NIGER ECONOMIC UPDATE APRIL 2022

Resilience in Uncertain Times: Investing in Human Capital

THE WORLD BANK
IBRD • IDA | WORLD BANK GROUP

© 2022 International Bank for Reconstruction and Development / The World Bank

Some rights reserved. This work is a product of the staff of The World Bank with external contributions. The findings, interpretations, and conclusions expressed in this work do not necessarily reflect the views of The World Bank, its Board of Executive Directors, or the governments they represent. The World Bank does not guarantee the accuracy of the data included in this work. The boundaries, colors, denominations, and other information shown on any map in this work do not imply any judgment on the part of The World Bank concerning the legal status of any territory or the endorsement or acceptance of such boundaries. Nothing herein shall constitute or be considered to be a limitation upon or waiver of the privileges and immunities of The World Bank, all of which are specifically reserved.

Rights and permissions

This work is available under the Creative Commons Attribution 3.0 IGO license (CC BY 3.0 IGO) http://creativecommons.org/licenses/by/3.0/igo. Under the Creative Commons Attribution license, you are free to copy, distribute, transmit, and adapt this work, including for commercial purposes, under the following conditions:

Attribution: Please cite the work as follows: World Bank. 2022. Niger Economic Update - April 2022. *Resilience in Uncertain Times: Investing in Human Capital*. Washington, D.C.: World Bank.

Third-party content: The World Bank does not necessarily own each component of the content contained within the work. The World Bank therefore does not warrant that the use of any third-party-owned individual component or part contained in the work will not infringe on the rights of those third parties. The risk of claims resulting from such infringement rests solely with you. If you wish to re-use a component of the work, it is your responsibility to determine whether permission is needed for that re-use and to obtain permission from the copyright owner. Examples of components can include, but are not limited to, tables, figures, or images. All queries on rights and licenses should be addressed to World Bank Publications, The World Bank, 1818 H Street NW, Washington, D.C., 20433, USA; e-mail: pubrights@worldbank.org.

Resilience in Uncertain Times: Investing in Human Capital

NIGER 2022 ECONOMIC UPDATE[1]

APRIL 2022

1 Prepared by Paolo Di Lorenzo (Senior Economist, EAWM1), Blaise Ehowe Nguem (Economist, EAWM1), Aboudrahyme Savadogo (Economist, EAWPV), Aissatou Ouedraogo (Economist, EAWPV) and Marc-Francois Smitz (Consultant, HAWH2), under the guidance of Yue Man Lee (Lead Economist, EAWM1), Jean-Pierre Chauffour (Program Leader, EAWDR), and overall supervision of Theo David Thomas (Practice Manager, EAWM1) and Johan Mistiaen (Practice Manager, EAWPV). The team received helpful support and inputs from Christophe Rockmore (Practice Leader, HAWDR), Laurence Elisabeth Marie-Paule Lannes (Senior Health Economist, HAWH2) and Cedric Ndizeye (Senior Health Specialist, HAWH2). The team appreciated comments from Marco Hernandez (Lead Economist, EAWM2), Tobias Haque (Lead Economist, ESAMU) and Moulay Driss Zine Eddine El Idrissi (Lead Economist Health, HECHN), and Clara de Sousa (Country Director, AWCW3).

CONTENTS

FIGURES, BOXES, AND TABLES

EXECUTIVE SUMMARY

After a COVID-19 related growth slowdown in 2020, Niger's economic recovery was hit by a series of climate and security shocks in 2021 that deteriorated many economic and social indicators. Unlike most countries in the region, Niger showed some resilience in 2020 and avoided an economic recession. GDP growth reached 3.6 percent driven by a strong agriculture production. However, the economic recovery that was underway in early 2021 was hit hard by a severe drought and a surge in insecurity. Cereal production collapsed by 38 percent in the fall of 2021 due to disruptions to rainfall cycles in certain areas, infestation of several crops by parasites, and deadly terrorist attacks in rural areas. The situation of insecurity worsened as the country experienced 335 violent events in 2021, creating significant economic disruption, including reduced agricultural production and productivity.

As a result, GDP growth decelerated to 1.4 percent in 2021, which translated into a per capita GDP contraction of 2.3 percent. The combination of poor agriculture supply and shrinking per capita income left more than 2.5 million people (10 percent of the population) in a situation of food insecurity. Average annual inflation accelerated to 3.8 percent in 2021 fueled by rising food prices at 7.8 percent (particularly cereals at 16.8 percent). Increased fiscal spending to support the recovery and to address the food and security crises further widened the fiscal deficit to 6.6 percent of GDP. Niger's public debt is estimated to have increased to 52.3 percent of GDP in 2021, but to remain at a moderate risk of debt distress.

Gains in the fight against poverty prior to the COVID-19 pandemic have been reversed. The 2.3 percent decline in per capita GDP in 2021 resulted in an increase of 1.4 percentage points in the international extreme poverty rate (US$1.90/day per capita, 2011 PPP) to 41.8 percent in 2021. As a result, the number of extreme poor rose from 9.8 million, to 10.5 million.

Amidst very high uncertainty and multiple downside risks, growth is expected to resume in 2022. Economic growth in 2022 is projected at 5.2 percent. This forecast hinges on several positive developments, particularly the return to an average agriculture season and a gradual improvement in the security situation. In the medium-term, with the looming oil production boom, growth is expected to accelerate to reach more than 10 percent in 2024. However, per capita income is not expected to quickly catch-up with its pre-pandemic trend. Poverty is expected to decline by 0.8 percentage points to 41.0 percent in 2022. Due to the rapid population growth (3.8 percent during the period 2022-2024), the number of poor is expected to increase by an additional 200,000 to 10.7 million in 2022. Against this background, a strong commitment to far-reaching economic reforms is paramount to sustainably lift the productivity rate of the economy, while enhancing crisis preparedness to recurrent shocks would help to improve resilience, reduce growth volatility and protect livelihoods.

The COVID-19 pandemic and climatic and security crises have taken a toll on Niger's health indicators. A significant and increasing proportion of the Nigerien population lives with impaired health. Niger underperforms particularly on infant health, infant mortality and child stunting rates. The difference between actual life expectancy in Niger and healthy life expectancy has progressively increased to 7.4 years in recent years, reflecting the lack of progress in healthy life expectancy. Niger's ratio of health workers is among the lowest in the world. Moreover, large spatial differences in access to services contribute to low health-care outcomes.

A combination of low domestic financing, inefficiency and inadequate policy priorities explains why Niger has failed to bring per capita health spending to the levels observed in the region. Niger's health expenditure reaches only US$31.4 per inhabitant per year, well below the average level for SSA (US$ 109). Domestic resource mobilization for health amounts to a meagre US$11 per capita, which is significantly lower than in other SSA countries (US$35). It also displays an inefficient pattern marked by phases of expansion followed by contraction. Development partners' contribution (US$4.8 per capita) is also lower by SSA (US$13.4) standards. Nigerien's out-of-pocket (OOP) payments for health makes for the difference, which amount to nearly half of total health expenditure, with significant adverse effects on poverty and access to service. Per capita government health expenditure increased by 175 percent over the last 19 years, mainly on account of the growing size of the government. The share of health in the budget has been hovering around 10 percent, with no upward trend.

Reestablishing public health priorities and resuming economic growth are essential prerequisites to sustainably fund an increase in health spending for better health outcomes. The 2020 World Bank Public Expenditure Review estimated that greater efficiency in the use of the resources spent on health care could increase life expectancy by 4 years. One source of inefficiency stems from the imbalance between the human resources and infrastructure: the density of qualified practitioners is at the very bottom of the international ranking, while in terms of beds per capita, Niger has twice the LIC average, though they are under-used. The geographical imbalance also has efficiency consequences: health providers in hospitals see very few patients, while health post and health center staff have a much larger caseload. Overall, redirecting health financing towards improvement of the primary health care and human resources could bring large gains in health and service coverage within the same budgetary envelope. However, the prioritization and efficiency of health expenditures are key strategies, but with finite possibilities. In the long run, only economic growth can enlarge these possibilities provided that major growth bottlenecks (such as informality, gender gaps, weak business environment) are tackled and that the resilience to shocks is enhanced.

Summary Table 1 Policy options to strengthen macro-fiscal sustainability, reduce poverty and vulnerability, and strengthen the healthcare system

Area	Objective	Actions
Macro-Fiscal Sustainability and Poverty Reduction	Accelerate crisis preparedness	• Introduce the groundwork for a crisis risk management (CRM) law clarifying the institutional roles and responsibilities for disaster risk management at the sectoral and territorial (central, regional, departmental and municipal) levels, aiming to address the overlap and fragmentation of the various existing competencies among several ministries and administrative authorities
	Strengthen domestic revenue mobilization	• Establish a transparent and effective management of oil revenues by establishing a fiscal stabilization fund and strengthening legislation enforcing fiscal discipline around usage of windfall resource rents • Implement tax policy and administrative measures to expand the non-oil tax base, including the rationalization of tax exemptions, simplify the tax system to encourage compliance, and complete the integration of the digital platform between tax and customs administrations
	Mitigate food insecurity	• Consider opening new food banks and strengthening existing ones, providing them with relevant types of cereals
	Revamp the microfinance sector	• Ensure the full operationalization of the financial inclusion fund • MFI network affiliation system should be set-up to support the redress of MFIs deemed viable
Improving Human Capital Through a Stronger Healthcare System	Expand health and service coverage	• Redirect new health financing towards improvement of the primary health care, of the referral system and human resources
	Improve efficiency of health sector	• Explore implementation of a system of transportation of medical staff and/or patients • Rectify the imbalance of human resources and infrastructure

1 MACROECONOMIC AND POVERTY DEVELOPMENTS

1.1 Recent economic and poverty developments

Real sector

Economic growth decelerated sharply in 2021, marking the worst growth performance in Niger since 2004. Unlike many fragile countries, Niger avoided a recession in 2020[2]. However, what seemed a promising recovery toward the pre-pandemic growth trend turned out to be an even weaker year than 2020, with growth falling from 3.6 percent to 1.4 percent. The underperformance is explained by the deterioration of the agricultural sector, particularly cereal production, which has been affected by poor rainfall, especially in the month of September. However, the performance of the services sector, which benefited from the reopening of borders and the expansion of the public sector, and the dynamism of activities in the secondary sector, linked to infrastructure investment, has compensated the drop in agricultural production. The growth slowdown resulted in a decline in GDP per capita of 2.3 percent in 2021, compounding the decline of 0.3 percent already recorded in 2020 and bringing GDP per capita down to below the level observed in 2019 (in real terms).

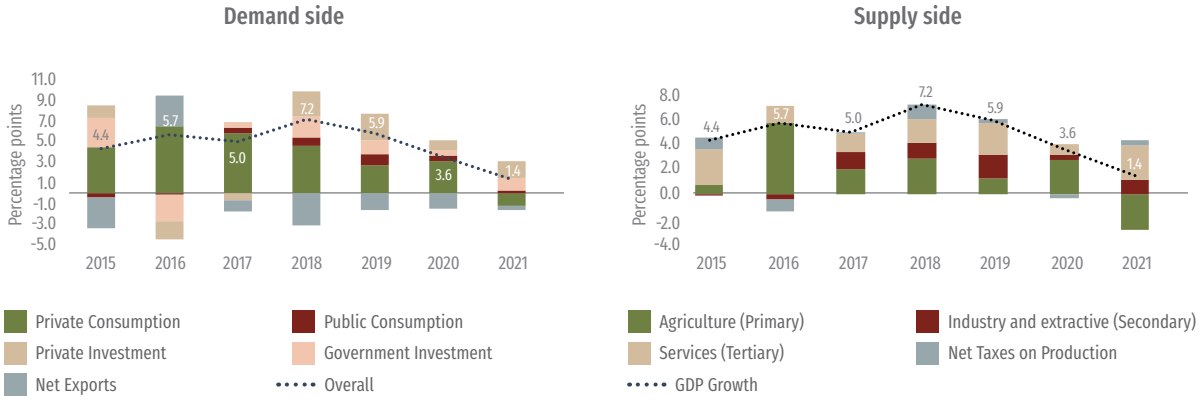
The 2.3 percent decline in per capita GDP in 2021 resulted in an increase of 1.4 percentage points in the international extreme poverty rate (US$1.90/day per capita, 2011 PPP) to 41.8 percent in 2021. As a result, the number of extreme poor rose from 9.8 to 10.5 million. Data from high frequency phone surveys indicated that 40 percent of households experienced an income loss during the pandemic. Furthermore, higher food inflation would have impacted poor households as 40 percent of Nigerien households are net food buyers and food represents 58 percent of their consumption basket.

Low cereal production due to insufficient rainfall has led to a significant decline in the agricultural sector. In 2021, production of the main cereals (millet, sorghum, corn, fonio and rainfed rice) is estimated at 3,497,696 tons, which is 38 percent lower than in 2020 and 39 percent lower than the 2016-2020 five-year average (see Box 1). The underperformance of the cereal sector, which spills over to other sectors such as livestock, has led to a 7.9 percent decline in agricultural production, and a negative contribution of 2.9 percentage points to GDP growth, compared with a positive contribution of 2.7 percentage points in 2020 (Figure 1.1). This deficiency has left more than 2.5 million people (around 8 percent of the population) in a situation of food insecurity. This decline in production, which has affected several localities, can be explained by rainfall deficits of more than 78 percent, infestation of several crops by parasites, and insecurity. See Box 1 for further details.

2 Di Lorenzo,Paolo; Tsimpo Nkengne,Clarence; Yogo,Urbain Thierry. *Niger Economic Update: Maximizing Public Expenditure Efficiency for Rebuilding Better (English)*. Washington, D.C.: World Bank Group. http://documents.worldbank.org/curated/en/754211626237332699/Niger-Economic-Update-Maximizing-Public-Expenditure-Efficiency-for-Rebuilding-Better

The secondary and service sectors have benefited from the reopening of borders. Growth in the industry sector rebounded to 5.4 percent following the dynamism of activities in construction but also in the water and energy subsectors. Oil and gas production increased by 2.4 percent, gold mining expanded by 31.1 percent, while the production of uranium continued to decline by 29.6 percent as a result of the closure of some major mines that are running out of reserves (such as Akouta) and the delay in the development of other mining projects. The reopening of borders and the relaxation of COVID-19's containment measures boosted service sector activities (+7.7 percent), especially trade, hotel and tourism sub-sectors in contrast to last year when these sub-sectors were affected by COVID-19 related border closures and lock-down measures.

Figure 1.1 GDP growth has been on a declining trend since 2019, reflecting agricultural volatility



Source: *INSN and World Bank staff estimates*

Investments (public and private) supported domestic demand and contributed to economic growth offsetting the decline in private consumption. Infrastructure and oil exploitation and transport related investments remain the main drivers on the demand side of growth in 2021 with a 2.8 percentage points of GDP contribution (Figure 1.1). Due to the poor agricultural production and high food prices, private consumption, the traditional driver of growth during a decade, declined and contributed negatively to growth in 2021. Despite the reopening of borders, net exports contributed negatively to growth due to the rapid increase of imports to compensate for lower production internal demand.

Box 1 Agricultural production, food prices and food insecurity in 2021

The 2021 agriculture season assessment had a production deficit. The postharvest cereal production is estimated at 3,562,549 tons against 5.576.371 tons production in 2020, a 38 percent decrease of production compared to 2020. Fodder production is also showing a decrease of 46 percent compared to the 2020 season. This situation is attributable to a combination of climate related events such as (i) late start of the rainy season (some regions started planting mid -July instead of late June) and an abrupt stop of the rains at the critical grain maturity of most crops and fodder plants; (ii) cases of inundations and pests which affected the farms. Another cause is insecurity, and recurrent attacks by armed groups presumed to be non-state actors, especially in Tillabery and North Tahoua regions, targeting farmers and civilians, coupled with theft, and looting of foodstuffs, which have led to the abandonment of farms and villages, with a major impact on production.

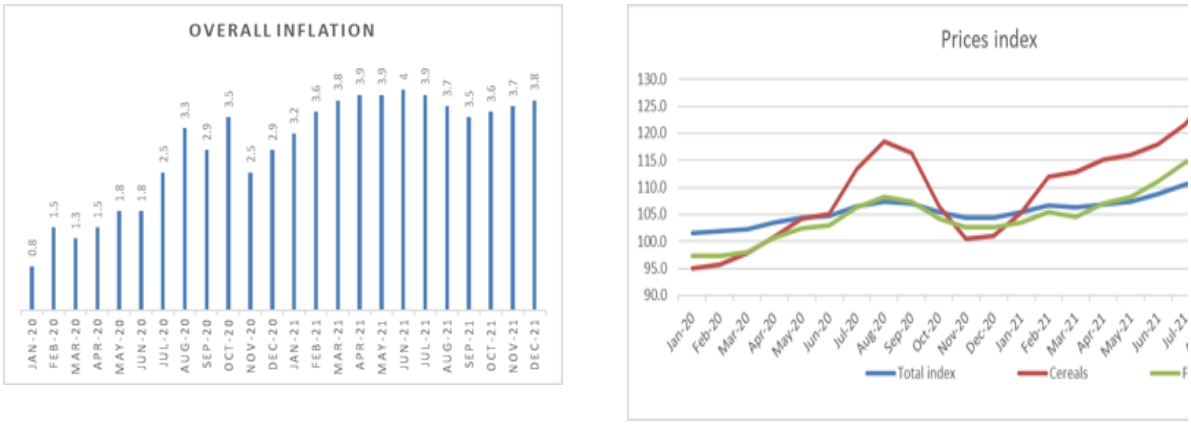
Prices monitoring data show an increase in prices for staple crops compared to 2020. The national price monitoring system is showing an increase in the average prices of cereals compared to last year (23 percent for millet, 24 percent for sorghum and 19 percent for maize). In addition to the internal supply shock, the security situation in Northern Nigeria and a food export ban from some neighboring countries (Burkina Faso) also contributed limit the import of cereal and contribute to the increase of food price in 2021.

Lower/disrupted food supply and higher prices together have led to significant food insecurity challenge. Data from the November Harmonized Frameworks (Cadre Harmonisé (CH)) are showing an unprecedent number of people at risk of food insecurity: According to the West Africa and Sahel Harmonized Framework latest food security monitoring report (November 2021), 2,554,833 people in Niger are at risk of food insecurity, and projection of 3,616,2444 people during the 2022 lean season between May and August 2022, an increase of 56 percent from 2021. To respond to the emergency, the Government of Niger has prepared a support plan costed at the US$484.8 million (3.4 percent of GDP in 2022) focusing on short to medium term intervention. Planned activities include (i) mitigation operations like cash and food for work and emergency response (targeted free distributions, price controls of cereals); (ii) management and prevention of malnutrition; (iii) protecting livelihoods of rural agricultural and pastoral household affected by a crisis; and (iv) multi-year social safety net programs.

Prices, Monetary and Financial Sector

Increased tension on the food market during the year led to a build-up of inflationary pressures during 2021. The inflation trend observed in the beginning of 2021 continued until December, with month-on-month inflation reaching 4.9 percent by end-December, driven by rising food prices (9.7 percent), which in turn were high due to the increase in prices of artisanal non-alcoholic beverages (10.0 percent), pulses and oilseeds (9.9 percent), and unprocessed cereals (4.3 percent) (Figure 1.2). As a result, the overall annual average inflation rate stood at 3.8 percent in 2021, compared with 2.9 percent in 2020. This was above the maximum standard of 3 percent set by the WAEMU Commission. Annual average inflation for food was 7.8 percent, while that of cereals reached 16.8 percent (resulting from the drop in cereal production and the suspension of cereal exports by neighboring countries and Niger's main suppliers).

Figure 1.2 Inflation spiked in 2021, driven by cereal prices



Source: *NIS*

While the performance of the banking sector remained stable, the situation of the microfinance sector continued to deteriorate. As of December 2020, Niger complied with prudential indicators. The liquidity coefficient and the minimum solvency ratio performed better than the WAEMU average level. In addition, non-performing loans (NPLs), although high, declined to 9.75 percent in 2020 compared to 15 percent in 2019. However, as of June 2021, NPLs had slightly increased to 12.3 percent. The slowdown in economic activity following the outbreak of the COVID-19 pandemic further undermined the microfinance sector by reducing the quality of its assets which were already in a dire situation. The NPLs of micro-finance institutions (MFIs) have increased at an alarming rate since 2019. According to the Central Bank, the ratio increased from 13.1 percent in 2019 to 42.7 percent in 2020 and reached 98 percent as of June 2021.

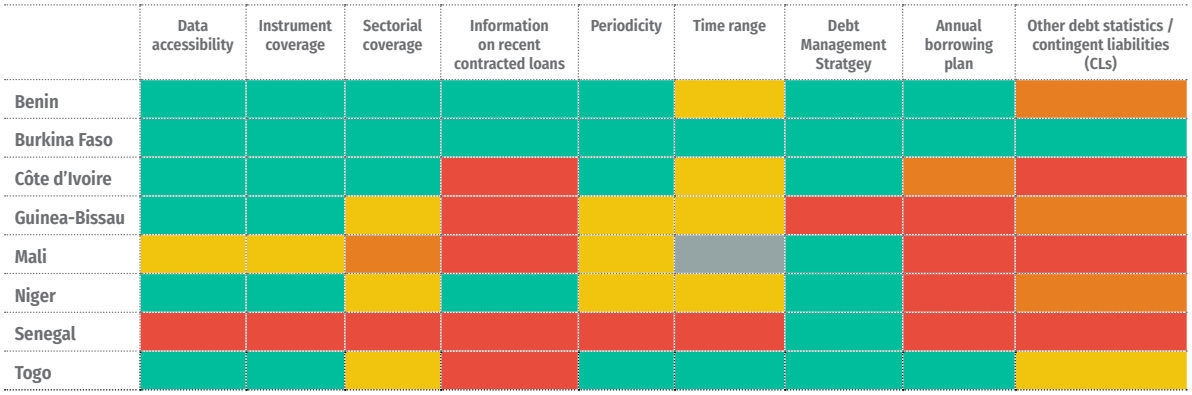
The government has started a process of restructuring the microfinance sector. The development of the microfinance sector in Niger is hampered by several capacity shortcomings, including limited technical expertise, weak governance systems and low transparency levels in lending operations. As part of Niger's revised 2019-2023 strategy for inclusive finance (NFIS), the government of Niger developed a plan to restructure and clean up the microfinance sector. The plan entailed the set-up of a financial inclusion fund to rebuild confidence in local microfinance institutions (notably by providing technical assistance to MFIs, fostering transparency and by providing the financial resources required to expand MFI loan portfolios). A Development Fund for Financial Inclusion (FDIF) was set up in 2020. In July 2021, development partners and the government of Niger pledged over US$150 million to support the implementation of the NFIS strategy (including the operationalization of the FDIF), starting from the restructuring of the microfinance sector.

Fiscal Sector and Debt

In 2021, fiscal policy remained accommodative and focused on sheltering the economy from various shocks and was financed by abundant concessional funding and increased reliance on domestic borrowing. Priority was given to implementing economic recovery actions in response to the socioeconomic impact of the COVID-19 pandemic, the deteriorating security situation and the food emergency. The fiscal deficit widened from 5.4 percent of GDP in 2020 to 6.6 percent in 2021 despite a recovery in tax revenues. Current spending increased by 0.6 percentage points of GDP in 2021 due to an increase in the wage bill (10 percent) and larger transfers (25 percent). Gross financing needs reached US$2 billion or around 13 percent of GDP. Substantial concessional borrowing was offered by the World Bank (US$250 million, half of which disbursed as a grant) and from the IMF (US$62 million). Moreover, the Government used half of the general SDR allocation made available by the IMF in August 2021, equivalent to around US$88 million. Starting from a low level in 2020, domestic financing picked up to 4.5 percent of GDP, benefiting from favorable market conditions, with yields for short maturities (1 and 2 years) moving down by around 100 bps.

Significant improvements have been made in debt management and transparency. Public debt management capacity and transparency has significantly improved in 2021 thanks to several efforts from the authorities with the support of the World Bank's Sustainable Development Financing Policy (SDFP). A 3-year Medium Term Debt Strategy was published in April 2021 and updated in October 2021, alongside the Budget Law, promoting external concessional borrowing while seeking an extension of the maturities on the domestic market. The government also published for the first time an annual report on public debt (available online) and approved a comprehensive regulatory reform of the state-owned enterprises (SOEs) to strengthen their capacity to monitor and manage fiscal risks. Such progress has translated into a reduction of the gaps vis-à-vis regional peers, as reflected in the World Bank's January 2022 debt transparency heat map (see Figure 1.3).

Figure 1.3 Debt Transparency heatmap in WAEMU countries

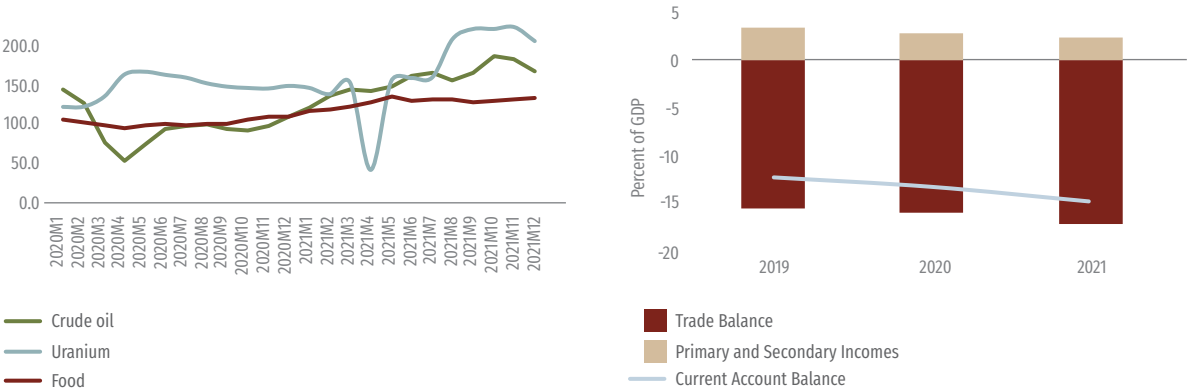


Source: *World Bank Debt Reporting Heat Map January 2022*

External Sector

Despite more favorable terms of trade in the energy sector, the external position widened in 2021 in line with the above mentioned accommodative fiscal and monetary policies. The current account deficit is estimated to have widened by 1.7 percentage points of GDP in 2021 to reach 14.9 percent of GDP (Figure 1.4). Imports increased by 1.3 percent of GDP with a significant increase in food imports (in line with a lower agriculture production) and a resumption of the import of equipment for oil and gas projects and associated freight expenditure. On the export side, the collapse in agricultural production prevented Niger from gaining the full benefit from the reopening of the Nigeria border, while uranium production contracted (falling from 2 to 1 percent of GDP despite favorable world prices) after the closing of the Akouta mining site. The recovery in direct and portfolio investments from the collapse in 2020 has not prevented the overall balance of payments from remaining negative, causing a further drop in Niger's net foreign assets holdings at the BCEAO.

Figure 1.4 The uranium prices boom has not prevented further degradation of the trade balance



1.2 Economic Outlook and Risks

Short term outlook and risks

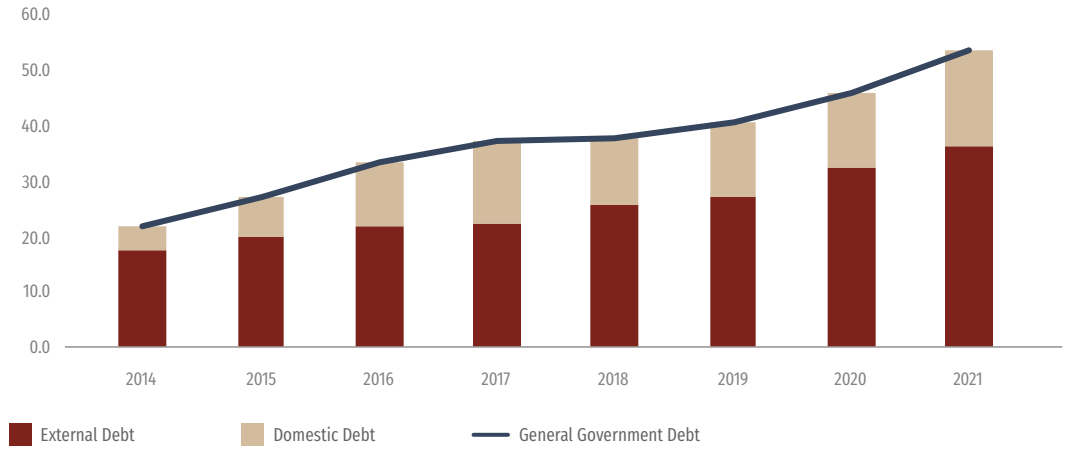
Economic growth is projected to pick up in 2022; however, income per capita is expected to stay below its pre-pandemic trend. The baseline projection for economic growth in 2022 is 5.2 percent. However, real GDP per capita will still be 1.3 percentage points below the level attained 2019. Inflation is set to overshoot the WAEMU target of 3 percent as food and energy prices will be severely affected by the consequences of the Russia-Ukraine war. This forecast hinges upon several positive developments, particularly in the agricultural sector, which is expected to grow according to the average agricultural campaign in absence of new climatic shocks, and on an improvement in the security situation.

Extreme poverty is expected to decline slightly to 41 percent in 2022 (using the international poverty line of US$1.9 a day, PPP terms) from 41.8 percent in 2021 as growth, particularly in agriculture improves. However, due to high population growth, the number of poor people is expected to increase from 10.5 million in 2021 to 10.7 million in 2022. To achieve a material reduction in the absolute number of poor, annual GDP growth must be significantly above Niger's projected high population growth rate of 3.8% during the period 2022-2024, and the rents from the petroleum sector must be broadly shared through proactive government policies for inclusive growth.

Fiscal performance is targeted to improve in 2022 with an ambitious fiscal adjustment supported by the IMF program. The fiscal deficit is targeted to fall to 5.5 percent of GDP in 2022, supported by the economic recovery, higher oil revenues, and domestic revenue mobilization efforts. To reach this goal, it is crucial to implement specific tax policy and administrative measures aimed at expanding tax base, such as the rationalization of tax exemptions, simplify the tax system to encourage compliance, and complete the integration of the digital platform between tax and customs administrations. These measures have a very ambitious target to bring additional revenues of 0.8 percent of GDP annually by 2022. At the same time, addressing competing urgent spending pressures requires an improvement in the efficiency of the use of existing resources. Section II of the present report addresses the issue of how to improve the organizational and financial efficiency of the healthcare system, a critical sector for improving human development indicators, but with structural weaknesses that have been put under additional strain by the COVID-19 pandemic.

Public and publicly guaranteed debt is projected to decline gradually. Public debt is projected to decline steadily after 2022, provided that downside risks to the outlook do not materialize and the authorities achieve their fiscal consolidation targets. While the present value of the highly concessional external debt is expected to remain stable over 2020-22 at around 23 percent of GDP, public domestic debt is expected to increase by 4.5 percentage points of GDP. According to the December 2021 Debt Sustainability Analysis Niger's risks for external and public debt distress remain moderate.

Figure 1.5 Total public and publicly guaranteed debt (in percent of GDP) continues growing



The GDP growth outlook is subject to a high degree of uncertainty and multiple downside risks. Beyond intensified climate-related shocks and security risks, other risk factors that can hamper the pace and trajectory of recovery include food security challenges, uncontrolled new local COVID outbreaks, and widespread social discontent from high food inflation and insecurity. The war in Ukraine is a further source of downside risk. The economic impact would primarily be through higher global food and energy prices as direct trade, investment, remittances and migration links between Niger and Russia and Ukraine are limited. Higher food prices will exacerbate food insecurity challenges. However, Niger would benefit from higher oil prices if they are sustained in the medium-term when Niger ramps up its oil production in 2023 (the latter representing an upside risk in the medium-term).

Although the Covid-19 pandemic is generally under control, the low vaccination rate remains a major challenge to controlling the disease. Niger moved quickly to contain the spread of the disease in early 2020 and to provide financial support to impacted households and businesses. The pandemic has been kept under control with a cumulative total of 8,743 confirmed cases and 306 deaths as of January 2022. The country is currently on the downslope of its third wave (due to omicron), which reached a peak of more than 126 daily cases at the end of December 2021, higher than the previous waves but with lower hospitalization numbers. In December 2021 only 4.3 percent of the adult population had been fully vaccinated (and 1.7 percent partially vaccinated) against the national target of 42.8 percent by end of June 2022.

The constant security threat continues to affect the country in human, social and economic terms. Since 2015, Niger has faced transnational security threats from conflicts across its borders with Mali, Burkina Faso, Nigeria, and Chad, involving attacks by non-state armed groups, with a recent spike in violence and deaths. In 2021, the country experienced 335 violent events, resulting in 1,460 reported deaths and more than 320,000 internally displaced persons as of June 2021. Violence and insecurity create significant economic threats, including reduced

agricultural production and productivity due to population displacement, local land conflicts between herders and farmers related to pastoral mobility and management of grazing areas, destruction of economic assets, slowing and halting of investments, and increase of country risk.

Climate change and its manifestations in the form of floods and droughts have adverse impacts on production and welfare. The Notre Dame GAIN index[3] classifies Niger among the most vulnerable countries in the world (176 out of 182 ranked countries). Ten major droughts and nine flooding events have been recorded over the last 30 years. According to current climate projections the mean and maximum temperature as well as the duration of heat spells will increase, and rain may also increase marginally. Mean temperatures in the Sahel are expected to increase between 2 to 4.3°C by 2080, with +4°C in Niger, while rainfall patterns are projected to become more irregular, with sudden oscillations between very wet and very dry years. Niger's economy remains largely dependent on the agricultural sector, which accounts for over 40 percent of GDP and is a source of income for over 80 percent of the population. This sector is highly vulnerable to climatic hazards, particularly droughts, as irrigated areas represent less than 1 percent of the country's arable land[4]. After the floods in 2020, which caused a loss of between 0.3 and 0.5 percentage points of GDP, the overall lack of rainfall in 2021 led to infestations of several pests and had a major impact on agricultural and livestock production.

Medium-term outlook and structural reforms

In the medium term, Niger's economic outlook will be disrupted, hopefully positively, by the coming on stream of large oil fields (see Box 2). Petroleum production currently stands at around 13,500 barrels per day (bbl/d) and occurs in the Diffa region. It is thereafter transported by pipeline to a 20,000 bbl/d refinery at Zinder. Both production and refining are managed by the China National Petroleum Corporation (CNPC). Oil production is projected to rise to around 100,000 barrels per day by 2024 with the completion of the Niger-Benin pipeline, which has an estimated 150,000 - 185,000 bbl/d capacity[5]. Proven reserves in Niger are limited, with the US Energy Information Administration (EIA) estimating them at 150 million bbl, equivalent to 20 years production at current rates. It is possible that proven reserves may rise significantly if oil prices and transportation options become more attractive. Indeed, there are some indications that oil reserves in Niger could be more than 1 billion bbl. However, the actual quantum of proven reserves is not certain at this stage.

3 ND-GAIN measures overall readiness by considering three components – economic readiness, governance readiness and social readiness

4 According to data from the Small-Scale Irrigation Strategy in Niger (SPIN)

5 The project is expected to cost US$6.1 billion: US$4 billion for oil field development and US$2.1 billion for the pipeline and the oil terminal. The cost for just the Nigerien part of the pipeline runs at US$1.3 billion. The West African Oil Petroleum Company (WAPCO) was established in April 2019 to own and manage the pipeline. It will be majority owned by CNPC, with the state of Niger owing a participation of 15 percent at a cost equivalent to 2.4 per cent of GDP

Box 2 Alternative growth scenarios until 2024

Three counterfactual scenarios have been constructed in order to assess both the combined and idiosyncratic impact on incomes and poverty of 1) the negative shock brought by the health and agricultural crisis experienced in 2020-21 and 2) the positive shock of the oil revenue coming to stream starting from 2024:

1. A positive scenario (positive shock from oil only), where new oil production in 2024 is the only shock hitting the trend growth (equivalent to the end-2019 vintage forecasts);

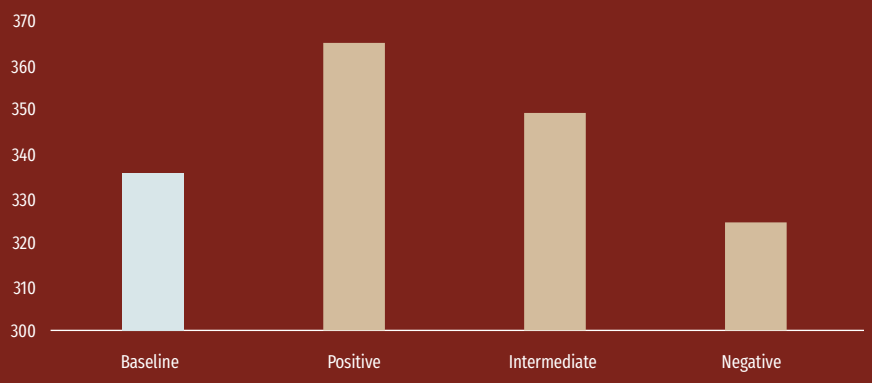
2. An intermediate (no positive or negative shocks) scenario, where the economy from 2020 would have grown at the same GDP trend rate observed between 2010 and 2019;

3. A negative scenario (negative shock from the health and agricultural crises only), where oil production does not come to stream and from 2022 on the economy will grow at the trend rate under scenario 2.

By comparing these three alternative scenarios with the baseline forecast, it emerges that despite the oil boost expected in 2024 the real per capita income projected under the baseline forecast will be lower the level where it would have been if it had evolved according to the pre-covid trend growth (intermediate scenario) i.e. the negative impact on GDP per capita of COVID-19 and the agricultural shocks experienced in 2020-21 is larger than the positive impact of oil in 2022-2024. Moreover, GDP per capita in 2024 will be 8 percentage points lower what it would have been in presence of the positive shock only.

However, the oil rents are still important for countering the impact of these shocks and improving on the negative scenario - where the negative effects from the crisis become entrenched without the support of oil income, and per capita income is 4.5 percentage points lower than in the baseline.

Figure 1.6 Expected GDP per capita in 2024 (real CFA millions)



Source: *WB elaborations on WDI data*

The oil sector is expected to become an important source of revenue for Niger. Recent data suggests that the government captures about 40 percent of the income generated in the oil sector, which is lower than the median rent of 45 percent received by other SSA oil producers. Oil revenues have so far been slim, accounting for less than one percent of GDP or ten percent of total fiscal revenues. By 2024, additional oil revenues of 1.5 percent of GDP are expected to contribute to the convergence to the 3 percent deficit target. Oil revenues are expected to climb to five percent of GDP or nearly one quarter of total fiscal revenues in the medium-term as oil production ramps up.[6]

With relative political stability in a turbulent region, Niger is best positioned among neighbors to adopt structural reform laying the foundations for more inclusive and resilient economic growth. Overcoming difficult structural conditions requires a strong commitment from all the actors to the resolute adoption and implementation of far-reaching economic reforms that can permanently lift the productivity rate of the economy. Improve the business environment, strengthen governance, promote financial inclusion, and broaden access to education and training are needed to support job creation. Accelerating the demographic transition needs to remain a central piece of Niger's development strategy, through policies aimed at reducing wide gender gaps in all sectors of the society, including by expanding access to education, training and jobs opportunities to women, fighting against child marriage and fostering access to reproductive health information and care.

The Government of Niger is currently finalizing its new development program, the Economic and Social Development Plan (PDES) 2022-2026 which can help implement structural reform to foster inclusive and durable development. The overall objective of the PDES 2022-2026 is to contribute to building a peaceful and well-governed country, with an emerging and sustainable economy, as well as a society based on the values of equity and sharing the fruits of progress. Specifically, it will consolidate the resilience of the country's economic and social development foundations and the expected final impact is to improve the level of well-being of the population (improvement of the HDI and reduction of the incidence of poverty from 40.8 percent in 2020 to 25 percent in 2026). The plan is based on fifteen programs structured in three strategic areas which are: (i) Human capital development, inclusion and solidarity; (ii) Consolidation of governance, peace and security; and (iii) Structural transformation of the economy.

Impact of inflation on poverty

Inflation has continuously hit households in Niger during 2020, 2021 and 2022. After a deflation in 2019 (-2.3 percent), the consumer price index increased during the next years and reached 2.8 percent, 3.8 percent and 3.5 in 2020, 2021 and 2022, respectively. With 40 percent of households being net food buyers, this increase in food prices has negative impacts on households' welfare, particularly the poor net food buyers who often allocate a large budget share to food. In addition, inflation increases household vulnerability to food insecurity. Indeed, 40 percent of households' food budget is spent on cereals items only with an average household in Zinder, Dosso,

6 Niger Country Economic Memorandum, World Bank 2022. Note that in the absence of future discoveries, depleting oil reserves will set oil production on a steady decline after 2030.

Maradi allocates about 20 percent of their food budget on millet alone. In this context, the high dependency of households on a few food items makes them more vulnerable to the volatility of food prices and production which can lead to food insecurity.

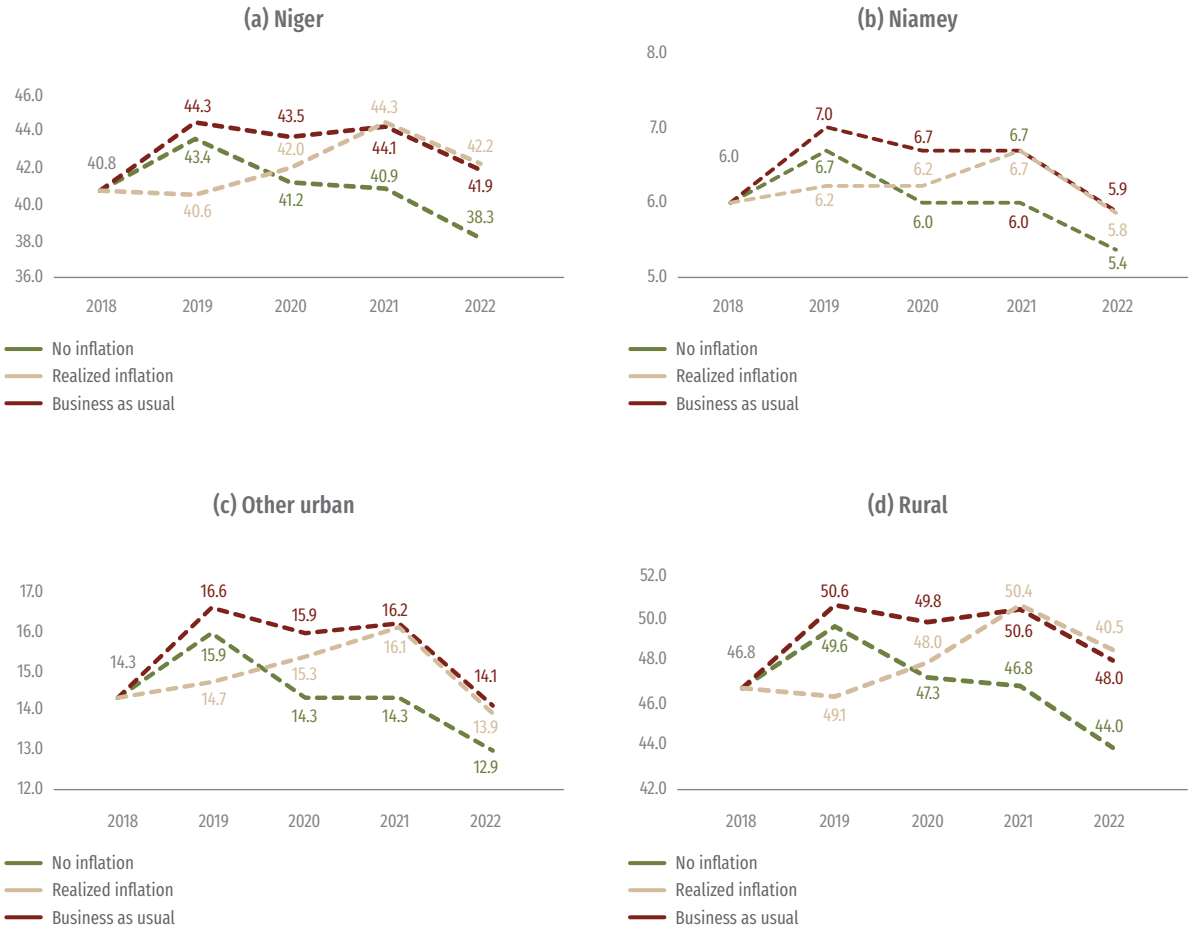
Simulations using EHCVM 2018/2019 data and inflation data show that the current price increase has hindered progress in poverty reduction in Niger. In the first scenario (no inflation), we assume that households experienced the same price as 2018 during the four next years (2019, 2020, 2021, and 2022). In the second scenario (business as usual), inflation in 2019, 2020, 2021, and 2022 are considered the same as in 2018. Finally, in the third scenario (inflation realized), we assume that households faced the level of inflation that has been realized during each year. For each of these scenarios, we assume that households' incomes increase at the same rate as the growth rate of the GDP per capita. Since the most recent poverty data available is EHCVM 2018/2019, that year is considered the baseline for each simulation.

The inflation periods correspond to those with high poverty rates. Indeed, the poverty rate reached its lowest value in 2019 where the inflation was – 2.3 percent while the highest poverty rate has been reached in 2021 when the inflation was at its maximal value (3.8 percent). In 2019, the poverty rate with the business-as-usual scenario (which set inflation to its value in 2018) is 44.3 percent and 3.7 percentage points higher than the poverty rate with the real inflation rate of – 2.3 percent in 2019. Indeed, with the deflation in 2019, households experienced an increase in their purchasing power due to decline in prices along with an increase in their income due to economic growth. These have positively impacted their welfare, and therefore have caused the poverty rate to decrease. In contrast, the increase in prices in 2020, 2021, 2022, has negatively impacted households' purchasing power. In 2022, the projected inflation rate of 3.5 is higher to the 2018 inflation rate used for the business-as-usual scenario. However, the gap does not seem enough to impact poverty in these two years as both scenarios (business as usual and realized inflation scenario) have almost the same poverty rate (42 percent).

For all the scenarios, the effect of inflation on poverty seems to have been moderate in urban areas compared to rural areas. Indeed, with the deflation in 2019, the gap between the projected poverty rates for the business-as-usual and the realized inflation scenario is – 4.2 percentage points in rural areas against – 0.8 percentage point in Niamey and – 1.9 percentage points in other urban areas. In 2021 and 2022, the gap is closed to zero in Niamey while it is 0.5 percentage point in rural areas. As rural households rely on a few items of food, particularly cereals (44 percent of their food budget), an increase in food price seems to have more impact on them. Urban households who allocate less than a quarter of their food budget to cereals are less vulnerable to an increase in food price as their food basket is more diversified and this allows them to substitute items which experience price increase[7].

7 See Annex 3 for a detailed analysis on food price elasticities of household consumption and welfare.

Figure 1.7 Impact of inflation on poverty rates



Source: *World Bank staff calculations using data from EHCVM 2018/2019 and consumption price index*

Note: *In the first scenario (no inflation), it is assumed that household face the same price levels as 2018 (the year of the survey) in the next four years (2019, 2020, 2021, and 2022). In the second scenario (business as usual), inflation in 2019, 2020, 2021, and 2022 are considered as the same as inflation in 2018. In the third scenario (inflation realized), it assumed that household faced the level of inflation that has been realized during each year plus the projection in 2022. For each of these scenarios, it is further assumed that households' income increases at the same rate as the growth rate of the nominal GDP per capita*

Box 3 Revisions to the World Bank Macro-Poverty Outlook key macro-fiscal indicators, including the impact of the Russia-Ukraine War

In Niger, real GDP growth estimates were revised sharply downwards for 2021 (-4.1 percentage points) due to the collapse of cereal production and slightly downwards 2022 (-0.7 percentage point). Inflation estimates increased slightly for both 2021 and 2022 (+0.9 and +1 percentage points, respectively). The current account balance was revised upward for 2021 (+0.5 percentage points) and downward for 2022 (-0.9 percentage points). The economic consequences of the Russia-Ukraine war impacted the economy primarily through higher global food (grains/fertilizer) and energy prices and contributed to the upward revision to 2022 inflation.

Table 1.1 Revision to Macro-Fiscal Estimates between the World Bank's Macro-Poverty Outlook Fall 2021 (October 2021) and Spring 2022 (upcoming)

Key macro-fiscal indicator	(a) Macro-Poverty Outlook Fall 2021		(b) Macro-Poverty Outlook Spring 2022		(c) Difference *(b) – (a)*	
	2021f	2022f	2021e	2022f	2021	2022
Annual Real GDP growth (%)	5.5	6.2	1.4	5.2	-4.1	-1.0
Annual Inflation (CPI) (%)	2.9	2.5	3.8	3.5	0.9	1.0
Fiscal Balance (% of GDP)	-6.8	-5.3	-6.6	-5.5	0.2	-0.2
Current Account Balance (% of GDP)	-15.3	-16.0	-14.9	-16.9	0.5	-0.9

1.3 Options for accelerating resilient growth and poverty reduction

As a country utterly exposed to climate shocks, accelerating crisis preparedness is key to increase resilience and reduce growth volatility. Given the frequency and the impact of natural shocks, it is key to move away from an emergency-type response and put in place a strong framework that can be mobilized to help cope with the effects of these shocks. The groundwork for a crisis risk management (CRM) law clarifying the institutional roles and responsibilities for disaster risk management at the sectoral and territorial (central, regional, departmental and municipal) levels should be laid down, aiming to address the overlap and fragmentation of the various existing competencies among several ministries and administrative authorities. Risk reduction can also be strengthened through capacity building and budgetary resources for disaster risk reduction, including investments in resilience in key sectors; implementation of building codes, and resilient urban planning and land use; resilient basic infrastructure and services; and improved natural resource management.

A transparent and effective management of oil revenues is needed to maintain macroeconomic stability and to ensure they are channeled toward funding large development needs in an efficient manner. On one hand, Niger's dependence on oil revenues would remain moderate compared to other commodity-exporting countries. For instance, regional peers like Nigeria, Angola, and Congo have oil revenues that account for over 70 percent of total revenues. On the other hand, more recent literature has extended the concept of resource curse to "pre-resource curse", which can represent a more considerable risk for Niger, leading to fiscal mismanagement and becoming a drag on growth even before the production of the natural resource begins.

To increase the level of mobilization of non-oil tax revenues, it is essential to strengthen and accelerate the implementation by the government of existing revenue forecasting and monitoring mechanisms. These include wider use of the VAT invoicing machines in line with the provisions on certified electronic invoicing introduced in the 2020 budget law, effective implementation of the marking of oil products to combat hydrocarbons frauds, revision of exemption conditions, strict application of the standard tax regime to government entities, taxation of amounts placed in free reserves, establishment of one set of formalities for both property registration and advertisement, revision of the special re-export tax (TSR) on sugar and fabric, deployment of the Integrated Tax and Taxpayer Monitoring System, obligation to produce a certified invoice for orders and public procurement, increase in the abatement rate on the taxable value of vehicles based on their condition, by 10 to 15 additional percentage points, exclusion, within the customs boundaries, of goods produced, manufactured or available locally from the exemptions included in the national budget, continuation of the reforms to automate and modernize tax and customs procedures.

With public resources stretched over different priorities, it is important to ensure the highest possible degree of efficiency in all spending areas. This will allow to create the space needed to enhance the ability to respond to calls for additional spending when shocks hit. In Section 2 we analyze the institutional structure, the performance, the drivers of growth, and the composition of spending in the health sector, a sector that provides a key contribution to human capital development, productivity and long-term growth

There is a need to support households through the social protection system to cope with the price increase, particularly in the context of pervasive food poverty in the country. Food security has become a major challenge in the country during the last decade and could be even more challenging in 2022, contingent on weather conditions and the Russia-Ukraine war. The government should consider opening new and strengthening existing food banks and providing them with relevant types of cereals. About 15 percent of Nigerien households receive food support, either through food for work, school feeding, or cereal distribution. While food assistance remains the biggest social protection program in terms of population coverage, it does not seem to reach regions in need and the poorest. In this context the risk of increase in child malnutrition is high with potential damaging impacts on children human capital accumulation.

The full operationalization of the financial inclusion fund is critical to support ongoing efforts to revamp the microfinance sector. The microfinance regulator (ARSM) plans to develop an institutional diagnostic of the microfinance sector and to publish governance guidelines specifying the terms and conditions for MFI recovery, placement under temporary administration or liquidation. It is important that the original roadmap is followed, and as a next step, an MFI network affiliation system should be set up to support the redress of MFIs deemed viable.

2 IMPROVING HUMAN CAPITAL THROUGH A STRONGER HEALTHCARE SYSTEM

Human capital is central to foster productivity and long-term development. The Human Capital Index (HCI) measures the formation of human capital of the youth: it is a measure of the investment in the productivity of the country's future labor force. The HCI is made of three components: survival to age 5 and then to retirement age, effective education, and health. This section will focus on the health sector. A healthier population will improve productivity of the country, and its long-term economic prospects[8,9].First, it will provide an overview of the health system performance by reviewing its organization, the health outcomes, and the allocation of resources for health. Then, this section will turn on to the health financing trends and level. The last part will focus on the decomposition and quantification of public health expenditure (PHE) change over time and will offer a post-pandemic projection regarding the future levels of PHE.

2.1 Niger's health care performance

Niger's underperformance in most health indicators indicates that a significant and increasing proportion of the population lives with impaired health. A few of Niger's health indicators —such as adult survival— are in line with comparable countries[10]; However, Niger underperforms particularly on infant health and the two indicators used for the human capital index: infant mortality and child stunting rates (Table 2.1). The prevalence of malaria, gut worms, and poor water infrastructure play a large role in explaining the poor health outcomes. Diarrhea is responsible for the largest loss of life in Niger (Global Burden of Disease[11]). The Burden of Diseases (BD) studies show that the largest share of loss of life and life quality is attributed to communicable diseases, maternal and child health, and poor nutrition. Communicable diseases still accounted for 73.5 percent of the BD in 2019, which is 20 percentage points higher than other LICs. The difference between life expectancy (LE) and healthy life expectancy (HALE – see Annex 4: Glossary, methods and data for SECTION II) has progressively increased to 7.4 years in recent years, overtaking the low-income countries' average of 6.9 years.

8 Hoddinott et al (2013) The economic rationale for investing in stunting reduction, Maternal and Child Nutrition

9 Galasso & Wagstaff (2016) The Economic Costs of Stunting and How to Reduce Them, World Bank Policy Research Note.

10 Comparable countries were selected using WB MTI country benchmarking toolkit. See Annex 4: Glossary, methods and data for SECTION II for details.

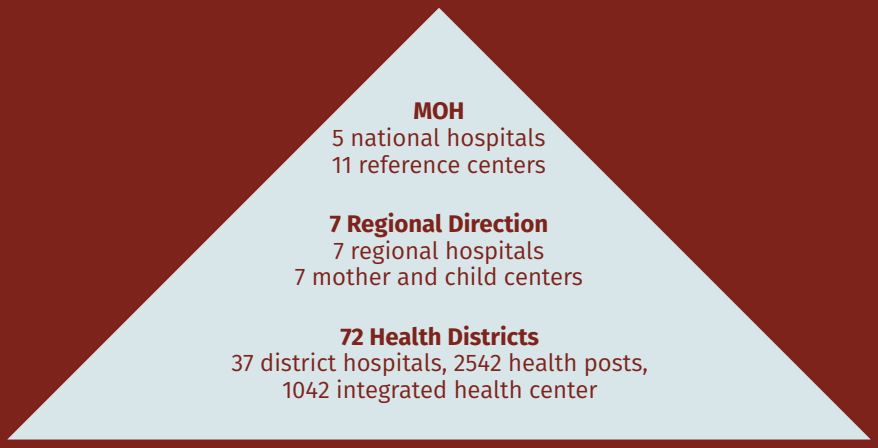
11 Global Burden of Diseases, Injuries and risk factors study 2010, Niger country data sheet.

Box 4 Structure of Niger's public health system

Niger's health system was originally structured along the principles of the Bamako initiative from 1987. Its main idea is that health financing should be decentralized and self-sustained at the district level. The resulting establishment of user fees for health services and medication accounted for the local self-financing of health services, while the central government provided limited subsidies and facilitate drugs/material purchase of the decentralized health entities. However, the resulting high financial barriers imposed on the population led many African governments to take another stance with the establishment of free care policies. The government of Niger took a first step to reduce fees by establishing co-payment mechanisms in 1994.

Niger's public health system is structured as a standard three-level pyramid. At the bottom, 2,542 health posts ("case sanitaire") and 1,092 integrated health centers are distributed across the 72 health districts. Thirty-seven of these health districts have a district hospital, of which all but two have surgical capacity. At the second level, each of the seven regions has one regional hospital and one maternal and childcare facility. At the national level there are five reference hospitals with advanced medical capacities which also serve as research and training centers, the Ministry of Health and its directions[12]. The administrative level is also composed of a three-level pyramid. The disease surveillance, health workforce, material available, drug availability, revenue from service provided, as well as financial and material aid to facility received by partners are information that are channeled back to the central level. However, the reporting is often missing and inaccurate.

In 2005, Niger established a free health care policy for pregnant woman and children under the age of five. However, even with an increased budget, the financing of these free policies remains an issue. In 2015 the government conducted a survey on the free health care policy, which indicated a significant delay in payment of health facilities and an inadequate supply of drugs, which in turn, has hindered the capacity of health providers to provide quality care to the population[13,14].



12 Niger MoH, National Health Account, 2019.

13 Institut National de la Statistique (2015) Etude sur la gratuite des soins de santé au Niger

14 Ridde V, Diarra A. *From unintended to undesirable effects of health intervention: The case of user fees abolition in Niger.* Morell, J.A. (2010) Evaluation in the Face of Uncertainty: Anticipating Surprise and Responding to the Inevitable Guilford Press N.Y

Table 2.1 Health indicators

Country	Population (millions)	Life Expectancy at birth	Total Fertility Rate	Under-five mortality	Adult survival	Maternal mortality	Childhood stunting
Burkina Faso	20	62	5.1	87.5	61.1	320.0	25.5
Uganda	39	63	4.8	45.8	61.1	375.0	27.9
Rwanda	12	69	4.0	34.3	71.5	248.0	32.6
Afghanistan	32	65	4.3	60.3	65.4	638.0	35.1
Ethiopia	94	67	4.1	50.7	68.0	401.0	35.3
Malawi	20	64	4.1	41.6	61.9	349.0	37.0
Niger	**22**	**62**	**6.8**	**80.4**	**62.5**	**509.0**	**46.7**
SSA region	1054	63	4.3	65.7	60.5	461.0	27.9
LICs	642	63	4.4	67.5	62.2	502.3	32.1
LMICs	2992	68	3.2	39.7	69.6	215.7	22.5

Source: *World Development Indicators (Sept 2021). Last estimate is 2019, except for MMR (2017). Under-five mortality is per 1,000 live births and maternal mortality is an estimate per 1000 live births.*

Large spatial differences contribute to low health-care outcomes. Rural populations, who represent 84% of the total population, have lower access to health than urban populations. Among the reasons for this are staffing distribution, input availability, and access to facilities. Niger's ratio of health worker of 0.44 for 1000 population[15] or one health worker per 2,300 inhabitants on average, is among the lowest in the world (Fig. 8) and is five times less than what is recommended by the WHO[16]. The health workforce deficit is exacerbated by its uneven distribution and absenteeism and relative low level of qualification competencies. The 2015 National Health Plan reported that 75 percent of health workers were based in urban areas[17]. Absenteeism was estimated to be 33 percent and is correlated with remoteness. In 2015, the Service Delivery Indicator assessed skill level of health workers: on average, providers successfully diagnosed 31.5 percent of the five common conditions. The availability of tracer drugs is also imbalanced in favor of urban areas. Finally, only 11 percent of facilities have the basic conditions to practice medicine (drinking water, power, sanitation, computer, and internet), again with important disparities between rural and urban areas. Half of Niger's population lives more than five kilometers from the closest health facility and the rainy season may make roads impassable[18].

15 There are conflicting data on health workers. This statistic counts only practicing doctors, nurses and midwives. The *rapport d'exécution du PDS* also focuses on those three categories and reports 1,404 more workers, which would bring the statistics to 0.51 health workers for every 10,000 workers.

16 These health worker statistics do not include the 4,000 community health workers ("relais communautaire") whose training takes 6 to 10 days and are paid 10,000 CFA per months (half by state and half by external funding). Source: Community health roadmap. Niger report, 2018

17 MoH, Plan de développement sanitaire 2017-2021, 2016.

18 The World Bank, Republic of Niger Service Delivery Indicator, Health, 2015

The lack of health care supply severely impacts access to health care services. On average, Nigeriens visit a health worker for out-patient services only once a year, which is too little in relation to the health needs. The latest household survey[19] finds that 38 percent of the population experienced illness over the past 30 days. The illness was severe enough to incapacitate 70 percent of them for at least a day. Of the population which experienced severe illness, 57 percent consulted a health provider. The wealthier quintile of the population was 11 percent more likely to consult a health provider, conditional on being sick, than the bottom quintile (Fig. 8).

Overall, there is considerable scope for improvement of the health care system. The relative weakness of the health workforce is known by the authorities. The 2020 MoH national action plan aims to boost dramatically the quantity and capacity of human resources for health. It also establishes a "rural pipeline" to foster production of human capital from rural areas to work in rural areas. This plan's financing shows that the government can pay for 29 percent of it, while 71 percent would have to be found elsewhere[20]. As redirecting resources from underused hospitals towards primary health care providers is politically difficult, there are scope of efficiency gains by restructuring the hospital sector for improved functionality given the current resource allocation. Further increase in budget should be allocated to the improvement of primary health care and the reinforcement of referral capacity. With such a large territory and low population density, investing in transportation of patients or mobile clinics – rather than building new facilities – could potentially be cost effective. The transportation would also help to refer patients to underused secondary and tertiary facilities.

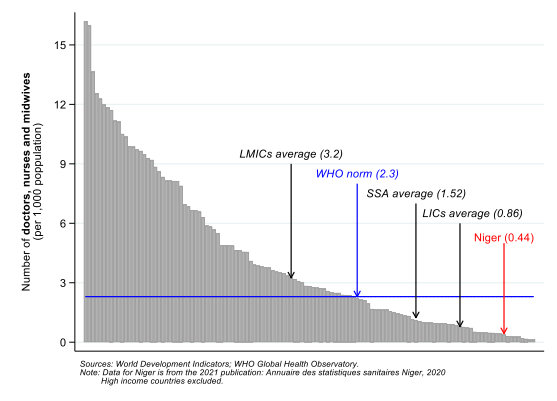
Niger has made significant progress in service coverage, but still hasn't caught up with other LICs. The overall index of service coverage doubled over the 2000-2017 period, and the gap with other LICs has shrunk in the first decade[21]. This service coverage increase was driven by a substantial improvement of the coverage of vaccination and curative health coverage. Nevertheless, the situation remains challenging for services around birth: only 40 percent of pregnant woman received the recommended four ante-natal consultations, and only 40 percent of births are attended by a trained professional. Service coverage against infectious diseases also improved but did not catch up with other LICs (Figure 2.2). The numerous infectious diseases that plague the country, such as diarrhea, malaria, respiratory infections, measles, and HIV are still responsible for the largest loss of life in Niger

19 Survey ECVMA was carried in 2018 on a representative sample of Niger's population. It is similar to Living Standard Measurement Surveys.

20 MoH, Plan d'Action National, note conceptuelle de la table ronde, September 2020

21 WHO and World Bank (2019) Global Monitoring Report on UHC

Figure 2.1 Distribution of health worker density and need of outpatient service in past 30 days (percent of population)



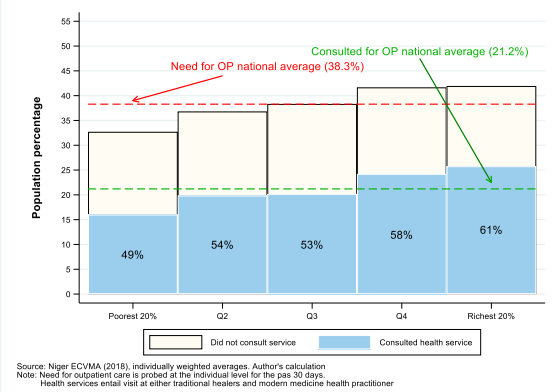
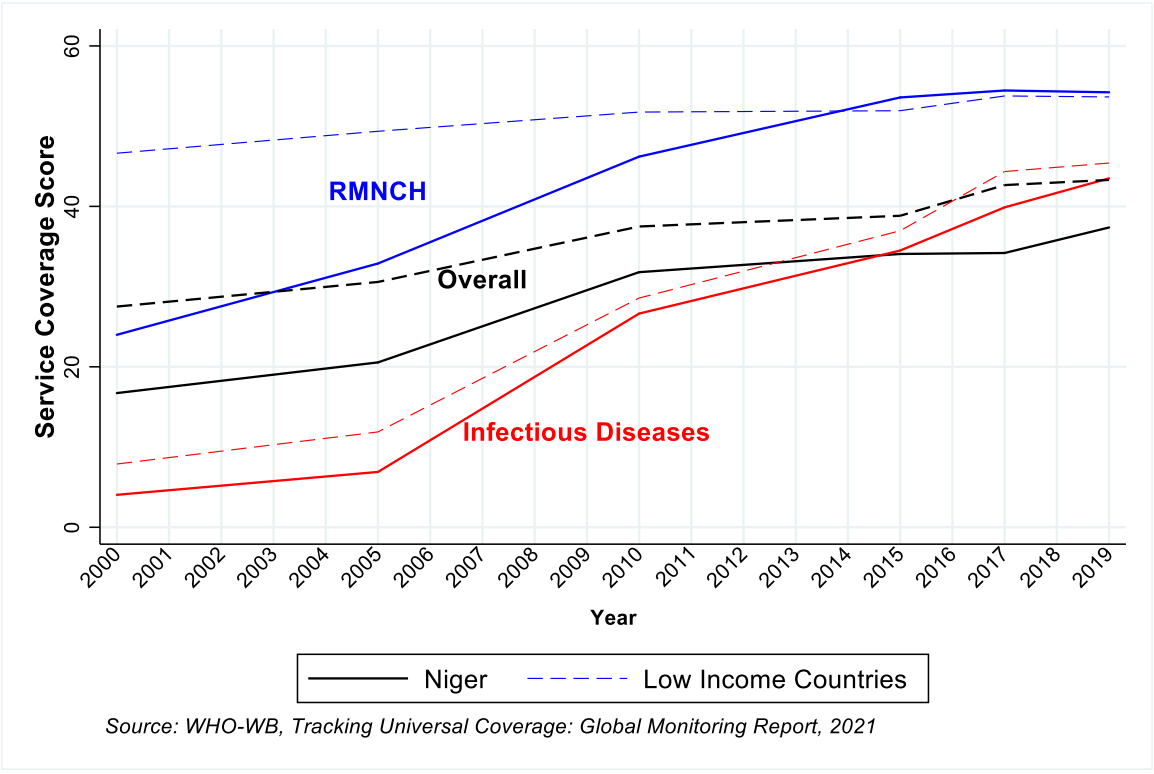


Figure 2.2 Service Coverage and its components over time



Source: WHO-WB, Tracking Universal Coverage: Global Monitoring Report, 2021

2.2 Health financing levels and trends

Niger has yet to bring per capita health spending to the levels observed in the region. Niger's current health expenditure (CHE) is situated at 5.7 percent of GDP in 2019, compared to 5.3 percent for Sub-Saharan Africa (SSA) and 6 percent for LICs. However, due to its extremely low GDP per capita, in absolute health expenditure per capita level, Niger is ranked lowest among peers in terms of health expenditure with $31.4 annual per-capita spending (Table 2.2).

In aggregate real terms, Niger's health expenditure's increased by 226% over the period 2000-2019. However, Niger's population doubled in size over the same time frame, leading to a per capita increase of only 56% in total. Niger's total fertility rate is the highest in the world and it dilutes investments made to increase human capital, not only in the health sector, but also in education. High fertility is also associated with negative health outcomes, such as prematurely born babies with low weight[22]. It also reduces female labor supplies. The demographic dividend associated with reduced fertility was central in the development of many low-income countries that transitioned to middle income countries[23]. Initiatives such as the World Bank financed SWEDD and the 2021 female nutrition and health multiphase program, or the government's recent change in legal framework, will contribute to long term growth[24].

Niger's health expenditures are spent mostly on medical products. As a proportion of current health expenditure, curative services in Niger are half of the other LICs. The relatively small curative budget is directed predominantly towards inpatient services, which absorbs 49 percent of total curative spending and serves a small proportion of the population[25]. This suggests that the primary health care, although more cost effective and equitable[26], has not been prioritized sufficiently. The preventive sector (vaccination, surveillance, preparedness) is also proportionally less financed in Niger (13.5 percent of current health expenditure) than in the Sub-Saharan region and other LICs (16 percent), despite the fact that vaccination is among the most cost-effective investments in health[27]. Breakdown by source of financing shows that Niger's financing mix for inpatient in comparison to others LICs, it relies less on public financing for outpatient services, and more on external support for preventive care.

22 DeFranco et al. (2015). Influence of interpregnancy interval on neonatal morbidity. American Journal of Obstetrics and Gynecology 212 (3), 386.e1– 386.e9.

23 Bloom, D. E., & Williamson, J. G. (1998). Demographic Transitions and Economic Miracles in Emerging Asia. The World Bank Economic Review, 12(3), 419–455

24 Calimoutou Emelyne (2022) How new laws are protecting women and girls, and changing mindsets in Niger, Nasikiliza blog serie, World bank

25 Public Expenditure Review, World Bank, 2020

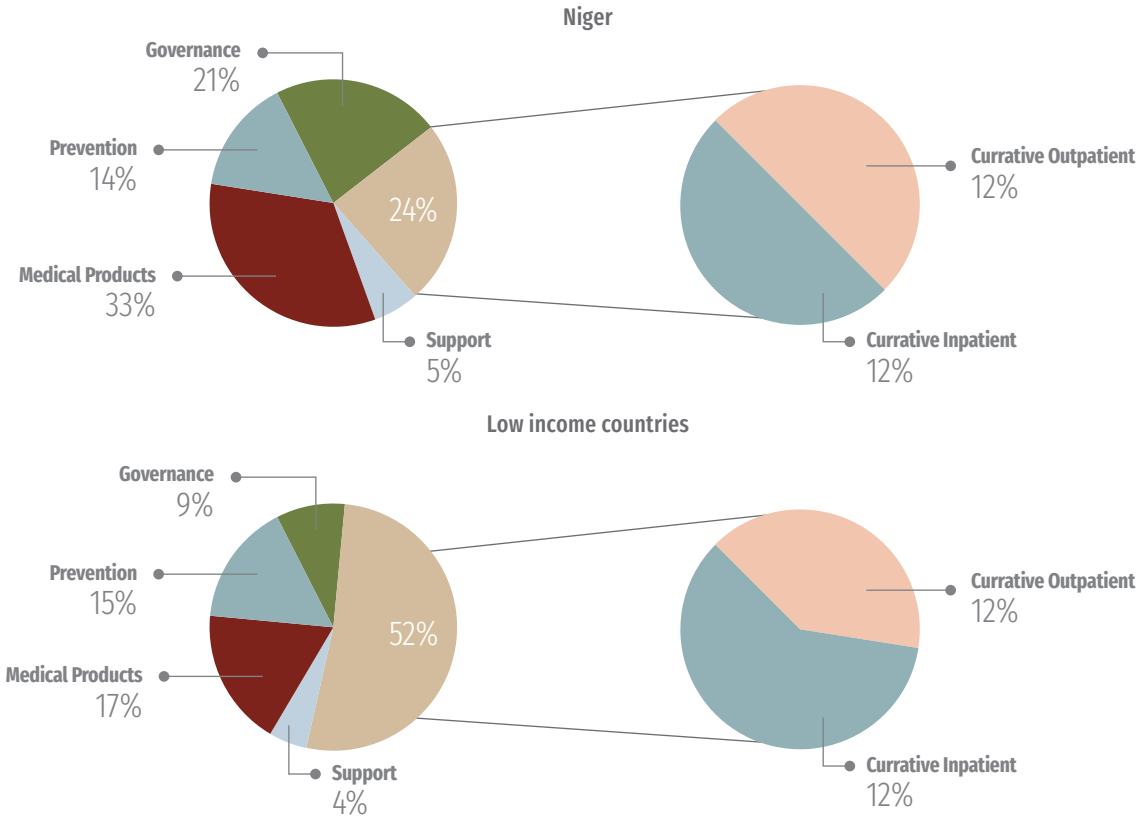
26 WHO (2018) Building the economic case for primary health care: a scoping review

27 Horton et al (2017) "Ranking 93 Health Interventions for Low- and Middle-Income Countries by Cost-Effectiveness." PloS One 12 (8): e0182951.

The governance health budget share is more than double the size of other LICs, suggesting that more efficient governance could free funding to advance primary health care. Regarding the health development plan, Governance is the only budget item that has received the planned amount in full[28]. The source of the large governance spending difference with other countries could not be identified due to lack of documentation. Institutional organizations tend to slowly drift towards more entropy (which can be defined as the inverse of perfect information)[29]. It can be beneficial for the MoH to seek external counsel to conduct an audit to identify potential efficiency gains, synergies between different units and suggest potential organizational changes.

Niger has been in the process of decentralization for over a decade. For the health sector, the regional level is responsible to maintain regional hospital, specialized centers and human resources, while the communes are responsible for the district hospitals, the integrated health centers and health posts. However, weaknesses at the lower levels and lack of financial planning at the central level impeded this transition. The decentralization process also doesn't entail a robust monitoring and evaluation system[30]. The step-by-step transfer of fewer competencies and associated budget could bring more benefits, rather than large plans that never materialized.

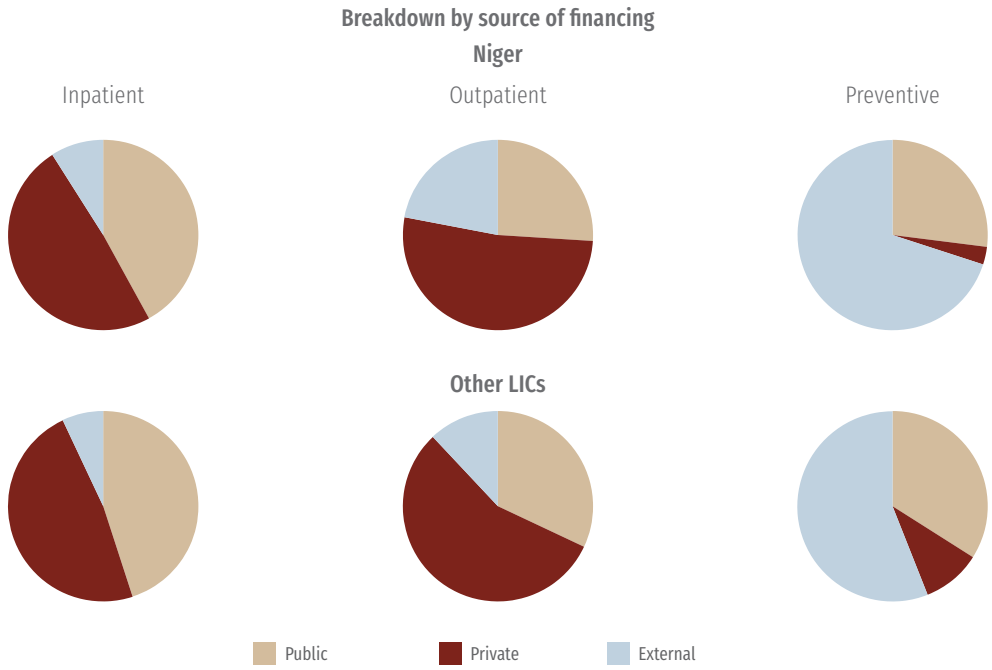
Figure 2.3 Niger and LIC health expenditures



28 GFF (2020), resource mapping exercise.

29 Martinez-Berumen et al (2014) Developing a Method to Evaluate Entropy in Organizational Systems, Procedia Computer Science, vol 28

30 Ministere du plan, Niger (2022) Plan de Développement Economique et Social (PDES) 2022-2026: Rapport d'analyse diagnostique globale



Source: *WHO GHED 2021. Last year of data availability: 2019.*

To overcome the financing challenges, the 2017-2021 health sector development plan sets sustainable health financing as one of the six overarching health goals. The government committed to increase central government allocations to health to 10 percent of the budget. Subsequently, allocations to the health budget as a proportion of government budget indeed increased from 5.7 percent in 2016 to 9.6 percent in 2017. In 2019, budget allocation to health remained at 9.3 percent. Despite these efforts, the financing gap to achieve the health sector development plan (PDS) and the committed budget remains large, estimated at 359 billion CFA (24 percent of overall cost of the PDS).[31] Moreover, given the current dimension of the overall budget and of the GDP per capita (see decomposition in Figure 2.5), an increased budget allocation will still fall short of what is needed to structurally improve health indicators.

Besides low budget allocations, contributions from external partners appear to be significantly lower than in similar countries. Half of the country's aggregate health expenditure is channeled through public health expenditures, i.e., managed by the government. These funds are raised primarily from government's domestic resource mobilization (70.7 percent of CHE) and external budget support (27.5 percent). The government domestic resource mobilization for health amounts to almost $11 per capita, which is higher than the LICs' average, but significantly lower than other SSA countries ($46 on average). This explains half of the gap in CHE. The on-budget development assistance for health (DAH) is similar to other LICs in absolute terms, at $4.3 per year per capita, but 50 percent lower than other Sub-Saharan Africa (SSA) countries that mobilize $6.5 per capita. Unlike other countries, such as Uganda and Malawi (Table 2.2), where the vast majority of DAH is channeled through direct

31 Global Facility Fund (2020), Health Development Plan Resource Mapping.

transfer to health providers, i.e., not managed by the government, in Niger, donors prefer to make the funds available for the government to disburse. Moreover, direct transfers would amount to only $0.5 per capita, as compared to $6.2 for LICs and $7.3 for other African countries. The overall level of DAH is $4.8 per capita per year, which is the lowest among Niger's peer countries and substantially lower than LICs ($8.9) and SSA countries ($13.4). These results indicate that Niger could substantially raise its revenue for health by improving its capacity to mobilize DAH from external donors.

However, key informants in the country consistently reported that off budget DAH, channeled through NGOs, is vastly underestimated. The health structures that benefit from support do not assess the value of the goods received, and do not report them to the central government through the DIHS2 system. The Global Financing Facility (GFF) surveyed all donors regarding their expenditure on health in Niger and assessed its level to 168.5 billion CFA (US$280M), while the official on budget number is estimated at 68.4 billion CFA (US$116M) in 2020[32]. This suggests that direct transfers are almost 2 times larger than on-budget support, and that actual direct transfers are underestimated by a factor of 14.

This creates a situation where out-of-pocket (OOP) payments represent nearly half of total health expenditure, with significant poverty impacts. OOP per capita is estimated to be US$ 15.4 (constant 2019) from the Enquête des Conditions de Vie des Ménages et l'Agriculture (ECVMA). Drugs purchased account for two thirds of OOP (US$10.2), while consultation (US$2.3) and hospitalization (US$1.25) expenses are the other large expenditures. The public sector heavily subsidizes the price of consultations, as only 10 percent public sector budget comes from service fees[33]. Household surveys from 2011 and 2018 suggest OOP is stable at ~3.4 percent of the household's annual budget. However, 6.5 percent of households spend more than 10 percent of their annual budget on OOP and therefore do not meet the UHC SDG threshold on catastrophic health expenditure. In a high poverty context, even minor health spending can have important consequences in terms of poverty and/or depth of poverty. That holds true in Niger: OOP raises the poverty rate by 2.5 percent, and the depth of poverty by 2.8 percent of the $1.90 poverty line.

32 Global Financing Facility for Maternal, Child and Adolescent Health (2020), Health Development Plan Resource Mapping.

33 MoH, Rapport annuel du Plan de Développement Sanitaire, 2019. From Jan 1st to Oct 31st, fees paid by user account for 12 billion CFA, out of total expenditures estimated at 117 billion.

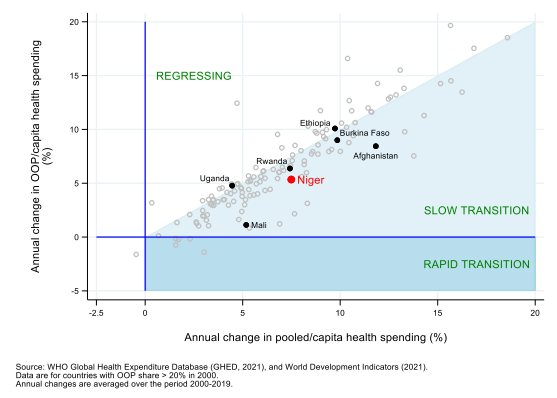
Table 2.2 Health expenditure disaggregation, 2019

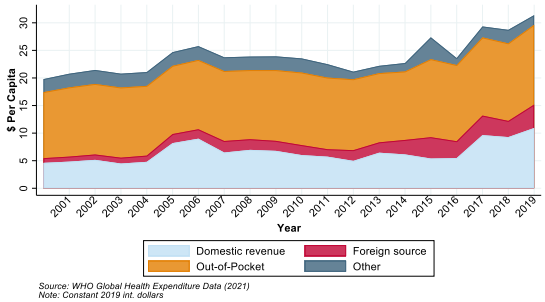
Country	TOTAL Health Spending		Public Health Expenditure (PHE)							Foreign Direct Transfer		Out-Of-Pocket		Other
	Per capita (US$)	Per capita (percent GDP)	Per capita (US$)	Domestic		Social Health Ins.		External		Percent CHE	Per capita (US$)	Percent CHE	Per capita (US$)	Per capita (US$)
				Percent PHE	Per capita (US$)	Percent PHE	Per capita (US$)	Percent PHE	Per capita (US$)					
Ethiopia	$27	3.2	$11.4	53.1	6.1	0.0	0.0	46.9	5.4	14.1	3.8	37.9	10.1	1.4
Uganda	$32	3.8	$4.9	99.8	4.9	0.0	0.0	0.2	0.0	42.0	13.6	38.3	12.4	1.5
Burkina Faso	$42	5.5	$23.6	74.8	17.7	0.1	0.0	25.1	5.9	1.8	0.7	34.7	14.7	3.3
Niger	**$31**	**5.7**	**$15.5**	**70.7**	**10.9**	**1.8**	**0.3**	**27.5**	**4.3**	**1.7**	**0.5**	**46.1**	**14.5**	**0.9**
Rwanda	$51	6.4	$31.5	45.8	14.4	19.5	6.1	34.7	10.9	12.5	6.4	11.7	6.0	7.5
Malawi	$30	7.4	$10.3	95.8	9.9	0.0	0.0	4.2	0.4	42.1	12.8	16.9	5.1	2.1
Afghanistan	$66	13.2	$6.6	81.4	5.4	0.0	0.0	18.6	1.2	10.5	6.9	79.3	52.2	0.1
SSA region	$109	5.3	$54.4	69.9	46.0	4.6	2.2	26.5	6.5	12.7	7.3	37.2	31.8	15.0
LICs	$39	6.0	$12.5	65.6	7.8	3.6	0.6	31.1	4.2	17.2	6.2	43.7	18.6	1.9
LMICs	$127	5.1	$72.1	71.1	45.1	15.6	17.3	15.2	11.8	6.4	6.0	37.4	42.0	6.6

Source: *WHO - Global Health Expenditure Database 2021*
Note: *Currency reported are constant 2019 int. $. Total Health Spending does not include investment in capital*

Niger is in the early stages of the health financing transition, the process by which OOP expenditures are progressively replaced by risk-pooling mechanisms. The difference between the rate of increase of OOP spending per capita and the rate of increase of health expenditure paid for by pooling mechanisms determines the speed of the health financing transition. Based on the last 20 years, Niger has had a slow transition (Fig. 11)[34]. The share of OOP to total health expenditure paid has slightly decreased with a modest reduction of 0.73 percent per year over the past two decades.

Figure 2.4 Health Financing Transition and Health Expenditure per capita





34 Niger's increase in PHE occurred in two spurs and therefore, the health transition slope is dependent on the choice of start year. A shorter period of time would place Niger almost at the border to the rapid transition zone.

To make progress towards Universal Health Coverage (UHC), the recent effort in mobilize domestic revenues must be maintained and reinforced. The share of OOP fell under 50 percent of total health spending for the first time in 2017 and kept falling to reach 46.1 percent in 2019. If Niger maintained the trends of 2000-2019, it would take another decade for the country to reach the OOP proportion seen in other LICs because Niger has a historically large OOP share. While OOP per capita expenditure was relatively stable over the years, government's domestic resource mobilization (DRM) for health displayed a pattern marked by phases of expansion followed by contractions (Figure 2.4). The increase in DRM occurred mostly in two spurs:

- During the first, in 2004-2006, domestic resource for health almost doubled (US$4.7 to $ US 9.0) and per capita health expenditure topped at $25.7/year, which is an all-time high as a proportion of GDP (5.8 percent).
- In 2017, after the new health plan was elaborated and the presidential commitment to increase health spending, domestic resources increased by 75 percent (US $5.4 to US $9.6) driving health expenditure per capita to an all-time high of US $31.4 in 2019.

2.3 Health financing decomposition

This section will formalize and estimate the relationship between health prioritization, economic growth and government's revenues.

Per capita public health expenditure can be decomposed as the product of three elements. The first element of the decomposition is the prioritization of health by the central government measured by the percentage of total government expenditure attributed to the health sector. The second element is the size of government's total budget as a share of GDP. Finally, the third element is the level of per capita GDP. This third element can subsequently be decomposed into GDP and population.

The government's prioritization of health is higher than the average of its comparators, LICs, and LMICs. Niger dedicated 12.9 percent of the government budget to health in 2018[35]. As a share of the social sector[36], Niger is among the countries that prioritizes health spending the most (Table 2.3). Despite the country's growing security needs, the military budget of Niger is only 28.2 percent of the social sector, lower than regional or LIC average.

35 This also includes on-budget foreign transfer and social insurance. For Niger, the actual number for 2019 would be 9.3 percent if we limit the "government budget" to domestic resource mobilization. This later variable is the one that is voted and executed by the government.

36 We limit ourselves to Health and Education for "social sector", due to lack of cross-country data on social safety net, old age, gender,

Table 2.3 Health expenditure disaggregation, 2018

Country	Share of total government expenditure				Prop. of Social Sector percent of military	
	Health[1]	Education[2]	Military[2]	Debt Service[1]	Health[1]	Military[2]
Uganda	3.2	11.2	13.1	11.5	21.9	91.1
Afghanistan	4.8	10.3	4.5	0.1	31.7	29.9
Ethiopia	9.0	24.0	3.2	3.3	27.3	9.7
Malawi	9.0	11.5	3.7	11.0	44.0	18.2
Burkina Faso	12.8	22.7	8.5	5.2	36.1	23.9
Niger	**12.9**	**13.3**	**7.4**	**4.6**	**49.3**	**28.2**
Rwanda	13.6	10.8	5.0	4.4	55.8	20.4
SSA region	9.1	15.2	6.2	8.2	38.5	33.7
LICs	8.4	14.4	6.2	6.7	38.2	36.5
LMICs	8.8	15.1	6.5	8.7	37.4	34.7

Source: *Source: Author's calculation based on (1) 2021 WHO GHED and (2) World Development Indicators (December 2021) Used last year for which data was available, but no later than 2015.*

Niger's pre-pandemic budget was lower than the average of the SSA countries. The public health expenditure volume does not only depend on its prioritization within the government budget, but also on the size of the budget. Niger's total budget as a share of GDP in 2020 (23 percent) is lower than the average spending in LICs (24 percent) and SSA (26 percent) countries. Finally, the last item of the accounting is the GDP per capita, which brings in the monetary amount per capita: it is the total annual welfare of the economy, divided by the population. As GDP per capita in Niger is one of the lowest in the world, this has a huge impact on the availability of resources for health spending.

The increase in PHE in Niger is greater than what was observed in other LICs and the Sub-Saharan region more broadly and was driven by an increase in total overall government spending. The US$15.5 per year per capita of PHE, while lower than the average, is still higher than many other LICs (Table 2.2). Per capita government health expenditure for health increased by 175 percent over the last 19 years, which averaged a 5.6 percent annual increase. Figure 2.6 provides a visual insight on the trend of the underlying determinants of public health expenditure. One can conclude that increase in government size (green) played an outsized role in the surge of public health expenditure per capita. On the contrary, the orange dashed line representing health prioritization oscillates around 10 percent, with no upward trend.

Figure 2.5 Decomposition of public health expenditure 2000-2018

Ratios	Public expenditure on health / Total Public Expenditure	Total Public Expenditure / GDP	GDP / Population	Public Expenditure on health / Population
2000	9.9%	13.5%	US$ 422	US$ 5.6
2019	12.9%	21.6%	US$ 553	US$ 15.5
Change	+31%	+60%	+31%	+175%

Looking ahead, economic growth will be the precondition to create more resources for health spending. The formal decomposition confirms however that the predominant source of increase in government health expenditure from 2000 to 2019 stemmed from the capacity of the government to mobilize a greater share of the GDP for its budget. Economic growth and the prioritization of health within the government's budget are of equal importance, as both increased by 31 percent over 19 years. Niger's case is atypical: for most countries (Figure 2.6), the main engine of increase in GHE is economic growth. This is true for sub-Saharan Africa and LICs, but also for other regions and income categories[37]. The prioritization of health and the share of government are important strategies, but with finite possibilities. In the long run, economic growth is the dominant factor as it allows to mobilize more resources to finance the budget in a sustainable manner, among competitive spending pressures. Niger's real economic growth has increased 166 percent between 2000 and 2019. However, the population also increased exponentially, resulting in a low per capita growth rate over the period. A decrease in fertility accompanied with more investment in human capital of girls and women is forecasted to increase real per capita GDP by 32 percent by 2030[38]. Even a modest reduction in fertility to converge to the regional average would translate into an 11 percent GDP per capita increase by 2030.

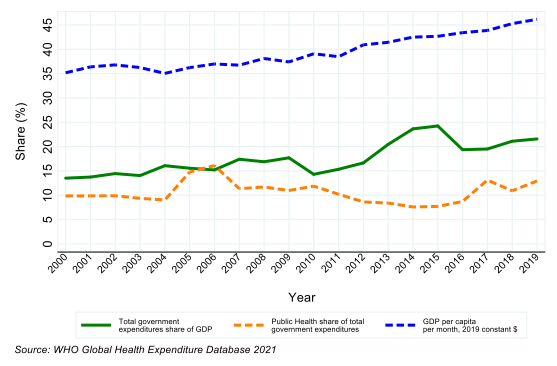
37 Other Fiscal Narratives decompose Public Health Expenditure and also find that economic growth is the main driver. See https://www.jointlearningnetwork.org/resources/drm-narrative-summaries/

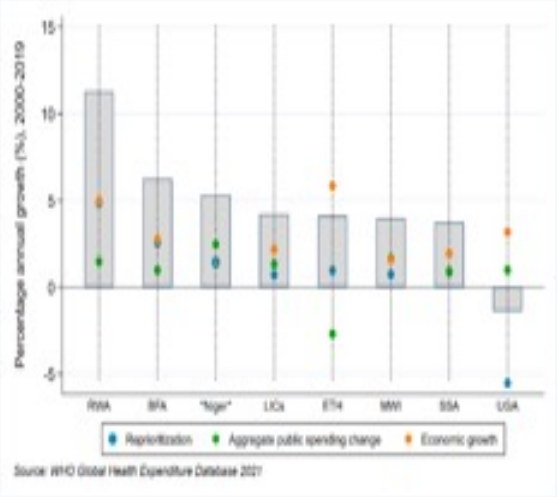
38 The World bank (2019), The economic Impacts of gender inequality in Niger. Result of general computable equilibrium study. A comparative statics approach assesses GDP gain to 30% by 2030

The value for money of health spending must also play a role in the improvement of the population's health. The 2020 public expenditure review estimated that Niger lies significantly below the stochastic frontier of Sub-Saharan countries. Life expectancy should be 4 years longer given Niger's current level of spending on the health sector; or conversely, the expenditure per capita could be 11 percent lower for the current life expectancy[39]. A recent study finds that the Universal Health coverage of the population with a core package of basic service is the best way to improve general efficiency of health spending[40].

The contemporary health financing landscape has been impacted by the Covid-19 pandemic. The associated reduction in incomes and the presence of new emergencies (food insecurity, terrorist attacks) compound structural spending needs might affect the government's budget and the prioritization of health in particular. Niger's per capita growth went down in 2020 and especially in 2021, as the low amount of rainfall in the late season negatively impacted agricultural output. We will use this parameter for 2021 and assume the World Bank and IMF's growth rate for the subsequent years will hold.

Figure 2.6 Niger's public health expenditure decomposition

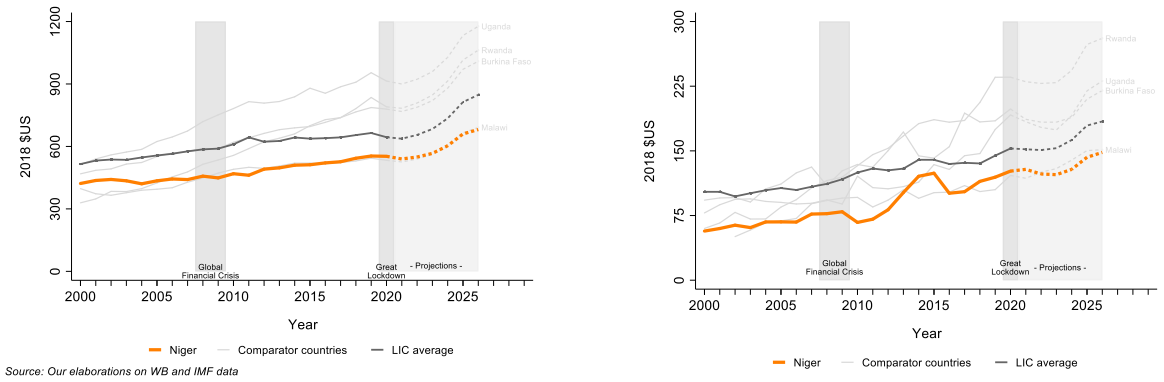




39 These numbers are in comparison to Sub-Saharan African countries in life expectancy. Comparing with all other countries on other indicators such as service coverage, the potential for efficiency enhancement would be larger (23%)

40 Garcia-Escribano et al (2022) Patterns and Drivers of Health Spending Efficiency, IMF Working Papers, WP/22/48

Figure 2.7 GDP per capita (left panel) and GGE per capita (right panel): time series and forecasts



Source: Our elaborations on WB and IMF data

Government expenditure countercyclically expanded during the pandemic with an increase in spending in 2020 and 2021. However, forecasts expect an adjustment in the medium term, with a reduction in government expenditure per capita for the years 2022 and 2023 (Figure 2.7). How government health expenditure will evolve depends on the prioritization during the time of crisis. Domestic resources for health increased when a political commitment around health occurred in 2016. The government relies on foreign support for a significant share of its health spending, and variation in external aid has affected health spending. Early data gathered by the Resource Mobilization exercise (GFF 2020) suggest a large decline in commitment from DAH for the year 2021. Besides these unpredictable political decisions, we can use assumptions or econometrics to sense the evolution of Government Health expenditure, along three scenarios.

1. **Pre-covid growth trend:** the Government protects the pre-pandemic trends in the growth of per capita government expenditure for health. The growth rate from 2009 to 2019 of 5.9 percent of GHE is maintained in absolute terms from 2022 onward.

2. **Constant health share of budget:** the government chooses to hold the pre-pandemic share of health in government spending constant as in the year [2017-2019], so health is maintained at 12.3 percent of Government Expenditures.

3. **Pro-cyclical:** the government's decisions about per capita health spending follow the same pro-cyclical pattern observed in the past. This prediction is based on a model that estimates elasticities of government health expenditure and economic growth. The model allows for different elasticities during economic recession to better fit the current situation. This scenario can be produced alongside two growth estimates:

    a. The growth forecasts included in Section 1
    b. A revised more pessimistic growth as a result of international food price increase and other consequences from the war between Russia and Ukraine.

Growth in health spending is expected to slow down in the medium term in the absence of a renewed political commitment. Figure 2.8 shows the results of the different scenarios. Of the three scenarios, the one with sustained pre-Covid growth rate in health budget share brings the largest fiscal space for health. On the contrary, the pro-cyclical elasticity model expects a strong downturn in Government Health Expenditure for years 2021 and 2022, followed by an uptake in the medium term to catch up with historical trends in 2023. The pessimistic growth would lead to a decrease in public health financing by more than one dollar per year for 2023-2025. The constant share model predicts that budget for health will follow the general government budget, with a slowdown in 2022 and 2023 as the government reduces expenditures after the Covid-related countercyclical spending to maintain budget sustainability. The first scenario would mean that the share of health in the budget continue to increase substantively and can only be achieved by a renewed strong political commitment in favor of the health sector, as it happened with the spur in DRM occurred in 2017. The new Health Development Plan 2022-2026 is currently being prepared and we are not aware of such strong commitments yet. Furthermore, government relies on foreign support for a significant share of its health spending. Early data gathered by the Resource Mobilization exercise (GFF 2020) suggest a potential decline in commitment from DAH for the year 2021.

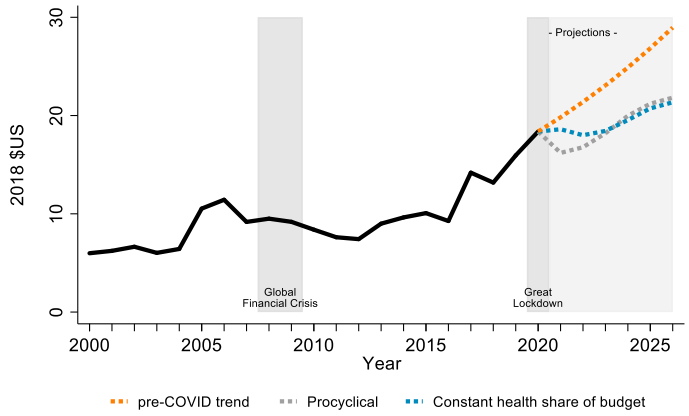
2.4 Conclusions and Policy Options

Increasing human capital is central to the long-term development of Niger. The improvement of health of the population will require increasing the provision and quality of health services. Given the important pressures on the government's budget, there is limited scope to increase the prioritization of health spending. This suggests that general economic growth must be relied on to increase health spending. It is well known that investment in human capital brings high rates of return, but this is specifically true for Niger which has yet to tap into the large demographic dividend, with an estimated potential of 30 percent increase in GDP per capita till 2030. In the short term, however, the largest potential gains in health lie in the efficiency improvements within the sector. Simply increasing public expenditure in the health sector may not yield the expected health outcomes if the efficiency of this spending is low. The 2020 World Bank Public Expenditure Review estimated that the amount spent on health care could increase life expectancy by 4 years if spending were executed more efficiently. One source of inefficiency stems from the imbalance between the human resources and the infrastructure: the density of qualified practitioners is at the very bottom of the international ranking, while in terms of beds per capita, Niger has twice the LIC average, and they are under-used.

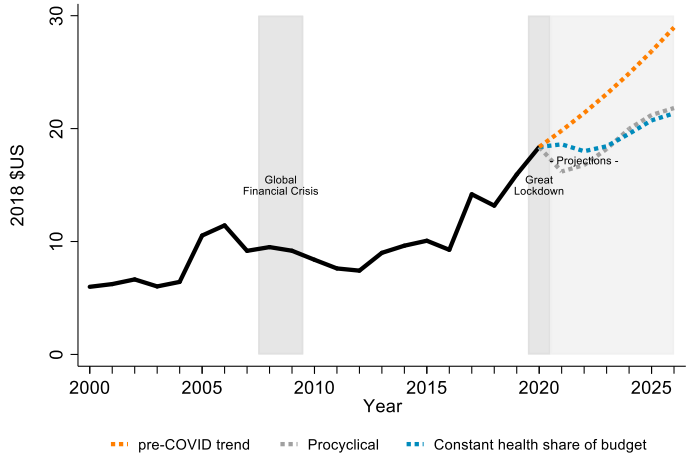
Addressing the geographical imbalance can also have an impact on efficiency. Health providers in hospitals see very few patients, while health post and health center staff have a much larger caseload. Niger's natural conditions exist such that the population is sparsely distributed in a large territory. Half of the population of Niger lives farther than 5 km from a health center, especially in sparsely populated area. Instead of building more health posts that are under-equipped and understaffed, a system of transportation of medical staff and/or patients could potentially be an option worth exploring. It would improve access to more people, as well as enable refereeing of at-risk patient to underused facilities that have better capabilities.

Overall, directing new health financing towards improvement of the primary health care, of the referral system and human resources could bring large gains in health and service coverage within the same budgetary envelope. Moreover, empirical evidence reveals that addressing overall income inequality and controlling corruption could improve efficiency[41]. The prioritization and efficiency of health expenditures are key strategies, but with finite possibilities. In the long run, only economic growth can enlarge these possibilities provided that major growth bottlenecks (such as informality, gender gaps, weak business environment) are tackled and that resilience to shocks is enhanced.

Figure 2.8. Scenarios of public health expenditure per capita



Source: WHO Global Health Expenditure Database (GHE 2000-2018)
Niger's National Health Accounts (2019-2020)
Author's calculation based on time trend and IMF's WEO forcast of GGE



Source: Our elaborations on WB, IMF, GHED and Niger's NHA (2020) data

41 IMF (2022) Patterns and Drivers of Health Spending Efficiency (WP/22/48).

ANNEXES

Annex 1. Table 3.1 Chad: Selected Economic Indicators, 2018-2024

	2018	2019	2020	2021	2022[1]	2023	2024
			Estimates		Projections		
National income and prices	*Annual percentage change unless otherwise indicated*						
Real GDP	2.4	3.2	-1.6	-1.2	2.8	3.5	3.9
Real GDP per capita	-0.7	0.2	-4.5	-4.1	-0.1	0.6	1.0
Agriculture	-1.3	0.1	3.9	6.2	5.0	4.3	4.3
Industry	8.1	7.3	-0.1	-4.6	1.3	2.8	1.6
Services	1.0	2.5	-7.0	-4.4	2.1	3.3	5.6
Private Consumption	0.7	1.4	0.5	1.6	2.8	2.9	3.3
Government Consumption	-11.8	1.7	11.1	3.7	3.7	0.2	0.0
Gross Fixed Investment	5.4	6.6	-14.7	-4.5	0.7	5.3	7.2
Gross Fixed Investment - Private	1.2	1.7	-28.1	-16.8	6.1	7.1	10.4
Gross Fixed Investment - Public	25.1	25.0	26.1	16.7	-5.9	2.8	2.6
CPI (year-average)	4.0	-1.0	3.5	1.0	3.5	3.0	3.0
CPI (EOP)	4.4	-1.7	3.0	2.3	4.8	2.7	2.9
Money and credit	*Annual percentage change unless otherwise indicated*						
Exchange Rate (to US$, average)	555	586	575	554	...	...	...
Exchange Rate (to US$, EOP)	576	590	539	580	...	...	...
REER	1.1	-2.3	-0.2	1.9	...	...	...
Broad money	-2.1	15.0	17.0	11.6	14.9	15.6	12.6
Credit to economy	-4.5	13.0	8.6	6.1	10.4	14.1	14.4
Credit to the government	127.8	-89.5	575.8	45.3	47.1	22.6	10.1
Public finance and debt	*Percent of GDP unless otherwise indicated*						
Total expenditure	21.2	21.6	22.9	24.3	23.7	22.9	22.3
Total revenue and grants	18.2	18.0	17.5	17.7	18.1	18.4	19.1
Overall balance (incl. grants)	-3.0	-3.6	-5.4	-6.6	-5.5	-4.5	-3.2
Overall balance (excl. grants)	-9.0	-10.4	-12.1	-13.8	-11.6	-10.1	-8.5
Primary Fiscal Balance	-2.1	-2.6	-4.4	-5.5	-4.1	-3.1	-2.1
Total public debt	37.0	39.8	45.0	52.5	53.0	52.2	48.7
External public debt	25	26	32	36	35	33	31
Domestic public debt[2]	11.6	13.3	13.4	16.4	18.3	19.1	18.1

	2018	2019	2020	2021	2022[1]	2023	2024
			Estimates		Projections		
External Accounts	*Annual percentage change unless otherwise indicated*						
Export Growth (%, yoy)	1.2	-4.4	-3.4	6.7	8.7	24.4	46.3
Import Growth (%, yoy)	14.7	0.8	4.4	9.7	17.5	9.7	12.2
Exports, Goods and Services	-4.3	1.1	-6.3	3.6	5.5	20.8	41.7
Imports, Goods and Services	9.4	6.2	2.7	3.5	6.8	11.1	11.0
CAD (incl. current transfer)	-12.7	-12.2	-13.2	-14.9	-16.9	-15.5	-12.2
Net FDI (% change)	38.0	60.3	-49.5	89.0	23.2	-26.4	-8.0
Terms of Trade (% change)	-0.9	2.9	-3.9	2.5	2.4	-2.1	-8.6
Population, Employment and Poverty							
Population, total (millions)	22.4	23.3	24.2	25.1	26.1	27.1	28.1
Unemployment Rate	0.4	0.7	0.4	0.5	0.5	4.5	3.4
Population Growth (annual %)	3.9	3.9	3.8	3.8	3.8	3.8	3.7
International poverty rate ($1.9 in 2011 PPP)[3]	41.4	40.3	40.4	41.8	41.0	38.7	34.8
Other memo items							
GDP nominal (CFAF billions)	7,114.53	7,567.89	7,909.37	8,238.80	8,905.38	9,882.82	11,303.64
GDP nominal (US$ billions)	12.8	12.9	13.7	14.3	15.5	17.2	19.6

Sources: *Nigerien authorities, WEO, WDI, KNOMAD, IMF and World Bank Staff estimates and projections.*

ANNEX 2: Poverty Effect of Food Inflation - Methodology

The methodology used in this analysis relies on a demand system estimation to account for behavioral responses of households to a given change in food prices. More specifically, using the latest household budget survey in Sahel countries, a linearized Exact Affine Stone Index (EASI) implicit Marshallian demand system (Lewbel and Pendakur 2008; Pendakur 2009) is estimated to fit the survey data considering 11 (homogeneous) food categories. Based on the estimated demand system, the poverty effect due to a change in prices is easily derived by compensating variation for a given period of reference.

Let consider J food categories, and let w^j, p^j denote, respectively, the price and budget share of a given food category j, $j \in \{1,...,J\}$. The approximate EASI demand system is given by:

$$w^j = \sum_{r=1}^{R} b_j^r (\tilde{y})^r + \sum_{t=1}^{T} g_t z_t + \sum_{k=1}^{J} a^{jk} \log(p^k) + \varepsilon^j \quad (1)$$

For $j \in \{1,...,J\}$. $\{z_t, t=1,...,T\}$ is a set of household characteristics, and $\tilde{y}$, $\tilde{y} = \log(x) - \sum_{j=1}^{J} w^j \log(p^j)$ is the approximate implicit utility derived from the consumption of the J food categories, with x being household (per capita) expenditure. In contrast to most demand systems, the EASI model is flexible enough to account for the variety of shapes of the Engel curve that has been observed in the empirical literature on consumer expenditure data (Pendakur 2009). The shape of the Engel curve is captured by the coefficients b_j^r in equation (1). Besides, the EASI model accounts for unobserved preference utility, which has been shown to be important in explaining the observed variation in budget shares (Pendakur 2009).

Lewbel and Pendakur (2008) show that the approximate EASI model can be consistently estimated by an iterated linear estimation method with instrumental variables. The instrumental variables, which are functions of $\log(x)$, z_t, and p^j, are used to correct for the endogeneity problem in the model due to the presence of the budget shares at the right-hand side of equation (1) (via the implicit utility). Once the EASI model is estimated, the corresponding coefficients can be easily used to compute demand elasticities or compensating variation following a change in prices.

Demand elasticities and poverty effect of a change in prices

The estimated parameters from equation (1) provide the semi-elasticities of budget shares, defined as the derivatives of budget shares with respect to log prices, given by the a^{jk}, or implicit utility, given by the b_j^r. These semi-elasticities can be easily converted to ordinary demand elasticities by dividing by the corresponding budget shares (Pendakur 2009). For instance, own-price Hicksian (or compensated), η_j^j, and cross-price Hicksian elasticities, η_j^i, for given food categories j and i are derived as follow (Pendakur 2009; Tovar Reaños and Wölfing 2018):

$$\eta_j^j = \left(\frac{\partial w^j}{\partial \log(p^j)}\right)\frac{1}{w^j} - 1 \quad (4)$$

$$\eta_j^i = \left(\frac{\partial w^j}{\partial \log(p^i)}\right)\frac{1}{w^j} \quad (3)$$

The poverty effect following a change in prices can also easily be computed from the estimated model (1). Consider a change in prices from the price vector P_0 to the price vector P_1. Then, the change in income (or expenditure) by compensating variation can be computed as follow:

$$CV(P_0, P_1) = x - exp\left(log(x) + \sum_{j=1}^{J} w_j^0 \left(log(p_j^1) - log(p_j^0) \right) + \frac{1}{2} \sum_{j=1}^{J} \sum_{k=1}^{J} a^{jk} \left(log(p_j^1) - log(p_j^0) \right) \left(log(p_j^1) - log(p_j^0) \right) \right) \quad (4)$$

Note that $CV(P_0,P_1)$ is positive (negative) when prices decrease (increase). In presence of inflation (increase in prices), $CV(P_0,P_1)$ represents the additional amount that is needed to achieve the same level of utility as before the change in prices. In other words, relative to the reference price system, P_0, a typical household will be poorer by $CV(P_0,P_1)$ amount under the new price system, P_1 (Wood et al., 2012). The poverty headcount ratio (by compensating variation) under the new price system can therefore be computed as the share of people with their equivalent income or expenditure in period $1, x_1$-$CV(P_0,P_1)$, below the poverty line of the reference period. x_1 represents the nominal income in period 1, that is $x_1=x_0*(1+g_0^1)$ with g_0^1 being the growth rate of nominal incomes between periods 0 and 1. Note that the poverty line needs not to be updated in the new period, since the price effects are already captured through the compensating variation measure. That compensating variation results from household behavioral responses to the change in prices.

Based on the described methodology, a time series of poverty rate has been computed for the period 2019-2022, with the reference date (period 0) being 2018, the year of the most recent poverty survey implemented in Sahel countries. Three scenarios are considered for any single year of the period 2019-2022. The first measures the poverty rate associated with growth in incomes and no change in prices, that is $P_1=P_0$ and $CV(P_0,P_1)=0$. In other words, the prices in the subsequent years are considered the same as the price of 2018. The second scenario, in addition to incomes growth, considers a benchmark inflation rate, which has been set to the inflation level of 2018 for each of the years of the period. Finally, the last scenario, in addition to incomes growth, consider the realized or effective (projected for 2022) inflation for each year of the period.

Annex 3: Food Consumption Profile and Food Price Elasticities

Food Consumption Profile

The foods group with the highest budget shares in Niger are cereals (millet, sorghum, rice, and maize) with significant geographical disparities. Cereals represent 41 percent of Nigerien households' food consumption, with 44 percent for rural households, 29 percent in other urban and 23 percent in Niamey. Among cereals, millet and sorghum are the most consumed with a food budget share corresponding to 27 percent. Overall, rural households allocate 31 percent of their food budget to millet and sorghum. Unlike the other cereals, rice is primarily consumed in Niamey where it accounts for 14 percent of food budget. Non-poor households allocate 34 percent of their food budget to cereals compared to 51 percent for poor households. The poor consume essentially millet and sorghum (39 percent).

The most consumed non-cereal foods among Nigeriens are fruit, vegetables, and meat, especially in urban areas. They represent respectively 14 percent and 10 percent of households' food consumption. In Niamey, households allocate a greater part of their food budget to meat (17 percent) compared to households in other cities (14 percent) and rural areas (8 percent). They also consume more dairies (8 percent) compared to rural households (5 percent).

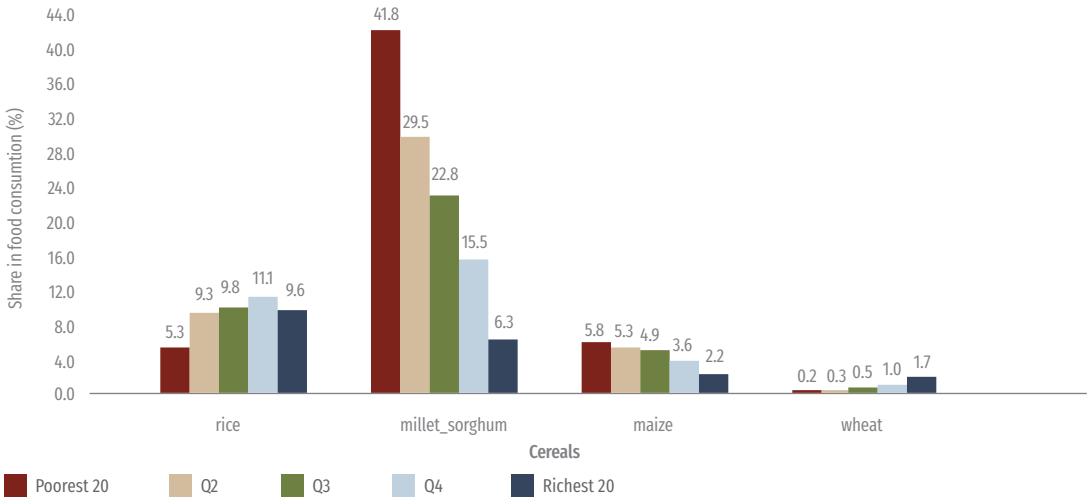
Table 3.2 Households' Consumption Profile by Welfare Quintile, Poverty Status, and Areas of Residency (in percentage)

	Rice	Millet, Sorghum	Maize	Wheat	Meat	Dairy	Fish & seafood	Fruits, vegetables	Beverages	Oil	Other foods
Quintile of Welfare											
Poorest 20	5.3	41.8	5.8	0.2	3.4	4.2	0.6	11.1	1.5	4.0	22.2
Q2	9.3	29.5	5.3	0.3	8.0	4.8	1.4	12.5	1.8	4.7	22.3
Q3	9.8	22.8	4.9	0.5	11.5	5.0	1.1	14.8	2.4	5.0	22.0
Q4	11.1	15.5	3.6	1.0	14.3	6.5	1.9	17.5	2.4	4.7	21.6
Richest 20	9.6	6.3	2.2	1.7	20.1	9.4	3.5	20.0	3.7	4.1	19.4
Poverty status											
Bottom 40%	7.1	36.4	5.5	0.2	5.4	4.5	1.0	11.7	1.6	4.3	22.2
Top 60%	10.2	16.7	3.9	0.9	14.3	6.5	1.9	16.8	2.7	4.7	21.3
Poor	6.3	39.1	5.6	0.2	4.3	4.4	0.7	11.4	1.6	4.2	22.3
Non-poor	10.1	19.2	4.2	0.8	13.2	6.1	1.9	15.9	2.5	4.7	21.4
Place of residence											
Niamey	13.8	2.4	4.5	1.8	17.3	7.7	2.8	22.2	2.6	4.2	20.6
Other urban	14.2	10.1	3.8	1.2	14.2	5.7	1.8	21.0	2.6	5.0	20.5
Rural	7.4	31.3	4.9	0.4	8.4	5.2	1.3	12.6	2.0	4.4	22.1
Niger	8.5	27.3	4.8	0.6	9.5	5.4	1.4	14.1	2.1	4.5	21.8

Source: *World Bank staff calculations using data from EHCVM.*

The share of cereals in the total food budget declines as the level of wealth increases. Cereals accounts for 53 percent of the food consumption of the poorest households whereas the corresponding figure for the richest households is 20 percent). In addition, the poorest households allocate more resources to millet and sorghum (42 percent) whereas the richest do so for rice (10 percent). Most of the rice consumed in Niger is imported, which makes households vulnerable to global price increases in rice. Overall, wheat is the least consumed cereal regardless of wealth level, though its budget share is much more insignificant among the poorest (0.2 percent for the poorest and 1.7 percent for the richest).

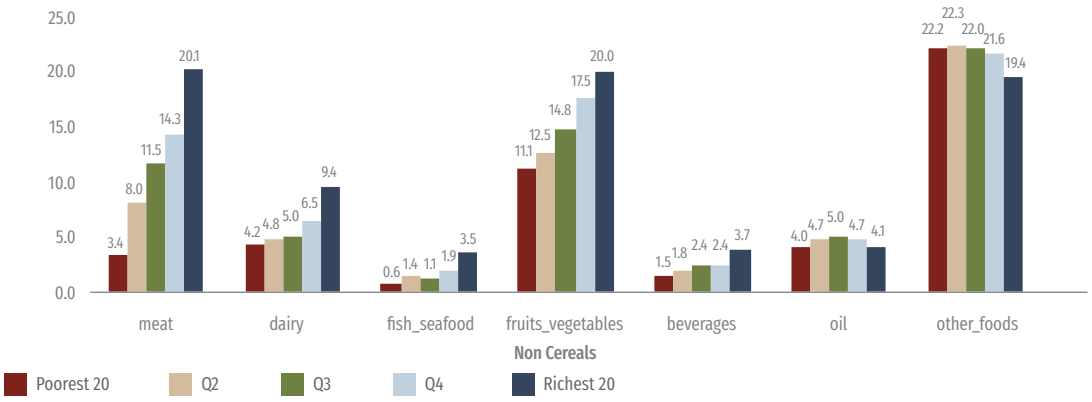
Figure 3.1 Budget share of cereal (%) in total food consumption by welfare quintile



Source: *World Bank staff calculations using data from EHCVM.*

Meat, vegetables, and fruits are the most consumed non-cereals food across all wealth quintiles. The share of fruit and vegetable in the total food budget varies from 11 percent for the poorest to 20 percent for the richest across wealth quintiles. The share of meat in households' food consumption, which is 9.5 percent, increases consistently from 3.4 percent for the poorest households to almost 20.1 percent for the richest households. Dairy and fish and seafood consumption follows the same pattern. Precisely, the budget share of dairy increases from 4.2 percent for the poorest households to 9.4 percent for the richest. Likewise, fish and seafood accounts for just 0.6 percent for the poorest while it is 3.5 for the richest. In contrast, the share of oil in the total food budget varies very little by wealth status.

Figure 3.2 Budget share of other foods (%) in total food consumption by welfare quintile



Source: *World Bank staff calculations using data from EHCVM.*

Food price elasticities

The impact of inflation on cereal demand is likely to be larger for maize and wheat. Overall, maize and wheat are the cereals with the highest elasticity. Specifically, a 1 percentage increase in the price of these goods leads to 2.6 percent decrease in their consumption. For wheat, it is particularly pronounced for the poorest wealth quintile for whom a 1 percent increase in wheat price leads to a 5.7 percent decline in the quantity consumed. The opposite is observed for maize, where the price elasticity of demand is much higher for the richest. As for rice, it has the lowest elasticity among all cereals (1.3 at the national level) and remains about the same across all wealth groups.

For non-cereals items, the elasticities of the quantity of the are below 1 percent, except fish, seafood, and beverages. For each of these items, there is no significant difference by geographic location. On the other hand, the elasticities decline for meat, dairy and fruit and vegetables as wealth level increases.

Table 3.3 Hicksian (Compensated) Elasticities of Quantities

	Rice	Millet, Sorghum	Maize	Wheat	Meat	Dairy	Fish & seafood	Fruits, vegetables	Beverages	Oil	Other foods
Quintile of Welfare											
Poorest 20	-1.47	-1.49	-2.24	-5.67	-0.25	-0.39	-1.88	-0.93	-1.53	-0.62	-1.00
Q2	-1.27	-1.70	-2.39	-3.22	-0.68	-0.46	-1.40	-0.94	-1.44	-0.67	-1.00
Q3	-1.26	-1.89	-2.51	-2.82	-0.78	-0.48	-1.51	-0.95	-1.32	-0.70	-1.00
Q4	-1.25	-2.37	-3.20	-1.87	-0.81	-0.58	-1.29	-0.95	-1.36	-0.65	-1.00
Richest 20	-1.34	-4.58	-5.06	-1.64	-0.84	-0.63	-1.17	-0.95	-1.30	-0.53	-1.00
Poverty status											
Bottom 40%	-1.36	-1.57	-2.30	-4.14	-0.53	-0.42	-1.57	-0.93	-1.49	-0.64	-1.00
Top 60%	-1.27	-2.25	-3.00	-2.02	-0.81	-0.56	-1.30	-0.95	-1.33	-0.65	-1.00
Poor	-1.40	-1.53	-2.28	-5.04	-0.41	-0.41	-1.81	-0.93	-1.51	-0.64	-1.00
Non-poor	-1.27	-2.09	-2.82	-2.14	-0.79	-0.54	-1.30	-0.95	-1.35	-0.66	-1.00
Place of residence											
Niamey	-1.29	-14.65	-3.42	-1.74	-0.76	-0.43	-1.34	-0.94	-1.52	-0.41	-1.00
Other urban	-1.22	-3.33	-3.28	-1.78	-0.78	-0.41	-1.38	-0.96	-1.39	-0.63	-1.00
Rural	-1.33	-1.66	-2.45	-3.07	-0.71	-0.51	-1.41	-0.94	-1.39	-0.66	-1.00
Niger	-1.31	-1.76	-2.55	-2.61	-0.72	-0.49	-1.40	-0.94	-1.40	-0.65	-1.00

Source: *World Bank staff calculations using data from EHCVM and consumer price index*

Households tend to substitute foods for which the price increases with other foods though this substitution is not strong. The cross-price elasticities – which measure how much the quantity of one good changes with respect to the price increase of another good – are below 1 percent for almost all the food items with few exceptions for some cereals. For example, for millet and sorghum, an increase of 1 percent in their price leads to an increase of 2.2 percent and 1.3 percent, respectively, in the quantities of maize and rice. Nigerien households also tend to switch to wheat when the price of maize increases (2 percent increase in the quantity of wheat in response to an increase of 1 percent in maize price).

Table 3.4 Cross-Price (Substitution -Hicksian or Compensated-) Elasticities of Quantities

	Rice	Millet, Sorghum	Maize	Wheat	Meat	Dairy	Fish & seafood	Fruits, vegetables	Beverages	Oil	Other foods
Rice	-1.31	1.32	-0.07	0.13	0.03	0.08	-0.17	0.00	0.07	0.11	0.17
Millet/ sorghum	0.38	-1.76	0.38	-0.02	-0.03	-0.09	0.16	0.03	-0.01	0.05	-0.06
Maize	-0.12	2.23	-2.55	0.22	-0.49	-0.05	0.44	-0.03	0.11	0.23	-0.07
Wheat	2.12	-1.12	2.02	-2.61	0.45	0.40	0.50	-0.01	0.03	0.53	-0.48
Meat	0.02	-0.07	-0.24	0.02	-0.72	-0.11	-0.07	-0.08	0.02	0.05	0.20
Dairy	0.13	-0.48	-0.04	0.04	-0.19	-0.49	-0.03	0.11	0.00	0.03	-0.01
Fish/Seafood	-0.96	3.03	1.43	0.18	-0.46	-0.10	-1.40	-0.02	0.21	-0.23	-0.27
Fruits/ Vegetables	0.00	0.07	-0.01	0.00	-0.06	0.04	0.00	-0.94	0.05	0.02	-0.12
Beverages	0.29	-0.12	0.26	0.01	0.09	0.00	0.14	0.31	-1.40	-0.14	-0.21
Oil	0.19	0.30	0.24	0.06	0.11	0.04	-0.08	0.06	-0.06	-0.65	0.07
Other foods	0.07	-0.07	-0.02	-0.01	0.09	0.00	-0.02	-0.07	-0.02	0.01	-1.00

Source: *World Bank staff calculations using data from EHCVM and consumer price index*
Note: *For a cross-price elasticity, read change in quantities of row when price in column change*

Annex 4: Glossary, methods and data for SECTION II

Note on peer countries selection

Peer countries are selected using dynamic benchmarking tool kit[42]. Structural peers are countries that share similar socio-economic features with Mali and were selected by using the following criteria: (i) commodity exporter (ii) landlocked economy (iii) GDP per capita, in constant 2010 US$ (iv) youth population, as percentage of total population and (v) the size of government, measured in government spending as percentage of GDP. The structural peers selected are Afghanistan, Burkina Faso, Malawi, Uganda.

The aspirational peers are countries that used to be structural peers, but that improved faster and reached higher level of development in terms of wealth and health. Ethiopia and Rwanda were selected as aspirational peers.

Glossary

GHE or PHE is Government Health Expenditure is computed from the WHO Global Health Expenditure Database (GHED). The literature uses alternatively "Public Health Expenditure" for this variable.

It is the sum of FS1 (transfers from government revenue), FS2 (transfers by government from foreign origin) and FS3 (Social Health Insurance). It consists in the resources over which the government has control

Constant International dollars: Also referred to as 'real', refers to the value of a monetary variable with adjustments made to remove the impact of changes in prices of goods and services due to inflation. Constant series show the data for each year in the value of a particular base year. Thus, for example, data reported in constant 2017 prices show data for 2000 to 2017 in 2017 prices. Constant series are important as it is used to measure the true growth of a series (i.e., adjusting for the effects of inflation in local currency unit and in US dollars). This measure does not take into account the price difference between countries (i.e., it is not PPP – purchasing power parity).

Healthy Life Expectancy (HALE) is an indicator that captures both fatal and non-fatal health outcomes in a summary measure of average levels of population health. Healthy life expectancy (HALE) at birth adds up expectation of life for different health states, adjusted for severity distribution of comorbidities that reduce life quality.

42 Matta, Samer. 2018. "Dynamic Benchmarking Tool." *MTIOnline Tools.* https://worldbankgroup.sharepoint.com/sites/MFM/Documents/Tools/Presentation.pdf

World Bank Poverty and Equity Global Practice,
Africa Region