



ECA POLICY BRIEF

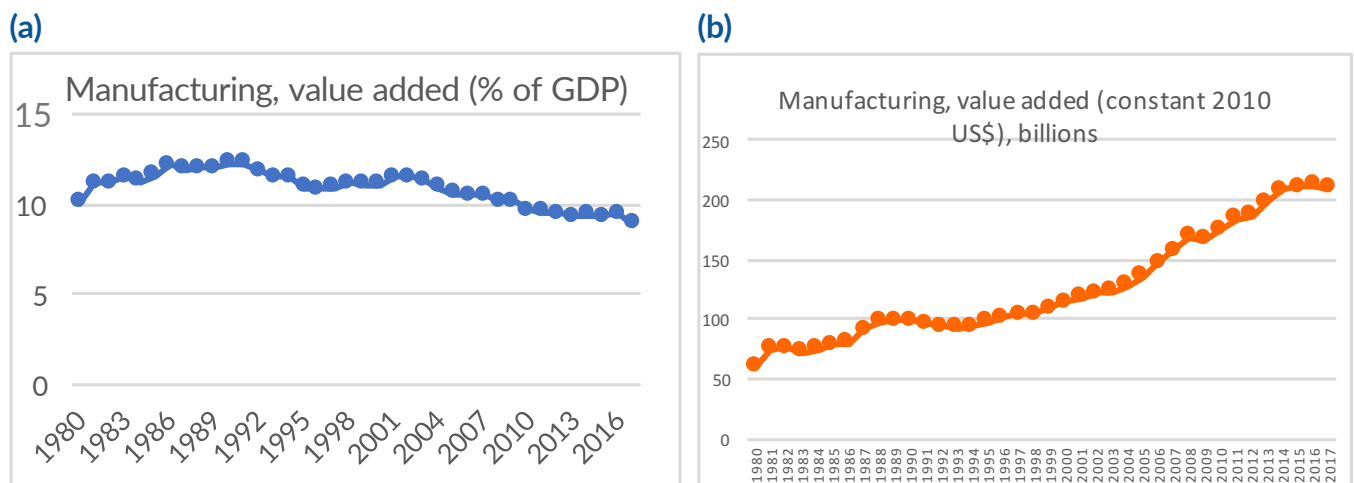
Aggregate demand and structural transformation in Africa

Economists generally emphasize the need for structural transformation – usually manifested in expansion of manufacturing production and exports and their increased sophistication, as well as in the shifting of labour out of low-productivity sectors into higher productivity and higher value added sectors – to enhance economic growth. However, although Africa is consistently diversifying and transforming, this is happening at a very slow pace, worrying to both analysts and policymakers. Current economic policies have not been effective enough to accelerate industrialization and job creation in sectors generally regarded as high-productivity sectors in Africa.

The share of industry in gross domestic product (GDP) in Africa has remained nearly unchanged since the 1960s, averaging 35 per cent of total value added over the period 2000-2016, with manufacturing averaging 13 per cent. Although the share of manufacturing value added in GDP has been declining for nearly two decades, the trend changed after 2007 (figure I, left panel), with total manufacturing production nearly doubling over the 2000-2016 period (right panel).

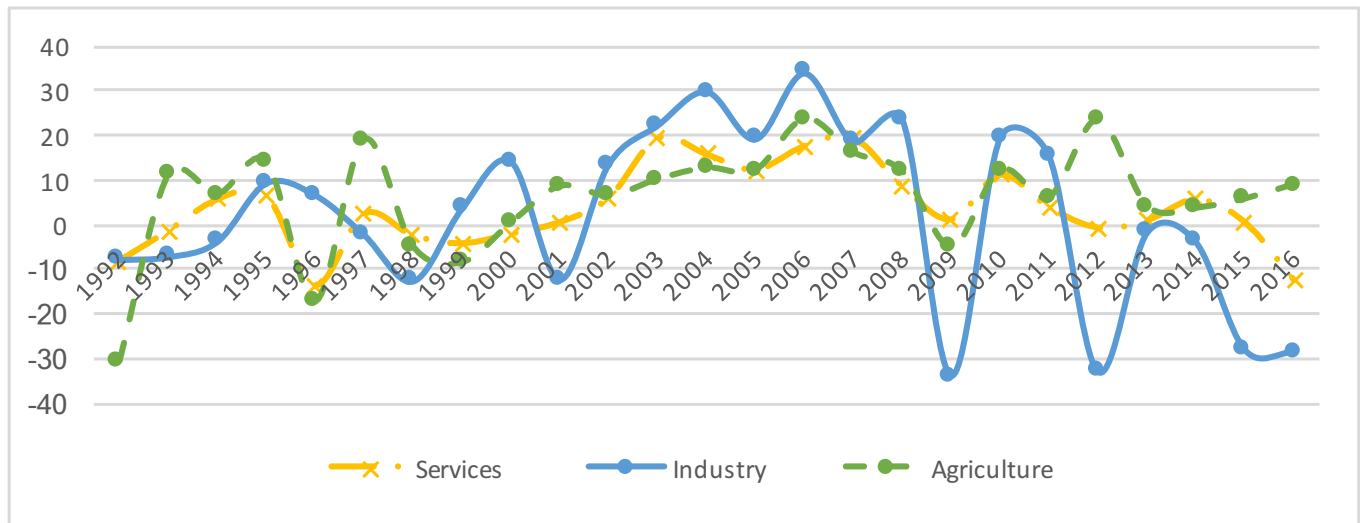
Similarly, the number of employees in the manufacturing sector increased, although the employment share of manufacturing in total employment fell from 10 per cent in 1991 to 8.5 per cent in 2013. This shows some signs of industrialization and structural transformation and strengthens the call for African countries to carry out further reforms to accelerate their structural transformation (figure II).

Figure I: Africa's share of manufacturing in gross domestic product is (a) falling and (b) real production is increasing



Source: World Bank, 2017.

Figure II: Productivity growth rate



Source: Author's calculations based on data from the World Bank (2017).

New approaches are therefore needed to accelerate structural transformation in Africa. Notwithstanding the extensive work on structural transformation, empirically identifying the key economic forces that shape the structural transformation process in Africa remains an open question. Among these economic forces is the role played by aggregate demand. Specifically, while it is known theoretically that household consumption, public expenditure, human capital, capital-labour ratio, and trade, among other factors, have an impact on resource allocation, the empirical significance of these factors in relation to their impact on structural transformation has not been extensively established. Assessing and establishing their impact has important policy implications for accelerating structural transformation in light of the unique African demographic and spatial dynamics.

Demand-side drivers and Africa's structural transformation

Examining the effect of aggregate demand on structural transformation in Africa will require empirically revisiting the shifts in the sectoral composition of economic activities as well as the sectoral productivity growth due to changing demand and economic structure. The results of an empirical study on "Aggregate demand and structural transformation in Africa"¹ undertaken by the Economic Commission for Africa (ECA) for 54 countries over the period 1960-2014 show that household consumption and

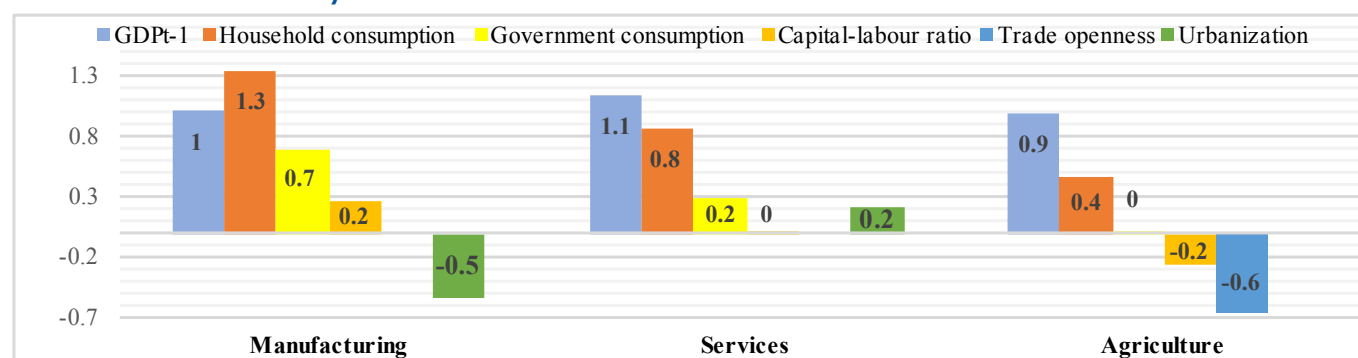
government consumption have the highest impact on the manufacturing sector, in relation to other variables (Figure III).

Among the most uniform changes in demand affecting industrialization and structural transformation is the shift in demand away from agricultural goods to industrial commodities and services. The empirical results of the study show that while household consumption expenditure has a positive and significant impact on all manufacturing, agriculture and services sectors, it has the highest impact on the manufacturing sector. An increase in household consumption by 1 per cent boosts the manufacturing sector value added by 1.3 per cent, while it increases the services and agriculture sectors by only 0.9 per cent and 0.5 per cent, respectively. As income rises, a shift in the composition of consumption expenditure is observed. Households spend higher proportions of their increasing disposable income on manufactured goods compared to services. This shift in demand towards manufactured goods and services leads to changes in the price of output and productivity in the manufacturing sector relative to the agriculture sector, which trigger the reallocation of resources across sectors.

Public expenditure is also found to have a positive and significant impact on the manufacturing, services and agriculture sectors. An increase of 1 per cent in public expenditure leads to an increase of 0.7 per cent and 0.3 per cent in manufacturing and service sectors, respectively, but with a negligible effect on the agriculture sector.

1 N.S. Ouedraogo, H. Chavula, K. Hussein (2018), "Aggregate demand and structural transformation in Africa". ECA Occasional Paper Series. Forthcoming.

Figure III: Visualization of the econometrics results: impact of demand variables on the different sectors of the economy in Africa



Source: Author's calculations based on data from the World Bank (2017).

An increase in the capital-labour ratio captures the technological developments through innovation and capital deepening that lead to increases in efficiency and productivity during the take-off stages of economic growth. This is found to lead to increases in value added of the manufacturing and services sectors, but decreases the value added of the agriculture sector. This could be because of the lack of modern farming methods in Africa (i.e. use of mechanized ways of farming), while noting that the largest proportion of the population is employed in the sector.

In theory, educational attainment can stimulate structural transformation, as a result government expenditure on education has been increasing in Africa. However, the results of this study show that the effect of education expenditure on structural transformation is not significant. It is important to note that the larger part of investment in education in Africa goes to primary education, however, the much needed, highly-skilled workers require the expansion of quality secondary and tertiary education. Yet, higher education enrolment remains low in many African countries.

Capital accumulation remains one of the main drivers of aggregate demand of any economy. Investment, especially if aimed at reducing unemployment and raising people's living standards, facilitates shifts in the labour force from less productive to more productive sectors of the economy. Nevertheless, the investment effect as identified in this study is insignificant in Africa. This seems to imply that the current level of investment is below the threshold level required to induce a process of structural change in Africa. It could also be suggesting that the investments made

in the various sectors are not being directed towards the countries' most productive sectors.

The economic advantages of urbanization are rooted in economies of scale, also known as agglomeration economies, which arise from the proximity of economic agents and their interaction in the factor and product markets, further enhancing structural changes in the country's economy. However, this study shows that urbanization has a negative impact on the manufacturing sector and a positive impact on services. This finding could be supporting the narrative that urbanization in Africa has been associated with the growth of low-productivity service and informal sectors as labour migrates from rural to urban areas. Studies have shown that African urbanization is mostly without industrialization, as countries are urbanizing rapidly without large shifts of economic activity towards manufacturing and modern services.

Among others, trade allows countries to specialize in areas where they have a comparative advantage, leading to an increase in economic activity and employment in the export sector (Heckscher-Ohlin theory). The findings in the study show that trade openness has a negative and significant impact only on the agriculture sector, but with a negative and insignificant impact on the manufacturing sector. This could be attributed to the fact that most of the industries before trade liberalization in Africa were agro-based. After trade liberalization, many firms and industries closed down or reduced their production capacity due to competitive pressures from relatively cheaper imported goods, which has a negative impact on the manufacturing sector in most countries.

Similarly, and contrary to theory, the results show that the effect of natural resources endowment on manufacturing value added is negative. This supports the notion that natural resource dependence without value addition to its products negatively affects employment prospects and revenue. The same trend is observed for aid flow, which has a positive but negligible impact, suggesting that a greater percentage of aid is spent on non-productive activities or sectors that do not have a significant contribution to structural transformation of African economies.

Foreign direct investment (FDI) flows also appear to have a negative effect on manufacturing value added, supporting the narrative that most FDI funds are being channelled into extractive sectors, with minimal attention given to value addition, hindering the diversification and employment generation efforts made in these countries. FDI could be “crowding out” domestic investment and suppressing local entrepreneurship in some of these countries. This negative effect could also be due to the deterioration in balance of payments because of increased imports, profit repatriation and reduced tax revenue caused by transfer-pricing practices, tax allowances and other financial incentives granted to foreign firms.

Policy implication

In contrast to the structural transformation process emphasized in the conventional narrative, by assessing the impact of aggregate demand on Africa’s structural transformation, this study identifies key policies to strengthen demand-side factors, particularly private and public consumption, which play a significant role in stimulating structural transformation in Africa.

Africa needs to take advantage of its growing urban and middle class which would lead to increased demand for goods and services, as compared to what is currently made available to them. Meeting this growing consumer demand will further enhance the continent’s economic growth, create jobs for the rising middle class, leading to a rise in income and further increase consumption.

Policies aimed at increasing the availability of credit facilities, especially to the private sector, by reducing the cost of accessing these services, would play a

greater role in stimulating private consumption and investment. This would lead to a shift in resources towards productive sectors hence enhance structural transformation processes. Maintaining stability, financial inclusion and fighting against money laundering along with illicit financial flows could strengthen the financial sector and increase its ability to give access to the private sector. Measures to encourage private sector investment, such as those aimed at improving the business climate, should be encouraged.

Policies that encourage FDI away from extractives activities and lower regulatory supply-side barriers for investors are required to increase investment spending towards productive sectors of the economy. FDI inflows can contribute to structural change through the modernization of production capacity and by ensuring that funds are channelled to the countries’ productive sectors. Moreover, to achieve structural transformation in Africa, policymakers should not only increase investment in education but also increase the quality of education at all levels. It is necessary to improve the quality of secondary, technical and vocational, as well as higher education. This should be coupled increased investment in teachers’ education and well-being (i.e., trainings, increased salaries, among other considerations).

To achieve structural transformation, specific industrial policies and programmes that target value addition to various raw commodities and products are of special importance. For example, putting emphasis on quality control would help expand both export and local markets. Indeed, as already stated, the African middle class is increasingly willing to pay for quality.

Finally, policies should focus on supporting high-growth sectors that could generate jobs and raise people’s income. Diversification of exports away from natural resource-based products will help avoid dependence on traditional exports, hence take advantage of the effects of trade openness. Industrial strategies based on development of the relative comparative advantages of various countries would also foster structural transformation. Overall, the promotion of coherent and effective macroeconomic policies that boost aggregate demand in Africa would trigger structural transformation that is both sustainable and inclusive.

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