



CHAPTER 8

Gender and Trade in Africa: Case Study of Niger

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Trade is positively associated with economic growth as it expands market opportunities, increases income earnings, and improves livelihoods.

However, there are prerequisites to fully seize the opportunities offered by trade—among others, less discriminatory practices. Countries with less discriminatory practices—such as fewer gender-based labor market disparities—enjoy higher benefits from trade openness. Trade can refer to the exchange of goods and services within a given country (that is, internal trade) as well as between two or more countries (that is, external trade). This study focuses on the latter; *trade* is used to refer to external trade hereon.

Trade policies are not always gender neutral, and the benefits of trade are likely to be unevenly distributed among men and women. Trade policies affect gender inequalities, but gender disparities, in turn, can affect the outcome of trade policies. Gender disparities in accessing and controlling resources limit women's ability to fully contribute to economic activities and lead to low capacity of the economy to respond to opportunities (Cagatay 2001). Thus, the impact of trade on men and women differs from one country to another based on the type of economy, the allocation of resources among individuals, and the employment structure in the economy.

This is particularly true in agriculture-based economies² where the opportunities trade creates are hindered by output constraints in the agricultural sector, which employs a large proportion of economically active women. Moreover, sectoral and occupational disparities between men and women are disincentives to an efficient allocation of resources across the economy.

Compared to men, women face different barriers to benefit from trade. These barriers fall into three categories: sociocultural norms, legal barriers, and socioeconomic disadvantages (Pozarny 2016). Norms and legal barriers are translated into gender disparities in human capital development and in economic activities, such as sectoral allocation of resources and rigidities in gender economic relationships. Context, initial conditions, and public policies matter in the gender outcomes of trade (Cagatay and Ozler 1995; Razavi 2012). This study tests the impact of those gender-based barriers on men's and women's

benefits from trade as well as on the outcome of trade reforms. The study is applied to Niger, one of the 15 member countries in the Economic Community of West African States (ECOWAS).

In Niger, women account for nearly 50 percent of the population and 44 percent of the labor force.³ The labor force participation rate is higher for men (91 percent) than for women (68 percent).⁴ Data from the 2014 National Survey on Household Living Conditions and Agriculture (ECVMA)⁵ show that 85 percent and 88 percent of all economically active women and men, respectively, were involved in agricultural activities. The female employment share of total employment in agriculture was estimated at 43 percent in 2014 (Niger, National Institute of Statistics 2016). Women were heavily involved in the informal trade sector in general, and the informal trade of agricultural and food products in particular, with 54 percent and 70 percent of total employment in 2014 (Niger, National Institute of Statistics 2016).

Cross-border trade is a vital economic activity in Niger due to the land-locked nature of the country. Many traders operate across the borders to connect the country with regional and international markets. Several entry and exit points spread along Niger's borders with Nigeria, Benin, Burkina Faso, and Mali.

Niger adopted the ECOWAS customs union scheme in 2013. The ECOWAS Common External Tariff (CET) aims to strengthen and accelerate regional integration among the ECOWAS member states. This trade agreement has guided Niger's trade policy since its implementation in 2015. Thus, this study essentially focuses on the implementation of the CET and its implications on gender inequalities in Niger.

The contribution of this study applied to Niger is twofold. First, it appraises evidence in the literature that greater trade openness may lead to an increase in gender disparities in an unskilled labor-abundant agricultural economy where women are heavily engaged in self-employed economic activities and small-holder farming. Second, the study contributes to the evidence on the impact of gender inequalities on trade policy outcomes.

2 Agriculture-based economies refer to economies with a relatively large contribution of agriculture to gross domestic product and employment.

3 Average value 2011–2018 using the World Development Indicators database (World Bank 2019).

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5 "Enquête nationale sur les conditions de vie des ménages et agriculture."

Gender and Trade Liberalization in Africa: Theory and Evidence

Evidence on both the impact of trade liberalization on gender inequalities and the impact of gender inequalities on the trade policy outcomes is not fully established. A significant positive impact of trade on women's employment is documented in the literature, but the impact of trade on wage equality and women's well-being is not well understood.

Indeed, there is a broad consensus in the literature on the impact of trade openness and female employment in developing economies. Trade liberalization increases female employment but with a higher magnitude in semi-industrialized economies compared with agriculture-based economies. It is commonly agreed that trade would reduce gender inequalities in labor market participation in the developing economies as it expands women's job opportunities given the low wages paid to female workers compared with their male counterparts. Indeed, an increasing number of women are absorbed in export-oriented firms and industries as the latter take advantage of the high gender wage gap against their competing foreign firms and industries. Several studies find female employment has increased as the result of globalization, particularly in the textile industry and agriculture sector (Cagatay 2001; Ozler 2000).

Countries' endowments and economic structure explain their specialization patterns and the differentiated gender outcomes of trade openness. In semi-industrialized countries, mainly Asian countries, low-wage women are the preferred labor source of a relatively more developed manufacturing sector, leading to feminization of employment. In Africa south of the Sahara (SSA) countries, men and women are more engaged in unpaid self-employed and family work, and smallholder farming. In the African economies, gender disparities in access to and control over resources are likely to more adversely affect women than men, as they do in semi-industrialized economies. Since men have control over land and are disproportionally represented among medium- and large-scale holders, some studies (Cagatay 2001) conclude that men have benefited more than women have from trade liberalization in SSA countries.

Contrary to the studies focused on employment, the literature on the impact of trade openness on wage gaps has conflicting results. The theoretical

framework here is the Heckscher-Ohlin-Samuelson trade model that suggests prices of goods equalize within and between trading partners, yielding an equalization of factor prices (Samuelson 1948; Lerner 1952). Thus, increased trade is expected to reduce wage gaps. Under another theoretical framework Becker (1971) suggests that gender-based discrimination will be reduced with increased competition because discrimination is costly to firms. Indeed firms engaged in gender discrimination would need to pay more to hire male workers who have the same level of productivity as women. This additional discriminatory-related cost, compared with nondiscriminatory firms, could lead them out of the market or push them to discriminate less.⁶ Thus, many studies suggest that trade openness reduces the gender wage gap (Juhn, Ujhelyi, and Villegas-Sanchez 2014; Oostendorp 2004; Fontana and Wood 2000). Trade's differential impact on women and men is strongly driven by sociocultural norms, but trade openness is likely to erode gender-based discriminatory practices established by sociocultural norms and legal barriers. Trade reduces gender discrimination in regulations, institutions, and codes of conduct—for instance, company codes of conduct adopted in the nineties in the horticultural export sectors in Kenya, South Africa, and Zambia to European markets (Barrientos, Dolan, and Tallontire 2003) and pressure on countries to promote gender issues related to trade by Mercosur partners (Cagatay 2001).

On the other hand, export-oriented firms take advantage of the preexisting gender wage gap to compete on cost reduction in more opened economies (Black and Brainerd 2004). Thus, some studies find a positive association between gender wage gap and comparative advantage in labor-intensive and export-oriented industries. In other words, lower female wages reduce production costs and stimulate export-led growth. Using a sample of 92 developed and developing countries, Busse and Spielmann (2006) find that a 1 percent increase in the gender wage gap increases the share of labor-intensive exports in total exports by 0.3 to 0.4 percent. In a study investigating the empirical determinants of economic growth among semi-industrialized export-oriented economies in Asia, Seguino (2000) finds that a 10 percent increase in the gender wage gap yields a 16 percent increase in the growth rate of gross domestic product (GDP). Vijaya (2003) suggests that low-skilled female employment gains with trade may increase skill gaps between men and women and exacerbate gender wage

⁶ Firms will discriminate less when they have market power, although it is shown that trade liberalization reduces their market power.

gaps. The benefit of trade is unevenly distributed among women themselves. High-skilled female workers are likely to benefit from trade with a reduction in skilled workers' gender wage gap. On the contrary, the wage gap increases between low-skilled female workers and their male counterparts. As women are more likely to be low-skilled workers, the overall impact of trade is to widen the gender wage gap under the pressure of competition (Cagatay 2001).

The impact of trade on well-being is underexplored and ambiguous. Trade can improve child education and health by increasing women's employment and earnings (Schultz 2007; Heath and Mobarak 2015). Although trade creates opportunities for women's employment and earnings, they do not necessarily control the increased household income (Elson 1999), with implications for women's bargaining power and intrahousehold allocation. In agricultural economies, trade openness may mobilize women's labor in export-oriented cash crops production and decrease their production of food crops. Men's increased control of family income may jeopardize children's nutritional status (Cagatay 2001), while the expansion of women's economic activities may increase their overall work burdens if time spent in unpaid household work remains unchanged (Cagatay 2001; Cockburn et al. 2007).

While some export-oriented and semi-industrialized African economies have benefited from the gender wage gap, some studies suggest that gender-based inequalities have constrained the output response and the export capacity of African economies, especially the agriculture-based economies (Joekees 1999; Elson 1999; Cagatay 2001). Thus, there is a reverse causality between gender inequalities and trade outcomes. In the African economies, gender inequalities in access to productive resources—such as agricultural land, skills, and credit—hinder women's ability to take advantage of opportunities created by greater trade openness. This issue is further investigated in the next sections using Niger as a case study.

Gender and Trade in Niger

This section describes male and female participation in Niger cross-border trade. Because trade policies and reforms affect the entire economy as they offer opportunities to some industries to expand while others may contract because

of increasing competition, we pay close attention to men's and women's exposure to both intra- and extraregional trade. Industries' trade openness and the gender distribution of employment is critical to understanding the gendered distributional impact of trade policy gains and losses.

Gender and Cross-Border Trade

This section is based on a survey of cross-border traders in the areas surrounding the border crossing posts of Birni-Konni, Gaya, and Makalondi, which are the major entry points for Niger's imports from or via its neighboring countries.⁷ The three border posts represent almost 99 percent of official trade flows entering Niger. Given the informal nature of the cross-border trade business, there was no prespecified sampling frame. The nonproportional quota sampling technique was used to stratify a sample of 200 cross-border traders into six strata of male versus female traders equally distributed across the three border areas. This technique was chosen to ensure that each major border crossing point was adequately represented in the sample. The snowball sampling technique was then used to select the desired number of sample units (traders) from each stratum (gender category and survey area). Clearly, the selection procedure began with the identification of a cross-border trader in each stratum, who after being surveyed was asked to recommend other traders he or she knew from the same stratum. A second trader was randomly selected from the suggested traders and surveyed and in turn asked to recommend other traders from the same stratum. The process was repeated until the desired number of traders to be surveyed in that stratum was met. Nine additional traders, including seven men and two women, were surveyed as replacements in case of possible attrition, resulting in a final sample size of 102 women and 107 men.

Who Are the Women Active in Cross-Border Trade?

Along the corridors connecting Niger to neighboring regional ports in Nigeria, Benin, Togo, and Ghana (via Burkina Faso), female and male traders ensure Niger's participation in regional and world markets despite the disadvantages of the geography of this large landlocked country. Like their male counterparts, female cross-border traders are mostly found among the Hausa, Zarma, and Gurma ethnic groups, which are the first, second, and eighth largest groups in

⁷ Gaya is the major entry point between Niger and Benin; Makalondi is the most likely entry point for imports originating from Burkina Faso, Côte d'Ivoire, Ghana, and Togo; and Birni-Konni is the most important gateway between Niger and Nigeria (Odjo and Badiane, 2018).

Niger, respectively. The border zone between Niger and Nigeria is mostly inhabited by the Hausa, while the Niger–Benin and the Niger–Burkina Faso border zones are mostly populated by the Zarma and the Gurma, respectively.

Female traders tend to be older than their male colleagues with an average age of 42 years versus 39 years for men. On average, years of experience in cross-border trade is the same for male and female traders at 12 years.

Like their male counterparts, female cross-border traders are typically urban dwellers, but they tend to be less educated with up to 54 percent of them versus 36 percent of male cross-border traders having received no schooling at all.

A larger proportion of male traders are married than female traders. More specifically, 46 percent of male traders are married in monogamous relationships compared with 35 percent of female traders. The percentages of married male and female traders in polygamous relationships are 37 and 19, respectively. Unmarried people are more common among male traders, while divorced and widowed people are more common among female traders. Among the married female traders, up to 68 percent are the most senior among their co-wives. The duration of marriage is longer among female than among male traders, with average durations of 23 years and 17 years, respectively. The larger share of the married women (63 percent) indicated that it was either easy or very easy to obtain their husbands' consent to start a business in cross-border trade. In contrast, 14 percent and 15 percent of women said it was, respectively, difficult or very difficult to obtain their husbands' permission.

Participation in trade associations is generally poor among all surveyed traders with 16 percent of women and 24 percent of men belonging to trade associations.

What Do Women Trade along Cross-Border Corridors?

Agricultural products are equally common in female and male cross-border trading operations, accounting for 35 percent of trade items declared in each trader category. However, women tend to dominate the trade in processed crop products, which account for 19 percent of declarations of traded items among female traders compared with 9 percent among male traders. As well, declarations of trade in poultry products are more common among female traders compared with their male counterparts. By contrast, more men than women are found trading cereals, cattle, sheep and goats, oilseeds, tomatoes, onions, and other legumes. As well, men are generally more represented than women in the cross-border trade of industrial products. In contrast textiles are more common among women traders. They account for 26.2 percent of declarations among

women compared with 14.5 percent among men. As another distinctive feature, a higher share of women operates along the corridors originating from Benin while the reverse holds along the corridors originating from Burkina Faso.

How Gender Sensitive Are Border-Crossing Operations and Facilities?

Cross-border operations are conducted in circumstances that expose both female and male traders to different forms of harassment, abuse, or violence. The most frequent forms of harassment witnessed or personally experienced by traders are intimidation and humiliation or verbal attacks. More than 40 percent of both female and male traders reported having experienced or knowing someone who has experienced intimidation and humiliation or verbal attacks. Interestingly, male traders reported experiencing many forms of harassment at higher rates than female traders. It may be that women are better bargainers or that religious beliefs and cultural habits forbid their harassment. But this result may also hide the fact that women underreport harassment cases they face fearing to lose their husbands' consent for their engagement in cross-border trading. It should also be noted that this result may reflect a sampling bias given the snowball sampling strategy used. The most obvious conclusion to draw from this finding is that harassment does affect both male and female cross-border traders, and likely to different extents for reasons that are less obvious.

Customs and police officers are most often cited by both men and women as the major perpetrators of harassment, abuse, or violence. Drivers and their apprentices, although to a lesser extent, are also seen by female traders as perpetrators of harassment, abuse, or violence. About 22 percent of cases of harassment or abuse among female traders versus 7 percent among their male colleagues are committed by drivers. Similarly, driver apprentices are cited as major perpetrators in 20 percent of women's harassment cases versus 3 percent of cases of men's harassment. These groups could be the target of sensitization, communication, and education efforts.

Gender Employment and Regional Trade

Niger's economy is largely based on smallholder subsistence farming, livestock rearing, informal trading, and uranium and petroleum oil mining. Niger's economy is one of the fastest growing in West Africa with an average annual growth rate of 6 percent over the last years (Fofana 2018). However, a volatile weather pattern has often had some direct bearing on the overall economic

growth of the economy. Fluctuations in world prices of uranium and crude oil, and changes in Nigeria's economy as well as security threats in the northern part of the country, are other factors affecting the economy (Odjo and Badiane 2018). Niger has one the faster-growing populations in the world with an average annual growth rate of 3.9 percent. The population was estimated at 19.9 million inhabitants in 2016, with 81 percent living in rural areas. Rural households are primarily involved in agriculture, which contributed 42 percent of GDP on average between 2012 and 2014 (Odjo and Badiane 2018).

Male participation in Niger's economy is twice that of female participation as measured in terms of hours worked (Table 8.1). Although men dominate the wholesale and retail trade sector, women are overrepresented in retail trade of agricultural products. Men are primarily engaged in the wholesale trade of raw agricultural products and live animals. It is worth noting that female employment in wholesale and retail trade activities as a share of total female employment in the economy represents 16 percent compared with 13 percent for their male counterparts in 2014. Therefore, trade activities constitute an important source of employment and income for women as compared with men.

Niger participates in international markets both as importer and exporter. The country runs a persistent trade deficit in both intra- and extraregional trade. Its exports to world markets consist of mining products, basically uranium ore and petroleum oil, with France and China as major destinations. Imports from world markets are more diversified, including, notably, cereals, machinery, vehicles and parts, cement, and petroleum. With respect to regional markets, Niger's exports essentially comprise raw foodstuffs, mainly livestock, onions, cowpeas, and hides and skins, Nigeria being their main destination. Its regional imports consist of raw foodstuffs mostly from Nigeria, Togo, and Benin. Figure 8.1 depicts Niger's trade position in intra-African agricultural markets over the period 2010–2014. The country has trade deficits for most of the products traded within the other ECOWAS countries (for example, maize, sorghum, millet, rice, wheat flour, palm oil, sugar, fruits, and food preparations). However, Niger is a net exporter of cattle, sheep, goats, and other live animals, as well as onions and other vegetables.

TABLE 8.1—MALE AND FEMALE EMPLOYMENT IN WHOLESALE AND RETAIL TRADE ACTIVITIES

	Male-to-female ratio	Male share (%)	Female share (%)
All economic activities	2.0	100.0	100.0
Wholesale and retail trade	1.6	13.2	16.0
Wholesale trade	12.7	1.6	0.2
<i>Agricultural products</i>	8.8	0.7	0.2
<i>Nonagricultural products</i>	19.7	0.9	0.1
Retail trade	1.5	11.6	15.7
<i>Fruits and vegetables</i>	0.9	0.5	1.1
<i>Other agricultural products</i>	0.7	2.8	8.5
<i>Nonagricultural products</i>	2.7	8.4	6.1
Other economic activities	2.1	86.8	84.0

Source: Niger, National Institute of Statistics (2016).

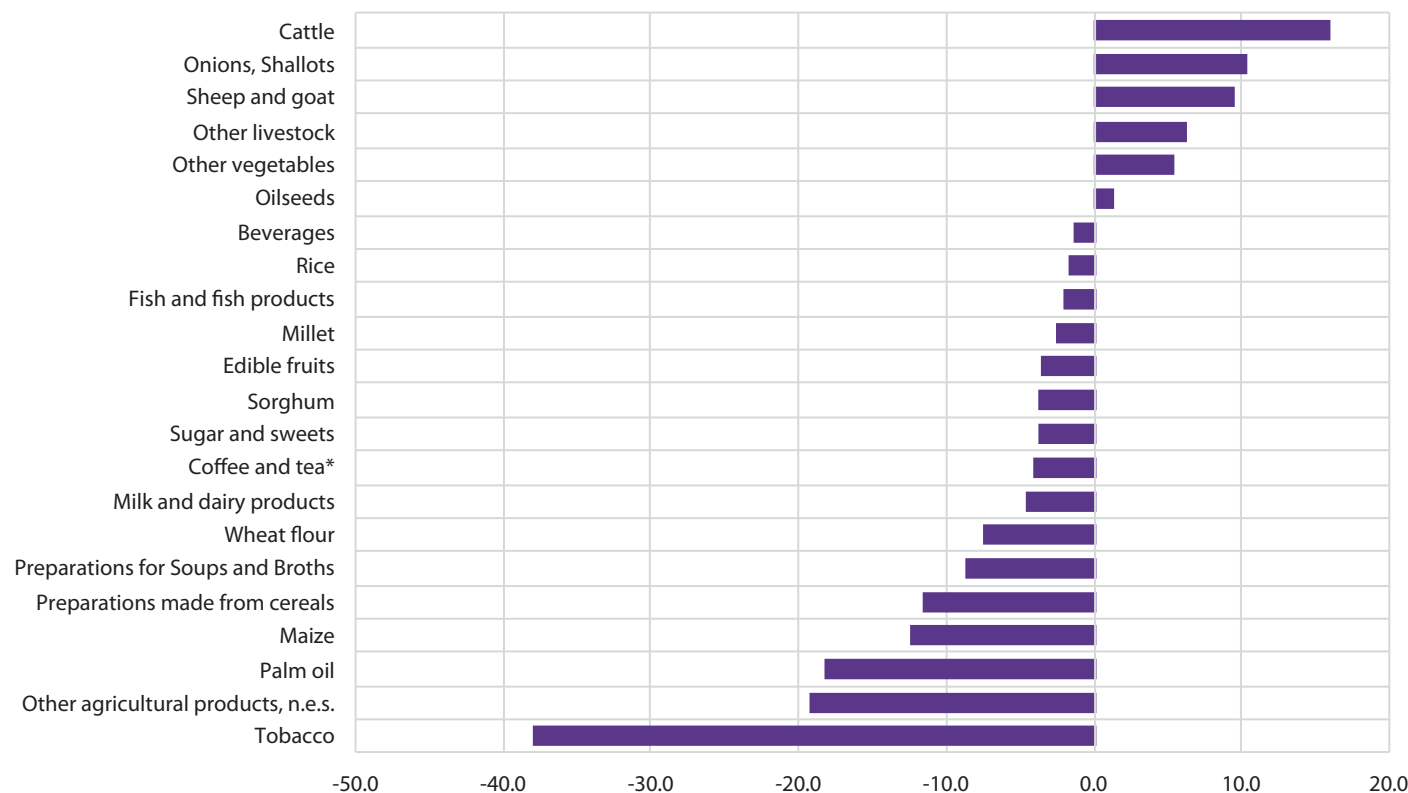
TABLE 8.2—MALE AND FEMALE EMPLOYMENT, FIVE MOST-OPEN INDUSTRIES IN TERMS OF INTRAREGIONAL TRADE

	Number of hours worked, ratio of men to women	Number of hours worked, male share (%)	Number of hours worked, female share (%)
Fruits and vegetables	0.9	1.4	3.2
Livestock products	1.7	5.8	6.8
Palm oil	0.1	0.4	6.6
Rice	3.8	1.0	0.5
Preparation made from cereals	0.1	0.2	3.6
All five products	0.8	8.8	20.7

Source: Niger, National Institute of Statistics (2016, 2019).

Table 8.2 records male and female employment among the five most traded products between Niger and the rest of the ECOWAS countries. It sheds light on the large contribution of women in terms of employment—that is, number of hours

FIGURE 8.1—NIGER’S TRADE POSITION IN INTRA-AFRICAN AGRICULTURAL MARKETS, AVERAGE 2010–2014



Source: UN Comtrade (United Nations 2019).

Note: n.e.s. stands for not elsewhere specified. * Extracts, essences, and concentrates of coffee and tea.

worked—in the production of these commodities. Thus, female employment tends to be more exposed than male employment to intraregional trade.

Using national accounts data for 2014 combined with the survey data for 2014, Table 8.3 depicts the cumulative share of male and female employment time (in hours) across industries. Those industries are ranked according to how open they are to intra- and extraregional trade, from more open to less open. That the female employment cumulative share surpasses the male employment

cumulative share indicates that women are more exposed to both intra- and extraregional trade than men are. Women have more exposure to intraregional than extraregional trade.

Women are more likely than men to be unsalaried (or self-employed/unpaid) workers (Table 8.4). On average, for every hour spent by women in wage employment, men spent seven hours. The ratio is less than 2 for self-employed and family workers. Women’s salary and wage employment time represents

TABLE 8.3—MALE AND FEMALE EMPLOYMENT BY INDUSTRY OPENNESS TO INTRA- AND EXTRAREGIONAL TRADE, PERCENT CUMULATIVE SHARE

Industry	Intraregional		Extraregional	
	Male	Female	Male	Female
Manufacturing	5.8	17.7	5.8	17.7
Fishery	8.5	17.7	12.0	17.7
Utilities	9.5	18.2	16.2	18.5
Transport and communication	15.7	18.2	18.6	18.5
Lodging and restaurant	16.2	22.4	21.9	36.2
Livestock	24.9	32.7	25.9	36.5
Staple crops	49.6	51.9	50.7	55.7
Cash crops	52.9	69.5	51.1	56.5
Finances and insurance	53.4	70.3	53.8	56.5
Real estate and business	57.4	70.7	62.5	66.8
Forestry	58.7	73.8	74.6	79.5
Mining	63.0	74.6	75.9	82.7
Construction	65.3	74.6	79.9	84.5
Trade services	77.5	87.3	81.0	84.9
Public administration	92.0	92.6	81.4	89.2
Education	94.3	95.5	96.0	94.4
Health and social work	96.0	98.2	98.2	97.3
Personal and collective services	100.0	100.0	100.0	100.0

Source: Niger, National Institute of Statistics (2016, 2019).

Note: Industries are ranked according to their openness to intraregional trade, with the most open listed first.

TABLE 8.4—MALE AND FEMALE EMPLOYMENT STATUS

	Male-to-female ratio	Male share (%)	Female share (%)
Self-employment	1.9	48.8	51.8
Family labor	1.7	38.5	44.7
Salary and wage	7.1	12.6	3.5
All employment	2.0	100.0	100.0

Source: Niger, National Institute of Statistics (2016).

only 3.5 percent of their total employment time compared with 12.6 percent for men. Women are more likely to be self-employed workers (52 percent of their productive time) and unpaid family workers (45 percent of their productive time).⁸

Agriculture constitutes the main source of employment for women and men (Table 8.5). Female self-employment is predominant in the agricultural and food value chain⁹ with those activities taking up 84 percent of their productive time compared with 69 percent for their male counterparts. Both self-employed women and self-employed men rely primarily on family members as the main source of labor in their economic activities.

Table 8.6 depicts women's and men's exposure to intra- and extraregional trade by employment status—that is, self-employment, family labor, and salary and wage employment. Female self-employed workers are more exposed to external trade than their male counterparts. To some extent, female family workers are also more exposed than male family workers to external trade. On the contrary, female salary and wage workers are less likely to be directly affected by external trade. They are overwhelmingly represented in personal and social services, including public administration, education, and health and social work—and therefore are less exposed to external trade.

Gender Inequality and ECOWAS CET Implementation in Niger

As a member state of ECOWAS, Niger adopted the ECOWAS Common External Tariff, or CET, in 2013. The CET aims at strengthening and accelerating integration among the 15 ECOWAS countries. Although Niger is committed to other trade agreements, this analysis focuses on the ECOWAS CET implemented in 2015. The study builds on the ex ante impact assessment conducted by Fofana (2018).

⁸ Productive time refers to the time women and men spend in economic activities.

⁹ The agricultural and food value chain includes the following industries and group of industries: staple crops, cash crops, livestock, forestry, fishery, food processing, trading of agri-food products, and lodging and restaurant.

TABLE 8.5—MALE AND FEMALE PRODUCTIVE TIME ALLOCATION ACROSS INDUSTRIES BY EMPLOYMENT STATUS (%)

Industry or activities	All employment		Self-employment		Family labor		Salary and wage employment	
	Male	Female	Male	Female	Male	Female	Male	Female
Staple crops	58.5	49.3	52.6	28.0	85.1	68.1	0.6	0.1
Cash crops	1.8	10.8	1.7	8.7	1.7	11.8	2.8	0.1
Livestock	5.8	0.0	3.7	4.1	10.0	10.5	1.2	0.0
Forestry	0.1	0.0	0.1	0.3	0.0	0.0	0.2	0.0
Fishery	0.1	0.0	0.1	0.0	0.0	0.0	0.1	0.0
Mining	0.5	0.1	0.3	0.1	0.0	0.0	3.2	0.9
Food manufacturing	1.3	9.4	1.7	14.7	0.7	2.0	1.4	1.0
Nonfood manufacturing	2.8	2.0	4.4	5.9	0.5	1.4	3.9	2.7
Utilities	0.1	0.1	0.2	0.0	0.0	0.0	0.4	1.5
Construction	1.6	0.0	1.0	0.0	0.1	0.0	8.1	0.0
Trading of agri-food products	6.0	13.5	8.9	20.1	0.2	4.0	12.5	2.8
Trading of other products	7.2	4.1	12.4	5.9	0.8	1.3	6.8	1.7
Maintenance & repairs	2.2	0.0	1.9	0.1	0.5	0.1	9.1	0.0
Lodging and restaurant	0.5	5.0	0.5	8.0	0.1	0.7	1.6	2.4
Transport and communication	2.9	0.0	2.2	0.0	0.1	0.0	14.0	0.1
Finances and insurance	0.1	0.1	0.0	0.0	0.0	0.0	0.5	3.8
Real estate and business	0.5	0.0	0.3	0.0	0.0	0.0	2.8	1.1
Public administration	1.1	0.6	0.0	0.0	0.0	0.0	8.8	13.7
Education	1.0	1.4	0.0	0.0	0.0	0.0	7.8	36.0
Health and social work	0.6	1.1	0.6	0.5	0.0	0.0	2.6	20.0
Personal and collective services	5.1	2.5	7.4	3.5	0.2	0.2	11.4	12.0
All industries or activities	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Niger, National Institute of Statistics (2016, 2019).

Note: Industries are ranked according to their openness to intraregional trade, with the most open listed first.

TABLE 8.6—MALE AND FEMALE SELF-EMPLOYED, FAMILY, AND SALARY AND WAGE WORK BY INDUSTRY OPENNESS TO ALL EXTERNAL TRADE, PERCENTAGE CUMULATIVE SHARE

Industry	Self-employed work		Family work		Salary and wage work	
	Male	Female	Male	Female	Male	Female
Manufacturing	10.4	29.0	2.9	6.3	2.6	1.5
Transport and communication	16.2	29.0	3.3	6.3	12.8	1.6
Mining	18.7	30.0	3.3	6.3	21.6	3.6
Cash crops	22.3	45.3	8.4	34.1	23.3	3.6
Construction	24.2	45.3	8.7	34.1	27.5	3.7
Real estate and business	26.8	45.3	8.7	34.1	35.5	6.2
Fishery	30.6	45.3	11.2	34.1	36.9	6.2
Utilities	32.2	45.3	11.2	34.1	38.1	9.7
Livestock	38.9	51.3	36.6	54.8	38.7	9.7
Staple crops	65.9	63.0	97.4	92.7	38.8	9.7
Lodging and restaurant	66.6	70.3	97.6	93.5	39.3	10.3
Finances and insurance	66.6	70.3	97.6	93.5	40.4	16.9
Trade services	88.7	90.5	99.4	99.1	48.0	17.9
Forestry	90.8	95.9	99.7	99.8	49.3	17.9
Personal and collective services	97.8	98.6	100.0	100.0	52.3	20.5
Public administration	97.8	98.6	100.0	100.0	91.6	62.1
Education	97.9	98.6	100.0	100.0	97.5	84.4
Health and social work	100.0	100.0	100.0	100.0	100.0	100.0

Source: National Accounts (2013); Niger, National Institute of Statistics (2016).

Note: Industries are ranked according to their rate of openness to external trade—that is, with ECOWAS and non-ECOWAS countries—with the most open listed first.

Model and Data

The economic model developed for the 15 ECOWAS countries (Fofana 2018) is used to simulate the distributional impact of the customs union reform on men and women in Niger. The model follows the tradition of multicountry computable general equilibrium (CGE) modeling to assess regional integration policies.¹⁰ The model incorporates 15 single-country CGE models customized to

the 15 ECOWAS economies. Then, trading relationships are established among the ECOWAS economies (intraregional trade), and between the ECOWAS economies and the non-ECOWAS partners (extraregional trade). Fofana (2018) discusses the salient features of the ECOWAS simulation (ECOSIM) model.

The ECOSIM model offers the opportunity to incorporate specific features of the ECOWAS economies as provided by social accounting matrices (SAMs).

¹⁰ Hinojosa-Ojeda et al. (1995) used a multicountry CGE model to study the impact of the North American Free Trade Agreement. Lewis and Robinson (1996) developed a similar model for Indonesia to assess the impact of regional trade liberalization.

We take advantage of this compelling feature of the model to make the Niger single-country model gender focused. Thus, the Niger model breaks down the labor market for men and women to reflect the gender disparities highlighted in the previous section. Thus, workers are separated by sex and employment status (self-employed workers, family workers, and wage and salary workers). The model includes male- and female-led economic activities based on information from their employment status. The 2014 SAM built for Niger is relatively disaggregated in terms of industries and commodities.¹¹ Thus, we identify industries with a larger proportion of self-employed workers relative to salary and wage workers and split each of them into male- and female-led economic activities. This has been the case for most agricultural and food processing industries. Industries with fewer self-employed workers remain aggregated as they are more likely to be driven by firms rather than individual entrepreneurs.¹² To specify the production technology in male- and female-led industries, additional information on production and operating accounts of self-employed males and females is gathered by industry from the 2014 National Survey on Household Living Conditions and Agriculture conducted in Niger.

Salary and wage workers, self-employed workers, and family workers are divided by sex. An economically active man or woman can fall into one of the following four employment statuses: self-employed, family worker, wage and salary worker, and unemployed. An industry demand for labor specifies a fixed proportionality relationship among three categories of workers related to the first three employment statuses. Male and female labor supplies are constant within a period and set to increase at a fixed rate from one period to another. A wage curve is specified to capture the relationship between the excess labor supply (unemployment) and the real wage rates. Female self-employed work and family work are valued at the expected wage rate (that is, the shadow market wage), and so are male self-employed work and family work. Thus, the (implicit)

employment earnings include changes in both employment levels and the real and implicit wage rates.

This gender-focused analysis of the ECOWAS CET differs from Fofana's (2018) study in two ways. First, the structural economic disparities between men and women are partially embedded in the gender-disaggregated SAM—that is, employment by category is disaggregated by sex and several industries are split up into male- or female-led economic activities. Second, the economic relationships between men and women are captured through the elasticity parameters. An inelastic substitution between male and female labor is assumed in the industries' production technology.¹³ Moreover, male- and female-led economic activities have different values of investment demand elasticity. The latter measures the responsiveness of investment demand by an industry to a change in the net return on investment. A low elasticity value is given to female-led industries relative to male-led industries because of the existing gender inequalities in access to agricultural land, credit, and other physical capital.¹⁴

Scenarios and Results

According to Fofana (2018), implementation of the CET results in declining tariff rates in the ECOWAS countries with the exceptions of Ghana, Cabo Verde, and Togo. The average tariff rates decline by 2.5 percent in Niger. Increasing tariff rates are estimated for rice and cash crops, whereas tariff rates decrease for other staple products, forestry and silviculture products, and mining and quarrying products. A detailed discussion of the effects of the CET implementation on tariff rates in the ECOWAS countries, including Niger, is provided by Fofana (2018).

Niger's implementation of the CET is likely to be pro-growth and welfare improving according to Fofana (2018). Both intra- and extra-ECOWAS trade expand more rapidly under the CET implementation versus the baseline (the situation without the CET). Niger accelerates trade in agricultural goods much faster than the trade of nonagricultural products, particularly with non-ECOWAS

11 The National Statistical Institute built Niger's 2014 SAM. It has been adjusted to the needs of the study by disaggregating the industries and products, as well as the production factors.

12 We have not attempted to undertake a disaggregation by sex of the leadership or the ownership of firms by industry. This would have required additional information that may not have been available or accessible at the time the analysis was conducted. Moreover, this additional information and specificity is less of interest to the study and is not likely to affect its main conclusions.

13 Previous analyses also make the choice of inelastic substitution between male and female labor (Fontana and Wood 2000; Cockburn et al. 2007).

14 Previous studies (for example, Fofana 2018; Cockburn et al. 2007) set the value of the investment demand elasticity at 2; this is the value selected for male-led activities. Initially, an investment demand elasticity value of 0.2 is chosen for female-led activities to reflect gender inequalities in access to economic resources, that is, private investment in this case. Later, a sensitivity analysis on the value of the investment demand elasticity is conducted by increasing the value in the female-led activities.

partners. Its trade balance with ECOWAS countries deteriorates under the CET compared with the baseline. In contrast, the country's trade balance with non-ECOWAS partners improves as its exports accelerate faster than imports.

Fofana's (2018) ex ante impact assessment of the CET implementation implicitly assumes the absence of major discrimination preventing individuals from fully participating in economic activities. However, our discussion in the previous sections highlights gender inequalities in many socioeconomic aspects hindering women from fully participating in economic activities. Women's economic choices are driven not only by market forces but also by sociocultural norms and legal barriers.

First, gender disparities emerge in labor market participation and employment status. Compared with men, women tend to be more self-employed than wage and salary employed (Table 8.4). Women are also overrepresented among unpaid family workers compared with men.

Second, compared with men's employment, women's employment is concentrated among fewer economic activities (Table 8.5). In the agricultural sector, women are overrepresented in cash crops, livestock, and forestry activities, whereas men are more involved in staple crops and fishery activities. In nonagricultural sectors, women overwhelmingly participate in the transformation of agricultural products (that is, agricultural and food processing) and food services industries.

Third, women have less access to productive resources (among others, credit and agricultural inputs), hindering their participation in economic activities. According to an IMF report (IMF 2017), long-established sociocultural barriers are impeding Niger's social transformation and economic growth. Niger falls below the SSA averages on the gender empowerment indexes, and its imposition of legal barriers to gender-based discrimination has been slow according to the same report. Women and youth are progressively losing access to land under the traditional system with increasing demographic pressures, and women are progressively losing control over agricultural production (Wouterse 2016).

Given the existing gender disparities, the ECOWAS CET implemented by Niger is not likely to benefit men and women proportionally. Moreover, gender disparities are likely to have a negative impact on the outcome of the trade reform, resulting in a lost opportunity for the country to accelerate growth and improve the livelihoods of its people.

Gender Inequalities Are Likely to Increase under the CET Implementation

The simulation results confirm that Niger's CET implementation affects men and women differently. The gendered impact of the CET reform is measured by the changes in employment levels and employment earnings

TABLE 8.7—CHANGES IN MALE AND FEMALE EMPLOYMENT AND EMPLOYMENT EARNINGS UNDER THE CET, COMPARED WITH BAU BASELINE (%)

	Employment level		Employment earnings	
	Male	Female	Male	Female
All workers	1.0	0.5	3.8	1.9
Self-employed workers	1.3	0.2	5.2	1.1
Family workers	0.6	0.8	2.6	3.0
Wage and salary workers	0.8	0.6	3.0	2.4

Source: Simulation results.
Note: CET = Common External Tariff; BaU = business as usual.

TABLE 8.8—CHANGES IN VALUE-ADDED IN MALE- AND FEMALE-LED ACTIVITIES UNDER THE CET, COMPARED WITH BAU BASELINE (%)

	Male	Female	All
Staple crops	3.4	-0.1	2.7
Cash crops	10.2	1.5	3.8
Livestock	5.3	0.4	3.5
Silviculture and forestry	6.7	0.7	2.9
Manufacturing	9.3	1.5	4.3
Trade services	6.3	0.6	4.1
Lodging and restaurant	18.8	4.0	5.7
Health and social work	6.6	0.8	4.9
Personal and collective services	4.3	0.5	3.5

Source: Simulation results.
Note: CET = Common External Tariff; BaU = business as usual.

(Table 8.7). Under the CET, both male and female employment levels and earnings are expected to increase versus the baseline (that is, the scenario without the CET). However, the gender gap is likely to increase as male employment and employment earnings increase more than those of their female counterparts. Female self-employment and wage and salary employment are likely to reap fewer benefits than the respective male categories from the trade reform.

Women's self-employment increases less rapidly compared with that of men because of gender inequalities in access to productive factors, such as agricultural land and financial resources. Because of challenges women face in accessing productive resources compared with men, investments grow more slowly in women-led activities than in men-led activities. Compared with men, supplies in women-led activities increase at a slower pace, primarily in cash crops, silviculture and forestry, food manufacturing, and food services (that is, restaurants and bars) where female self-employment is predominant (Table 8.8).

Moreover, the CET reform appears to widen gender employment and wage gaps among wage and salary workers. Female wage and salary workers are less exposed to external trade than their male counterparts (Table 8.6). Female wage and salary workers are concentrated in few numbers in industries that are less exposed to international trade. Nearly 80 percent of female wage and salary employment time is allocated to public administration, education, and health and

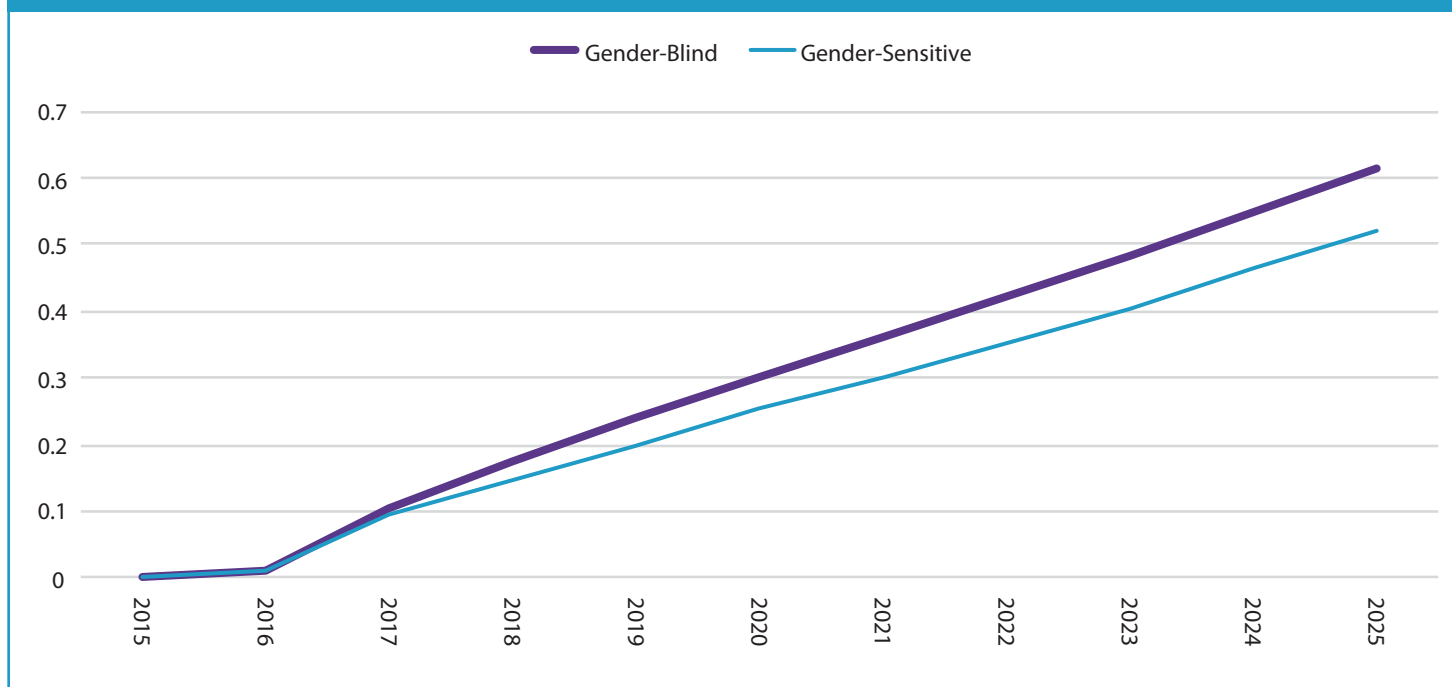
social work, versus less than 50 percent for their male counterparts. Thus, female salary and wage earners are less positioned to benefit from greater regional trade integration.

Lost Economic Opportunity with CET Implementation because of Gender Inequalities

Fofana's (2018) assessment of Niger's CET implementation was conducted without considering gender-based disparities (that is, it was gender blind). We contrast the results of that assessment with those of a gender-sensitive assessment of the CET implementation.

The simulation results indicate that the positive outcome of the CET implementation is not as rosy when gender disparities are accounted for. In other words, the measure of GDP under the CET implementation compared to

FIGURE 8.2—CHANGE IN GDP UNDER THE CET, COMPARED WITH BAU BASELINE (%)



Source: Simulation results.

Note: GDP = gross domestic product; CET = Common External Tariff; BaU = business as usual.

the continuity is lower under the gender-sensitive assessment than it is in the gender-blind assessment (Figure 8.2). After 10 years of CET implementation, Niger's GDP is lower by 17 billion CFA francs in constant 2013 prices under the gender-focused analysis compared with the gender-blind analysis. Thus, if the current gender disparities persist in the future, the country's GDP is likely to lose 13 percent of its potential gain under the CET implementation. One should consider the estimate as a short-term lost economic opportunity of the customs union reform because of gender-based disparities. The loss is likely to be amplified over time (Figure 8.2) and pass through other socioeconomic dimensions, which in turn further damage the economic performance in the long run. Niger would likely enhance the outcome of the regional trade integration reform if it were to increase women's access to productive resources and reduce disparities in gender participation in economic activities and in sectoral distribution of employment.

Trade flows are lower under the gender-focused assessment compared with the gender-blind assessment because of women's difficulties in accessing physical capital and the slow growth of their economic activities. Trade for all partners, ECOWAS and non-ECOWAS, is lower under the gender-sensitive analysis than the gender-blind assessment. Gender disparities in access to economic resources lower Niger's exports under the CET reform, but, most important, they lower its cash crops and livestock exports to non-ECOWAS partners. Niger's imports of agricultural commodities from ECOWAS members are higher compared with the gender-blind assessment because of greater domestic supply constraints under the gender-sensitive assessment. Niger's imports of agricultural products from non-ECOWAS partners are relatively lower. Niger's low export capacity due to women's poor access to productive resources is translated into a smaller aggregate amount of imports, except for agricultural commodities facing greater supply constraints. Gender disparities' implications on GDP growth is depicted by Figure 8.2.

Closing the Gender Gap in Access to Productive Resources

Women's relatively greater exposure to external trade may offer them opportunities to benefit from greater trade openness, on the one hand; however, it can constitute a serious challenge to female economic empowerment with greater competition from imported products, on the other. In both situations, women's economic empowerment, including increasing their access to productive resources, is critical if they are to seize opportunities and mitigate the adverse impacts of greater regional trade integration.

Recently Niger's development strategy (the "Plan de Développement Economique et Social 2012–2015") has set gender equality as a national priority. Under the strategy, the government is hoping to increase women's access to productive resources, including equipment and credit. Moreover, several sectoral strategies and initiatives have been launched to improve women's access to credit. Among others are the National Financial Inclusion Strategy, which gives priorities to women in rural areas and female small business owners, and the World Bank initiative "The Sahel Women's Empowerment and Demographic Dividend Project."

We turn our analysis to assessing the impact of the CET implementation in Niger under the removal of gender-based barriers in access to productive resources. The scenario is implemented by assuming equal opportunities for women and men in accessing available economic resources, that is, agricultural land and financial resources (credit).

We find that more access for women to productive resources would likely accelerate women's participation in economic activities, particularly as self-employed workers (Table 8.9). Self-employed women's greater exposure to intra- and extraregional trade provides them a strategic advantage to seize the opportunities offered by the trade reform. Male self-employment work increases but at a slower pace because of the increase in competition from their female counterparts over the available productive resources. More women participate in economic activities as family workers because of the increase in female

TABLE 8.9—CHANGES IN MALE AND FEMALE EMPLOYMENT LEVELS UNDER THE CET, COMPARED WITH BAU BASELINE (%)

	Employment level		Employment earnings	
	Male	Female	Male	Female
All workers	1.0	0.5	0.9	1.0
Self-employed workers	1.3	0.2	1.0	1.1
Family workers	0.6	0.8	0.8	1.0
Wage and salary workers	0.8	0.6	0.9	0.7
Source: Simulation results.				
Note: CET = Common External Tariff; BaU = business as usual.				

self-employment. Both male and female salary and wage work accelerate when gender-based barriers in access to productive resources are removed, but the gap between men and women remains unchanged.

In our simulation, closing the gender gap in access to productive resources accelerates economic growth in Niger. The country's GDP increases by up to 17 billion CFA francs in 2013 prices over a 10-year period. A complete removal of gender-based barriers in access to productive resources almost compensates for the 10-year economic loss estimated earlier for the gender-sensitive assessment. Thus, access to productive resources constitutes a critical step in women's economic empowerment in Niger. The economic return of that access benefits both women and men through accelerated economic growth.

Conclusion

The evidence regarding the impact of trade liberalization on gender inequalities is not fully established yet, and neither is the evidence for the impact of gender inequalities on trade policy outcomes. Sociocultural norms, legal barriers, and socioeconomic disadvantages are the main gender-based barriers that affect the distribution of trade benefits between men and women, on the one hand, and the outcomes of trade policies and reforms, on the other. This study of Niger assesses the impact of gender-based barriers on whether men and women benefit from trade and the outcome of trade reforms. It focuses on ECOWAS's Common External Tariff, a customs union that has guided Niger's trade policy since its implementation in 2015.

Trade is vital to economic sectors in Niger due to the landlocked nature of the country. Male and female traders operate across borders to connect the country with regional and international markets. Female traders belong to the same ethnic groups as their male counterparts but are less educated, less involved in associations and business networks, and have less access to productive resources. Different forms of harassment are experienced by both female and male traders, with the most frequent cases consisting of intimidation and humiliation and verbal attacks. Law enforcement agents are among the major perpetrators of harassment. Women are, however, more subject to harassment than their male counterparts. Women specialize in products that do not always

originate from the region, and so are not subject to duty-free trade. In addition to gender-specific harassment, the specialization pattern of female traders exposes them to more harassment.

Women are concentrated and overrepresented in a limited number of economic activities compared with men. Women's economic activities are more exposed to regional and international trade than men's activities. Focusing on employment levels and earnings, this study finds an increased gender gap under the CET implementation even though the reform leads to positive outcomes for both men and women when compared with the baseline—that is, employment levels and earnings increase more for men than for women. The widened gender gap is essentially due to a lower supply response of female-led activities compared with their male counterparts with the trade reform. Existing gender inequalities in access to productive resources, such as agricultural land and other physical capital, contribute to limiting women's ability to seize the opportunities offered by greater regional trade integration. In addition, female wage and salary employment is concentrated in sectors not exposed or less exposed to trade—that is, health and social work and education. Thus, women take less advantage in the labor market of the opportunities that regional trade expansion offers.

Gender disparities result in the misallocation of resources in the economy and lead to lost economic opportunities for Niger. The country's GDP level is 17 percent lower under the prevailing gender inequalities than its potential gain, that is, without gender-based barriers. Thus, closing the gender gap in access to productive resources is likely to generate positive outcomes for Niger. Thus, reducing gender inequalities in Niger is not only an ethical consideration, but it would have positive economic benefits for both women and men. That the Niger government has set gender equality as a national priority in its development strategy constitutes a critical step toward further empowerment of women and gender equality.