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Econometric Evidence of the Effectiveness of Aid for Trade in Addressing Trade Binding Constraints in Africa

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Issues Addressed

The key issue that this case story addresses is the experience of sifting through empirical evidence to show what the effect of the increasing amounts of Aid for Trade flows to Africa in tackling the region's main trade binding constraints has been. This experience is important because the case for aid for trade is not contentious, but whether the delivery mechanisms and implementation are realizing the expected results remains an important issue. At the risk of repeating what other case stories in Africa might have said already, it is worth reiterating the point that trade binding constraints are the main rationale for the case for aid for trade in Africa. Numerous studies on Africa have shown that the region's marginalization can be attributed to among others, the following trade binding constraints. First, the region has on average higher transport costs than elsewhere in the world (see Morrissey 2009). Second, weak infrastructure, institutions and regulatory environment inhibit Africa's export supply response (see ECA, AUC and AfDB 2010). Third, high internal transport costs and long delays in trading ports lead to Africa's underperformance in trade (see Djankov and others, 2006; Limao and Venables 2001). Fourth, poor investment climate associated with high transaction costs due to the weak infrastructure hampers growth of Africa's manufactured exports. Fifth, Africa's trade composition reflects more of primary resource endowments with diversification stalled and in some cases retarding (see ECA and AUC 2007). Now, aid for trade has been flowing in an increasing manner to Africa and the way it has been allocated, it is evident that it has been designed to address these trade binding constraints (see Karingi and Fabbroni 2009). So, one would imagine that if aid for trade is working, then it should be possible for one to associate progress in tackling binding trade constraints in Africa with such increasing flows.

Objectives Pursued

The overarching goal was to establish the effects of aid for trade in Africa. In order to do this, the following objectives were pursued and are documented in Karingi and Leyaro (forthcoming):

(a) Show the significance of the different categories of aid for trade (trade related infrastructure, trade productive capacity, trade policy and regulation, and trade adjustment) in any improvements on the indicators for trade capacity (diversification index, competitiveness index, logistics performance index, trading across border, and intra-regional trade index).

(b) Find out whether improvements in the indicators of trade capacity can be associated to Africa's trade performance (real growth in Africa's total trade, more trade integration, improvement in Africa's share of trade in world markets).

Problems Encountered

As one can deduce from the presentation of this case story so far, the main challenge that one would have to contend with is how to disaggregate the effects of aid for trade interventions from other measures that African countries may have put in place and which could have had influences on the binding trade constraints. This was a major problem. Statistics show that most of Africa's aid for trade has been directed towards addressing infrastructure and productive capacities constraints. While such interventions would help address in a direct way the binding trade constraints, other policy measures could achieve similar results. For instance, in the last decade, macroeconomic stability in Africa has improved significantly and this has resulted in resilient and sustainable growth as evidenced by the quick rebound of the African economy after the economic crisis of 2008 and 2009. Which then among these two interventions, aid for trade investments and macroeconomic reforms, can be attributed to observed improvements in indicators of trading capacities?

Or take the example of the regional integration programmes in Africa. Trade integration is one among many objectives of regional integration processes in Africa. Political objectives such as having conflict resolution platforms are of some of the other goals of regional integration in Africa. Where regional cooperation allows realization of reduced political risks, the results are mainly seen in terms of additional investments—both foreign and domestic—due to the improved investment climate. So, is it aid for trade or regional political cooperation that can lay claim to the improved investment climate? Disentangling the attribution question was one of the problems encountered in seeking the evidence whether aid for trade is helping address binding trade constraints in Africa.

There are two other problems that were faced in this exercise. The first one relates to the paucity of data. The second one and which was more serious was the empirical difficulty of associating the expected outcomes of aid for trade with the binding constraints results. Let us take first the African data problem. As agreed among aid for trade practitioners, while the initiative got a political impetus during the WTO Hong Kong Ministerial, aid for trade dates back beyond 2005. It is therefore possible to get data on aid for trade equivalent flows of Overseas Development Aid (ODA). However, the same cannot be said of the data for the demand side. Most of the indicators that one can use to sift the evidence of the effectiveness of aid for trade have short spans of time series. This meant that the statistical analysis (econometric investigation) could not achieve the robustness needed to establish a relationship that could stand on its own as a stylized fact on the results of aid for trade interventions in Africa. The observations on African demand side data, i.e. logistics performance index, trading across borders etc. are very few.

Despite the data paucity, as indicated in the section on results achieved, it was possible to have reasonable results relating aid for trade with the changes observed in the binding trade constraints. But the same cannot be said of the link between expected trade outcomes, i.e. improvements in intra-African trade, increased employment and by extension higher incomes, increased global share of Africa's trade with the observed improvements in some of the binding trade constraints indicators. While the conceptual framework made sense that aid for trade would improve Africa's trade by tackling the binding trade constraints, this could not be established from an empirical point. This two-stage process was incomplete, and only the first stage could be established while the second stage proved difficult. Just to amplify why more work is needed, the analysis presented in this case focused on the macro level. One would expect that such difficulties would be much harder to resolve at the meso and micro levels.

Factors for Success/Failure

As the next section shows, the results achieved from this exercise were mixed. At one stage, it was possible to successfully demonstrate that aid for trade is actually helping address Africa's binding trade constraints. But in the next stage, the approach failed to show that it is the influence of the aid for trade through addressing binding trade constraints that explains observed changes in incomes, employment, poverty, global trade performance and intra-African trade performance. The following can be summarized as the key factors that determine the success and/or failure of this approach to establishing the aid for trade effectiveness:

(a) data availability;

(b) ability to resolve the attribution question;

(c) the level of analysis—macro, micro or project; and

(d) Time period of analysis.

Results achieved

The discussion of this case presentation has so far shown that it was only possible to establish the link between aid for trade and the resolution of the most binding trade constraints in Africa. But it was not possible to link the aid for trade with the more long term desired trade outcomes that extend to trade's role in achieving the MDGs. Therefore, this section presents the results in relation to the dealing with trade constraints. The first result relates to the relationship between diversification in African economies and aid for trade flows. The expected relationship was established at the aggregate level. That is, increase in aid for trade can be attributed to the improved diversification of the African economies. What was this aggregate result—that a one per cent increase in aid for trade appears to improve Africa's diversification index by 0.04 per cent. Now, it is possible that many readers will jump to the smallness of this effect.

Actually, the first thing that one needs to note is that the diversification index ranges between zero and one. The smaller the value of the index the better while a value of one indicates perfect specialization into only one product. Historical analysis of the diversification indices of different economies and regions show that it takes significant investments and structural transformations to register visible improvements in the diversification index. Therefore, this result was quite significant for Africa. But one cannot stop here as there are different categories of aid for trade. Further analysis was carried out in which the aid for trade flows was decomposed to their different categories. This additional analysis showed that in Africa, the significant results of aid for trade effects on diversification can be attributed to investments in economic infrastructure and productive capacity building.

Still on the demand side of the aid for trade, the investigation showed that in aggregate terms, aid for trade flows to Africa have a positive impact on the region competitiveness with compound effects of about 0.02 per cent from a one per cent increase in aid for trade. Again the effect appears small, but it is important to highlight that the competitiveness index also ranges between zero and one. Unlike the case of diversification where economic infrastructure and productive capacity dominated, in the case of competitiveness of the African economies, the aid for trade categories effects seemed to be spread somehow equally.

Trade facilitation (broadly defined) is clearly one of the most binding trade constraints in Africa. As a result, establishing the effectiveness of aid for trade in improving the trade across border was a natural area of focus. In this case story, what was essentially done was to see whether there was a significant relationship between the costs of exporting one 20-feet container from Africa. The results showed that a one per cent increase in aid for trade reduces the cost of exporting one 20-feet container by 0.11 per cent. Put differently, a ten per cent increase in aid for trade reduces the exporting costs by 1.1 per cent. To appreciate this result, one needs to recall that millions of 20-feet containers pass through African ports for export. Therefore, aid for trade is helping to significantly reduce trade costs in Africa.

Lessons learned

The main lesson learnt is that it is not easy to show how aid for trade is impacting on lives when analysis is done at the macro level. There is no contention that improvement in the trade capacity constraints through aid for trade is a necessary condition to expanding trade and by extension promoting growth and development. However, it is not possible to show this. Scepticism on the effectiveness on aid for trade cannot therefore be avoided, unless one is able to show how livelihoods are becoming different because of this initiative.

Conclusion

The import of the results above is that they reinforce the argument that for Africa to benefit from trade, it has to address its most binding trade constraints. As the results show, targeting aid for trade to these binding trade constraints can help in the diversification and the transformation of the African economies. Unfortunately, it was not easy to deal with the long term impacts of aid for trade via the resolution of binding constraints. This is something that should remain at the frontier of aid for trade research. The analysis should be extended to capture the regional dimension of aid for trade as well.

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