

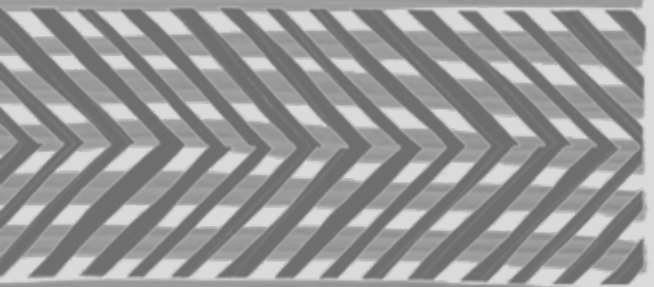
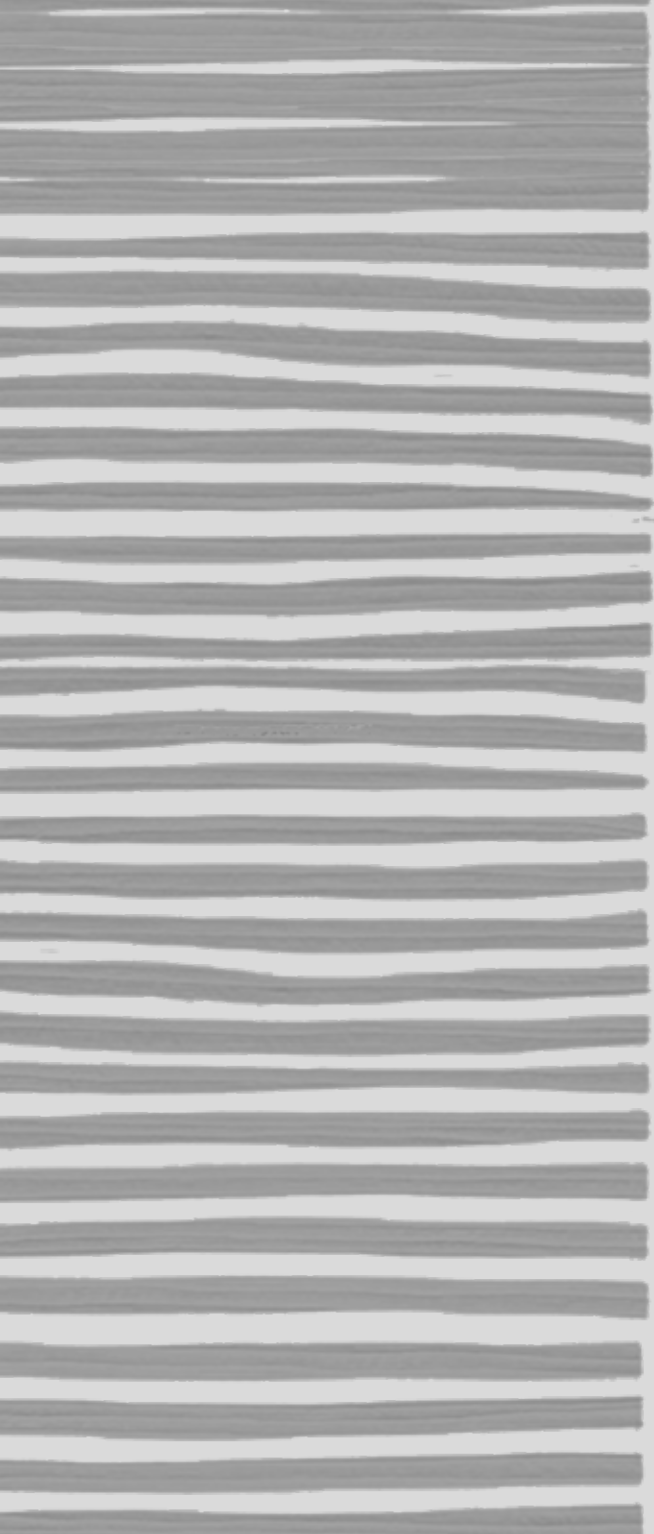
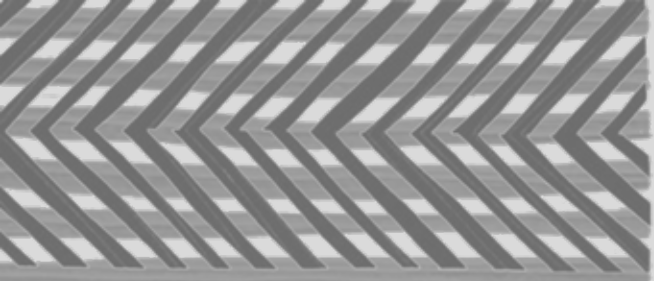
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WOMEN EMPLOYMENT IN
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Kethelyn Ferreira (PPGE/UFRJ)

INTRODUCTION

The analysis of socio-economic impacts of international trade has for a long time been considered neutral with regard to gender inequality; in other words, the effects of changes in the level or type of commercial integration between countries were to impact women and men equally (López, Muñoz and Cáceres, 2019). In the last two decades, there has been progressive dissemination of the perception that such neutrality does not exist as a result of men and women occupying diverse paid and unpaid job positions (Fontana, 2009). These differences can, furthermore, impact countries with regard to commercial performance and competitiveness (UNCTAD, 2017; Zarrilli, 2017). The economy, in other words, is a structure *with gender issues*. Gender relations are formed and conditioned according to the context in which social relations are included, originating stereotypes such as work division according to gender and vertical or horizontal¹ segregation (Ridgeway and Correll, 2004).

Based on this assumption, the literature often questions whether trade liberalization contributes towards reducing inequalities between women and men or reinforces them. This questioning has partly to do with the characteristics of jobs associated to exports and imports in relation to the total labor market in an economic setting. Indeed, according to evidence shown by Fontana (2009), the specificities of each country will play an essential role regard-

¹ Vertical segregation refers to the difficulty that women have to rise in the ranks and occupy positions associated to decision-making. Horizontal segregation, in turn, refers to the fact of women staying in specific economic sectors and certain types of job positions (ILO-UNDP, 2019, apud Barafani and Verna, 2020).

ing the answers given to these questions. In other words, factors such as institutions in the labor market, the country's socio-economic characteristics and the level of access to information and the markets have a strong influence in determining the results of trade over women. Additionally, the volume and profile of the job associated to trade differ according to commercial partners, especially in the case of countries with different types of geographic and sectorial expertise, as is the case of Brazil.

In this study, we seek to assess the impact of the European Union-Mercosur agreement on the jobs of Brazilian women. This agreement, whose signature dragged on for 20 years due to diverging interests between the two blocks, was finally signed at the end of President Macri's term with the approval of the Brazilian President in 2019. The agreement follows the broad and comprehensive trend of the agreements that the EU has latterly signed and makes Mercosur countries commit to non-commercial disciplines and themes which have not thus far been part of the multilateral and bilateral agreements signed by the block – notably intellectual property and government procurement. With regard to trade liberalization, the agreement anticipates a strong tariff reduction for Mercosur industrial products and a more moderate liberalization for the European agricultural product market, as a result of timeframes and certain non-tariff barriers being maintained. For the Brazilian industry, particularly, the increase in competition with an industry as highly competitive as the European, due to trade liberalization and adherence to other disciplines can significantly impact domestic national production and jobs associated to it (Sarti and Castilho, 2021).

It is worth highlighting that we recognize that this “non neutrality” of economic phenomena, especially with regard to foreign trade, is not restricted to gender differences: the effects of changes in economic policies and conditions do not affect the various individuals with differing forms of integration in society in the same way, such as people of different socio-economic strata, different color or race, different sexual orientation or different gender identities.² In this regard, Azar, Espino and Salvador (2009) state that despite gender being an explanatory variable of social inequalities, it is no more than a social construction, such as race, ethnicity, class and sexuality, which are also socially constructed categories, which intersect with gender and contribute towards determining the position of individuals in society. Besides

² On this matter, Oliveira *et al.* (2021), for example, point out that an overlap of discriminating attitudes associated to these many social bookmarks takes place, and this overlap ultimately helps to increase the hierarchization imposed by gender division in the workplace.

these differences, in the women's group, level of education, age, having or not children and their ages, in addition to the many obligations imposed in their homes and communities, they also influence their integration into the job market (Fontana, 2009).

It is always worth remembering that although the present study focuses on the labor market which pays wages, the impacts of a trade agreement are not restricted to it. According to Fontana (2020), changes in trade policies can affect the population through the following channels: employment, consumption and public provision. In the first channel, it is considered that policies will influence expansion or contraction of the different sectors and may change the demand for workers within them. In the second channel, it is understood that relative price and goods supply may also be subject to change. Finally, in the third channel, the idea is that the social services offered, as well as their quality, can change.

The importance of recognizing these channels exists because, as pointed out by Azar, Espino and Salvador (2009): restricting the analysis of gender relations and trade exclusively through the links between trade and the labor market ends up ignoring other factors and aspects outside the job market, but which contribute to inequalities in the realm of work itself. This is the case of the responsibilities assigned to women in the unpaid sphere of the economy and are reflected as disadvantages with regard to insertion into the job market, and even more in relation to wealth distribution, access to public assets and to the realms of power.

Regardless, however, of the different transmission channels, "the differences between men and women, whatever way in which they are integrated in society (work factor suppliers, consumers etc.)" (Castilho, 2010, p. 224), result in changes to trade regulation – such as regional and multilateral agreements – affecting women's lives differently.

Although both economic theory and the analysis of concrete phenomena and policies insist on gender neutrality, the existence of different economic and cultural mechanisms result in women having to face different forms of discrimination in the different economic *loci*. The most evident is the labor market, where discrimination is visible and measurable via wage difference or occupation of leading positions, for example. For that reason, it will always be at the core of our analysis. There are, however, other *loci* as, for example, the one in which society's reproductive tasks are carried out, where the role of women is very well socially defined in relation to that of men.

On account of the many discrimination mechanisms that exist, economic phenomena impact women's lives differently. This is no different in the case of foreign trade – and consequently, trade agreements. The most evident

connection between trade and gender happens, indeed, within the paid labor market. Changes in the flow structure of international trade can impact jobs, and due to their gender-based segmentation, end up affecting men and women differently. This is due to the fact that some sectors are more intensive in terms of male or female labor, or alternatively, of wage differences existing between women and men. The connection between labor market and trade can also happen in the opposite direction, which is: lower wages usually paid to women can be a source of competition – a spurious one, as Fajnzilber (1988) would say – and benefit countries whose specialization is concentrated in highly “female-type” sectors. (UNCTAD, 2014, Sipelman; Busse, 2005).

Unpaid work can also be affected by the progress of international trade, be it due to changes in the paid job market itself (and here the relation can happen in the two aforementioned directions), or due to changes in access to imported goods or services, also, in a regulatory environment capable of influencing the availability of public care services. Indeed, time allocation for men and women between paid and unpaid work and leisure may be influenced by changes in relative price for goods and services and paid work conditions (also potentially affected by international trade). With a difference in consumer baskets, price changes have different impacts on the purchasing power of both groups. There is evidently intersectionality of this aspect with the social classes in which they are found.

Beyond these specific connection/communication/relation mechanisms between trade and gender, the adoption of a certain trade policy direction is normally included within a broader economic policy direction. The trade liberalization process is normally associated to the implementation of so-called structural reforms, who have a decreasing State as one of their main objectives and motivations, including processes of privatization, deregulation and the reduction of State investment. According to Bidegain (2009), “Trade liberalization is part of a structural adjustment process which affects the rendering of services within the scope of the economy of care, restricting access to them for large sectors of the population, mainly those on low income” (p. 10, *our translation*). In this regard, some direct effects of trade liberalization can be increased through the adoption of policy packages employed to reinforce a liberal orientation. In Brazil, for example, trade liberalization in the 1990’s was contained within the adoption of a set of neoliberal policies aimed at reducing State participation in the economy.³

³ As an example, see the study on the impact of water privatization on women in the city of Manaus (Equit, 2013).

Finally, international trade was still able to influence the lives of women through the effect it can cause on economic growth and poverty.⁴ Although the relation between trade and growth is not clearly demonstrated in the empirical literature (see Rodríguez and Rodrik, 2000), if it exists, it will somehow influence women's lives, whether through income, through work opportunities, poverty reduction or consumer opportunities.

In order to analyze the prospects of the Mercosur-EU agreement for women with emphasis on employment, this study is organized into four sections, after this introduction. In the second section, a brief trade profile between Brazil and the European Union is presented. In the third, a few observations are made with regard to recent or ongoing changes in the female job market in Brazil, which somehow contribute to gender inequalities and make the situation for female employment in Brazil more delicate on the eve of the agreement being implemented. The fourth session is dedicated to presenting and assessing the volume and profile of female employment associated to Brazil-EU trade, based on an estimate of the work content contained in exports and imports, as well as an analysis of the quality of female employment associated to trade through an index that synthesizes some of the features of female employment. The final session points to the prospects of the agreement for female employment in Brazil and presents additional considerations about the prospects of the agreement according to a female point of view. It is worth highlighting that this text consists of a reduced version of the study of the same name.

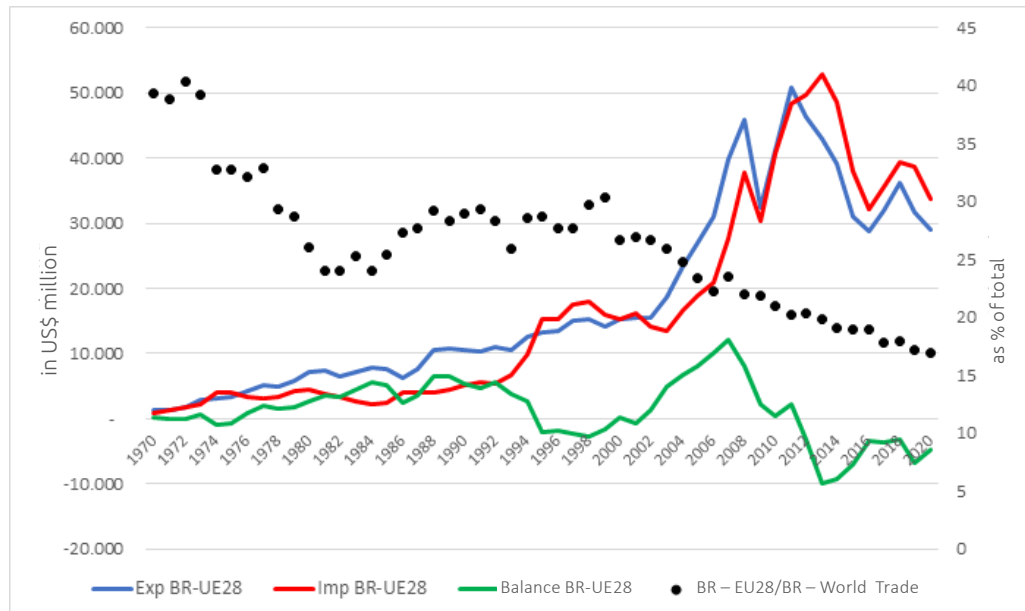
BRAZIL-EU TRADE PROFILE

European countries figure historically among Brazil's main trade partners, as well as of the remaining Mercosur countries. Although its weight in terms of Brazilian foreign trade of goods has fallen significantly, European countries continue to carry an amount of weight en bloc in Brazilian exports and imports similar to that of the U.S. The new feature in the last few years has been Chinese competition – trade flows between Brazil and China have grown quickly in the new millennium and that country has become Brazil's main trading partner. In 2019, China was responsible for 25% of Brazilian foreign trade,

⁴ As pointed out by Cagatay (2005), one of the arguments that has been used in favor of trade liberalization is that trade expansion has "equalizing" effects, from a gender point of view, by contributing to higher economic growth rates and increasing the level of competition among economies.

with the UE27 group accounting for 17.3% (half the weight observed in the 1960's and 1970's).

GRAPH 1. PROGRESS OF TRADE FLOWS OF GOODS BETWEEN BRAZIL-EU28 AND EU WEIGHT FOR TOTAL TRADE



Source: Comtrade/WITS

Brazil's main EU partners are Germany, Italy, Spain and Holland, whose port receives a large part of the goods exported to the other countries.

In terms of structure, Brazil-EU trade is characterized by a North-South type of trade pattern, meaning that Brazil exports predominantly goods of agricultural and mineral origin—processed or not— and imports predominantly manufactured goods, with important weight placed on the more sophisticated products.

In the following chart we can see that 64% of Brazilian exports to the EU were concentrated on agribusiness commodities, products from the mineral extraction, food and beverage industries and metal and steel products. The concentration and setup are relatively close to those of total exports for Brazil, the only difference being the greater weight of transport equipment within total exports (9.8% for total and 6.2% for UE28).⁵ In terms of development,

⁵ The concentration is currently higher for total exports than bound for the EU, mostly due to the extremely high concentration of Brazilian exports to China, which has become the first destination for Brazilian products. The Herfindal-Hirshman Index (HHI), which measures the level of concentration, showed a tendency towards concentration on total exports and export stability to EU28, with it being higher in 2002 with regard to sales to Europe.

in the case of EU exports there were no really significant changes: while it is possible to see a strong “primarization” and concentration movement in the total export agenda, in the case of exports to the EU, the structure and level of concentration show certain stability since the early 2000’s. When we take a more disaggregated look at the products⁶, most of the 15 products with the highest participation on the agenda in 2018 correspond to processed or unprocessed agricultural products, unprocessed or partly processed mineral products (metal or steel), and cellulose; the list also contains 3 manufactured products that take a higher level of preparation: aircraft, car parts and certain types of machinery and mechanical equipment.

The import agenda coming from the EU differs greatly from the one for exports, and stands out in relation to total imports due to its greater diversification⁷, with predominating importance given to manufactured, and particularly, more sophisticated goods. With regard to total imports, Brazil does not import minerals (especially oil and oil products) from the European continent, this being the greatest difference regarding total foreign purchases. The three major sectors responsible for most of the products imported from the EU are chemicals/petrochemicals, machinery and equipment and transport material. Under the SCN classification we use here (relatively aggregated), three products accounted for 36% of imports coming from the EU in 2018: certain machinery items and mechanical equipment, pharmaceutical products and car parts.

The EU is a very important Brazilian partner, notably in certain sectors. On the Brazilian export side, the EU is an important market for agribusiness and food products, minerals, and to a lesser extent, other manufactured products such as paper and pulp (26% of total exports), metal and steel products (18.5%) and chemicals/petrochemicals (18.3%).⁸ In terms of Brazilian imports, the EU is the main supplier in many sectors (paper and cellulose, non-metal minerals and tobacco), but EU-originated imports for the chemicals, machinery and equipment and transport material sectors are particularly important for total imports due to the volume of imports for these sectors.

The weight of Brazil regarding European imports, on the other hand, dis-

⁶ The analysis is based on a separation of 84 products from the National Accounts System (SCN) version with 106 products.

⁷ Imports from EU28 continued far more concentrated than total Brazilian imports throughout the period between 2002 and 2018. Although the tendency towards decentralization was observed for the EU and for the world, the HHI for imports coming from UE28 in 2018 stood at 0.0605, much higher than that observed for total imports – 0.0339.

⁸ In the case of tobacco, the EU weight stands at 37.6%; however, export volume is relatively low, as with furniture.

counting intra-EU exchanges, is negligible – 1.6% (despite being higher than Brazil's weight relative to total global imports). Looking to the weight of Brazil on European imports, only 3 sectors are worthy of mention: tobacco, paper and cellulose, and agribusiness.

It is worth highlighting that with regard to the services trade, the importance of the EU is even greater. Based on services trade data⁹, EU participation is far greater than their participation in the trade in goods. On the Brazilian import side, in 2018 the EU accounted for 46.2% of total Brazilian services imports, and in the case of exports the total for the EU was 27.8%.

TABLE 1 – FOREIGN TRADE FOR BRAZIL-UE28 – 2018 (AS % OF TOTAL)

	Exports	Imports	Balance	Structure		Weight EU		Weight Brazil
	UE28	UE28	UE28	Exp.	Imp.	Exp.	Imp.	Imports outside EU
Description	(US\$ million)			(as % of total)		(% of total Brazil-World)		(% of total EU-World)
Agribusiness, vegetable and animal extraction	5,670,751	254,915	5,415,835	15.2	0.7	12.8	6.3	9.2
Mineral extractive ind. products	7,166,327	215,642	6,950,685	19.2	0.6	14.4	1.7	1.9
Food and beverage	6,896,381	1,834,356	5,062,025	18.5	4.8	19.6	27.7	7.0
Tobacco Products	732,970	21,875	711,095	2.0	0.1	37.6	34.9	20.3
Textiles, apparel, leather artifacts, footwear	748,115	316,882	431,233	2.0	0.8	14.5	5.7	0.4
Timber products, cellulose, paper and byproducts	3,474,467	449,432	3,025,035	9.3	1.2	26.0	38.2	12.2
Chemical, petrochemical, pharmaceutical prods	3,327,686	13,647,085	-10,319,400	8.9	35.9	18.3	23.2	0.7
Rubber and plastic products	179,666	1,125,195	-945,529	0.5	3.0	7.1	22.4	0.4
Non-mineral products	146,404	541,638	-395,234	0.4	1.4	7.3	34.4	0.8
Metallurgy & steel	4,150,556	2,879,385	1,271,171	11.1	7.6	18.5	24.6	1.8
Machinery, equipment and maintenance	1,977,083	9,592,298	-7,615,215	5.3	25.2	15.8	22.2	0.3
Transport material	2,300,887	6,341,772	-4,040,885	6.2	16.7	10.2	21.6	0.9
Furniture and diverse industry products	477,534	788,722	-311,189	1.3	2.1	25.0	21.6	0.3
Other non-classified goods and services	3,910	56,514	-52,604	0.0	0.1	5.5	2.9	0.1
TOTAL	37,252,738	38,065,714	-812,976	100.0	100.0	16.1	20.5	1.6

Source : SECEX, GIC.

Brazil's main EU partners are Germany, Holland, Italy, Spain, France and UK. Holland comes up as the main receiver of exports from Brazil, due in large part to the entry of grains through the port of Rotterdam, from where they

⁹ Obtained from SISCOSEV, the Economy Ministry's Services Flow Registry System.

are distributed to European countries – the same (on a smaller scale) occurring with Belgium. Germany has a key role, both as the destination country as that of origin for commercialized products. Italy, UK, France and Spain are traditional partners. Together, the aforementioned countries absorb around 83% of Brazilian exports and 79% of imports coming from the EU to Brazil.

The differences in levels of tariff and non-tariff protection of both blocks reveal the interests and provide an indication of each side's potential, as commented during the agreement assessment. Table 2 succinctly presents the tariff profiles of Brazil and the EU, based on WHO data, and informs the tariff quota coverage for imports.

As seen in Table 2, the average EU tariff protection is much lower than Brazil's. It differs greatly, however, for agricultural and non-agricultural products, with greater protection for the agricultural sector, both in tariff and non-tariff terms. Brazil and Mercosur, by contrast, offer greater protection for the industrial sector, basically through tariff tools – although the average tariff rate on agricultural product imports is not that much lower than the average. In terms of tariff peaks, there are more of them and show higher rates for agricultural products imported by the Europeans.

TABLE 2 – STRUCTURE OF BRAZILIAN EXPORT AND IMPORT TOTALS AND FOR UE27 – 2000 AND 2019 (AS % OF TOTAL)

		Total	Agricultural	Non-Agr.	Tariff quotes (coverage)
EU	Average	5.2	12.0	4.2	13.5
	Maximum		235.0	26.0	
Brazil	Average	13.4	10.1	13.9	0.2
	Maximum		35.0	35.0	

Source: WTO

FEMALE EMPLOYMENT SITUATION IN BRAZIL ON THE VERGE OF IMPLEMENTATION OF THE AGREEMENT

The Brazilian labor market is marked by blatant gender discrimination, due to the natural way that the role of women, subordinate to men, is seen. Saffioti (1987) has pointed out that the fact this this subordination is seen as natural is the result of a sociocultural dimension. And, generally speaking, the problems that exist in the labor market mirror the issue related to gender dominance and submission present in society as a whole. In summary, discrimi-

nation against women is rooted within social norms, which instill on them a subordinate role, both in paid and unpaid employment settings (Himmelweit, 2000 *apud* Barrientos *et al.*, 2019). This discrimination takes place in various forms: the Brazilian labor market is marked by strong horizontal and vertical segregation of women in the job market.¹⁰ And despite the female population of active age (PIA)¹¹ being higher than that of males, the percentage of women in the economically active population (PEA)¹² is lower than that of men (in 2018, women accounted for 44.6% of PIA). In addition, the participation rates (ratio between PEA and PIA) and occupation rates (ratio between those in an occupation and PIA)¹³ in the labor market also underline female under-representation, respectively 52.9% and 45.6% (lower than for men: 72% and 64.3%, respectively). Conversely, when we analyze the numbers for unemployed people in the economy, women are in the majority – the female unemployment rate in 2018 stood at 13.8%, higher than the male rate at 3,2 p.p. (Pnad [National Household Sample Survey] -2018).

There can be many reasons to explain female under-representation in the paid employment sector. 31.6% of women who declared they had not sought employment in 2018 attributed the fact to the responsibility of taking care of household chores, children or other family members. According to Bruschini (1994), “the need and the possibilities a woman has to work outside the home depend both on economic factors and the position she occupies within the family unit” (p. 181), in other words, the socially imposed responsibility on women to perform household chores presents itself as a clear hindrance to their seeking employment. This reality is noticeable in the case of Brazil, highlighting one of the impacts of gender division in the labor scope on women’s inclusion in the paid employment market.

In practice, women perform a large volume of work at no charge. This work is seldom visible and is understood as something stemming from human nature, particularly the nature of females (Himmelweit, 1999; Hirata and Kergoat, 2007). This work, although unpaid and unrecognized, is essential in order to enable individuals to socialize as well as produce and maintain hu-

¹⁰ Horizontal segregation is associated to women remaining within specific economic sectors and certain types of jobs, and vertical segregation, to the low female representation in positions of leadership and associated to decision-making (ILO-UNDP, 2019 *apud* Barafani; Verna, 2020).

¹¹ PIA corresponds to the sum of people aged 14 and over in the workforce or outside the workforce (CESIT [Centre for Studies in Trade Unionism and Labor Economics], 2017).

¹² PEA corresponds to people of active age inserted in the labor market, both employed and unemployed (CESIT, 2017).

¹³ According to the CESIT definition (2017).

man abilities, on which the life of economies depends. Additionally, the ways in which this work is performed in different societies shape the way women and men are inserted in the paid labor market (Hirata and Kergoat, 2007). Female under-representation in the paid labor market and their rating as “unemployed” or “unoccupied” underestimates much of the work done by women¹⁴, although, as stated by Elson (1999), there is a clear intersection between performing paid and unpaid activities, both equally necessary.

In addition to the features of vertical and horizontal segregation, as well as the presence of discrimination and stereotypes with regard to the insertion of women in the paid labor market, the latter was further affected in the last few years by certain phenomena which tend to exacerbate inequalities. To wit: the 2019 labor reforms, the onset of the pandemic, and in a longer timeframe, changes in technology.

The approval of the labor reform in 2017¹⁵ takes the form of a new obstacle for greater equality between men and women in the labor market. As Alves and Faria (2020) accurately state, the labor reform brings about an “increase in differences and social inequalities which historically place women in an invisible and subordinate position” (p. 180). According to Krawczun *et al.* (2020), the enactment of this law culminates in important changes to labor relations at a national level. To the authors, the changes to CLT (Consolidated Labor Laws) Article 461, for example, make it difficult to defend isonomy between wages for women and men who perform a job of “equal value” and occupy the “same job position”. Following the change in the law, in order for it to be mandatory to offer the same pay to employees as per the aforementioned terms, it is necessary that both be employed in the same establishment, whereas previously it was enough that the work be carried out in the same municipality or metropolitan region and for the same employer. Additionally, if one of the prerequisites for equal pay was simply that both parties perform the same job function with a maximum of two years’ difference, with the change to article 461 it became necessary for the employees to have a maximum of four years’ work difference at the company in relation to their counterpart, regardless of the work performed. In general terms, the deregulation of the labor market suppresses the mechanisms necessary for the correction

¹⁴ According to the continuous Pnad interview Manual (2017), the people who performed only the following activities in the week of reference are not considered to be employed: i) production destined for self-consumption by unpaid people in the household; ii) voluntary work; iii) caring for people living in the household or family members living outside of it or iv) unpaid domestic chores within their actual household or at the home of a family member.

¹⁵ Law nº 13.467/2017, which alters the Consolidated Labor Laws (CLT) statute.

of pay inequality (including gender) by restricting situations where the jobs performed can be compared (Krawczun et al, 2020). Alves and Rabelo (2017), *apud* Alves and Faria (2020), highlight the inclusion of an innovation which implies that even after hardening the conditions which would enable female workers to demand equal pay, if it becomes possible to prove wage discrimination, the penalty levied on the employer is delivered in the form of a paltry fine.

Additionally, the reform also brings about changes to working hours that can be very detrimental to working women: the permission to disrespect shift limits and extend shifts in unhealthy environments. Despite this factor reflecting on all classes of workers, in the case of women this change is added to a double shift context related to the socially attributed responsibility of caring for home and family. Finally, it is important to note that other CLT alterations render pregnant or nursing workers even more vulnerable before their employers, as it permits that they work in unhealthy environment, fully transferring the onus and accountability of this type of work to women. It also allows breaks for breastfeeding to be negotiated directly with the employer, allowing, thus, that the will of the employer override the needs of women (Farias, 2018).

In the face of this scenario already marred by the deterioration of women's labor relations, the onset of the Covid-19 pandemic made the situation even worse. According to ECLAC (2021a), the pandemic deepens the ties of gender inequality and threatens women's autonomy on many levels, such as: gender division of work, patriarchal cultural patterns, concentration of power and socio-economic inequality and poverty. With regard to gender division of work, it is noticed that women are concentrated in the sectors containing the highest risk of contraction. Furthermore, the increase in demand for home-care, with schools being closed down, for example, also tends to overburden women. Another important point generally observed in Latin America and the Caribbean is the larger number of women in low-skilled sectors, thus increasing the likelihood of job losses in a scenario of ever-growing automation.

The Covid-19 crisis has also sped up other organizational changes, made possible by the recent technological changes. According to Valenzuela *et al.* (2021), there has been an acceleration in terms of process automation and digitalization of operations, enabling opportunities to incorporate changes of a structural nature. The discussion about the impact of new technologies on jobs and people's lives, particularly automation and digitalization allied to the use of artificial intelligence, Big Data and widespread incorporation of the internet to various types of equipment, precedes Covid-19. The integration of these technologies can result in gains in terms of productivity and

wealth for countries, as well as enabling a more sustainable use of resources. The realization of these gains, however, does not guarantee their equal distribution among peoples (Roberts *et al.*, 2019) nor people. One relevant aspect of current technological changes is that they can potentially have an impact on jobs thus far unthreatened by technical progress. Indeed, artificial intelligence combined with modern robotics leads to Machine Learning and enables the automation of tasks, until recently considered too complex, to be performed by machines (Benhamou, 2020). In other words, technological convergence enables the execution of non-standard tasks by non-human beings.

Various studies estimate the potential impact of technological changes on jobs related to the characteristics of the activities performed by workers in different job positions. Based on the likelihood of man being replaced by machine, estimates are made as to the likelihood of work automation, and considering the structure of employment, a result is reached in percentage points regarding how much of existing jobs are to be replaced and which will be the people, countries and regions to be most affected. Lima *et al.* (2019) estimate that 60% of workers in Brazil will be affected by automation in the next few years, a figure slightly higher than the 50% estimated by McKinsey (2017). Such a change taking place will obviously depend on the speed of change for the assimilation rate of new technologies by companies established in Brazil – which is considerably low at the moment (Kupfer *et al.*, 2019).

Based on the segregation in the labor market, men and women are affected differently by technological change. In a study made for the US, the IWPR (2019) points to the fact that the percentage of women at risk of losing their jobs due to technology (58%) is higher than their participation in the workforce (47%). An analysis of jobs according to the potential for automation shows women at both extremes: on one side, there are more women than men in sectors with a higher risk of automation (above 90%, according to study estimates). At the other end, women are also the majority in sectors where risk of automation is low, such as caretaking activities, in which wages, however, usually tend to be lower.¹⁶ The study also points out that in technological jobs (I.T. and digital media), although women are well represented, that is not the case in the better paid positions. In addition, the wage gap in favor of men is also much more significant in the world of digital work.

¹⁶ The study emphasizes that, generally speaking, these “secure jobs”, from an automation point of view, as well as paying even lower wages, are of lower quality and provide less access to benefits obtained in many jobs with a higher risk of automation.

Many studies assess the likelihood of women's jobs being affected by automation, many of them showing a higher probability than in the case of men.¹⁷ For Brazil, the comparison of the impact of automation on the different sexes made by Lima *et al.* (2019) demonstrated that women were more vulnerable to automation than men. The numbers for the index that measures the likelihood of work automation weighted by its participation in total employment showed 69.7% for women, compared to 62.5% for men.

Women can also be affected in other ways. The development of platform work, based on the progress of networks and telecom technologies has imposed significant changes in employment organization and workplace relations. At the same time that it creates job opportunities, they are significantly marked by instability, precarious workplace relations and no social security. Furthermore, in this case women's vulnerability can be relatively higher than men's due to privacy issues, possibility for discrimination and difficulty to reconcile these jobs with caretaking tasks usually carried out by women (IWPR, 2019).

One aspect which could favor a reduction in gender inequality, according to Roberts *et al.* (2019), consists of an eventual reduction or reorganization of working time that favored a redistribution of caretaking tasks between men and women. This possible balance between paid and unpaid work distribution for women and men would not take place spontaneously.

Thus, gender perspective must be integrated to public policies to face the pandemic. ECLAC (2021a), however, points out that this very seldom occurs, and consequently the pandemic ends up by causing a backwards movement of at least ten years in terms of women's participation in the paid employment market in Latin America. In the case of Brazil, none of the policies adopted were aimed directly at the care economy or the insertion of women into the digital age, differently from other countries in Latin America and the Caribbean.¹⁸ Among the few measures with adopted gender prospects are those related to job and income generation and social protection measures. In the first case, federal male and female civil servants who were responsible for taking care of people with Covid-19, pregnant or nursing women, were authorized to work remotely for the duration of the state of public health emergency. With regard to the second case – social protection measures –, the emergency financial aid granted from April 2020 to informal male and female

¹⁷ This is the case of an assessment by Roberts *et al.* (2019) for England. In the study made by Brussevich, Dabla-Norris and Khalid (2019), results vary from country to country.

¹⁸ In *Observatório COVID-19 en América Latina y el Caribe* (ECLAC - UN), it is possible to analyze and compare mitigation policies on the impacts of the pandemic among the countries in the region.

workers, unemployed people and low-income male and female micro-entrepreneurs, paid, in the case of single mothers, double the amount proposed for the benefit. Additionally, awareness campaigns for women's rights were run and specific policies within the scope of gender violence against women were implemented.

In the midst of the pandemic there were also proposals in Brazil for measures to reduce workers' rights even further. Provisional Measure (MP) 1.045, approved in 2021, renewed a wage reduction and employment contract suspension that had been launched at the beginning of the pandemic. Under the justification of fomenting job creation, this MP also proposes two new programs, which induce job insecurity by withdrawing the rights of young workers (aged 16 to 29), who started to receive "grants" instead of salaries thus breaking away from the minimum wage principle.¹⁹

IMPACTS EXPECTED FROM THE EU-MERCOSUR AGREEMENT OVER FEMALE EMPLOYMENT IN BRAZIL

As previously mentioned, one of the direct ways for a trade agreement or a change in the economy to affect the lives of women is through the paid employment market. Part of these jobs is associated to the products exported by a country, with the export structure – which can differ from the production structure – determining the level to which female jobs are affected. Additionally, the Brazilian economy is not evenly specialized before its different trade partners.²⁰ Thus, female employment characteristics can also differ depending on the destination of Brazilian exports and consequently the commercial arrangements the countries were in, which favor relations with different partners and result in different commercial developments according to blocks and countries (Castilho, 2010).

¹⁹ See the report available at: <https://oglobo.globo.com/economia/camara-renova-reducao-de-salarios-de-jornada-cria-bolsa-para-jovens-no-mercado-de-trabalho-veja-como-vai-funcionar-25149828>.

²⁰ In an analysis for 2000 and 2010, Kupfer *et al.* (2012) analyze the different standards in Brazil's bilateral trade with China, Mercosur, USA and EU, and the respective employment contents comprising the bilateral flows. The authors show that in the case of exports made to Mercosur, more concentrated on industrialized products, including higher added value, the associated job position is better qualified. At the other extreme, the export agenda for China, concentrated on mineral extractive activities, agriculture and food and beverages (generally including less elaborate products), the associated job position is relatively more important, however, less qualified. US and EU show intermediate profiles.

As seen in Ferreira and Castilho (2021), job characteristics – for both women and men – differ according to sector, depending on their diverse characteristics and dimensions. Some sectors, for example, offer jobs with more desirable features from the point of view of the employee, in the sense of greater job formality, higher pay or stability, among other aspects. Additionally, it is true to say that among companies within the same sector, there can also be significant differences – there is also data in the literature about the heterogeneity of companies and the behavior of export firms (*see* Helpman, 2011). There are, however, no available statistics to show this difference.

The implementation of a trade agreement also affects a country's imports, and soon the same applies to the labor indirectly imported by the country, contained in the manufacture or use of foreign goods. *Roughly speaking*, we could interpret the total number of jobs associated to imports as domestic work positions which are threatened by the replacement of locally manufactured products by those manufactured in other countries. And such as exports, these job positions *under threat* may vary according to the trade partners and free trade treaties.

In this section, we estimate Jobs associated to Brazilian exports and imports²¹ and show their characteristics in order to think about the possible impacts of the EU-MS Agreement on women's jobs, based on an analysis of the sectors that can most benefit from or be impaired by trade deregulation. It is worth mentioning that the contents both directly and indirectly related to trade will be estimated here, and that are contained in the goods and services used in the production of the goods traded and their inputs.

Employment volume associated to trade flows

In 2018, 12.4 million domestic jobs were associated to Brazilian exports²², equivalent to 11.9% of the jobs in the economy. Out of this total, women represented 28.6%. Female under-representation in the export-related labor market was even stronger than in the labor market as a whole, where women represented 43.7% of employed people.²³ However, female employment as-

²¹ Calculation made based on the methodology proposed in Castilho (2007) and Kupfer *et al.* (2003).

²² Most of these jobs were indirectly associated to exports (56.3%). The direct jobs are from the actual export sector and the indirect ones are encouraged in other sectors given the demand for inputs coming from export sectors that constitute their own production chain.

²³ According to Pnad Continuous data, considering only people aged 14 or over in employment in 2018. In absolute numbers, the total employed women aged 14 or over in 2018 was 40.395 million.

sociated to exports is still very relevant in relation to total women employed. There was a total of 3.5 million women employed in activities connected to exports in 2018, equivalent to approximately 7.8% of women in paid employment throughout the labor market as a whole.²⁴ On the other hand, in 2018 there were 9.5 million jobs *threatened* by imports, amongst which, female participation is higher than in the jobs generated by exports, which corresponds to 36.1% of the 9.5 million job positions quoted. This total corresponds to approximately 3.4 million women or 7.5% of female jobs in the economy as a whole (see **Table 3**). Even so, in both cases, female participation is lower than in the labor market as a whole.

TABLE 3. WORK CONTENT – BRAZIL-EU TRADE - 2018 (IN JOB NUMBERS)

Jobs	Women	Men	Total
Exp Total (A)	3.538.586	8.843.533	12.382.119
Exp UE (B)	595.492	1.418.433	2.013.926
B/A	16,8%	16,0%	16,3%
A/E	7,8%	15,1%	11,9%
B/E	1,3%	2,4%	1,9%
Imp Total (C)	3.412.245	6.046.248	9.458.493
Imp UE (D)	882.184	1.574.073	2.456.257
D/C	25,9%	26,0%	26,0%
C/E	7,5%	10,3%	9,1%
D/E	1,9%	2,7%	2,4%
Total Brasil (E)	45.647.765	58.692.510	104.340.275

Source: SCN and PNAD/IBGE, Passoni and Freitas (2020). Compiled by the authors.

As mentioned previously, the European Union is among Brazil's main trade partners, and was, in 2018, both the second largest export destination and the second highest source of imports for the country. Thus, that economic block ends up being responsible for a significant part of trade-related jobs, particularly jobs *threatened* by Brazilian imports (jobs related to exports to the EU correspond to 16.3% of total jobs associated to exports; in the case of imports, the EU accounts for 26% of total jobs). Consequently, the net balance for jobs associated to trade with the European Union in 2018 was negative, corresponding to 442 thousand jobs. In other words, the work content

²⁴ In the case of men, those working in jobs related to exports represented 15.1% of employed men aged 14 and over in the labor market as a whole.

associated to imports from the EU was higher than that related to exports to the bloc.

In the case of women, jobs related to exports and imports (totals) are much lower than for men – 28.6% in the case of exports and 36.1% for imports, both lower percentages than for female participation in the job market as a whole (43.6%). These numbers in percentage points are similar in the case of trade with the EU – that is, female workers are under-represented in jobs associated to bilateral trade in similar proportion.

Comparing employment volume generated by exports and threatened by imports, in terms of total trade there is a positive balance for both men and women. But when we analyze bilateral trade, the jobs threatened by imports coming from the EU exceed the jobs created, with this “deficit” being much higher for women than for men (the negative balance for female jobs in trade with the EU corresponds to 286,692 work positions and 155,639 for men) (see Table 3).

TABLE 4. WORK CONTENT ASSOCIATED TO BRAZILIAN EXPORTS BY MAJOR SECTORS - 2018

Major sectors	Direct content	Indirect content	Total	Women		Men	
Jobs associated to total exports							
Agriculture, livestock, forestry production & fisheries	3,006,182	1,796,594	4,802,776	958,340	27%	3,844,436	43%
Extractive industry	83,350	37,901	121,251	13,444	0%	107,807	1%
Processing industry	1,450,448	775,061	2,225,509	667,039	19%	1,558,470	18%
Construction	53,980	122,286	176,266	6,150	0%	170,116	2%
Services	1,079,589	3,976,728	5,056,317	1,893,613	54%	3,162,704	36%
Jobs total	5,673,549	6,708,570	12,382,119	3,538,586	100%	8,843,533	100%
Jobs associated to exports to the EU							
Agriculture, livestock, forestry production & fisheries	393,768	237,820	631,589	125,900	21%	505,689	36%
Extractive industry	19,645	5,889	25,534	2,575	0%	22,958	2%
Processing industry	240,045	121,031	316,075	111,002	19%	250,074	18%
Construction	42,139	23,505	65,644	2,290	0%	63,354	4%
Services	278,724	651,360	930,084	353,725	59%	576,359	41%
Jobs total	974,320	1,039,605	2,013,926	595,492	100%	1,418,433	100%

Source: SCN and PNAD/IBGE, Passoni and Freitas (2020). Compiled by the authors.

An analysis of the total export-related job structure according to the larger sectors clearly shows the larger weight of the services sector vis a vis female employment. Agriculture, despite being a highly male-oriented sector, comes second in terms of weight, followed by the processing industry. Activities con-

nected to the extractive industry and construction, in turn, are not shown to be significant with regard to export-related female employment. In the case of exports destined for the European Union the job structure is similar, with the weight of employment in the services sector being even stronger, which is related, on one hand, to the direct and indirect importance of this sector in exports to Europe, and on the other, to the feminization of the services.

A disaggregated analysis, with emphasis on the sectors with a higher volume of female jobs associated to exports reveals a certain similarity between the work content associated to total exports and those destined for the EU. As seen in Table 5, there is a coincidence in nine out of the ten sectors which carry the most weight in terms of work content associated to total exports and those destined for the EU.

TABLE 5. WORK CONTENT ASSOCIATED TO BRAZILIAN EXPORTS – MAIN SECTORS - 2018

Total Exports						
Sectors	Job content assoc. to exports	Sector weight on job content assoc. to exports (%)	Job Content assoc. to exports..	Sector weight on job content assoc. to exports (%)	Total job content	Sector weight on total job content (%)
	Mulheres		Homem		Mulheres	
Agriculture, livestock and related services	922.231	26,1	3.690.452	41,7	2.514.951,1	5,6
Trade (wholesale and retail) and automobile and motorcycle repairs	717.786	20,3	941.219	10,6	8.334.128,1	18,5
Legal and accounting activities, consultancy and company headquarters	229.980	6,5	213.254	2,4	979.489,6	2,2
Food processing	188.255	5,3	231.712	2,6	1.873.154,0	4,2
Other administrative activities and supplementary services	180.030	5,1	358.304	4,1	737.990,8	1,6
Architecture and engineering services, tests, technical analysis and R&D	110.681	3,1	188.572	2,1	233.214,4	0,5
Accommodation	82.779	2,3	53.725	0,6	265.982,5	0,6
Catering	80.278	2,3	65.804	0,7	3.089.622,8	6,9
Leather artifact preparation and manufacture, travel goods and footwear	65.836	1,9	614.218	6,9	394.659,5	0,9
Road Transport	63.456	1,8	40.225	0,5	2.755.854,2	6,1
Total	3.538.586	-	8.843.533	-	44.979.074	-

Exports to the EU						
Sectors	Job content assoc. to exports	Sector weight on job content assoc. to exports (%)	Job Content assoc. to exports..	Sector weight on job content assoc. to exports (%)	Total job content	Sector weight on total job content (%)
	Mulheres		Homem		Mulheres	
Agriculture, livestock and related services	118.739	19,9	475.153	33,5	2.514.951,1	5,6
Trade (wholesale and retail) and automobile and motorcycle repairs	115.897	19,5	151.973	10,7	8.334.128,1	18,5
Legal and accounting activities, consultancy and company headquarters	59.747	10,0	55.402	3,9	979.489,6	2,2
Food processing	36.856	6,2	73.353	5,2	737.990,8	1,6
Other administrative activities and supplementary services	33.687	5,7	41.463	2,9	1.873.154,0	4,2
Architecture and engineering services, tests, technical analysis and R&D	31.487	5,3	53.646	3,8	233.214,4	0,5
Accommodation	15.137	2,5	9.824	0,7	265.982,5	0,6
Catering	14.999	2,5	12.295	0,9	3.089.622,8	6,9
Leather artifact preparation and manufacture, travel goods and footwear	14.019	2,4	14.624	1,0	229.321,0	0,5
Road Transport	10.672	1,8	99.566	7,0	394.659,5	0,9
Total	595.492	-	1.418.433	-	44.979.074	-

Source: SCN and PNAD/IBGE, Passoni and Freitas (2020). Compiled by the authors.

Among these sectors, *Trade and Agriculture* occupy a prominent position, as they jointly correspond to 39.4% and 46.3%, respectively, of female work content associated to total exports destined for the EU. Additionally, it is worth pointing out that with the exception of *Agriculture* and *land transport* the work content in the previously identified sectors is far more relevant for women than for men. Lastly, it is worthy of note to see how *Agriculture* becomes more relevant for female employment in positions associated to exports than in the economy as a whole (*see* Table 5). This phenomenon is owed to the weight of these products and their by-products (food, especially) in exports.

On the imports side, the services sector is the one that concentrates a large part of female jobs *under threat*. The importance of female jobs under

threat in the services sector is even more expressive with regard to imports from the EU – this percentage comes to 68% for total imports and 80% for imports coming from Europe. As opposed to exports, total imports coming from the EU *are a greater threat* to female jobs associated to the processing industry than those associated to agriculture, with the former, in general, holding more desirable features for workers. Activities connected to the extractive industry and construction are also shown not to be significant to female employment *threatened* by total imports and originating in the EU, and this can be attributed both to a strong male domination factor of these sectors and their low representation in terms of international trade (see Table 6).

TABLE 6. WORK CONTENT ASSOCIATED TO BRAZILIAN IMPORTS BY LARGE SECTORS – 2018

Large sectors	Direct content	Indirect content	Total	Women		Men	
Jobs associated to total imports							
Agriculture, live-stock, forestry production and fisheries	288,895	588,704	877,599	177,340	5%	703,259	12%
Extractive industry	106,023	34,685	140,708	10,061	0%	130,647	2%
Processing industry	1,703,039	784,667	2,487,706	901,703	26%	1,586,002	26%
Construction	33,393	84,672	118,065	4,119	0%	113,945	2%
Services	2,000,472	3,833,944	5,834,416	2,322,022	68%	3,512,395	58%
Total jobs associated to imports	4,131,822	5,326,671	9,458,493	3,412,245	100%	6,046,248	100%
Jobs associated to imports - EU							
Agriculture, live-stock, forestry production and fisheries	17,657	132,534	150,191	29,926	3%	120,265	8%
Extractive industry	1,648	6,737	8,385	728	0%	7,657	0%
Processing industry	335,740	171,212	506,952	143,512	16%	363,441	23%
Construction	9,408	21,555	30,963	1,080	0%	29,883	2%
Services	779,361	980,405	1,759,766	706,939	80%	1,052,827	67%
Total jobs associated to imports to EU	1,143,814	1,312,443	2,456,257	882,184	100%	1,574,073	100%

Source: SCN and PNAD/IBGE, Passoni and Freitas (2020). Compiled by the authors.

On the import side, there is also a proximity among the main sectors in terms of work content when we compare total imports against imports coming from the EU. In this case, seven out of the ten most representative sectors in terms of female employment associated to imports intersect among themselves (see Table 7).

TABLE 7. WORK CONTENT ASSOCIATED TO BRAZILIAN IMPORTS – MAIN SECTORS – 2018

Total imports						
Setors	Job content assoc. to imp.	Sector weight on job content assoc. to imports (%)	Job content assoc. to imports	Sector weight on job content assoc. to imports (%)	Total job content	Sector weight on total job content (%)
	Women		Men		Women	
Trade (wholesale and retail) and automobile and motorcycle repairs	678.347	19,9	889.503	14,7	8.334.128,1	18,5
Apparel and accessories manufacture	245.564	7,2	62.976	1,0	1.334.379,9	3,0
Accommodation	222.902	6,5	144.668	2,4	265.982,5	0,6
Other administrative activities and supplementary services	215.222	6,3	264.904	4,4	1.873.154,0	4,2
Legal and accounting activities, consultancy and company headquarters	214.370	6,3	198.780	3,3	979.489,6	2,2
Catering	204.004	6,0	167.223	2,8	3.089.622,8	6,9
Non-real estate rent and intangible non-financial asset management	183.045	5,4	308.850	5,1	111.061,9	0,2
Textile manufacture	161.032	4,7	70.534	1,2	439.605,3	1,0
Agriculture, livestock and related services	152.987	4,5	612.201	10,1	2.514.951,1	5,6
Artistic, creative and performance-related activities	72.939	2,1	111.059	1,8	445.111,7	1,0
Total	3.412.245	-	6.046.248	-	44.979.074	-
Imports coming from the EU						
Setors	Job content assoc. to imp.	Sector weight on job content assoc. to imports (%)	Job content assoc. to imports	Sector weight on job content assoc. to imports (%)	Total job content	Sector weight on total job content (%)
	Women		Men		Women	
Trade (wholesale and retail) and automobile and motorcycle repairs	159.242	18,1	208.811	13,3	8.334.128,1	18,5
Apparel and accessories manufacture	130.578	14,8	220.323	14,0	111.061,9	0,2
Accommodation	111.892	12,7	72.621	4,6	265.982,5	0,6
Other administrative activities and supplementary services	64.044	7,3	78.828	5,0	1.873.154,0	4,2
Legal and accounting activities, consultancy and company headquarters	58.326	6,6	54.084	3,4	979.489,6	2,2
Catering	35.330	4,0	28.960	1,8	3.089.622,8	6,9
Non-real estate rent and intangible non-financial asset management	27.979	3,2	111.964	7,1	2.514.951,1	5,6
Textile manufacture	26.582	3,0	27.618	1,8	608.709,7	1,4
Agriculture, livestock and related services	17.862	2,0	11.323	0,7	2.755.854,2	6,1
Artistic, creative and performance-related activities	16.856	1,9	19.277	1,2	285.962,9	0,6
Total	882.184	-	1.574.073	-	44.979.074	-

Source: SCN and PNAD/IBGE, Passoni and Freitas (2020). Compiled by the authors.

The *Trade* sector stands out, corresponding to around 20% of work positions associated to imports, a much higher weight than that for men and not much higher than total domestic work. With regard to the industrial sectors, those which figure among the ten sectors with bigger weight in terms of work content and *threatened* by imports are Apparel and Textiles. *Agriculture* also features among the ten main sectors, which can be explained more by the intensity of work than its importance vis a vis total imports. The remaining sectors represent different services, many of them contributing indirectly towards creating jobs associated to imported products.

Job quality associated to trade flows

As shown above, there is a difference between the total sectorial job structure, and of those associated to exports and imports. The job profile according to sector is also different (there are also significant differences within sectors) with regard to many features – starting with gender structure, also moving through others which award higher or lower quality to jobs (such as turnover, average earnings, type of contract, among others). The combination of these two realms – sectorial structure and job characteristics per sector – can give us an idea of total job quality as well as of those associated to trade.

The job profile comparison is made through a brief job quality index. The “Job Quality Indicator” (IQE)²⁵ uses a methodology similar to the Human Development Index (HDI), which performs a comparison of various job market characteristics. We selected a few points which we believe to be relevant to evaluate job quality – as follows: wages, job formality, gender structure of leadership positions and length of contracts. In other words, sectors with better pay, with higher rates of payroll jobs, where women are increasingly holding leadership positions and whose turnover is not very high, are sectors whose jobs are considered of higher “quality”.

In this study, we present IQE for female and male employment associated to the general labor market, total exports and to the EU, and *under threat* by total imports and those coming from the EU. The aforementioned characteristics are represented by the following variables, obtained from PNAD data: *average hourly wage associated to the main activity*, the weight of *how formal the job is*, the weight of *positions held in management and board roles*

²⁵ General IQE was calculated based on the methodology proposed in Saboia and Kubrusly (2013) and helps us to group together job characteristics into a synthetic indicator, from which we obtain a *proxy* for job quality. To compare IQE relative to exports with the one associated to the labor market as a whole, we used the method proposed by Castilho, Costa and Saludjan (2015).

(decision-making positions) and the weight held by *remaining in the job for over 10 years*. For all variables, the higher they are, the better the quality of employment.

As we shall see, there is a difference between job profiles associated to trade flows relative to total employment in the economy, but there are also differences between import and export flows according to the partners, due to the differences of expertise mentioned previously.

The quality of employment associated to exports is lower than for total employment in Brazil for all workers. The IQE value for employment associated to exports is 2.8% lower than for total female employment and 7.8% lower than for men.²⁶ In the case of exports to the EU, the difference is slightly smaller, but follows the same trend towards greater quality reductions measured by the IQE for men (IQE associated to exports to the EU in relation to total employment is 1.0% worse for women and 5.9% worse for men).

The IQE estimate suggests that the quality of employment associated to exports fares better in bilateral trade than in total trade, for both men and women (in Table 8, the value of C – 0.544 – exceeds B for women – 0.534 – and for men, E – 0.540 – exceeds the value of F – 0.529).

Due to the differences between men and women in employment associated to total exports and to the EU, the *inequity* in terms of the quality of female and male employment is reduced in relation to total employment. This reduction, however, is due to the “downgrade” in male employment – in other words, there is a kind of tendency to use the “lowest common denominator”. Whereas in total employment the IQE for women is 4.1% lower than the indicator for men, in the case of jobs associated to total exports and exports to the EU, IQEs for female employment are, respectively, 1.0% e 0.8% higher than for their male counterpart.

An analysis of IQE components (Table 8) shows that female jobs associated to exports apparently provide more opportunities for women in decision-making (management and board) positions and that the job profile also appears to be more stable (higher proportion of jobs of over 10 years). On the other hand, both wages and job formality show lower indicators for jobs associated to exports (total and to the EU). Lastly, when comparing men and women, indicators are more favorable towards men with regard to factors such as wages, holding leadership positions and length of time in the job, with only job formality being higher for women.

²⁶ Although exact values are not relevant, order of magnitude is, for it enables classification in terms of quality of employment.

TABLE 8. QUALITY INDICATOR FOR JOBS ASSOCIATED TO EXPORTS

IQE		Hourly Pay Main Activ- ity	Job For- mality	“Director and Man- ager” Job Position	Over 10 years in Job	Total
Women	Total (A)	0,281	0,889	0,195	0,834	0,550
	Exp total (B)	0,224	0,749	0,227	0,939	0,534
	Exp UE (C)	0,257	0,817	0,237	0,866	0,544
	B/A	-20,5%	-15,8%	16,3%	12,6%	-2,8%
	C/A	-8,8%	-8,1%	21,6%	3,8%	-1,0%
	C/B	14,8%	9,1%	4,6%	-7,8%	1,8%
Men	Total (D)	0,377	0,705	0,312	0,900	0,573
	Exp total (E)	0,280	0,537	0,244	1,055	0,529
	Exp UE (F)	0,317	0,587	0,257	0,998	0,540
	E/D	-25,6%	-23,8%	-21,8%	17,1%	-7,8%
	F/D	-16,0%	-16,7%	-17,6%	10,9%	-5,9%
	F/E	12,9%	9,3%	5,4%	-5,3%	2,0%
Men x Women	A/D	-25,3%	26,2%	-37,6%	-7,4%	-4,1%
	B/E	-20,2%	39,4%	-7,2%	-11,0%	1,0%
	C/F	-18,9%	39,2%	-7,9%	-13,2%	0,8%

Fonte: SCN e PNAD/IBGE, Passoni and Freitas (2020). Compiled by the authors.

With reference to the quality of jobs *threatened* by imports, the IQE indicates higher quality for employment associated to imports (total and EU) than for total male and female employment. With regard to women, IQE associated to imports is 2.7% higher than total IQE (see Table 9). The discrepancy between the quality of jobs *threatened* by imports coming from the EU and employment as a whole is even higher, the former being 10.1% better than the latter. In the men’s case, the same happens: jobs threatened by total imports and those coming from the EU are, respectively, 6.9% and 14.4% better than total employment.

In summary, the profile for jobs that are *threatened* by imports is *better* than for jobs in the country as a whole, mainly with regard to imports coming from the EU. Such a fact reflects Brazilian production and commercial expertise, especially in reference to the EU, with whom Brazil operates according to a North-South trade pattern.

Analyzing the IQE components, female jobs *threatened* by imports seem to have a higher formal job rate and provide more opportunities for women in decision-making positions, mainly in imports coming in from the EU. On the other hand, job profiles also appear to be less stable and are associated to lower wages. In the case of men, Jobs *threatened* by total imports and coming from the EU are better paid, with a higher rate of positions held in leadership roles and higher formal job rate than for the economy as a whole, despite

showing less favorable indicators for job duration. In line with the total employment profile for Brazil, the IQE components – except for job formality – suggest a more favorable profile for male employment than for female (*see* Table 9). In other words, imports affect male jobs that are even better than female jobs; that is, however, already the reality of the Brazilian labor market.

TABLE 9. JOB QUALITY INDICATOR – TOTAL AND *THREATENED* BY IMPORTS – 2018

IQE		Hourly Pay Main Activity	Job Formality	“Director and Manager” Job Position	Over 10 years in Job	Total
Women	Total (A)	0,281	0,889	0,195	0,834	0,550
	Imp total (B)	0,252	0,964	0,325	0,717	0,564
	Imp UE (C)	0,270	1,093	0,402	0,656	0,605
	B/A	-10,5%	8,5%	66,6%	-14,1%	2,7%
	C/A	-4,0%	23,0%	106,2%	-21,3%	10,1%
Men	C/B	7,2%	13,4%	23,7%	-8,4%	7,2%
	Total (D)	0,377	0,705	0,312	0,900	0,573
	Imp total (E)	0,404	0,860	0,403	0,784	0,613
	Imp UE (F)	0,456	0,927	0,495	0,747	0,656
	E/D	7,3%	22,0%	29,2%	-12,9%	6,9%
Men x Women	F/D	20,9%	31,6%	58,6%	-17,0%	14,4%
	F/E	12,7%	7,9%	22,8%	-4,8%	7,1%
	A/D	-25,3%	26,2%	-37,6%	-7,4%	-4,1%
Men x Women	B/E	-37,7%	12,2%	-19,5%	-8,6%	-7,9%
	C/F	-40,7%	17,9%	-18,9%	-12,1%	-7,8%

Source: SCN and PNAD/IBGE, Passoni and Freitas (2020). Compiled by the authors.

Prospects for volume and quality of employment associated to Brazil-EU trade

As shown in the previous sections, foreign trade creates relatively few employment positions in Brazil, positions which are even less representative for female employment.

When comparing the amount of jobs generated by exports and those which are under potential threat by imports, the result for female jobs associated to foreign trade in 2018 was of only 126 thousand job positions, equivalent to 0.3% of female jobs in the labor market. In the case of the EU, the result is negative – in other words, the number of jobs under threat is significantly higher than that of jobs created (-236 thousand job positions). This is already indicative of the little importance of the trade deal as a job creating source.

Looking beyond job quantity figures, the type of job that is being generated or threatened must also be considered. When we compare the results presented in the previous section (Tables 8 and 9), we notice that the quality

of the jobs *threatened* by imports is significantly higher than of those associated to exports. The IQE (Job Quality Indicator) values suggest that female jobs *threatened* by imports are of higher quality than jobs associated to total exports (0.564 *versus* 0.534). The difference between the quality of female jobs associated to exports and imports is even stronger in the case of trade with the EU (0.605 *versus* 0.544). This manifests itself with regard to pay, job formality and holding decision-making positions. In terms of the job duration factor alone, jobs associated to exports – total and destined for the EU – show better results than those *threatened* by imports. In the case of men, we observe the same pattern, with the profile of jobs *under threat* still faring better than for those created domestically (15.8% and 21.6%, respectively, when compared to total imports and exports and imports and exports to the EU).

Next, we analyze the profile of some of the sectors selected besides exports and imports. The selection was made based on the weight of the sectors on bilateral trade flows (2018) and by cross checking the levels of tariff protection. The sectors that at the moment already experience the competitiveness to enter the European market—or conversely, which have already entered the Brazilian market – and come across tariffs with a reduction margin, are sectors with growth potential regarding bilateral exports and imports. Six sectors were selected for exports and six for imports – they represented 72.7% of Brazil-EU exports and 66.4% of imports in 2018.²⁷ In terms of Brazilian imports, all the sectors have average tariffs over 5.5%, while the two carrying the most weight regarding bilateral imports show above-average tariffs (23.3% in the case of motor vehicles and 15.7% in the case of machinery and equipment). On the side of Brazilian exports, only one sector selected (metallurgy) has a tariff below the average tariff for Europe, estimated at 4.1%.

Table 10 shows the IQE for the products selected for exports and for imports. The indicators suggest that job quality associated to the sectors with the highest growth potential is significantly unequal: the average IQE associated to female jobs *threatened* by imports (0.475) is almost double that associated to the average IQE related to female employment generated by the sectors selected on the side of exports (0.160). In the case of men, this difference increases to almost 3 times (*see* Table 10).

These results are not surprising. While the sectors which have the highest

²⁷ On the export side, the pulp and paper sector, despite presenting weight equivalent to “leather and footwear” in exports, faces zero protection in the entry of the European market. In other words, the agreement is unlikely to result in direct advantages for Brazilian exports of these products.

probability of increasing imports are more sophisticated industrial sectors, therefore, with better quality jobs – manufacturing machinery and equipment, chemicals, electrical devices and materials –, the sectors in which Brazil has better chances of increasing its exports are precisely those associated to agriculture and food processing (see Table 10). In as far as the agreement tends to strengthen the North-South specialization of bilateral trade, the characteristics shown regarding trade-related employment should develop further.

Additionally, it is worth pointing out that among these sectors, where potential growth in imports coming from the EU is perceived, there has been a boost in certain sectors of the economy, such as the production of chemical and pharmaceutical products, associated to the health industry, and the manufacture of IT equipment and electronic and optical products, associated to the digital economy (see Table 10). According to ECLAC (2021b), these dynamic sectors hold the potential to stimulate investments which allow for more inclusive and sustainable development, as well as having room for industrial and technological policies which contribute, among other things, towards the creation of good quality employment, innovation, export diversification and regional cooperation efforts.

Finally, one sector in particular is worthy of attention: the bilateral trade in motor vehicles, trailers and bodywork shows growth potential both in terms of exports and imports. This is partly due to the strong presence of European companies in Brazil, as mentioned previously. On one hand, there is a potential win-win situation, where European companies outline regional strategies which make the most of the experience and training accumulated with the production of *flex* vehicles by the subsidiaries of European companies established here (Sarti and Castilho, 2021). On the other hand, this is a key sector for the feeble regional productive integration in Latin America (ECLAC, 2021a). The agreement may stimulate the disbanding which had thus far existed (also within the European companies themselves) among the subsidiaries established in the region, by facilitating exchanges with no other than the European continent itself.

TABLE 10. QUALITY OF JOBS IN THE SECTORS WITH HIGHER PROBABILITY OF INCREASING IMPORTS AND EXPORTS IN BILATERAL TRADE BETWEEN BRAZIL AND THE EU

IQE - Sectors with growth potential		Hourly Pay Main Activity	Job Formality	"Director and Manager" Job Position	Over 10 years in job	Total
Brazilian Imports						
Women	Production of Machinery and equipment	0,355	1,403	0,350	0,729	0,709
	Production of Chemicals	0,727	1,209	0,747	0,331	0,753
	Production of motor vehicles, trailers and bodywork	0,225	0,836	0,099	0,509	0,417
	Production of IT equipment, electronic and optical products	0,081	0,482	0,224	0,154	0,235
	Production of pharma chemicals and pharmaceuticals	0,348	1,091	0,246	0,150	0,459
	Production of machinery, electrical devices and materials	0,099	0,583	0,136	0,289	0,277
	Total	0,306	0,934	0,300	0,360	0,475
Men	Prod. Of machinery and equipment	1,163	3,229	0,925	1,793	1,777
	Prod. Of chemicals	0,666	1,416	0,559	0,425	0,767
	Prod. of motor vehicles, trailers and bodywork	0,586	1,996	0,472	0,905	0,990
	Prod. of IT equipment, electronic and optical products	0,145	0,325	0,178	0,082	0,183
	Prod. of pharma chemicals and pharmaceuticals	0,471	0,776	0,464	0,146	0,464
	Prod. of machinery, electrical devices and materials	0,222	0,911	0,170	0,415	0,429
	Total	0,542	1,442	0,462	0,628	0,768
Brazilian Exports						
Women	Food processing	0,114	0,451	0,113	0,234	0,228
	Agriculture, livestock and related services	0,368	0,612	0,378	0,167	0,381
	Metallurgy	0,069	0,255	0,030	0,155	0,127
	Prod. of motor vehicles, trailers and bodywork	0,015	0,090	0,042	0,029	0,044
	Prod. of chemicals	0,039	0,122	0,027	0,017	0,051
	Leather artifact preparation and manufacture, travel goods and footwear	0,045	0,267	0,062	0,132	0,127
	Total	0,108	0,300	0,109	0,123	0,160
Men	Food processing	0,280	0,778	0,223	0,432	0,428
	Agriculture, livestock and related services	0,253	0,537	0,212	0,161	0,291
	Metallurgy	0,134	0,456	0,108	0,207	0,226
	Prod. of motor vehicles, trailers and bodywork	0,020	0,046	0,025	0,012	0,026
	Prod. of chemicals	0,039	0,065	0,039	0,012	0,039
	Leather artifact preparation and manufacture, travel goods and footwear	0,076	0,312	0,058	0,142	0,147
	Total	0,134	0,366	0,111	0,161	0,193

Source: SCN and PNAD/IBGE, Passoni and Freitas (2020). Compiled by the authors.

CLOSING REMARKS

This study of the impact of the Mercosur-EU agreement on female employment resumes a few questions present in the literature with regard to relations between trade and gender: i) does trade deregulation contribute towards reducing or reinforcing inequalities between women and men in the labor market?; ii) do exports create better quality employment for women than the economy as a whole?; iii) how many and which forms of domestic employment are “under threat” from imports?

In practice, answering these questions is not a trivial task, but above all it is necessary to recognize that foreign trade is not neutral with regard to gender, and consequently, the effects of changes to trade or at each country’s commercial integration level can be perceived differently by women and by men (López, Muñoz and Cáceres, 2019). Even before considering the various transmission channels of changes in foreign trade, it is necessary to understand that women and men occupy distinct positions in the wage and non-wage economy, and for that reason may be impacted differently. This happens in many different ways in each country due to socio-economic characteristics, labor market institution specifics of each country and level of deregulation of the economies.

The Mercosur-EU agreement, signed in 2019 out of the blue after about 20 years’ discussion, consists of an expanded trade agreement, which encompasses not only other non-commercial subjects – such as government procurement and intellectual property rights– but also contains other chapters pertaining to democratic, environmental and human rights clauses. One of the reasons for the long delay in signing the agreement was resistance by the South American countries to deregulate industrial assets and to include in the agreement certain subjects which are the object of international agreements of which Brazil and its Cone Sur partners are not signatories. On the European side, the greatest resistance consisted of agricultural market deregulation. Additionally, the block proposed a comprehensive agreement, such as it was signed, and within the standards the EU has established in the last decade. Resistance on the Brazilian side was dropped with government changes starting in 2016 and the agreement was signed in a window of opportunity perceived by presidents Macri and Bolsonaro (and by the team leading the European Commission at the end of its term in office). If, how and when the deal will be implemented are still unknown due to much resistance within Europe itself, largely because of the many instances of environmental aggression which the current Brazilian government has been condoning, but also on account of the sectors connected to agribusiness in countries such as France Spain and Poland.

The EU is traditionally one of the main trading partners of Brazil and the Cone Sur, and the main foreign investors in Mercosur countries come from the EU. The liaison between the two blocks is very well specialized, where the South American countries sell products of agricultural and mineral origin and purchase manufactured goods, especially the most sophisticated ones. In the case of Brazil, despite the importance of sales of processed or unprocessed agricultural and mineral products, there is a relatively important exchange of manufactured goods, due partly to the presence of European multinationals there (as is the case of the automobile sector and some segments of the chemical industry). This exchange of manufactured goods has, however, been running out of steam and has been significantly affected by the Covid-19 pandemic.

This productive and commercial specialization between Brazil and the EU has consequences regarding the volume and profile of total employment and female employment associated to trade flows. On one hand, the structure of exports, with a strong agricultural and mineral product content, sectors with low female participation, result in female employment generated by Brazilian exports to the EU being reduced, representing just 1.3% of total female employment in the Brazilian economy. It is worth pointing out that exports in general do not contribute significantly to employment in Brazil – only 11.9% of total employment– and besides, the rate of women’s participation in jobs associated to exports is only 28.6% (in the labor market as a whole the participation rate is 43.7%).

In terms of quality, in this case approximated according to the IQE, which summarizes information relative to wages, job formality, participation in positions of leadership and their duration, employment associated to exports shows less desirable features than total employment – both for men and women. This is due to a trade specialization with more weight for sectors with the worst jobs, such as agriculture. In a comparison between men and women, female jobs associated to exports – total and to the EU – are of better quality than those performed by men, the opposite of what occurs with total employment.

Employment associated to imports, on the other hand, shows higher quality than for total employment associated to total imports and those coming from the EU. In this case, we consider that jobs in imports correspond to domestic services which can be shifted by the replacement of national products and services by imported ones – for that reason, we refer to these jobs as “jobs threatened by imports”.

Jobs associated to imports are of higher quality than jobs in the economy as a whole, and those performed by men are systematically of higher quality than female jobs. Lastly, the quality of employment associated to imports

from the EU is higher than the quality of total imports, which is a result of the high level of sophistication of Brazil's import agenda coming from the EU.

In a comparison between export-generated employment and jobs threatened by imports coming from the EU, there appears to be a negative result for female employment. In other words, not only are more jobs *threatened* than created in trade with the EU, but these jobs are also of higher quality than those generated by exports – actually, their quality is also higher when compared to female jobs in the economy as a whole.

In terms of prospects of the agreement for the female labor market, from the viewpoint of the Brazilian productive and commercial specialization, this shouldn't change. As we have seen in this study, both tariff deregulation as well as the other disciplines in the agreement do not point towards an inversion of Brazilian trade specialization with the EU. On the contrary, in the absence of active domestic productive development policies that promote diversification in the economy, the EU-Mercosur agreement should strengthen the current trade standard and develop the characteristics of female employment associated to the 2018 trade flows.

Moreover, European exports to Mercosur are expected to grow more than the other way round, as a result of the higher deregulation margin in the entry by Mercosur than in the case of the entry of the European market (as a result of the current level of protection and the actual deregulation/liberalization timeframe agreed between the two blocks).

From the point of view of gender equality promotion policies, concern about the gender impacts of the economic policies is currently missing from discussions in the realms of government. On the contrary, gender issues have been demonized by the current Brazilian government, therefore it will be no surprise to see that the theme – incorporated only recently to a few international agreements – is absent from the first trade deal made by the current administration. The trade agreement between Mercosur and the EU does not contain specific clauses dedicated to the theme, consequently, no supplementary policies are expected. They are necessary to promote greater gender equality or at least mitigate possible negative impacts of the trade agreement with regard to gender inequalities.

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