

The Efficiency of Social Spending in Niger

Niger

Jean-Marc Atsebi and Paola Ganum

SIP/2023/003

IMF Selected Issues Papers are prepared by IMF staff as background documentation for periodic consultations with member countries. It is based on the information available at the time it was completed on December 6, 2022. This paper is also published separately as IMF Country Report No 2023/029.

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The Efficiency of Social Spending in Niger
Prepared by Jean-Marc Atsebi and Paola Ganum*

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ABSTRACT: Despite some progress, poverty remains elevated and education and health outcomes are lagging. This paper finds evidence of inefficiencies in education, health, and social protection spending in Niger. Programs are typically not well-targeted, some are regressive, and there are significant coverage gaps. Improving the living standards of the Nigerien as well as education and health systems, a priority of the government, would require not only scaling up social spending but also strengthening social protection programs through better targeting, supporting girls' education, and moving away from general subsidies. Moreover, social assistance should focus more on enhancing productivity and resilience to shocks.

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SELECTED ISSUES PAPERS

The Efficiency of Social Spending in Niger

Niger

THE EFFICIENCY OF SOCIAL SPENDING IN NIGER¹

Niger faces daunting development challenges despite robust economic growth over the past decade. Poverty remains elevated and a large share of the population faces food insecurity. Niger also lags in terms of education and health outcomes, with demographic dynamics putting pressure on these systems. There is evidence of inefficiencies in education, health, and social protection spending. Programs typically are not well targeted and there are significant coverage gaps. Improving the living standards of the Nigerien as well as education and health systems, a priority of the government, would require not only scaling-up education, health and social protection spending, but also strengthening social protection programs through better targeting, supporting girls' education, and moving away from general subsidies.

A. Overview of Niger's Social Indicators and Government Priorities

1. **Niger continues to face daunting development challenges and recent improvements have been offset by a growing population.** GDP per capita remains below its 1980 level, and the country remains one of the poorest in the world. Niger's Human Development Index in 2022 was ranked at the bottom 189th out of 191 countries. Under five mortality rate is still elevated at 78 per 1,000 live births and life expectancy at birth is 63 years. Poverty incidence at 41.4 percent in 2021 is high with about 10 million Nigerien living below the national poverty line—of which two thirds live in three regions: Zinder, Maradi, and Dosso. Rapid population growth (more than 3 percent per year) generates significant pressures in terms of social spending and high fertility rates hinder the empowerment of women.
2. **Cognizant of these challenges, Niger is committed to scale-up and preserve social spending to support the poor and vulnerable population.** Regarding education, the government is committed to increase the quantity and quality of education by building education infrastructures, especially classrooms made with durable materials and residential school facilities for girls and revising the hiring process and career prospects of teachers to attract skilled teachers. Regarding social safety nets, the authorities would like to increase the coverage of social programs, especially to most vulnerable population, also with the objective to reduce gender inequality. They are also taking steps to improve the targeting of social programs by creating a unified social registry.
3. **The IMF is supporting the authorities in their efforts.** One of the program's objectives is to improve the effectiveness of public spending with the emphasis on social spending and poverty reduction expenditure. Indeed, the program includes an on-budget floor on social spending. It also puts strong emphasis on revenue mobilization, the quality of spending, and re-prioritization of

¹ Prepared by Jean-Marc Atsebi (FAD) and Paola Ganum (AFR). We are grateful to Maliki Amadou, Antonio David, Pantaleo Creti, Paolo Di Lorenzo, Patrick Hoang-Vu Eozenou, Thi Minh, Snjezana Plevko and the authorities for their valuable comments and suggestions.

spending to create the fiscal space needed to scale-up priority spending in education, health and social protection and improve their efficiency.

4. The main objective of this paper is to provide an overview of social spending in Niger and assess its efficiency. Sections B. and C. present Niger's education and health outcomes as compared to peers and discuss the trends and the efficiency of education and health spending. Section E. provides an overview of existing social programs in Niger. Section E compares Niger's social protection programs with peers and describes their coverage, adequacy and targeting, as well as their impact on poverty and inequality. Section F. further assesses the efficiency of targeting in social programs using the 2018/19 household survey. Section G. concludes and lays out some policy recommendations.

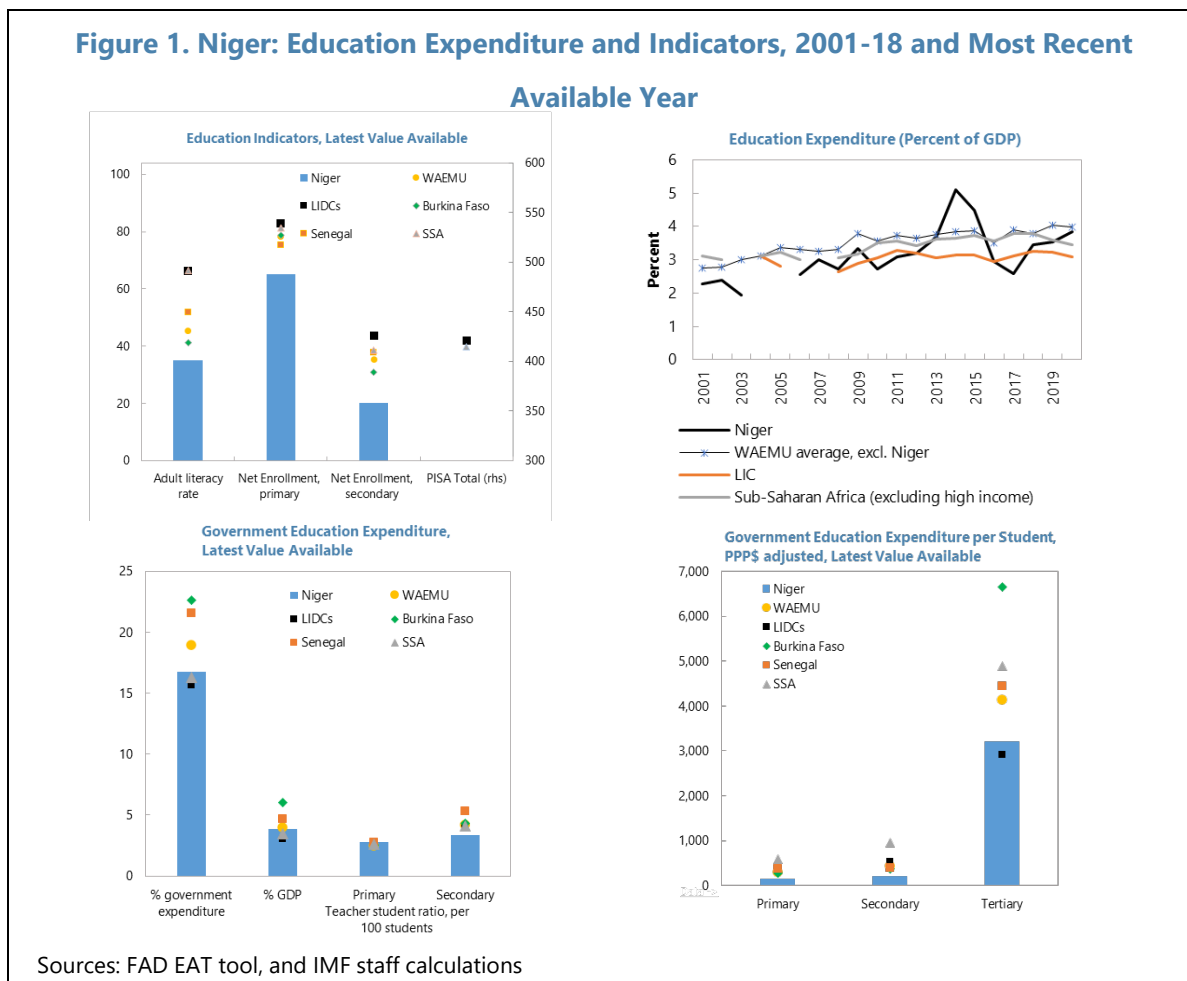
B. Education Outcomes and Efficiency of Education Spending

5. The analysis in this and next section is based on FAD's Expenditure Assessment Tool (EAT). This tool focuses on spending levels, composition, and outcomes in a variety of areas ranging from the wage bill, investment, energy subsidies, health, education, and social protection. It provides comparisons against regional and income group benchmarks. It draws upon diverse datasets, including ASPIRE, World Bank, World Health Organization, World Economic Outlook, and IMF Pension Indicators. The dataset covers indicators from around 2000 until 2018-19 as the latest available value (although there is wide variability across countries for the latest available value).²

6. Niger lags behind peers in educational outcomes. The adult literacy rate is 35 percent (implying 6.5 adults over 10 are illiterate) compared to 45 percent in the WAEMU and 66.4 percent in SSA and LIDCs (Figure 1). Net enrollment in primary and secondary education levels stand at 65.1 percent and 20.1 percent respectively, also lagging considerably behind peers, and possibly hindering even worse outcomes for girls.

7. Even though, the share of education spending in percent of GDP in Niger is broadly in line with peers, education spending per student is much lower than peers at all levels of education (Figure 1). After increasing over the 2000s, education spending declined reaching 3.8 percent of GDP in 2020, which is above the average in sub-Saharan Africa (SSA) countries but slightly below the WAEMU average of 4 percent of GDP. However, spending per student in primary and secondary education is less than half than SSA and low-income countries (LIC) countries and the teacher student ratio is lower than peers. This illustrates the challenge to keep up education spending at par with population growth. The comparison of spending by education level (last chart on the right) reveals that spending per student at the tertiary level is much higher than for the other levels.

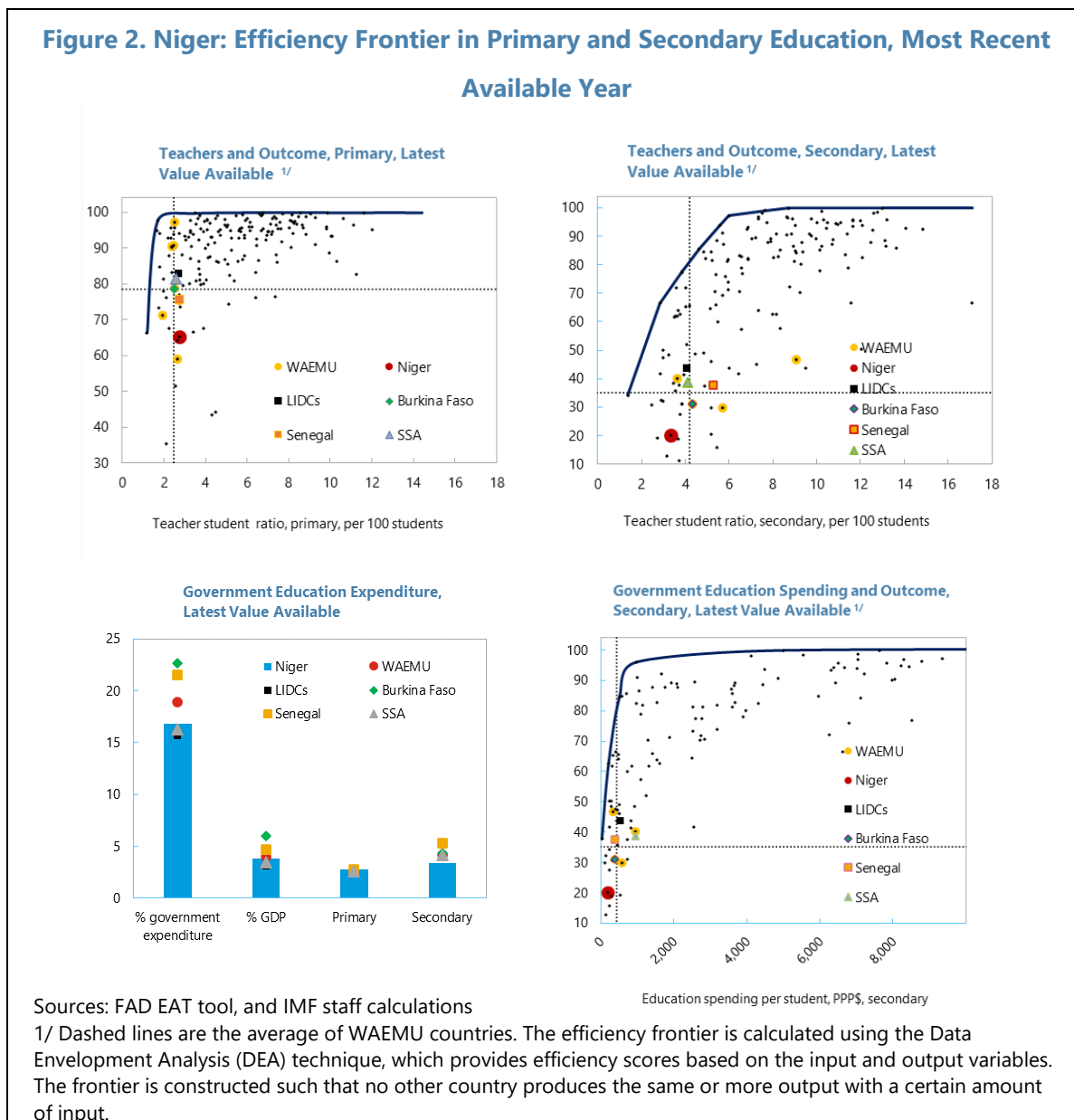
² However, this period does not cover the COVID-19 pandemic which has significantly affected government expenditures and socio-economic indicators. According to the World Bank (2021), The COVID-19 pandemic growth slowdown is estimated to have pushed up to an additional 270,000 people into poverty in Niger.



8. There are several indicators pointing to stark inefficiencies in education spending both at the primary and secondary levels.³ Overall, Niger is situated well below the efficiency frontier for different measures of education spending and education outcomes. Several countries in the WAEMU, SSA, and LIDCs groups spend less than Niger at both the primary and secondary levels and yet have better net enrollment rates (Figure 2). For example, Ethiopia has a similar expenditure per student ratio, but presents a net enrollment rate in primary education of 84.6 percent compared to 65.1 percent in Niger. While several other countries spend less per student and get better outcomes (e.g., Rwanda, Madagascar, Malawi, Burundi). Similarly, several LIDC and SSA countries with comparable teacher student ratio get better outcomes, closer to 80 percent net enrollment in primary and close to 30 percent in secondary (compared to 65 percent and 20 percent respectively in Niger). Moreover, Niger has a lower teacher student ratio in secondary education (3.4 per 100

³ Even though the analysis presented allows to control to some extent for some economic or social determinants of education by comparison with peers, a more granular analysis is required to identify the areas for efficiency gains within education spending.

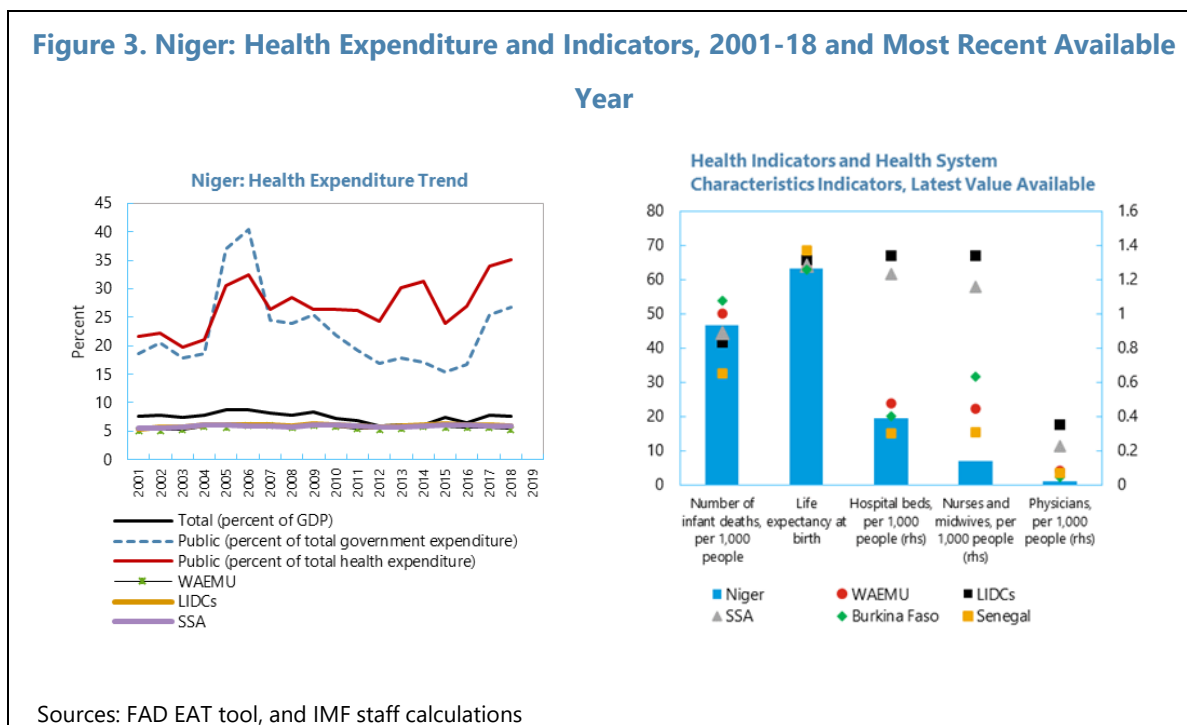
students) than most peers (around 4.1 per 100 students), which might explain the gap in net enrollment rates with respect to other countries.



C. Health Outcomes and Efficiency of Health Spending

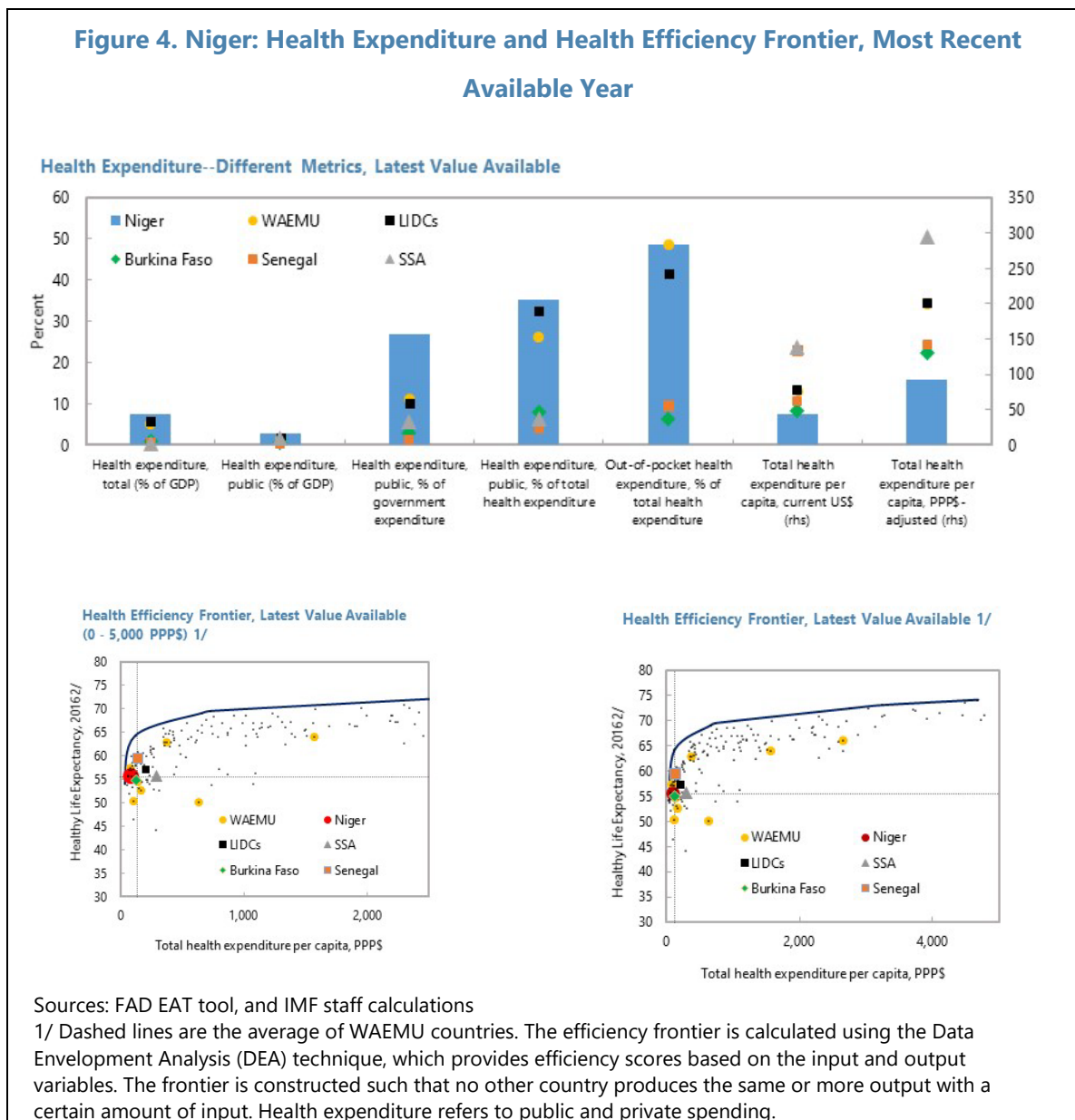
9. Despite efforts to dedicate resources to the health sector, outcomes are lagging, and coverage is low. Health spending in percent of GDP is comparable, although higher, to countries in the WAEMU and LIDCs (Figure 3). It has averaged 7.4 percent of GDP in the last two decades compared to 5.5 percent of GDP by WAEMU countries and 5.9 percent of GDP by LIDCs. But expenditure per capita has yet to catch up to the level of peers. However, LIDCs and SSA countries have fewer infant deaths, and higher life expectancy, more hospital beds, nurses, and physicians.

Niger’s ratio of physicians at 0.019 per 1000 people is one of the lowest in the world. The vast extension of the country and spatial distribution of the population compounds the shortage of healthcare workers and contributes to low health service coverage.



10. There are some inefficiencies as well in the health sector. Both spending per capita and health adjusted life expectancy (HALE)⁴ are lower than LIDC and SSA countries (Figures 3 and 4). Yet, there are countries that spend less on health in per capita terms, but have slightly better outcomes (e.g., Madagascar, Ethiopia, and Malawi). However, compared to education sector, the inefficiencies in the health sector are less pronounced as shown by a lower distance to the efficiency frontier.

⁴ According to the World Health Organization this is defined as the “average number of years that a person can expect to live in “full health” by taking into account years lived in less than full health due to disease and/or injury”.



D. An Overview of Social Protection Programs in Niger

11. The main social protection programs in Niger cover social safety nets, social insurance, labor market, and general subsidies. According to the World Bank (2019), social insurance expenses more than doubled between 2008 and 2017 reflecting increased payroll, safety nets tripled, while general subsidies (particularly petrol) have declined by 78 percent.

12. Social safety net programs comprise food distribution and safety nets for resilience. The former is the main short-term response to temporary food insecurity and the latter are more long-term and predictable cash transfers to chronically poor and vulnerable households. Typically,

coverage by these programs has not been sufficient and has not been conducive to reduce chronic poverty. The main programs are as follows:

- **in-kind distributions** (targeted food distribution and subsidized sales of cereals). These are part of Niger's system for prevention and management of food crises. Targeted food distribution covers the food needs of moderately and severely food insecure households in vulnerable areas and for victims of climate shocks and conflict, using a community-based method—the household economy approach (HEA). While transiently food insecure households are targeted using a geographical approach. Sales of cereals at subsidized prices target moderate food insecure households, through the OPVN (a public institution in charge of these sales).
- **nutrition programs** focused on the search for solutions to chronic malnutrition.
- **unconditional cash transfers under the National Safety Net Project (NSNP) and World Food Program (WFP) Resilience approach.** The NSNP aims to target poor and chronically food insecure households combining both geographic targeting (where poverty rates determine geographical allocations) and then poor households are identified through proxy means test. The launch of the Adaptive Safety Net project (ASNP 2) in 2019 has increased cash transfers delivered, with 120,000 households receiving a monthly transfer of 15,000 CFA for 24 months. The WFP aims to target the poorest crisis-affected households over a three-year period, using the HEA targeting method.
- **conditional cash transfers for education**, covering all levels of education. The largest share goes to university scholarships and allowances, but there are also programs to keep children in secondary school and in primary school to mitigate the high drop-out rates. Particularly, there are programs to support girls' continuation of education and reduction of early marriage through cash transfers conditional on the girls' enrollment and attendance to school and their families' participation on certain activities.
- **cash for work**, consisting of temporary public works activities, aims at providing income and learning skills to food-insecure people affected by weather shocks, helping them protect their assets and consumption.
- **school feeding programs** aimed at increasing school attendance. These programs run in over 2000 primary schools. WFP is the leading partner supporting school canteens in 7 out of 8 regions in Niger.
- **targeted agricultural subsidies**, covering typically free distribution of seeds and animal restocking, as well as sales of livestock feed and fertilizers at subsidized prices. Targeting of these subsidies has been an issue. FAO is the leading partner in this area of intervention.
- **free health care**, for pregnant women and children under 5.

13. The adaptive social protection system has been scaled-up in response to the COVID-19 crisis, and diverse analysis show that increased cash transfers for resilience is desirable.

With contributions from different partners, emergency cash transfers were distributed to households in urban and rural areas, covering about 65 percent of the individuals impacted by the crisis. An impact evaluation of the World Bank found that cash transfers induced lasting investments in productive assets and activities aimed at raising revenues among the very poor. They also found a positive impact on households from cash transfers to build resilience to shocks. Moreover, IMF staff analysis found that cash transfers are more effective than fertilizer subsidies at safeguarding household welfare.⁵

E. Profile, Impact and Efficiency of Social Protection and Labor

14. The Social Protection and Labor Assessment Tool (SPL-AT) is used for profiling social protection expenditures in Niger as well as analyzing their impact and efficiency. This tool uses data from various sources including the World Bank PovcalNet and ASPIRE data, the International Labour Organization, the World Economic Outlook of the IMF. It provides a broad understanding of the country context (e.g., on poverty, inequality, and labor market), SPL expenditures, and SPL performance by analyzing their coverage, adequacy, targeting, and efficiency while allowing for comparison with some country and country groups comparators.

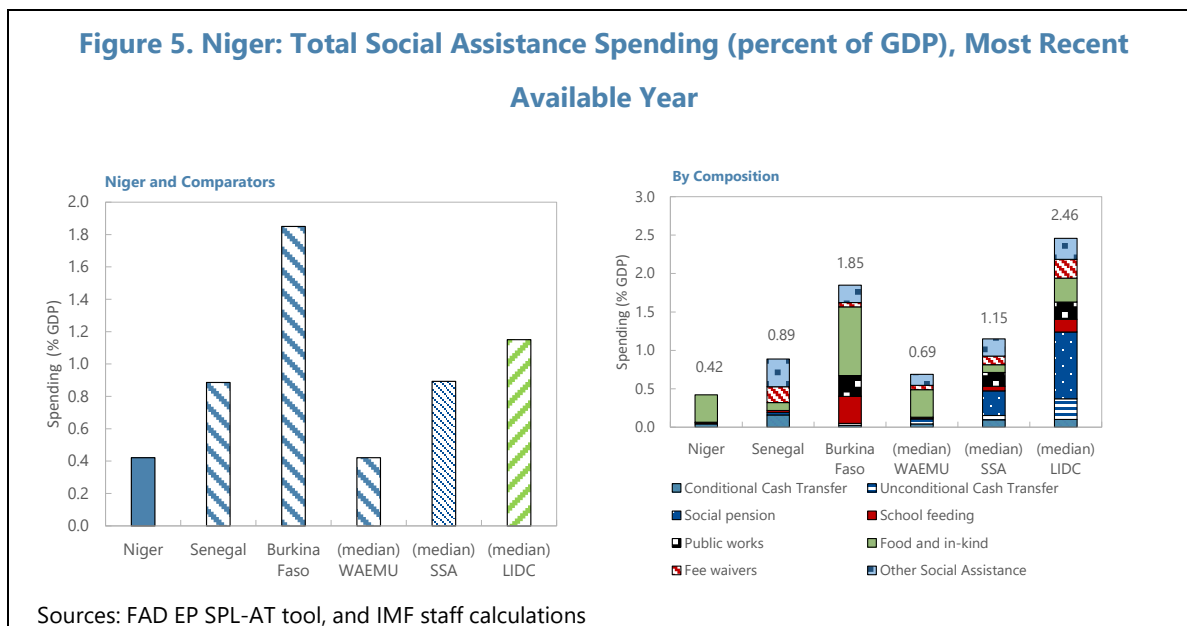
15. Social assistance expenditures in Niger remain among the lowest in the world, with a concentration on food and in-kind assistance (Figure 5).⁶ In 2017, Niger spends only 0.42 percent of GDP on social assistance programs, which is lower compared to SSA and LIDC medians at 0.89 and 1.15 percent of GDP, respectively. This amount is also 2 times lower than in Senegal and 4.4 times lower than in Burkina Faso. In addition, contrary to country comparators and SSA and LIDC medians, Niger's social assistance spending is concentrated on food and in-kind assistance (0.36 percent of GDP or 84.8 percent of all social assistance expenditures), followed by conditional cash transfers (0.04 percent of GDP), school feeding (0.02 percent of GDP), and public works (0.01 percent of GDP).

16. The coverage of social protection and labor programs (SPL) in Niger is inadequate (Figure 6). At 21.3 percent of the population in 2017, SPL coverage in Niger is lower relative to WAEMU median, but like SSA and LIDC medians. This suggests that around 80 percent of Nigeriens are not covered by any kind of SPL, increasing their vulnerability to the compounding shocks faced by the country. SPL coverage is particularly low for labor market and social insurance programs (less than 1.5 percent). This suggests that almost all old age pensioners are left without pensions, reflecting the predominance of the informal sector. In contrast, a higher percentage of the population (46.1 percent) receives assistance via private transfers in Niger, which is higher than in its

⁵ Please see the Selected Issues Paper on "Economic Effects of Climate Change and Food Insecurity in Niger".

⁶ The spending is available only for social assistance programs, which are a fraction of all SPL programs. These programs include cash transfer, in-kind, public works, school feeding, social pensions, subsidies and any other social assistance programs.

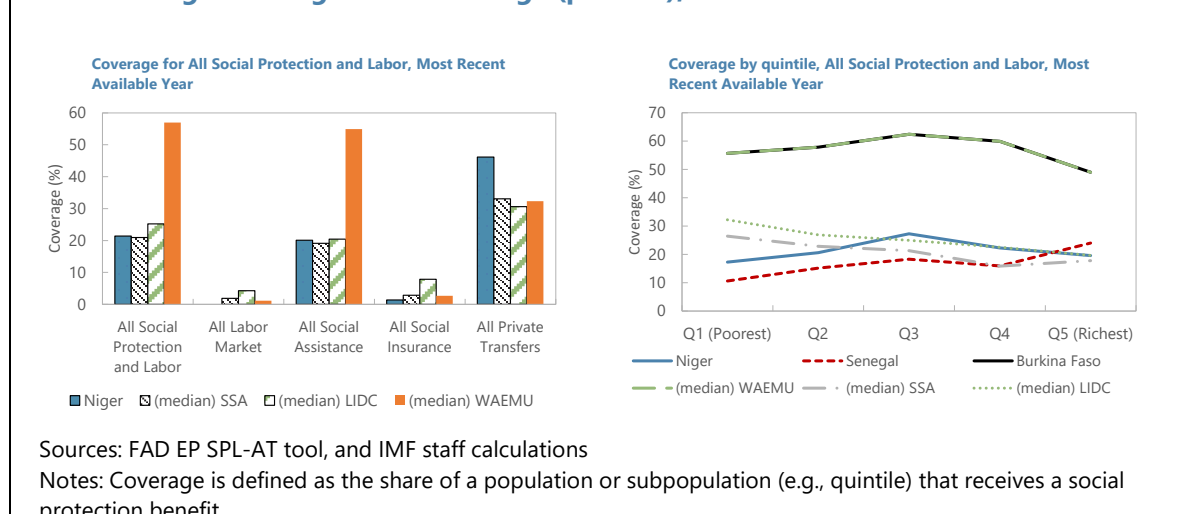
comparators.⁷ Difficulties in reaching the population living in conflict-affected areas are not captured by this analysis but constitute an important impediment to social assistance.



17. Moreover, the top (richest) quintile is more covered by SPL benefits than the bottom (poorest) quintile (Figure 6). Only 17.2 percent of the bottom quintile has access to any kind of SPL benefits, while the other quintiles have a higher coverage (between 19.5 and 27.3 percent for top quintile and third quintile, respectively). The richer segments of the population are more likely to receive any kind of SPL benefits than the poorest. Also, the poorest in Niger are less covered relative to SSA and LIDC medians. Therefore, there is scope to increase the efficiency of SPL programs through better targeting of expenditures.

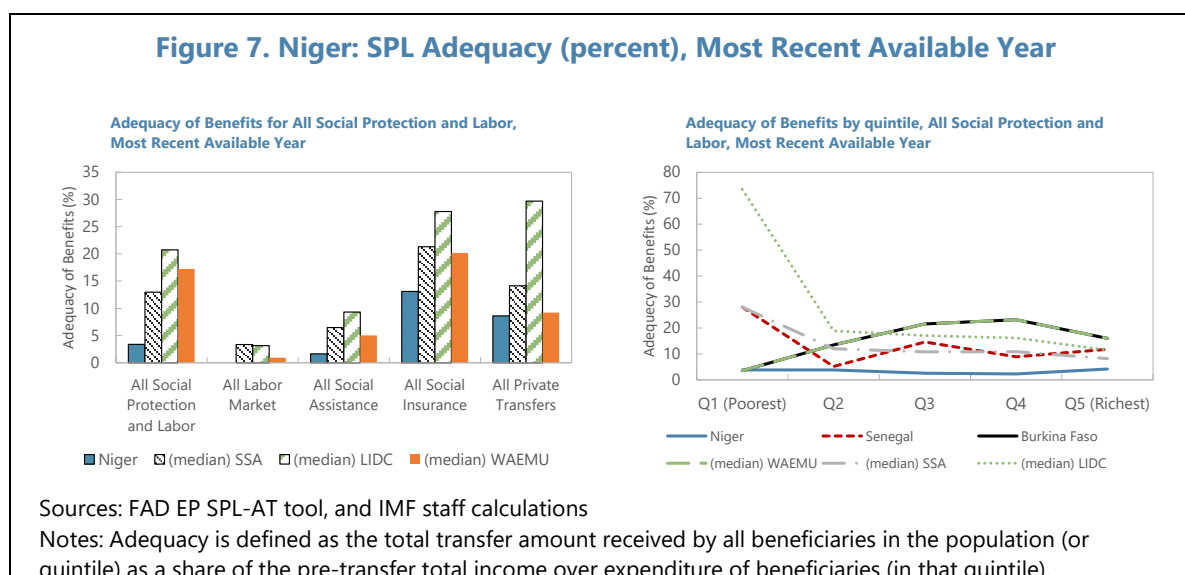
⁷ Private transfers include both domestic private transfers such as inter-family and in-kind gifts and monetary transfers, alimony, income support from charity, private zakat, and international private transfers (remittances from abroad).

Figure 6. Niger: SPL Coverage (percent), Most Recent Available Year



18. While social protection expenditures have substantially increased in nominal terms, they are still not enough to have a significant impact on poverty (Figure 7). According to the World Bank (2019) estimates, social protection expenditures have more than doubled over 2008-2017, peaking in years of crises. However, the total amount of funding for SPL benefits can cover only a small share of the population in need of support. At 3.4 percent of beneficiaries' income, the adequacy of benefits is significantly lower, relative to WAEMU, SSA, and LIDC medians at 21.7, 39.1 and 33.4 percent, respectively. This means that the total transfer amount received by all beneficiaries in the population as a share of their total income is inadequate in a country where the poverty incidence is at 40.8 percent. This is acute for social assistance (1.6 percent), especially in-kind programs (1.1 percent). For social insurance and private transfers programs, the adequacy is somehow higher at 13.1 and 8.6 percent, but still lower relative to peer countries.

19. In addition, the adequacy of SPL benefits is relatively lower for the poorest (Figure 7). When disaggregating by quintile of incomes, the adequacy of benefits is lower for the bottom quintile at 3.8 percent than the top quintile at 4.2 percent. Also, the adequacy for overall SPL programs and for the bottom quintile is 7 and 19 times lower in Niger as compared to SSA and LIDC medians, respectively. For private transfers programs, this is less acute as the adequacy for the bottom quintile at 13.3 percent is almost like SSA median but more than 3 times lower than LIDC median. This highlights the weakness of the SPL programs to provide significant support for poor and vulnerable populations.

Figure 7. Niger: SPL Adequacy (percent), Most Recent Available Year

20. The targeting of SPL programs remains weak, and programs tend to be regressive (Figure 8). This is exemplified by a relatively lower beneficiary incidence for the poor with only 16.1 percent of all beneficiaries being in the bottom (poorest), the lowest share as compared to the other quintiles. For instance, the share of beneficiaries is 25.4 percent for the third (quintile), 20.9 percent for the fourth quintile, and 18.2 percent for the top (richest) quintile. In other words, richer segments of the population are more likely to participate in SPL programs than poorer ones, contrary to what occurs in comparator countries. Moreover, SPL programs are regressive similar to WAEMU median, contrasting a somehow pro-poor allocation of benefits for SSA and LIDC medians. Indeed, half of the SPL benefits goes to the richer and wealthier. The share of the total amount of all SPL benefits received by people in the bottom quintile at 7 percent is the lower across all quintiles, and 7 times lower than the one received by the top quintile. This finding is generally confirmed for all types of SPL programs and more acute for social insurance programs.

21. Overall SPL programs are less efficient in Niger than typically is the case in other SSA and LIDC countries (Figure 9). Simulated effects of SPL spending on poverty and inequality show a lower impact and efficiency of SPL in Niger compared to SSA and LIDC medians by examining pre and post transfer indicators. SPL programs reduce the poverty headcount by about 2 percent in Niger, which lower than for SSA and LIDC medians (reduction of 2.7 and 7.3 percent, respectively) but higher than for the WAEMU median (reduction of 0.6 percent). Also, SPL spending also reduce the poverty gap by close to 1.8 percent in Niger, lower than for SSA and LIDC medians (reduction of 5.07 and 14.06 percent, respectively) but higher than for WAEMU median (0.82 percent). In line with the findings on SPL coverage and adequacy, the simulations confirm that SPL programs are somewhat regressive as they increase inequality by 0.07 percent in Niger but lower than for WAEMU median (increase of 0.79 percent), while they reduce it by 0.41 and 2.46 percent for SSA and LIDC medians.

Figure 8. Niger: SPL Beneficiary and Benefits Incidence (percent), Most Recent Available

Year



Sources: FAD EP SPL-AT tool, and IMF staff calculations

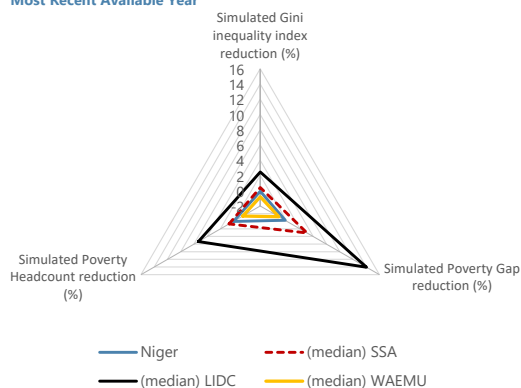
Notes: The beneficiary incidence is the share of beneficiaries by income/expenditure quintile. The benefit incidence is the transfer share that each quintile receives. Both indicators should be considered to analysis the targeting of SPL.

22. For all social assistance programs, also for in-kind and public works programs, the efficiency is also low compared to SSA and LIDC medians. Their impact on the reduction of poverty headcount, poverty gap, and inequality is weak as they reduce them by 1.71 percent, 1.56 percent, and 0.28 percent, respectively. These impacts are lower than SSA and LIDC medians, but higher than WAEMU medians, indicating that there is room to improve the efficiency of SPL programs in Niger.

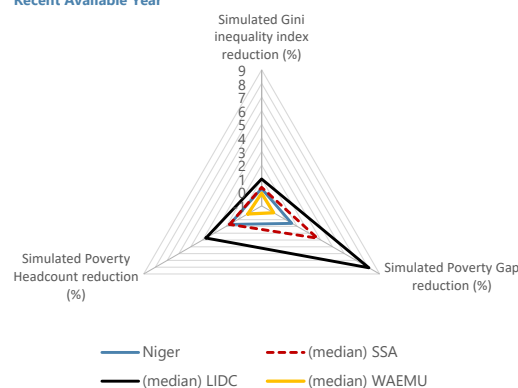
23. Similar results are found for contributory pensions. These programs have a lower impact on reducing poverty headcount, poverty gap with an estimated reduction of 0.34 and 0.21 percent, respectively, which is lower than for WAEMU (0.46 and 0.82 percent), SSA (1.36 and 1.92 percent, respectively) and LIDC (5.17 and 9.24 percent, respectively) medians. On inequality, the contrary of the expected effect is found for Niger and WAEMU with contributory pensions increasing inequality by 0.35 and 0.72 percent, respectively, while they are neutral or reduce it for SSA and LIDC medians by 0.01 and 1.76 percent, respectively.

Figure 9. Niger: Impact and Efficiency of SPL (percent), Most Recent Available Year

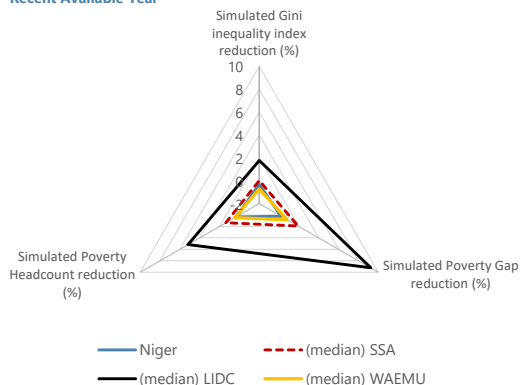
Simulated Impact Variables for All Social Protection and Labor, Most Recent Available Year



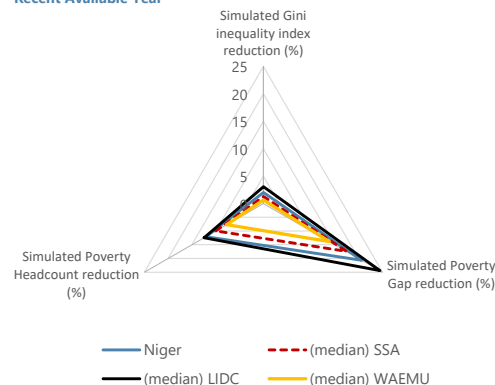
Simulated Impact Variables for All Social Assistance, Most Recent Available Year



Simulated Impact Variables for Contributory Pensions, Most Recent Available Year



Simulated Impact Variables for All Private Transfers, Most Recent Available Year



Sources: FAD EP SPL-AT tool, and IMF staff calculations

Notes: i) the Gini inequality reduction is obtained as a simulated percentage change in Gini coefficient due to SPL programs. The calculation is as follows: $(\text{Gini coefficient pre-transfer} - \text{Gini coefficient post-transfer}) / \text{Gini coefficient pre-transfer}$; ii) the poverty headcount reduction is obtained as a simulated percentage change of poverty headcount due to SPL programs by comparing the metric pre and post transfer. The calculation is as follows: $(\text{poverty headcount pre-transfer} - \text{poverty headcount post-transfer}) / \text{poverty headcount pre-transfer}$; iii) the poverty gap reduction is obtained as a simulated percentage change of poverty gap due to SPL programs by comparing the metric pre and post transfer. The calculation is obtained as follows: $(\text{poverty gap pre-transfer} - \text{poverty gap post-transfer}) / \text{poverty gap pre-transfer}$.

F. Efficiency of Targeting in Social Programs

24. To complement the analysis in the previous sections, the Harmonized Survey on Households Living Standards 2018–19 (EHCVM) is used to assess the determinants of access to social programs in Niger and their efficiency.⁸ This survey covers more than 6,000 households and provide very detailed information on safety nets, food insecurity, demographics, education, health, consumption, household assets, and shocks and survival strategies. We further examine whether social programs in Niger are well-targeted to poor and vulnerable populations using this household survey. To do so, we focus on three kinds of programs, such as i) food programs, ii) health programs, and iii) government transfers programs.⁹

25. Access to social programs in Niger is low, particularly for both conditional and unconditional government cash transfers. 12 percent of households indicate to have benefited from food programs over the last 12 months prior to the survey. This figure stands at 14.9 percent for households that experienced any kind of shocks. Access to health programs is higher with 38 percent of households declaring to have been enrolled in a health program, a similar percentage relative to households that experience any kind of shocks. However, access to both conditional and unconditional government cash transfers is very limited with only 0.71 percent of households mentioning that they received cash transfers from the government. This figure is slightly higher but still very low for households that suffered any kind of shocks at 0.83 percent.

26. We apply linear probability models (OLS regressions) to assess the determinants of access to social programs in Niger. The dependent variables capture whether the household received a specific type of social program over the last 12 months before the survey. The dependent variables are regressed on the set of criteria that should guide the targeting of social programs. Indeed, appropriate targeting of social programs should include, beyond geographical targeting, other criteria such as i) whether the household is poor (both absolute and relative poverty) or not, ii) whether the household is food insecure or not, iii) whether the household is affected by shocks (e.g., family, natural, agriculture, conflict shocks), and iv) other household characteristics (e.g., household size and gender, disability status, level of education, age of the household head). The results are presented in –Table 3 in the Appendix, where we show the findings for the set of poverty criteria in column (1), the set of hunger or food insecurity criteria in column (2), the set of shocks criteria in column (3), the set of household and household head characteristics in column (4).

27. Overall, the results point to inefficiencies in the targeting of social programs. Specifically, we find some evidence of geographical targeting for food and health programs but not for government cash transfers, as reflected in the significance of the regional dummy coefficients.

⁸ This survey is implemented by the National Institute of Statistics (INS) with support from the World Bank and the WAEMU Commission.

⁹ The food programs include distributions of food (particularly of cereals), school feeding programs, food supplement for children, food for work programs. The health programs include care for children under 5 years old, donation of impregnated mosquito net, vaccination, annual medical checkup, medical treatment and donation of medications. The government transfers programs are conditional and unconditional cash transfers to population.

This is consistent with the fact that food shock response programs use geographic targeting. Generally, poverty, hunger or food insecurity and household characteristics cannot explain the targeting of social programs, while households affected by shocks have a higher likelihood to participate in a program. We also show some evidence that non-poor households and households in regions with fewer number of poor have a higher likelihood to benefit from social programs, highlighting some inefficiencies and leakage in social programs and under-coverage of poor population.

- **There are indications that food programs are inadequately targeted, as the coefficients associated with poverty and food insecurity indicators tend not to be significant in the regressions (Table 1).** This suggests that poverty and food insecurity criteria do not determine access to food programs in a systematic way. Findings are similar for other household characteristics criteria, with the exception that households whose household head achieve tertiary education are less likely to be included in social programs than households with a head with no education. Interestingly, the results reveal that the type of shocks faced by households matters. Households that experienced family shocks, natural disaster shocks, and conflict shocks have a higher likelihood to participate in a food social program. However, agricultural shocks (such as higher prices for food and fertilizers, decrease of agricultural production, etc.) do not seem to determine the targeting of food social programs.¹⁰
- **Households in poorer regions of the country are more likely to participate in health programs, but these programs are not systematically targeted to poor and food insecure population within regions (Table 2).** Households in the regions of Zinder and Maradi where poverty is higher are more likely to receive health programs. In addition, there is an inverted U relationship between household consumption per adult equivalent and the probability to be selected for a health program. In other words, both the poorest and richest households are less likely to receive these programs, while households in the middle of the consumption distribution have a higher likelihood to be selected. Food insecurity, which is a critical determinant of health conditions, does not determine the targeting of health programs. Households that experienced agricultural shocks and non-agricultural employment shocks are more likely to participate in health programs, while those experiencing natural disaster shocks are less likely to do so.
- **Targeting issues are even more pronounced for government cash transfers programs, but households facing conflict shocks are more likely to participate (Table 3).**¹¹ Neither poverty, food insecurity, nor household characteristics criteria (except for the age of the household head) can determine access to government cash transfer programs. Regarding shocks, only households

¹⁰ Regarding geographical targeting, we show that compared to Niamey, households in the regions of Diffa and Dosso where there are fewer number of poor have a higher likelihood to be selected, while those in the regions of Zinder and Maradi where poverty is higher are less likely to receive food programs.

¹¹ One caveat is worth noting. Our analysis cannot differentiate between conditional and unconditional government cash transfers. The targeting issues highlighted in this analysis are relevant for unconditional government cash transfers which are intended to support poor and vulnerable population. However, the objective of conditional cash transfers is not to reduce poverty but to improve education and health outcomes. As such, the conditional cash transfers do not have to target poor and vulnerable population.

that experienced conflict shocks have a higher likelihood to participate in these programs, while the other shocks are not significant.

G. Concluding Remarks and Policy Recommendations

28. Niger would benefit from moving away from a system based on untargeted subsidies (e.g., distribution of food and fertilizers at moderate prices) to a system based on targeted social safety nets. Social programs should aim at ensuring full coverage of the poorest and most vulnerable populations (starting with those at the bottom quartile) using means testing or proxy-means testing of social assistance transfers, in combination with geographic methods, as needed.¹²

29. Progress is needed to improve individual and geographic targeting, including through the establishment of a unified social registry (USR) with assistance from the World Bank. Consolidating the information of potential beneficiaries in one database would bring in efficiency gains by the integration of the information of different systems and would improve the efficiency and individual targeting of social programs. Progress is ongoing to strengthen the institutional, regulatory, and operation framework for the USR. In addition, there could be efficiency gains in improving geographic targeting in food and government cash transfer programs towards regions where poverty is higher.

30. There is a need to reallocate benefits going to the richer segments of the population. The regressive nature of several programs, where adequacy, coverage, and beneficiary and benefits incidences tend to be better for the top quintile of the income distribution, suggest there are efficiency gains from the reallocation of benefits within the population. Thus, helping improve coverage gaps in the most vulnerable and ensuring the benefits received are more adequate.

31. There is a need to better balance shock-response and long-term social assistance programs to reduce poverty and enhance productivity. While Niger has a relatively strong system to respond to crisis, funding of long-term assistance programs is not enough to make a dent on poverty. Moreover, based on impact evaluation, social assistance should focus on enhancing productivity and resilience by providing cash transfers which can be oriented to lasting investments and income-generating activities rather than dealing with the needs of those affected post-crisis only. They should be more productive and help to build resilience and capacity before shocks.

32. Supporting better education outcomes, particularly for girls, would require an increase of the coverage of existing conditional cash transfer programs and complementary activities to their families. Conditional cash transfers for primary and secondary education should be

¹² Please see Schnitzer (2019) and Premand and Schnitzer (2021) for a discussion on the effectiveness of targeting methods in addressing persistent poverty and shocks. Schnitzer (2019) find that proxy-means testing (PMT) performs more effectively in identifying persistently poor households, while Household Economy Analysis (HEA) shows superior performance in identifying transiently food insecure households. Premand and Schnitzer (2021), based on a large-scale randomized experiment, confirm that PMT is more efficient in identifying households with lower consumption per capita (poor households). PMT and a formula to identify the food-insecure (FCS) can improve the targeting and efficiency of programs than community-based targeting (CBT) which is more affected by manipulation and information imperfections.

stepped up to reduce elevated dropout rates. In addition, an extension of existing programs aimed at supporting girls' education to include more beneficiaries is needed. In addition, supplementary workshops should continue, thus contributing to educate parents and reduce incentives for early marriage.

33. The lower coverage and adequacy of social programs and lower expenditure per capita on health and education calls for the creation of fiscal space to scale-up social spending.

Strong population growth requires scaling up social spending, including through reprioritization within total spending, given Niger's lower expenditure per capita in education and health compared to peers, and very low social assistance spending. There is a need to address also other sources of low outcomes in education and health, beyond funding, by improving the quality of education and healthcare. Policies aimed at reducing informality, should help the low coverage in social insurance.

34. Improvements of governance, public financial management and efficient public procurement are also key to achieve better education, health, and social protection outcomes.

The authorities should continue to put a strong emphasis on transparency and competitive bidding in public procurement, while reinforcing the capacity of the *Cour des Comptes* to audit a very large share of government's expenditure through public procurement and fighting corruption.

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Annex 1. Regression Tables

Table 1. Niger: Determinants of the Targeting of Food Programs

	(1)	(2)	(3)	(4)	(5)
Dependent: Access to food programs (Yes = 1)	Poverty	Hunger	Shock	Household	All
Poor, domestic pov. line (1 = Yes)	-0.012 (0.020)				-0.024 (0.020)
<i>Relative poverty: against neighbors (1 = Better-off)</i>					
Relative poverty: against neighbors (2 = Same)	-0.033* (0.014)				-0.025 (0.014)
Relative poverty: against neighbors (3 = Worse-off)	-0.017 (0.016)				-0.012 (0.017)
<i>Relative poverty: self-assessment (1 = Richer)</i>					
Relative poverty: self-assessment (2 = Medium)	0.054 (0.042)				0.069 (0.042)
Relative poverty: self-assessment (3 = Poor)	0.055 (0.042)				0.070 (0.043)
Relative poverty: self-assessment (4 = Very poor)	0.032 (0.044)				0.045 (0.044)
Log of consumption per adult eq.	-0.315 (0.397)				-0.335 (0.396)
Log of consumption per adult eq. squared	0.010 (0.015)				0.011 (0.015)
Do not eat healthy and nutritive food (1 = Yes)		0.012 (0.012)			0.004 (0.012)
Hunger but no food (1 = Yes)		0.010 (0.015)			0.008 (0.015)
Entire day without food (1 = Yes)		-0.009 (0.019)			-0.017 (0.020)
Family shocks (1 = Yes)			0.031* (0.013)		0.029* (0.013)
Natural shocks (1 = Yes)			0.037** (0.012)		0.028* (0.012)
Agriculture shocks (1 = Yes)			-0.008 (0.012)		-0.010 (0.012)
Non-Agri employment shocks (1 = Yes)			0.006 (0.021)		0.008 (0.022)
Conflict shocks (1 = Yes)			0.089* (0.035)		0.088* (0.036)
Other shocks (1 = Yes)			0.044** (0.017)		0.048** (0.016)
HH head disability (1 = Yes)				-0.001 (0.025)	-0.003 (0.025)
HH size				0.004* (0.002)	0.003 (0.002)
HH gender (1 = Female)				-0.004 (0.015)	-0.006 (0.015)
HH head age				0.001 (0.002)	0.001 (0.002)
HH head age squared				-0.000 (0.000)	0.000 (0.000)
HH head nationality (1 = Niger)				0.001 (0.038)	0.013 (0.038)
HH head alphabetization (1 = Yes)				0.022 (0.013)	0.023 (0.013)
<i>HH head level of education (0 = No education)</i>					
HH head level of education (1 = Primary)				0.001 (0.016)	0.005 (0.017)
HH head level of education (2 = Secondary)				0.000 (0.022)	0.006 (0.023)
HH head level of education (3 = Tertiary)				-0.079*** (0.019)	-0.060* (0.024)
<i>Niamey</i>					
Agadez	0.099*** (0.014)	0.108*** (0.013)	0.103*** (0.014)	0.104*** (0.014)	0.000 (0.000)
Diffa	0.232*** (0.021)	0.249*** (0.020)	0.216*** (0.021)	0.250*** (0.020)	0.167*** (0.022)
Dosso	0.214*** (0.019)	0.235*** (0.018)	0.224*** (0.018)	0.234*** (0.018)	0.168*** (0.019)
Maradi	0.039** (0.014)	0.063*** (0.013)	0.059*** (0.012)	0.065*** (0.013)	-0.000 (0.013)
Tahoua	0.080*** (0.013)	0.104*** (0.011)	0.090*** (0.012)	0.105*** (0.012)	0.039** (0.014)
Tillaberi	0.096*** (0.015)	0.119*** (0.013)	0.110*** (0.014)	0.118*** (0.013)	0.053*** (0.015)
Zinder	0.056*** (0.015)	0.081*** (0.012)	0.078*** (0.011)	0.081*** (0.013)	0.019 (0.014)
Constant	2.347 (2.704)	0.010 (0.006)	0.002 (0.006)	-0.070 (0.061)	2.401 (2.696)
# of Households	5998	5998	5998	5998	5998

Notes: This table presents the results for the determinants of food assistance programs using a linear probability model. In column (1), we focus on poverty criteria only. In column (2), we focus on hunger and food insecurity criteria only. In column (3), we focus on shock criteria only. In column (4), we focus on other household characteristics criteria only. In column (5), we include all the criteria. Robust standard errors are in parentheses.

*Indicates significance at 10% level, **significance at 5% level, and ***significance at 1% level.

Table 2. Niger: Determinants of the Targeting of Health Programs

	(1)	(2)	(3)	(4)	(5)
Dependent: Access to health programs (Yes = 1)	Poverty	Hunger	Shock	Household	All
Poor, domestic pov. line (1 = Yes)	0.032 (0.026)				-0.011 (0.026)
Relative poverty: against neighbors (1 = Better-off)					
Relative poverty: against neighbors (2 = Same)	-0.054* (0.022)				-0.041 (0.022)
Relative poverty: against neighbors (3 = Worse-off)	-0.025 (0.026)				-0.009 (0.026)
Relative poverty: self-assessment (1 = Richer)					
Relative poverty: self-assessment (2 = Medium)	0.004 (0.096)				0.005 (0.089)
Relative poverty: self-assessment (3 = Poor)	0.027 (0.097)				0.043 (0.089)
Relative poverty: self-assessment (4 = Very poor)	0.031 (0.099)				0.052 (0.092)
Log of consumption per adult eq.	0.872* (0.385)				0.296 (0.356)
Log of consumption per adult eq. squared	-0.035* (0.014)				-0.013 (0.013)
Do not eat healthy and nutritive food (1 = Yes)		-0.023 (0.018)			-0.036* (0.018)
Hunger but no food (1 = Yes)		0.036 (0.022)			0.013 (0.021)
Entire day without food (1 = Yes)		0.005 (0.031)			-0.009 (0.030)
Family shocks (1 = Yes)			0.034 (0.019)		0.050** (0.018)
Natural shocks (1 = Yes)			-0.034* (0.017)		-0.041* (0.017)
Agriculture shocks (1 = Yes)			0.057** (0.018)		0.044* (0.018)
Non-Agri employment shocks (1 = Yes)			0.149*** (0.036)		0.124*** (0.035)
Conflict shocks (1 = Yes)			0.054 (0.048)		0.045 (0.048)
Other shocks (1 = Yes)			0.057* (0.024)		0.056* (0.024)
HH head disability (1 = Yes)				0.017 (0.038)	0.004 (0.037)
HH size				0.024*** (0.003)	0.022*** (0.003)
HH gender (1 = Female)				-0.059** (0.022)	-0.066** (0.022)
HH head age				-0.015*** (0.004)	-0.014*** (0.004)
HH head age squared				0.000** (0.000)	0.000** (0.000)
HH head nationality (1 = Niger)				-0.027 (0.066)	-0.031 (0.064)
HH head alphabetization (1 = Yes)				0.013 (0.020)	0.014 (0.020)
HH head level of education (0 = No education)					
HH head level of education (1 = Primary)				0.009 (0.028)	0.016 (0.027)
HH head level of education (2 = Secondary)				0.012 (0.033)	0.030 (0.033)
HH head level of education (3 = Tertiary)				-0.165*** (0.038)	-0.081 (0.044)
Niamey					
Agadez	-0.120*** (0.029)	-0.072** (0.027)	-0.089*** (0.026)	-0.105*** (0.027)	0.000 (0.000)
Diffa	-0.009 (0.032)	0.061* (0.028)	0.037 (0.031)	0.012 (0.029)	0.018 (0.030)
Dosso	-0.047 (0.033)	0.031 (0.029)	0.043 (0.029)	-0.014 (0.029)	0.021 (0.028)
Maradi	0.038 (0.031)	0.115*** (0.027)	0.120*** (0.026)	0.046 (0.028)	0.067** (0.025)
Tahoua	0.051 (0.032)	0.130*** (0.027)	0.135*** (0.027)	0.086** (0.028)	0.118*** (0.026)
Tillaberi	-0.195*** (0.029)	-0.121*** (0.024)	-0.115*** (0.024)	-0.165*** (0.025)	-0.131*** (0.024)
Zinder	0.071* (0.030)	0.153*** (0.024)	0.161*** (0.024)	0.100*** (0.026)	0.133*** (0.025)
Constant	-5.114* (2.593)	0.312*** (0.019)	0.276*** (0.019)	0.723*** (0.107)	-1.009 (2.388)
# of Households	5998	5998	5998	5998	5998

Notes: This table presents the results for the determinants of health assistance programs using a linear probability model. In column (1), we focus on poverty criteria only. In column (2), we focus on hunger and food insecurity criteria only. In column (3), we focus on shock criteria only. In column (4), we focus on other household characteristics criteria only. In column (5), we include all the criteria. Robust standard errors are in parentheses.

*Indicates significance at 10% level, **significance at 5% level, and ***significance at 1% level.

Table 3. Niger: Determinants of the Targeting of Government Transfers Programs

Dependent: Access to gov. transfers programs (Yes = 1)	(1) Poverty	(2) Hunger	(3) Shock	(4) Household	(5) All
Poor, domestic pov. line (1 = Yes)	0.002 (0.005)				-0.000 (0.005)
Relative poverty: against neighbors (1 = Better-off)					
Relative poverty: against neighbors (2 = Same)	-0.001 (0.003)				-0.000 (0.003)
Relative poverty: against neighbors (3 = Worse-off)	-0.004 (0.004)				-0.002 (0.004)
Relative poverty: self-assessment (1 = Richer)					
Relative poverty: self-assessment (2 = Medium)	0.002 (0.002)				0.002 (0.002)
Relative poverty: self-assessment (3 = Poor)	0.006* (0.003)				0.006* (0.003)
Relative poverty: self-assessment (4 = Very poor)	0.014 (0.009)				0.015 (0.008)
Log of consumption per adult eq.	-0.020 (0.102)				-0.025 (0.107)
Log of consumption per adult eq. squared	0.001 (0.004)				0.001 (0.004)
Do not eat healthy and nutritive food (1 = Yes)		0.005 (0.003)			0.002 (0.003)
Hunger but no food (1 = Yes)		-0.002 (0.003)			-0.004 (0.004)
Entire day without food (1 = Yes)		-0.004 (0.003)			-0.007* (0.003)
Family shocks (1 = Yes)			0.001 (0.003)		0.001 (0.003)
Natural shocks (1 = Yes)			0.004 (0.004)		0.003 (0.003)
Agriculture shocks (1 = Yes)			0.001 (0.003)		0.001 (0.003)
Non-Agri employment shocks (1 = Yes)			0.003 (0.005)		0.002 (0.005)
Conflict shocks (1 = Yes)			0.032** (0.011)		0.034** (0.011)
Other shocks (1 = Yes)			-0.002 (0.003)		-0.003 (0.003)
HH head disability (1 = Yes)				0.000 (0.004)	0.000 (0.004)
HH size				0.001 (0.000)	0.000 (0.000)
HH gender (1 = Female)				0.007 (0.005)	0.007 (0.005)
HH head age				0.001** (0.000)	0.001* (0.000)
HH head age squared				-0.000** (0.000)	-0.000** (0.000)
HH head nationality (1 = Niger)				-0.010 (0.014)	-0.008 (0.014)
HH head alphabetization (1 = Yes)				-0.001 (0.003)	-0.001 (0.003)
HH head level of education (0 = No education)					
HH head level of education (1 = Primary)				-0.001 (0.004)	-0.000 (0.004)
HH head level of education (2 = Secondary)				0.001 (0.005)	0.003 (0.004)
HH head level of education (3 = Tertiary)				-0.004 (0.003)	0.003 (0.003)
Niamey					
Agadez	-0.001 (0.004)	-0.000 (0.004)	0.000 (0.004)	0.001 (0.004)	0.000 (0.000)
Diffa	0.040*** (0.010)	0.043*** (0.010)	0.034*** (0.008)	0.044*** (0.010)	0.031*** (0.008)
Dosso	-0.008* (0.004)	-0.004 (0.003)	-0.005 (0.003)	-0.003 (0.003)	-0.009** (0.003)
Maradi	-0.003 (0.004)	0.002 (0.004)	0.003 (0.004)	0.004 (0.004)	-0.001 (0.004)
Tahoua	0.000 (0.005)	0.004 (0.005)	0.003 (0.006)	0.004 (0.005)	-0.001 (0.004)
Tillaberi	-0.007* (0.003)	-0.005 (0.002)	-0.006 (0.003)	-0.004 (0.003)	-0.007* (0.003)
Zinder	-0.001 (0.005)	0.004 (0.004)	0.005 (0.004)	0.006 (0.004)	0.000 (0.005)
Constant	0.152 (0.693)	0.003 (0.002)	0.003 (0.002)	-0.019 (0.021)	0.164 (0.737)
# of Households	5998	5998	5998	5998	5998

Notes: This table presents the results for the determinants of government transfers programs using a linear probability model. In column (1), we focus on poverty criteria only. In column (2), we focus on hunger and food insecurity criteria only. In column (3), we focus on shock criteria only. In column (4), we focus on other household characteristics criteria only. In column (5), we include all the criteria. Robust standard errors are in parentheses. *Indicates significance at 10% level, **significance at 5% level, and ***significance at 1% level.