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Effects of African Trade Arrangements

A. Have RTAs Helped Increase Intraregional Trade?

Time-series data show that the impact of the RTAs on intra-African trade seems to have been small or insignificant. As a share of the continent's global trade, intra-African trade declined over much of the 1970s before it recovered in the 1980s and the first half of the 1990s. It was not until the early 1990s that intra-African trade recovered to its early 1970s levels (Figure 2). Since the mid-1990s, however, it has stagnated at about 10 percent of total African trade despite intensified efforts to integrate regionally. Trade among the countries in the major RTAs (SADC, COMESA, ECOWAS, WAEMU, and CEMAC) has also grown erratically relative to their trade with the rest of the world, often showing no obvious trend over time—except perhaps WAEMU, whose intraregional trade has increased in recent years because of the improved performance of the CU (Table 3). For many RTAs, intra-arrangement trade as a share of their total external trade remains below intra-African trade as a share of total African external trade.

Trade ties within Africa look much stronger when they are normalized with Africa's share in world trade (Figure 3). Although intraregional trade in Africa is lower than in other parts of the world, trade intensity is considerably higher among African countries than between African countries and a typical country outside the continent.[16] This regional concentration in trade is largely due to

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[16]The trade intensity index used here is the same as the one used by Frankel, Stein, and Wei (1997) and similar to the one developed by Drysdale and Garnaut (1982):

$$I = \frac{T_I}{T_A} \bigg/ \frac{T_A}{T_W},$$

where I is the trade intensity index, T_I is intraregional trade, T_A is the region's total (global) trade, and T_W is world trade. If the index is lower (higher) than unity, intraregional trade is less (more) intense than extraregional trade.

Figure 2. Intra-African Trade in Total African Trade, 1970–2003
(In percent)

Including South Africa

Excluding South Africa
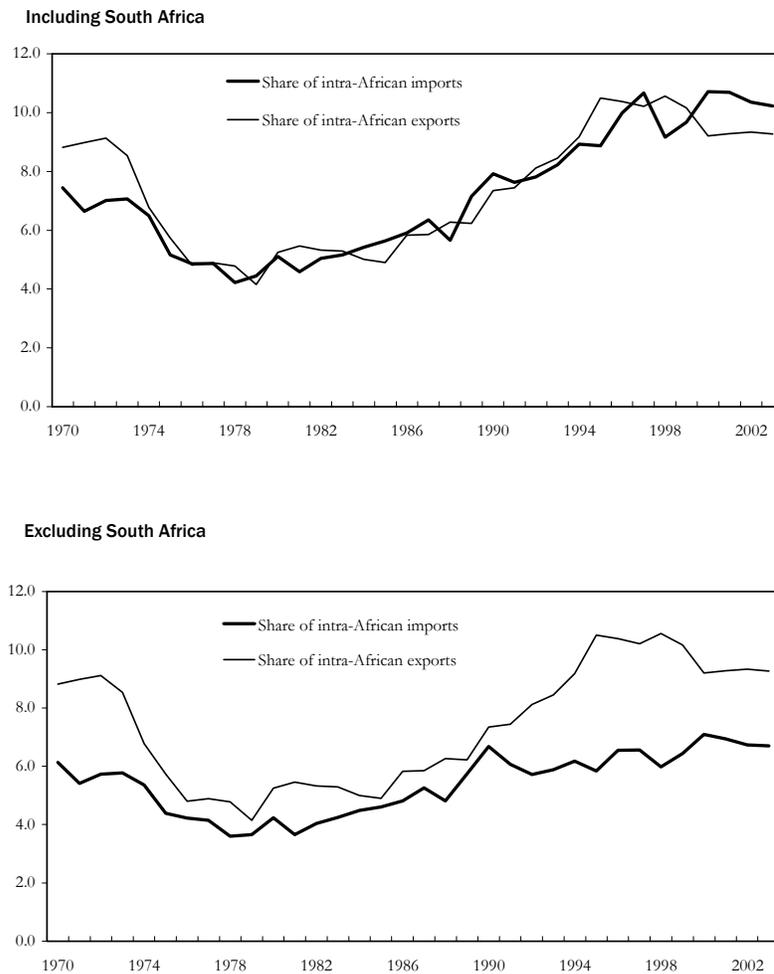
Source: IMF, *Direction of Trade Statistics.*

Africa's marginalization in the world market (Figure 4) rather than to the performance of intraregional trade.

The econometric evidence of the effectiveness of RTAs in promoting intra-African trade is mixed. The slow long-term growth of trade within Africa over the past few decades could result from something other than the ineffectiveness of the RTAs. The econometric technique commonly used to isolate the RTA

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Table 3. Intra-Arrangement Trade in Africa
(Percent of total trade)

	1970	1980	1990	1998	2003
Exports					
CEMAC	4.9	1.6	2.3	2.3	1.4
COMESA	9.7	9.1	8.1	8.9	8.6
ECOWAS	3.1	10.6	8.9	11.1	10.1
WAEMU	7.9	12.6	15.3	13.0	16.2
SADC	9.4	2.7	6.9	6.0	6.0
Africa	8.8	5.2	7.3	10.5	9.3
Imports					
CEMAC	5.0	3.7	3.6	3.9	2.9
COMESA	6.7	2.8	3.4	3.9	5.8
ECOWAS	3.3	10.2	14.9	12.9	11.5
WAEMU	6.4	7.6	14.8	9.8	13.3
SADC	4.9	3.8	6.0	6.1	6.3
Africa	7.4	5.1	7.9	9.2	10.2

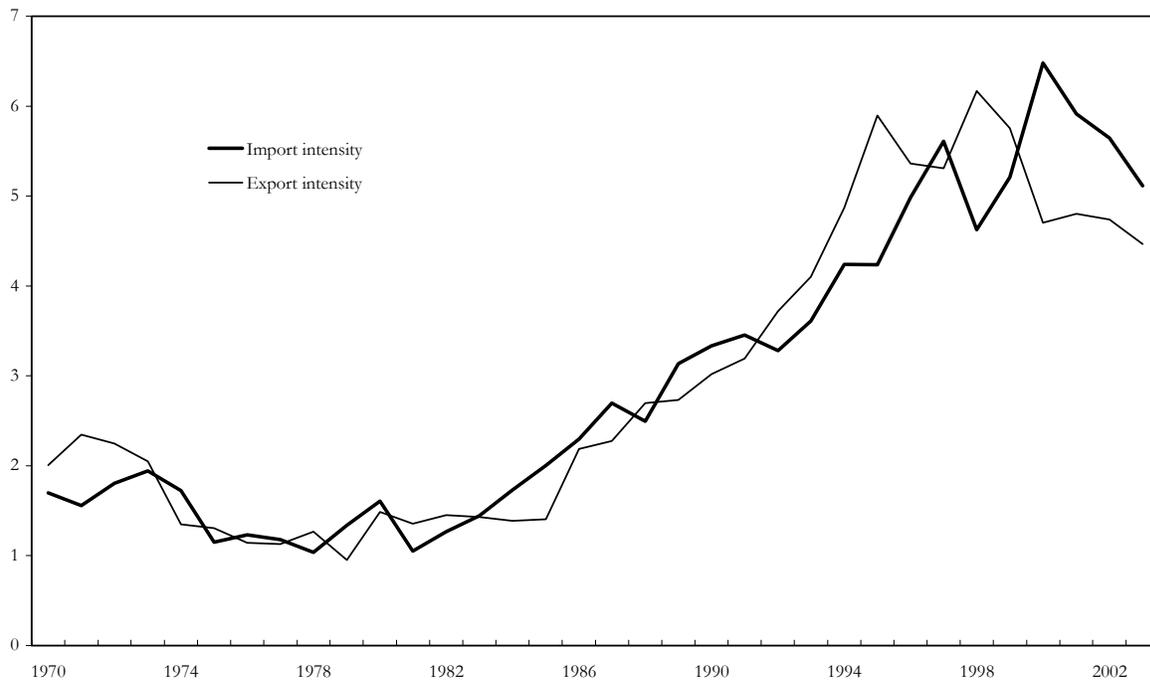Source: IMF, *Direction of Trade Statistics,* various years.

effects on intraregional trade from those of other factors is the gravity model.[17] Using this technique, Elbadawi (1997) finds that, during 1980–84, the presence of African RTAs increased intraregional imports by about 31 percent on average (the effect ranged from nonexistent to substantial) without causing trade diversion. However, these arrangements performed worse in the second half of the 1980s—most of them led to substantial trade diversion and even reductions in intra-arrangement and external overall trade. Carrere (2004) offers a more positive assessment of the African RTAs. She finds that during 1962–96 RTAs generated a significant increase in intra-RTA trade, although initially often through trade diversion. She also finds that CUs in the two CFA franc zone arrangements (CEMAC and WAEMU) have reinforced the positive effect of the

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[17]The typical gravity model for testing the trade effect of RTAs has the following general specification:

$$X_{ijt} = \alpha + \beta_{jt} C_{ijt} + \delta_{jt} D_{ijt} + \mu,$$

where X_{ijt} stands for exports from country i to country j in time t; C_{ijt} represents a set of variables that control for the effect on bilateral trade; D_{ijt} is a set of (binary) dummy variables that are designed to capture the incremental effect of the RTAs in question; μ is the error term; and α, β, and δ are coefficients to be estimated. A less widely used approach is to estimate the trade diversion and trade creation effects using quantity and price data at the detailed commodity level, together with demand and supply elasticities that are needed in partial equilibrium analysis. See, for example, Krueger (1999c), Clausing (2001), and Romalis (2004).

## Figure 3. Intraregional Trade Intensity in Africa, 1970–2003

Source: IMF, *Direction of Trade Statistics,* various years.

corresponding trade agreements on intraregional trade while dampening their trade diversion effect. Other studies (Kasekende and Ng'eno, 1995; Lyakurwa, 1996; Robson, 1998) conclude that African RTAs have little or no effect on intraregional trade.

Thus, the RTAs may have had a positive but uneven effect on intraregional trade, although, over the long run, the effect seems to have been small or insignificant. The RTAs also appear to have caused some trade diversion, which may explain part of the decline over time in Africa's share in world trade. Given the small share of intraregional trade in Africa's total trade, the direct contribution of any trade diversion to overall trade performance is likely to be limited; any significant impact would have to come from the overall trade policy environment that RTAs have helped to create. It is difficult to establish that RTAs have resulted in a worse trade regime than there would have been otherwise.

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Figure 4. Africa's Share in World Trade, 1970–2003
(In percent)
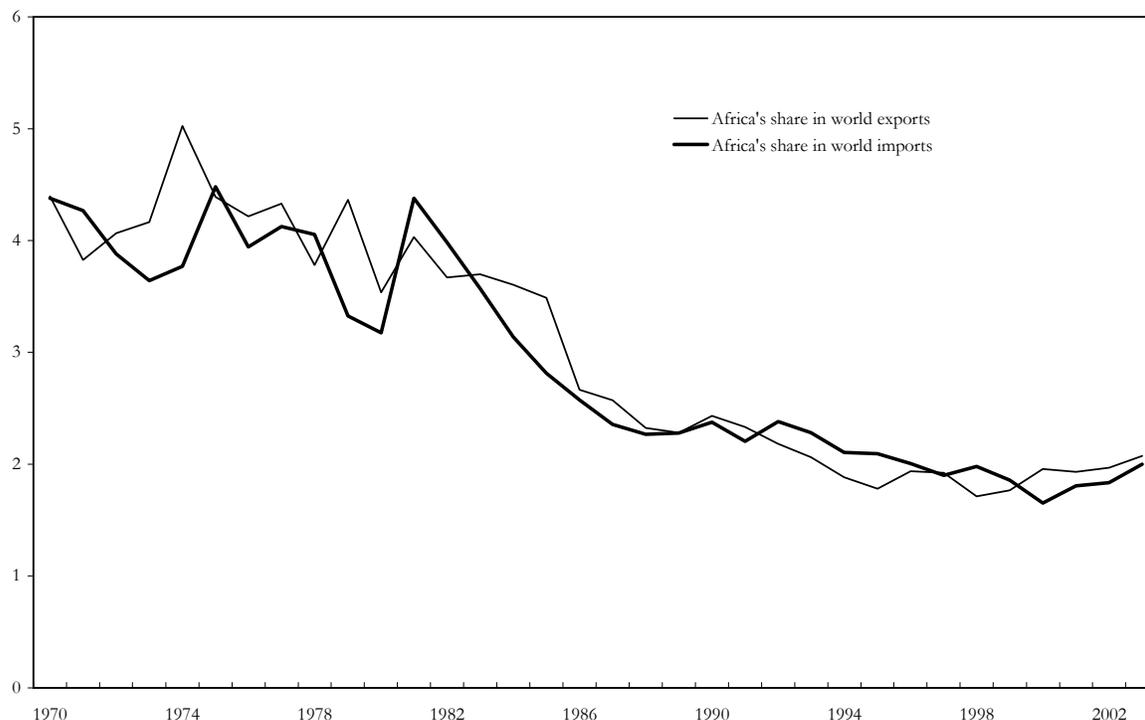
Source: IMF, *Direction of Trade Statistics*, various years.

The econometric results should be interpreted with caution. The greatest difficulty in interpreting these results is to identify a counterfactual with which the actual outcome can be compared. The implicitly assumed counterfactual in the gravity model is an outcome determined by control variables. As O'Connell (1997) points out, however, trade policies (including those governing RTAs) in Africa are often endogenous: they are largely influenced by macroeconomic variables (e.g., the balance of payments and the exchange rate) and, in turn, affect countries' macroeconomic policy positions. Apart from the endogeneity problem, specification errors in the gravity model could lead to large margins of error in capturing the residual effect of RTAs. This problem may be compounded by the inaccuracy of African trade data.[18]

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[18]Yeats (1998) provides a detailed discussion of the deficiencies of African trade data, which, as reported to the United Nations (UN) COMTRADE system, are often incomplete, out of date, missing, or even contradictory. On the other hand, data reported in the IMF's *Direction of Trade Statistics* on Africa are up-to-date but contain data on aggregate trade only.

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B. Have RTAs Helped Improve Regional Competitiveness?

RTAs do not yet seem to have had a significant impact on Africa's export performance in the world market. The continent's share in global trade has declined from about 4 percent in the 1970s to about 2 percent at present. The trend is similar when oil exports are excluded. Perhaps the clearest sign of Africa's weak competitiveness is its poor performance in manufactured exports. During 1970–2003, Africa's share in global manufactured exports (about 0.5 percent) hardly changed. Its exports of textiles and clothing, often the spearhead of export growth as countries industrialize, also failed to gain global market share. Several studies (Foroutan and Pritchett, 1993; Coe and Hoffmaister, 1999; Rodrik, 1999; Subramanian and Tamirisa, 2003) find that the declining share of Africa's products in global trade can be explained largely by its income growth, population size, geography, and economic policy.[19] This evidence supports the argument that Africa's marginalization in world trade cannot be attributed to external forces (Ng and Yeats, 2000).

A further analysis of Africa's non-oil export growth indicates that Africa's competitiveness has declined over the past three decades (Table 4). Results from the constant market share (CMS) analysis show that, during 1970–80, declining competitiveness, together with an unfavorable export composition, was the dominant contributor to the continent's poor non-oil export performance.[20] This finding is consistent with that by Ng and Yeats (2002), who argue that Africa must diversify away from traditional exports or continue to suffer from a secular decline in the terms of trade and slow growth of demand for these exports. Africa's competitiveness declined sharply during the 1980s before this deterioration slowed in the 1990s. Of course, the CMS analysis cannot reveal the causes of Africa's declining export competitiveness, but it does show that RTAs have not been able to halt this decline.

There is little econometric research linking African export competitiveness with RTAs. However, available evidence on the relationship between African exports/trade liberalization and productivity growth helps shed some light on the impact of African RTAs on export competitiveness. Based on firm-level panel

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[19]Subramanian and Tamirisa (2003) also find that francophone Africa, in particular, is an undertrader and that its undertrading, especially with industrial countries, has increased over time. The authors suggest that trade-related costs and the currency arrangements in the CFA zone may be responsible.

[20]The CMS analysis decomposes a country's export growth into four components that are attributed to (1) global market growth, (2) the effect of export composition, (3) the effect of market distribution, and (4) changes in the country's competitiveness (the residual). The analysis here identifies four regions (Africa, the North American Free Trade Agreement (NAFTA) countries, the EU, and the rest of the world) and uses commodity data at the Standard International Trade Classification (SITC) (Rev. 1) one-digit level. For details of the CMS model, see Leamer and Stern (1970).

Table 4. Decomposition of African Non-Oil Export Growth, 1970–2000

	1970–80	1980–90	1990–2000
Total change in trade (in percent of total)	100	100	100
Contribution of:			
Global demand growth	157	1,337	154
Export composition	–29	–504	–62
Market distribution	–4	–2	11
Residual competitiveness	–4	–731	–4
Memorandum item:			
Change in total exports (US$ billion)	25	3	22

Source: IMF staff estimates based on UN COMTRADE data, extracted from the World Bank
World Integrated Trade Solution (WITS) database.

data from three African economies (Ghana, Kenya, and Ethiopia), Mengistae and
Pattillo (2004) find that exporting manufacturers have a total factor productivity
premium of 11–28 percent. Jonsson and Subramanian (2000) find that trade
liberalization has contributed significantly to growth through higher productivity
in South Africa. To the extent that RTAs have not been effective in promoting
overall African exports, it is unlikely that they have increased Africa's export
competitiveness (through productivity gains) vis-à-vis the rest of the world.
Indeed, the RTAs may have reduced Africa's international competitiveness
because they divert trade toward RTA partners. In many ways, the effects of
African RTAs are similar to those of an import substitution policy (albeit on a
regional, rather than a national, scale), which protects local industries and reduces
incentives to export to world markets. In fact, the primary motive for the
establishment of the early (and not so early) African RTAs was industrialization
through regional import substitution (Foroutan, 1993; Oyejide, 1997; François
and Subramanian, 1998).

Africa's poor record in attracting FDI also seems to indicate that RTAs have not
significantly improved the region's competitiveness. One rationale for the
premise that RTAs would increase Africa's external competitiveness was that
enlarged regional markets would generate higher returns to capital and hence
attract more FDI, which would then increase the region's ability to export. At the
aggregate level, FDI inflows in Africa as a percentage of total low- and middle-
income country FDI have declined sharply over time (Figure 5). In addition, the
inflows are heavily skewed toward the mining industries (including the petroleum
industry) and highly concentrated in just a few countries (e.g., South Africa,
Nigeria, and Angola). FDI from South Africa to other countries in the region is,
however, more diversified across industries. Elbadawi and Mwega (1998) find
that, unlike some trade agreements in other parts of the world (e.g., the

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Figure 5. Foreign Direct Investment: Net Inflows in Africa, 1970–2001
(In percent of the low- and middle-income countries, total)

Source: World Bank, *World Development Finance*, various years.

Association of Southeast Asian Nations (ASEAN)), African RTAs other than the SADC did not significantly increase FDI. However, an earlier study by de Melo, Panagariya, and Rodrik (1993) finds significant investment effects for the Central African Customs and Economic Union (UDEAC), predecessor of the Central African Economic and Monetary Community (CEMAC), and the West Africa Economic Community (CEAO), predecessor of WAEMU. Nevertheless, if investment increases under an RTA because of higher returns from activities related to trade diversion, then the investment will have been diverted from more productive uses.[21]

C. Have RTAs Benefited Africa?

Even if RTAs have increased intra-Africa trade, they may not have improved welfare. The conventional approach to the analysis of the impact on economic welfare of regional trade arrangements is based on Viner's concepts of the trade creation and trade diversion effects of CUs. If African RTAs have not significantly increased intraregional trade over extraregional trade, then they are unlikely to have led to any trade creation or trade diversion. Nevertheless, real resource costs are involved in negotiating and implementing these arrangements, irrespective of the outcome. If the regional arrangements have also diverted attention away from unilateral and multilateral trade liberalization and other domestic reform agendas, then the cost could be larger.[22]

The available econometric results suggest that RTAs are unlikely to have increased Africa's overall trade or its economic welfare. Take the example of the relatively positive assessment by Carrere (2004), which shows that the SADC increased intraregional trade by two and a half times and reduced extraregional trade by only 35 percent during 1962–96.[23] Since intra-SADC trade was less than one-tenth of total SADC external trade, this implies that total SADC trade (intra-SADC plus SADC external) declined by about 7 percent as a result of this regional arrangement. In fact, even if trade creation exactly offsets trade

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[21]Krueger (1999b) explains this possibility in the context of FTA rules of origin that tend to be "protectionist." An exporter selling within an FTA could switch the sourcing of inputs to a higher-cost partner country from a lower-cost country outside the FTA because it has to meet the rules of origin in order to gain duty-free entry of final goods exports to the partner country. Similarly, an investor could be induced to invest in a factory within an FTA that would otherwise not be viable.

[22]The counterfactual for evaluating the effect of RTAs is difficult to establish. One could compare the observed outcome with an equilibrium extrapolated from the trend prior to the establishment of the arrangement, or with an equilibrium in which a different outcome might have emerged as a result of an alternative path of multilateral or unilateral liberalization.

[23]It is not clear whether and to what extent the increase in intra-SADC trade resulted from South Africa's accession to the SADC.

diversion (and assuming domestic production does not change), the arrangement must have *reduced* welfare—the loss of tariff revenue from intraregional trade is greater than consumer benefits.[24]

Of course, RTAs may have some dynamic effects that could, in theory, dominate the static welfare effects outlined above. Such benefits could result from increased competition and learning by doing. They could also come from the increased imports of capital goods, which may embody more advanced technology. But if African RTAs have not been able to increase the region's overall trade and have often led to fewer imports from the rest of the world, it is unlikely that they have yielded any dynamic gains. A study cited earlier (de Melo, Panagariya, and Rodrik, 1993) finds no growth effects for the UDEAC or CEAO. Robson (1998) draws the broader conclusion that most RTAs in Africa have contributed little or nothing to economic development.

D. Have RTAs Achieved Their Noneconomic Objectives?

Like RTAs in other parts of the world, African arrangements also have several noneconomic objectives, of which the most important is conflict prevention and resolution. It is widely believed that close trade ties would make conflicts between countries economically more costly and hence less likely to happen. If conflicts do arise, the incentives for external intervention are stronger because the stakes are higher. Close trade ties, however, do not always reduce risks of conflict. In fact, they can aggravate tensions between countries if they lead to an uneven (real or perceived) distribution of benefits (and losses) arising from RTAs (World Bank, 2000). For instance, trade integration among members of the Eastern African Community (Kenya, Tanzania, and Uganda) led to the concentration of manufacturing activities in Kenya and eventually caused the demise of the EAC. On balance, however, anecdotal evidence seems to suggest that more recent RTAs that are part of deeper regional integration arrangements (e.g., the EU and the African Union) may have contributed to regional stability and security. One prominent African example often cited as a success is the intervention by ECOWAS in the civil conflicts in Sierra Leone, where ECOWAS troops, together with UN and British troops, played an important role in disarming the rebels against the government and eventually led to peaceful democratic elections in 2003.

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[24]Popular press and academic analysis often equate net *trade* creation (increase in intraregional trade plus decrease in extraregional trade) with net *welfare* creation. Obviously, even if net trade creation is positive, there could be a net welfare loss depending on the cost structure of domestic production and the level of the external tariffs against nonmember countries. The ultimate criterion for judging the welfare effect of a regional arrangement is whether consumer gains outweigh government revenue and producer losses.

However, the role of RTAs in preventing and resolving conflicts in Africa should not be exaggerated. First, even if closer trade ties do increase incentives for regional intervention in the event of a conflict, RTAs that do not increase intraregional trade will not make such intervention more likely. In fact, in Africa, regional cooperation arrangements that address the management of cross-border resource issues (such as water) are more effective in reducing military conflicts than trade-based RTAs (World Bank, 2004). Second, effective regional intervention requires regional arrangements that go beyond trade. This finding suggests that some regional political and cooperation arrangements can be just as effective as trade arrangements in preventing and resolving conflict. Furthermore, regional intervention may not be effective without the broad support of the wider international community. An RTA that diverts trade away from the rest of the world could hardly help attract attention from the rest of the world.

Another largely noneconomic objective of African RTAs is to increase regional bargaining power in multilateral and other forums for trade negotiations. Collective efforts would increase Africa's bargaining power only if the African countries formed a common position, in terms of both what concessions they seek from their trading partners and what they are willing to offer to them. In many areas, African countries do have a common position, such as greater market access in industrial countries. Another common interest is to make the Doha Round more development-oriented. However, when it comes to specific trade issues, African countries do not always have a common interest or position. For example, African countries have not presented a common tariff offer during the Doha Round negotiations. Another such example is quota restrictions on textile imports in the United States and the EU. For cotton-exporting countries in Western Africa (i.e., Benin, Burkina Faso, Chad, and Mali), the removal of textile quotas would increase world demand for their cotton, a vital industry for their economies. In contrast, some other African countries—Kenya, Lesotho, Madagascar, Mauritius, Namibia, South Africa, and Swaziland—are expected to lose from the removal of the quotas. So far in the WTO, Mauritius and Madagascar have aligned themselves with some other developing countries that are expected to lose from the quota removal in an effort to extend the quota restrictions, against the interests of the cotton-exporting African countries.