DRAFT: NOT FOR PUBLICATION"

25th Annual Conference on Global Economic Analysis

"Accelerating Economic Transformation,
Diversification and Job Creation"

8-10 June, Virtual conference

An Economic Assessment of the AfCFTA Impact on the Moroccan Economy

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Abstract

This article presents an assessment of the economic implementations of the ongoing African Continental Free Trade Area agreement (AfCFTA) on the Moroccan economy. In this study a two-level economic modeling work has been performed, firstly, beginning with the computable general equilibrium model[2], followed by a micro-simulation analysis.

The implementation of the Agreement would result in the liberalization of trade in goods in conformity with the agreed terms of the AfCFTA; a 50% reduction in actionable trade barriers in the five priority service sectors (tourism, transportation, communication, financial services, and business services), as well as in health and education services that have received special attention due to the coronavirus (COVID-19)-induced crisis and a cut of 50% in actionable NTMs. Following the implementation of the AfCFTA, Morocco's GDP and output, are all expected to increase (albeit by a relatively modest amount, less than 1%). On the trade front, a trade distortion in favor of Africa is expected. Thus, Morocco's exports to

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[2] The United Nations Economic Commission for Africa (ECA) and the Centre for International Research and Economic Modelling (CIREM) of the Centre d'Etudes Prospectives et d'Information Internationales (CEPII) have conducted a comprehensive new assessment of the economic implications of implementing the current African Continental Free Trade Area (AfCFTA) agreement. The latest version of the computable general equilibrium model is MIRAGE-e, the GTAP10.1 database and the latest Market Acces Map database on bilateral protection information for 2014, reported in the Harmonized Commodity and Coding System for products at 6-digit level.

the African continent will increase by US$8.7 billion (91%), while exports to the rest of the world are expected to decrease by nearly US$5 billion.

The second part of the study is conducted through a microsimulation model to assess the effects of AfCFTA on the reduction of poverty and social inequalities in Morocco. In terms of modeling, the approach used is non-parametric (Magher, 1993), capturing changes in the distribution of income as a result of shocks related to the implementation of the Agreement. The used data are from the National Survey on Household Consumption and Expenditure for the year of 2014 conducted by the Higher Planning Commission of Morocco. The number of surveyed households is 15970, distributed by the main socio-economic indicators. In terms of outcomes, the impact of the implementation of the AfCFTA on poverty and social inequality in Morocco will be relatively modest. In conclusion, it can be observed that the impact of the AfCFTA will be felt mainly at the macroeconomic level, and more particularly in trade. Indeed, the Agreement will contribute to the expansion of trade between Morocco and the African countries. In terms of welfare and social inequality, the impact will be positive but modest. According to the scenario envisaged by the Agreement, an increase of 0.6% is expected for welfare, and a decrease of 0.70% for social inequalities.

Keywords: Trade, General Equilibrium Model, Microsimulation, Poverty.

I. Introduction

Intra-African trade began to take place under the AfCFTA on January 1, 2021. As of March 31, 2022, out of the 55 member states of the African Union, 54 had signed the Agreement and 42 of them had ratified it. Moreover, the signatory parties are not yet in a position to trade under the agreed preferential conditions, as the rules of origin and schedules of tariff concessions have not been officially established. In addition, for the five key sectors (transport, tourism, communications, financial services, and business services), the Parties have yet to finalize their specific schedules of commitments and submit them to the African Union secretariat.

In this framework, the United Nations Economic Commission for Africa (ECA) and the Centre for International Research and Economic Modelling (CIREM) of the Centre d'études prospectives et d'information internationales (CEPII) have conducted a new detailed assessment of the economic implications of the current implementation of the African Continental Free Trade Area (AfCFTA) agreement.

The study employed a computable general equilibrium (CGE) model[3]. The analysis is based on liberalization of trade in goods following the terms of the AFCFTA agreement; a 50 percent reduction in restrictions on the five priority services sectors (tourism, transportation, communication, financial services, and business services) as well as on health and education (which have become particularly important services in the context of the COVID-19 pandemic); and a 50 percent reduction in non-tariff measures[4] (NTMs) applicable only within the African continent. In this analysis, progress on trade facilitation measures is not taken into account, as they require significant implementation costs, which cannot be properly assessed in the CGE analysis. The results are presented for 2045 because of the gradual implementation of the reform, particularly between the period 2021 and 2035. Thus, by the need to give sufficient time to the variables in the model to be adjusted dynamically, once the reforms of the Agreement are fully and successfully implemented.

In addition, three other scenarios were considered in the study, namely: (A) liberalization of trade in goods exclusively; (B) liberalization of trade in goods followed by a 50 percent reduction in actionable trade restrictions in the five main service sectors (i.e.,

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[3] The conducted study relies on the latest version of MIRAGE-e computable general equilibrium model(http://www.cepii.fr/PDF_PUB/wp/2013/wp2013-39.pdf), the GTAP10.1 database (https://www.gtap.agecon.purdue.edu/databases/v10/index.aspx) and the latest MarketAccesMap database on bilateral protection information for 2014 and reported in the Harmonized Commodity System for 6 digit products (MAcMap-HS6; http://www.cepii.fr/cepii/en/bdd_modele/presentation.asp?id=12).

[4] In practice, not all limitations on services and non-tariff measures are feasible. Some are legitimate or appropriate, while others are others are difficult or impossible to suppress. In the literature, it is estimated that NTMs are up to 50 percent actionable (Petri A. and Plummer M.G., "The economic effect of the Trans-Pacific Partnership: new estimates" Petreson Institute for International Economics, Working Paper Series, WP 16-2 (January 2016)).

communications, transportation, tourism, financial services, and business services), plus those related to health and education; (C) liberalization of trade in goods, plus a 100 percent reduction in actionable trade restrictions in all seven sectors and a 100 percent reduction in applicable NTMs. These scenarios were developed and simulated to further understand the weight of trade costs and opportunities expected through liberalization of trade in goods, reduced restrictions on trade in services, and lower NTMs under the AfCFTA Agreement.

Furthermore, the results are based on the assumption that all 55 member states of the African Union have signed and ratified the Agreement. Therefore, if not all member states have signed or ratified the Agreement, the actual costs and benefits of implementing the AfCFTA may be lower than those shown in the following sections. This means that the more unified the African market becomes, the more the countries of the continent will be able to take full advantage of the Agreement.

In addition, a macro-micro economic framework was developed to assess the effects of the AfCFTA on reducing poverty and social inequality in Morocco. Specifically, a two-stage economic modeling exercise was conducted: 1) a GGE model; 2) a micro-simulation. The two stages or models communicate through a set of interdependent variables linked sequentially. Thus, the results from the CGE model are used as input to the micro-simulation model. This combination of economic models allows for a more comprehensive assessment of the effects of the AfCFTA Agrement. In this context, the micro-simulation model captures the changes in income distribution as a result of shocks under the implementation of the Agreement. In terms of modeling, the approach used is the non-parametric[5], capturing the distribution of income and changes in consumption behavior in the population based on the estimated probability distribution of income[6]. The data used are from the Moroccan National Survey on Household Consumption and Expenditure for the year 2014. Thus, the number of households surveyed amounts to 15970, with multiple socio-economic indicators available.

II. The impact on macro-economic indicators and trade

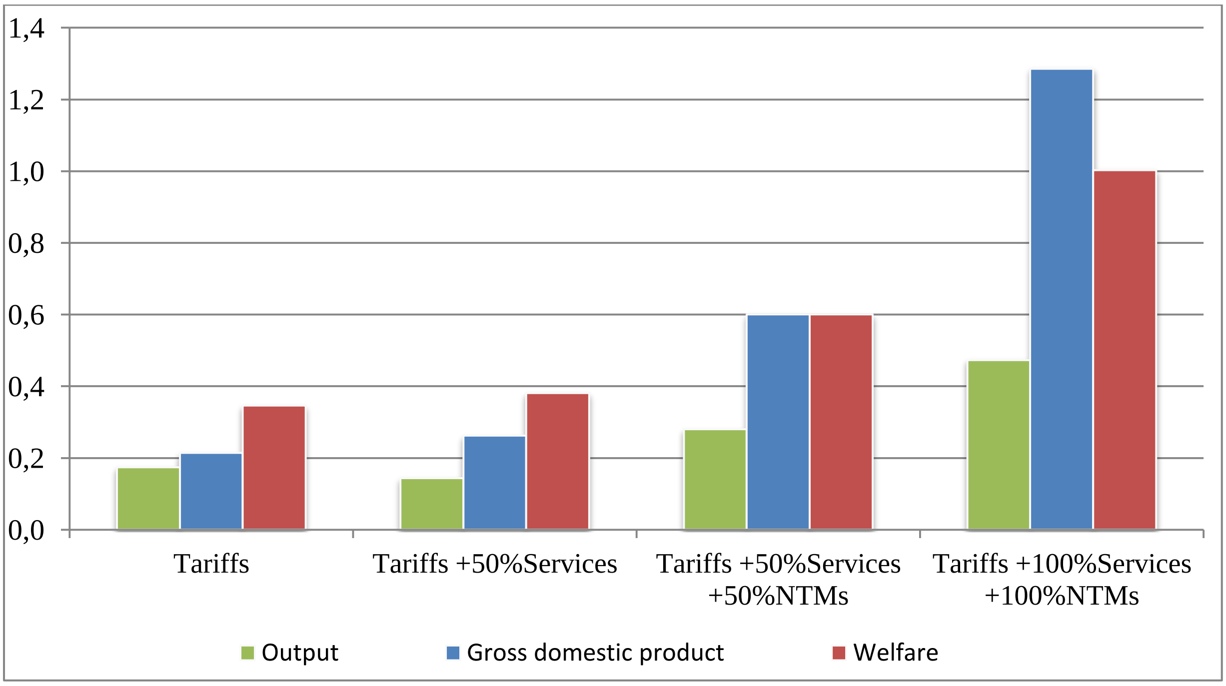
In the case of Morocco, the expected changes in variables such as GDP, output, and welfare would be relatively moderate. Not surprisingly, the implications of the AfCFTA will be felt most in trade between Morocco and its African partners. Figure 1 shows the different impacts in 2045 that will be generated by the implementation of the AfCFTA, according to the four simulated scenarios and in comparison with the baseline scenario in the absence of the AfCFTA. Focusing on the central or most "realistic" scenario of tariff reduction with a

[5] Magher G.A. (1993), “Forecasting Changes in Income Distribution: an Applied General Equilibrium Approach”, Centre of Policu Studies, Monash University

[6] Lee T.C et Judge G. (1996). « Entroypy and cross entropy procedures for estimating transition probabilities from aggregated data”.

50% reduction in actionable trade barriers in services and NTMs, Morocco's GDP will increase by 0.6% (or US$1.9 billion). Similarly, a slight increase is expected in production and welfare, with increases of 0.3% (or $2.2 billion) and 0.6% (or $0.2 billion), respectively.

Figure 1: Changes in key macroeconomic indicators in 2045 following the implementation of the AfCFTA, compared to a situation without the AfCFTA - %.



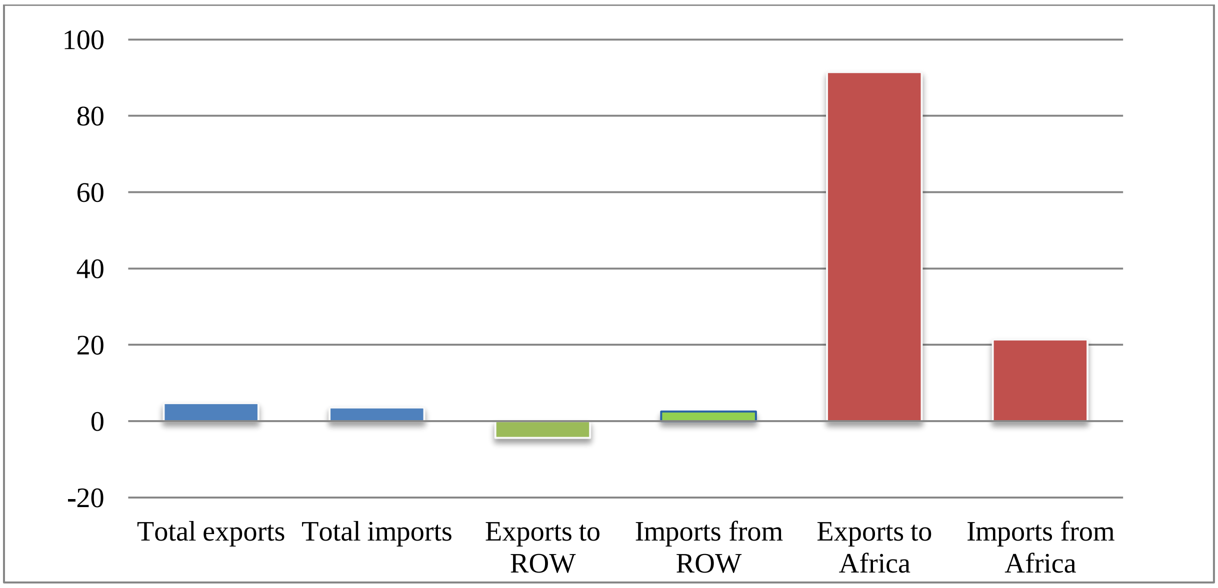
Source: CEA&CIREM-CEPII calculations based on the EGC MIRAGE-e model

In terms of trade relations, the implementation of the AfCFTA will contribute to the growth of Morocco's total exports, with an increase of 4.7% (or US$4.7 billion) compared to a situation without the AfCFTA in 2045. Similarly, Morocco's total imports would also increase by 3.6 percent (or US$4.7 billion) compared to a situation without the AfCFTA in 2045. It should be noted that the AfCFTA will have important implications for the direction of Moroccan trade flows, including a detour of trade to Africa. Indeed, Morocco's exports to its current main partners will decline, particularly with the EU, which is expected to decline by 4.3% (a drop of US$2 billion).

Thus, exports to the United States and China will be reduced by 0.3% and 0.2% respectively (i.e., US$4.3 billion and US$4.2 billion). Morocco's exports to the African continent would increase by 91% (or US$8.5 billion) despite exports to the rest of the world decreasing by 4.4% (or US$4.7 billion) in 2045. Morocco's exportable supply will be spread over the entire African continent; to countries in the West, such as Cote d'Ivoire and Ghana, as well as to countries in the East, notably Kenya and Uganda.

Demand for African goods and services from Morocco will increase, but not as much as exports. Indeed, Morocco's imports from the rest of Africa will increase by 21.4% (US$1.6 billion). Morocco's imports from the rest of the world will increase by 3.2 percent (or US$2.5 billion) compared to a situation without the AfCFTA in 2045 (see Figure 2).

Figure 2: Changes in Morocco's exports and imports by destination following implementation of the AFCFTA compared to the baseline (without AfCFTA) - % - 2045



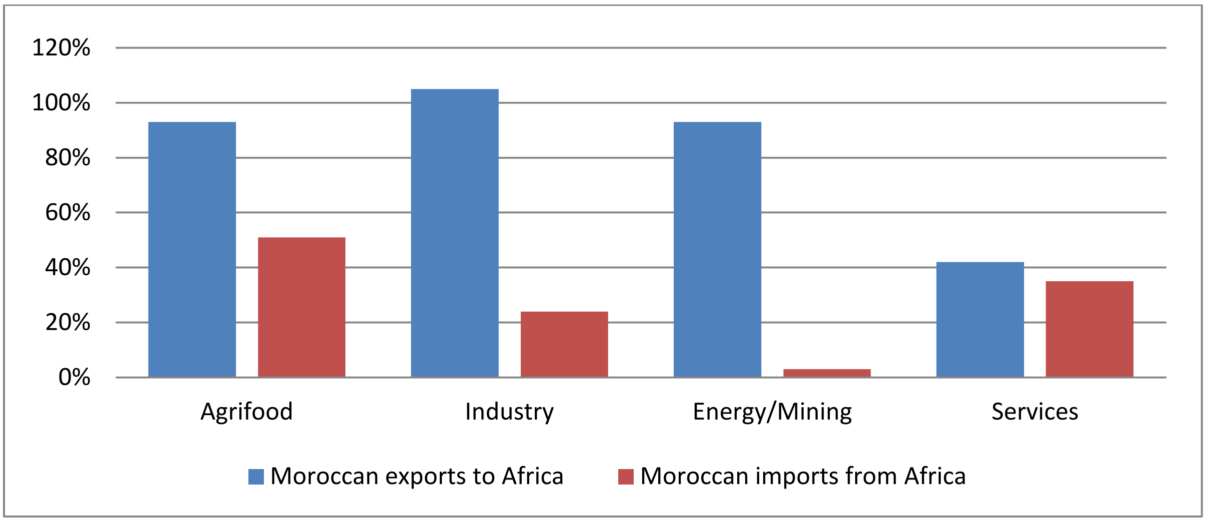
Source: CEA&CIREM-CEPII calculations based on the EGC MIRAGE-e model

III. Focus on the nature of Morocco-Africa trade flows

In Africa, the nature of intra-African trade is characterized mainly by industrial products, followed by agricultural and food products.h Te nature of Moroccan exports to Africa will grow considerably in the industrial sector, i.e., an increase of 105% in 2045 after implementation of the AFCFTA and in comparison with a situation without the AFCFTA For agricultural and food products, an increase of 93% will be recorded. An increase of 93% is also expected in the energy and mining sector. The results also indicate considerable opportunities for trade in services, with an estimated increase of 42% (see figure 3).

As for Morocco's imports from Africa, the largest growth will be in agri-food products (over 50%), followed by industrial products (24%).In addition, the presence of African services on the Moroccan market will also increase significantly. Thus, Morocco's demand for services will rise by 35%. In contrast, the increase in the energy and mining sector will be the smallest, at around 3%.

Figure 3: Distribution of Moroccan Exports and Imports to and from Africa by Major Sectors Following Implementation of the AfCFTA versus Baseline (without AfCFTA) - % - 2045



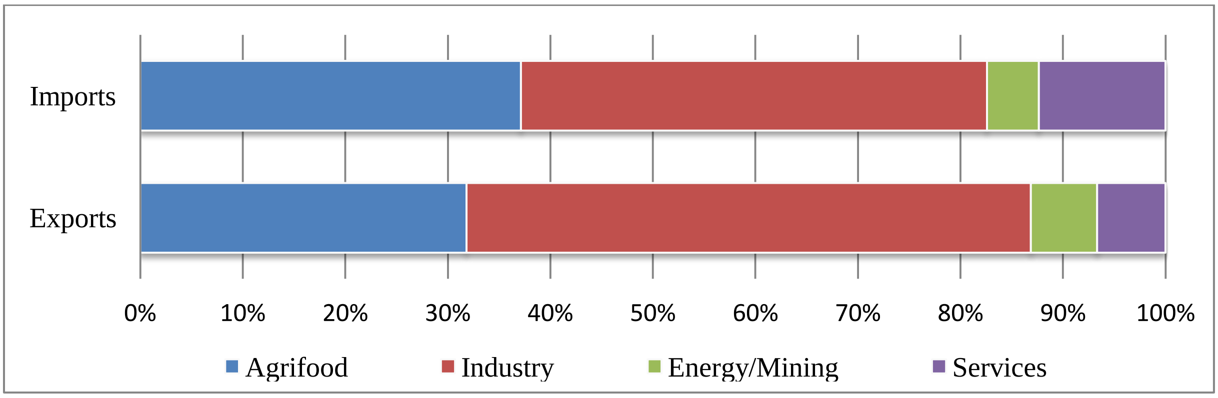
Source: CEA&CIREM-CEPII calculations based on the EGC MIRAGE-e model

As a result of these relative variations in major sectors, the industrial and agribusiness sectors will capture the majority of Morocco's absolute trade gains with its African partners. The implementation of the AfCFTA is therefore an opportunity for Morocco's growth and development, as well as an enhanced presence of Moroccan industries on the African continent.

Indeed, the nature of the exportable offer will evolve (a considerable move up market for Moroccan products). Specifically, the gains in Moroccan exports to the rest of Africa, following the implementation of the AfCFTA, will be concentrated at about 55% in manufactured products, followed by agricultural products (31.8%), services (6.6%) and the energy and mining sector recording (6.5%).

Similarly, the structure of gains from the AFCFTA for Moroccan imports from Africa is relatively similar to the structure of Moroccan exports to Africa. Thus, industrial products will account for the majority of gains (45.5%), followed by agricultural products (37.1%). The services sector and the energy and mining sector will account for 12.3% and 5% of the gains respectively (see Figure 4).

Figure 4: Distribution of Absolute Gains in Morocco's Exports/Imports to/from Africa by Major Sectors with Implementation of the AfCFTA versus Baseline (without AFCFTA) - % - 2045



Source: CEA&CIREM-CEPII calculations based on the EGC MIRAGE-e model

IV. Analysis of AFCFTA gains by sub-sectors

Focus on goods

A more in-depth analysis of the nature of the products that will be traded between Morocco and its African partners indicates that African markets will be increasingly supplied by a multitude of "made in Morocco" products. Indeed, Moroccan exports will be composed of wood and paper products, food and beverages, chemicals, plastics, pharmaceuticals, textiles, and other manufactured goods.

Regarding Morocco's imports from Africa, the African products whose demand will experience an upward trend will be chemicals, plastics and pharmaceuticals, food and beverages, and milk and dairy products.

Focus on services

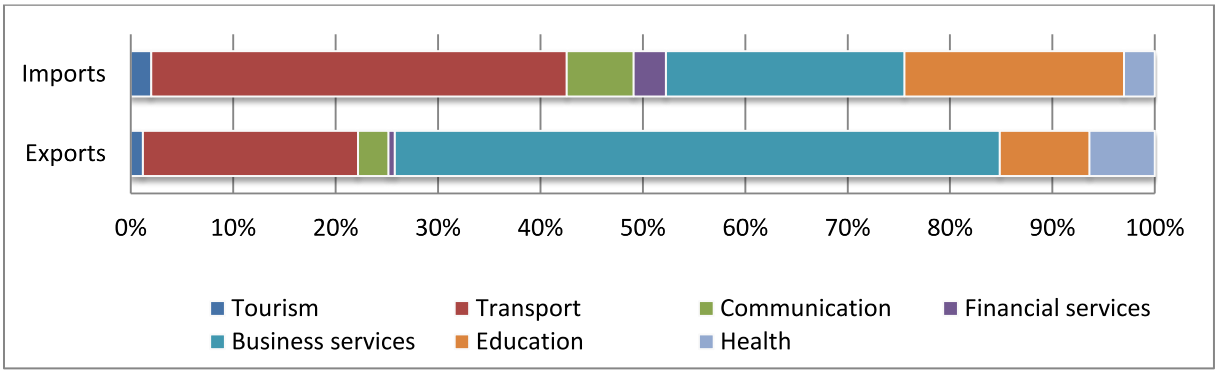
Concerning services, Morocco's exportable supply will be characterized mainly by business services and transport services. As concerns imports, the share of services remains fairly modest given the low level of intra-African trade in this area and the dependence on other Western countries. However, opportunities for growth and development can be envisaged for African companies operating in the transport sector.

In terms of absolute gains, business services will account for nearly 60% of Morocco's services export gains to the rest of Africa, representing an opportunity for Moroccan companies to expand further nationally and continentally, but also an opportunity for African countries to benefit from Moroccan expertise in this area.

The evolution of Africa's transport networks is one of the keys to the success of the AFCFTA, as the shortcomings of the transport system are a real obstacle to intra-African trade. The transport sector will account for a significant portion (over 20%) of Morocco's export gains to the rest of the continent. The other services sectors will share a relatively smaller share of the gains (see figure 5).

On the import side, transportation services will account for about 40 percent of Morocco's services export gains from the rest of Africa. Other services will account for a sizable share of Morocco's absolute import gains from Africa, notably business services and education-related services, at 23 percent and 21 percent, respectively (see figure 5).

Figure 5: Distribution of Absolute Gains in Morocco's Exports/Imports to/from Africa by Major Sectors with Implementation of the AFCFTA versus Baseline (without AFCFTA) - % - 2045

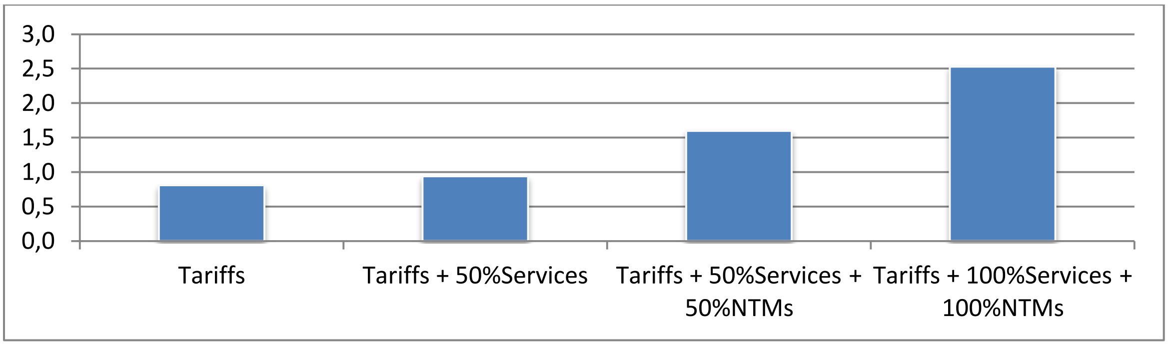


Source: CEA&CIREM-CEPII calculations based on the EGC MIRAGE-e model

The impact of the AFCFTA on tariff revenues

It is worth noting that in terms of customs revenue, despite the impact that a free trade agreement could have on government revenue, in the case of Morocco there is a constant increase of US$0.1 billion (or 1.6%). The AFCFTA will not harm government revenues. This is partly due to the maintenance of import tariffs on excluded products (i.e., 3% of tariff lines) and an increase in Moroccan imports from Africa of 21.4% (i.e., US$1.6 billion). However, the increase in Moroccan customs revenues is more largely explained by the fact that the Moroccan market will continue to be supplied by products from the rest of the world. The latter are not affected by the reduction in tariffs within the AFCFTA. Indeed, the results of the analysis indicate an increase in Morocco's imports from the rest of the world, up 2.5 percent, which translates into an increase of $3.2 billion in absolute value (see Figure 2).

Figure 6: The impact of the AFCFTA on tariffs revenues



Source: CEA&CIREM-CEPII calculations based on the EGC MIRAGE-e model

V. The Impact on Inequality and Poverty in Morocco

The results of the micro-simulation analysis indicate that in the absence of the AFCFTA, Morocco's poverty rate would continue to decline. Table 1 (below) shows the different trends expected in a scenario excluding the implementation of the Agreement.

Table 1: Evolution of poverty and social inequality in Morocco under the baseline scenario

	2014	2045	Percentage change
National poverty line	4,8%	1,3%	-0,73%
International poverty line $1.9 per day per capita	1,0%	0,3%	-0,73%
International poverty line of $3.2 per day per capita	7,7%	2,2%	-0,71%
International poverty line of $5.5 per day per capita	31,5%	9,2%	-0,71%
Gini Index	39,7	33,3	-0,16%

Source: ECA simulation results

The decrease in the poverty rate will be expected regardless of the poverty line considered[7]. Thus, if we consider the national poverty line, the poverty rate will drop from 4.8% in 2014 to 1.3% in 2045.

Similarly, there will be a decrease in the poverty rate for all international poverty lines. Concerning the issue of social inequality, the Gini index will fall from 39.5 in 2014 to 33.3 in 2045, a decrease of about 6% over the period.

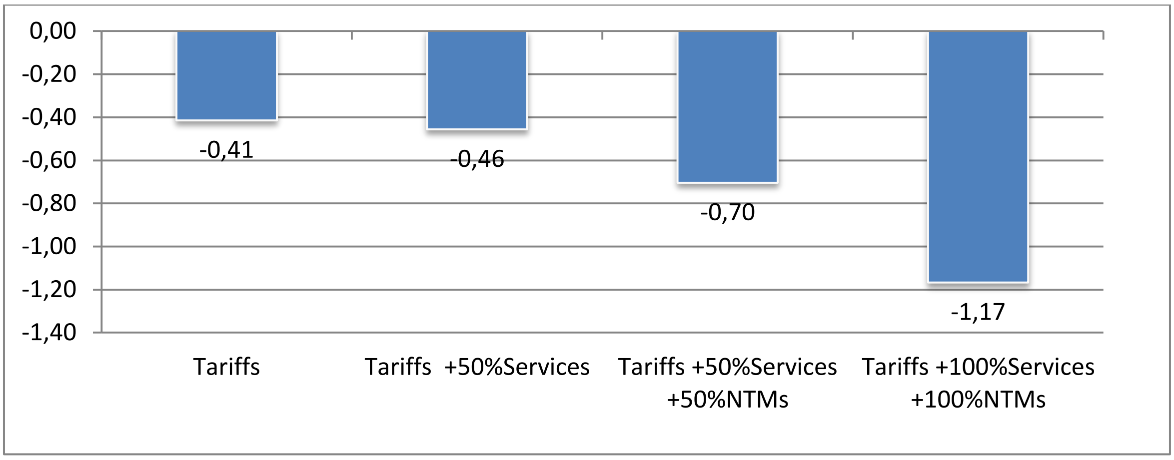
The results indicate that with the implementation of the AFCFTA, poverty and social inequality in Morocco could decline further but to a lower degree. Indeed, several factors

[7] Morocco's national poverty line is measured by Le Haut Commissariat au Plan (HCP) based on the food component in accordance with FAO-WHO standards, and the method for estimating the non-food component developed by the World Bank. In 2014, the monetary poverty line was set, per person and per year, at 4,667 DH in urban areas and 4,312 DH in rural areas. It is worth, on average, US$2.6 PPP per day per person in urban areas and US$2.4 PPP in rural areas. The international poverty line is calculated by the World Bank to facilitate comparison between countries. There is (i) the international extreme poverty line ($1.90 per day per person) which is the average of the national poverty lines of the 15 poorest countries in the world, (ii) the poverty line of $3.2 per day per person for lower middle income countries and $5.5 per day per person for upper middle income countries.

can explain this, including the poverty rate determined in the last household survey of 4.8 percent (according to the national line), one of the lowest in Africa.

Thus, the level of social inequality would decline as intra-African trade is liberalized under the implementation of the AfCFTA. For example, for the scenario that considers only the liberalization of trade in goods, the expected decline is 0.41% as measured by the Gini Index (Figure 7), while for the most realistic scenario, based on the Agreement (i.e., tariffs+50%services+50%MNTs) the expected decline is 0.70% compared to a scenario without the AfCFTA. Hence the importance for African countries to continue efforts to liberalize intra-African trade.

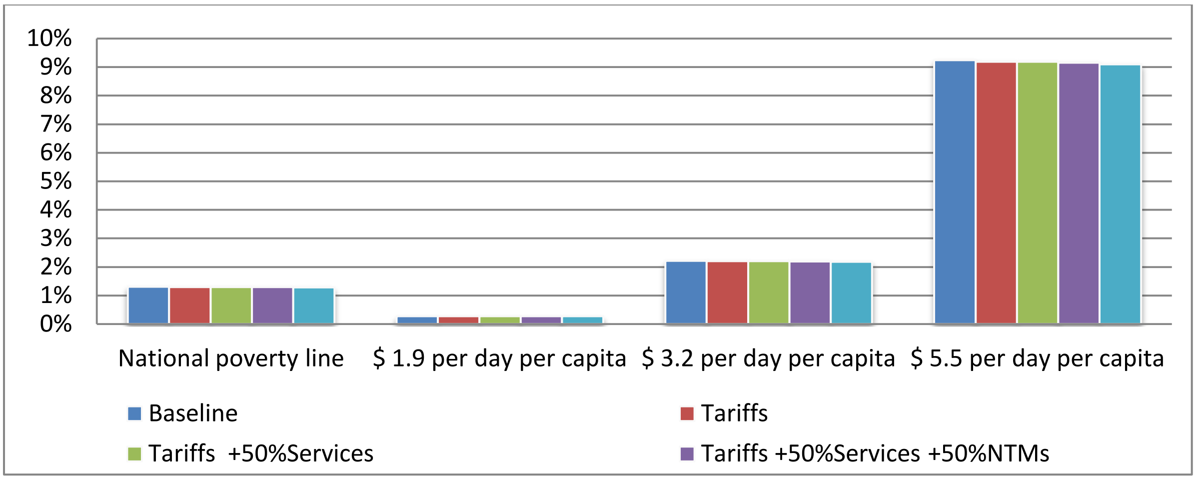
Figure 7: Representation of the impact of the AFCFTA on social inequalities according to the scenarios compared to a situation without the AFCFTA in 2045 - %.



Source: ECA simulation results

The graph below (Figure 8) shows the projected poverty rate in 2045 for Morocco with and without an AFCFTA. It can be seen that the poverty rate will not vary much from one scenario to another but rather according to the level of the poverty line considered. Indeed, if we consider the international poverty line of \$1.9 per day per person, the poverty rate will be 0.3% (the lowest value compared to the other lines studied). Thus, if we refer to the international poverty line of \$5.5 per day per person, the expected poverty rate in 2045 will be 9.2%.9 Figure 9 illustrates the relative difference in the poverty rate in the different scenarios compared to the reference scenario.

Figure 8: Poverty rate in 2045 in Morocco under different scenarios (with and without the AFCFTA) and different poverty lines - %.

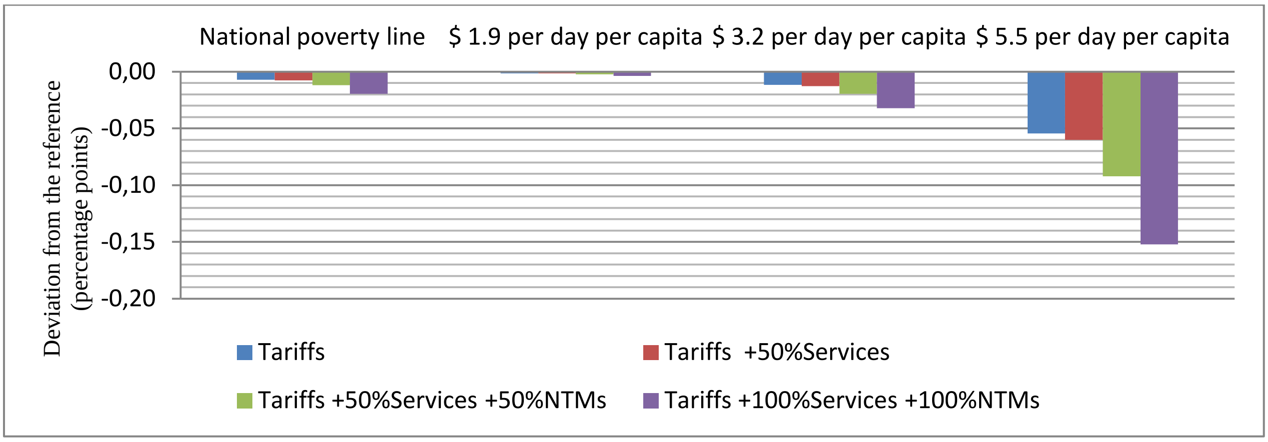


Source: ECA simulation results

The implementation of the AFCFTA will contribute to poverty reduction. In this context, if we consider the most realistic scenario (Tariffs+50% Services+50% NTMs), a decrease of 0.1 percentage points (i.e., the poverty rate decreases from 9.2% in the absence of the AFCFTA to 9.1% under the "central" scenario of the Agreement) compared to the baseline scenario will be felt at the $5.5 per capita per day poverty line, which is the most significant decrease.

For the other international poverty lines, the poverty reduction will be less than 0.05 percentage points. Similarly, for the national poverty line, a reduction of 0.01 percentage points (i.e., a reduction in the poverty rate from 9.2 percent to 9.1 percent) compared to a scenario without the AFCFTA is possible. In the case of Morocco, the effects of implementing the AFCFTA on the poverty level will remain quite modest compared to the expected changes in the macroeconomic level.

Figure 9: The impact of the AFCFTA (realistic scenario) on poverty in 2045 by poverty line and scenario compared to the baseline scenario - percentage points



Source: ECA simulation results

Indeed, the results of the micro-simulation analysis indicate that the number of people who will be out of poverty will remain fairly moderate, as will the poverty rate presented above. For example, according to the results of the scenario agreed upon in the Agreement (tariffs+50%services+50%MNTs), the number of people who would be lifted out of poverty in 2045 would be a little over 31,000 people (according to the international poverty line of $5.5 per day per person), the highest number compared to other international lines. If we consider the poverty line of $3.2 per day per capita, the number of people who will be lifted out of poverty becomes smaller, more than 6,000. Similarly, for the national poverty line the number will be about 4000 people and about 800 for the $1.9 per day per person poverty line.

By relating these results to the Moroccan population for the year 2045, the proportion of the number of people who would move out of poverty in the total Moroccan population will be 0.07% if we consider the threshold of 5.5$ per day per person, and 0.01% for the international poverty line of 3.2$ per day per person. For the national poverty line and the $1.9 per day per person threshold, the variation will be close to zero.

However, it is important to consider the following socio-demographic factors in detail: area of residence, gender, education level and employment status.

Impact of poverty according to place of residence

In Morocco, as in many African countries, rural areas tend to be the most impoverished. However, over the years, poverty has begun to increase significantly in urban areas.

The results of the simulations confirm that in 2045, rural areas will continue to represent the area with the highest level of poverty in Morocco, even without the implementation of the AfCFTA.

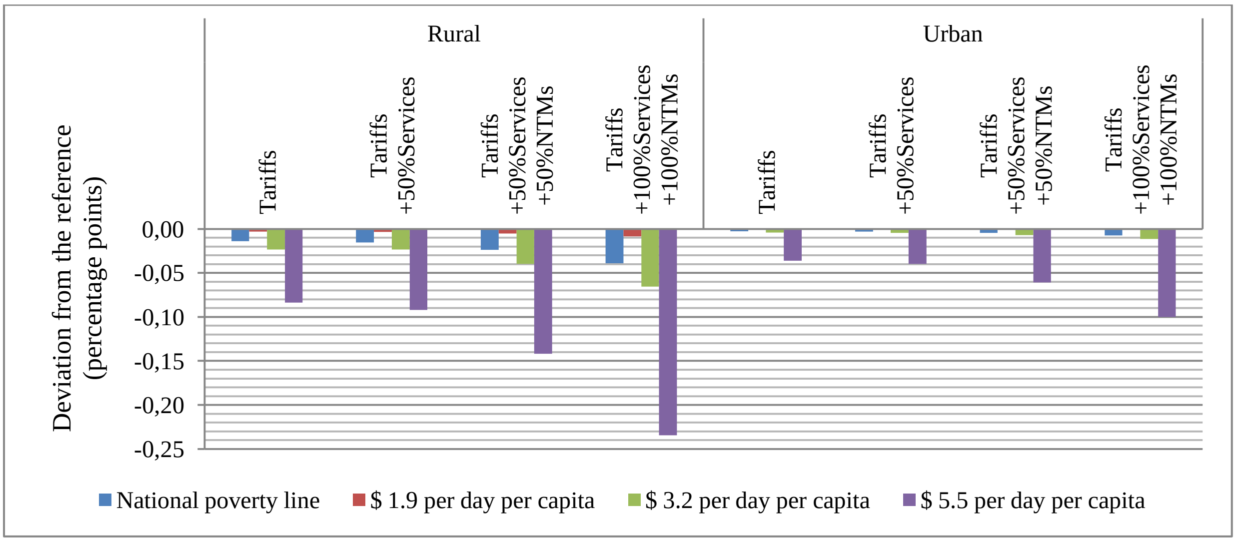
In the absence of the AFCFTA, the poverty rate in rural areas in 2045 would vary between 0.7% (international poverty line of $1.9 per capita per day) and 21.5% (international poverty line of $5.5 per person per day). For the international poverty line of $3.2 per day per person, the poverty rate would be 5.4%. Thus, for the national poverty line, the rate of poor people in rural areas would be 3.2%. In urban areas, the rates would be considerably lower, ranging from 0.01% (international poverty line of $1.9 per day per person) to 1.66% (international poverty line of $5.5 per day per person). For the national poverty line, the rate would be 0.12% compared to 0.18% for the international poverty line of $3.2 per day per person.

Following the implementation of the AFCFTA, the results indicate a decline in poverty rates in 2045 compared to a situation without the AFCFTA, both in rural and urban areas, but more pronounced in rural areas. In urban areas, if we consider the international poverty line of $5.5 per day per person in the case of the realistic AFCFTA scenario, a decrease of 0.06 percentage points would be expected (the poverty rate in urban areas would go from 1.69%

to 1.63%) compared to a decrease of 0.14 percentage points (the poverty rate would go from 21.19% to 21.05%) for rural areas compared to the baseline scenario (Figure 10).

A more ambitious reduction in NTMs would result in a larger decrease in the poverty rate in both zones of residence, i.e., a decrease of about 0.23 percentage points in urban areas (i.e., a rate that would go from 21.19% to 20.96%) and 0.1 percentage points in rural areas compared to a scenario without ZLECAf. (i.e., the poverty rate would increase from 1.69% to 1.59%).

Figure 10: The impact of the AFCFTA (realistic scenario) on the poverty rate by place of residence compared to the reference scenario in 2045 - percentage points



Source: Source: ECA simulation results

The relatively greater reduction in rural poverty in Morocco as a result of the AFCFTA is even more evident when we consider the number of people who will be lifted out of poverty. If we analyze the national poverty line, more than 3,100 rural residents will be out of poverty (or 77%) compared to 934 urban residents (or 23%) in 2045 as a result of AFCFTA implementation. Moreover, if we take into account the other poverty lines, we see that the ratio and number of people residing in rural areas who will be lifted out of poverty is always higher than that of people residing in urban areas. If we refer to the poverty line of $1.9 per day per person, the percentage of people living in urban areas is 14% (more than 100 people) compared to 86% (683) for those living in rural areas. Moreover, the results of the simulation indicate that for the poverty line of $3.2 per day per capita, the number of people living in rural areas who will be lifted out of poverty will be more than 5,000 (79%), or almost four times more than the number of people living in urban areas (more than 1,400). As for the poverty line of $5.5 per day per capita, nearly 19,000 rural residents (60%) will be lifted out of poverty, while nearly 13,000 urban residents (40%) will be lifted out.

The results of the simulations show that the implementation of the AFCFTA Agreement would result in a decrease in the poverty rate in Morocco in 2045. These figures for the

Moroccan population in 2045 indicate that for the central or "realistic" scenario and according to the national poverty line, the rate of people in rural areas who will be out of poverty will be 0.2% and 0.02% for people living in urban areas. A more important decrease would be registered in rural areas, if we consider the international poverty line of 5.5$, that is to say a proportion corresponding to 1.6% for the population residing in rural areas and to 0.03% for people residing in urban areas.

The impact by gender

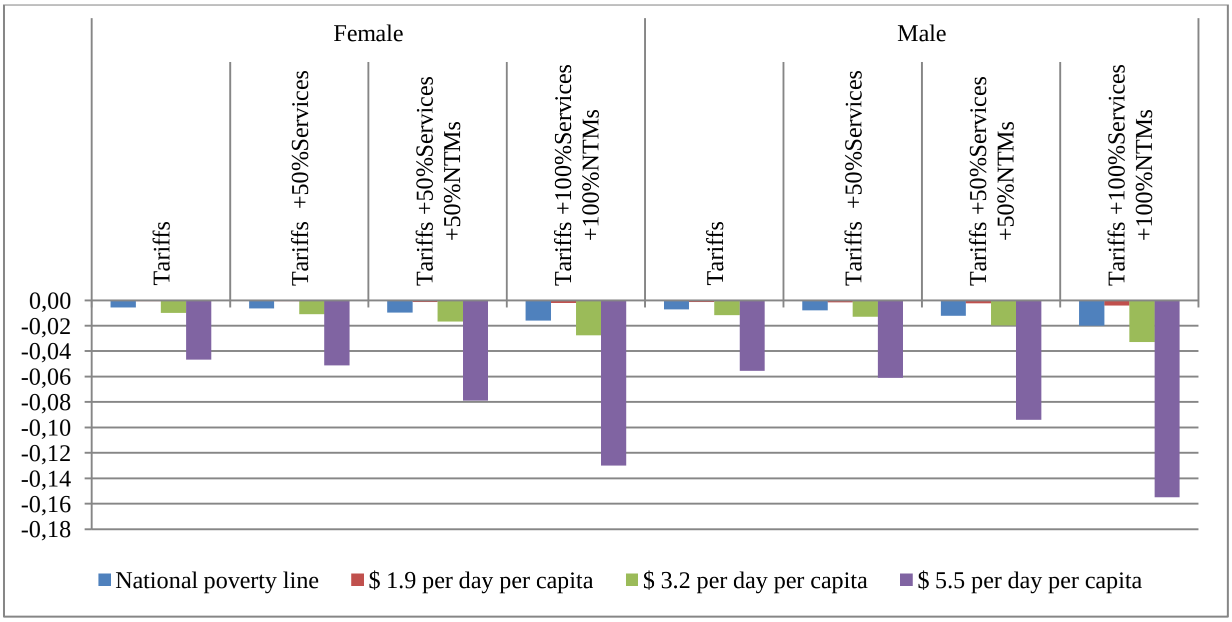
The results of the simulations indicate that the poverty rate for men is higher than that of women in Morocco, both for the reference scenario (without the AFCFTA) and for all of the scenarios studied (Figure A2 in the Appendix).

For example, the results show that without the implementation of the AFCFTA in 2045, the poverty rate will be 1.4 percent for men versus 0.8 percent for women, if we refer to the national poverty line. If we consider the $5.5 per capita per day line, the poverty rate for men is even higher at 9.7% while the rate for women is 6.2%.

With the AFCFTA, and according to the central or "realistic" scenario, the difference remains very small. Indeed, the expected poverty rate for men will be 9.6 percent compared to the 6.1 percent poverty rate for women.

These reductions in poverty caused by the AFCFTA for women and men in all scenarios considered are presented in Figure 11. This graph illustrates the percentage decreases in poverty rates in the no AFCFTA scenario and in all scenarios considered compared to the baseline scenario.

Figure 11: Impact of the AFCFTA (different scenarios) on poverty by gender compared to the reference scenario in 2045-percentage points



Source: Source: ECA simulation results

In terms of reducing the poverty rate in Morocco by gender, following the implementation of the AFCFTA, we see that this decline is shared by both genders. If we consider the realistic AFCFTA scenario, for example, we see a 0.01 percentage point drop for women and also for men (the poverty rate for women would drop from 0.85% to 0.84% and for men from 1.37% to 1.36%). In addition, the greatest impact will be recorded at the $5.5 per day poverty line, with a decrease of about 0.1 percentage points for men and women respectively compared to the baseline scenario (i.e., the rate for women would drop from 6.15% to 6.07% and for men from 9.71% to 9.62%). Moreover, when we look more closely at the number of people who will be lifted out of poverty by gender, we see that the number of men will be higher than that expected for women. This can be explained by the fact that in the Moroccan labor market the presence of men is still important and therefore the results indicate a greater impact on this gender. If we refer to the national poverty line, 10% of the people who will be lifted out of poverty will be women (418), while 90% will be men (more than 3,600 people). If we consider the other international poverty lines, in particular the $1.9 per capita per day poverty line, we can see that the number of men escaping from poverty will be more than 700 (97%) compared to 58 for women (7%). As for the poverty lines of $3.2 and $5.5 per capita per day, the ratio is identical, i.e., a percentage of 11% (i.e., 718 for the poverty line of $3.2 and 3,410 for the poverty line of $5.5 per capita per day), representing the number of women who will be lifted out of poverty, compared to 89% of men who will be lifted out of poverty (i.e., 5,923 per capita per day for the poverty line of $3.2 and 2,8000 per capita per day for the poverty line of $5.5).

Impact on poverty by level of education

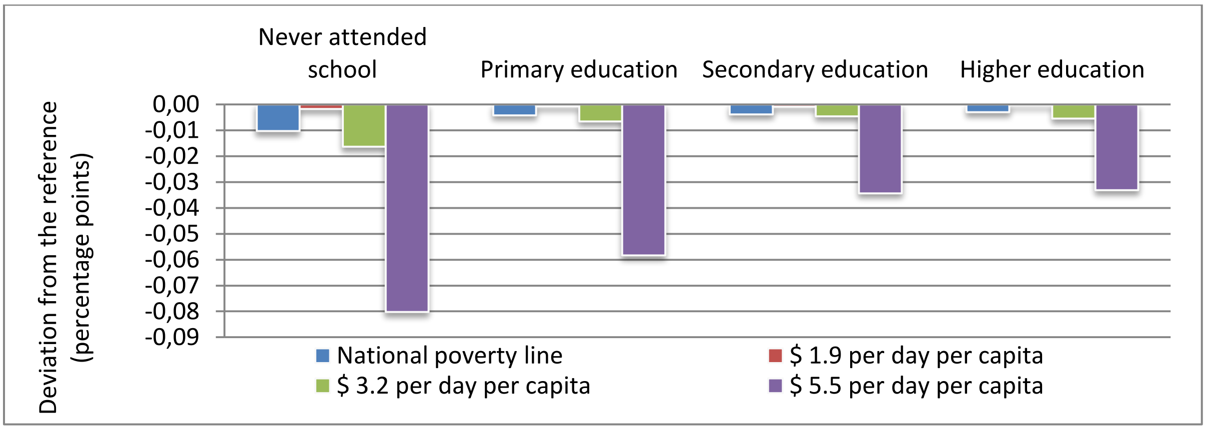
The study classifies households into four categories: those who have never had an education, those with primary education, those with secondary education, and those with tertiary education.

In Table A1 (in the Appendix), the results for the poverty rate in 2045 under the baseline scenario and all AFCFTA scenarios are presented. In this context, the poverty rate is higher for those with low and elementary education levels. Indeed, the results indicate that in 2045 without the implementation of the AFCFTA and according to the national poverty line, the poverty rate will be 3.73% for those with no schooling, 1.38% for those with primary schooling. For people with secondary and higher education, the poverty rate will be lower, at 0.25% and 0.19%, respectively. Furthermore, considering the poverty line of $5.5 per day per person, the results indicate that without the implementation of the AFCFTA, the highest poverty rate would be among those who have never attended school, at 23.2%, and 13.2% for those with access to primary education.

With the implementation of the realistic AFCFTA scenario and according to the national poverty line, the poverty rate in 2045 will be 3.72% for people with no schooling, 1.37% for people with primary schooling, 0.25% for people with secondary schooling, and 0.19% for people with higher education. For people with secondary and higher education, the poverty rate in 2045 will be almost zero. However, if we refer to the poverty line of 5.5$ per day per person and if we consider people with no schooling, the poverty rate will be 23.2% and 13.2% for people with primary education. Thus, the results would remain virtually unchanged from a scenario without the AFCFTA.

The graph below shows the impact of the AFCFTA under the "realistic" scenario (Fares+50% services+50%MNT) in each category considered (Figure 12).

Figure 12: Impact of AFCFTA ("realistic" scenario) by level of education - 2045 - percentage change from no AFCFTA scenario



Source: Source: ECA simulation results

The implementation of the AFCFTA will result in a slight decrease in poverty for all levels of education. In the most "realistic" scenario, the impact will be mainly on those who have never had access to education, with a decrease of about 0.1 percentage points based on the poverty line of $5.5 per person per day compared to a scenario without the AFCFTA (i.e., a poverty rate that would decrease from 23.24% to 23.16%). In opposition to the group of people who have never attended school, those with primary education and those with access to higher education, the expected decrease will be less significant, i.e. a decrease of 0.06 and 0.03 percentage points respectively compared to the reference scenario (i.e. a poverty rate that will go from 13.28% to 13.22% for people with primary education and from 2.29% to 2.26% for those with access to higher education).

Furthermore, if we continue to consider the scenario provided by the Agreement (tariffs+50% Services+50% MNTs), as well as the national poverty line, we find that compared to a scenario without ZLECAf, the poverty rate will not decrease in all of the categories studied, except for the group concerning people who have never attended school, which represents a decrease of 0.1 percentage points.

Moreover, if we look at the results of the analysis in terms of the number of people who will be lifted out of poverty by the different levels of education presented above, the weight of one category to another varies considerably. Indeed, the implementation of the central or "realistic" scenario of the AFCFTA will have a positive impact on people who have never attended school by constituting more than 60% of the people who will be lifted out of poverty, in all the poverty lines analyzed. If we take into consideration the national poverty line, the number of people who have never attended school and who will be lifted out of poverty will be close to 3,000 (or 72%), while the rest will be divided by people with a primary education, i.e., 620 people (or 15%), the remaining 13% will be shared by people with a secondary education (i.e., 7%, or 290 people) and those with a higher education (i.e., 5%, or 217 people). As for the international poverty lines, the order of the categories moving out of poverty remains almost unchanged. Except the $3.2 and $5.5 poverty lines, for which the weight of the category of people leaving poverty who have access to secondary and higher education remains fairly similar (5.14 for the first category and 5.8% for the second category - according to the $3.2 poverty line; 8.3% and 7.6% respectively for the $5.5 poverty line).

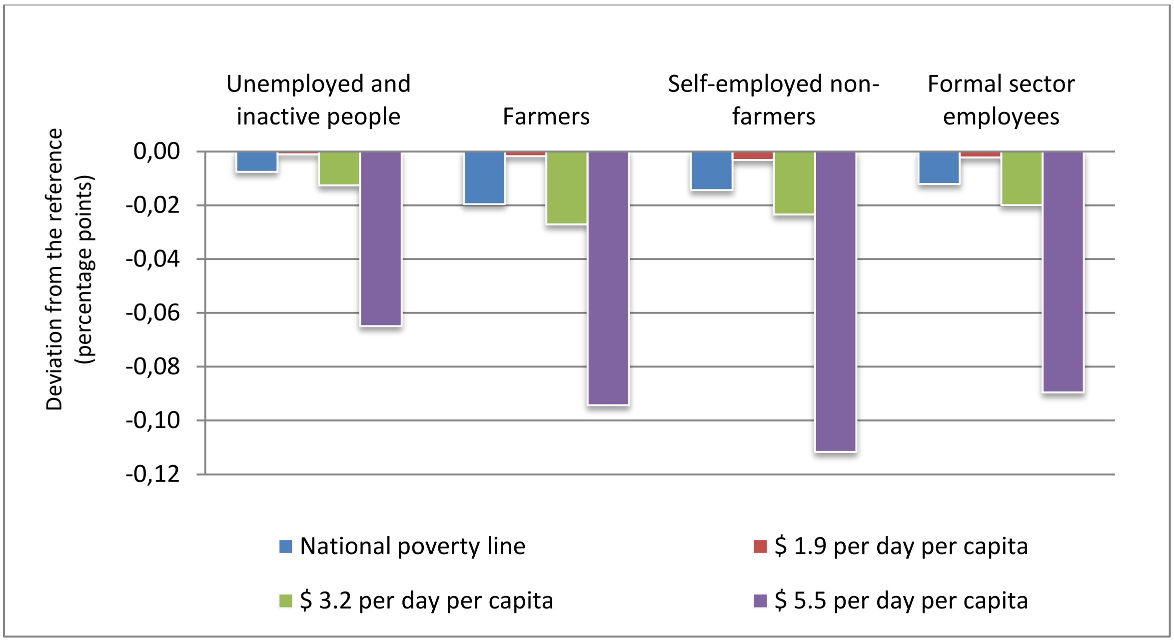
Impact of poverty by employment status

With respect to household employment status, four categories were identified: unemployed and inactive, formal sector employees, farmers and non-agricultural self-employed.

The results indicate that in the absence of the FLECA, poverty rates would range from 0.12% ($1.9 poverty line) to 30.99% ($5.5 poverty line) for farmers. Thus, for self-employed non-farmers the poverty rate would be 13.3% ($5.5 poverty line) and 7.84% for wage earners ($5.5 poverty line).

With the implementation of the AFCFTA, poverty reduction will benefit all social categories but to different degrees. Indeed, for the international poverty lines as a whole, the percentage change will be higher for the non-agricultural self-employed and farmers. While less significant impacts will be recorded among formal sector employees and the unemployed and inactive. If we consider the international poverty line of $5.5 per day per person, we can see that the decrease in poverty will be 0.11 percentage points among self-employed non-agricultural workers (a decrease in the poverty rate from 13.3% to 13.2%, respectively), and a decrease of 0.09 percentage points among employees in the formal sector and farmers. As for the unemployed and the inactive, the decrease will be 0.06 percentage points compared to the reference scenario (figure 13).

Figure 13: Impact of AFCFTA (realistic scenario) on poverty by employment status - 2045 - percentage changes compared to a scenario without AFCFTA - percentage points



In terms of the ratio and the number of people who will be lifted out of poverty by employment status, the order of the categories that will benefit the most changes in the same way for all the poverty lines studied. Non-autonomous workers and formal sector employees will be the categories that will benefit the most, representing respectively more than 44% and 36% of the people who will be lifted out of poverty in the set of poverty lines presented. The share of unemployed and inactive people would be quite small, over 16% (except for the $1.9 line with 12.6%) and the proportion for farmers would be under 2%.

If we refer to the national poverty line, we can see that the number of people who will be lifted out of poverty will be nearly 700 (17%), compared to more than 1,700 for the category of independent non-agricultural workers (44%). As far as the employees of the formal sector are concerned, the number of people who will be out of poverty will be more than 1500 (38%), while for the farmers the number of people is very small, 60 (less than 2%).

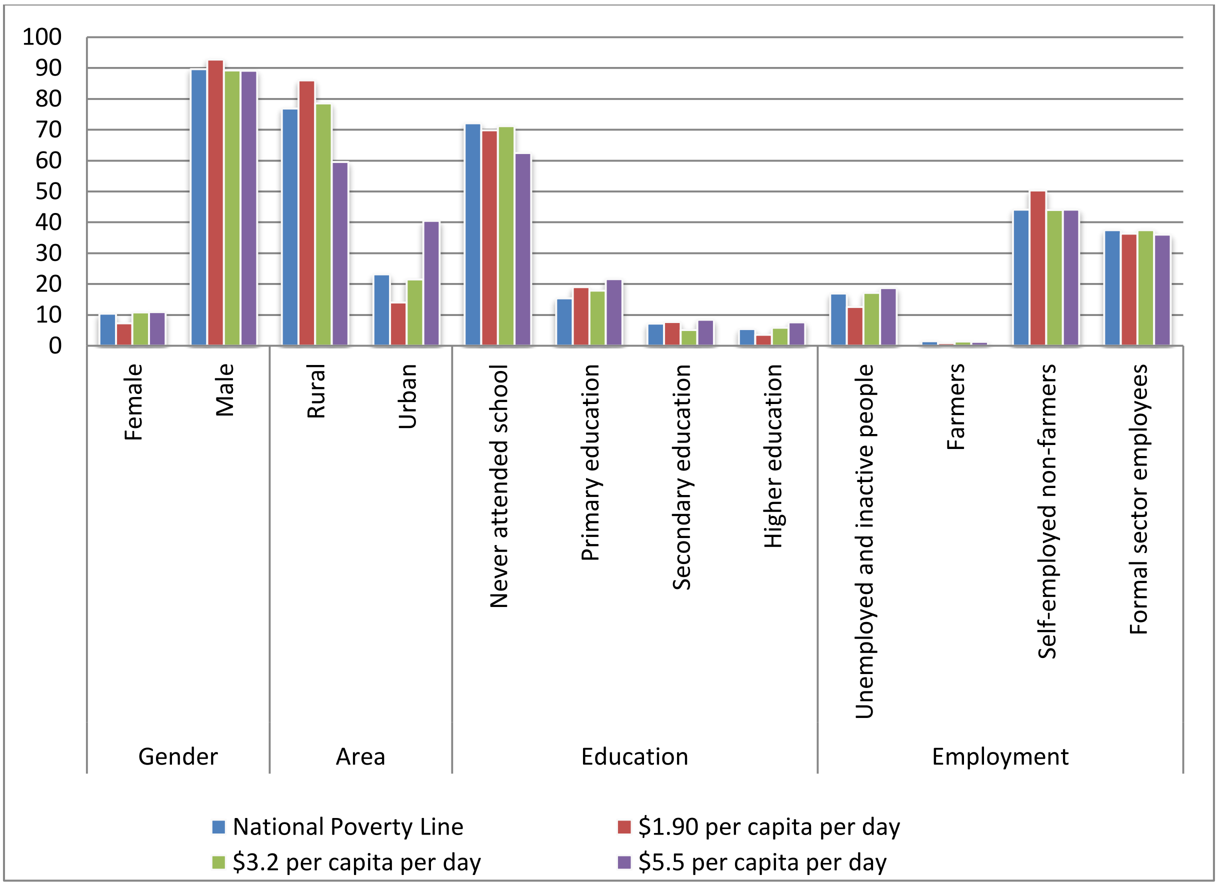
Distribution of people who could move out of poverty

The graph below shows the distribution of people who would be lifted out of poverty after the implementation of the AFCFTA.

The distribution of people who would be out of poverty as a result of the implementation of the AFCFTA Agreement is presented by residence, gender, education, and employment status. In the case of Morocco, across all the poverty lines considered, rural residents are the ones who could be lifted out of poverty the most. In terms of gender, men make up the large share of those who will be lifted out of poverty. The uneducated and the self-employed non-farmers represent the categories whose poverty reduction will be the most significant. In summary, the decrease in poverty will be distributed similarly regardless of the poverty line observed. The results of the micro-simulation model analysis indicate that males will be the ones to escape poverty the most (constituting more than 89% in all international poverty lines analyzed), while the percentage for females will remain above 11% in all international poverty lines studied.

In addition, if we refer to the area of residence, more than 70% of the people who will be lifted out of poverty will be those from rural areas. About the level of school education, the exit from poverty will be expected mainly for those who have never had access to education, i.e. more than 60% in all the international poverty lines presented. As regards employment status, self-employed non-agricultural workers and formal sector employees are the two categories that will benefit most (nearly 50% and 40% respectively for all the poverty lines), while the least important share will be reserved for farmers, who will constitute less than 2% (Figure 14).

Figure 14: Within-group distribution of people moving out of poverty following implementation of the AFCFTA (central or "realistic" scenario) - 2045 - %.



Source: Source: ECA simulation results

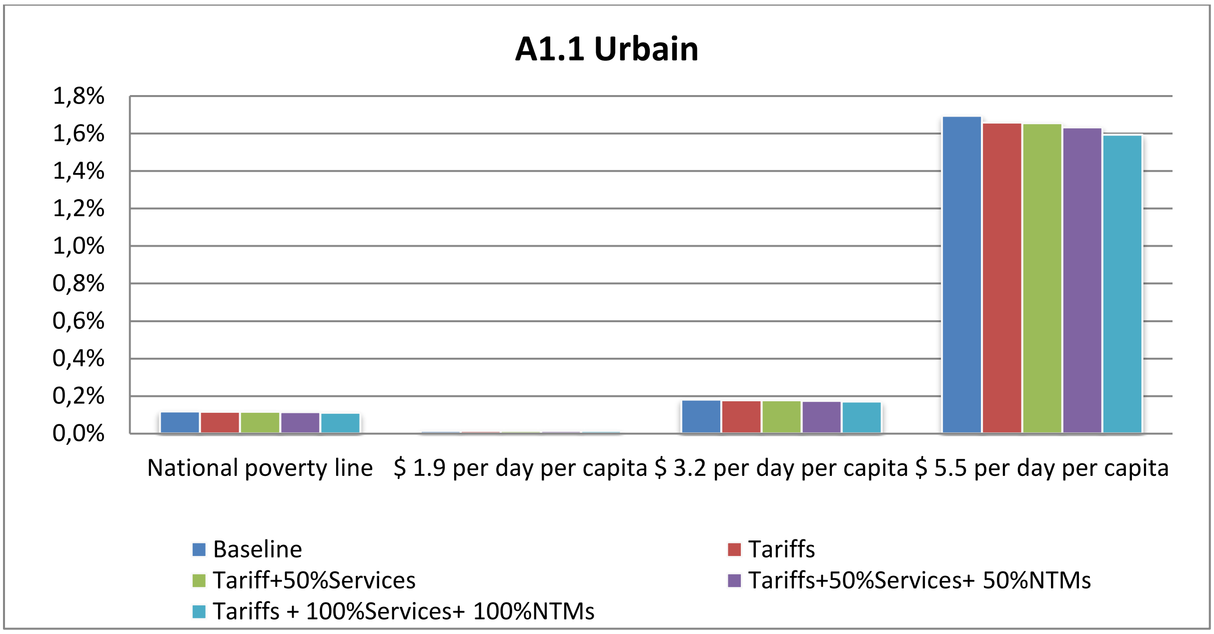
Conclusion

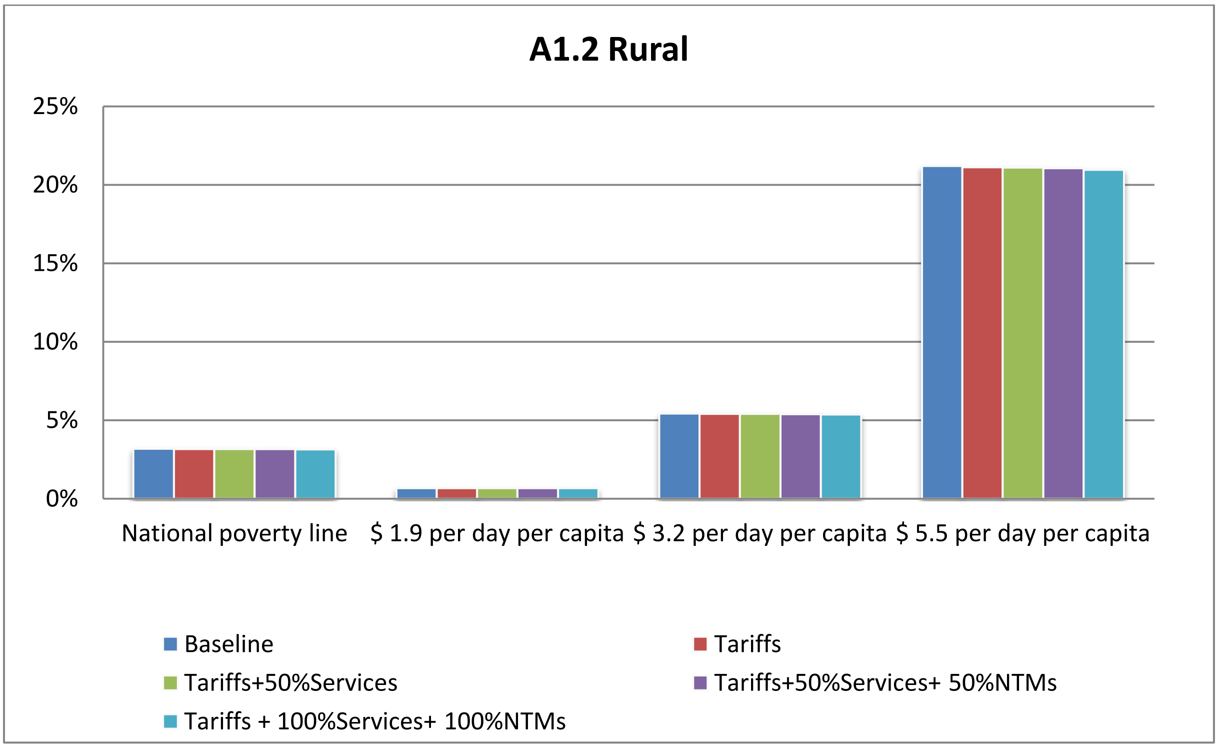
The work to assess the economic impact of implementing the AFCFTA on the Moroccan economy was carried out using a computable general equilibrium model and micro-simulation techniques. The results show that under all options, the implementation of the AFCFTA will have positive macroeconomic impacts, particularly in terms of GDP and output growth (these increases will be quite modest and would not exceed 1%). On the other hand, the most important changes are expected at the trade level. Indeed, following the implementation of the AFCFTA, Morocco's exportable supply will increase by 4.7 percent compared to a scenario without the AFCFTA in 2045. Thus, Morocco's total demand will increase by 3.6 percent compared to a situation without the AFCFTA. The implementation of the AFCFTA will contribute significantly to the intensification of trade relations between Morocco and the African continent. Simulation results indicate that Morocco's exports to the rest of the world will decline (4.4 percent) in favor of Africa (an increase of 91 percent). Morocco's imports from the rest of the world are projected to increase by 3.2 percent compared to a scenario without the AFCFTA in 2045; similarly, imports from Africa are projected to increase by 21.4 percent. As for the nature of goods and services traded between Morocco and its African partners, the results of the simulations indicate an increasingly dominant presence of industrial products, followed by food and agri-food products. Thus, the share of the mining sector will be less important compared to manufactured and agri-food products. As regards services, African markets will offer development prospects for Moroccan services in the areas of transport and business services. The share of services imports from Africa will remain fairly modest, due to the low level of intra-African services trade and dependence on certain Western countries. In terms of customs revenue, the implementation of the AFCFTA will not harm government revenue. This is due in particular to the volume of imports from the rest of the world, which will continue to increase (and for which imported products are not affected by the reduction in tariffs), and to the fact that import tariffs for excluded products (i.e., 3% of tariff lines) will be maintained.

The implementation of the AFCFTA will have less effect on reducing poverty and social inequality. As stated earlier, this can be explained primarily by Morocco's poverty rate of 4.8 percent, which is one of the lowest on the continent. However, the results of the simulations indicate that this rate will continue to fall to 1.3% in 2045, and this will be recorded in all the international poverty lines studied. In terms of social inequality, a decline of about 6% is also projected, with the Gini coefficient falling from 39.5 in 2014 to 33.3 in 2045 as a result of the AFCFTA. The results indicate that as intra-African trade is liberalized, the poverty rate declines as well as social inequality. With respect to the decrease in the poverty rate, the results indicate that in all the scenarios considered and regardless of the poverty line observed, this decrease will not exceed 1 percentage point. Furthermore, the micro-simulation analysis shows that the number of people who will be lifted out of poverty as a result of the AFCFTA will be quite modest. If we take the central or "realistic" scenario and the international poverty line of $5.5 as a reference, the number of people who will be lifted out of poverty will be more than 31,000, of which 60% will be rural residents and 40% urban residents. Furthermore, if we break down this figure (31413) by gender, level of education and employment status, we can see that nearly 90% of the people who will be out of poverty will be men and 11% will be women. In terms of educational attainment, people who have never attended school are the ones who will mainly come out of poverty, those who have accessed primary education will occupy the second place with more than 21%. The remainder will be shared by people with secondary education with 8% and higher education with a proportion of 7.6%. About employment status, the category of self-employed non-agricultural workers will account for 44% of those who will escape poverty, followed by employees in the formal sector with 36%. The two classes whose number of people coming out of poverty will be smaller are the unemployed and inactive people, who will represent nearly 19%, and farmers, with a proportion higher than 1%. It should be noted that, in general, this order and these proportions will remain unchanged whatever the poverty line considered. Moreover, this figure (31413 people), when compared to the Moroccan population in 2045, indicates that the proportion of the total Moroccan population that will be out of poverty will be 0.07% if we consider the $5.5 threshold. It is important to note that across the poverty lines studied, these figures could increase considerably if more ambitious trade liberalization measures are put in place. As a conclusion, the implementation of the AFCFTA in Morocco, and the progressive liberalization of trade in goods and services would result in not only economic but also social growth.

Annexes

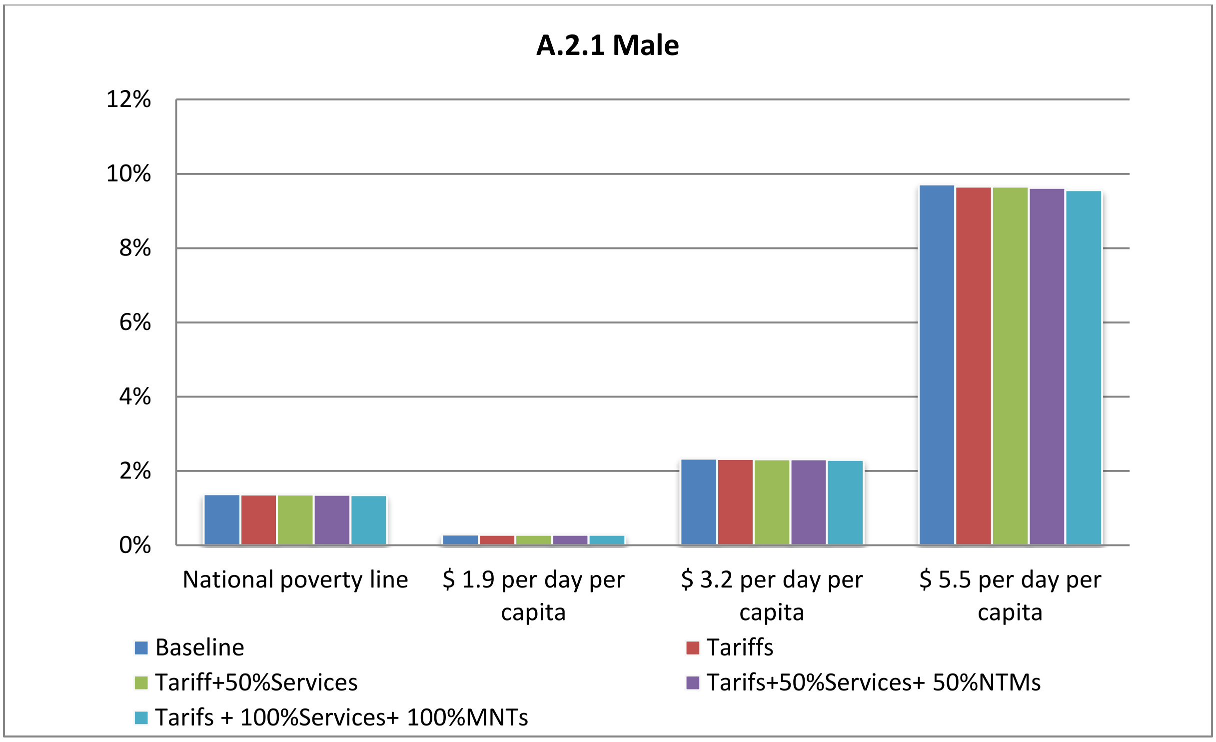
Figure A.1: Poverty Rates by Place of Residence and Central or "Realistic" Scenario - 2045 - Percentage Change from scenario without AfCFTA

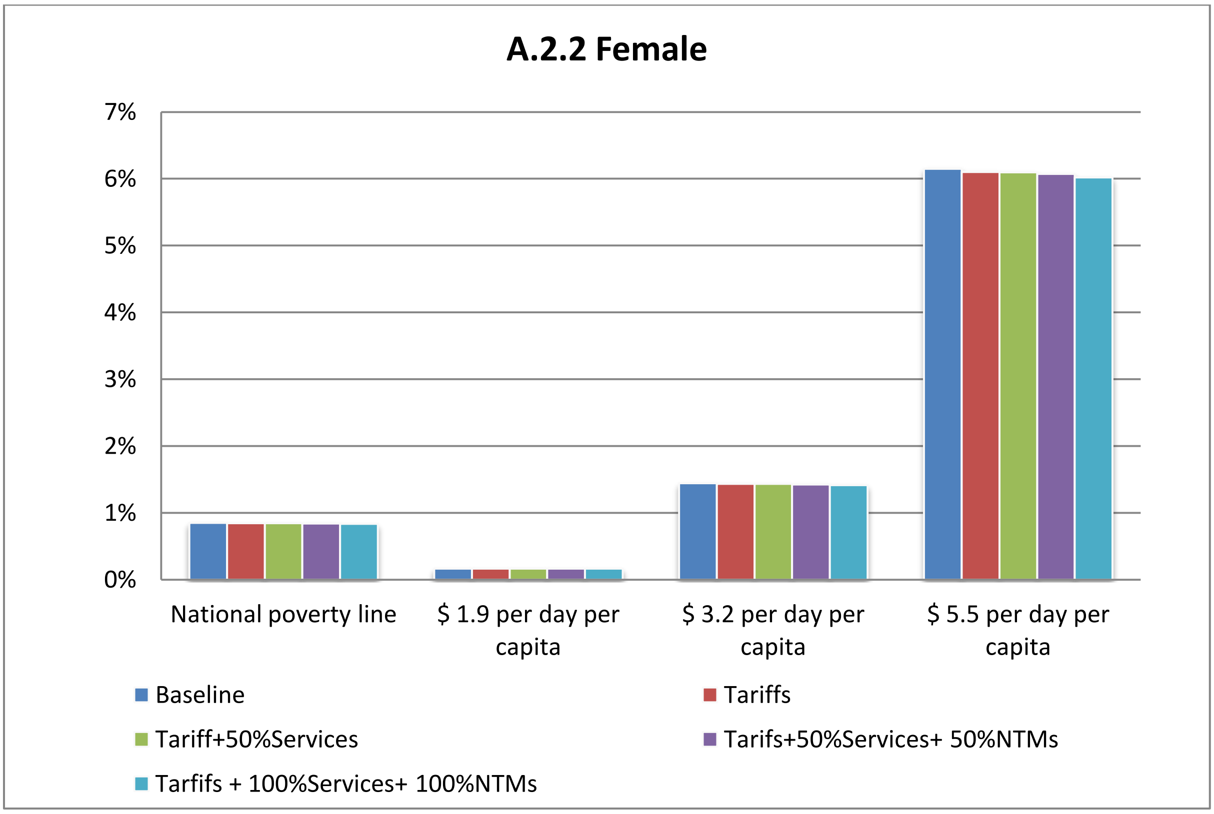




Source: CEA Simulation results

Figure A2: Poverty rate in 2045 by gender and central or "realistic" scenario - 2045 - Percentage changes compared to the scenario without AfCFTA





Source: ECA Simulation results

Table A1: Poverty rate by scenario and education level in percent - 2045

Scenario		National Poverty Line	$1.90 per capita per day	$3.2 per capita per day	$5.5 per capita per day
Never attended school	Baseline	3,7	0,8	6,1	23,2
	Tariffs	3,7	0,8	6,1	23,2
	Tariffs + 50%Services	3,7	0,8	6,1	23,2
	Tariffs + 50%Services+50%NMTs	3,7	0,7	6,1	23,2
	Tariffs + 100%Services+100%NTMs	3,7	0,7	6,1	23,1
Primary education	Baseline	1,4	0,4	2,9	13,3
	Tariffs	1,4	0,4	2,9	13,2
	Tariffs + 50%Services	1,4	0,4	2,9	13,2
	Tariffs + 50%Services+50%NTMs	1,4	0,4	2,9	13,2
	Tariffs + 100%Services+100%NTMs	1,4	0,4	2,9	13,2
Secondary education	Baseline	0,3	0,1	0,3	2,1
	Tariffs	0,3	0,1	0,3	2,1
	Tariffs + 50%Services	0,3	0,1	0,3	2,1
	Tariffs + 50%Services+50%NMTs	0,3	0,1	0,3	2,1
	Tarifs + 100%Services+100%NTMs	0,2	0,1	0,3	2,0
Higher education	Baseline	0,2	0,0	0,4	2,3
	Tariffs	0,2	0,0	0,4	2,3
	Tariffs + 50%Services	0,2	0,0	0,4	2,3
	Tariffs + 50%Services+50%NTMs	0,2	0,0	0,4	2,3
	Tariffs + 100%Services+100%NTMs	0,2	0,0	0,4	2,2

Source: ECA Simulation results

Table A2: Poverty rate by scenario and employment status in percent - 2045

Scénario		National Poverty Line	$1.90 per capita per day	$3.2 per capita per day	$5.5 per capita per day
Unemployed and inactive people	Baseline	0,7	0,1	1,3	5,6
	Tariffs	0,7	0,1	1,3	5,6
	Tariffs + 50%Services	0,7	0,1	1,3	5,6
	Tariffs + 50%Services+50%NMTs	0,7	0,1	1,3	5,6
	Tariffs + 100%Services+100%NTMs	0,7	0,1	1,3	5,5
Farmers	Baseline	3,3	0,4	5,6	30,1
	Tariffs	3,3	0,4	5,6	30,0
	Tariffs + 50%Services	3,3	0,4	5,6	30,0
	Tariffs + 50%Services+50%NMTs	3,3	0,4	5,6	30,0
	Tariffs + 100%Services+100%NTMs	3,3	0,4	5,6	29,9
Self-employed non-farmers	Baseline	1,7	0,4	3,0	13,3
	Tariffs	1,7	0,4	3,0	13,3
	Tariffs + 50%Services	1,7	0,4	3,0	13,3
	Tariffs + 50%Services+50%NMTs	1,7	0,4	3,0	13,2
	Tariffs + 100%Services+100%NTMs	1,7	0,4	3,0	13,2
Formal sector employees	Baseline	1,3	0,3	2,1	7,8
	Tariffs	1,7	0,4	3,0	13,3
	Tariffs + 50%Services	1,7	0,4	3,0	13,3
	Tariffs + 50%Services+50%NMTs	1,7	0,4	3,0	13,2
	Tariffs + 100%Services+100%NTMs	1,7	0,4	3,0	13,2

Source: ECA Simulation results