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African Commitments for Agricultural Development Goals and Milestones for Niger

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Abstract

The main objective of this study is to assess the potential contribution of agricultural investment to the achievement of Niger's economic and social development objectives. By combining a computable general equilibrium model and a microeconomic model, it helps to determine to what extent the implementation of the National Agricultural Investment Programme (NAIP) would enable Niger to achieve the objectives and targets of the CAADP, the United Nations' SDGs and the African Union Agenda 2063. The results indicate that the implementation of the NAIP would enable the country to maintain the share of public agricultural expenditure above the 10% target set by CAADP. All things being equal, this would improve the attractiveness of the agricultural sector and increase both domestic and foreign private investment in the sector. Increased public and private investment could lead to agricultural GDP growth at a rate above the CAADP target of 6%, and to the achievement of several sustainable development goals by 2030 as well as some of the targets of the African Union's Agenda 2063. In particular, Niger could halve poverty by 2030. Similarly, the country could achieve the objective of sustainable growth and the creation of decent employment. However, reducing inequality and eradicating extreme poverty will remain major challenges for the country.

Résumé

Cette étude a pour objectif principal l'évaluation de la contribution potentielle de l'investissement agricole à l'atteinte des objectifs de développement économique et social du Niger. En couplant un modèle d'équilibre général calculable et un modèle microéconomique, elle aide à déterminer dans quelle mesure la mise en œuvre du Programme national d'investissement agricole permettrait au Niger d'atteindre les objectifs et cibles du PDDA, des ODD et de l'Agenda 2063 de l'Union africaine. Les résultats indiquent que l'exécution du PNIA permettrait au pays de maintenir la part des dépenses publiques agricoles au-dessus de la cible de 10% fixée par le PDDAA. Toutes choses étant égales par ailleurs, ceci permettrait d'améliorer l'attractivité du secteur agricole et accroître l'investissement privé aussi bien national qu'étranger dans le secteur. La hausse des investissements public et privé pourrait conduire à une croissance du PIB agricole à un taux supérieur à la cible de 6% du PDDA, et d'atteindre plusieurs objectifs de développement durable à l'horizon 2030 ainsi que certaines cibles de l'Agenda 2063 de l'Union africaine. En particulier, le Niger pourrait réduire la pauvreté de moitié en 2030. De même, le pays pourrait atteindre l'objectif d'une croissance durable et celui de la création d'emploi décent. Toutefois, la réduction des inégalités et l'élimination de l'extrême pauvreté demeureront des défis majeurs pour le pays.

1. Introduction

Agriculture is a key sector of the economy of Niger. It is the main livelihood sector and employs the majority of the working population. Aware of this vital importance for Niger, the government, like other African Union member countries, has subscribed to the continent's commitment to making agriculture a main source of growth and poverty alleviation. This commitment, initiated under the Malabo Declaration, aims to establish agriculture as the priority sector for the economic transformation of the continent. On this basis, Niger has adopted the Comprehensive Africa Agriculture Development Programme (CAADP) to guide agricultural development efforts on the continent. CAADP consists of four key areas or pillars around which efforts for agricultural development strategies have to be articulated. Each country is expected to devote at least 10 percent of total government expenditure to the agricultural sector with a view of achieving a 6 percent annual growth in agricultural GDP.

Ten years after the Maputo Declaration, African Union member countries adopted a new agricultural development programming cycle. This new cycle is based on the Malabo Declaration, which provides guidance for CAADP for the period 2015-2025. CAADP 2015-2025 is defined around seven commitments that can be grouped into two categories of objectives. The first is articulated around overarching objectives and targets to address issues related to poverty reduction and hunger eradication, agricultural productivity and growth, and public expenditure and investment. The second category includes thematic objectives and targets on inclusive growth and development of agricultural value chains, intra-African trade in agricultural products and services, nutrition and food security, gender, climate resilient agriculture and mutual accountability.

With the broadening of the number of commitments and targets under CAADP 2015-2025, the design and implementation of continental, regional and national agricultural policies in general and National Agricultural Investment Programs (NAIPs) have become more complex. To facilitate the implementation and monitoring of CAADP, each country has been equipped with a results framework to report on progress and to facilitate mutual learning and accountability. By combining the results framework of the CAADP 2015-2025 with that of the United Nations Sustainable Development Goals (SDGs) and the African Union's Agenda 2063, this study assesses the contribution of agricultural policy to the achievement of Niger's multiple international and national commitments. The rest of the document is structured as follows. Section 2 presents the background. Section 3 is devoted to the presentation of Niger's development policies and strategies with a focus on the agricultural sector and the analysis of their coherence. Section 4 provides a prospective analysis of agricultural development. Section 5 concludes the study.

2. Background

In 2018, Niger's population was estimated at about 21 million with a population growth rate among the highest in the world at 3.9 percent (FAO, 2018). Niger is among the world's least developed countries.

The country is ranked 189th out of 189 countries on the UNDP Human Development Index (HDI), with a relatively low GDP per capita ($396 USD in 2017) and a high poverty rate estimated at 47 percent (ReSAKSS, 2017). In 2018, Niger recorded an economic growth rate of 5.2 percent, which represents an increase compared to the previous year (4.9 percent in 2017). This growth comes particularly from the agricultural sector, which represents one of the pillars of the economy with 40 percent of GDP and a significant share in the country's exports 20 percent (ReSAKSS, 2017). In addition, this sector is one of the key sectors in terms of job creation and the fight against unemployment. It employs about 76 percent of the working population (World Bank, 2018).

Niger is a landlocked country of about 1.267 million square kilometers. The country is characterized by an unfavorable natural environment, with low and erratic rainfall. Three-quarters of the territory is desert. Agriculture is essentially rainfed and is based on an estimated cultivable potential of 14.5 million hectares (less than 13 percent of the territory) including 270,000 ha of irrigable land (Niger, 2017). In such a context, aware of the role of agriculture in the economy, the government of Niger devotes a significant part of total public expenditure to the agricultural sector. This importance was already well perceived before the Maputo Declaration in 2003. Paradoxically, the share of public spending on agriculture fell from around 20 percent to 9.8 percent on average over the five years following this declaration.

Table 1 shows the evolution of growth, agricultural production, and investment indicators between 2003 and 2016. This time frame is divided into two main periods. The first period that we consider as the reference period runs from 2003 to 2007. The second period which covers 2010-2016 is considered to be the period of development and implementation of Niger's first Agricultural Investment Plan[1]. This period is called the CAADP period. Between these two periods, we highlight the year 2008, which corresponds to the international economic crisis, and the year 2009, which we consider to be a post-crisis year (or period). Table 1 shows that the growth rate of general government agricultural expenditure has dropped dramatically from 8.8 percent before the 2008 financial crisis to -3.3 percent after. Consequently, the ratio of public expenditure to agricultural value added decreased to around 1.5 percent. However, agricultural value added per agricultural worker and per hectare of arable land increased by 26.3 percent and 11.5 percent respectively between the 2010-2016 period and the reference period. Over the same period, the growth rate of agricultural value added increased from an annual average of 4.22 percent to 7.84 percent (ReSAKSS, 2017), an increase of 3.62 percentage points. The growth rate of agricultural value added per capita fell by 1.13 percent while GDP per capita increased by 2.78 percent. In addition, the number of jobs created per year increased by 84321.98 between the two periods, but the average employment rate did not follow because it fell by -8.78 percent. Limited data on poverty indices do not allow, at this stage, to examine poverty outcomes in Niger.

[1] The first generation of NAIP was developed in 2010 and its implementation covers the period 2011 to the end of 2015 with the objective of achieving a growth rate of 7.4 percent of agricultural GDP (Niger, 2010).

Table 1. The status of Niger's agricultural production, investment, growth and poverty during the CAADP and CAADP with Malabo Declaration periods

Metrics	**Source**	**Reference Period**	**Economic crisis period**	**Post crisis period**	**CAADP overlapping with CAADP/Malabo period**	**Change between period *(average 2003-2007 vs 2010-2015)***	
		Average 2003-2007	**2008**	**2009**	***Average 2010-2015***	***Value***	***Unit***
Government agriculture expenditure growth rate (percent)*	ReSAKSS, 2017	8.83	-48.52	-29.64	-3.31	-12.14	percent
Government agriculture expenditure (percent of total government expenditure)	ReSAKSS, 2017	19.6	7.9	5.4	9.8	-9.7	
Government agriculture expenditure (percent of agriculture value added)	ReSAKSS, 2017	9.4	4.3	3.4	7.9	-1.5	
Agriculture value added per agricultural worker (constant 2005 USD)	ReSAKSS, 2017	499.4	567	494	525.7	26.3	
Agriculture value added per hectare of arable land (constant 2005 USD)	ReSAKSS, 2017	44.2	52	47	55.7	11.5	
Yield for individual crops (Tons/Ha)							
Onion	FAO, 2017	271.40	194.99	181.78	288.32	16.92	
Rice, paddy rice	FAO, 2017	34.56	38.11	43.57	38.46	3.89	
peanut	FAO, 2017	4.46	4.52	4.31	5.12	0.66	
millet	FAO, 2017	4.45	5.18	4.11	4.76	0.32	
The growth rate of output for individual commodities (percent)*							
Onion	FAO, 2017	6.62	-1.69	-9.17	15.76	9.14	
Rice, paddy rice	FAO, 2017	0.88	1.44	29.79	-3.05	-3.93	
peanut	FAO, 2017	-8.36	106.51	-16.88	1.27	9.63	
millet	FAO, 2017	0.34	25.43	-23.26	-2.95	-3.28	
Agriculture production index (2004-2006=100)	FAO, 2017	101.9	139.38	115.32	145.72	43.96	
Agriculture, value added (constant 2010 US$, billion)	ReSAKSS, 2017	1835	2296	2069	6628.7	395.7	
Growth rate of agricultural value added (constant 2010 US$)*	ReSAKSS, 2017	4.22	15.55	-9.89	7.84	3.62	
Growth rate of agricultural value added per capita (constant 2010 US$)*	ReSAKSS, 2017	0.91	11.61	-12.87	-0.22	-1.13	
Growth rate of GDP per capita (constant 2010 US$)*	ReSAKSS, 2017	-0.37	5.44	-4.30	2.41	2.78	
GDP per capita (constant 2010 US$)	ReSAKSS, 2017	330	349	334	368.2	38.2	

Metrics	Source	Reference Period	Economic crisis period	Post crisis period	CAADP overlapping with CAADP/Malabo period	Change between period *(average 2003-2007 vs 2010-2015)*	
		Average 2003-2007	**2008**	**2009**	***Average 2010-2015***	***Value***	***Unit***
GNI per capita, PPP (constant 2010 $)	World Bank, 2017	331.36	347.32	330.92	360.53	29.16	
Gini coefficient	ReSAKSS, 2017	37	32	31	29.5	-7.5	
Number of jobs created per annum*	World Bank, 2017	172584.46	231225.51	246078.67	256906.44	84321.98	
Employment rate (percent of population)	World Bank, 2017	11.03	4.69	6.42	2.25	-8.78	
Poverty headcount ratio, national (percent of population)	World Bank, 2017	69.2	61	59	51.7	-17.5	
Poverty headcount ratio, national (percent of rural population)	World Bank, 2017						
Poverty headcount ratio, international poverty, $1.90/day (percent of population)	World Bank, 2017	72			44.5		

Legend: *ReSAKSS*: Regional Strategic Analysis and Knowledge Support System; *WDI*: World Development Indicators; *FAOSTAT*: FAO Statistical database; pp: percentage point; * Calculation from employment rate and population from the WDI database

3. **Policy Coherence and Agricultural Development Goals**

In 2012, after several decades without any real development planning, Niger resumed economic planning exercises that led to the preparation of several policy documents and development strategies. These include the Sustainable Development and Inclusive Growth Strategy (SDDCI), the Economic and Social Development Plan (PDES), a National Agricultural Investment Plan (NAIP) and the Investment Plan for the Initiative “Nigeriens feed Nigeriens” better known under the acronym 3N. The Niger Vision for 2035 responds to the need to provide the Nigerien society with a strategic vision for long-term development. Adopted by the Government on 9 May 2017, this vision serves as a reference framework for all Government strategies. Its overall objective is to make Niger "*a modern, peaceful, prosperous country proud of its cultural values in a united Africa*". This vision is based on six challenges established in six interdependent axes so that intervention in each area reinforces the progress sought in all other areas. These main strategic axes are homeland security, development of a dynamic private sector, control of fertility and infant mortality, dynamization and modernization of rural areas, human capital development and transformation of the administration.

The axes should contribute to transforming the economy at all levels and eradicating poverty and inequality in Niger. Vision 2035 considers that the development of productive agriculture that is less dependent on climatic hazards is necessary to help Niger to meet the food challenge and provide employment opportunities for young people and women. In particular, it aims to develop a national strategy for sustainable land and ecosystem management. Vision 2035 is based, among other things, on a national agricultural investment plan (NAIP) and an investment plan for the 3N Initiative (SDDCI, 2017). The strategic orientation of axis 4 will focus on revitalizing traditional rainfed agriculture, pursuing and accelerating investments in irrigation and restructuring and modernizing livestock systems.

The Economic and Social Development Plan (ESDP) is the main instrument for implementing the country's short- and medium-term economic development policy. To date, Niger has experienced two phases of ESDP. ESDP 2012-2015, and ESDP 2016-2021. The first includes five strategic areas, namely consolidating the credibility and effectiveness of public institutions; implementing the conditions for the sustainability of balanced and inclusive development, food security and sustainable agricultural development, promoting a competitive and diversified economy for accelerated and inclusive growth and the promotion of social development. This plan also gives an important role to agriculture through its axis 3. At the end of this first period of ESDP, the challenges identified in the review served as the basis for the development and implementation of ESDP 2017-2021. This second phase is also in line with the vision of the Niger 2035 Sustainable Development and Inclusive Growth Strategy (SDDCI) and is structured around five strategic axes, which are: the cultural renaissance, social development, and demographic transition, the

acceleration of economic growth, improving governance, peace and security and sustainable environmental management.

The optimistic scenario of the macroeconomic framework is expressed in the Renaissance Program Act 2, which aims to reduce the incidence of poverty from 39.8 percent in 2016 to 31.3 percent in 2021 with an average annual economic growth rate of 7 percent and a tax burden rate of 20 percent. The first axis of ESDP - cultural renaissance - is the first priority formulated in the Renaissance Program Act 2. It appears in ESDP as an essential condition for social, political and economic modernization. The objective of the cultural renaissance is to shape a "Nigerien of a new type", a model of responsible citizenship, rooted in Niger's cultural values of integrity, respect for others and the public good. In addition, the 2017-2021 ESDP aims, through axis 3, in line with the orientations of the 3N, to revitalize and modernize the rural world through enhancing food security, sustainable agricultural development, the development of a dynamic private sector and the improvement of development management.

Despite the resources invested in Niger's agricultural sector for years, food production still falls short and a large share of the population suffers from food insecurity. In response to this situation, the authorities have decided to implement the 3N initiative. This initiative underwent the first phase of implementation which covered the period 2011-2015 and resulted in a positive outcome. However, the progress achieved in this implementation phase still seems insufficient to close the country's food deficit. Thus, for the period 2016-2021, which aims to achieve the objective of zero hunger in Niger, 3N will strive to fight not only against poverty but also against inequality. The investment plan designed and implemented over the previous period 2012-2015 was updated and will continue. The 3N initiative provides the foundation for all agricultural development and food and nutrition security programs. It is structured around five strategic axes: increase and diversification of agro-sylvo-pastoral and fisheries production, regular supply of agricultural and agri-food products to rural and urban markets, improving people's resilience to climate change, crises and disasters, improvement of the nutritional status of Nigerien and creation of an enabling environment for the implementation of the 3N initiative. The 3N initiative's 2016-2020 Action Plan builds on the 2012-2015 Action Plan and the second act of the Renaissance Programme. In addition, it is an integral part of Niger's Economic and Social Development Programme (PDES 2012-2015) and contributes to the implementation of some of PDES' Priority Action Programs. In fact, a large number of operational programs in the strategic axes of 3N correspond to the programs in axis 2 of ESDP. In addition, the 3N initiative is part of the Strategy for Sustainable Development and Inclusive Growth (SDDCI) for 2035 and is consistent with the Comprehensive Africa Agriculture Development Programme (CAADP). 3N will enable Niger to achieve the Sustainable Development Goals, particularly SDG1 and SDG7.

Table 2. Summary of countrywide and agriculture sector specific policies for Niger.

Policy	Description	Timeframe
3N	Basis for all agricultural development and food/nutritional security programs	2012-2015 2016-2020
PDES	Economic and Social Development Plan (PDES), Niger's economic planning.	2012-2015 2017-2020
SDDCI vision 2035	Document of the long-term strategic vision of Nigerien society and its development. Framework for all Government strategies and actions in accordance with the Constitution of 25 November 2010, article 146, paragraph 1, which stipulates that: "The State's action in the field of economic and social development policies is supported by a strategic vision".	2017-2035

Source: Authors' compilation

In 2003, African leaders committed to initiating the continent's development through agriculture adopted the Comprehensive Africa Agriculture Development Programme as part of the continent's overall development strategy called the New Partnership for Africa's Development (NEPAD). CAADP is the framework for intervention in agricultural sector development policies and strategies across the continent. It follows from the commitment made by the Heads of State in Maputo in 2003 to devote at least 10 percent of public expenditure to finance the agricultural sector. The overall objective of CAADP is to help African countries achieve a higher level of economic growth through agriculture-oriented development and, in doing so, to eradicate hunger and reduce poverty through agriculture. (CAADP, 2013). Taking advantage of the launch of CAADP, ECOWAS launched its agricultural policy in 2003 and ECOWAP was adopted in 2005 as a key tool for translating CAADP at the regional level. It constitutes a reference framework for guiding and accompanying the desirable transformations of the agro-sylvo-pastoral and regional fisheries sector. ECOWAP will develop NAIPs and the Regional Agricultural Investment Programme (PRIA) in each member country. The NAIPs are mainly focused on productive investments in agriculture, livestock, fisheries and forestry. An NAIP defines the volume and allocation of investments to generate at least 6 percent annual growth in the agricultural sector. The PRIA combines investments and public policy instruments (regulations, incentives, etc.). In June 2014, 10 years after the launch of CAADP, at the 23rd African Union Summit in Malabo, Heads of State and Government pledged to eradicate hunger by 2025 by halving current levels of post-harvest losses by 2025.

Agenda 2063 was adopted in 2015 with the ambition of building a prosperous and united Africa, based on common values and a common destiny. To implement the pan-African vision of an integrated, prosperous and peaceful Africa, led by its own citizens, and representing a dynamic force on the international scene (OAU, 2013), a fifty-year continental agenda has been developed following stakeholder consultation. Agenda 2062 will focus on achieving seven concrete objectives, namely: a prosperous Africa based on inclusive growth and sustainable development, an integrated continent, politically united, based on the

ideals of pan-Africanism and the vision of Africa's renaissance, an Africa where good governance, democracy, respect for human rights, justice and the rule of law prevail, a peaceful and secure Africa, an Africa with an identity, a common heritage, shared values and a strong cultural ethic, an Africa where development is people-centered, including the potential of women and youth and an Africa, as a strong, united and influential actor and partner on the world stage. In addition to bringing together Africa's aspirations for the future, Agenda 2063 identifies the main programs that can boost Africa's economic growth and development. This development will not be possible without the development of the agricultural sector, and it is in this perspective that the agricultural component is addressed in Aspiration 1, which aims to modernize agriculture for greater production and productivity.

Table 3. National, Africa-wide, and global programs and objectives

SDDCI/VISION 2035	ESDP 2017-2020	Initiative 3N 2016-2020	CAADP 2015-2025	AGENDA 2063	SDG 2030
Axis2: Development of a dynamic private sector	Axis 3: Accelerating economic growth	Axis1: Increase and diversification of agro-sylvo-pastoral and fisheries production Axis 5: Creating an enabling environment for the implementation of the 3N Initiative	Pilar 1: Increase in a sustainable way the areas cultivated and served by reliable water control systems	O1: A prosperous Africa based on inclusive growth and sustainable development	SDG1: Eliminate Poverty SDG2: Erase Hunger SDG4: Quality of educationSDG8: Decent work and economic growth SDG9: Increase Industry, Innovation, and Infrastructure
Axis 4: Dynamisation and modernisation of the rural areas	Axis5: sustainable environmental management	Axis3: improving people's resilience to climate change, crises, and disasters	Pilar 2: Improve rural infrastructure and trade capacity to facilitate market access	O7: An Africa, as a strong, united and influential actor and partner on the world stage O1: A prosperous Africa based on inclusive growth and sustainable development	SDG1: Eliminate Poverty SDG2: Erase Hunger SDG4: Quality of education SDG6: Clean water and sanitation SDG8: Decent work and economic growth SDG9: Increase Industry, Innovation, and Infrastructure SDG10: Reduced inequalities
			Pilar 4 Improve agricultural research, technology diffusion and adoption	O1: A prosperous Africa based on inclusive growth and sustainable development	SDG1: Eliminate Poverty SDG2: Erase Hunger SDG4: Quality of education
Axis5: Human capital development	Axis 2: Social development and demographic transition	Axis4: Improvement of the nutritional status of Nigerians	Pilar 3: Increase food supplies, reduce hunger, improve responses to food emergencies	O6: An Africa where development is people-centred, including the potential of women and youth	SDG1: Eliminate Poverty SDG2: Erase Hunger SDG 5: Gender Equality

The comparison of the strategic axes and objectives of Niger's long-term vision and the various development policies and strategies shows a certain coherence. It appears that the axes of the ESDP can be linked to some axis of SDDCI/VISION 2035. The vision and other national documents are consistent with the continental agricultural sector wide commitments and goals as set out in the CAADP Malabo, SDGs and Agenda 2063 commitments and goals. Table 3 summarizes national and Africa wide or global programs and goals to which Niger subscribes. After briefly presenting the methodological approach used in the study, the next section assesses agricultural intervention and financing policy options and their effectiveness in relation to the objectives and targets of CAADP, the SDGs and Agenda 2063.

4. **Prospects for Agricultural Development**

The methodological approach used in this study is based on a modelling exercise that combines two analytical tools. These tools consist of a macroeconomic model and a microeconomic analysis. The macroeconomic model used is a computable general equilibrium (CGE) model that considers all institutional agents and economic sectors of Niger's economy. It is an application of the model by Fofana et al (2019). The approach used here makes it possible to take into account growth and investment objectives and targets. With a relatively standard approach on certain aspects, it specifies the behavior of several economic agents. Thus, consumers maximize their well-being given the prices on the market for goods and services and their income constraints. Producers maximize their profit given the prices of the goods and services, and the factors of production and taking into account the available technology. On the other hand, the government remains passive in the model. Its role is to redistribute economic wealth through the collection of taxes (direct and indirect), transfers to households and firms and the supply of public services. In line with the assumption of a small open economy, we assume that international import and export prices are exogenous.

The CGE model described above is combined with a microeconomic model. Here we use a mathematical optimization model designed to capture the probability changes associated with individual income levels. The model uses the concept of entropy as discussed by Golan (2006) and applied by Lee and Judge (1996) to generate the transient probability parameters of a Markov process or Markov chain. This approach has two advantages. First, by setting the objectives of poverty reduction and hunger eradication, we can determine the targets for total consumption expenditure and food consumption required to achieve the Malabo goals. Second, by using the consumption results provided by the CGE model, we can link investment options to poverty and hunger reduction outcomes. Further details on the characteristics of the micro and macro-economic models are available in Fofana et al (2019).

The computable general equilibrium model was calibrated using a social accounting matrix (SAM) of Niger for the year 2013. For the purposes of the analysis, the model has been updated to reflect the structure of

the economy in 2015. It has 50 accounts, including 17 activities and product accounts. The labor market has been broken down into urban and rural labor markets. The agricultural sector has been divided into four sub-sectors: crop production, livestock, fisheries and forestry. The microeconomic model uses the LSMS-ISA data collected in 2014 by INS in collaboration with the World Bank. The survey was carried out throughout the national territory. The target population is households in the eight regions of the country. The sample size is 4 000 households. With this sample size, it is possible to conduct analyses at the national level and three areas which are Niamey, the rest of the urban areas and the rural areas. The sample was drawn using a conventional two-stage draw. In the first stage, Enumeration Area (EA), which are primary survey units, are selected proportionally to their size in the 2001 General Population and Housing Census. In the second stage, households are equally randomly selected in each EA. The household sampling frame is constructed following the exhaustive enumeration of households in the first-degree enumeration zones. The study area is the entire country, the city of Niamey, other urban areas (regional and departmental capitals), the agricultural rural area, the agro-pastoral rural area and the pastoral rural area. The reference scenario was constructed on the basis of the evolution of the key macroeconomic indicators of the Nigerian economy as presented over the period 2011-2014 and the projections covering the period 2015-2024 (see Tables 4 and 5).

Table 4. Niger's Selected Economic Variables, Trend and Outlook 2011-2024

Subject Descriptor	Units	2011-2014	2015-2024
Gross domestic product, constant prices	Percent change	6.7	6.1
Total investment	Percent of GDP	40.7	40.6
Gross national savings	Percent of GDP	21.8	22.5
The volume of imports of goods and services	Percent change	-1.1	6.3
The volume of exports of goods and services	Percent change	10.4	11.7
General government revenue	Percent of GDP	21.8	23.5
General government total expenditure	Percent of GDP	25.1	27.6
Current account balance	Percent of GDP	-17.0	-17.1

Source: World Economic Outlook (IMF, 2019)

Thus, under the reference scenario, Niger, which posted a GDP growth rate of around 7 percent between 2011 and 2014, could maintain a fairly high level of activity over the period 2015-2024. This dynamism can be explained by the maintenance of a fairly high investment rate (more than 40 percent over the two periods considered) and a significant domestic savings rate, although lower than the level of investment. In terms of external trade, imports are expected to increase by about 6 percent over the period 2015-2024 after a slight decline over the period 2011-2014, while exports are growing at a faster rate. Total government revenue as a percentage of GDP could improve between the two periods from about 22 percent to 23.5 percent while total expenditure rises from 25 percent of GDP to almost 28 percent with a current account deficit remaining at about 17 percent of GDP.

Table 5. Niger's Selected Socioeconomic Variables, Trend 2011-2018

Subject Descriptor	2011-2014	2015-2018
Households and NPISHs Final consumption expenditure (annual percent growth)	5.2	5.4
GDP growth (annual percent)	6.7	4.8
Agriculture, forestry, and fishing, value added (annual percent growth)	5.0	6.2
Industry (including construction), value added (annual percent growth)	17.1	2.8
Manufacturing, value added (annual percent growth)	16.9	4.5
Services, value added (annual percent growth)	6.3	4.8
Population growth (annual percent)	3.9	3.8
labor force, (annual percent growth)	3.7	3.9
Employment, (annual percent growth)	3.8	3.9
Rural population growth (annual percent)	3.9	3.8
Urban population growth (annual percent)	3.9	4.2

Source: World Development Indicators (World Bank, 2019); * African Statistical Yearbook (AfDB; UNECA and AUC, 2019); ** ReSAKSS Database (ReSAKSS, 2019);
Note: NPISHs=Non-profit institutions serving households

The remarkable economic growth over the period 2015-2024 (Table 4) masks a slight decline in the performance of the Niger economy over the period 2015-2018 (Table 5). Indeed, over this period, Niger's growth rate is slightly lower than that of the 2011-2014 period. This is in line with the economy's sectoral performance over both periods. With the exception of the agricultural sector, which maintained a growth rate slightly higher than the level recorded over the period 2011-2014 between 2015 and 2018, all other sectors posted a decline. However, household well-being has improved with a faster growing level of consumer spending. Similarly, the level of employment, overall demographic and labor force trends remain between the two periods.

The first scenario analyzed relates to Business as Usual (BaU), which assumes a continuation of Niger's economic performance observed in recent years, all other things being equal. The results of this scenario are compared to the different CAADP targets in Table 6. The BaU scenario allows Niger to achieve very few of the CAADP targets with some progress in a few others. Thus, Niger could maintain the share of agricultural spending in total government spending above the 10 percent target. However, this does not seem surprising since Niger has always devoted a significant share of public expenditure to agriculture in order to cope with natural and climatic conditions unfavorable to agriculture production. By continuing to give an important place to agriculture with a fairly high level of public expenditure, Niger could thus continue to give a signal and an incentive to private investment, which will increase significantly.

Table 6. Progress towards Selected CAADP Goals, BaU Scenario (Percent Cumulative 2015-2025)

Goal	Result	Metric	BaU Progress	CAADP Target
Increase in Agriculture Investment	Increase in Agricultural Public Investment	Public Agricultural Investment, Share of Total Public Investment	10.9	**10.0**
	Increase Agricultural Private Investment	Private Agricultural Investment	132.8	>
End Hunger	Increase Agricultural Productivity	Total Factor Productivity Agriculture	2.0	**100.0**
		Agricultural Labor Productivity	22.6	**100.0**
	Increase Consumption of Locally Produced Food	Consumption Locally Produced Food, Ratio Total Food Consumption	-0.7	>
	Reduction Extreme Income Poverty	Poverty Headcount Index, Food poverty line, Change (percent)	-2.2	**-95.0**
Halve Poverty	Accelerate Agricultural Growth	Agricultural GDP, Annual Growth	5.2	**6.0**
	Achieve Agriculture-led Poverty Reduction	Agricultural contribution to GDP Growth	27.6	**50.0**
	Reduction Income Poverty	Poverty Headcount Index, National poverty line	-2.3	**-50.0**
Boost Intra-African Agricultural Trade	Increase Intra-Africa Agricultural Trade	Intra-Africa Imports and Exports of Agricultural and Food Commodities	46.6	**200.0**

Source: Simulation Results.
Note: Unless otherwise noted, values shown are cumulative growth rates from 2015 to 2025. Values for "Agricultural Share Public Investment" and "Agriculture Contribution to GDP Growth" denote average annual shares. Values for "Agricultural GDP, Annual" refer to average annual growth rates.
Green indicates that the goal is met (> 90 percent); yellow indicates that much progress is made toward the goal (>50 percent and 90 percent); orange indicates that little progress is made toward the goal (>10 percent and 50 percent); red indicates that very little progress is made toward the goal (10 percent or less); grey indicates that data are not available to assess the progress towards the target. For directional goals, i.e. goals without a numeric target, the progress is assessed against the initial value.

The simulation results indicate that Niger could make progress in agricultural growth and increase the contribution of the agricultural sector to total GDP. However, this progress would not allow the country to reach the target of a 6 percent annual agricultural GDP growth rate nor the 50 percent contribution of the sector to GDP. Results indicate a very small reduction in the poverty rate, far from the 50 percent targeted by CAADP. In terms of nutrition and food security outcomes would be even worse under BaU. Thus, while Niger could improve labor productivity in the agricultural sector, this progress may not be sufficient to meet the 100 percent target by 2025. As a result, the total factor productivity target in the agricultural sector will be out of reach with any tentative progress that may be made. The increase in agricultural production could, therefore, be a limiting factor in eliminating hunger. Indeed, the ratio of consumption of local food products to total consumption could decline, which would severely limit the rate of food poverty reduction.

The comparison of the results of the reference scenario with the targets of the United Nations sustainable development objectives by 2030 is presented in Table 7 below. The analysis took into account five SDGs. These are SDG1 and SDG2 in relation to halving poverty and eliminating hunger respectively. These two objectives must be added the promotion of sustainable economic growth (SDG 8), the promotion of inclusive and sustainable industrialization (SDG 9) and the reduction of inequalities (SDG 10).

Table 7. Progress towards Selected SDGs, BaU Scenario (Percent Cumulative 2015-2030)

Goals	Result	Metric	BaU Progress	SDGs Target
Halving poverty (Goal 1)	Eradicate extreme poverty	Proportion of population below the international poverty line of $1.90 a day PPP	-3.0	**-95.0**
	Reduce at least by half the proportion of the population living in poverty	The proportion of the population living below the national poverty line	-3.1	**-50.0**
End hunger (Goal 2)	Double the agricultural productivity and incomes of small-scale food producers	The volume of agricultural production per laborer	38.6	**100.0**
Sustainable economic growth (SDG 8)	Sustain per capita economic growth	The annual growth rate of real GDP per capita	50.1	>
		The annual growth rate of real GDP	6.8	**7.0**
		The annual growth rate of real GDP per employed person	54.3	>
	Achieve full and productive employment and decent work	Average hourly earnings	108.0	>
		Unemployment rate, change	0.2	**<6**
Inclusive and sustainable industrialization (SDG 9)	Promote inclusive and sustainable industrialization	Manufacturing value added as a proportion of GDP and per capita	4.6	**100.0**
		Manufacturing employment as a proportion of total employment	29.9	**100.0**
Reduce inequality (SDG 10)	Adopt policies, especially fiscal, wage and social protection policies, and progressively achieve greater equality	Labor earning share of GDP	-20.8	>

Source: Simulation Results
Note: Unless otherwise noted, values shown are cumulative growth rates from 2015 to 2030. Values for "GDP, Annual Growth" refers to average annual growth rates. Values for "Unemployment rate" are reported for the specific year, i.e. they are not cumulative.
Green indicates that the goal is met (> 90 percent); yellow indicates that much progress is made toward the goal (>50 percent and 90 percent); orange indicates that little progress is made toward the goal (>10 percent and 50 percent); red indicates that very little progress is made toward the goal (10 percent or less); grey indicates that data are not available to assess the progress towards the target. For directional goals, i.e. goals without a numeric target, the progress is assessed against the initial value.

The results indicate that, without further efforts, a continuation of the economic performance recorded in previous years would enable Niger to achieve SDS 8 through an economic growth rate that could approach the target of 7 percent per year, a significantly higher GDP per capita growth rate and a significant improvement in real GDP per person employed. All this would result in an unemployment rate below the target of 6 percent. With the exception of SDG 8, assuming the continuity of the economy's trajectory as it has emerged in recent years would not allow sufficient progress to meet the targets for the other SDGs that have been addressed in this analysis. The country could make progress on two indicators, but these may not be sufficient to meet the targets by 2030. First, the volume of agricultural production per worker would remain below the growth needed to double the country's performance in this area. Second, the increase in

volume of industrial employment as a proportion of total employment is not sufficient for Niger to reach the 100 percent target by 2030.

Table 8 presents the results of the BaU scenario compared to the Agenda 2063 targets by 2035.

Table 8. Progress towards Selected Goals of Agenda 2063, BaU Scenario (Percent Cumulative 2015-2035)

Goal	Result	Metric	BaU Progress	Agenda 2063 Target
Poverty, inequality, and hunger	Poverty Reduction	The proportion of population below the international poverty line of $1.90 a day PPP	-4.8	-95.0
		The proportion of the population living below the national poverty line	-4.5	-95.0
	Hunger Eradication	Food Import Dependency Ratio	33.8	-70.0
	Inequality Reduction	Rural-to-Urban Income Ratio	18.2	50.0
Incomes, jobs and decent work	Employment and Incomes	Unemployment Rate	0.1	6.0
		Per Capita Income Growth	81.5	>
Sustainable and inclusive economic growth	Inclusive Economic Growth	GDP, Annual Growth	6.8	7.0
	Intra-African Trade	Value of intra-Africa Trade	221.9	120.0
Agricultural productivity and production	Productivity Growth	Agricultural TFP	4.1	500.0

Source: Simulation Results

Note: Unless otherwise noted, values shown are cumulative changes from 2015 to 2035. Values for "GDP, Annual Growth" refers to average annual growth rates. Values for "Unemployment rate" are reported for the specific year, i.e. they are not cumulative.

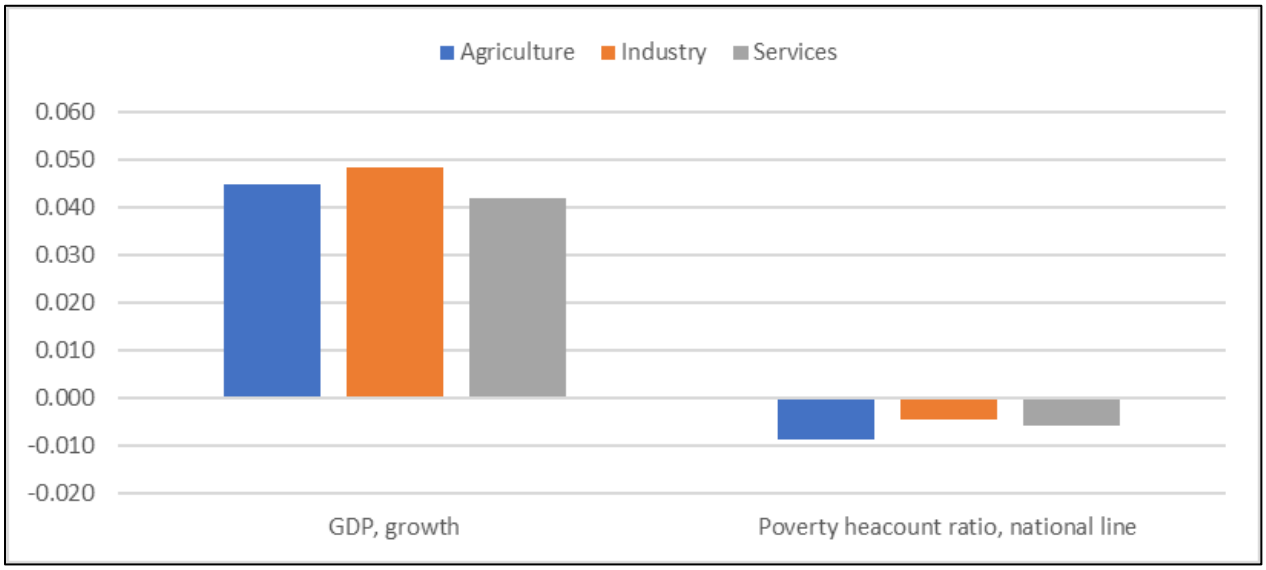
Green indicates that the goal is met (> 90 percent); yellow indicates that much progress is made toward the goal (>50 percent and 90 percent); orange indicates that little progress is made toward the goal (>10 percent and 50 percent); red indicates that very little progress is made toward the goal (10 percent or less); grey indicates that data are not available to assess the progress towards the target. For directional goals, i.e. goals without a numeric target, the progress is assessed against the initial value.

If the Niger economy continues the trends observed, all other things being equal, the country will not be able to achieve most of the targets of Agenda 2063 by 2035. The challenge of inclusive and sustainable growth could be met under the reference scenario. With an economic growth rate of around 7 percent per year and a significant increase in intra-African trade that could exceed the 120 percent target by 2035, Niger could meet African commitments in this area. Moreover, with the dynamism of economic activities, the unemployment rate could fall below 6 percent. This could lead to a significant improvement in per capita income. On the other hand, the objectives of reducing poverty and inequality and eliminating hunger could not be far from being achieved under the baseline scenario.

The results of the baseline scenario indicate that some targets of African and international commitments can be achieved under the continuation of current trends, but most will not. It is therefore important to accelerate the process of economic growth by raising the level of investment. From this perspective and considering the prominent role of agriculture in the economy, increasing public expenditure in and for

agriculture can be a solution for promoting economic and social development. In the context of a relative scarcity of resources, below we will highlight the impact of investment options. First, we try to prioritize investments between different sectors of the economy and then assess the potential impact of options for financing public interventions without the agricultural sector. Different public investment options are evaluated, and Figure 1 compares the impact of the 1 percent allocation of public investment to agriculture, industry or services on GDP growth and poverty incidence under the assumption of external financing.

Figure 1. Growth and Poverty Effects of a 1 Percent Point Increase in Public Investment by Economic Sector, Percent Point Change from Baseline



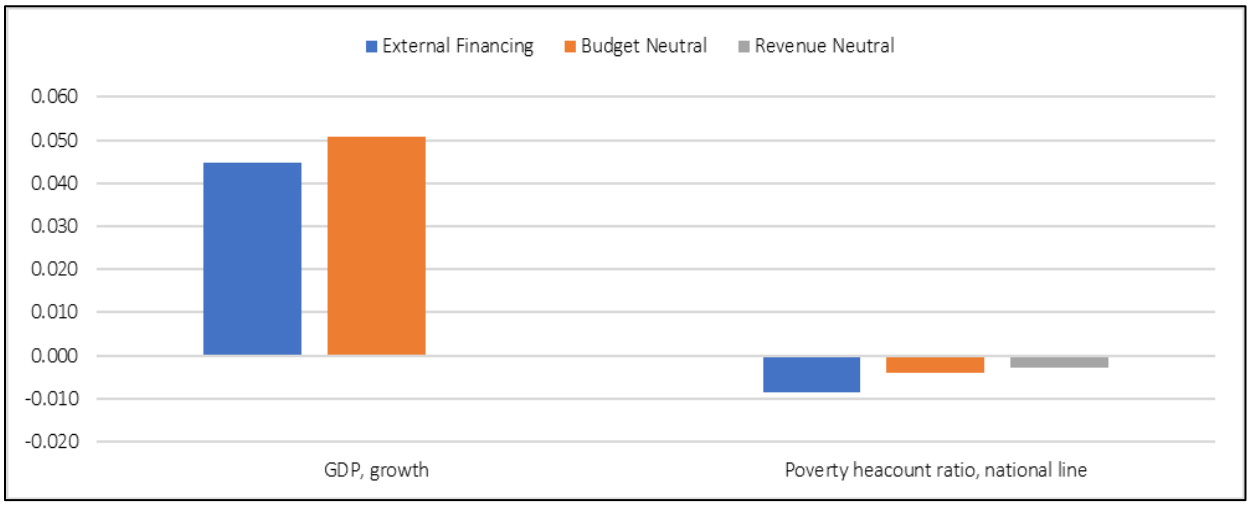
Source: Simulation results.
Note: Under external financing option.

It appears that regardless of the sector targeted, increased sectoral public investment has a positive impact on economic growth and poverty reduction. However, the industrial sector, which has a relatively greater effect on economic growth, has a smaller effect on poverty reduction. Considering the criteria for growth and poverty reduction, the results of the simulations indicate that investing in agriculture is more beneficial. Agriculture ranks as the second sector in terms of spillover effects on the rest of the economy and is also the sector that contributes most to poverty reduction. This result is not surprising because the rural environment, in which the main economic activity is agriculture, is also the environment with the highest concentration of poor people. Thus, economic growth driven by agriculture appears the best lever for poverty reduction.

Several financing options exist to increase public investment in the agricultural sector. Here we consider external financing, income-neutral domestic financing, and balanced budget financing. Income neutrality implies that the increase in the share of the agricultural sector in public investment is financed by the

decrease in the share of the non-agricultural sectors. With a balanced budget, the increase in public agricultural investment expenditure is financed by an equivalent increase in tax revenues. It should be recalled that the external financing of agricultural investments is the third option. The results of the simulations of these three options are presented in Figure 2.

Figure 2. Growth and Poverty Effects of a 1 Percent Point Increase in Public Investment by Financing Option, Percent Point Change from Baseline

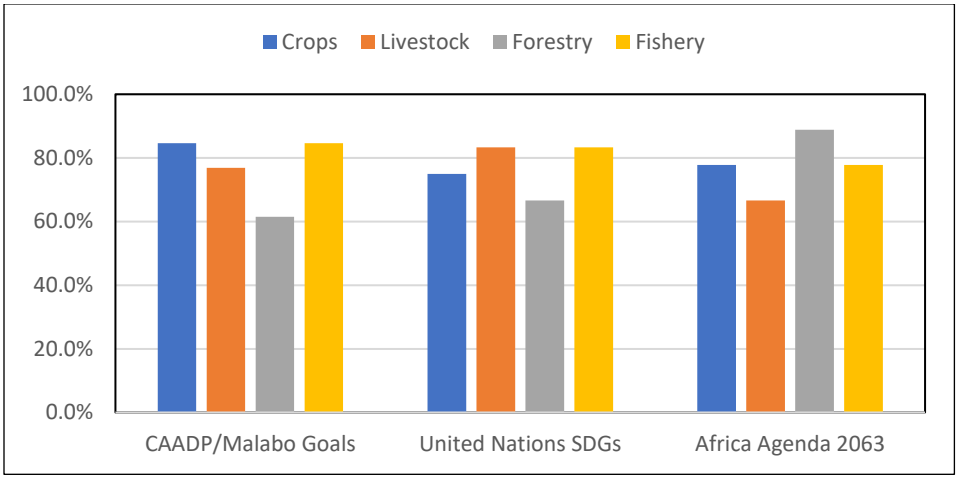


Source: Simulation Results

The results of the simulations indicate that the option of financing agricultural expenditure with external resources could have a greater impact in terms of poverty reduction than all other options, although all three could enable Niger to reduce the poverty rate. However, in terms of economic growth, it seems that balanced budgets could produce better results while the strategy of financing through expenditure neutrality could at best result in stagnant economic activity.

Two aspects have been highlighted that need to be considered to ensure the effectiveness of interventions and rationalize the use of resources. Given the multiple indicators and targets that are monitored under the different agendas, we have calculated an effectiveness index for each intervention in terms of priority agricultural sub-sectors and segments of the value chain. The agricultural sector is divided into four sub-sectors, namely: the crop sub-sector, the livestock sub-sector, the fisheries sub-sector, and the forestry sub-sector. Figure 3 presents the effectiveness score of the interventions in its different sub-sectors according to the three agendas under study.

Figure 3. Public Investment Effectiveness Score by Agricultural Sub-Sector



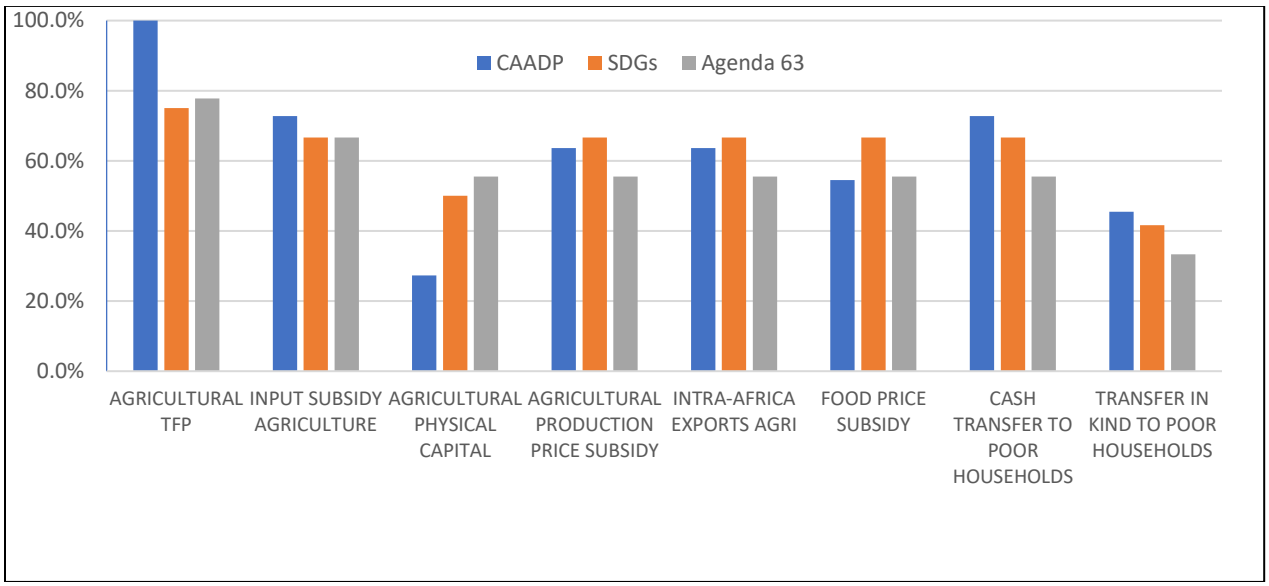
Source: Simulation results.
Note: Under External Financing Option.

The results of the simulations show that in the case of Niger, the target of a particular sub-sector is difficult to envisage. In view of the effectiveness scores, it seems more appropriate to opt for a combination of interventions affecting the entire sector. Indeed, it appears that while for CAADP and SDGs, focusing on crop production, fisheries and livestock is more effective in achieving the various targets by 2025 and 2030, intervention in the forestry sub-sector makes it easier to achieve the objectives of Agenda 2063.

Intervention strategies along the agricultural value chain can be classified into the following three categories. Upstream interventions or supply strategies aim to boost the production and supply of agricultural products through increasing agricultural productivity, improving technical efficiency and access to inputs through subsidies, and improving agricultural production infrastructure and equipment. Mid-stream interventions aim to improve post-production agricultural infrastructure and equipment in order to reduce post-production losses and facilitate the trade of agricultural products. Downstream interventions use instruments to drive demand for agricultural and food products. These include reducing the costs of intra-African trade, subsidizing consumer food prices and providing cash and in-kind transfers to poor households.

The simulation results were used to compute efficiency scores for achieving the different targets of the agendas studied. These results are presented in Figure 5.

Figure 5. Public Investment Effectiveness Score Along Agricultural Value Chain



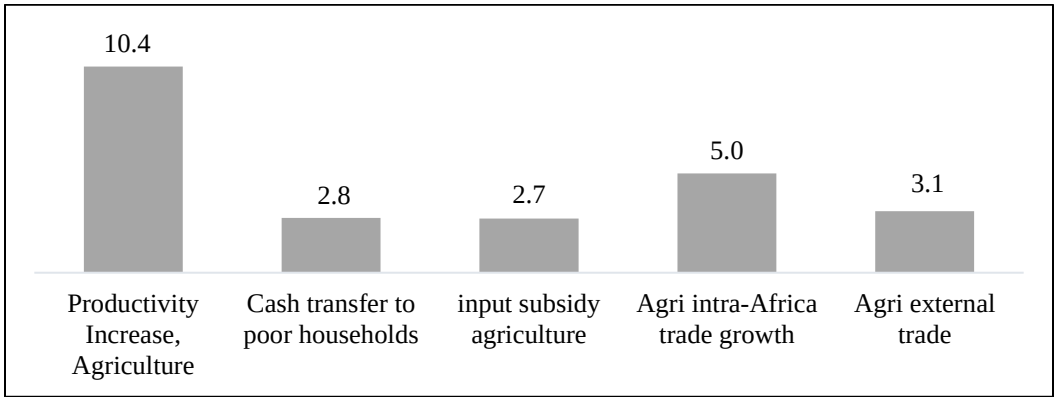
Source: Simulation results.
Note: Under External Financing Option.

Upstream interventions seem to be the most effective in Niger. These are mainly aimed at improving the sector's productivity (supervision and training of producers, technological innovations, etc.) and facilitating access to inputs through input subsidies. The results indicate that an increase in investment to improve productivity would result in a very high efficiency score for CAADP. In addition to this segment, input subsidies and cash transfers to poor households that could support demand for agricultural and food products are also effective instruments for achieving CAADP targets. With regard to the SDSs, focusing on productivity, input subsidies and demand support (producer price subsidies, intra-African trade facilitation, food price subsidies and cash transfers to poor households) can be effective in achieving the different targets. The results seem to give the same order of effectiveness with regard to Agenda 2063. Considering the efficiency score obtained along the value chain, upstream interventions seem to be the most effective, especially those aimed at improving productivity at the production level. Combined with demand support measures, these interventions could significantly improve efficiency scores and facilitate the achievement of targets by 2035.

The results of the simulations related to the identification of investment options analyzed above are used to develop an investment scenario for the National Agricultural Investment Programme (termed NAIP). Based on this scenario, we define the milestones for monitoring Niger's progress in meeting the targets set out in the CAADP, the SDGs and Agenda 2063. For each of these agendas, the determination of milestones can be useful for the results framework. Results in Figure 6 indicate that a combination of appropriate interventions along the agricultural value chain is needed. It appears that if a particular effort is to be made

in favor of supply, this must be combined with interventions in other segments of the agricultural value chain to ensure the sustainable development of the sector. Thus, the results indicate that Niger must, in its efforts to increase public spending, focus its interventions on both supply and demand. Particular attention should be paid to interventions aimed at boosting agricultural production with improved productivity. These actions must be accompanied by financing for access to inputs and the facilitation of foreign trade in general and intra-African trade in particular.

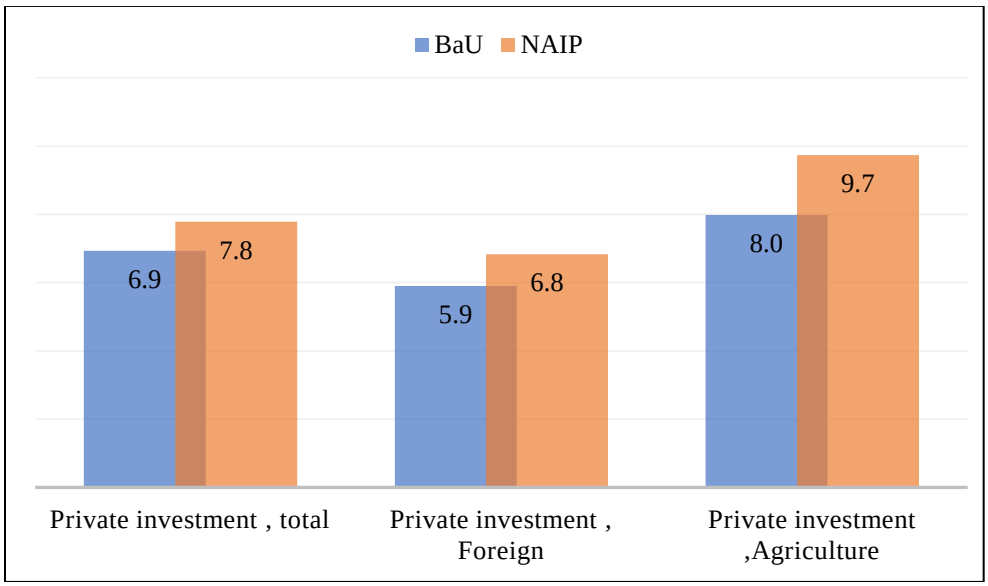
Figure 6. Public Agricultural Investment Priority Areas, Percent Point Public Investment Increase Compared to BaU



Source: Simulation Results

Similarly, increased spending on cash transfers to poor households can be useful in boosting demand for agricultural products and thus providing opportunities for producers in the sector. The combination of these public financing actions could thus create a favorable environment and make the Niger economy in general and its agriculture, in particular, more attractive for private investment. In fact, the increase in public agricultural expenditure could give an incentive signal to the private sector. This is confirmed by the results of the simulations as presented in Figure 7.

Figure 7. Percent Increase in Private Investment, Annual Average



Source: Simulation Results

The implementation of the NAIP would lead to an increase in total private investment in the Niger economy above that observed in the baseline scenario. This increase could be partly linked to the increase in foreign direct investment, the inflow of which is encouraged by the implementation of the NAIP. This leads to an increase in private investment in agriculture, which could increase by around 10 percent per year. The increase in public and private investment will have the effect of increasing productivity and production in the agricultural sector. Table 9 shows the potential impact of NAIP implementation on agricultural productivity and production growth.

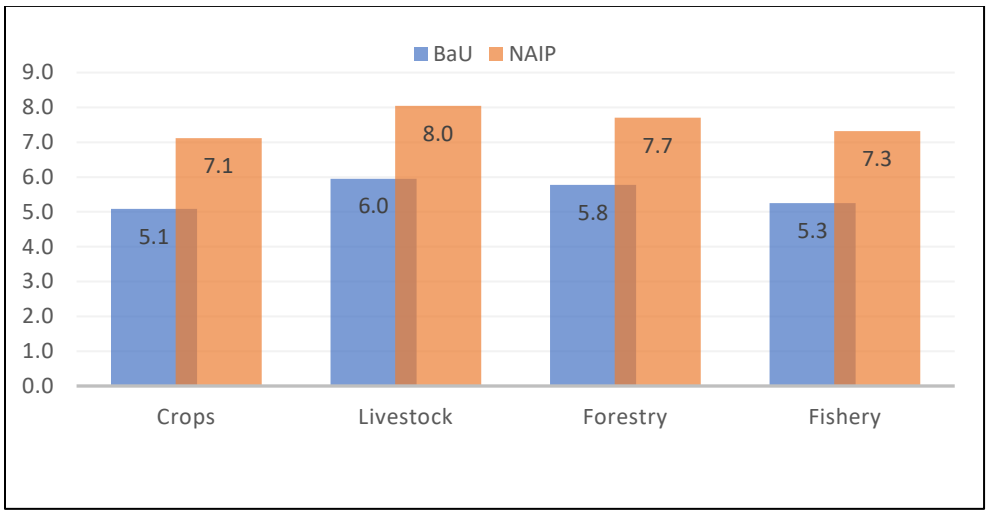
Table 9. Agricultural Productivity and Production Growth, Average Annual Growth (percent)

	BaU	**NAIP**
Cost of agricultural inputs	0.3	-3.3
Agricultural total factor productivity	0.2	1.3
Agricultural Production	5.4	7.4

Source: Simulation Results

It appears that the NAIP could generate positive results both in terms of reducing agricultural input costs and in terms of agricultural productivity and supply. According to the results presented in this Table 9, the implementation of the NAIP could reverse the upward trend in input costs, which could decrease by about 3 percent per year. Total factor productivity could increase by 1.3 percent per year leading to strong growth in agricultural production exceeding the performance observed in the reference scenario. This growth could be achieved in all agricultural sub-sectors as shown in Graph 8.

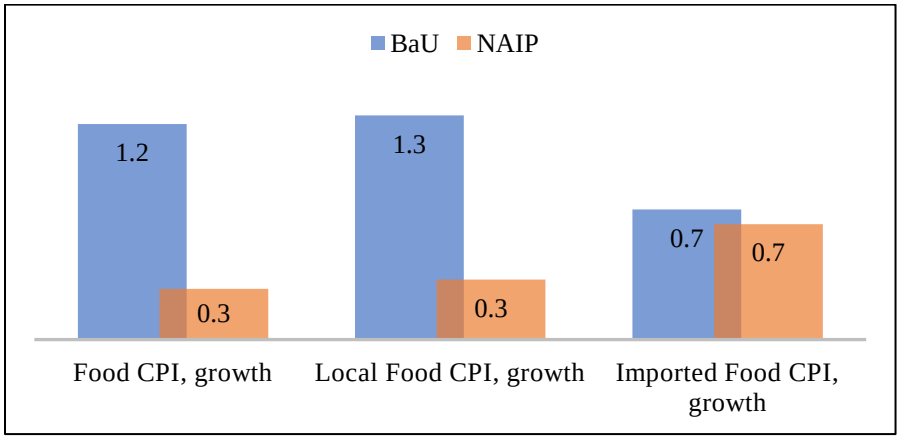
Figure 8. Agricultural Production Growth by Agricultural Sub-sector (percent)



Source: Simulation results

Individually, all sub-sectors could grow at a rate of more than 7 percent per year compared to an average annual growth rate of between 5 percent and 6 percent in the reference scenario. This increase in production could have significant consequences on the country's ability to ensure food security for the population through the control of consumer prices. Figure 9 below shows the potential impact of NAIP implementation on consumer prices.

Figure 9. Change in Food Prices, Annual Average (percent)

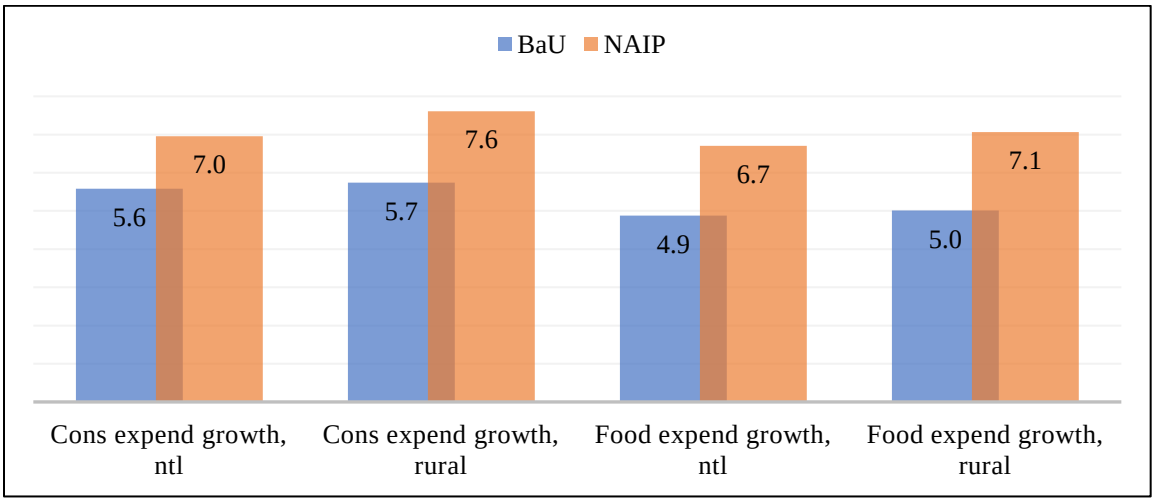


Source: Simulation Results
Note: CPI: Consumer Price Index.

The results indicate that the consumer food price index could be significantly below its level in the reference scenario. The same applies to the consumer price index for local food products. This result is to be linked to the increase in national agricultural production that could be induced by the NAIP. This is all the more plausible as the consumer price index for imported food products does not seem to show the same result.

Moderate increases in food prices could facilitate people's access to food and contribute to food security. Figure 10 shows the results of the food consumption simulations.

Figure 10. Increase in Income and Food Consumption Expenditure, Annual Average (percent)



Source: Simulation Results

With the implementation of the NAIP, Nigerien household consumption expenditure could increase at the national level by about 7 percent per year. This increase, which would exceed its level in the reference scenario, could be even more noticeable at the level of rural households. By limiting the analysis to food consumption expenditure, the same trend can be seen with a higher growth rate in rural areas than the national average.

The implementation of the NAIP is expected to help Niger achieve the multiple economic and social development objectives and targets resulting from its international commitments. These targets, which have been clearly identified in the CAADP, SDG and Agenda 2063 results frameworks, are analyzed by comparing them with the results of the simulations. Table 10 presents the results of the simulation of an NAIP implementation and their involvement in the objectives and targets of the CAADP.

Table 10. Progress towards Selected CAADP Goals, NAIP Scenario (Percent Cumulative 2015- 2025)

Goal	Result	Metric	BaU Progress	NAIP Progress	CAADP Target
Increase in Agriculture Investment	Increase in Agricultural Public Investment	Public Agricultural Investment, Share of Total Public Investment	10.9	21.3	10.0
	Increase Agricultural Private Investment	Private Agricultural Investment	132.8	178.0	>
End Hunger	Increase Agricultural Productivity	Total Factor Productivity Agriculture	2.0	15.8	100.0
		Agricultural Labor Productivity	22.6	41.3	100.0
	Increase Consumption of Locally Produced Food	Consumption Locally Produced Food, Ratio Total Food Consumption	-0.7	0.4	>
	Reduction Extreme Income Poverty	Poverty Headcount Index, Food poverty line, Change (percent)	-2.2	-48.0	-95.0
Halve Poverty	Accelerate Agricultural Growth	Agricultural GDP, Annual Growth	5.2	6.7	6.0
	Achieve Agriculture-led Poverty Reduction	Agricultural contribution to GDP Growth	27.6	31.0	50.0
	Reduction Income Poverty	Poverty Headcount Index, National poverty line	-2.3	-41.1	-50.0
Boost Intra-African Agricultural Trade	Increase Intra-Africa Agricultural Trade	Intra-Africa Imports and Exports of Agricultural and Food Commodities	46.6	146.1	200.0

Source: Simulation Results.
Note: Unless otherwise noted, values shown are cumulative growth rates from 2015 to 2025. Values for "Agricultural Share Public Investment" and "Agriculture Contribution to GDP Growth" denote average annual shares. Values for "Agricultural GDP, Annual" refer to average annual growth rates.
Green indicates that the goal is met (> 90 percent); yellow indicates that much progress is made toward the goal (>50 percent and 90 percent); orange indicates that little progress is made toward the goal (>10 percent and 50 percent); red indicates that very little progress is made toward the goal (10 percent or less); grey indicates that data are not available to assess the progress towards the target. For directional goals, i.e. goals without a numeric target, the progress is assessed against the initial value.

Before the Malabo Declaration, Niger allocated a significant share of public spending on agriculture. However, in recent years, its share of the sector had declined significantly. The implementation of the NAIP is expected to result in an increase in government spending on agriculture and a resulting increase in agricultural investment. Thus, Niger could easily exceed the minimum threshold of 10 percent of government spending on the sector. This renewed interest from the government will be a signal to the private sector to invest in agriculture. The attraction thus created would enable Niger to significantly increase private agricultural investment and comply with CAADP objectives in this area. Increased private and public investment would contribute to improving the productivity of the sector. However, progress may not be sufficient to enable Niger to double productivity, regardless of the indicator used to measure

productivity. Indeed, neither total factor productivity nor the volume of product per agricultural worker could double, despite the implementation of the NAIP. Increased investment and improved productivity could lead to a sufficient level of agricultural GDP growth to enable Niger to reach the target of 6 percent per year. However, neither the target for the sector's contribution to global GDP nor the reduction of poverty by half will be within Niger's reach despite the progress made. Similarly, the implementation of the NAIP will lead to a significant increase in intra-African trade in agricultural and food products without being able to triple the volume of products traded.

Table 11 presents Niger's performance results with the implementation of the NAIP in relation to the objectives and targets defined by the United Nations in the context of the SDGs. As mentioned above, the analysis focused on a few SDGs with specific quantitative targets.

Table 11. Progress towards Selected SDGs, NAIP Scenario (Percent Cumulative 2015-2030)

Goals	Result	Metric	BaU Progress	NAIP Progress	SDGs Target
Halving poverty (Goal 1)	Eradicate extreme poverty	Proportion of population below the international poverty line of $1.90 a day PPP	-3.0	-55.0	-95.0
	Reduce at least by half the proportion of the population living in poverty	The proportion of the population living below the national poverty line	-3.1	-51.5	-50.0
End hunger (Goal 2)	Double the agricultural productivity and incomes of small-scale food producers	The volume of agricultural production per labor	38.6	47.5	100.0
Sustainable economic growth (SDG 8)	Sustain per capita economic growth	The annual growth rate of real GDP per capita	50.1	71.6	>
		The annual growth rate of real GDP	6.8	7.7	7.0
		The annual growth rate of real GDP per employed person	54.3	75.7	>
	Achieve full and productive employment and decent work	Average hourly earnings	108.0	140.1	>
		Unemployment rate, change	0.2	0.0	<6
Inclusive and sustainable industrialization (SDG 9)	Promote inclusive and sustainable industrialization	Manufacturing value added as a proportion of GDP and per capita	4.6	-8.8	100.0
		Manufacturing employment as a proportion of total employment	29.9	23.6	100.0
Reduce inequality (SDG 10)	Adopt policies, especially fiscal, wage and social protection policies, and progressively achieve greater equality	Labor earning share of GDP	-20.8	-20.7	>

Source: Simulation Results

Note: Unless otherwise noted, values shown are cumulative growth rates from 2015 to 2030. Values for "GDP, Annual Growth" refers to average annual growth rates. Values for "Unemployment rate" are reported for the specific year, i.e. they are not cumulative.

Green indicates that the goal is met (> 90 percent); yellow indicates that much progress is made toward the goal (>50 percent and 90 percent); orange indicates that little progress is made toward the goal (>10 percent and 50 percent); red indicates that very little progress is made toward the goal (10 percent or less); grey indicates that data are not available to assess the progress towards the target. For directional goals, i.e. goals without a numeric target, the progress is assessed against the initial value.

The implementation of the NAIP could lead to significant progress for Niger, in relation to some of the SDGs. Indeed, the results indicate that the country could achieve the targets related to SDG8. This objective, which is linked to sustainable economic growth, would have an economic growth rate above the target of 7 percent per year with an appreciable performance in terms of productivity. This performance could result

in an improvement in hourly wages and a decrease in unemployment. The increase in per capita income and income per employee could lead to a significant reduction in the poverty rate so that Niger would be able to reduce poverty by half by 2030. However, on other objectives, this progress will not be sufficient to meet the targets set by the United Nations.

Table 12 presents the progress of the Nigerian economy in relation to the objectives and targets of Agenda 2063.

Table 12. Progress towards Selected Objectives of Agenda 2063, NAIP Scenario (Percent Cumulative 2015-2025)

Goal	Result	Metric	BaU Progress	NAIP Progress	Agenda 2063 Target
Poverty, inequality, and hunger	Poverty Reduction	The proportion of population below the international poverty line of $1.90 a day PPP	-4.8	-69.0	**-95.0**
		Proportion of population living below the national poverty line	-4.5	-65.4	**-95.0**
	Hunger Eradication	Food Import Dependency Ratio	33.8	-16.5	**-70.0**
	Inequality Reduction	Rural-to-Urban Income Ratio	18.2	38.0	**50.0**
Incomes, jobs and decent work	Employment and Incomes	Unemployment Rate	0.1	0.0	**6.0**
		Per Capita Income Growth	81.5	120.7	>
Sustainable and inclusive economic growth	Inclusive Economic Growth	GDP, Annual Growth	6.8	7.7	**7.0**
	Intra-African Trade	Value of intra-Africa Trade	221.9	333.6	**120.0**
Agricultural productivity and production	Productivity Growth	Agricultural TFP	4.1	34.1	**500.0**

Source: Simulation Results

Note: Unless otherwise noted, values shown are cumulative changes from 2015 to 2035. Values for "GDP, Annual Growth" refers to average annual growth rates. Values for "Unemployment rate" are reported for the specific year, i.e. they are not cumulative.

Green indicates that the goal is met (> 90 percent); yellow indicates that much progress is made toward the goal (>50 percent and 90 percent); orange indicates that little progress is made toward the goal (>10 percent and 50 percent); red indicates that very little progress is made toward the goal (10 percent or less); grey indicates that data are not available to assess the progress towards the target. For directional goals, i.e. goals without a numeric target, the progress is assessed against the initial value.

With the implementation of the NAIP, Niger would be able to achieve some of the targets of Agenda 2063 with significant progress on others. According to the results of the simulations, the country would be able to meet the targets for income improvement and job creation for decent work. In doing so, proper implementation of the NAIP could reduce the unemployment rate to below 6 percent with a significantly higher growth rate in per capita income. Similarly, Niger could achieve inclusive and sustainable growth by exceeding the 120 percent target set for intra-African trade. This performance would occur in a context

of strong economic growth above the 6.8 percent target. While total factor productivity would improve, the country would not be able to meet the target by 2035. Economic growth and the creation of decent jobs would enable Niger to significantly reduce poverty and inequality but not sufficiently so to achieve the various targets. Increased agricultural production could reduce the country's dependence on food imports. However, Niger could not meet the target in this regard.

5. **Conclusions**

Niger has signed on to the Malabo Declaration and its principles and commitments. By doing so, Niger has committed itself to promote strong and inclusive agricultural growth through devoting at least 10 percent of public spending to the agricultural sector with a view to achieving at least a 6 percent agricultural growth rate per year. In addition to this challenge for agriculture, Niger also intends to achieve the SDGs and objectives set in Agenda 2063.

These African and international agendas and commitments all aim to promote sustainable and inclusive economic growth, poverty and inequality reduction and hunger eradication. Considering the large number of obligations arising from these commitments and the multiple objectives and targets pursued, the implementation, monitoring, and evaluation of the various policies remain major challenges for the country. To overcome this issue, the study has combined two analytical tools to assess Niger's progress for the different agendas. With a results framework for 2025, 2030 and 2035 corresponding respectively to CAADP, SDG and Agenda 2063, this study developed a CGE model combined with a microsimulation model to measure Niger's progress.

The simulations results indicate that under the BaU scenario, Niger could only achieve a very limited number of the objectives and targets of the different agendas. The implementation of the NAIP would boost investment in both the public and private agricultural sectors. Simulation results indicate that Niger could return to historical levels of public agricultural spending and significantly exceed the CAADP 10 percent threshold. This increase could strengthen private sector confidence and the attractiveness of the agricultural sector so that the level of private investment could increase significantly.

However, increased public and private investment will not allow the country to achieve all CAADP targets by 2025. Among other factors that could explain this, it appears that productivity progress could be relatively low, far from the 100 percent increase targeted in the CAADP. While NAIP's efforts will help achieve the target of 6 percent agricultural growth per year, the objective of halving poverty will not be achieved, despite the progress the country may make. With a longer horizon and continued efforts in the agricultural sector, Niger could more easily achieve some of the SDGs set by the United Nations by 2030. The implementation of the NAIP could enable Niger to achieve SDG8 with significant progress on SDG1 and SDG2. In particular, Niger could reduce the poverty rate by half by 2030. The economic progress

induced by the NAIP could make it possible to achieve some Agenda 2063 objectives such as inclusive and sustainable growth and employment and decent work creation. In terms of reducing poverty and hunger, the country will not be able to meet the targets. However, it could make significant progress, even if dependence on food imports still remain one of the country's challenges.

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