

Estimating the Fiscal Impact of the Côte d'Ivoire-EU Economic Partnership Agreement

Mombert Hoppe

August, 2010

Introduction

Côte d'Ivoire is the second largest economy in West Africa. It is one of eight member states of the UEMOA and is also a member state of ECOWAS. It applies the UEMOA Common External Tariff (CET) which consists of four tariff bands at zero, five, ten, and twenty percent.

To prevent trade disruption with the European Union at the end of 2007 when the trade component of the Cotonou agreement ended, Côte d'Ivoire has negotiated and signed an interim Economic Partnership Agreement (EPA) with the European Union. Under the agreement, Côte d'Ivoire will remove tariffs on 80.8 percent of the goods originating in the European Union by 2023. The tariff removal has started in 2010 with tariff reductions for the first 576 lines, for 406 lines from 5 to 0 percent, for 160 lines from 10 to 0 percent, and for 10 lines from 20 to 0 percent.

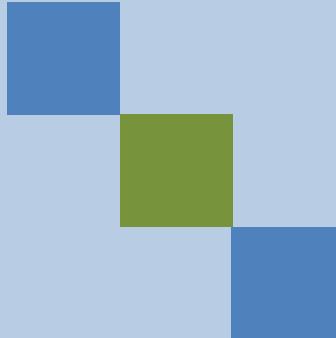
Using the Tariff Reform Impact Simulation Tool (TRIST) developed by the World Bank¹, this short note presents the

¹ See Brenton, P; C. Saborowski; C. Staritz and E von Uexkull (2009) 'Assessing the adjustment



Africa Trade Policy Notes

Note #4



simulation results of the impact of this Economic Partnership Agreement on fiscal revenues in Côte d'Ivoire. It finds that the interim EPA is likely to lead, at full implementation, to a loss of annual fiscal revenue in the order of less than CFA 43 billion, representing 2.2 percent of total 2007 government revenue. This reduction in fiscal revenue will occur over 15 years and will be at least partially compensated by growing import volumes as the economy grows.

Data description

For the estimation, we obtained data at transaction level from customs for the year 2007 covering imports for consumption (excluding imports into warehouses and government imports). According to these

implications of trade policy changes using TRIST (tariff reform impact simulation tool)', World Bank Policy Research Working Paper 5045, <http://go.worldbank.org/AMF45BV930>.

Table 1: Main import partners for Côte d'Ivoire, 2007, in CFA million

Top 10 Import Partners	Import Value	Share Of Total Imports
Nigeria	769,275	24.2%
France	683,330	21.5%
China, People's Republic	209,345	6.6%
Venezuela	102,173	3.2%
Thailand	88,894	2.8%
Germany	86,459	2.7%
U.S.A	85,802	2.7%
India	79,928	2.5%
Japan	78,421	2.5%
Great Britain	69,977	2.2%

Table 2: Imports from the EU, top 20 sectors in CFA million

ISIC # ISIC Description	EU27 (mln)	Total imports (mln)	EU share
292 Manufacture of special purpose machinery	156,136	200,102	78.0%
242 Manufacture of other chemical products	112,149	169,496	66.2%
341 Manufacture of motor vehicles	88,589	174,832	50.7%
151 Production, processing and preservation of meat, fish, fruit, vegetables, oils and fats	66,479	191,018	34.8%
011 Growing of crops; market gardening; horticulture	62,775	90,694	69.2%
291 Manufacture of general purpose machinery	57,279	92,775	61.7%
241 Manufacture of basic chemicals	54,221	169,444	32.0%
322 Manufacture of television and radio transmitters and apparatus for line telephony and line telegraphy	47,843	81,289	58.9%
353 Manufacture of aircraft and spacecraft	41,034	42,913	95.6%
271 Manufacture of basic iron and steel	34,079	95,681	35.6%
343 Manufacture of parts and accessories for motor vehicles and their engines	33,754	39,183	86.1%
289 Manufacture of other fabricated metal products; metal working service activities	30,983	49,239	62.9%
210 Manufacture of paper and paper products	26,869	47,172	57.0%
154 Manufacture of other food products	24,951	35,264	70.8%
232 Manufacture of refined petroleum products	24,366	60,885	40.0%
155 Manufacture of beverages	23,954	29,494	81.2%
153 Manufacture of grain mill products, starches and starch products, and prepared animal feeds	22,487	183,353	12.3%
331 Manufacture of medical appliances and instruments and appliances for measuring	18,510	27,231	68.0%
152 Manufacture of dairy products	15,680	24,184	64.8%
252 Manufacture of plastics products	15,044	26,624	56.5%
Total of to 20 sectors for EU imports	957,182	1,830,872	52.3%
Total all imports	1,142,297	3,180,734	35.9%

data, Côte d'Ivoire imported a total of CFA 3.18 trillion in 2007. 35.9 percent of these imports originated in the European Union. Non-oil imports were CFA 2.26 trillion in 2007, 50.4 percent of which originated in the European Union. Other major trading partners were Nigeria (of which 99.5 percent were petroleum imports), China, Venezuela (only petroleum imports), and Thailand (see Table 1).

Table 2 shows imports from the European Union by the main industrial (ISIC) categories. These imports are concentrated in machinery and chemicals, as well as cereals and processed foods.

The data obtained also contain values for the actually collected tariff revenue at the borders (accounting for exemptions granted), as well as data on revenue collected through excise taxes and the Value Added Tax (VAT, at 18 percent), which is collected at the border for imports. Table 3 summarizes the amount of taxes collected at the border. These data allow the estimations of revenue changes to be based on actual rather than hypothetical revenue data.

Assessing the revenue collection in greater detail, the data show that Côte d'Ivoire collected CFA 61 billion or 39.8 percent of its customs revenue from imports originating in the EU.² Imports from the EU

² Revenues of CFA 479 million were collected from imports originating within UEMOA. This figure is small but should in principle be zero given that UEMOA has established a free trade area, indicating that issue relating to rules of origin may be important but also concerns with the recording of data collected at the borders. In particular, some goods that originate outside the customs union and pay duty upon import are recorded as originating within the customs union. While these cases can be easily identified, it raises the concern that the origin of products could also be inadequately recorded in the customs database in other cases. Where the origin of trade flows is incorrectly recorded, the model will not

generally face lower tariffs than those from the rest of the world. The trade-weighted actually applied tariff rate on EU imports was 5.3 percent in 2007, while the average tariff for imports from the rest of the world (excluding other ECOWAS member states) was 7.5 percent. Given that the statutory trade-weighted tariff rates were 10.7 and 8.8 percent, respectively, the detailed data show that imports originating in the EU were generally granted more exemptions (half of the duty payments on imports from the EU were exempted) than imports originating in other non-ECOWAS countries (where only 15 percent of payments were exempted). This already indicates that removing tariffs on EU imports is likely to have a substantially smaller effect on fiscal revenue than statutory tariff data, which has often been used in similar studies in the past, would indicate. These exemptions are granted on a large variety of products but a substantial share has been granted on imported vehicles.

Table 4 further details the treatment of imports originating in the EU. It groups imports by tariff rates that should have been and that were actually levied. While only 6.4 percent of imports originating in the EU should have entered Côte d'Ivoire duty free, actually 34.7 percent did not pay any duties. At the same time, using data aggregated at the product line level, only 15.6 percent of goods imported from the European Union paid more than 10 percent tariff duties, while according to statutory tariff rates, 32.6 percent should have paid these higher rates.

be able to adequately simulate the effects of preferential trade liberalization on these trade flows, although given the relative magnitude of these flows the impact on the the results of the simulations is likely to be small.

Table 3: Border taxes collected by Côte d'Ivoire, 2007, in CFA million

	Statutory tariff	Collected tariff	Excise tax	VAT
Total Value	239,335	152,331	9,257	200,316
Share Of Total		42.1%	2.6%	55.4%
Simple Average	13.7%	11.8%	0.3%	14.8%
Weighted Average	7.5%	4.8%	0.3%	6.0%

Table 4: Distribution of tariffs applied to imports from EU

Tariff category	Imports from EU (CFA million) falling into categories according to: statutory tariff rate		Share of EU imports statutory tariff rate	applied tariff rate
	rate	applied tariff rate		
0	73,131	396,023	6.4%	34.7%
0<=5%	426,162	418,565	37.3%	36.6%
5%<x<=10%	271,178	149,545	23.7%	13.1%
10%<x<=20%	371,825	177,674	32.6%	15.6%
>20%	0	490	0.0%	0.0%

Source: database and own computations

Based on the trade data and Côte d'Ivoire's interim EPA exclusion list used for this simulation exercise, Côte d'Ivoire would liberalize 59.3 percent of imports from the EU by January 2013 (of which 10.8 percent already attracted a statutory tariff of zero percent), an additional 13.4 percent by January 2018, and an additional 7.7 percent by January 2023, leading to a removal of import duties on imports from the EU of 80.3 percent based on the imports structure of 2007. Using the latest available market access offer presented by ECOWAS, which differs from that negotiated by Côte d'Ivoire, in the context of the regional EPA negotiations, 26.7 percent of Côte d'Ivoire's imports from the EU would remain excluded from liberalization at the end of the transition period. However, Côte d'Ivoire is

currently levying a zero tariff on some of the lines that would be excluded from liberalization under the West African EPA market access offer, resulting in an effective exclusion from liberalization of 23.1 percent of current imports from the EU.

Simulating trade policy changes

Using the trade flow pattern and actual revenue collected in 2007, this section describes the simulation results of a number of tariff liberalization scenarios using the Tariff Reform Impact Simulation Tool (TRIST). The model uses the detailed trade and revenue data described above to estimate the effects of tariff rate changes on trade flows and revenue collection.

Using a partial equilibrium framework, the model first estimates the trade diversion effects resulting from relative price changes following trade liberalization. The removal of customs duties on products originating in selected countries makes these products cheaper in relative terms when compared to the same products originating in the rest of the world and importers substitute these products for those that are now relatively more expensive. There is no substitution between different products and because the model uses elasticities for its calculations, zero trade flows will remain zero. In a second step, as average prices for goods fall in the domestic market, consumers demand more of those goods, and the model estimates a trade creation effect as effective demand for cheaper products increases. Both effects are modeled using the existing structure of trade flows, price changes as a result of tariff reductions, and elasticities for the substitution effect and the demand effect. The aggregate changes in trade flows are then used to calculate the changes in customs duties and border taxes (customs duties, excise duties, and VAT) collected. The results should be interpreted as short-term simulations, as the model does not capture effects in the real sector, i.e. responses in output, competitiveness gains from cheaper access to intermediate inputs that make specific domestic industries more competitive, or effects resulting from changes in export performances. The model does not consider general increases in import flows as a result of economic growth and increased demand. Consequently, the simulation results can be seen as describing only the change on tariff revenues as a result of tariff reform and represent the marginal changes as compared to a baseline scenario without an EPA.

Revenue effects of the Côte d'Ivoire-EU interim EPA

The first scenario used for simulating reforms assumes that Côte d'Ivoire removes tariffs on 80.3 percent of imports from the European Union. We use the exclusion list that forms an integral part of the interim EU-Côte d'Ivoire Economic Partnership Agreement to identify these products that are excluded from liberalization. The simulations are undertaken using standard elasticities, as well as higher elasticities for substitution among various import sources for sensitivity analysis.³

Based on these simulations, overall imports by Côte d'Ivoire would increase by CFA 18 billion, or 0.6 percent. Tariff revenue collected would decrease with CFA 38 billion or 25.0 percent. When including secondary effects on VAT and excise collections, the overall loss in border tax revenues would equal CFA 41 billion or 11.3 percent of revenues from tariffs. Doubling the elasticity of substitution among various sources of imports, which leads to a greater trade diversion effect, results in estimated tariff revenue losses of CFA 40 billion or 26.0 percent, while overall border taxes would fall by CFA 42.5 billion or 11.7 percent (see columns titled “Interim EPA” in table 5).

³ TRIST uses two elasticities during the simulation. The elasticity of substitution describes the responsiveness of importers to relative price changes of identical goods following preferential tariff liberalization and consequently models the degree to which importers switch to new sources as a result of these price changes. It is set at 1.5 in the standard scenarios, and at 3 for the sensitivity analysis. The second elasticity models consumers’ responsiveness in demand for a given product to price reductions of products following tariff reform. This demand elasticity is set at 0.5 in all scenarios.

Table 5: Summary of estimation results

	Standard elasticities			Alternative elasticities		
	Interim EPA	ECOWAS EPA	ECOWA S EPA +	Interim EPA	ECOWA S EPA	ECOWA S EPA +
Impact on imports:						
Imports pre	3,180.9	3,180.9	3,180.9	3,180.9	3,180.9	3,180.9
Imports post	3,198.7	3,195.7	3,198.1	3,199.0	3,195.9	3,198.4
Change in imports	17.7	14.8	17.1	18.1	15.0	17.4
% change in imports	0.6%	0.5%	0.5%	0.6%	0.5%	0.5%
Impact on revenue:						
Tariff revenue pre	152.3	152.3	152.3	152.3	152.3	152.3
Tariff revenue post	114.2	121.1	115.9	112.7	120.1	114.7
Change in tariff revenue	-38.1	-31.2	-36.4	-39.6	-32.3	-37.7
% change in tariff revenue	-25.0%	-20.5%	-23.9%	-26.0%	-21.2%	-24.7%
Total Tax Revenues on Imports						
Total revenue pre	361.9	361.9	361.9	361.9	361.9	361.9
Total revenue post	321.1	328.1	322.9	319.4	327.0	321.5
Change in Total revenue	-40.8	-33.8	-39.0	-42.5	-34.9	-40.4
% change in Total revenue	-11.3%	-9.3%	-10.8%	-11.7%	-9.6%	-11.2%
Collected Tariff rate:						
Collected applied tariff rate pre	4.8%	4.8%	4.8%	4.8%	4.8%	4.8%
Collected applied tariff rate post	3.6%	3.8%	3.6%	3.5%	3.8%	3.6%
% change in collected applied tariff rate	-25.4%	-20.8%	-24.3%	-26.4%	-21.6%	-25.1%

note: standard elasticities are 1.5 for substitution among sources of imports and 0.5 for the demand elasticity; alternative elasticities assume substitution elasticity of 3 (and unchanged demand elasticity)

The results indicate that the implementation of the EPA would have a very limited impact on collected revenue from border taxes.

We also break down the simulations to analyze the effects of each of the three tariff liberalization phases. With standard elasticities, removing import duties during the first five years according to the liberalization calendar would lead to an increase in imports of CFA 10 billion or 0.3%, a reduction in annual tariff revenue of CFA 21 billion, and a total reduction in annually collected border taxes of CFA 22.4 billion, or 6.2 percent of total border taxes by 2013. Following the second liberalization phase (after 10 years, by 2018), imports would increase with an additional CFA 6 billion, tariff revenue would decrease with an additional CFA 14 billion, and overall

revenue from border taxes decline with an additional CFA 14.8 billion or 4.1 percent as compared to the original tax revenues. The effects during the last phase of the liberalization by 2023 would be relatively small, with imports increasing by another CFA 1.6 billion, tariff revenue falling with CFA 3.4 billion, and overall revenue from border taxes declining with an additional CFA 3.6 billion or one percent. Again, these effects are estimated as relative to the baseline scenario and do not take general import growth effects into consideration. They should be seen as indicating the relative impact on fiscal revenue during the three phases of liberalization rather than specific estimates. To summarize, more than half of the total fiscal revenue loss from border taxes relative to the baseline scenario will occur during the first liberalization

phase, another 36 percent will occur during the second liberalization phase, while the remaining nine percent will occur during the last phase. From a revenue point of view, the liberalization is strongly frontloaded.

Revenue effects of an ECOWAS-EU EPA

To compare these results tentatively with the likely effects of a regional Economic Partnership Agreement between West Africa (ECOWAS and Mauritania) and the European Union, we also simulate the effect of the latest market access offer submitted by ECOWAS on fiscal revenues in Côte d'Ivoire. Here, we simulate the impact of removing tariffs on only 26.7 percent of imports from the European Union of which 3.6 percentage points were already facing a statutory duty rate of 0 percent in 2007 in Côte d'Ivoire. The simulation consequently effectively continues to apply positive statutory tariff rates on 23.1 percent of imports originating in the European Union. Many of those already faced applied tariff rates of less than the statutory rates. The simulation estimates that the application of this market access offer would lead to an increase of imports of CFA 15 billion, a decrease in tariff duty revenues of CFA 31 billion, or 20.5 percent, and an overall decrease in collected border taxes of CFA 34 billion, or 9.3 percent. These figures are somewhat higher using alternative elasticities (see columns titled "ECOWAS EPA" in table 5). However, as part of a regional EPA, Côte d'Ivoire would also have to modify its statutory tariff rates by adopting the new ECOWAS Common External Tariff (CET), which would see import duties for a number of products increase to 35%. As the new CET has not yet been agreed in detail, we are unable to run a simulation of moving to the new ECOWAS CET. At the same time, the regional EPA would also lead to the creation

of a FTA among all ECOWAS member states and tariffs would be removed on intra-regional trade. Again, in the absence of the new CET rates, the application of an EPA with the EU and the simultaneous removal of import duties on all intra-regional trade would lead to a reduction in tariff revenues of CFA 36 billion, and a reduction in overall revenues collected at the border of CFA 39 billion, or 10.8 percent. Again, effects would be slightly larger using alternative elasticities (see columns titled "ECOWAS EPA +" in Table 5).

Conclusion

Both the interim EPA and a potential ECOWAS EPA will have limited effects on revenue collected at the borders in Côte d'Ivoire. To a large extent, this reflects that many imports from the European Union are already entering duty free. Simulation results based on a partial equilibrium framework estimate that fully implementing the interim EPA would lead to a loss of fiscal revenues at the border of between CFA 40.8 and 42.5 billion, representing less than 2.2 percent of government revenue in 2007. Tariff revenue losses under a potential regional EPA would be smaller as 26.8 percent of imports from the EU would not see their tariffs removed (as opposed to 19.7 under the interim EPA). Fiscal revenue losses at the border are estimated between CFA 33.8 and 34.9 billion (or 9.3 to 9.6 percent of current border revenues) in that case. The reduction in fiscal revenue, however, will occur over 15 years and will be at least partially compensated by growing import volumes as the economy grows. However, changes to the ECOWAS-wide CET and the parallel completion of the internal West African market would have a further impact on fiscal revenues. In the absence of a finalized West African CET, these effects have not been modeled. Once

progress is made in this regard TRIST could be used also in neighboring countries to assess the wider impacts of full regional integration and the regional EPA.

Even if these losses are relatively small, government will either have to cut spending or find ways to replace these revenues. One way could be the expansion of the existing VAT system or the strengthening of other domestic sources of revenue. Another opportunity would be the establishment of a compensation fund as part of the (regional) EPA. A similar mechanism has been established in COMESA and it has been used to compensate Burundi and Rwanda for losses incurred when moving to the Common External Tariff of the East Africa Community. Both countries used TRIST to estimate the likely revenue losses at the beginning of the year to access the compensation fund.

Changes to tariff revenue reflect only one dimension of effects resulting from the implementation of a free trade agreement. Trade liberalization with the EU may lead to lower consumer prices and reduced prices of intermediate inputs for some companies, increasing their capacity to integrate into global supply chains and increasing their competitiveness to compete globally with potentially large dynamic effects on output and employment growth. Nevertheless, these economic benefits would be enhanced if an EPA were to be accompanied by liberalization of imports from all sources.

Accompanying the implementation of an EPA with good economic policies that address current constraints to growth and the development of businesses, reduce the costs of doing business, support those negatively affected by trade reforms and helping them to adjust, and increasing the overall flexibility of the economy, allowing

resources to flow into those sectors that are most competitive, and to the most efficient firms within them, will be essential to maximize the benefits from the EPA.

About the Author

Mombert Hoppe is a Consultant in the Africa Poverty Reduction and Economic Management unit. This work is funded by the Multi-Donor Trust Fund for Trade and Development supported by the governments of the United Kingdom, Finland, Sweden and Norway. The views expressed in this paper reflect solely those of the authors and not necessarily the views of the funders, the World Bank Group or its Executive Directors.