



# Analysis of the Competitiveness and Sophistication of Exports in Ecowas Countries: The Case of Measuring Trade in Value Added Products

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## Abstract

The objective of this study was first to analyze the participation of Economic Community of West African States (ECOWAS) countries in the global value chain. Then, an analysis was done of the export performance of these countries in value added trade through export competitiveness and sophistication. The results show that the participation of these countries in the global value chain is strongly driven by downstream integration, that is, exports of primary products. About export performance in value added trade, the results suggest that the export basket of these countries is uncompetitive. The results also highlighted the low sophistication of the export basket with a very high degree of heterogeneity between countries.

## Introduction

In an increasingly interconnected world economy, where more than 70% of trade is in intermediate goods and services, integration into today's global value chains will determine tomorrow's trade and foreign direct investment (FDI) patterns and growth prospects (OECD, WTO, 2014). Indeed, since the 1990s world trade has been undergoing rapid change. Lower transport and communication costs combined with technological advances and trade liberalization have profoundly changed the way goods and services are produced (Baldwin, 2012). As a result, competition has increased, and firms have had to rethink their organizational structure and production methods (Lorenzi, 2005). For most firms, this meant expanding geographically in some form (offshoring, outsourcing, etc.) to capture growth opportunities and gain competitive advantages, hence the emergence of so-called global value chains (GVCs). These refer to a decentralized and interconnected process from conception and design to manufacturing, marketing and commercialization of goods and services (Gereffi and Fernandez-Stark, 2011).

This new configuration of value-added trade offers new opportunities and possibilities for structural transformation to developing countries, which are no longer obliged to set up entire production units (Baldwin, 2012; Escaith, 2014). However, it can now integrate as links in GVCs according to their comparative advantages while benefiting from the transfer of foreign skills and know-how (Hausmann, 2014).

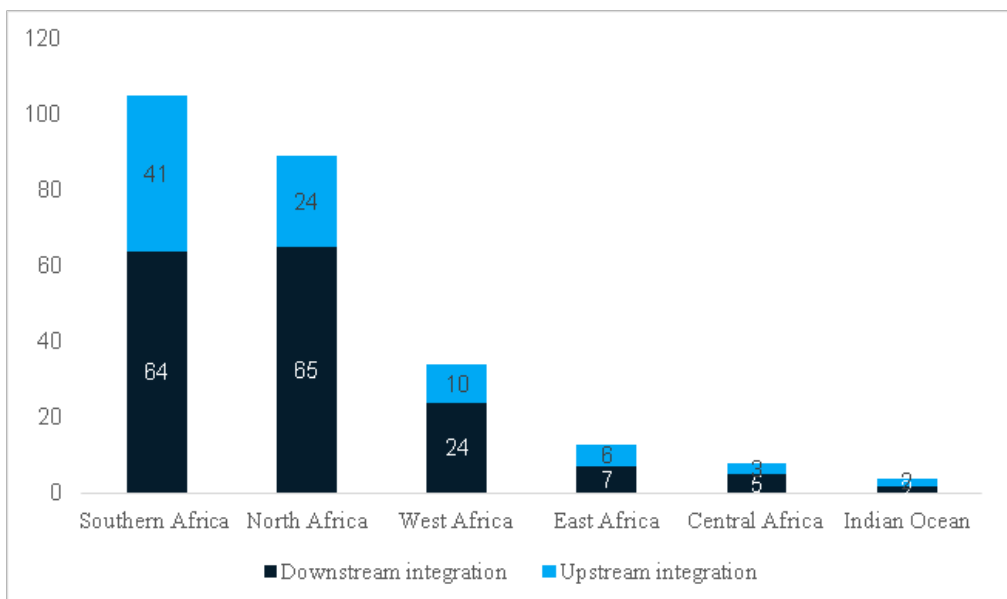
Indeed, integration into GVCs can have many advantages. Access to larger foreign markets could allow firms to exploit economies of scale, become familiar with new technologies and products, and become more innovative. Such integration would also facilitate access to cheaper intermediate products, a wider range of products or higher-quality foreign inputs, all of which can increase firm productivity (Grossman and Helpman, 1991). Productivity effects also stem from efficiency gains from international competition, access to tacit knowledge and foreign technology, and opportunities for specialization and economies of scale (Helpman and Krugman, 1985; Pietrobelli and Rabellotti, 2007; Egger and Egger, 2006; Crino, 2008; Bandick, 2015; Merlevede and Theodorakopoulos, 2016).

However, participation in a GVC does not automatically bring gains for participating countries; it also has drawbacks. It can increase vulnerability to global economic cycles (Altomonte et al., 2012), supply-side fluctuations, risks associated with relocation and FDI (Plank and Staritz, 2013) and employment levels (Mankiw and Swagel, 2006). Moreover, some studies have stressed that value-added trade leads to diversification, competitiveness, and export sophistication (López-Cálix, 2010). Thus, for African countries, participation in the GVCs remains a strategic alternative for the diversification and structural transformation of their economies (Jouini, 2016).

However, analysis of Africa's participation in the GVCs, especially West Africa (AfDB, 2014) shows a high level of integration in low value-added segments characterized by low opportunities for innovation and technology transfer (Foster-McGregor, 2016). This raises the question of whether this level of integration allows these countries to make gains in terms of the competitiveness and/or sophistication of their exports. Economic literature on GVCs is abundant. However, few studies have been carried out on export performance (see Gereffi and Kaplinsky, 2001; Humphrey, 2004; Hausmann, Hwang and Rodrik, 2007; Bernhardt and Milberg, 2011; Foster-McGregor et al, 2016), and even fewer for African countries. Shedding light on this facet justifies the interest of this study, which proposes to address this issue in countries of Economic Community of West African States (ECOWAS). The main contribution of this study is to analyze for the first time to the best of our knowledge the export performance of ECOWAS countries through value-added trade.

The choice of this region is justified by the fact that it is one of the most open to international trade in Africa (CACID, 2012). However, its share in international trade remains below its potential and represents in value 0.7% of world exports against 0.5% of imports. Moreover, in terms of the level of integration into GVCs, West Africa is the third best integrated region in Africa (Figure 1). However, their exports are reputed to be highly concentrated on a limited number of primary products with low technological content. This suggests that trade openness in the region has contributed little to improved trade performance. Hence the question arises as to whether the positioning of its ECOWAS countries in trade allows them to benefit from their integration into the world economy.

**Figure1: Integration of ECOWAS countries in the GVC, 2011**



Source: UNCTAD-EORA-GVC database (AfDB and al, 2014)

This research sought to answer the question of whether ECOWAS countries are improving their export performance in GVCs? This study therefore:

- Allows investigation of the GVC theme in West African countries, where this theme is hardly addressed.
- Complements existing studies on Africa's positioning in global value chains.
- Provides a complementary analysis of the investigations made in the literature on export performance. However, unlike previous studies which are based on gross trade flows, it is based on the concept of measuring trade in value added.
- Focuses on sectoral exports rather than on overall exports.

The overall objective of this research was to analyze the export performance of African countries, particularly ECOWAS countries in GVCs. More specifically, it sought to analyze:

- (i) The competitiveness of exports in terms of value-added goods.
- (ii) The sophistication of value-added exports.

As hypotheses, value-added trade in ECOWAS countries is not competitive and has very low levels of sophistication.

## Data source

Data covering ECOWAS countries from 2002 to 2011 are mainly from the EORA-GVC (2014) database of UNCTAD except the data on gross domestic product (GDP) per capita that are from the World Bank's World Development Indicators (WDI) database. The EORA-GVC database provides multi-regional input-output tables to calculate value added trade for 189 countries over the period 1990 to 2012. These tables bring together a variety of primary data sources, including input-output tables at the national level; data on the main aggregates obtained from national statistics, Institute for Developing Economies (IDE-JETRO) and OECD collections; and trade data (UN Comtrade, UN Service Trade). Collected by UNCTAD, OECD and EORA, the data cover 42 of the 45 countries in sub-Saharan Africa.

**Table 1: Descriptive statistics of the study variables (GDP per capita and exports by sector according to the EORA classification)**

Variables	Observations	Average	Standard deviation	Source
Gross domestic product (GDP) per capita	140	619.6246	521.6042	WDI
Agriculture	140	1.82e+07	4.88e+07	UNCTAD-EORA
Livestock	140	18034.51	23763.13	UNCTAD-EORA
Mining and quarrying	140	1.18e+08	4.48e+08	UNCTAD-EORA
Food and drinks	140	1.04e+07	3.29e+07	UNCTAD-EORA
Textiles and clothing	140	100968.2	378809.4	UNCTAD-EORA
Timber and paper	140	2790774	1.59e+07	UNCTAD-EORA
Oil and chemical products	140	1.43e+07	5.11e+07	UNCTAD-EORA
Metal products	140	29114.8	27128.68	UNCTAD-EORA
Electricity, Gas and Water	140	47821.02	231687	UNCTAD-EORA
Financial Intermediation	140	34209.34	94859.73	UNCTAD-EORA

Source: Author's calculation from WDI and UNCTAD-EORA database

## Conclusion and policy recommendations

In recent decades, globalization has been undergoing unprecedented changes linked to the emergence of the GVC. The GVC offer new opportunities to African countries that are no longer required to set up entire production units but can now be integrated as links in the GVC. The objective of this paper was to analyze the export performance of ECOWAS countries in the GVC.

At the end of our analyses, it appears that trade between ECOWAS countries is increasing strongly but remains below its potential in terms of positioning in the GVC. The participation of these countries in the GVC is strongly driven by the export of agricultural and mining products, which has limited to some extent the gains in terms of export performance. Rather than relying on primary commodity exports, in terms of recommendation, these countries should add value to their commodities to promote structural transformation and sustained growth. To do so, we recommend that these countries should be more integrated upstream into the GVC. To this end, credits and customs exemptions should be offered to support the purchase of materials and the import of intermediate products.

In terms of the first analysis of export performance, export competitiveness appears to be weak in ECOWAS countries. Analysis through unit value and export market share in 10 sectors shows that there is little evidence of deterioration in the GVC. Nevertheless, some cases of improvement are noted. In addition, in some sectors, the results suggest that ECOWAS countries were able to export their products at high

prices but with a decline in export market share, pointing to the need to increase the unit value of exports but above all to increase the export market share in these countries. To do this, an integration of national production would be a godsend. This regional integration strategy should be reoriented towards the creation and coordination of regional value chains in high value-added activities.

Second, the analysis of export performance through the sophistication of the export basket highlights two types of observations. First, the level of export sophistication is low in ECOWAS countries. Second, the evolution of this indicator reveals mixed results across countries. While some countries are experiencing a dynamic in the sophistication of their export basket (Ghana, Liberia, and Sierra Leone), others are experiencing a deterioration (Togo and Benin). The other countries experienced stabilization in the last years of the decade under review. This result also highlights the need for effective public intervention to improve the sophistication of existing products and promote new ones. This will be done through investments in infrastructure and support to exporting companies. Infrastructure development plays a central role in promoting exports by reducing the cost and delivery time of goods. The authorities of the countries and ECOWAS also face a major challenge to accelerate industrialization in the region by reorienting industrial policy towards investment in more sophisticated and high value-added activities. The authorities must also facilitate access to financing services for producers and exporters, including cheap credit at preferential rates.

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