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Political Economy of National Agricultural Statistics

The Case of Niger

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ABSTRACT

This paper conducts a political economy analysis to understand the factors that affect provision of and access to reliable agricultural statistics and data systems in Niger. A conceptual framework that identifies selected political economy aspects including political will, transparency and accountability, state capacity, and international commitments is developed. The predictions of the framework are tested using information collected through informal and formal interviews with professionals and staff of different institutions and organizations that provide or use agricultural statistics to analyze how different components of agricultural statistics and the underlying capacity and systems are differentially influenced by various political-economy factors. Implications for Niger and at the global level for developing an effective strategy to improve agricultural statistics and data (availability, quantity, and quality) that go beyond technological and methodological fixes are drawn.

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ACRONYMS

A&FNS	agriculture and food and nutrition security
AFDB	African Development Bank
ASCI	Agricultural Statistics Capacity Index
CAADP	Comprehensive Africa Agriculture Development Programme
CAPEG	Center for Public Policies Analysis and Government Action Assessment
CNEDD	National Council on Environment for Sustainable Development
CRS	Catholic Relief Services
CSOs	civil society organizations
DHS	demographic and health survey
DNPGCA	Dispositif National de Prévention et Gestion des Crises Alimentaires
ECOWAP	Economic Community of West African States Agricultural Policy
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
FBOs	farmer-based organizations
GDP	gross domestic product
GFDRR	Global Facility for Disaster Reduction and Recovery
GSARS	Global Strategy: Improving Agricultural and Rural Statistics
HC3N	High Commission for the Nigeriens Nourish Nigeriens Initiative
HIES	household income and expenditure survey
i3N	Nigeriens Nourish Nigeriens Initiative
ICP-Africa	International Comparison Program for Africa
ICT	information and communication technology
INS	Institut National de la Statistique
IRD	Institut de Recherche pour le Développement
LSMS	living standards and measurement survey
M&E	monitoring and evaluation
MCC	Millennium Challenge Corporation
MDGs	Millennium Development Goals
MOAL	Ministry of Agriculture and Livestock
NCS	National de la Statistique
NDVI	Normalized difference vegetation index
NEWS	National Early Warning System
NGOs	non-governmental organizations
NSOs	national statistical organizations
NSS	national statistical system
PDES	Economic and Social Development Plan
PIM	Program on Policies, Institutions, and Markets
PNIN	Plateforme Nationale d'Information pour la Nutrition
ReSAKSS	Regional Strategic Analysis and Knowledge Support System
SAKSS	Strategic Analysis and Knowledge Support System
SAP	Systèmes d'Alerte Précoce
SASE-i3N	Système Automatisé de Suivi-évaluation- Nigeriens Nourish Nigeriens Initiative
SDGs	Sustainable Development Goals
SIMA	System d'Information du Marché Agricole
SMS	short message service
UNECA	United Nations Economic Commission for Africa
UNOPS	United Nations Office for Project Services
WDI	World Development Indicators

1. INTRODUCTION

The importance of high-quality statistical data seems unequivocal, as reliable data are central to evidence-based decision making by various stakeholders, including state and non-state actors (Taylor 2016). High-quality agricultural statistical data are essential for public policy formulation and for evaluating policy choices, and contribute to decisions on farm inputs choices, private sector investments, and donor programs among others—which together impact agricultural and broader development outcomes. Yet, agricultural statistics in most African and other developing countries are characterized as being of poor quality, which is commonly attributed to weak capacities of national statistical and data systems (Jerven 2013). Consequently, many projects deriving from various global initiatives have been implemented with the aim to improve the quality of data and statistics and to strengthen the capacities of national statistical agencies. In Africa for example, some of these projects include the International Comparison Program for Africa (ICP-Africa), which is part of the global ICP initiative to produce internationally comparable price levels, expenditure values, purchasing power parity estimates, and gross domestic product (GDP) and its sub-aggregates (ACBF 2019, ICP-Africa 2010). African Development Bank’s 2011–2017 Action Plan for improving statistics for food security, sustainable agriculture, and rural development (AfDB 2011), is another example, which is part of the Global Strategy for Improving Agricultural and Rural Statistics (GSARS) to provide a blueprint for long-term sustainable agricultural statistical systems (GSARS 2019). The Partnership to Strengthen Agricultural and Rural Statistics in Africa under the Paris21 initiative (Paris21 2002) is yet another example of such initiative.

Often, many of these projects are implemented in the same countries. Niger, the case study for this paper, is one such country where several initiatives and efforts are planned or underway to strengthen national statistical capacity and data systems in the agricultural sector. For example, the European Union recently completed assessments of statistical capacity in different ministries and departments to identify strategies for strengthening their capacities and data. To help support the implementation of the Comprehensive Africa Agriculture Development Programme (CAADP) in Niger, a capacity assessment and strategy for setting up a strategic analysis and knowledge support system (SAKSS) was undertaken (ReSAKSS 2014). The Millennium Challenge Corporation (MCC) also commissioned an assessment to design a strategy to bolster the statistical and analytical capacity of relevant government institutions to establish and maintain a sustainable agricultural data system (MCC 2017). Currently underway is a World Bank grant to improve the quality, availability, and use of macroeconomic and sector statistics through strengthened institutional, human, and physical infrastructure of the National Statistical System (World Bank 2018).

The above assessments, strategies, and projects undertaken in Niger, including the 2017–2021 National Strategy for the Development of Statistics (INS 2017), characterize the national statistical system, which is coordinated by the National Institute of Statistics (INS—*Institut National de la Statistique*), as having weak capacities and generating poor quality data and statistics. Thus, their call for modernizing the production of improved quality data and statistics and strengthening the capacities of the relevant institutions in the system is not surprising. However, the assessment recommendations or project activities tend to focus on methodologies of indicators and requirements; technologies for collecting, managing and reporting data; and training in the methodologies and technologies. This also may not be surprising, as the goal of the global initiatives that the assessments and projects derive from is to produce internationally comparable data and statistics. However, because national-level data and statistics tend to be politicized and as this may affect the availability, quantity, and quality of data, the political economy issues raise a red flag on the targeting of government and donor assistance for improving agricultural statistics and data. Krätke and Byiers (2014) for example argue that the call for a “data revolution” deriving from the UN High Level Panel on post-2015 global development agenda seems to have suffered this fate by focusing just on technical aspects (up-to-date technologies and funding arrangements) and giving little attention to the political economy factors.

This paper conducts a political economy analysis to understand the factors affecting provision and access to reliable agricultural statistics and data systems in Niger. Starting with a literature review on the issue globally, we develop a conceptual framework that identifies selected political economy aspects including political will, transparency and accountability, state capacity, and international commitments which can form the basis for conducting the political economy analysis. . Using information collected through informal and formal interviews with professionals and staff of different institutions and organizations that provide or use agricultural statistics, we test how different components of agricultural statistics and the underlying capacity and systems may be differentially influenced by various political-economy factors. The results will be useful for developing an effective strategy to improve agricultural statistics and data (availability, quantity, and quality) that go beyond technological and methodological fixes in Niger, as well as in other countries with similar political-economy determinants of agricultural statistics and data.

Briefly, we find that transparency, state capacity and accountability challenges affect the national statistical system in Niger. Politicization of data system alongside lack of quality data due to capacity constraints contribute to the pervasive data problems. It is strongly recommended that a clear data transparency and dissemination policy is developed to strengthen decision making process at all levels, including sub national governments, civil society organizations, and private sector. Additionally, to improve the data collection process, recent graduates could be incentivized and given adequate training at the university to pursue data collection and analytics jobs in the government. This study has broader implications since data collection, processing, management, dissemination and transparency issues are a major concern across the globe especially in developing nations. Hence, recommendations provided for the case of Niger are also relevant for other nations facing similar challenges as well.

2. CONCEPTUAL FRAMEWORK AND EMPIRICAL APPROACH

In this section, we develop a conceptual framework to analyze the political economy aspects of public provision of agricultural statistics and data. The first thing to acknowledge is that national agricultural statistics and data are public goods, and so it behooves governments to provide them, at least the part of statistics and data whose social benefits outweigh the private or market cost in providing them. As such, issues associated with the provision of public goods (see e.g. Stiglitz 2000) also apply to the provision of national agricultural statistics and data. Similarly, the reasons why governments may invest capacity to provide different types of agricultural statistics and data may follow those given for policy choices or public spending allocation.¹ The overall conceptual framework adopted in this paper is illustrated in Figure 1.

Generation and Use of Agricultural Statistics and Data: Basics

Agricultural statistics and data derive primarily from the national statistical system (NSS) that the government invests in, which is depicted by arrow A in Figure 1. Defining NSS as a combination of the principles, foundations, structures, resources, and organizations responsible for a nation's official statistics, Taylor (2016) lists several reasons why governments may invest in a national statistical system. They include: constraining policies of future governments to be evaluated by the same measures; suspecting that the short-term losses in public oversight may be outweighed by the long-term gains in performance, obtained through better analytical tools; having few options in light of pressures from different data users or actors; informing on performance of agreements between members of the political regime; and thinking that developing statistical capacity may be a useful way of signaling a credible commitment to certain policies. Consequently, the strength of a national statistical system depends on several factors such as the legal framework and statutes that define the rights of citizens to statistics, the actors and their mandates and responsibilities, and the resources, among others. It also depends on the capacities of the actors—human, technical, financial, organizational, institutional, and technological. Thus, poor availability, quantity, or

¹ See for example Mogues (2015) for a review of the political-economy determinants of public spending allocation.

quality of agricultural statistics and data may derive from a weakness in any or a combination of the above factors.

Utilization of agricultural statistics and data (arrow B) depends on how accessible they are to meet the needs of various potential users (politicians, bureaucrats, media, donors, researchers, academia, private sector, farmers, organizations—CSOs, FBOs, NGOs, etc.), which are shaped by users’ incentives such as vote-seeking, accountability, profit-maximizing, lobbying, or knowledge, among others. Specifically, the incentives, in addition to users’ capacities in assimilating data, influence the types of statistics and data that are used (and how they are used) to reach different decisions—policies, programs and projects, investments, technologies and know how, and farm input allocations, among others (arrow C). These together impact the national statistical system in terms of being responsive to the types of agricultural statistics and data that may be useful for monitoring the implementation and outcomes of the users’ decisions (arrow D). Therefore, the loop of arrows A, B, C, and D in Figure 1 form the basic structure of the generation and use of agricultural statistics and data. This means that an effective national statistical system must be adequately staffed and resourced to be able to filter the data needs of the different users and to provide the data and statistics efficiently, timely, and independently of any user’s political affiliation.

Political economy analysis helps in understanding how political structures and stakeholders are affecting Niger’s decision-making process for generation and use of agricultural statistics. The overall country-wide political economy factors contribute to the availability, quantity and quality of agricultural statistics and data. These can be classified into three key factors: (i) transparency; (ii) state capacity and accountability, and (iii) international treaties and commitments. Along with these key set of factors, others such as cultural heritage, and overall political system may also influence the both the national system and the user perspectives in the data collection, management, and use process. This is depicted by the arrows H and I in Figure 1. We further elaborate on the key political economy factors below.

Figure 1: Conceptual framework for political-economy determinants of agricultural statistics

Source: Authors’ illustration.

Notes: CSOs = civil society organizations. NGOs = non-governmental organizations.

Transparency

A major tension to the basic structure discussed above is the complexity of users' incentives and decisions on the one hand (arrow C) and the attribution of outcomes to the decisions on the other hand (arrow G). In general, different incentives exert different pressures on the users to align with specific interest groups, forcing them to make decisions or take actions that may capture the system and appropriate it to provide agricultural statistics and data that meet their own ends. For example, governments and politicians may appreciate the benefits of statistics and data for improving their policy decisions. However, the same statistics and data may be used by others to hold the politicians accountable or critique their decisions, which may lead to demands for change in for example policies, budget allocation, or leadership that are inconsistent with their campaign promises or regime. Fearing attribution of poor outcomes to their decisions, governments and politicians may also be anxious about the public airing of statistics and data and may intervene either directly in the outputs of the national statistical system (arrow E) or indirectly in the data-generating process (arrow F). The examples by Jerven (2013, 2014) on fertilizer subsidy in India and Malawi illustrate this by showing how the governments of these countries went to considerable lengths to prove that fertilizer subsidies were working by generating statistics and data which showed high food production as a result of the subsidies. Because fertilizer subsidies are popular at all levels, Jerven shows that the network of data providers (local authorities, agricultural extension officers, and farmers that received the subsidies) "colluded" to inflate production figures. Jerven further suggests that agricultural statistics and data are themselves a product of agricultural policies, consistent with the principal-agent theory (Gauld, 2016). Other examples of interference by politicians in the data relate to selectivity or timeliness in the release of certain types of data, especially during election periods depending on whether the data may support or undermine the credibility of campaign promises or provide ammunition to the opposition (Taylor 2016). An economy with high rates of corruption, for example, will likely compromise the autonomy and integrity of the statistical agencies and network of data providers and result in statistics and data that mostly cater to the interests or agenda of the data users that the statistical agencies are aligned with.

In the same vein (i.e. regarding arrows E and F), other users for various reasons may also intervene to either directly provide the data through their own surveys for example (arrow E) or indirectly influence the national statistical system to generate the data (arrow F) that meet their specific needs. Whereas these behaviors and outputs may fill some data gaps, they may also generate unreliable or conflicting data. During the structural adjustment period in Nigeria for example, it was reported that there were four sources of data on food crops—Federal Office of Statistics, the United States Department of Agriculture, the FAO, and the Central Bank of Nigeria—which frequently showed enormous discrepancies (Mosley 1992). International development agencies and donors through their programs may also influence the types of statistics and data that are generated (arrow F), in response to obtaining data to monitor and evaluate their programs and their consistency with broader outcomes such as the millennium and sustainable development goals (MDGs and SDGs). To make cross-country comparisons of their programs however, donors prefer statistical information that are collected using internationally standardized questionnaires and formats (e.g., living standards and measurement survey (LSMS), household income and expenditure (HIES), demographic and health survey (DHS), etc.). As these require significant resources to undertake, they may place enormous demands on the statistical system, which may in turn limit provision of other types of statistics and data. Furthermore, the raw data from such surveys may not be available to the public, and the usefulness of such data for undertaking sub-national analysis in each country may be limited (Sandefur and Glassman 2014).

State Capacity and Accountability

A country's statistical capacity and quality of statistics are undoubtedly closely related to its level of general state capacity and bureaucracy as well as to the interest in evidence-based policy decision making and results-based public management. Thus, it would not be surprising to find weak statistics and data in countries that have weak overall state capacity or lack of interest in evidence for public administration. For example, having a high-capacity bureaucracy that demands high-quality statistics and data for its own operations and public management, independent of political affiliations, is more likely to result in a

statistical system with desired attributes, including producing and sharing information publicly and effectively without interference from politicians or other data users.

It is possible for a country that has several state institutions with high technical capacity to also have a relatively weak national statistical system, as Dargent et al. (2018) show in their case studies on Latin America. Here, high-capacity public institutions like the ministry of finance and the central bank that also generate macro-economic and sector-wide statistics for example may hinder or limit capacity building in the national statistical system, especially the institute that coordinates the system, to avoid a reduction in their statistical functions, which may happen by transferring those functions and staff to low-capacity institutions that may be deemed less professional or pay lower salaries and benefits. This may lead to having good macro-economic and sector-wide statistics and data (e.g., total GDP, total government revenue and expenditure, etc.), but poor statistics and data at the subsector level such as government agriculture expenditure disaggregated by function (general administration, research, extension, irrigation, health including pest control and vaccination, markets and marketing, etc.), commodity groups (crops, livestock, forestry, and fishing), or economic use (salaries, use of goods and services, subsidies, interest, etc.). The same dynamics within decentralized state institutions may pertain, resulting in the coexistence of good national and poor subnational levels of statistics and data on agriculture production and prices for example, which raises issues of how national-level data are obtained with poor subnational-level data.

The political system (including the political regime, system of government, electoral system, executive and legislative branches, relationship between central and subnational governments, etc.) is a critical factor, as it creates incentives or sanctions for certain behaviors. For example, an increase in democracy and voice and accountability may increase data users' demand for high-quality statistics, which in turn may put pressure on the government to increase public investment in the statistical system. The Latin America case studies by Dargent et al. (2018) show that the executive branch is the most significant political power with respect to building national statistical capacity, whether through the action of technical bodies that are part of the executive branch or because of the political preferences of the presidents themselves. As such, we can expect the types and quality of statistics and data that are generated and publicly shared will depend on the political preferences of the country's president and how he or she promotes institutionalization of the statistical system and enhances their capacity and autonomy to meet the statistical demands of the various data users. Therefore, it seems that presidential initiatives that concentrate statistical or monitoring and evaluation capacity in the executive branch will tend to increase the politicization of statistics and data, whereas those that promote professionalism and autonomy of the existing statistical system will tend to reduce the politicization.

Accountability in the national statistical system is highly connected to institutional and state capacity and hence related to the governance of the statistical institutions. Without adequate capacity for both generating data and maintaining its quality, it is difficult to hold the leaders of the statistical institutions accountable for delivery of the high-quality data. Even with adequate capacity for producing and sharing quality data for decision making purposes, political interference in releasing the data, particularly when the data point to poor performance of the state institutions and the policies of the present government, there is a danger that the accountability of the system may be low and overtime making the entire statistical system unaccountable. On the other hand, if there is adequate capacity to generate and disseminate data on a set of indicators that have little or no political implications, such data sets are made available on a routine basis and the accountability could be fairly high for generating and releasing such data. In addition, in such cases, even when there is limited capacity, the system tries to meet the demand for data when the data is directly used by the producers and consumers without much analysis. Market prices data and the price monitoring system are good examples. Identifying the sources of low accountability and delineating the causes for such deterioration of accountability can help in investing in right solutions to make the national statistical system demand driven, institutionally strong, and independent supplier of high-quality data for decision making.

International treaties and commitments

Signing unto international treaties and commitments (e.g., CAADP, Agenda 2063, SDG) have raised the demand for different types of high-quality statistics and data to monitor progress in implementing the commitments and their outcomes. Take CAADP for example. By promoting more inclusive participation in planning, better evidence-based policies and investments, and greater accountability and mutual learning, it is changing the demand for and use of agricultural statistics and data. This is reflected in the sophisticated analysis of growth options and required investments in the national agricultural investment plans (Diao et al. 2012) as well as in the diversity and depth of indicators in the CAADP results framework (AU-NEPAD 2015) and the CAADP biennial review process for reporting on the Malabo declaration (AUC 2018). To make reliable cross-country comparisons of progress in these commitments, internationally standardized data are needed. Thus, countries must invest in regular data collection activities, e.g., censuses every ten years and national household surveys (e.g., living standards and measurement survey (LSMS), household income and expenditure (HIES), demographic and health survey (DHS), etc.) every three to five years. Such international pressures could also lead to some negative data behaviors. For example, since the Maputo Declaration by African leaders in 2003 to spend 10 percent of their national budgets on agriculture (AU 2003), the incentive to show commitment to the Declaration and CAADP may have led some governments to inflate their performance in the indicator for tracking progress (Benin and Tiburcio 2019). Also, some new data initiatives may pop up, depending on the capacity of the national system to respond to the international data requirements. Related to the Maputo Declaration for example, there have been several initiatives to fill the data gap on government spending on agriculture that is needed for reporting on progress.² Similarly, lack of publicly-available agricultural production data such as inputs, outputs, and prices may lead many data users to rely on international databases such as FAO Stat and the World Development Indicators (WDI), although these databases have been criticized for their poor data-filling procedures (Jerven 2013).

Other Factors

It also possible that rather than an active interest by some state institutions in keeping statistical capacity low or the status quo in the types and quality of statistics and data, there is simply a general lack of interest in building statistical capacity or improving statistics and data, as other priorities may be deemed more important. Then, neither the data users nor the statistical agencies push reform of the system onto the national agenda. Thus, in such path dependent cases, low-quality statistics and data may be maintained overtime even in countries with high statistical capacity, which may be attributed to the heritage of the data-generating process from the colonial days. For example, although agricultural statistics and data have been important since the colonial days, the types of statistics and data generated then were limited to information on export crops that provided raw materials for industrial production in the metropolitan countries, with very little information on foods crops which were deemed to be of less value to the colonial administrators.³ This narrow coverage of agricultural statistics and data seems to have persisted after independence and when the role or policy-focus of agriculture has evolved from the promotion of food crops to import substitution, poverty reduction, food and nutrition security, climate-smart agriculture, etc., requiring the scope of agricultural data and statistics to evolve accordingly. Kenya provides a good example on this by looking at country's statistical abstracts dating back to 1955.⁴ From these statistical abstracts, the bulk of the agricultural statistics and data have remained on export and industrial commodities (e.g., coffee, sisal, tea, pyrethrum, sugar-cane, cotton, tobacco, cut flowers, and livestock products). Although food crops (maize, rice, wheat, sorghum, potato, cassava, vegetables and beans being the main ones), which contribute a third of total agricultural output and have been stated as a policy focus in several agricultural development strategies of the country (e.g., GOK 2010), there is no information in the statistical abstracts on them with respect to input use, subsidies, cooperatives and societies, capital, etc., as there are for the export and industrial commodities.

² See Mogues and Anson (2018) for a review of the different initiatives and their results.

³ See Benin et al. (2016) for a narrative of the history of African agriculture and hypothesis.

⁴ See <https://www.knbs.or.ke/publications/>.

Another factor, which perhaps is a combination of some the previously discussed elements, that has significant impact on the intertemporal and cross-country comparisons of statistics and data is the rebasing of GDP. Whereas this exercise is intended to more accurately reflect previously neglected, unaccounted, or nonexistent activities in various sectors and thus generate more accurate national accounts data, it has helped countries to achieve their national objective of reaching middle-income status and expanded their capacity to borrow more money from the international development community. African countries that have recently rebased their GDPs include Ghana, Kenya, Nigeria, Tanzania, Uganda, and Zambia. While the rebasing resulted in substantial increases in their GDPs, it had mixed impacts on the share of agriculture in the economies as well as the available data series compared to when the rebase was done (see Table 1 for details). For example, Ghana has rebased its GDP twice in less than ten years: first in 2010 by changing the base year from 1993 to 2006, and again in 2018 by changing the base year from 2006 to 2013. Whereas, these resulted in the expansion of GDP by 60% and 25%, respectively, the share of agriculture dropped in the first rebasing exercise from 38.8% to 30.4% and then it increased in the second rebasing exercise from 17.0% to 19.7%. But the available trend data now only starts from 2006, as the conversion prior to 2006 is yet to be completed or made public (GSS 2018, World Bank 2019). As Table 1 shows, the rebasing exercises in the other countries caused the share of agriculture in GDP to increase in Kenya and Uganda, and to decrease in Nigeria, Tanzania, and Zambia. Except for Kenya and Zambia, the start year of the available data series for agriculture value added growth rate have been significantly curtailed compared to the previously starting year of 1962 (Table 1). The rebasing exercise in Nigeria, which nearly doubled the country's GDP, caused a major shift in global power: it pushed Nigeria well ahead of South Africa to become the largest economy in Africa, and moved Nigeria 12 places up in the world rankings to become the 24th largest economy in the world (The Guardian 2018, Oyedele 2018).

Table 1. Effect of GDP rebasing on the economy and available data series in selected countries

Country	Rebase	Change in GDP (%)	Share of agriculture (% of GDP)		Start year of data series ¹
			Old base year	New base year	
Ghana	1993 to 2006	60.3	38.8	30.4	2006
Ghana	2006 to 2013	24.6	17.0	19.7	2006
Kenya	2001 to 2009	25.3	29.0	29.5	1965
Nigeria	1990 to 2010	89.2	35.0	22.0	1988
Tanzania	2001 to 2007	27.8	27.1	26.8	1991
Uganda	2002 to 2010	13.1	22.2	26.8	1983
Zambia	1994 to 2010	25.2	20.0	9.9	1966

Sources: GSS (2010, 2018), Sy (2015), World Bank (2019).

Notes: ¹ based on data for agriculture value added growth rate.

Although it is standard practice to rebase an economy on regular basis to reflect actual changes in economic activities, politicization of the rebasing exercise seems to derive from the timing of the exercise relative to the electoral cycles (see e.g. Chaudhary and Beniwal (2018) for the case of India) or how the results are communicated or compared to GDP performance associated with the periods of preceding governments.

Agricultural and broader development outcomes may also indirectly influence the availability, quantity and quality of agricultural statistics and data, through feedback effects by influencing data users' demands, provision, or use of data (dashed-arrow J) or by influencing the data-generation process of the national statistical system (dashed-arrow K). With increased call for greater inclusive participation in policy planning and implementation as well as for more equitable distribution of outcomes, which are reflected the CAADP principles and the SDGs for example, these pathways are more likely to broaden the scope the agricultural data and statistics via disaggregation of the data by gender, age, subnational levels, etc. Also, more data on policies and participation or membership in decision making bodies. However, because the contribution of agriculture to some broader development outcomes (in addition to its measurement) may be tenuous, some of the demands may be beyond the capacity of the system to meet them, and may crowd out

some of the traditional agricultural statistics and data to the extent that resources are reallocated to meet the new demands. For example, outcomes such as food shortages or high food prices, as seen with the 2008-2009 high food prices and financial crisis, may prompt demand for greater accountability of policymakers and for the monitoring of more early-warning indicators and resilience of vulnerable households.

Like the political-economy environment, other national-level and external factors such as availability of information and communication technology (ICT), satellite imagery, larger processing capacity of computers, and open-access data policies of donors, among others, may also influence the generation and use of agricultural statistics and data. For example, ICT may help increase timely access to data in multiple formats that meet the different needs of users that are in different places. Also, data generated from satellite or drone imagery (e.g., normalized difference vegetation index (NDVI)) may be used to corroborate agricultural land use data from household-farm surveys and help improve the accuracy and reliability of the later. Furthermore, these other factors increase the ability to recycle or combine different data to produce new statistics and data beyond what the initial data were collected for.

Testing the Model in Niger and Main Research Questions

The model presented above is tested in Niger, with the objective of answering the following two main questions:

1. What are the major political-economy factors that affect the generation and use of agricultural statistics and data in Niger, and how have their influence changed over time?
2. Based on the political economy analysis, what are the lessons learnt and implications for Niger?

In evaluating the predictions of the conceptual framework, the notion that agricultural statistics and data are themselves a product of agricultural policies (Jerven 2013) does not imply that politicization of agricultural statistics and data will always lead to overestimation of the effect of government policies. Some of the evidence reviewed in Jerven (2013) show that underestimation of the effect of government policies is also consistent with the principal-agent relationship. For example, given the generally uneven distribution of public goods and services, whether due to the difficulty or cost of providing the public goods and services to remote populations (Robinson 2007) or partisan favoritism (Kramon and Posner 2013), the affected local governments or populations may also “collude” to underreport performance as a backlash toward policymakers.⁵ Therefore, further complexity in determining politicization of national statistics and data is introduced by the unevenness in either the reach or perceived manifestation of policies across different citizens, populations, or demographic groups.

Empirical Approach

The empirical approach used to evaluate the predictions of the conceptual framework in Niger is based on two main sources of information, focusing on the power structures among the institutions that constitute the statistical system and the influence of various actors in the data-generating process (especially the executive branch of the government, which has been identified as the single most important factor in other countries). First is a desk review to map the structure of the national agricultural statistical system, by examining the organizations and institutions involved and their linkages in terms of mandates, responsibilities, and authorities, as well as the statistical information generated. Second is information from surveys with key informants, policymakers, and other actors identified in the mapping exercise to determine the power structures and influence of various actors in the data-generating process. The surveys are from a broader statistical capacity needs assessment study involving two informal interviews conducted in December 2017 and February 2018, followed by a formal questionnaire in June 2018. See Babu et al. (2019) for details.

⁵ This mirrors the fertilizer subsidies case where local authorities and agricultural extension officers, and farmers in favor of the subsidies “collude” to inflate production figures to show that the subsidies are working.

3. NIGER'S NATIONAL AGRICULTURAL STATISTICAL SYSTEM

Overall National Statistical System (NSS)

Niger's national agricultural statistical system is organized under the broader national statistical system (NSS), which is regulated by the Statistics Law No. 2004-011 (RDN 2004). The mandate of the system is to provide up-to-date statistical information relating to all aspects of the economy (including economic, social, demographic, cultural and environment) to the public administrations, regional and international institutions, enterprises and nongovernmental organizations, media, researchers and the public. The NSS, which is managed by the Council of Ministers, is composed of the National Council of Statistics (*Conseil National de la Statistique*—NCS), the National Institute of Statistics (*Institut National de la Statistique*—INS), and the directorates of statistics in the line ministries and the national schools of statistics and demography (see Figure 2 for details).

The NCS is chaired by the minister in charge of the finance ministry, with INS as the secretariat and membership drawn from various public administrations and some representatives for civil society organizations.⁶ The chair is responsible for drawing up and regularly updating the list of statistical services to be provided by the system, whereas the NCS in general is responsible for defining the policies on statistics for approval by the Council of Ministers, which ensures that the system has adequate human, material, and financial resources to implement the policies and deliver the services. The law makes provision for several other things, including: "public statistics" (or "official statistics") that are statistical data produced by the NSS; scientific independence of the NSS to collect, process, and disseminate statistics transparently, impartially, and objectively according to international standards; and confidentiality and protection of personally identifiable information. As the number and organization of the ministries and their departments and agencies may change over time, the composition of the NSS changes accordingly. Currently (in 2019) within the NSS, the primary data-generating institutions at the highest level are: the Directorate of National Accounts, Economic Affairs and Economic Studies of the INS, the Directorate of Coordination and Management of Statistical Information of the INS, and the directorates of statistics of all line ministries. The role of the universities is to analyze data collected by the government, while they also undertake consultancies for different donor agencies.

⁶ The membership is made up of representatives from or of: the National Assembly; the General Inspectorate of Finance; the structure responsible for monitoring the implementation of the National Poverty Reduction Strategy; each department, agency or institution with a service that consists of the national statistical system; the commissioner for the economy at the ministry in charge of finance; the commissioner for development at the ministry in charge of finance; the national director of the Central Bank of West African States; the director general of budget; the director general of the National Geographic Institute of Niger; the university; local elected officials; the Chamber of Commerce, Agriculture, Industry and Crafts; approved trade union organizations; approved employers' organizations; the College of Physicians; the College of Chartered Accountants; national NGOs; and three civil society organizations appointed by the minister in charge of finance (INS 2019).

Figure 2. Agriculture and food and nutrition security (A&FNS) statistical system within the broader national statistical system in Niger

Source: Authors' illustration based on based on RDN (2004), INS (2019), and the study interviews.

Notes: DNP-GCA = *Dispositif National de Prévention et Gestion des Crises Alimentaires* (National Food Crisis Prevention and Mitigation Mechanism). CAPEG = Center for Public Policies Analysis and Government Action Assessment. HC3N = high commission for the Nigeriens Nourish Nigeriens Initiative. PDES = Economic and Social Development Plan. ECOWAP = Economic Community of West African States Agricultural Policy. CAADP = comprehensive Africa Agriculture Development Programme. SDGs = sustainable development goals. NGOs = nongovernmental organizations, both national and international.

Agriculture and Food and Nutrition Security (A&FNS) Statistics

Regarding national agricultural statistics and data, the main responsible institution within the NSS is the Directorate of Statistics of the Ministry of Agriculture and Livestock (MOAL) for information on policies and programs and agriculture and food production.⁷ With the broadening scope of agriculture to including food and nutrition security, directorates of statistics within other ministries become relevant, which may be categorized into those within ministries that more directly involved with agriculture and food and nutrition security (A&FNS) as opposed to those that are less involved. The former includes for example ministries for trade and commerce (for information on prices, imports, exports), public health (nutrition), environment, sanitation and sustainable development (climate and weather); and population, community development and spatial planning, and water resources (labor, land use, natural resource management)—see Figure 2 for details.

Together with the institutions that are less involved with A&FNS, Figure 2 also shows the different types of A&FNS statistics data that are generated, along with their uses. The A&FNS statistics and data may be categorized into eight types: (1) policies and programs that are implemented and government expenditures; (2) agriculture and food production; (3) market prices and trade; (4) food balance sheets; (5) food and nutrition security; (6) climate change; (7) natural resource management; and (8) disaster and vulnerability assessment. The statistics and data are reported and disseminated in various forms such as weekly, monthly or quarterly bulletins, annual reports, and yearbooks, which are available in both print and electronic versions.⁸ Typically, A&FNS statistics and data are used for national policy reforms and program assessment (e.g., i3N and PDES); decisions about disaster prevention and preparedness, emergency response and subnational resource allocation; tracking regional, continental, and global commitments (e.g., ECOWAP, CAADP, and SDGs); and for evaluating programs and projects of donors and national and international NGOs.

As several of the programs and projects that are being assessed are in the custody of or being coordinated by agencies or institutions that are outside of the INS or the line ministries responsible for official statistics, the custodians or coordinators of those programs and projects also tend to be actively involved in the generation of A&FNS statistics and data; either indirectly by influencing or collaborating with INS or the line ministries to generate the data of interest, or directly by generating their own data (see Figure 2). Within the executive branch of the government of Niger for example, one such custodian is the High Commission for the i3N (HC3N), established by a presidential decree and based in the president's office. The i3N, which is being implemented within the framework of the country's Food and Nutrition Security and Sustainable Agricultural Development Strategy as well as of the broader Economic and Social Development Plan (PDES), is part of implementing CAADP, the Economic Community of West African States Agricultural Policy (ECOWAP), the West African Economic and Monetary Union Agricultural Policy, and the SDGs. The i3N is implemented across several line ministries and agencies (including Agriculture and Livestock, Environment, Trade, Rural Roads, Public Health and Nutrition, Planning, and the National Disasters and Food Crises Units), and is coordinated by a ministerial level position (the Commissioner), indicating the importance of the program and the political commitment to the program. The main responsibilities of the Commission are to: coordinate the development and implementation of the programs and projects of the initiative based on the state of food and nutrition insecurity; mobilize resources and monitor implementation; and evaluate its impact. Consequently, a monitoring and evaluation (M&E) unit was established and it has set up an ambitious system (*système Automatisé de suivi-évaluation* (SASE-i3N) with more than 200 indicators that is expected to rely on the national statistical system to feed it. The system has recently been put on a website to allow officials at all levels (local, district, provincial, and central) from the implementing ministries to fill indicators with updated information.

⁷ Unless otherwise stated, agriculture includes crops, livestock, forestry, and fishery.

⁸ See INS (2019) for a list of publications and schedules of the national statistical system for 2019.

Another program within the executive branch of the government of Niger is the National Mechanism for the Prevention and Management of Disasters and Food Crisis (*Dispositif National de Prévention et Gestion des Crises Alimentaires*—DNP-GCA), which is in the prime minister’s office and is responsible for evaluating government and donor assistance needed in different districts in the country based on the status of food insecurity and vulnerability across different districts. The mechanism, which is co-managed with a cross-cutting coordinating body (the National Council on Environment for Sustainable Development—CNEDD)⁹, integrates the National Early Warning System (NEWS, which used to do the vulnerability assessments), the Food Crisis Unit (which oversees emergency humanitarian aid), the Safety Nets Unit (which manages the government’s support to the most vulnerable people through cash transfers and work-for-food operations), and a Secretariat (which coordinates the mechanism) (GFDRR 2018). Unlike the i3N in the president’s office, the DNP-GCA collects its own data on food insecurity using staff of MOAL in the districts to implement its surveys. In addition, it uses data provided by different ministries and agencies in various sectors (e.g., agriculture, health, education, demography) to do the evaluation, based on food production, incidence of natural disasters (mostly drought), and the population that is vulnerable or affected. Another unit within the prime minister’s office is the Center for Public Policies Analysis and Government Action Assessment (CAPEG), which is responsible for analyzing public policies and assessing the overall effort of government. CAPEG however does not collect any raw data, but it works directly with the prime minister, the council of ministers, and the president, using the data generated by the system to produce quarterly reports that document performance of different policies and programs implemented by the government.

There are several players at the international level that influence A&FNS data and statistics in Niger. For example, the World Bank is planning to invest in strengthening overall agriculture data collection systems in its next round of lending. The United Nations Food and Agriculture Organization (FAO) has been providing methodological support to MOAL to organize its data collection initiatives. FAO also contributes to agricultural census, which has been expanded to include fisheries. With the last census being conducted in 2004, this is a critical activity. Same with the African Development Bank (AFDB), which helped to develop a Strategic Plan for Agricultural and Rural Statistics for Niger and is now beginning to work in an economy-wide data collection system that go beyond the agriculture sector. The United Nations Office for Project Services (UNOPS) has been studying market information systems to inform its strategic investments on the issues in the country. The European Union (EU) has focused on data collection systems in the health, nutrition, and education sectors, and they have an assessment report that is being finalized. The Catholic Relief Services (CRS) is using cell phones (via SMS) to collect and report data on health, agriculture, and nutrition, which are its main areas of focus. The United Nations Economic Commission for Africa (UNECA), which is also present in Niger, has a responsibility for tracking the SDGs for the West Africa region and been working with the NSS to improve their capacity and the quality of data collected. UNECA also plays an important role of bringing various actors and players (especially donors) together to harmonize the data collection activities in the country.

Several of these interventions have put in place various information systems. To mention three main ones, there is the Livestock Market Information System (SIM-Bétail), dating back to the early 1900s, that is responsible for monitoring livestock prices, detecting crisis alert, and informing policy makers and government officials about livestock based on data collected from 85 markets (including 7 that are cross-border).¹⁰ The Agricultural Market Information System (*System d’Information du Marché Agricole*—SIMA), which started in 1989 with support from the EU in collaboration with the ministry of commerce and the private sector, monitors weekly a set of 44 agricultural products divided into 6 main categories—

⁹ Like the NCS, the CNEDD is composed of government representatives from various ministries, academic and research institutions and civil society, including the private sector.

¹⁰ See <http://simbniger.cilss.int/>. Support has varied over time with USAID, CILSS, and EU.

cereals, cash crops, roots and tubers, vegetables, fruits, and fertilizer.¹¹ These two contribute to the Early Warning System (*Systèmes d'Alerte Précoce*—SAP), which was created in 1989 and is now under DNP-GCA in the prime minister's office. The National Platform for Information on Nutrition (*Plateforme Nationale d'Information pour la Nutrition*—PNIN), which is hosted by the i3N, is a recent initiative aimed at building capacity to collect and analyze data nutrition.

State Capacity and Accountability

Based on the information obtained from the interviews, Table 2 summarizes the mandates and capacities of the various institutions, initiatives, networks, and information systems at different levels that are involved with A&FNS in Niger for the those interviewed. Table 2 also presents the main challenges facing the institutions in their effectiveness to generate, share, and use the data and statistics. Together as a system, one of the main challenges is data availability in all the different categories of A&FNS identified in Figure 1 (policies and programs, production, market prices and trade, food balance sheets, food and nutrition security, climate change; natural resource management, disaster and vulnerability assessment). Also, the data from the various directorates of statistics in the line ministries does not seem to be coordinated, leading to inconsistent information for several indicators that are used by different actors and players in the system. The universities, for example, have a huge role play in this, but it needs help to build capacity of recently graduated students who can potentially work for the government to collect and evaluate data. Also challenging for the university is connecting research to policymaking decisions. The UNECA's work on coordination can also help map donors in the system to understand their roles and to coordinate and harmonize their activities. A common sentiment among several government officials is that there are many projects and consultants that have come to Niger to assess the state of the national statistical system, but either no further steps have been taken to address the low or deteriorating state of the statistical system or little and short-term efforts are made by donors and the interventions collapse once the donor funds are exhausted.

Despite the challenges, Niger, compared to other African countries, is ranked with 16 other African countries as having a relatively well-developed agricultural statistics system, a measure that is based on several input and output perspectives of statistical capacity (Table 3). As Niger is part of several regional and global initiatives, networks, and organizations (e.g., AFRISTAT data portal and CountrySTAT of the food and agriculture data network),¹² it benefits from regular capacity-strengthening activities implemented by those networks and organizations.

¹¹ See <http://simaniger.cilss.int/>.

¹² See <http://afristat.opendataforafrica.org/> and <http://countrystat.org/home.aspx?c=NER&p=ab> for these two examples.

Table 2. Mandate and effectiveness of selected institutions, networks, and information systems involved with agriculture and food and nutrition security data and statistics in Niger

Institution/Network/ Information system	Mandate for data collection and key responsibilities	Challenges and effectiveness in data generation, sharing, and use
National Institute of Statistics (INS)	<ul style="list-style-type: none"> • National census on agriculture • Household surveys (integrated production and consumption such as LSMS and HIES; demographic, nutrition and health) 	<ul style="list-style-type: none"> • Effective in managing external demands with limited capacity • Improved capacity for managing censuses and large household surveys and the data for policymaking • Need to develop open data platforms to share the data collected
Agriculture Statistics Directorate, MOAL	<ul style="list-style-type: none"> • Agricultural production • Crop estimates • Extent of irrigation • Land use patterns • Input supply and use 	<ul style="list-style-type: none"> • Has staff who are committed to data collection and analysis but have weak capacity (both in quality and quantity) • Limited connection to policymaking process
Livestock Statistics Directorate, MOAL	<ul style="list-style-type: none"> • Livestock statistics • Vaccination and animal health • Data on pastoral systems 	<ul style="list-style-type: none"> • Improved management of the livestock statistics • Attempts to meet the increasing demand for data-based policymaking • Manages its functions with limited staff
High Commission for the Nigeriens Nourish Nigeriens Initiative (HCi3N)	<ul style="list-style-type: none"> • Food security and nutrition • Monitoring key Sustainable Development Goals targets • Poverty and hunger 	<ul style="list-style-type: none"> • Effective in establishing the M&E sections • Policy research and analysis capacity yet to be developed
National Food Crisis Prevention and Mitigation Mechanism (DNPGCA)	<ul style="list-style-type: none"> • Household vulnerability and food insecurity • Regional vulnerability mapping • Programs implementation and impact 	<ul style="list-style-type: none"> • Effective in collecting and dissemination of data related to food crisis management • Focused data on impact of the interventions need to be collected
Coordination cell of the Early Warning System	<ul style="list-style-type: none"> • Food balance sheets • Crop estimates • Livestock production estimates • Food availability gap analysis • Food aid requirements and commercial import needs • Regional food distribution 	<ul style="list-style-type: none"> • Facing challenges in improving data quality • Connecting data to policymaking in the emergency context is still a challenge • Methods of vulnerability need revision • Limited capacity for data analysis and integration with other sources of data
Famine Early Warning Systems Network (FEWSNET-Niger)	<ul style="list-style-type: none"> • Data collected on food and agriculture issues 	<ul style="list-style-type: none"> • Limited capacity in terms of number of individuals working. • Unable to communicate research findings for policy and decision making.
Center for Public Policies Analysis and Government Action Assessment (CAPEG)	<ul style="list-style-type: none"> • Uses secondary data to produce policy advice • Relies on data collected by others 	<ul style="list-style-type: none"> • Effective in connecting with policymakers • Poor-quality data from national systems remains an issue
Agricultural Market Information System (<i>System d'Information du Marché Agricole</i> —SIMA)	<ul style="list-style-type: none"> • Crop and livestock markets and prices 	<ul style="list-style-type: none"> • Generation and sharing have been effective to create new demands • Well supported by the government funds • Good example of high return on investment
Ministry of Planning	<ul style="list-style-type: none"> • Depends on the secondary data collected by sectoral ministries • Data used in the national planning and resource allocation process 	<ul style="list-style-type: none"> • Data source used by planning needs to be more reliable and timelier

Institution/Network/ Information system	Mandate for data collection and key responsibilities	Challenges and effectiveness in data generation, sharing, and use
		<ul style="list-style-type: none"> Reaching out to sectoral ministries on a regular basis, as the government needs the synthesized data for planning
Ministry of Trade	<ul style="list-style-type: none"> Uses trade-related data from various sources Depends on the sectoral ministries, MOAL, Ministry of Commerce, and INS 	<ul style="list-style-type: none"> Demand for trade- and market-related data in the input and output markets is key for policymaking in the agriculture and livestock sector Reliability of data for trade-related policymaking and programming is a challenge
Directorate of Statistics, Ministry of Health	<ul style="list-style-type: none"> Depends on the secondary data collected by the sectoral ministries 	<ul style="list-style-type: none"> Produces several critical indicators related to food and nutrition security, which can be freely accessed in the Division's annual publication entitled Yearbook of Health Statistics in Niger
Department of Rural Sociology and Rural Economics, Faculty of Agronomy, University of Niamey	<ul style="list-style-type: none"> Uses secondary data collected by Ministry of Agriculture. 	<ul style="list-style-type: none"> Limited capacity in terms of number of individuals working Poor-quality data from national systems remains an issue
Institute for Sustainable Development (<i>Institut de Recherche pour le Développement—IRD</i>)	<ul style="list-style-type: none"> Household vulnerability and food insecurity 	<ul style="list-style-type: none"> Effective data management (data collection, management, or distribution).
National Institute of Agronomic Research (INRAN)	<ul style="list-style-type: none"> Source of information and analytical capacities that may be solicited by government officials for agricultural policy making 	<ul style="list-style-type: none"> Effective monitoring and evaluation tool exist The organization regularly produces monitoring and evaluation reports for learning and redefining programs

Source: Authors' based on information from interviews with representatives of the institutions.

Table 3. Classification of African countries by level of development of agricultural statistics system

Group A: fragile countries with a weak statistical system	Group B: fragile and non-fragile countries at the low end of development	Group C: non-fragile countries with a moderately-developed system	Group D: countries with a relatively well-developed system
Liberia, Congo Rep., Comoros, Sao Tome and Principe, Central African Republic, Sierra Leone, Zimbabwe, Guinea Bissau, Somalia, Djibouti, Equatorial Guinea and Libya	Angola, Guinea, Burundi, Togo, Gambia, Congo Dem. Rep., Eritrea, Chad, Sudan, Cote d'Ivoire, Cameroon and Seychelles	Swaziland, Gabon, Madagascar, Namibia, Zambia, Ghana, Botswana, Mauritania, Cabo Verde, Tanzania, Rwanda and Kenya	Nigeria, Malawi, Niger , Morocco, Mozambique, Burkina Faso, Mauritius, South Africa, Senegal, Benin, Uganda, Ethiopia, Mali, Algeria, Egypt, Lesotho and Tunisia
ASCI <40%	ASCI >40% for fragile and <30% for non-fragile	ASCI = 31–54%	ASCI >55%

Source: AfDB (2011, 2014).

Note: ASCI = agricultural statistics capacity index, within a of range 0-100% is based on different input and output perspectives of statistical capacity.

From the accountability perspective, the study reveals the following. The key question in the accountability sphere is who is responsible for generating, managing, and coordinating data collection systems in Niger and how such data is compiled at various levels for the use at the national and decentralized levels. Further how international agreements and global forums help to ensure some element of accountability for the data collection and use in an open platform. Several donor-funded data collection activities are underway in Niger. They are often project-based and these data sets remain in the project level. There is a consensus that these data sets are not shared widely with the government or among the development partners. This is partly due to the low capacity of the INS to track, negotiate, and convert such data into a usable format for sharing widely. Also, due to various quality issues associated with the data sets collected by development projects, their availability in an open platform remains limited. Further, since they may be subjected to criticism by potential users, for quality there is reduced the incentive for sharing such data sets openly. However, there are some positive examples of data collection and sharing with high level of accountability. Among the sectoral ministries, the data collected by SIMA on crops and livestock prices from various markets remains fully functional system of data collection and dissemination. This is mainly because the end users directly benefit from the information produced. The broadcasting of this data on the radio daily at specific time has generated continuous demand for this data. The government has been regularly funding this system as it has brought positive benefits to the users and seen as an effective instrument to manage the prices in the crop and livestock markets. However, it should be noted that such accountability is possible, because all the data generated by this government are readily useable by the end users—producers and consumers—on a regular basis.

From the development partners' perspective, due to low accountability in the national systems, funders tend to support collection of their own data from the field for initiating their projects or to track the progress of their projects. This not only ensures quality but also allows to maintain the control over the use of data by the funding agencies. However, this approach has both capacity and financial implications for the national statistical system. In terms of capacity, this approach does not fully contribute to the development internal capacity. From the financial perspective, it often takes funds away from the national statistical system. In due course, both these factors which are critical to the institutional development of the national statistical agencies, further contribute to the low-level accountability to generation and dissemination of publicly available data sets by the national system. To overcome this, some donors have used the technical assistance approach. It places an expatriate technical advisor in the national statistical system to develop the data collection and management process and to ensure timely collection and the quality of the data. Such technical assistance can be helpful particularly if it helps to build local capacity. It also facilitates increased coordination and harmonization of the data collection activities, among the sectoral ministries, the national and provincial levels, and among the donors themselves. Ultimately however, the accountability of the national statistical system as a whole depends on the accountability of all individual actors and their institutions involved in the generation, sharing, and use of data for evidence-based policy making.

Transparency

During the interviews, most of the respondents claimed that A&FNS statistics and data are politicized in Niger. This derives mostly from the programs that are coordinated out of the executive branch of the government, specifically i3N in the president's office and DNP-GCA and CAPEG in the prime minister's office (see Figure 2). Whereas situating these programs in the executive branch of the government elevates the importance of the programs and the political commitment to them, the politicization derives from how the data used in designing, monitoring, and evaluating the programs and their projects are collected and analyzed to make decisions and then shared with the public.

With respect to the i3N program for example, the data for the 200+ indicators in the SASE-i3N are provided by various implementing institutions, including i3N, the Ministries of Agriculture and Livestock, Environment, Trade, Rural Roads, Public Health and Nutrition, Planning, and the various units that constitute DNP-GCA in the prime minister's office. However, only the commission (or HC3N) can visualize

all the indicators and underlying data, whereas the other institutions have access to only the indicators that affect them. The public has access to only the information or reports that are available publicly, including what is available on the i3N website.¹³

As these programs and their operations are financed and managed outside of the national statistical system and institutions that are mandated to carry out the same types of functions, it creates competition and undermines the capacity and autonomy of the mandated institutions in the system, which together affect their outputs. Because the targeting of these programs may be political,¹⁴ the data used for targeting and for reporting on the impact of the programs is also likely to be politicized, which derives from the fact that some of the data used in the decisions and evaluations are also collected by the programs. The DNPCCA for example collects its own data on food insecurity, which could have been independently done by MOAL when given adequate resources. Also, because staff of MOAL in the districts are used in surveys implemented by the DNPCCA to collect their data on food insecurity, MOAL's mandate to independently collect and publish statistics and data on food production seems to have been tempered. Another aspect of the politicization is how data generated by the institutions are used by the programs—i3N, DNPCCA, or CAPEG. For example, CAPEG does not use the available data provided by MOAL on livestock production in its analysis, claiming that they are not reliable. To address these data problems, CAPEG plans to work directly with mayors in each “commune” to obtain the data. It seems that a more sustainable solution will be to improve the capacity of MOAL to do this work effectively.

The politicization of A&FNS data with respect to the work of DNPCCA also works the other way around, as we learned from the interviews that several districts tend to underreport their agricultural production and food availability in order to attract more resources from the central government for implementing the food security program. Even when it becomes common knowledge that the affected districts have surplus production, data showing deficit remains in effect and those districts would continue to receive food aid and avoid contradiction with the program officials (key informant interview). Furthermore, the data collected are not made publicly available for long-term monitoring purposes.

4. LESSONS AND IMPLICATIONS FOR NIGER

The Niger case study presented in this paper presents several lessons and implications that could be derived for both Niger and at the global levels.

The overall aim of a statistical system at the national level should be to invest in building up a community of users which demands high-quality statistics, knowing how to respond to them, and having a degree of monopoly over the production of legitimate and essential statistics. The Niger case study demonstrates the importance of establishing a legal framework that promotes the NSO's technical and management autonomy. It is observed that key challenges exist in the arenas of transparency, state capacity and accountability. Given these challenges, a key recommendation that emerges is that a clear data transparency and dissemination policy should be developed in Niger. This would help in creating a critical mass of users, both within and outside of government who are willing to complain if the flow of information is interrupted, tampered or modified. Through data transparency and access-to-information policies, NSOs can establish a fluid relationship with sub national governments, civil society organizations and private sector which use government data. Likewise, such actors enhance the NSO's legitimacy and help erect a barrier against

¹³ See <http://www.initiative3n.ne> for the general website of the i3N program and <http://www.sase-i3n.org/> for the login page to its data entry platform.

¹⁴ Under the DNPCCA program for example, the transfers include cash-for-work operations for very poor people in areas affected by drought, distribution of small ruminants to women in vulnerable areas, and distribution of food to households in areas with limited markets (OPM 2016).

governments that attempt to limit their statistical capacity. The study even finds that some NSOs reinforce these links strategically to build institutional capacity—a strategy that might be reproduced by other reformers interested in strengthening NSOs in the developing world. Thus, one of the study’s most important lessons is to show that the dimension of demand for statistics is a key determining factor of statistical capacity in the region.

Another key recommendation is development of a new statistical law which focuses on improving the quality of data collected and analyzed. A key pathway to improving the quality of data is by providing enough funds to INS. Prior to 2004, funds for INS were allocated in the ministry budget. After 2004, INS was established as a public institute and receives funds directly from the government. Due to delays in receiving allocated budget from the government, data collection activities suffer. Previously, there was a separate tax allocated to support data collection; however, INS never received funds from this tax. This fund should be reactivated to ensure sustainability of INS. There is a need to explore existing laws in place to make INS a sustainable institution. Currently, INS receives its funding from the government with the help of donor support. Since INS is directly impacted by donor funding, it is essential to develop a strategy to sustain INS in case of decrease in donor funding. The tight funding situation also affects the human capacity and institutional development activities of the INS. While donor support has been helpful in the past to build local capacity, the proposed funding strategy should also include resources for short term and long-term development of human and institutional capacity of INS.

Another keyway to improve the quality of data collected is by employing educated and informed data collectors. Recent graduates from universities can be a great resource for collecting and evaluating government data. This requires the government and universities to work together to build the necessary capacity building trainings for these students. Another key area in which universities have a role to play is as important data users which help the government in conducting research that informs policy decisions. This can be accomplished through the actions of internal leaders and bureaucrats who accept the challenge of changing the organization and its statistical production to respond to new demands as an institutional capacity-building strategy.

Global implications

It is critical to pay attention to the factors that will enable national statistical agencies (and their network of data providers) to develop their own capacity to produce high-quality, timely, and relevant agricultural statistics and data, in addition to the factors that permit them the autonomy needed to ensure their credibility and professional independence. This assumes that the incentives and data demands of the users are aligned with the broader welfare of the entire society, allowing the provision of data and the acquisition of knowledge and information that induces decisions to transform the economy toward greater and more socially desirable outcomes.

Government agencies across the globe require statistics to carry out their functions for various purposes including policy making and resource distribution. Private sector and civil society organizations also rely on available government data for decision making. Nations like India have been brought under the lens due to lack of good quality data in terms of collection process and methodology which has led to significant overestimation of India’s growth figures (Subramanian, 2019).

Given the similarity in nature of challenges in other developing countries with those being faced in Niger, the recommendations for Niger have universal applicability. Development of implementation of a data transparency and dissemination policy, sustainable funds for countries statistical bodies, capacity building through youth training in data collection and analytics methods are some such key pathways.

5. CONCLUDING REMARKS

In this paper we try to go beyond the technical and management challenges of a National Statistical system to understand the political economy issues facing the process of data generation and use as a public good for evidence-based policy making. We find that transparency, state capacity and accountability challenges affect the national statistical system in Niger. Politicization of data system alongside lack of quality data due to capacity constraints contribute to the pervasive data problems. It is strongly recommended that a clear data transparency and dissemination policy is developed to strengthen decision making process at all levels including sub national governments, civil society organizations, and private sector. Additionally, to improve the data collection process, recent graduates could be incentivized and given adequate training at the university to pursue data collection and analytics jobs in the government. This study has broader implications since data collection, processing, management, dissemination and transparency issues are a major concern across the globe especially in developing nations. Recommendations provided for the case of Niger are also relevant for other nations facing similar challenges as well. Further research on the political economy of public data systems are needed as increasing use of data becomes a crucial input in the policy design and implementation in developing countries.

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