INTRODUCTION

Economies change their sectoral structure as they develop and increase their value added and their overall productivity and improve their living conditions. As sectoral structure changes, value added and employment are reallocated from low to high productivity sectors in ways that positively affect aggregate labour productivity growth, both directly (as average productivity increases) and indirectly, through changes in sectoral productivity. Structural transformation processes thus entail compositional shifts that might have different implications for women’s employment, depending on whether they can benefit from the new job opportunities that emerge and how exposed they are to employment losses.

Structural transformation processes are not gender-neutral. They take place against a background of persistent gender segregation in sectoral employment. Everywhere, sectors such as construction, and transport, storage and communication are male-dominated, while health, education and other social and personal services are female-dominated.1 In other sectors, male and female dominance in sectoral employment is associated with a country’s level of development. Agriculture, for example, tends to be male-dominated in countries with higher income levels, and female-dominated in low and lower-middle income countries, while the opposite is true for public administration. Manufacturing industry is male-dominated in high-income countries, but female-dominated or reaching parity in some lower-middle income countries. Hence, gender segregation might change with structural transformation, but in complex ways and certainly not much (Esquivel forthcoming).

If women and men did not work together but the sectors they worked in provided similarly decent working conditions, including equal pay for work of equal value, perhaps gender segregation would not be such a serious hindrance to gender equality. The absence of decent employment opportunities, however, means that women are crowded into low-productivity, low-paying sectors, which are the ones that grow less than others with structural transformation. Even in low-productivity male-dominated sectors, women are often the first to be dismissed, given their lower seniority or their less protected employment status. There is evidence that gender segregation could in fact be exploited to depress average wages and sustain labour-intensive manufacturing exports (Seguino 2019). In this case, women become trapped in low-productivity, but dynamic sectors, which are among the few that offer them jobs.

Barriers to entry into high-productivity sectors are pervasive as well. For instance, women’s growing educational credentials might not necessarily be those required by high-productivity, high-paying jobs (STEM subjects), reflecting the complex feedback effects between the gender-typing of jobs and education choices (Borrowman and Klasen 2017). Women’s unequal shouldering of unpaid care work not only is the main barrier to entering the labour force but also limits women’s ability to gain access to decent employment opportunities (ILO 2018). Moreover, barriers to entry into high-productivity sectors are reinforced in times of crisis,

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1 Gender segregation is usually studied using the index of dissimilarity (ID), also called the Duncan Index (see for example a recent calculation in (ILO 2017)). The ID compares the distribution of employed women among economic sectors to that of men (that is, 10 per cent of female workers are employed in agriculture, as opposed to 2 per cent of male workers). If women and men were in the labour force in equal numbers, this would also tell something about the degree of feminization of sectors (for instance, whether women employed in agriculture are more or less than men employed in agriculture). But the higher the difference in the numbers of women and men in employment, the less informative the ID index is. This brief presents male and female dominance in sectors, that is to say the proportion of male/female employment at the sectoral level.

This brief has been prepared by Valeria Esquivel based on 10 country studies on the Sustainable Development Goals, conducted as part of the ILO/Sida Partnership Programme.
as exclusionary gender norms become a way of rationing scarce good jobs (UNCTAD 2017).

If structural transformation processes are to benefit women, supply-side “fixes” (Chant and Sweetman 2012) will not be enough. The fact that the enormous progress in women’s educational credentials do not show up in changes in gender segregation patterns implies that women’s skills development needs to be demand-driven, and, more obviously, that there needs to be demand in the first place. Otherwise, removing barriers to entry and increasing women’s labour force participation will only exacerbate occupational segregation, worsening, instead of improving, the working conditions of both women and men (Seguino 2016).²

² As the recent ILO-Gallup 2017 study proves, most women want to be in employment and barriers to their participation exist. Removing these barriers is a necessary but not sufficient condition of their economic empowerment.

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1-DO WOMEN GAIN FROM STRUCTURAL TRANSFORMATION? A VIEW FROM SELECTED COUNTRIES

The countries selected for analysis exemplify the male and female dominance of sectoral employment delineated above. Only in Azerbaijan and Rwanda is agriculture female-dominated (Table 1). Manufacturing industry (including also extractive sectors and construction) is male-dominated in all countries, while services are mostly female-dominated. Notable exceptions are India (16.8 per cent) and Egypt (24 per cent), where women make up less than a quarter of all employment in services.

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### TABLE 1. PROPORTION OF FEMALE EMPLOYMENT BY SECTOR, SELECTED COUNTRIES, 1991–2018

<table>
<thead>
<tr>
<th></th>
<th>1991</th>
<th>2000</th>
<th>2010</th>
<th>2018</th>
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<tbody>
<tr>
<td></td>
<td>AGR</td>
<td>IND</td>
<td>SERV</td>
<td>AGR</td>
</tr>
<tr>
<td>Azerbaijan</td>
<td>50.4</td>
<td>31.7</td>
<td>42.2</td>
<td>52.0</td>
</tr>
<tr>
<td>Chile</td>
<td>10.4</td>
<td>18.2</td>
<td>46.2</td>
<td>10.9</td>
</tr>
<tr>
<td>Costa Rica</td>
<td>6.4</td>
<td>21.9</td>
<td>37.6</td>
<td>7.4</td>
</tr>
<tr>
<td>Egypt</td>
<td>27.5</td>
<td>9.6</td>
<td>18.5</td>
<td>24.4</td>
</tr>
<tr>
<td>Ethiopia</td>
<td>38.2</td>
<td>56.7</td>
<td>61.5</td>
<td>39.3</td>
</tr>
<tr>
<td>India</td>
<td>30.4</td>
<td>19.1</td>
<td>14.0</td>
<td>32.0</td>
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<tr>
<td>Peru</td>
<td>33.9</td>
<td>25.6</td>
<td>43.9</td>
<td>37.1</td>
</tr>
<tr>
<td>Philippines</td>
<td>25.5</td>
<td>32.8</td>
<td>54.5</td>
<td>24.7</td>
</tr>
<tr>
<td>Portugal</td>
<td>47.8</td>
<td>30.5</td>
<td>48.6</td>
<td>50.7</td>
</tr>
<tr>
<td>Rwanda</td>
<td>52.6</td>
<td>12.5</td>
<td>29.7</td>
<td>54.5</td>
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Source: ILO modelled estimates, November 2018.
WOMEN AND EMPLOYMENT IN AGRICULTURE

The process of structural transformation, in which countries have experienced a decline in the share of agricultural employment – particularly acute in India, the Philippines and Rwanda (ILO 2019) – has been accompanied, in almost all cases, by a process of feminization of employment, in other words, an increase in the proportion of women in employment (Table 1). This process is stronger the lower the initial proportion of women. In Chile and Costa Rica, for example, women’s share of agricultural employment has doubled in the past 30 years. In other words, as agriculture contracts its employment in relative terms, men find their way out to other sectors in greater numbers than women. India and Philippines have experienced some small declines (around 2 percentage points) in the proportion of women in employment, suggesting that employment contraction has not had a strong gender impact. Only in Portugal, where agricultural employment as a proportion of total employment is very low – the lowest in our sample, at only 6.3 per cent – has the proportion of women in employment been substantially reduced, from almost half (47.8 per cent) almost 30 years ago to currently a third of employment (31.6 per cent), mirroring the process of high-income countries.

Working conditions are particularly dire in agriculture. In Rwanda and Ethiopia, where agriculture still accounts for the largest share of employment (62.6 per cent and 66.6 per cent (ILO 2019)), female labour force participation is very high and similar to men’s. In both countries, the overwhelming majority of women are employed in agriculture (80 per cent and 65 per cent, respectively). In Rwanda, all women (and men) in agriculture are informally employed (Malunda forthcoming). In Ethiopia, women make up 41.7 per cent of employment but only head approximately 25 per cent of all farm households and have less access to land and other factors of production than men. Women also experience lower returns than men from a given level of resource expenditure, as they receive fewer agricultural extension services, access less formal credit, manage less land and harvest a narrower range of crops, and have access to fewer production inputs (such as fertilizers, pesticides, herbicides, and fungicides) compared with men (Ronnås and Sarkar forthcoming). In Egypt, in line with the sector’s low productivity, over 90 per cent of all employment in agriculture is precarious (Fedi et al. 2019).

BOX 1. RWANDA'S AGRICULTURAL TRANSFORMATION

Despite the efforts to achieve agricultural transformation in Rwanda, farming systems are still predominantly in subsistence production. Women are more involved than men, and their number has even increased in the past decade. But women have less access to markets than men. In the Northern Province of Rwanda, 75 per cent of farmers participate in output markets in potato crops, and 72 per cent of them are market oriented. In contrast, only 26 per cent of bean farmers sold their production. The commercialization of potatoes is in the hands of men – a “husband’s crop” – while beans are mainly sold by women. Women are also overrepresented in low-income casual agricultural work. Despite women’s high engagement in agriculture, they participate little in input and output markets, their decision-making power and their control over agricultural income remains limited and they continue to shoulder high workloads due to the combination of their on-farm and reproductive activities. Removing these inequalities, which contributes to the persistence of subsistence farming, entails going beyond top-down gender-mainstreaming to supporting the adoption of gender-responsive policies at the local level, and focusing on the informal institutional changes that should accompany formal ones.

WOMEN AND EMPLOYMENT IN MANUFACTURING INDUSTRY

In some of the countries under analysis, manufacturing industry (including also extractive sectors and construction) has gained in employment in relative terms: Azerbaijan (explained by the expansion in the extractive sector (Valiyev forthcoming)), Egypt, Ethiopia, India, Philippines and Rwanda. A process of deindustrialization in employment is evident over the past 30 years in Chile, Costa Rica and Portugal. In the case of Chile and Azerbaijan, there has been an expansion of extractive activities, which have had relatively low employment impacts. With the exception of Rwanda, where women’s employment in industry has increased as the sector expanded – although still explaining less than 10 per cent of total employment (ILO 2019) – women have lost employment opportunities in all other countries where the industry has expanded, as manufacturing industry employment has further defeminized. In Chile, Costa Rica and Portugal, where industrial employment contracted in relative terms, the proportions of women in manufacturing employment have remained roughly constant (Table 1). Given that, typically, manufacturing industry and extractive industries are high-productivity, these employment composition shifts have the effect of deteriorating women’s average employment conditions and earnings.

Overall, both the feminization of agricultural employment and the de-feminization of industrial employment entail negative gender impacts of structural transformation that require specific policy interventions (see box 1 and box 2).

BOX 2. ADVANCING GENDER EQUALITY IN THE GARMENT SECTOR

The global garment sector provides manufacturing jobs to tens of millions of workers around the world. At least 75 per cent of these workers are women, but they are not equally represented in positions of power in the workplace. Frequently, lowest paid positions go to women, who work longer hours for less pay than men. The Better Work Programme has shown that taking steps towards gender equality in the sector is a powerful driving force for enhancing working conditions, achieving better results for business and improving lives. For example, providing training to female supervisors can boost line productivity by more than a fifth. Gender balance in worker-management committees is also an important issue. Factories that have female representation in committees proportionate to the factory workforce have overall reduced levels of industrial unrest.

Addressing gender imbalances has knock-on benefits beyond the workplace. The skills learned at work, along with the improved incomes that often follow from improved working conditions, have elevated the position of women in their homes and contributed to more balanced family life, as well as to better educational opportunities and health care for workers’ children.


WOMEN AND EMPLOYMENT IN SERVICE SECTORS

The picture is mixed in service sectors, as their productivity levels and their role as engines of growth are complex, with some sectors positively driving aggregate productivity growth and others negatively contributing to it (Dasgupta, Kim, and Caro 2019).

Like manufacturing industry and construction, services are mostly urban. With the exception of Ethiopia, Rwanda and India, in all other countries under analysis the service sector explains around half or more of total employment. In all cases, the service sector has increased its participation in total employment over the past 30 years. Deindustrialization in Chile, Costa Rica and Portugal has resulted in almost 70 per cent of all employment being in the service sector (ILO 2019). In most countries, the service sector has gender parity in employment – a roughly equal proportion of women and men employed – although this parity is the result of averaging male- and female-dominated subsectors. The exceptions are Egypt (where only one quarter of the employed are women) and India (a mere 16.8 per cent). In all cases except the
In the Philippines, the expansion of services has been coupled with strong processes of employment feminization (Table 1).

Services are highly heterogeneous, and several quite distinctive factors are behind these trends. Services like trade, and hotels and restaurants are typically female-dominated and low-productivity, whilst transport and communications are male-dominated and relatively high productivity – and the countries under analysis are no exception. Financial, insurance and real estate (FIRE) services offer a more mixed picture. They are small in employment terms (between 0.3 per cent of total employment in Rwanda and Ethiopia, 2.8 per cent in Portugal and 6 per cent in Chile), male-dominated when small and feminizing as their employment grows. In Portugal, where finance and insurance employment contracted at a 1 per cent annual rate, but real estate expanded at a 1.5 per cent annual rate in the past decade, women still gained around 5 percentage points in their share, to reach 50.3 per cent of sectoral employment in finance and insurance and 53.6 per cent of sectoral employment in real estate in 2017 (Escária forthcoming). In Chile, however, where the sector increased its productivity but shed employment, women lost 4.6 percentage points in their employment share between 2008 and 2018, falling below parity. As restructuring took place, women were dismissed in greater proportions than men (Velásquez Pinto forthcoming).

Turning to care services, the countries under analysis confirm two trends identified at the global level. First, women account for approximately two-thirds of all employment in care sectors – in health, including long-term care, and education, including early education – plus domestic work; and this proportion rises to over three-quarters in the Americas and in Europe and Central Asia. Second, the larger the care workforce as a proportion of total employment, the more feminized it is (ILO 2018).

In Portugal, for example, where education accounts for 6.6 per cent of total employment and health accounts for 5.4 per cent of total employment, women make up 73 per cent of all employees in education and 79 per cent of all those in health (Escária forthcoming). In Costa Rica, women are 69 per cent of those employed in education, 65 per cent of those employed in health, and 89 per cent of domestic workers (employed by households) (Sauma forthcoming). Proportions are similar in Chile, although approximately 95 per cent of domestic workers are women (Velásquez Pinto forthcoming).

In Ethiopia, where health only accounts for 0.6 per cent of all employment, women are 54 per cent of health workers; but in education, which explains 1.6 per cent of employment, they make up only 37 per cent of the employed, a feature that is also evident in several African countries with extensive rural populations, as female teachers concentrate in urban areas (ILO 2018). Notably, much of the growth of non-agricultural employment in Ethiopia appears to be the result of a statistical quirk, as most workers in private households were excluded in 2005, but not in 2013, when they made up 7.3 per cent of all employment, that is more than a quarter of all non-agricultural employment (85 per cent women). When the statistics are adjusted by excluding workers in private households in both 2005 and 2013 it appears that the share of non-agricultural employment increased by a mere 2.5 percentage points between 2005 and 2013, from 19.1 per cent to 21.6 per cent. The only major gains in employment shares were made in education and health, reflecting large public investments in these areas (Ronnäs and Sarkar forthcoming).

Relatedly, where care sectors are largely public, working conditions tend to be better. In Egypt, workers in care sectors are amongst the least precarious workers (Fedi et al. 2019). In Ethiopia, where almost 98 per cent of women employed are informal, the incidence of informality is only 24 per cent in education and 30 per cent in health amongst women employed, slightly less than the incidence for men (28 per cent and 37 per cent respectively) (Ronnäs and Sarkar forthcoming).

The expansion of the employment in care sectors is associated with further feminization in the countries under analysis. In Costa Rica between 2012 and 2018, women gained 1.5 percentage points in their share in education and 0.5 percentage points in health. In Chile, women gained 7.8 percentage points in the two sectors combined between 2010 and 20184 (Velásquez Pinto forthcoming). Yet, the expansion of employment in care services also comes with a deterioration in output per employee, that is, in labour productivity. In Chile, the abovementioned expansion in women’s employment was associated with a drop of 3 per cent in productivity (as compared to a 10.2 per cent average increase). In Rwanda,
real estate, education, health and social work and other services explain 2.6 percentage points of the expansion in employment, but the output per worker went down by 25 per cent in a decade, thus making a negative contribution to productivity growth (-16.7 per cent for a positive total of 73.1 per cent) (Malunda forthcoming). In general, care sectors appear as low productivity and negative contributors to productivity growth (Kucera and Jiang 2019).

Given the importance of health and education to sustain any ambitious and human-centred development agenda, it is somewhat suspicious that care sectors appear as dragging structural transformation. Issues of productivity measurement in these sectors might partly explain this paradox (box 3).

BOX 3. PRODUCTIVITY IN CARE SECTORS
Measuring productivity is challenging in care sectors. First, standard definitions of labour productivity do not fully apply: at some point, increasing persons cared for per care worker jeopardizes care quality. Nurse under-staffing or too high pupil-to-teacher ratios are cases in point. If quality changes are poorly captured in output valuations, increasing the number of care workers per person cared for will be reflected in a lower measured productivity - when it is possibly the opposite. Second, as care provision has public-good characteristics, output calculations underestimate the true value of health and education outputs, lowering output per worker calculations. Third, and particularly problematic, most care services are not sold in the market. Without a price, output valuation is not possible. Input methods are thus used to calculate value added by adding up the value of all factor inputs necessary for producing care services - what is called the "input equal output convention". Labour inputs will be valued at their cost (wages), under the assumption that pay correctly reflects workers' productivity. However, existing care pay penalties in care sectors mean that low pay will be directly reflected in lower sectoral value added. Moreover, when value added is calculated using the input method, variations in value added are assumed to equal variations in inputs, which are typically derived from variations in volume indexes (extrapolations). In other words, variations in the numerator of the output per worker ratio are derived from variations in the denominator (number of workers). If this is the case, productivity growth calculations are flawed. If indexes were perfectly comprehensive, they would be in fact equal to zero.

Source: Esquivel forthcoming.

Public administration shares some of the features of care sectors. In Costa Rica, it is the most dynamic employment creator, along with hotels and restaurants; as employment has grown, it has feminized and carried with it productivity losses. In Egypt, public administration is a particularly significant employer of women - and the signalled freeze in public hiring and a commitment to downsizing public employment seems to be at the heart of women's decline in labour force participation (for highly educated women) and a degradation of women's employment conditions (for the least educated). Indeed, public administration employment was among the few sectors that offered women the possibility to reconcile heavy unpaid care responsibilities with paid work. Coupled with the lack of formal employment opportunities in the private sector and lack of access to childcare and elder care services, the contraction of public employment leaves women with little or no choice but to leave the labour force (Fedi et al. 2019). In Portugal, where public administration also contracted at a 0.4 per cent annual rate over a decade, women lost 19 percentage points in their employment share, down to 35 per cent (Escária forthcoming). At least in these two cases, women are also the first to be fired when public employment contracts. As has long been recognized, fiscal adjustment is not good news for women.

5 Some further compositional effect could also be at stake, as public administration also includes defence.
2-LABOUR MARKET GENDERED OUTCOMES

In several of the countries under study, decent employment creation has not been sufficient to match labour supply – and that has deteriorated women’s labour market outcomes and hindered improvements. This was particularly the case in the two agrarian economies under study, in which female labour force participation is high. In Rwanda, the unemployment rate stood at 15.1 per cent but was higher amongst women, at 17.1 per cent – both high levels for a predominantly agrarian economy (Malunda forthcoming). In Ethiopia, the deficit of productive jobs takes the form of working poverty in rural areas, while in urban areas open unemployment is more extensive. Female rural unemployment stood at 2.9 per cent in 2013, compared with 23 per cent for urban areas (Ronnås and Sarkar forthcoming).

In both countries, gender wage gaps (calculated among wage workers in both urban and rural areas) are high. In Rwanda, women’s hourly wages are 65 per cent of men’s; but in median terms, they reach 87 per cent of men’s in farms jobs and 82 per cent of men’s in non-farm jobs – in other words, women work longer hours to make ends meet. In Ethiopia, the average female wage in urban areas is only 62 per cent of the average male wage. This wide wage gap is partly due to the over-representation of women in low-wage sectors, such as trade, hotels and restaurants. However, the gender wage gaps within sectors are also large. In manufacturing women earned on average 65 per cent of the average male wage, in trade 64 per cent, in hotel and restaurants 66 per cent, in education 68 per cent and in the health and social services sector 62 per cent (Ronnås and Sarkar forthcoming).

3-CONCLUDING REMARKS

The jury is still out on whether women gain or lose with structural transformation processes. It would perhaps be unwise to settle the matter depending on the “net” results – that is, whether gains in employment in service sectors that provide decent job opportunities more than compensate for losses in manufacturing industry (high productivity) and constitute a viable alternative to remaining in agriculture (low productivity) employment. More to the point, for women to gain from structural transformation the following are key: engaging women in productivity-enhancing innovations in agriculture; making explicit policy choices to include women in high-productivity manufacturing; supporting investment and the expansion of decent work in care sectors; and in general providing a dynamic, pro-employment macroeconomic policy framework.
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