The role of big data in Africa’s regional integration

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July 01, 2015

The ambitions of a young Ugandan entrepreneur to expand his coffee processing business will soon be within reach. East Africa’s accelerated integration process is opening up possibilities that were unthinkable not long ago. In a couple of years he may be able to tap into West Africa’s 350 million people without having to pay the high tariffs and transport costs that currently make it easier to export to Europe than to other parts of the continent.

Initiatives to accelerate the speed of Africa’s regional integration are gaining momentum. They include the establishment of a Continental Free Trade Area by 2017, an action plan to boost intra-African trade and the dismantling of trade barriers through establishment of sub-regional free trade areas and customs unions. Measures to simplify customs procedures, the free movement of people and the development of regional infrastructure are also being put in place. The spirit of the 1991 Abuja Treaty, which has served as the blueprint for such an ambitious goal, is finally being taken seriously.

With trade pegged as a means to implement the post-2015 development agenda, as well as Africa’s own Agenda 2063, the role of trade as a vehicle for development has become more obvious.

Formal and informal trade

On average, formal intra-African trade accounts for about 14% of total African trade. This is low compared to other regions. Intra-regional trade as a share of trade is 17% in South and Central

America, 42 % in North America, 62% in the European Union and 64% in Asia. Key to such a figure is the word 'formal.' A significant portion of economic exchanges taking place along various African borders are informal.

The good news, though, is that manufactured products represent about 46% of intra-African formal trade. This indicates the huge potential for the development of supply chains across the continent. Africa's predominately monocultural economic base can be changed by adding value to goods produced on the continent. Along with productivity gains and a boost in competiveness, enough jobs can be created for the continent's young and rapidly urbanizing population.

In perhaps the boldest attempt to date to collect data on the impact of regional integration, the Economic Commission for Africa (ECA), the African Union and the African Development Bank have jointly developed a Regional Integration Index. The tool will be a barometer for governments and the general public, enabling them to check the performance of countries and their regional economic communities.

Summarizing information from more than 70 indicators, the index tracks progress and identifies bottlenecks to be addressed, informs policy decisions and helps with future trade negotiations. In support of its implementation, the ECA is training countries and sub-regional entities in Africa on data collection and supervision.

From flight data to tariff data

Given the novelty of some of the indicators being used, efforts are also being made to standardize databases. The use of 'big data' techniques has offered opportunities for the index to be a frontrunner of innovative methodologies. For instance, collection of airline data to provide datasets on flight patterns between airports is used to calculate an aggregate of intra-African flights; or trade tariff data is employed to calculate averages of trade-weighted intra-African tariffs.

In light of the advances made in the telecommunications industry, there is potential to leapfrog technology and leverage sources of big data generated from online content, social media or satellites to mobile-phone technology to support refined policy choices. With more than 629 million mobile-phone users, phone data is proving to be a gold mine for decision-makers. This data is already making a difference in numerous areas, from humanitarian assistance to tracking the transmission of diseases and helping compensate farmers in real time for weather -related crop failures. Africa's mobile banking systems have not only changed the way financial transactions are carried out on the continent, but are becoming a reference for the rest of the world.

Notwithstanding these successes, further investments are required to take full advantage of big data's potential. Data-user communities are being designed that will help validate data entries generated by others rather than from official statistical entities. Being able to update the Regional Integration Index with big data will encourage the type of scrutiny and accountability that can catalyse greater government action.

With data enablers in place, entrepreneurs will be able to assess which markets are worth plugging into. This will be as crucial for the young Ugandan waiting to export coffee as it will be for the Malian business thriving on cotton production or the assemblers of BMW automobiles in South Africa. Making the right decisions can only be accomplished through having the right knowledge.