The Africa Information Highway, the role of SDMX in modernizing data reporting in Africa

Rafik Mahjoubi[1] , AfDB, Abidjan, Cote d'Ivoire – R.MAHJOUBI@AFDB.ORG
Koua Louis Kouakou , AfDB, Abidjan, Cote d'Ivoire – K.L.KOUAKOU@AFDB.ORG
Anouar Chaouch , AfDB, Abidjan, Cote d'Ivoire – A.CHAOUCH@AFDB.ORG

Abstract

Data reporting to international agencies and other development partners is an ever-growing burden weighing heavily on the shoulders of most National Statistical Offices in Africa. The Statistical Data and Metadata eXchange (SDMX) standard has been developed to make reporting automated and efficient. However, the lack of leadership and expertise in SDMX along with a poor IT infrastructure are the main obstacles to its proliferation in Africa. The African Development Bank's Africa Information Highway (AIH) addresses this challenge in a very effective way. National statistical offices simply need to upload data onto the cloud based Open Data Platform using common SDMX standards and formats already agreed upon by all stakeholders. The data so reported in the Open Data Platform (ODP) of the AIH is then made available to users in real time. This has the potential to significantly reduce the data-reporting burden for countries. Furthermore, to make greater use of the AIH and ODP, the Bank has been collaborating closely with the International Monetary Fund (IMF) to facilitate reporting of macroeconomic data via the platform to IMF and the public in SDMX format. Building on that momentum the AIH launched the Sustainable Development Goals data hub for all African countries to publish their data in SDMX format.

Keywords: Africa information highway, Data reporting, Sustainable Development Goals, e-GDDS

1. Introduction

Over the years, many African countries have significantly scaled up their data collection efforts. But challenges remain to ensure a timely dissemination of the data to users, such as policy makers, researchers, private sector, civil society and citizens in general. To this end, the African Union Summit of African Heads of State in July 2012 adopted a resolution calling on the African Development Bank (AfDB), the Economic Commission for Africa and the African Union Commission to urgently support countries to improve their data management and dissemination systems. Following this directive, AfDB launched the Africa Information Highway (AIH) initiative, which involved installing Open Data Platforms (ODP) in all 54 African countries and 16 regional and sub-regional organizations to facilitate data collection, management, and dissemination. Live data links were established between the AfDB and the Regional Member Countries' (RMCs) national statistical offices, central banks, and line ministries on the one hand, and development partners, international organizations and other users, including the general public and the private sector, on the other.

The ODP aimed at significantly increasing access to quality data necessary for managing and monitoring development results in African countries. It responds to a number of important global and regional initiatives to scale up the availability of quality data on Africa and so foster evidence-based decision-making, public accountability and good governance. It also responds to the AfDB's own demand for

[1] The views expressed are those of the authors and do not necessarily reflect those of the African Development Bank Group.

timely data to inform its Results Measurement Framework and facilitate the monitoring of the development impact of AfDB's interventions on the continent and to ensure that these are in line with its "High 5s Transformation Agenda for Africa" for the period 2015-2025.

The ODP itself is a user-friendly tool for extracting data, creating and sharing customized reports, and visualizing data across themes, sectors and countries in tables, charts and maps. Through the ODP, users can access a wide range of development data on African countries from multiple national official sources. The platform also facilitates the collection, analysis and sharing of data among countries and with international development partners including in Statistical Data and Metadata eXchange (SDMX) format.

On 19 April 2013, the Presidents of all multilateral development banks, the International Monetary Fund (IMF) and the| United Nations Secretary General signed a Memorandum of Understanding to strengthen cooperation on statistical activities. An action plan was developed and its implementation is monitored through regular meetings by the Directors of Statistics in these various institutions. As part of the action plan, AfDB and the IMF have since then strengthened collaboration for improving data collection and dissemination systems across Africa, capitalizing on the AfDB's open data platform as the core system.

On July 1st, 2015, the IMF Board approved the Enhancement of the General Data Dissemination System (e-GDDS), which replaces the GDDS and which forms a part of its Data Standards Initiative. The e-GDDS aims to significantly improve access to timely and high-quality macroeconomic data in developing countries, including those in Africa. The IMF Board, in its endorsement of the e-GDDS, noted how improved technology was helping to reduce the cost of data management, reporting and dissemination for member countries. Once part of the e-GDDS, countries should strive to improve access to data by incorporating a National Summary Data Page (NSDP) built on global standard open format and giving access to data in SDMX format[2]. The Board furthermore decided that the AfDB's Open Data Platform (ODP) would be used as the core data collection and dissemination platform for African countries. So far, more than 24 African countries benefitted from the technical support of the AfDB and IMF, and 15 of them have already published their NSDP using the ODP.

Building on the success of the NSDPs in Africa, the AfDB has launched a similar page for reporting on the Sustainable Development Goals (SDGs). That page has now been implemented and is fully functional in all the 54 African countries. As soon as the SDGs Data Structure Definition (DSD) has been validated, users can start collecting SDGs data in SDMX format published by African countries directly from ODP.

2. SDMX in Africa: status and way forward

So far very few SDMX initiatives have been implemented in Africa. Most of the existing initiatives are internationally led and attempting to build local SDMX capabilities while collecting data for specific purposes. We can mention as an example the UNSD-lead "CountryData Project" to collect data on the Millennium Development Goals. The countryData project included five African countries. Another example is the ongoing joint AfDB-IMF's "ODP Initiative" which provides technical assistance to more than 25 African countries. The project, which has as an overall goal to cover the 54 countries within the coming few years, is progressing steadily.

[2] For more information about e-GDDS see http://dsbb.imf.org/Pages/GDDS/WhatIsGDDS.aspx

However it is important to keep in mind that the capacity development part of the internationally driven SDMX initiatives follow different approaches and they are disputed. When analysing the way these two projects, the ODP and the countryData, are designed, we can see that the AfDB-IMF initiative, the ODP, deliberately hides the SDMX complexity from countries to help them quickly push data into SDMX format for the public. This approach has the benefits of faster country enrolment and a wider coverage, of making data available in SDMX format very quickly, of reducing the data reporting burden, and of increasing data quality as it follows a rigorous process of compliance with the requirements of the e-GDDS. The countryData approach holds many similarities to the ODP, but offers in addition basic trainings on SDMX while the implementation of data dissemination and exchange system is ongoing. This is beneficial to the country representatives as about it adds a layer of learning on SDMX. The downside of this approach however is that it is lengthy and costlier. The approach is nevertheless limited in scale as only a few country representatives from a selected few countries can participate. In conclusion, the results of these two projects show that in terms of capacity development they generate many of the same outcomes, while the AfDB-IMF approach has the advantage of covering a much higher number of countries.

There are other initiatives however that are motivated by internal needs of the individual countries. It is therefore important to acknowledge the leading work done by certain of the National Statistical Offices (NSO) in Africa, especially those in Morocco and Tunisia. These are the two examples we are aware of in Africa, where the NSOs took an active role in initiating SDMX implementation projects internally to modernize their statistical exchange processes. When it comes to regional and sub-regional organizations, we can see SDMX taking off slowly, but surely and on a solid ground. The collaboration underway between the AfDB, the African Union Commission and the Economic Commission for Africa to build SDMX artefacts for data collection and dissemination of their common publication the African Statistical Yearbook, is one example. At the time of writing this paper these institutions are optimising the DSD matrix. Another example is the Common Market for Southern and Easter Africa (COMESA) which has allocated funds to properly train its staff on SDMX to start implementing it to use for data collection from its member countries. This project is being implemented with technical support from the AfDB.

The AfDB is actively pushing the SDMX agenda in Africa. Few projects are being implemented in Africa with technical support of the statistics department of the Bank. For the first time these projects have been launched and fully implemented by African agencies and countries. This is very significant for the future of SDMX in Africa because it shows that organisations at the regional and sub-regional levels are more and more committed to SDMX and they have the necessary skills to implement SDMX.

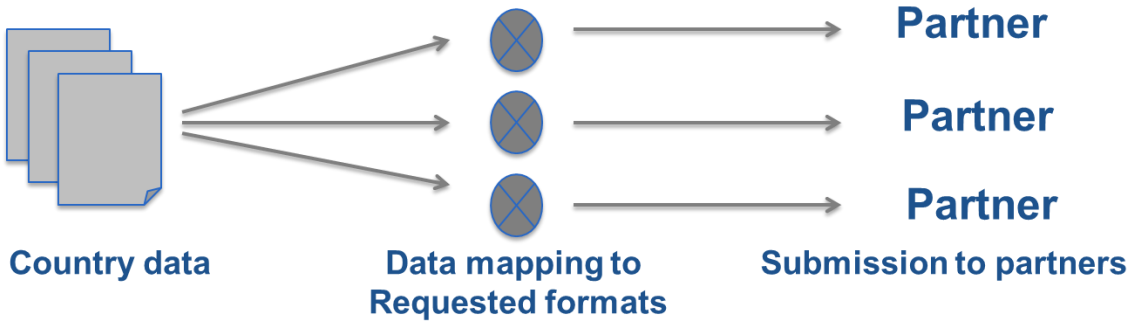
Although we have seen many improvements and good results, there are still many obstacles preventing African countries from embracing fully the power of SDMX. Expertise and leadership from within the region are still limited, especially at the country level where a limited number of countries have gained some SDMX knowledge. And here we can add to that the infrastructure. The results of a survey we have lately conducted show that more than 85% of African NSOs do not have a data repository or management system and more than 50% of our focal points still report internet connection as the main obstacle to regular data uploading and exchange using their ODP, with few countries reporting no internet access at all in the office.

Advocacy at the highest level in African countries must be given maximum priority. This should be done by clearly showing the benefits of SDMX implementation to country chief statisticians. That means African success stories exhibiting cost saving and improved data quality and reliability. Implementing SDMX is a lengthy and costly process that needs medium to long term commitment, rigorous planning and adequate funding. Results, therefore, cannot be seen at the short term. We must clearly show chief statisticians that SDMX will help them achieve the results they want in order to find their commitment

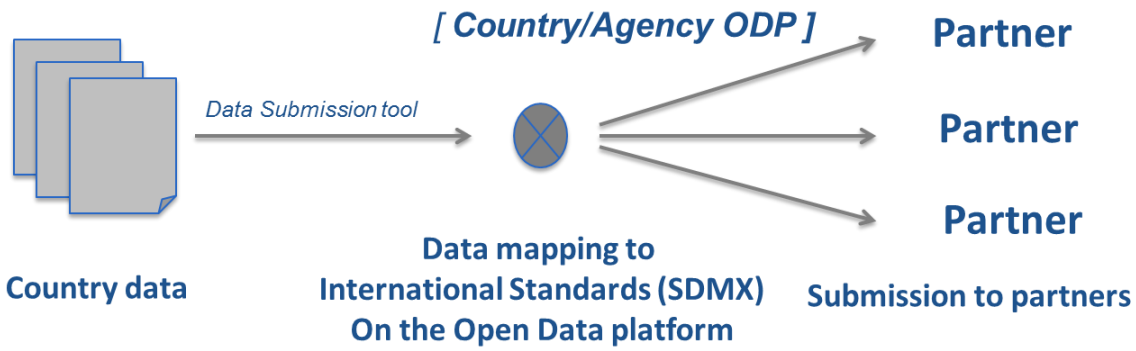
to implement such a demanding project. Meanwhile, every initiative that can make more date available to the public in SDMX format is most welcome.

3. AIH and the joint AfDB-IMF work

Before the introduction of the AIH, African Region Member Countries' (RMCs) national statistical offices received many requests for data from international organizations that all needed information in different formats. At the same time, there was an increased appetite for official statistics from policy makers, private sector, researchers, civil society, non-governmental organizations, the media, and the general public. National statistical offices seeking to meet all these demands in a timely fashion are often engaged in repetitive and time-consuming tasks, which are costly in terms of manpower and finances. An average African country receives around 15 questionnaires a year with frequency going from 1 to 12 and the number of pages per questionnaire varies from four to 150 pages. Each questionnaire will include different classifications and formats. The following schema summarizes the way this process currently works in most African countries.



The AfDB's Open Data Platform addresses this challenge in a very effective way. National statistical offices simply need to upload data once onto the Open Data Platform using common SDMX standards and formats already agreed upon by all stakeholders. Several global DSDs have been developed and could be implemented. The data reported in the Open Data Platform is then made available to users in real time. This has significantly reduced the data-reporting burden for many countries.



To make greater use of the AIH and ODP, the AfDB has been collaborating closely with the IMF to facilitate reporting of macroeconomic data via the platform to the IMF in SDMX format. Data submission has been successfully piloted by the AfDB and IMF during joint technical assistance missions to over 25 African countries in total, 18 of them invited to participate in the e-GDDS and 15 have so far reached the e-GDDS status and successfully published their NSDP. The objective is to help

all African countries participate and comply with the e-GDDS and extend it to other types of data (including SDGs, the Agenda 2063 and the High 5s), in collaboration with other development partners.

One of the main objectives of the AfDB–IMF collaboration on the ODP and the publication of the NSDP is to provide harmonized and reliable key national macroeconomic and financial statistics that is regularly updated. The NSDP page provides access to data and metadata in different formats and allows for download in SDMX format manually or using its web service.

Also, the AIH platform facilitates the collection and sharing of data among countries and with international development partners. This "single source" approach for data dissemination ensures that all data producers progressively adopt the same methodologies and formats for data reporting. This provides an opportunity for countries to adopt international statistical standards for greater comparability and improved data quality at the country, regional, and international levels.

On the 1st of January 2016 the world officially began implementation of the 2030 Agenda for Sustainable Development—the transformative plan of action based on 17 Sustainable Development Goals—to address urgent global challenges over the next 15 years. Motivated by the successful implementation of the NSDP, the Bank launched a regional SDGs data hub in September 2016 which is a gateway to countries SDG pages built for the 54 African countries on top of their ODP making available data and metadata in SDMX format.

4. Conclusion and way forward

The Africa Information Highway has created a "one-stop" common platform for reliable and timely development data on African countries. The ODP is now the premier hub for the collection, management and dissemination of quality data on Africa. The Bank will continue to work closely with the IMF through their joint missions to extend the ODP's data dissemination and exchange process in SDMX format to all the remaining countries of Africa. This collaborative initiative presents a unique example of a successful collaboration between two international agencies to capitalize on a common system, while avoiding duplication of efforts and further burdening the countries with yet another data dissemination platform.

The cooperation with other development partners subscribing to the Bank's AIH as the single data source of choice on African countries, must nevertheless be strengthened and consolidated for the benefit of the African countries and the international community. It is important that SDMX be at the heart of all that. SDMX will allow any agency to collect and ingest the data they need directly from the ODP. This will help countries reduce their reporting burden and the number of dissemination systems they have to manage.

5. References

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