effectively realizing income gains. Notwithstanding this, the expansion of comparative advantage industries that use female labor relatively intensively could still increase labor demand and reduce un- and under-employment among women, even if wages do not increase. Importantly, this dynamic can promote the formalization of women's employment, as they move out of traditional occupations in the home and small-scale agriculture to participate in other industries, such as light manufacturing (such as of garments) and services. From the long-run perspective, the formalization of women's labor is positive from a gender equality standpoint, as it lays the foundation for increased bargaining power and improved labor market outcomes. It is an important component in broader attempts to empower women economically. However, women start from a significant disadvantage in the labor market, so it is important to develop complementary policies—including anti-discrimination laws, and effective enforcement—that allow them to compete on an equal footing. In saying this, we recognize that even the most advanced economies still see evidence of gender discrimination, so the emphasis in more traditional settings must be on improving women's circumstances, with a view to supporting the effective operation of the labor market in an environment of liberalized trade.

It is also important to highlight a dynamic aspect of the labor market analysis. Demand for labor varies according to skill level, and the distribution of skills is different in the male and female populations, in part due to discrimination in terms of women's access to education and training at all levels. As countries move up the income ladder, relative demand for higher skilled labor is likely to increase, and opportunities for those without skills are likely to become relatively less abundant. As a result, it is important to support women in their efforts to acquire comparable levels of human capital to men. In many societies, that process has many difficulties. Women face numerous challenges that men do not, from explicit discrimination to social expectations in relation to domestic work and the timing of fertility decisions. Supporting education for women and girls is a crucial part of ensuring that they can take advantage of higher paying job opportunities that arise as countries develop.

2.3 Women-Owned Businesses

Women are not only active in international trade as consumers and workers, but also as business owners. In terms of traditional trade models, they can be seen as the owners of capital, who benefit from rental returns. As for the case of women workers,

the crucial mechanism here is specialization by comparative advantage, as well as the Stolper-Samuelson logic; women-owned businesses in comparative advantage sectors will tend to grow as opening to trade takes place, whereas those in comparative disadvantage sectors will contract. Similarly, if women's capital holdings tend to be concentrated in comparative advantage sectors, there is also the possibility that the real return might increase. Both dynamics offer women business owners possible gains from trade, in addition to valuable export opportunities that arise from market opening abroad.

Again, the crucial issue for women business owners is their sectoral distribution, and the interplay between that distribution and patterns of comparative advantage. However, it is important to bring more recent insights from trade theory into play as well. Heterogeneous firm models emphasize intra-sectoral reallocations that take place as trade costs fall, from low productivity firms to high productivity ones. Discrimination—both explicit and through established social practices that create expectations—can keep women entrepreneurs locked in low productivity firms, which are the most likely to suffer from foreign competition as markets are opened. Another complementary approach to enable women to take advantage of trade liberalization therefore relates to the encouragement of female entrepreneurship, both in terms of business establishment, and growth and development over time. Women need to be encouraged to enter sectors based on the identification of growth opportunities. Women-owned firms need access to finance to allow them to develop—an area in which anecdotal evidence suggests that men often perform better due to women's difficulty in putting up collateral and demonstrating creditworthiness to lenders.

2.4 Women Informal Cross-Border Traders

The preceding discussion has been general in scope. This final subsection addresses a more detailed issue that has received considerable attention in the policy literature relating primarily to African countries: women informal cross-border traders. In many parts of Africa, borders are porous and substantial amounts of informal trade take place. Women are heavily involved in this trade, for example by taking small amounts of merchandise across borders multiple times in a day. The women involved in this kind of trading activity are poor and located in border areas. The issue is that one particular type of trade liberalization—improvements in trade facilitation—can have negative implications for their activity, which provides them with income. In addition, women informal cross-border traders are often subject to harassment at border crossings, including sexual harassment.

The mechanism, in this case, is simple. Informal trade exists in part because formal trade is relatively difficult and costly, with inefficient border crossings and redundant documentary requirements. As formal trade costs come down with improved trade facilitation, the incentive for exporters to seek to move their goods informally is correspondingly less. Although this might be beneficial overall for the economy, the implications for women informal cross-border traders can be negative. They may lose all or part of their activity, which may represent the only opportunity for employment outside the home.

Again, this case makes clear the need for complementary policies to accompany trade liberalization, including non-traditional market opening measures like trade facilitation. It is important that the gains from reform be used in part to assist those who stand to lose as a result. In the case of women informal cross-border traders, assistance could be directed to supporting other economic activities outside the home

or improving educational opportunities to provide skills that would enable them to work with formal traders.

3. EMPIRICAL EVIDENCE

The previous section has made clear that women interact with trade in a number of ways. It is impossible to be categorical about an overall or unidirectional relationship between women and trade because the result for particular groups of women is different according to the effects that accrue to them due to their different roles as producers, consumers, business owners, and traders. Such ambiguity makes empirical research difficult, but it is nonetheless striking that such an important issue should have received so little attention in the literature. This situation will need to be remedied in the coming years if the SDG period is to coincide with the development of policies that ensure that women can benefit from trade.

The remainder of this section examines the empirical evidence that is available on the implications of trade openness for women. Not all the mechanisms reviewed in Section 2 can be examined empirically as data are often lacking. The next subsection provides a brief review of the literature, and the following subsection presents some original results from the World Bank Enterprise Surveys.

3.1 Findings from Previous Literature

The bulk of previous work on gender and trade focuses on labor market issues. Exposure to international markets has been shown to improve outcomes for workers in general, but not necessarily for women. In their seminal work, Bernard, Jensen, and Lawrence (1995) show that United States exporters pay higher wages and that this wage premium goes to both production and non-production workers. The degree to which this export wage premium accrues differently to men and women is still unknown. Klein et al. (2013) find that German manufacturers paid a premium to high-skilled workers while discounting low-skilled workers' salaries. To the extent that women are over-represented in lower skilled jobs, we would expect to observe an increase in the wage gap due to exporting. Indeed, Boler, Javorcik, and Ulltveit-Moe (2015) find that exporting Norwegian firms exhibit higher gender wage gaps than non-exporters but find the effect only in *skilled* workers.

Black and Brainerd (2004) test whether or not increased trade openness induced employers to reduce discrimination against women, by estimating the differential effect of increased imports on concentrated versus competitive industries. The results showed that after controlling for skills, the gender wage gap narrowed more rapidly in concentrated industries than in competitive industries, concluding that product market competition drives out discrimination in the labor market since it costs employers to continue discriminatory practices in the competitive market. However, other studies have shown that competitive forces from trade liberalization alone have limited impact on the wage gap between women and men (OECD 2005).

Juhn, Ujhelyi, and Villegas-Sanchez (2012) examined the degree to which trade liberalization under the North American Free Trade Agreement induced exporting firms to update their technology in a way that raised the relative wage and employment rate of women in blue-collar occupations in Mexico. Using firm-level panel data between 1991 and 2000, they conclude that a firm in an industry experiencing the average reduction in US tariffs of 5.2 percentage points increased female employment share in blue-collar occupations by approximately 20% more than a firm experiencing zero tariff

change. In terms of wage bill share, the effects are even larger, with an average tariff reduction of 5.2 percent points, causing a 24% increase in the blue-collar women's relative wage bill. They attribute these results to the entry of exporting firms that invested in new machinery and equipment, and this new technology raised the relative productivity of female workers in blue-collar occupations.

In a similar study for Colombia, Ederington, Minier, and Troske (2009) investigate whether firms in industries experiencing the greatest reduction in tariffs increased the employment of female blue-collar workers more than in industries that had little or no reduction in tariffs. They use plant-level data from 1984 to 1991, during which Colombia experienced an average tariff reduction of 31.4 percentage points. They find empirical evidence that industries with reduced tariffs increased their share of female plant workers by 6.9% compared to industries with no change in tariffs. Similar to Black and Brainerd (2004), they argue that this result was brought by increasing competition leading existing plants to hire more women in Colombia. However, they also show that plants that employ more women tended to pay lower wages than the industry average.

World Bank (2001) provides evidence that strong export-oriented growth in Southeast Asia has helped to strengthen gender equality over the last 50 years. Key export industries, such as textiles and electronics, rely heavily on relatively unskilled, but generally literate, workers. To meet this requirement, many countries in Southeast Asia implemented programs that urged basic education for all, and which particularly benefited young women and girls. In 1970, women made up 26%–31% of the labor force in Indonesia, Malaysia, and Singapore. By 1995, women's share in the labor force had risen to between 37% and 40% in those countries.

UNCTAD (2004) shows women's participation in export-led industries, such as textiles, pharmaceuticals, food processing, electronics, and toy production, has been strongly increasing in many developing economies, reaching between 53% and 90% of the labor force in 2003.[†] Many of these jobs in the light-manufacturing export sectors are newly created providing new opportunities for women outside more traditional sectors.

But the reality is that women in low-income economies are more often employed in subsistence agriculture while men tend to be employed more widely in export sectors, suggesting that greater openness to trade may lead to an increase in gender inequality (UNCTAD 2004). Indeed, Berik et al. (2003) show that greater trade openness in Taipei, China between 1980 and 1990 was associated with a widening of the gender wage gap. Here, import competition appears to widen the wage gap by adversely affecting women's relative employment perspective, leading to a loss of both opportunity and bargaining power for women.

The existing literature shows that labor market dynamics are complicated in the area of gender and trade. There is considerable scope for country-level particularities to play out. Going forward, the use of highly disaggregated data will be important in identifying the relative importance of the different mechanisms discussed in Section 2. It will also be crucial to expand research into the areas not yet examined empirically in any detail, such as female consumption patterns and trade, and women informal cross-border traders. More fundamentally, the mechanisms underlying possible discrimination against women workers will need to be laid bare, and policies developed to deal with the relevant factors. Boler, Javorcik, Ulltveit-Moe (2015) provide an example of the type of work that is needed. As noted above, they find a gender wage gap in Norwegian employer–employee data. They hypothesize that women may be perceived

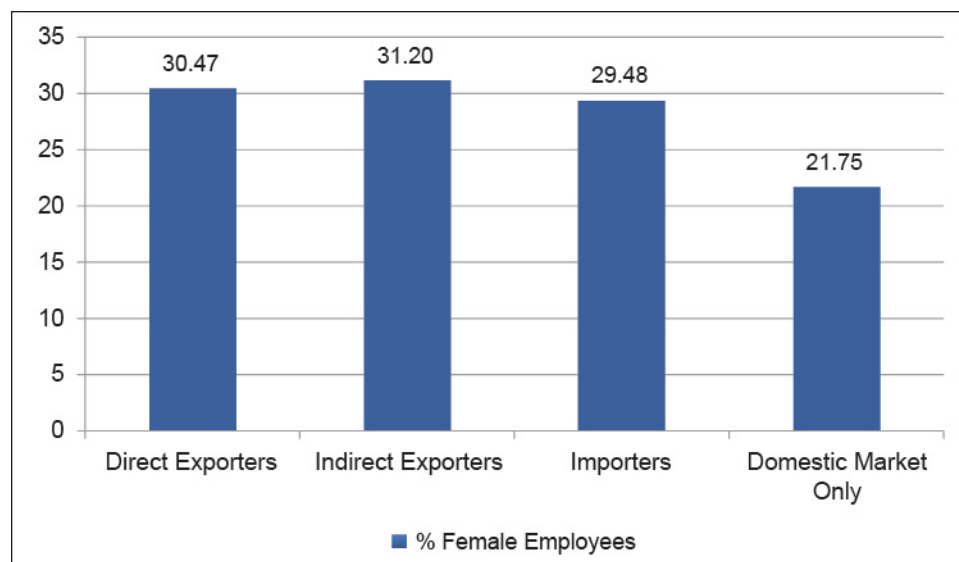
[†] Countries cited include Bangladesh, Cape Verde, the Dominican Republic, Guatemala, Honduras, Jamaica, Kenya, the Republic of Korea, Malawi, Malaysia, Mauritius, Mexico, Nicaragua, Pakistan, the Philippines, and Sri Lanka.

as less-committed workers than men, which leads to the de facto discrimination. In this case, there is an exogenous shock that allows the authors to test their contention: the lengthening of paternity leave, which should even up the perception of commitment between male and female workers. Indeed, they find that the gender wage gap in exporters narrows following the introduction of this new policy. The paper is instructive both because of its research method, which postulates a concrete mechanism for a previously observed effect, and its policy implications; there is clearly a role for creative labor market interventions to help reduce de facto discrimination against women workers.

3.2 World Bank Enterprise Surveys

The Enterprise Surveys dataset tracks the number of female production and non-production workers at each firm, in addition to total employees. That makes it possible to derive a measure of the proportion of each business' workforce that is made up of women. Figure 2 presents a breakdown of that measure by firm type, looking at direct exporters, indirect exporters (through a wholesaler), and firms that serve the domestic market only. Clearly, internationalized firms have a higher proportion of female employees than firms that do not export at all. In part, this finding is due to sectoral composition effects—many exporting firms in a number of Enterprise Surveys countries are active in the textiles and clothing sector, which is known to be intensive in female labor.

Figure 2: Share of Female Production and Non-production Workers, by Firm Type, All Countries and Years (%)



Source: World Bank Enterprise Surveys.

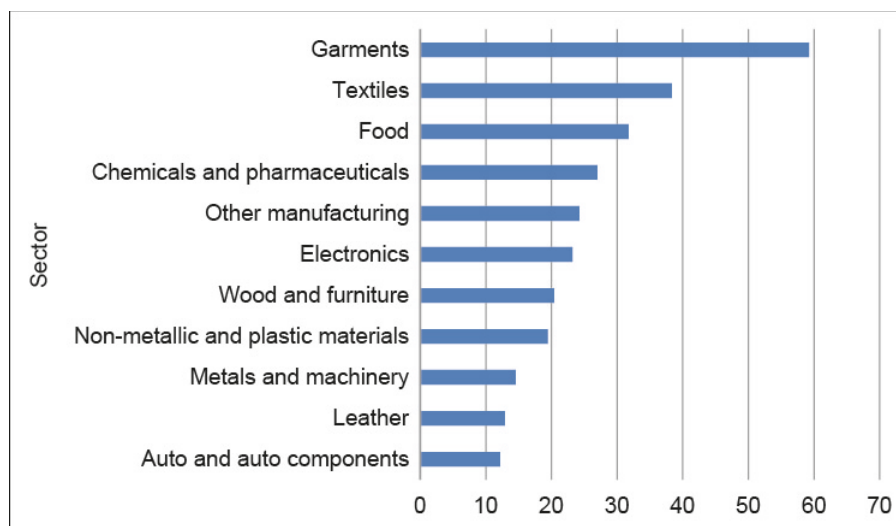
It is also important to highlight that firms that import intermediate goods also tend to employ a greater proportion of women. It is therefore not only on the export side that firm internationalization can create demand for female labor. Taking the exporting and importing results together indicates that linking firms to international markets can be one way of bringing women into the formal labor force and providing them with wage income. Of course, this encouraging finding needs to be tempered by a recognition of persistent gender wage gaps, even in developed countries—an issue the Enterprise

Surveys do not have any data on. Notwithstanding this caveat, the data nonetheless show that trade can potentially be good for women workers, as comparative advantage sectors take on more employees and draw them into the formal wage-labor market.

Of course, it is important to be cautious in interpreting simple averages, as in Figure 2. They represent observed differences only and do not control for the intervening factors that may affect labor demand. It is important to supplement them with econometric analysis of the demand for female labor and its links to firm internationalization. Results from such an analysis (see Shepherd and Stone [2013]) show that internationalized firms indeed tend to be more intensive in their use of female labor, even after controlling for other relevant factors. Of particular note is that the combination of importing, exporting, and being foreign invested all together is associated with a higher proportion of women in the workforce. This evidence tends to suggest that participation in GVCs can, under the right circumstances, be positive for women's employment, subject again to the issue of the gender pay gap, which cannot be evaluated using these data.

As noted in Section 2, it is also important to analyze the sectoral distribution of female labor in developing countries, and to relate it to possible comparative advantage sectors. In a study like this one, it is not possible to analyze every country-sector combination. Instead, we present average figures by sector across countries to provide some first indications of the data. Figure 3 contains the results. It is not surprising to see textiles and garments as the two sectors with the highest proportion of female workers. As noted above, these sectors are sources of comparative advantage in a number of developing countries, which bodes well for female labor market outcomes there as trade opens up. As manufacturing activity becomes heavier, female labor use becomes relatively less intensive. It is striking that in all sectors, except garments, women represent less than half of employees on average in developing country manufacturers. The data are consistent with a difficult labor market environment for women, likely due to explicit and implicit discrimination. By increasing labor demand, trade openness can potentially strengthen labor markets, but as noted above, it will be important to look closely at the functioning of labor market institutions to ensure that women can take jobs for which they are qualified.

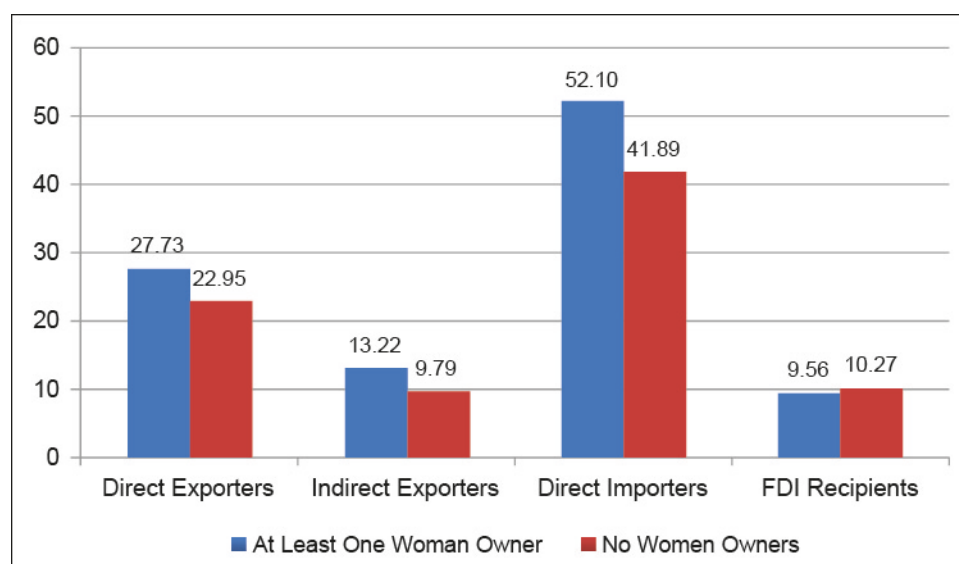
**Figure 3: Female Workers as a Share of the Total Number of Workers,
Simple Average by Sector**
(%)



Source: World Bank Enterprise Surveys.

The second area described in Section 2 for which the Enterprise Surveys have data is women-owned businesses. A descriptive analysis of the Enterprise Surveys data (Figure 4) suggests that women-owned firms are active in international trade. Higher percentages of women-owned firms export (directly and indirectly) than their counterparts with only male owners, although the differences are not very large. Women-owned firms are similarly more likely to be direct importers of intermediate inputs, a factor that tends to boost productivity and competitiveness. However, these firms are slightly less likely to receive foreign direct investment. Based solely on the descriptive statistics, it would appear that women-owned firms compete successfully in international markets. But the understanding needs to be nuanced by detailed econometric analysis that controls for other factors.

Figure 4: Percentage of Firms with at Least One Woman Owner that Engages in International Activity, Compared with Other Firms, All Countries and Years (%)



FDI = foreign direct investment.

Source: World Bank Enterprise Surveys.

Preliminary analysis using an econometric model of export behavior that controls for factors like size and capital intensity suggests that the picture is not as rosy as Figure 2 would tend to suggest. In fact, women-owned businesses export less directly in dollar terms than other firms, even after controlling for intervening causes. However, performance for indirect exports is not different to a statistically significant extent. This finding suggests that women-owned business may be more reliant on intermediaries, like wholesales, to overcome some of the fixed costs associated with exporting. Examples of such costs include information costs on tastes and standards in the foreign market. Alternatively, the econometric results could be consistent with women-owned businesses having less-well-developed international networks, hence the need to go through a middleman, such as a wholesaler. In any case, these preliminary results suggest that there is work to be done to boost the ability of women-owned firms to compete successfully in international markets, and in particular to make direct links with overseas buyers.

What are the factors constraining women-owned businesses in their pursuit of international success? The Enterprise Surveys provide some suggestive information. They ask respondents to cite their top three business constraints. For women-owned businesses, the most commonly cited are access to finance (16% of respondents), practices of competitors in the informal sector (13%), and tax rates (13%). By contrast, firms without at least one female owner list electricity (17%), access to finance (15%), and tax rates (12%). These results suggest that there is some overlap in terms of the policy agenda promoting the participation of women-owned businesses in international markets. Women-owned firms, as well as their male-owned counterparts, clearly see tax issues and access to finance as crucial constraints on their ability to compete. There is a clear agenda for regulatory reform in those areas in a way that promotes inclusive growth. Importantly, though, women-owned businesses also cite practices in the informal sector, perhaps because at their smaller scale—and given their sectoral distribution—they are more subject to this type of difficulty than male-owned businesses. The formality discussion is one that has implications for women in a variety of settings, and these results suggest that it is true for trade, too.

4. CONCLUSION: MAKING TRADE GOOD FOR WOMEN

This paper has reviewed a number of economic mechanisms that connect women with the global trading economy. Increasing trade openness at home and abroad has implications for women in their capacities as consumers, workers, business owners, and traders. It is impossible to provide any general response to the question of whether or not trade is good for women—its net impact is the result of a set of positive and negative effects that play out differently in different country and sectoral contexts.

Given the complexity that arises when multiple economic mechanisms are in play, there is a clear need for detailed empirical work to try and parse out their relative importance. It is striking that there is relatively little such work that deals specifically with the case of women, and almost all of it deals with labor markets. Additional evidence presented here shows that women-owned businesses face difficulties in internationalizing, but they nonetheless do so at an impressive rate. On the employment side, there is clear evidence that internationalization can be good for women's job prospects. Of course, the gender pay gap is persistent around the world and is an issue that needs further consideration in the context of trade. There is mixed evidence on that front in the literature, and more work is needed specifically in the developing country context.

There are a number of policy implications that emerge from these findings. The first is to note that the gender aspects of trade are still ill understood and under-researched. There are few contributions in the academic literature, while the policy literature has tended to focus on particular issues, such as women informal cross-border traders, and has not fully grappled with the available data. This study is an attempt to come to a more complete understanding of the ways in which trade affects women in developing countries, specifically with the aim of establishing whether, and if so, under what conditions, trade can be a positive force for gender equality in the context of SDG5.

In reviewing the data on women-owned businesses, it is apparent that informal practices represent a serious constraint for formal sector businesses. The issue of informality is pervasive in developing economies, particularly in low-income economies. Barriers to the formalization of economic activity, including trade, need to be addressed at the policy level. In some cases, administrative procedures are unnecessarily burdensome, which discourages entrepreneurs from moving into the formal sector.

Employment laws can also be an issue, as can tax rates and administration. Regulatory reform that is effective—in that it achieves important social goals—and efficient—in that it does so at minimum economic cost—would be welcomed in many developing countries. Women-owned businesses, as well as women in the workforce, would stand to gain from these types of reforms.

Another issue relates to the role of GVCs in development. There is evidence that the cluster of activities associated with GVC participation is associated with more intensive use of female labor, although there is, of course, a sectoral composition issue playing out, particularly through textiles and clothing-related activities. Nonetheless, identifying policies that support women's engagement with GVCs promises to be beneficial for trade as well as gender equity.

As in the case of health, there is evidence that there is scope for “win-win” solutions in the area of gender and trade: policies that are good for women, and which also serve to boost engagement with international markets. In many cases of relevance to developing countries, there is good reason to believe that opening to trade can benefit significant groups of women, particularly those employed (or potentially employed) in comparative advantage industries. However, there is also the scope for losses to accrue to particular groups. It is, therefore, important to pay heightened attention to the design of complementary policies that can support women in their multiple engagements with international markets. Addressing discrimination in labor markets, as well as in business operation and financing, are key. It is also important to support the education and training opportunities of women and girls so that they can take advantage of opportunities that require a certain degree of skill. These measures are absolutely consistent with a liberal approach to trade, as well as with a more general posture in favor of gender equality.

REFERENCES

- Berik, G., Y. Rodgers, Y. van der Meulen, and J. E. Zveglic. 2003. International Trade and Wage Discrimination: Evidence from East Asia. Policy Working Paper. Washington, DC: World Bank.
- Bernard, A. B, J. B. Jensen, and R. Z. Lawrence. 1995. Exporter, Jobs and Wages in US Manufacturing: 1976-1987. *Brooking Papers on Economic Activity*.
- Black, S. E., and E. Brainerd. 2004. Importing Equality? The Impact of Globalization on Gender Discrimination. *Industrial and Labor Relations Review* 57(4).
- Boler, E. A., B. Javorcik, and K. H. Ulltveit-Moe. 2015. Globalization: A Women's Best Friend? Exporters and the Gender Wage Gap. CEPR Discussion Paper No. 10475. London: Centre for Economic Policy Research.
- Busse, M., and C. Spielmann. 2006. Gender Inequality and Trade. *Review of International Economics* 14(3): 362–379.
- The Economist*. 2005. The Conundrum of the Glass Ceiling. 21 July. [http://www.economist.com/node/4197626_\(accessed December 2016\)](http://www.economist.com/node/4197626_(accessed December 2016)).
- Ederington, J., J. Minier, and K. R. Troske. 2009. Where the Girls Are: Trade and Labor Market Segregation in Colombia. University of Kentucky, April.
- International Labour Organization (ILO). 2010. *Women in Labour Markets: Measuring Progress and Identifying Challenges*. Geneva: ILO.
- . 2016. *Women at Work, Trends 2016*. Geneva: ILO.
- Juhn, C., G. Ujhelyi, and C. Villegas-Sanchez. Men, Women, and Machines: How Trade Impacts Gender Inequality. NBER Working Paper No. 18106. Cambridge, MA: National Bureau of Economic Research.
- Klein M. W., C. Moser, and D. M. Urban. 2013. Exporting, Skills and Wage Inequality. *Labour Economics* 25: 76–85.
- Kucera D., and S. Tejani. 2014. Feminization, Defeminization, and Structural Change in Manufacturing. *World Development* 64: 569–582.
- Lim, J. Y. 2000. The Effects of the Asian Crisis on the Employment of Women and Men: The Philippine Case. *World Development* 28: 1285–1306.
- Nordås, H. K. 2003. Is Trade Liberalization a Window of Opportunity for Women? Staff Working Paper ERSD, August.
- Organisation for Economic Co-operation and Development (OECD). 2005. Trade and Gender, Trade Policy Working Paper No. 24. Paris: OECD.
- . 2012. *Closing the Gender Gap: Act Now*. Paris: OECD Publishing. <http://dx.doi.org/10.1787/9789264179370-en>
- Shepherd, B., and S. Stone. 2013. Global Production Networks and Employment: A Developing Country Perspective. Trade Policy Paper No. 154. Paris: OECD.
- United Nations Conference on Trade and Development (UNCTAD). 2004. *Trade and Gender: Opportunities and Challenges for Developing Countries*. New York and Geneva: United Nations.
- . 2014. *Key Statistics and Trends in International Trade 2014*. Geneva: UNCTAD.

- United Nations Inter-Agency Network on Women and Gender Equality (IANWGE). 2011. Gender Equality & Trade Policy, Resource Paper. *Women Watch*. http://www.un.org/womenwatch/feature/trade/gender_equality_and_trade_policy.pdf (accessed December 2016).
- World Bank. 2001. Engendering Development Through Gender Equality in Rights, Resources, and Voice. Washington, DC: World Bank.
- . 2004. The Impact of International Trade and Gender Equality, PREM Notes No. 86. Washington, DC: World Bank.