

When progressive fiscal policies do not reduce health inequalities: An examination of child malnutrition in South Africa

Coretta M. P. Jonah, Winnie C. Sambu, Julian D. May¹

Submission to United Nations Department of Economic and Social Affairs: Expert Group Meeting on "Addressing inequalities and challenges to social inclusion through fiscal, wage and social protection policies", 25-27 June 2018

Session 4: Addressing inequalities and challenges to social inclusion through public spending

Abstract

Governments use fiscal policy measures as distributive interventions to improve welfare levels, population health, and nutrition. These measures can be applied directly as taxation and transfers, or indirectly as subsidies and incentives. Their impact, referred to as fiscal incidence, varies across the population. For example, commodity taxes are naturally regressive and impact the poorest the most unless mitigated in some way. At the same time, taxes and subsidies may negatively affect economic efficiency and may send inappropriate pricing signals and resulting in perverse incentives. In the context of pre-existing high inequality levels, fiscal policy tools applied to health and nutrition programmes may disproportionately benefit the wealthy and burden the poor, or the converse. In this paper, we discuss the persistence of poor child nutrition outcomes from progressive fiscal policy in South Africa, highlighting some of the reasons why fiscal policy may not reduce inequalities in child health and nutrition. We conclude that better targeting and coordination of policies, well designed taxes and subsidies are needed in order for fiscal policies to significantly improve nutritional status of poor children and reduce inequalities in nutritional outcomes.

¹ Respectively, Researcher, Institute for Social Development, University of the Western Cape; Research, Children's Institute, University of Cape Town; and Director, DST-NRF Centre of Excellence in Food Security, University of the Western Cape.

1 Introduction

Most available evidence indicates that the world is becoming increasingly unequal (UNDP, 2017; Bhorat and Naidoo, 2017; Dabla-norris, and Kochhar 2015). This has been attributed to historical and present inequalities in opportunities, and concentration of economic, social and political power in the hands of specific groups which generate unfair social positions (Lustig 2016). Inequalities in opportunities result in earnings and wealth inequalities, which subsequently drive inequalities in other social dimensions (Lustig, 2016; Dabla-norris, and Kochhar, 2015). As one of the most unequal societies in the world, South Africa presents a compelling case for examining the effects of long-term deliberate and systematic allocation of fiscal resources to specific population groups in the face of inequality (Statistics South Africa, 2014; Leibbrandt et al., 2009; Spaull, 2013; Bhorat and Kanbur, 2005).

2 Context

South Africa's colonial period was characterised by land disposessions and economic exclusion of the indigenous populations who were predominantly farmers and relied on land for their livelihoods (Aliber et al., 2013; Bhorat and Kanbur, 2009; Walker, 2005). Apartheid, which followed colonialism, further entrenched the exclusion by systematically discriminating against those who were already excluded (Bhorat and Kanbur, 2005). Black Africans were relegated to designated areas known as homelands, where access to land was minimal, there was lack of essential infrastructure, and the population was geographically and politically isolated (Swilling et al., 1991; Nel and Binns, 2000). In addition, healthcare services to the Black and Coloured populations were vastly inferior, compared to those available to the White population (van der berg, 2007; Price 1986). Education was also provided on a colour gradient and once again the Black and Coloured population had to contend with a system that was racially segregated and provided them with poor quality education (van der berg, 2007). Labour market segregation, based on race, limited access to skilled high paying jobs, and restrictions on human mobility prevented migration and urbanisation. This systemic discrimination was justified on the basis of the perceived role that each race-group was to play in society (van der berg, 2007; Price 1986). The long-term consequences of Apartheid have been dire; South Africa remains a country that is extremely unequal along racial and geographical lines (Leibbrandt and Woolard, 2009). At the end of Apartheid in 1994, poverty levels, however measured, were significantly higher for the Black and Coloured population compared to other population groups and have remained so (Burger *et al.*, 2017). Poverty was also higher in certain provinces, in rural areas compared to urban areas, among women-headed households compared to male-headed households, and among the youth (May, 2000).

The most recently released poverty statistics show that poverty has reduced over the long-term, but the distribution across racial groups, social groups and geographical locations is unchanged (Statistics South Africa, 2017a). Inequalities have increased. In

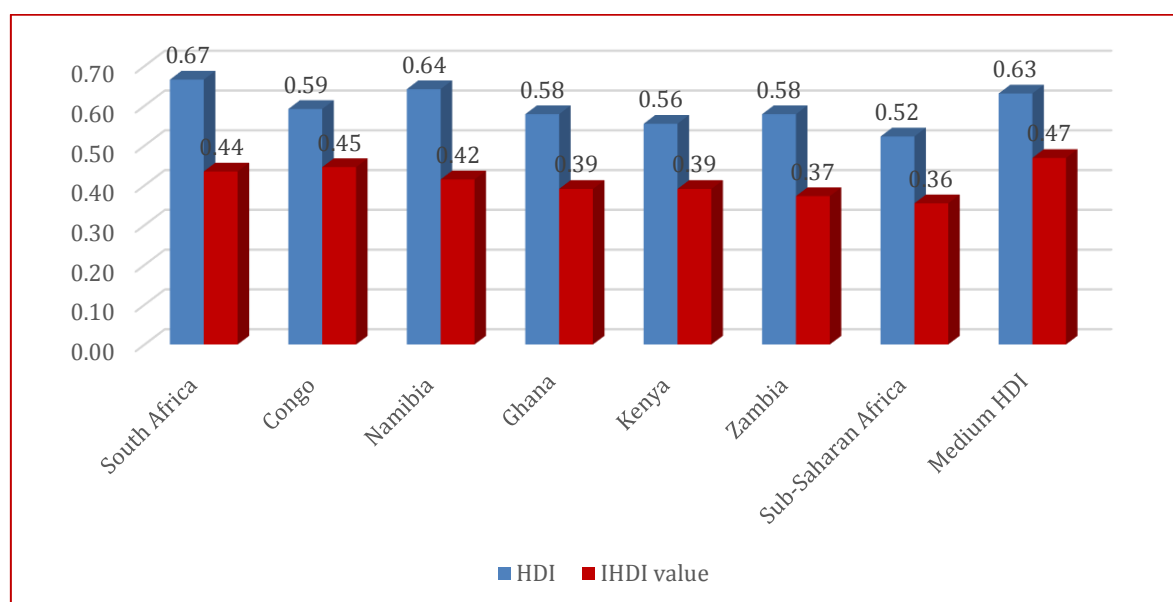
fact, a Gini coefficient of 0.63 gives South Africa the unenviable position of the most unequal country in the world among countries in which indicators are available (World Bank 2018). South Africa is also identified as one of seven countries driving increasing inequality in Africa (Bhorat and Naidoo, 2017). Across the continent and in South Africa, inequalities are not limited to income alone but are also present in health and nutrition, education, and housing (May and Timaeus, 2014; Black et al., 2013; Zere and McIntyre, 2003; Barbarin and Richter, 2001).

At PPP\$ 12,087 per annum in the 2016 Human Development index, South Africa's per capita Gross National Income (GNI) corrected for purchasing power parity (PPP) now places it as one of the 50 wealthiest nations and among the 40 largest economies in the world. South Africa based on a GNI of PPP \$718 733 million is ranked 38 out of 217 countries (World Bank, 2016). Despite this apparent wealth, the combination of discriminatory and protectionist policies of apartheid have resulted in serious structural weaknesses. During the 1960s the South African economy grew at some 6% per annum, while total employment grew by nearly 3% per annum, in line with population growth. However, by the late 1980s an economic crisis was emerging with the real economy shrinking, along with formal sector employment. This trend was briefly reversed after the country's first democratic elections, with sustained growth throughout 1995. However, by the middle of 1998, economic growth measured in terms of Gross Domestic Product (GDP) fell to less than 0.5% per annum. With the introduction of a self-imposed structural adjustment programme and a more favourable global environment, positive, if at times weak per capita growth took place from 2000, peaking at 4.5% in 2004/5. This was underpinned by concomitant growth in gross fixed capital formation. The 2008 global economic crisis reversed this, with a slowing of growth in per capita GDP to just above 2% and growth has remained sluggish throughout the last decade, currently sitting at 1% for 2017 (National Treasury, 2018a). A recent Systematic Country Diagnostic report prepared by the World Bank concludes that economic growth in South African is constrained by "(i) insufficient skills; (ii) the skewed distribution of land and productive assets, productive assets, and weak property rights; (iii) low competition and low integration in global and regional value chains; (iv) limited or expensive spatial connectivity and under-serviced historically disadvantaged settlements; and (v) climate shocks: the transition to a low-carbon economy and water insecurity." (World Bank, 2018: iv-v)

In terms of poverty, 16.6% of the South African population live below the global extreme poverty line of PPP\$1.9 (UNDP, 2016). In the latest global human development index report (2016), South Africa ranks 119 out of 188 countries with an index value of 0.66 (UNDP, 2016). However, when the index is adjusted for inequality South Africa's index value drops to 0.43, losing 34.7% of its HDI due to inequality (UNDP, 2016). The HDI also confirms that inequality in South Africa is high in a number of dimensions, but inequality is highest in income and in health where there is a 25.7% inequality in life expectancy (UNDP, 2016). Figure 1 shows South Africa HDI and inequality adjusted HDI - relative to those of selected countries and regional averages. At 61.4% health is the largest contributor to overall poverty of deprivations in

South Africa, standards of living contribute 30.2% while education accounts for 8.4% using the multidimensional poverty index (UNDP, 2016).

Figure 1: Human Development Index and Inequality adjusted Human development Index for South Africa and selected countries 2016



Source: United Nations Development Programme (2016)

Child poverty is an important dimension of persistent poor socio-economic outcomes that relates to food security and poor health. About 1 in 4 children under five years are stunted, and 1 in 3 in the poorest wealth quintile are stunted (Statistics South Africa, 2017b). This situation has not changed over two decades despite a massive expansion of social protection programmes, health care and the provision of housing, electricity and sanitation, key interventions intended to reduced child malnutrition (World Bank, 2017). While worrisome for policy-makers, this provides an opportunity to examine the reasons why fiscal policy may fail to achieve its intended impact in a highly unequal society. In this paper, we explore some of the factors that could offer an explanation on why fiscal policy has failed to significantly reduce child stunting in South Africa, including inequalities in child nutritional outcomes. We also highlight some of possible recommendations for policymakers for other countries with similar levels of inequality.

3 Fiscal policy: role and effects

There are several ways through which poverty and inequality can be reduced through fiscal policy, and we broadly categorise these into two strategies. First, there are those that deal with the redistribution of individual or collective endowments of incomes, assets and wealth from those of higher socio-economic status to those who are deprived (lower socio-economic status) thereby reducing the gap between these two socioeconomic groups. The second involves improvements in the welfare levels of those who are impoverished, through increased access to markets and income generation. Specific fiscal policies instruments that may be applied include; direct measures such as

transfers and taxes, and indirect measures such as provision of services like health and education, which could lead to improvements in social and human capital. A stable macroeconomic environment that results from a healthy fiscal position also reduces inequality by improving the income levels of the poorest. Beyond the gains that result from a healthy fiscal stance and provision of basic services, fiscal policies can be important tools for redistribution either directly or indirectly. Indirectly, these policies can be used to specifically fund service provision to those who cannot afford them. Examples of direct redistributive mechanisms include social protection, tax rebates, and subsidies. Some of these measures are widely applied in South Africa and have a history that predates the end of Apartheid.

Fiscal policy instruments can be broadly classified into two: government spending and taxation. Government spending is especially crucial for provision of services to a significant proportion of the population that would otherwise be unable to access them. Provision of these services is expected to lead to a desired effect of lower inequality levels by allowing a segment to enjoy services funded by taxes raised from those in higher socio-economic groups. Government spending on the delivery of services, facilities and infrastructure has dominated fiscal policy in developing countries. However, fiscal policy is much wider than this and includes taxation instruments (direct and indirect taxes) that generate revenue for government, which can then be used to mitigate the effects of poverty, or to transfer assets to the poor. Direct taxes include personal income taxes and taxes on profits of both businesses. Taxation may also be used to incentivise desirable behaviours, or to discourage behaviour deemed undesirable. Tax relief that generates employment opportunities accessible to the poor is an example of the former, while “sin taxes” such as those recently placed on sugary beverages in South Africa, are an example of the later.

Fiscal policy can be used to expand access to healthcare to the poorest and/or universal access for all. Studies have shown that government budgetary allocations have resulted in improved access to health services for the poorest (Anyanwu and Erhijakpor, 2007). With a specific focus on child and maternal health and nutrition, public funding and provision has significantly expanded access and reduced malnutrition levels in countries such as India, Peru and Brazil (IFPRI, 2016; Government Of India, 2012; Monteiro et al., 2009). However, evidence suggest progress in these will require more beyond budgetary allocations. Fiscal policy has also been used to influence health; in some countries budgetary instruments have been also been applied to motivate individuals to make healthier choices (WHO, 2015). These instruments include taxes that are imposed on items deemed less desirable such as tobacco and sugar, and subsidies on more desirable items such as fruit intake and healthier lifestyles. These have generally shown positive outcomes in some countries (WHO, 2015), but the design and implementation are crucial to the success of failure of these fiscal measures.

4 The architecture for fiscal policy in South Africa

Key to understanding fiscal policy in South Africa is the country's decentralised architecture of governance. The South African Constitution adopted in 1996 introduced an elaborate system of cooperative governance through which this decentralised system is resourced and operationalised. Chapter Three of the Constitution sets a vertical division of authority, assigning each sphere its own powers, functions and responsibilities while limiting the extent to which each can intervene in the decisions of other spheres (Pimstone, 1998). Thus, the Constitution stipulates that the legislative authority of the national sphere of government is vested in Parliament, while the provincial and local levels legislative authority is vested in Provincial Legislatures and Municipal Councils.

Provincial and municipal government have political autonomy, although with competences that are exclusive and those that are concurrent and shared by more than one sphere of government. Examples of exclusive functions include provincial planning, roads and transport, and economic affairs. Concurrent functions shared with national government include the three social services of health, welfare and education, critical for the fulfilment of health care and adequate child nutrition. According to Section 28(1)(c) of the Constitution, every child has the right to "basic nutrition, shelter, basic health care services and social services. With concurrent functions, national departments are responsible for policy formulation and for monitoring and evaluating implementation, while provincial departments are mandated to deliver most basic services, including education, health and welfare. Municipalities have the major responsibility for the delivery of local services and infrastructure such as water, sanitation, and electricity while the Municipal Structures Act (1998) assigns the metropolitan municipalities full water, sanitation, refuse and electricity functions. These too are the critical elements for the attainment of adequate child nutrition.

Responsibility for the revenue generation component of fiscal policy is unequally distributed between the national, provincial and local spheres of government. The national government has a wide variety of tax instruments available that include direct payroll tax, indirect taxes such as Value Added Tax (VAT), and general, specific, business and individual taxes. In contrast, the provinces have limited options for taxation, while the municipalities largely rely upon property taxes. Municipalities also are able to levy user charges on the services that they are mandated to provide. As a result, on average, by 2004, 89 % of national revenue accrued to the national government, while the share of provincial and municipal governments was 5 percent and 6 percent respectively, a distribution that remains to date (Yemek, 2005:9). To address this, the Constitution also provides for a non-partisan Financial and Fiscal Commission (FFC) that advises parliament and sub-national governments on a variety of issues concerning intergovernmental fiscal relations, and which is represented on the NCOP. Issues of concern to the FFC include taxing powers, the allocation of revenue between spheres of government, the grants system and borrowing powers. Between

2018/19 and 2020/21, 48% of national revenue will go to national government, 43% to provincial government and 9% to local government (National Treasury, 2018a).

The Division of Revenue Act (DoRA) provides for the annual allocation of national revenues to each of the three spheres of government. Together with the Constitution, this act lays out South Africa's intergovernmental fiscal relations system and determines the way in which taxes are allocated and shared among the various spheres of government, as well as how funds are transferred from one level to another. The Intergovernmental Fiscal Relations Act of 1997 details the inter-governmental budget process that determines these transfers. In terms of this Act, ten months prior to the financial year, a division of revenue is submitted by the FFC to the Minister of Finance, Parliament and the nine provincial legislatures. The Minister consults with the provinces, local government and the FFC before a decision concerning the division of revenue is brought before Cabinet. At the time of the budget a Division of Revenue Bill is tabled which allocates revenues to the three spheres along with an Allocation Bill which gives authority to spending agencies to make use of the resources that they have been awarded.

Section 214 of the South African Constitution provides for an elaborate and complex set of revenue transfers from the national to the sub-national governments. The two main instruments for national transfers are unconditional/equitable shares and conditional grants. The Constitution provides that programs are funded primarily through the equitable sharing of the revenues raised at a national level between the three spheres of government, (vertical division). These transfers follow the recommendations of the FFC, which annually proposes the amount to be allocated to each sphere of government. According to the National Treasury (2008b: 51), these transfers address structural imbalances arising from the revenues available to provinces and municipalities and the expenditure responsibilities assigned to them by the Constitution. The transfers also ensure that national priorities can be addressed by all spheres of government, particular those relating to the provision of universal access to services. Finally transfers can be used as incentives to encourage good governance and to build local government capacity.

The provincial share is divided equitably between the provinces and the municipalities (horizontal division). The FFC is responsible for developing the revenue-sharing formula for this division of resources over a period of three to five years. This formula is based on the demographic and economic profiles of the provinces and has included the following components: an education share based on the average size of the school-age population (ages six to 17) and the number of learners enrolled in public ordinary schools; a health share based on the differential use of the public health system by people with and without medical aid or health insurance; a social security component based on the population eligible for social security grants. Over time, the formula has been developed and expanded so as to target the poor. Although municipalities are expected to be largely self-financing, thereby ensuring their accountability to the communities from which their income is derived, a component of the local government

formula known as the ‘S grant’ is designed to enable municipalities to deliver affordable basic services to low-income households. A further component, the ‘I grant’ supports the overhead costs of municipalities that currently have a small revenue base in relation to their population size. To ensure a measure of financial certainty and facilitate planning, 70% of the previous year’s grant is assured.

The strategic management and monitoring of government budgets in all spheres has received particular emphasis in the post-apartheid period. This has included the introduction of multi-year planning, an annual review of government expenditure, and the linking of policy targets, expenditure and performance measurement for programs and sub-programs as required by Public Finance Management Act (PFMA) of 1999. The South African Government’s Medium-Term Expenditure Framework (MTEF), first introduced in 1997 and extended to provinces in 1999, is one of the more important policy instruments used to manage public expenditure. The MTEF is way in which priorities and longer-term policy options can explicitly be brought into the budget process of all spheres of government. Operationalising this for local government, the National Treasury gives provinces and municipalities rolling three-year allocations for the MTEF periods, with the final two years being indicative. Further, each year all spheres are provided with upper and lower parameters showing the growth in municipal budgets that is required. These can be exceeded if properly motivated. Following the MTEF, the Medium-Term Budget Policy Statement is presented annually by the Minister of Finance to Parliament prior to the forthcoming year’s budget speech. It provides an assessment of the state of the economy, the fiscal framework, the budget priorities and the division of revenue between national departments, provinces and municipalities.

5 Outcomes of fiscal policy instruments in South Africa

Taxes on incomes and profits are the largest source of government revenue with personal incomes tax being income tax the single most important contributor. In 2016/17, for example, gross tax revenues amounted to R1.14 trillion of which income and profit taxes amounted to R0.66 billion which is equivalent to approximately 58% of total tax revenue (National Treasury, 2018a). Personal income taxes contributed 37% of gross tax revenues and of total revenues 33% of consolidated government revenue (National Treasury, 2018a). Personal income tax is also steeply progressive and it has been reported that the country’s top income decile contributes 87% of direct taxes compared zero percent in the bottom decile, suggesting that direct taxes have the desired effect of reducing inequality (World Bank, 2014).

However, 35% of the fiscus is generated by indirect taxes and 25% directly attributable to value-added tax (VAT) (National Treasury, 2018a). South Africa’s indirect taxes include; excise duties, VAT and import tariffs. While indirect taxes have the largest tax base, they are also potentially some of the most regressive as all citizens, including those highly impoverished, are subjected to them. Evidence suggests that the inequality effect of indirect taxes has not been as high as those of direct taxes as the share of indirect

taxes contributed by the top decile is 60% and 9.5% for the bottom decile. This is due to the zero rating of staple foods. This suggests that indirect taxes have a bigger and more negative effect on the incomes of the poor in South Africa, compared to direct taxes. In general, indirect taxes tend to be the largest components of government revenue, but this is an exception in South Africa where the share of direct taxes in total revenue is higher than indirect taxes. This shows that despite the use of indirect taxation, the tax system can still be viewed as being pro-poor (Lustig, 2016).

Another avenue for redistributing resources to the poor are direct transfers from government. South Africa has a high social spending driven by the most extensive social programme on the Africa continent. However, the nature of the social transfer system will determine whether the system is able to redistribute in favour of the poor thereby reducing inequalities. Social programmes and transfers that are poorly designed and targeted may not have the desired effect of lifting the poorest of the poor out of poverty and eliminating inequalities.

Examining the redistributive impact of social expenditure World Bank (2015) find that while health spending takes up a larger share of the market incomes of the poor, public health spending is progressive. Private health care services are expensive and primarily funded by out of pocket payment or medical aid. In South Africa, estimates indicate that approximately 16% of the population, mostly the middle to high income groups, have medical aid. The majority of the population depend almost solely on public health services. Private medical schemes consume over 50% of total private and public health care expenditure (Surender, 2015). Additionally, 70% of general practitioners and 59% of all medical doctors are in private practice (Surender, 2015). The result is that the effects of progressive public health expenditure may be offset by high inequality in the distribution of health resources in favour of private sector.

Through the use of these resources, South Africa is among the countries that have reported positive effects of redistribution of fiscal policies, through reduced poverty levels (World Bank, 2014; Lustig, 2017; Inchauste et al., 2015). For example, using a fiscal incidence analysis methodology, the average incomes of the top 10% before adjusting for the effects of fiscal policy was R 200,769 per annum compared to R200 per annum for the bottom 10% (World Bank, 2014; Inchauste et al., 2015). After fiscal policy, though still wide this gap closes considerably to R 141,075 per year for the top 10% and R 2,131 per year for the bottom 10% (World Bank, 2014; Inchauste et al., 2015). Table 1 presents the distribution of incomes before and after the effect of fiscal policy instruments – direct taxes, cash transfers and indirect taxes are taken into account.

Table 1: Average per capita income in each market income decile (in Rand)

Income Decile	Market income (1)	Market income (2)	Disposable income (3)	Poorest-fiscal income (4)
		$(2)=(1) - \text{Direct taxes}$	$(3)=(2) + \text{Cash transfers}$	$(4)=(3) - \text{Indirect taxes}$
1 (Poorest decile)	200	200	2 363	2 131

2	736	735	2 997	2 669
3	1 497	1 493	3 691	3 264
4	2 761	2 748	4 679	4 106
5	4 925	4 887	6 609	5 755
6	8 653	8 535	9 970	8 627
7	14 793	14 397	15 662	13 481
8	27 119	25 762	26 658	22 828
9	57 711	51 994	52 661	44 822
10 (Richest decile)	207 693	16 652	166 803	141 075

Source: Adapted from Inchauste et al., (2015): 30

For the poorest decile market incomes of R200 are unaffected by direct taxes, the effects of transfers significantly increase their incomes to R2363, however this is impacted by indirect taxes. While the fiscal incidence analysis concludes that fiscal policy is indeed redistributive in South Africa, inequalities remain high, a Gini coefficient of 0.77 for market incomes reduces to 0.69 (World Bank, 2014; Inchauste et al., 2015) and evidence suggests it is widening over time (Bhorat and Naidoo, 2017). The majority of taxpayers in South Africa (57%) fall within the bottom of the tax bracket with an upper limit R250000 (National Treasury, 2018a). The upper end of the tax bracket, the three highest categories account for only 6.8% of registered taxpayers.

In the 2018/19 budget, out of a budget of R1.67 trillion,² the South African government has allocated over two thirds of its total budget (R1.01 trillion) to social services: education has the biggest share of social services budget (35%), followed by health (20%), community development (19%) and social development (26%). Because food security and nutrition is multi-sectoral and programmes are spread across government departments, it does not have a specific line item dedicated to it in the budget. The three main departments that have nutrition specific or nutrition sensitive programmes include the Department of Agriculture, Forestry and Fisheries (DAFF); Department of Health (DOH), and the Department of Social Development (DSD). The national school feeding programme (NSFP) falls under the Department for Basic Education (DBE), but only covers school-going children and is constitutes' s a small proportion of the department's budget. Estimating the distribution of government spending on nutrition across child age groups is difficult, as the national and provincial departments do not necessarily allocate or report expenditures by age groups. Some budget line items such as administration costs or employees' salaries cannot be allocated to nutrition, as there is no information on the share of the costs, or time that employees dedicate to nutrition programmes, especially in cases where they perform multiple roles. For these reasons, it is difficult to arrive at exact budgetary allocation to food and nutrition, and for children in particular.

²\$1 (USD)= R6.076 (2017 - PPP)

Nevertheless, by examining some budget line items, it is possible to get an overview of government's expenditure on nutrition. Table 2 shows government spending on nutrition-related programmes in DOH, DSD, DAFF and DBE. With an allocation of 163 billion in 2018/19, social assistance has the largest share of expenditure. The 2018/19 allocation is 1.7 times more than what was allocated in 2011/12. Social assistance programmes include grants for children, people over 60 years of age, a foster care grant, a disability grant, and a social relief of distress grant. As at 2018/19, spending on social grants constitutes 3.2% of the country's GDP, and over the next 3 years, government expects to spend a total of R528.4billion on social grants (National Treasury, 2018a).

The 2018/19 health budget included over R90 billion allocated to district health services. Analysis across provinces provided in Table 3, shows that spending on district health services has increased significantly over the years, and is projected to continue to do so until 2020.

Table 2: Spending on nutrition-related budget line items.

	Expenditure estimates (R millions)										
	Audited outcome						Revised estimate	Budget estimate			Average growth rate
	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2017/18 - 2020/21
Child, Youth & School Health (DOH)	29.89	13.39	16.60	207.45	177.33	212.36	222.45	224.97	237.56	250.63	4.1%
Health promotion & nutrition (DOH)	12.29	14.11	23.88	18.35	22.11	19.14	26.26	24.68	25.77	27.65	1.7%
Social Assistance (DSD)	95,973.0	103,898.8	109,596.6	119,994.8	128,333.4	138,915.6	150,880.2	162,960.7	175,655.6	189,773.5	7.9%
Food Security (DAFF)	780.13	868.14	1,025.43	1,037.49	1,270.76	1,250.17	1,342.04	1,421.96	1,646.80	1,665.42	7.5%
National School Nutrition Programme (DBE)	4,578.75	4,906.46	517.31	5,461.92	5,685.38	6,059.66	6,426.31	6,802.08	7,185.72	7,695.90	6.2%

Source: (National Treasury, 2015, 2018b)

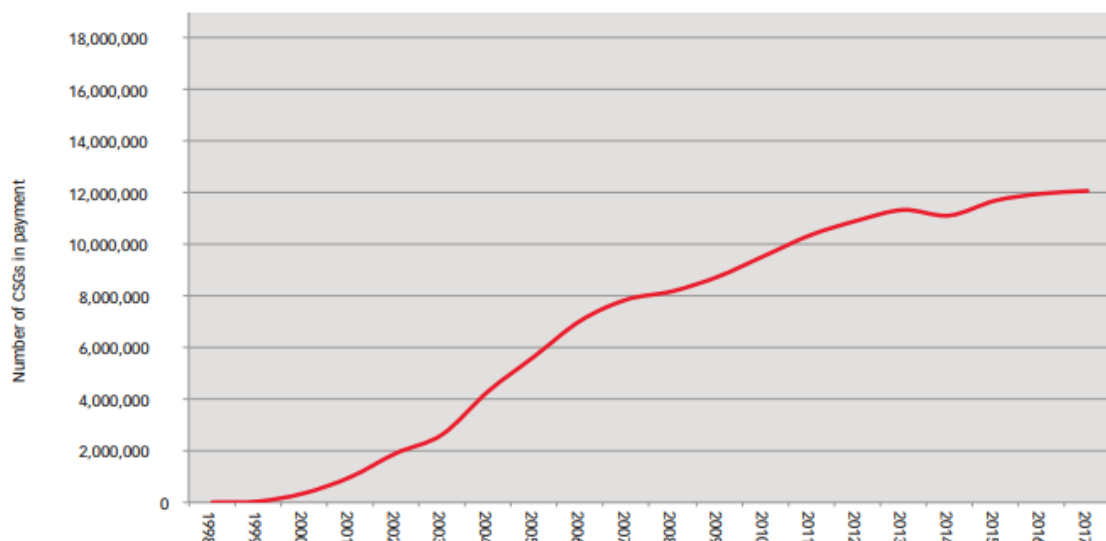
Table 3: Provincial spending on district health services (2014/15 - 2020/21)

	Expenditure estimates - District Health Services (R millions)						
	Audited outcome			Revised estimate	Medium-term expenditure estimates		
	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21
Eastern Cape	8 939,15	9 516,43	10 420,60	11 392,81	12 031,95	12 899,14	13 899,33
Free State	3 404,36	3 720,14	3 985,60	4 161,99	4 401,71	4 780,58	5 122,34
Gauteng	9 563,05	11 075,55	11 992,09	14 368,62	15 305,14	16 914,02	18 318,13
KwaZulu-Natal	14 334,35	16 007,90	17 723,97	19 659,16	20 825,71	22 429,84	24 246,45
Limpopo	9 280,31	9 849,56	11 012,37	12 763,06	12 548,88	13 277,14	14 069,90
Mpumalanga	5 475,43	6 175,41	6 524,84	7 389,39	8 048,07	8 644,91	9 218,85
North-West	4 408,28	4 693,40	5 012,58	5 653,12	5 662,21	6 140,77	6 682,83
Northern Cape	1 633,01	1 696,41	1 915,04	2 012,94	2 169,98	2 347,90	2 518,20
Western Cape	6 767,27	7 352,88	7 953,44	8 784,81	9 344,34	9 707,90	10 352,77
Total (all provinces)	63 805,21	70 087,66	76 540,55	86 185,90	90 337,99	97 142,21	104 428,81

District health services include community health clinics and community-based services, HIV/AIDS, nutrition and district hospital. The majority of these funds are spent on HIV/AIDS and district hospitals. Nutrition forms a small proportion of provincial expenditure on district health services (less than 2%). However, nurses and community-based healthcare workers also play a role in nutrition-related services including maternal and child healthcare, hence nutrition is embedded in these programmes. Nonetheless, it is difficult to estimate the shares of these expenditures that are utilised for nutrition programmes.

The largest social assistance programme in terms of both beneficiaries and cost is the Child Support Grant (CSG). This is targeted at children (0-17 years) living in poor households and provides supplementary income that is supposed to cater for the basic nutritional needs of children. The number of beneficiaries has significantly increased over the years and the grant now has over 12 million beneficiaries (Hall and Sambu, 2017), and is valued at R405 (PPP \$66.7) per person per month in 2018. This grant constitutes close to 40% of DSD's total expenditure on social assistance and its rapid growth since its introduction is shown in Figure 2.

Figure 2: Number of recipients of CSG, 1998-2017



Source: Adapted from Hall and Sambu (2017) South African Child Gauge
'Income poverty, unemployment and social grants.'

While the aim of the CSG is to assist caregivers to provide for basic food needs of children, it is not clear what proportion of the grant goes to nutrition, especially since there are other important household needs that have to be catered for. Government spending on the CSG increased by 8.7% between 2014/15 and 2017/18, faster than the growth rate all social assistance programmes combined (7.9%) over the same period. While the CSG has the highest number of beneficiaries, spending on the Old Age Grant (OAG) is highest and constitutes 43% of total social assistance budget for 2018/19. The OAG is targeted at elderly persons, but research has shown that the grant is a crucial source of income for households, including those with children. The social relief of distress grant provides temporary income support and food parcels to households

experiencing hardships. It has a budgetary allocation of R410 million in 2018/19 and constitutes less than 1% of total social assistance expenditure. It is not clear how many children benefit from this grant.

DSD also allocates subsidies to Early Childhood Development (ECD) Centres. A pre-determined portion is normally supposed to be spent on food, but the subsidies also pay for ECD staff and educational materials (Cornerstone Economic Research, 2015). Like other programmes, it is difficult to allocate staff time to nutrition, and it is not clear whether the pre-determined amount is spent on food. In addition, the subsidy only goes to ECD centres that are registered, excluding other centres that are in operation (DOH, DSD and DPME, 2017). An estimated 607,092 poor children were subsidised through ECD centres by the end of 2016/17 (National Treasury, 2018b). In the 2018/19 budget, government has allocated R1.3 billion over the next three years to subsidise an additional 113,000 children through ECD centres, and R250.6 million to support 1,165 centres to meet norms and standards.

Between 2018/19 and 2020/21, government's spending on health is expected to total R667.8 billion, but the majority of these funds is allocated to district health services (National Treasury, 2018b). Health sector spending on nutrition is difficult to estimate because nutrition specific or nutrition sensitive programmes are generally integrated lumped up with other interventions for children, for example child and maternal health programmes (Cornerstone Economic Research, 2015).

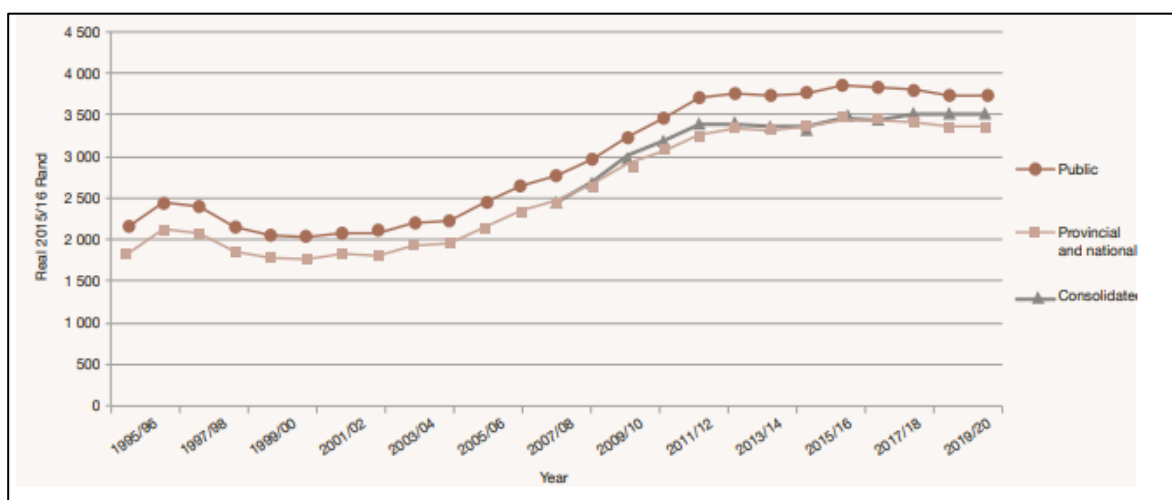
Only 1.3% of the country's 2018/19 budget goes to the Department for Agriculture, Forest and Fisheries (DAFF), and this allocation will remain fairly the same in 2019/20 and 2020/21 (National Treasury, 2018a). DAFF's has programmes that target improved household food security, and in 2018/19 budget, R1.4 billion has been allocated to these. This programme's (food security) budget grew by over 70% between 2011/12 and 2017/18 (see Table 2) and is expected to grow by 6.8% between 2017/18 and 2020/21. However, like nutrition-related programmes in other government departments, it is not clear what share of the budget goes to households with children under the age of 5 years, or to any other child age groups. Finally, the education budget includes school feeding programmes, a further form of social protection. This forms a small proportion of total learning and culture budget (R6.8 billion compared to R351 billion allocation in the 2018/19 budget).

6 The impact of fiscal policy on child malnutrition in South Africa

Although fiscal policy is important in tackling malnutrition and its related inequalities requires a multipronged and multi-sectoral approach (World Bank, 2017). Improving access to and use of health care services are expected to favourably enhance child nutritional outcome and mitigate inequalities in these outcomes (World Bank, 2017). These are important indicators of population's health and well-being (WHO, 2006). To examine the impact of fiscal policy therefore on child health we look first at budget allocation to programmes that directly or indirectly influences child health. As discussed earlier, in South Africa the health budget rests at the Provincial level. The

share of consolidated health budget (South Africa's) to total budget has remained fairly stable at approximately 12% between 2014/15 and 2018/19 (National Treasury, 2018a). While the country's health budget is one of the highest in Africa, its spending still falls short of the Abuja declaration, which requires governments to commit at least 15% of the budget to healthcare. Real per capita public health spending increased rapidly between 1999/00 and 2011/12 and stabilised after that.

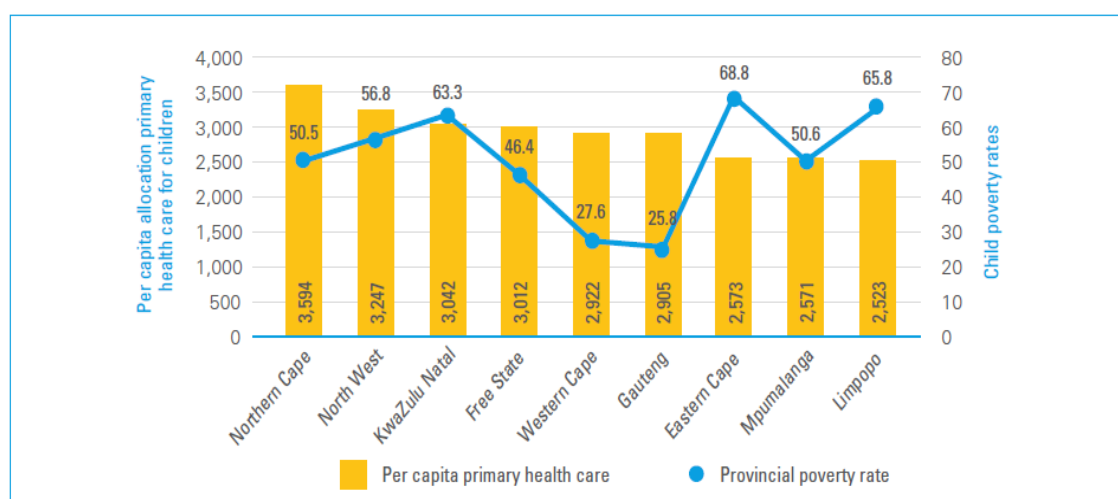
Figure 3: Real per capita (uninsured) public-health expenditure, South Africa (2015/16 prices)



Source: Blecher *et al.* (2017)

Of the 18 million children in South Africa, over a third (6.5 million) are aged under 5 years (Hall and Sambu, 2017). An analysis conducted by UNICEF focusing on provincial primary health care budgets, which normally constitute about 26% and 40% of total provincial health budgets, revealed the inequity health spending across provinces. A comparison of provincial per capita primary health care spending (2017/18 budget) by child poverty rates shows that Limpopo and Eastern Cape provinces have the lowest per capita allocation for primary healthcare, despite having the highest child poverty rates.

Figure 4: Provincial per capita allocation on primary health care for children (2017/18) and child poverty (2015)

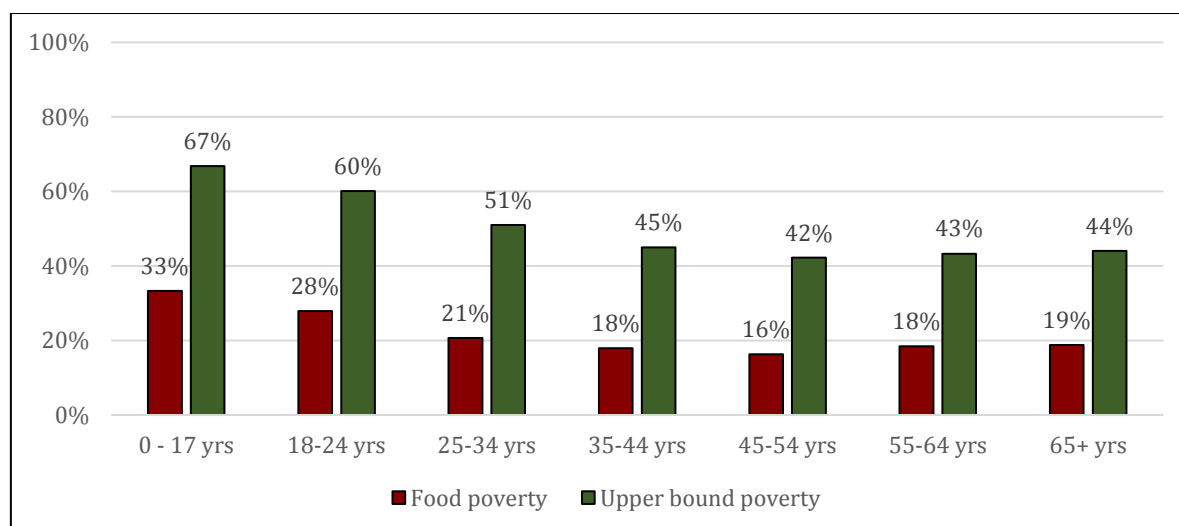


Source: UNICEF – Analysis of 2017/18 budget (health).

At national level, FAO’s undernourishment rate is used to monitor the extent to which national food supply, can cater to population’s dietary needs. Undernourishment is derived from per caput food supply data and has various limitations, including data quality and the fact that the measure does not provide information on household or individual food insecurity. South Africa’s undernourishment rate has fluctuated between 3% and 5% and between 2000 and 2016, and between 2014 and 2016, an estimated 2.5 million people were undernourished (FAO *et al.*, 2017).

At household-level, there are indicators that capture the quality and quantity of diets consumed, which includes self-reported hunger, dietary diversity, and energy intake. Self-reported hunger has been widely monitored in South Africa; analysis shows that child hunger rates have been on the decline over the years, from 31% in 2002 to 13% in 2015 (Hall, Nannan and Sambu, 2017). However, hunger is a subjective indicator and is influenced by respondent’s feelings and may not adequately capture the extent of food insecurity. More objective measures of food insecurity include food poverty, derived from other income or expenditure data. Households that are food poor, are financially constrained often struggle to cater for their nutritional needs. South Africa’s food poverty rates are high, despite a reduction over the years. In 2015, 25% of the population lived below a food poverty line, while a third of children (0 – 17 years) lived below a food poverty line (Statistics South Africa, 2017a). Children are more affected by poverty, compared to other age groups as is shown in Figure 5 (Statistics South Africa, 2017a). Compared to 2006, child food poverty rates declined (from 37% to 33% in 2015). However, the rates appeared to have increased from 2011 when 28% of children were living below the food poverty line. A similar pattern was reported for the upper bound poverty rates.

Figure 5: Food poverty and upper bound poverty rates, by age group (2015)



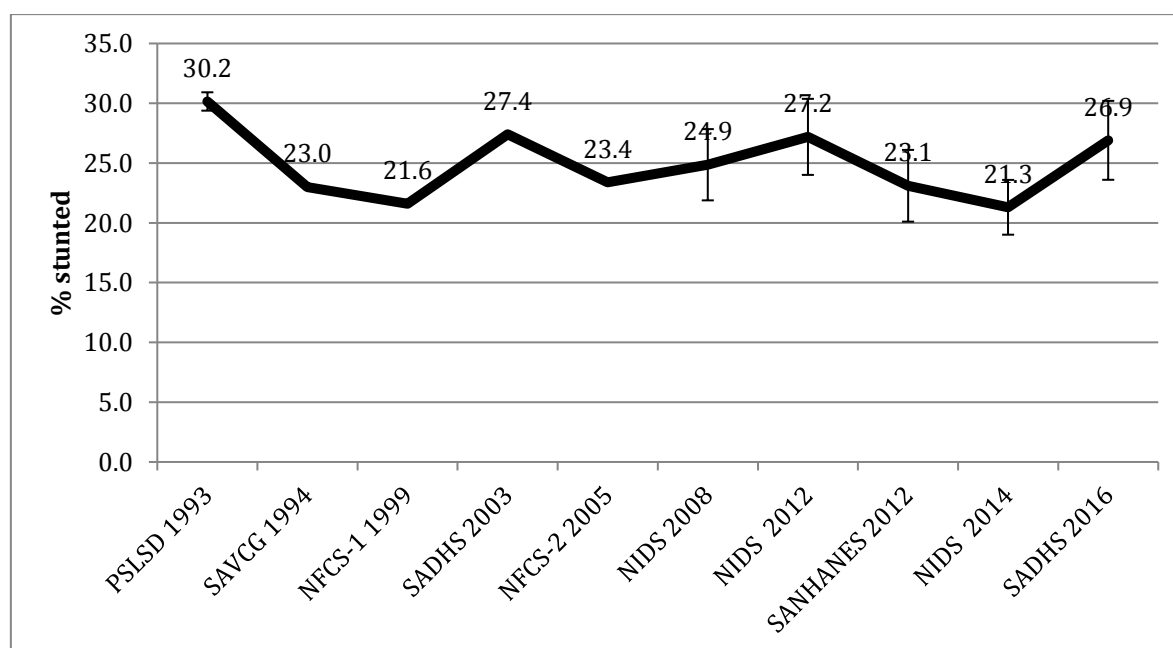
Source: Statistics South Africa (2017).

Consumption of safe nutritious and diverse foods is important, as recommended in the country’s food and nutrition guidelines (Steyn and Ochse, 2013). But, research has

shown that diets consumed by most South Africans is low in diversity (Labadarios, Steyn and Nel, 2011; Steyn and Ochse, 2013). This is especially the case in rural areas, and in the urban informal areas where poverty is high and access to food is limited by the low incomes. Consumption of some healthy foods is informed by socio-economic status; for example regular consumption of fruits and vegetables is reportedly higher among richer and wealthier households, compared to poorer households (Faber, Wenhold and Laurie, 2017). With regards to child specific nutritional outcomes, an evaluation of nutrition interventions for children under 5 years found that food security interventions were not linked to consumption of nutritious foods (DOH, DSD and DPME, 2017).

Inadequate dietary intake is manifested through South Africa's high malnutrition rates; the most recent Demographic and Health Survey reports that 27% of children under five years suffer from stunting, a condition that has significant adverse effects on the lives of children in the short and long-term. Comparison of previous estimates of stunting reveals that this prevalence has not changed since 1993 before the end of Apartheid, and before the significant increase in fiscal measures to address child stunting. This is shown in Figure 6 that reports the prevalence of child stunting from all available national surveys since 1993, with confidence intervals fitted for those surveys for which the micro-data are available.

Figure 6: Stunting prevalence 6 months to 59 months, 1993-2016



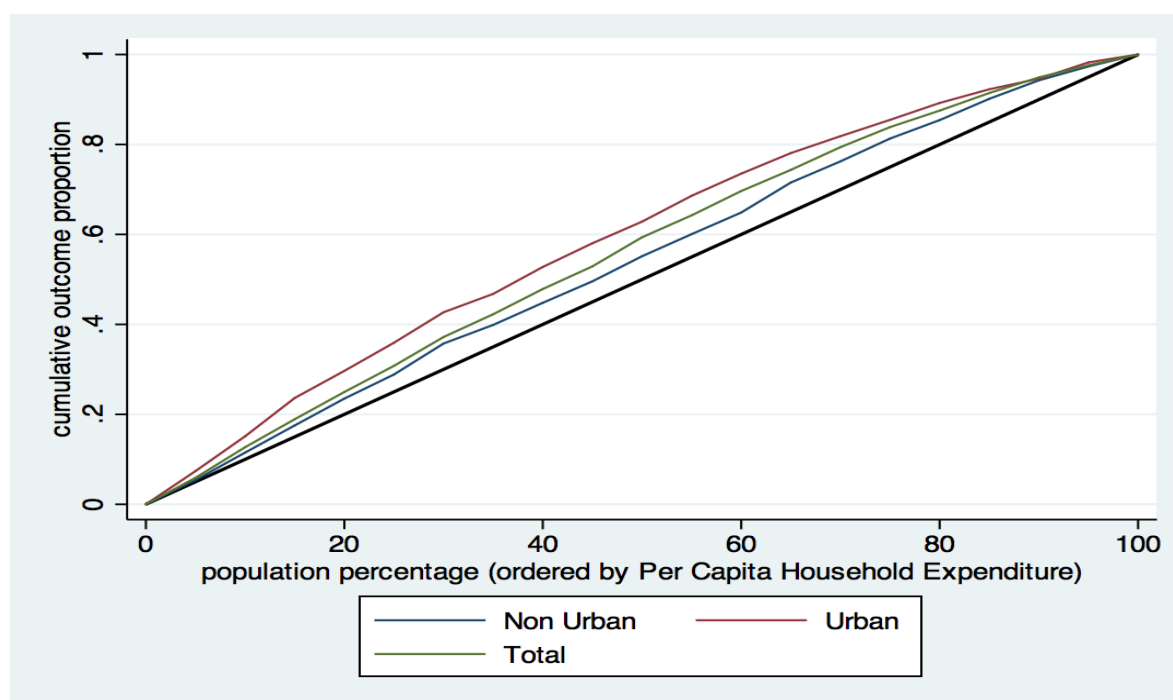
Source: PSLDS, 1993; SAVCG, 1995; NFCS, 1999; SADHS, 2003; NFCS, 2005; NIDS, 2008, 2012, 2014; SADHS, 2016.

Like other countries in sub-Saharan African, there are striking inequalities in stunting across socio-economic status. For example, the SADHS found that 12.5% of children under 5 years in the wealthiest group were stunted, compared to 36.3% in the poorest wealth group (Statistics South Africa, 2017b). But inequalities go beyond wealth or

income levels and include geographical areas and gender. Income and food security rates differ significantly across provinces.

While child stunting rates remain high in South Africa, (May & Timaes, 2014) find that inequalities in childhood stunting have reduced between 1990 and 2008 using the first wave of the South African National Income Dynamics Survey (NIDS, 2008). The NIDS survey provided three geographic classifications, Urban, farms and tradition areas, for this analysis we reclassify this into two, urban and non-urban (farms and the traditional areas). We compute stunting rates based on NIDS provided z-scores using the WHO growth standards (WHO 2006) and derive concentration curve for under-five stunting using the fourth wave of the NIDS survey (NIDS, 2014). We find the inequalities persist in stunting and are more extensive in urban areas as compared to rural areas see Figure 7. Urban levels of inequalities in child stunting are found to be higher than the total population levels.

Figure 7: Concentration Index for under five stunting levels in South Africa by geographic area NIDS Wave 4



Source: authors' own computation 45-degree line of equality in black based on data NIDS (2014; 2015)

7 Why has fiscal policy not reduced malnutrition in South Africa?

There are various factors that could explain why there are high stunting levels, and nutritional inequalities persist, despite increased government expenditure in the social sector and agriculture. We highlight some of these below, beginning with the limitations of the Child Support Grant (CSG).

Despite the many reported benefits of the CSG, child poverty remains high (though has steadily declined over the years), there are significant inequalities across socio-economic groups, and malnutrition remains high. There are several reasons for this.

First, the value of the grant is not tied to an objective measure and is lower than the country's food poverty line, which is based on the monetary value needed for a minimum energy intake of 2,100 kilocalorie per day (Statistics South Africa, 2015). Research has shown that the value of the grant is too small to cater for the a basic food basket for a child (Smith and Abrahams, 2016). Second, the grant is not used exclusively for food, but is also used to pay for other important household expenses such as transport and education-related costs (Devereux and Waidler, 2017). In addition, close to two million children who are eligible for the grant are excluded due to barriers that prevent them from accessing the grant, including lack of proper information, confusion on the means test, and lack of documentation such birth certificates and identity documents (DSD, SASSA and UNICEF, 2016).

In addition to poverty, high cost of food also affects the quality and quantity of foods consumed. Another factor is the accessibility of fresh and nutritious foods, especially for households located in the rural areas where distance from major urban centres and infrastructural challenges determine the types of foods that households have access to. In an attempt to make food more affordable, 19 food items that are currently zero-rated, including fruits and vegetables, maize meal, brown bread, eggs, legumes, rice and vegetable oil. Foods that are not zero-rated attract a 15% VAT rate. The VAT rate was previously set at 14%, and the new rate was announced during the 2018/19 budget speech.³ There has been opposition on this increase from some civil society groups,⁴ and government has now set-up a committee of experts to review the list of zero-rated items, with a view to increasing the number.

Other factors that affect child nutritional outcomes at household level, in addition to dietary intake, include access to basic services at home. Lack of adequate living conditions is one of the main underlying causes of malnutrition, as it increases the risks of contracting infections like diarrhoea which are strongly linked to poor nutritional outcomes. Diarrhoea is one of the leading causes of death for children under the age of 5 years (Bamford, 2016). In South Africa, there is still a significant number of people who lack access to basic services like adequate water, adequate sanitation, and proper housing. Service provisioning differs significantly across rural and urban areas, and across socio-economic status. For children, access to quality health care is also important. Yet, close to a quarter of children live far from their nearest health facility (Hall, Nannan and Sambu, 2017). Children in the poorest provinces have lower access to basic services. For example, while 8% and 9% of children in Gauteng and Western Cape provinces live far from health facilities, over 25% of children living in the North-West, KwaZulu-Natal and Eastern Cape provinces live far from health facilities (Hall, Nannan and Sambu, 2017). In terms of adequate water, only 40% of children living in the Eastern Cape province have access to adequate water, compared to 92% in Gauteng and 94% in the Western Cape (Hall, Nannan and Sambu, 2017). The consequence is

³ <http://www.treasury.gov.za/documents/national%20budget/2018/speech/speech.pdf>

⁴ <http://section27.org.za/wp-content/uploads/2018/02/2018-02-26-Civil-society-submission-to-Finance-Committees-on-the-2018-Budget.pdf>

that the Eastern Cape records the highest level of childhood and this is significantly related to type and distance to adequate sanitation (Voth-Gaeddert et al., 2018).

At national level, budgetary constraints have been listed as some of the main challenges affecting food and nutrition in South Africa. As previously discussed, the country does not have a coordinated food and nutrition security budget. An evaluation of 18 nutrition interventions found that majority of the interventions were largely integrated into larger budget line items (DOH, DSD and DPME, 2017). In addition, FNS does not have coordinated or dedicated staff across departments, making it difficult to disaggregate staff time and materials to FNS. All these factors make it difficult for accountability purposes (DOH, DSD and DPME, 2017).

South Africa has a Food and Nutrition Security (FNS) policy, whose strategic goal is to ensure availability, accessibility and affordability of safe and nutritious food at both national and household levels (DSD and DAFF, 2013). An implementation plan for the FNS exists, and includes six objectives: 1) Establish a multi-sectoral FNS council, 2) establishment of inclusive local food value chains to support access to nutritious food, 3) expanding targeted social protection measures and sustainable livelihoods programmes, 4) scaling up of high impact nutrition interventions targeting women, infants and children, 5) development of an integrated communication plan to influence people across the life cycle to make informed food and nutrition decisions, and 6) development of a monitoring and evaluation system for FNS, including a risk management system. It is not clear whether a dedicated budget has been allocated to the implementation plan, though a presentation by the Department for Planning, Monitoring and Evaluation to the national assembly's committee on Agriculture, Forestry and Fisheries, estimated that it would cost R87 billion between 2018 and 2023 to fund implementation programmes and ensure achievement of the policy's six objectives (Ngomane, 2017). Close to 80% of the expenditure is expected to go to programmes that will support local food value chains to increase access to nutritious affordable food, 13% is planned for expanding social protection and sustainable livelihoods programmes, while 8% is planned for scaling up nutrition interventions for women, infants and children (Ngomane, 2017).

Due to its complex and multi-sectoral nature, food security and nutrition functions are spread across several government departments. There are challenges that come with this, especially where no department plays a leading or coordinating role and is accountable for the overall FNS programme. This is evident in some provincial level departments where nutrition does not have a high profile. It has been reported that some national and provincial level government employees are not necessarily aware of their roles with respect to food security and nutrition (DOH, DSD and DPME, 2017). These factors affect the implementation of FNS programmes at both national and provincial levels, for there is low political demand for action against malnutrition ((Benson, 2008). In line with the FNS policy, South Africa will have a Food and Nutrition Security Council that is expected to oversee the alignment of policies, legislation and programmes, and ensure implementation of programmes that address

FNS.⁵ This council is expected to be chaired by the country's Deputy President. As at November 2017, a TOR for the council had been drafted and submitted to the Deputy President.⁶

Lack of adequately trained personnel is one of the main issues affecting implementation of food security and nutrition programmes (DOH, DSD and DPME, 2017). In addition to income support for caregiver, including the CSG, it is important that mothers and caregivers are provided with information on infant and young child feeding, and consumption of adequate diets. Children's anthropometric measurements should also be monitored regularly. South Africa has very few dietitians; in 2010, it was estimated that there were 0.61 dietitians and nutritionists for every 10,000 people (DOH, DSD and DPME, 2017). Majority of those who exist are concentrated in urban areas and private hospital, as opposed to public health care facilities. Implementation of nutrition programmes is mainly left to nurses and community health workers, and while in some provinces like KwaZulu-Natal, they are well trained and aware of their roles around nutrition, this is not the case in other provinces (DOH, DSD and DPME, 2017). It also appears that government has a high turnover rate with many positions related to food and nutrition security. Shortage of human resources affects government departments' (national and provincial) abilities to implement food and nutrition interventions / programmes for the poorest and those in rural areas.

8 Recommendations and conclusion

Despite two decades of progressive fiscal policy and reduced poverty rates, there are still vast inequalities across health indicators in South Africa. Despite the high levels of economic inequalities in income, wealth and opportunity, analysis by the World Bank suggests that the South African tax system is progressive and favours the poor, though more can be done with indirect taxes. Additionally, the expenditure shares of social services and government transfers also suggest that expenditure component of fiscal policy can be redistributed in favour of the poor. Social expenditures on sectors such as education and health are significant proportions of public expenditures and transfer programmes such as child support and free essential services cushion the poor.

However, the persistence of health inequalities, together with the absence of progress in the reduction of child stunting in the face of what is a redistributive fiscal system suggests more attention needs to be paid to the design, coordination and roll out of these programmes. Qualitative factors such as the timing of benefits and quality of services should be addressed. For example; attention needs to be paid to quality and distribution of social services such as health facilities in poorer neighbourhoods. Additionally, existing programmes should be assessed for effectiveness, better linkages should be made between existing intervention to leverage on synergies and linkages and where needed increasing access to these programmes should be done. This may need to

⁵ <https://pmg.org.za/committee-meeting/25488/>

⁶ See 2 above

take account of factors that affect health status and nutrition that lie beyond the ambit of health and nutrition policies. The provision of water, sanitation and hygiene (WASH) is a potential starting point. Government should also review the value of social grants, in particular the Child Support Grant whose value should at least be equal to the food poverty line. Ultimately the goals of these programmes should move beyond merely lifting people out of extreme poverty to enhancing upward socioeconomic mobility.

More than fiscal policy is required, and ideas from other countries could be applied in South Africa. One recent innovation is ‘cash plus’ programming, which combines cash transfers such as social grants with links to other services, such as ‘behaviour change communication’ around good nutrition, feeding and hygiene practices. Also indicated are greater and more enduring investments in antenatal and post-natal health care, and in the nutrition of adolescent girls and pregnant and lactating women. Most important of all is to implement a holistic approach, by setting targets to reduce child malnutrition and adopting multisectoral coordination mechanisms to achieve the necessary improvements in incomes, diets, education, quality health care, clean water, sanitation and hygiene.

References

- Aliber, M. (2003) ‘Chronic poverty in South Africa: Incidence, causes and policies’, *World Development*, 31(3), pp. 473–490. doi: 10.1016/S0305-750X(02)00219-X.
- Aliber, M et al. (2013), *Land Reform and Livelihoods: Trajectories of Change in Northern Limpopo Province, South Africa*. Cape Town: HSRC Press, 2013.
- Anyanwu, C.J. And Erhijakpor, E.O.A. (2007). Health expenditures and health outcomes in Africa. Economic Research Working Paper No 91, African Development Bank.
- Bamford, L. (2016) ‘Leading Causes of Death in Children’, in Stephen, C. (ed.) *Saving children 2012 -2013. An eight survey of child healthcare in South Africa*. Pretoria: Tshepesa Press.
- Barbarin, O. A. and Richter, L. M. (2001) ‘Mandela’s children: Growing up in post-apartheid South Africa.’, *Mandela’s children: Growing up in post-apartheid South Africa*. Available at: <http://ovidsp.ovid.com/ovidweb.cgi?T=JS&PAGE=reference&D=psyc3&NEWS=N&AN=2001-18519-000>.
- Benson, T. (2008) Improving nutrition as a development priority : Addressing undernutrition within national policy processes in Sub-Saharan Africa. Washington, D.C. doi: 10.2499/9780896291652RR156.
- Bhorat, H. and Kanbur, R. (2005) ‘Poverty and well-being in Post-Apartheid South Africa: An overview of data, outcomes and policy’, *Poverty and Policy in Post-Apartheid South Africa*, pp. 1–17. doi: 10.2139/ssrn.982805.
- Bhorat, H. and Kanbur, S. M. R. (2009) *Poverty and Policy in Post-Apartheid South Africa, Science*.

- Black, R. E. et al. (2013) 'Maternal and child undernutrition and overweight in low-income and middle-income countries', *The Lancet*, 382(9890), pp. 427–451. doi: 10.1016/S0140-6736(13)60937-X.
- Blecher, M. *et al.* (2017) 'Health spending at a time of low economic growth and fiscal constraint', in Ashnie, P. and Barron, P. (eds) *South African Health Review 2017*. 2017th edn. Durban, pp. 25–40. Available at: <http://www.hst.org.za/publications/South African Health Reviews/HST SAHR 2017 Web Version.pdf>.
- Burger, R. *et al.* (2017) 'The Long Walk: Considering the Enduring Spatial and Racial Dimensions of Deprivation Two Decades After the Fall of Apartheid', *Social Indicators Research*, 130(3), pp. 1101–1123. doi: 10.1007/s11205-016-1237-1.
- Case, A. (2001) 'Does Money Protect Health Status? Evidence from South African Pensions', *NBER Working Paper 8495: Cambridge, MA.*, (October), pp. 1–32. doi: 10.2139/ssrn.279919.
- Coetzee, M. (2013) 'Finding the benefits: Estimating the impact of the South African child support grant', *South African Journal of Economics*, 81(3), pp. 427–450. doi: 10.1111/j.1813-6982.2012.01338.x.
- Cornerstone Economic Research (2015) Performance and Expenditure Review Nutrition and food security for children under five years old.
- Dabla-norris, E. and Kochhar, K. (2015) *Causes and Consequences of Income Inequality : A Global Perspective, IMF report*. doi: DOI:
- Devereux, S. and Waidler, J. (2017) Why does malnutrition persist in South Africa despite social grants?, Food Security SA Working Paper Series No. 001.
- DOH, DSD and DPME (2017) Diagnostic/Implementation Evaluation of Nutrition Interventions for Children from Conception to Age 5. Preotia.
- DSD and DAFF (2013) National Policy on Food and Nutrition Security.
- DSD, SASSA and UNICEF (2016) Removing barriers to accessing Child Grants: Progress in reducing exclusion from South Africa's Child Support Grant. Pretoria: Department of Social Development/SASSA/UNICEF.
- Duflo, E. (2003) 'Grandmothers and Granddaughters: Old-Age Pensions and Intrahousehold Allocation in South Africa', *The World Bank Economic Review*, 17(>1), pp. 1–25. doi: 10.1093/wber/lhg013.
- Faber, M., Wenhold, F. A. M. and Laurie, S. M. (2017) 'Dietary Diversity and Vegetable and Fruit Consumption of Households in a Resource-Poor Peri-Urban South Africa Community Differ by Food Security Status', *Ecology of Food and Nutrition*. Routledge, 56(1), pp. 62–80. doi: 10.1080/03670244.2016.1261024.
- FAO et al. (2017) The State of Food Security and Nutrition in the World, Fao. Rome: FAO. Available at: <http://www.fao.org/state-of-food-security-nutrition/en/>.
- Goñi, E., Humberto López, J. and Servén, L. (2011) 'Fiscal Redistribution and Income Inequality in Latin America', *World Development*, 39(9), pp. 1558–1569. doi: 10.1016/j.worlddev.2011.04.025.

- Government Of India (2012) 'Children in India 2012- A Statistical Appraisal', Social statistics division, Ministry of Statistics and Programme Implementation, Govt. of India, pp. 1–225.
- Hall, K., Nannan, N. and Sambu, W. (2017) 'Child Health', in Jamieson, L., Berry, L., and Lake, L. (eds) *South African Child Gauge 2017*. Children's Institute, University of Cape Town, pp. 111–117.
- Hall, K. and Sambu, W. (2017) 'Income poverty, unemployment and social grants.', in Jamieson, L., Berry, L., and Lake, L. (eds). Cape Town: Children's Institute, University of Cape Town, pp. 107–113.
- Hall, K. and Sambu, W. (2017) 'Demography of South Africa's children', in Lucy, J., Berry, L., and Lake, L. (eds) *South African Child Gauge 2017*. 2017th edn. Cape Town: Children's Institute, University of Cape Town, pp. 100–104. Available at: http://www.ci.uct.ac.za/sites/default/files/image_tool/images/367/Child_Gauge/South_African_Child_Gauge_2017/Child_Gauge_2017-Demography_of_South_Africa's_children.pdf.
- Hoogeveen, B. J. G., Özler, B. and Hoogeveen, J. G. (2005) 'Poverty and Inequality in Post-Apartheid South Africa Not Separate, Not Equal: Poverty and Inequality in Post-Apartheid South Africa', *World*, 78, pp. 1–42. doi: 10.1016/j.jfoodeng.2005.10.022.
- IFPRI (2016) 'Nutrition and equality: Brazil's success in reducing stunting among the poorest', in *Nourishing millions: Stories of change in nutrition*, pp. 99–105. doi: 10.2499/9780896295889_11.
- Inchauste et al., (2015) "The Distributional Impact of Fiscal Policy in South Africa." CEQ Working Paper No. 29. Tulane University and the Center for Inter-American Policy and Research.
- Labadarios, D., Steyn, N. P. and Nel, J. (2011) 'How diverse is the diet of adult South Africans?', *Nutrition Journal*, 10(1), pp. 1–11. doi: 10.1186/1475-2891-10-33.
- Leibbrandt, M., Woolard, C. and Woolard, I. (2009) 'Poverty and inequality dynamics in South Africa: Post-apartheid developments in the light of the long-run legacy', *South African Economic Policy under Democracy*, 10(January), pp. 270–300. doi: 10.1093/acprof:oso/9780199551460.003.0010.
- May, J. ed., (2000) *Poverty and Inequality in South Africa: Meeting the Challenge*. 1st ed. Cape Town: Zed Books
- Monteiro, C. A. et al. (2009) 'Causes for the decline in child under-nutrition in Brazil', *Rev Saúde Pública*, 43(1), pp. 35–43. Available at: <http://www.scielo.br/pdf/rsp/v43n1/498.pdf>
- National Treasury (2015) *Estimates of National Expenditure 2015*. Pretoria. Available at: http://www.treasury.gov.za/documents/national_budget/2016/ene/FullENE.pdf.
- National Treasury (2018a) *Budget Review*. Pretoria.
- National Treasury (2018b) *Estimates of National Expenditure*. Pretoria.
- Neckerman, K. M. and Torche, F. (2007) 'Inequality: Causes and Consequences', *Annual Review of Sociology*, 33(1), pp. 335–357. doi: 10.1146/annurev.soc.33.040406.131755.'

- Nel, E. and Binns, T. (2000) 'Rural self-reliance strategies in South Africa: Community initiatives and external support in the former black homelands', *Journal of Rural Studies*, 16(3), pp. 367–377. doi: 10.1016/S0743-0167(00)00003-6.
- Ngomane, T. (2017) 'National Food and Nutrition Security Plan for South Africa 2017 - 2022', in An interdepartmental presentation to the Portfolio Committee on Agriculture, Forestry and Fisheries. Department of Planning, Monitoring and Evaluation. Available at: <https://pmg.org.za/files/171114dpme.pptx>.
- Lustig, N. (2016) 'Analytic Foundations: Measuring the Redistributive Impact of Taxes and Transfers', in *Commitment to Equity Handbook: A Guide to Estimating the Impact of Fiscal Policy on Inequality and Poverty*. Available at: <https://ssrn.com/abstract=2893797>.
- Price, M. (1986) 'Health care as an instrument of apartheid policy in South Africa', *Health Policy and Planning*, 1(2), pp. 158–170. doi: 10.1093/heapol/1.2.158.
- Roy, Rathin (2006). Fiscal space for public investment: Towards a human development approach. Paper prepared for the G-24 Technical Meeting, Singapore, 13-14 September 2006.
- Spaull, N. (2013) 'Poverty & privilege: Primary school inequality in South Africa', *International Journal of Educational Development*, 33(5), pp. 436–447. doi: 10.1016/j.ijedudev.2012.09.009.
- Smith, J. and Abrahams, M. (2016) 2016 PACSA Food Price Barometer Annual Report, Pietermaritzburg Agency for Community Social Action. Pietermaritzburg.
- Statistics South Africa (2015) National poverty lines and development Methodological report on rebasing of national poverty lines and development on pilot provincial poverty lines Technical Report. Pretoria.
- Statistics South Africa (2017a) Poverty Trends in South Africa: An examination of absolute poverty between 2006 and 2015, Statistics South Africa. Pretoria.
- Statistics South Africa (2017b) South Africa Demographic and Health Survey 2016: Key Indicators Report. Pretoria: Statistics South Africa.
- Steyn, N. and Ochse, R. (2013) 'Food-Based Dietary Guidelines for South Africa: "Enjoy a variety of foods": as a food-based dietary guideline', *South African Journal of Nutrition*, 26(3), pp. 13–17.
- Surender, R. et al. (2015) 'The drive for universal healthcare in South Africa: Views from private general practitioners', *Health Policy and Planning*, 30(6), pp. 759–767. doi: 10.1093/heapol/czu053.
- Swilling, M., Humphries, R. and Shubane, K. (1991) *Apartheid city in transition, Contemporary South African debates*.
- UNDP (2016) Human Development Report 2016: Human Development for Everyone Available at: http://hdr.undp.org/sites/default/files/2016_human_development_report.pdf
- UNDP (2017) Income Inequality Trends in sub-Saharan Africa (pp. 53–73). New York: United Nations Development Programme.
- UNICEF (2018) 'Health budget South Africa 2017/2018'.

- van der berg, S. (2007) 'Apartheid's enduring legacy: Inequalities in education', *Journal of African Economies*, pp. 849–880. doi: 10.1093/jae/ejm017.
- Voth-Gaeddert, L. et al., (2018) Assessment of Demographic and Environmental Exposures on Child Diarrhea and Systemic Inflammation [insubmission]
- Walker, C. (2005) 'The limits to land reform: Rethinking "the land question"', *Journal of Southern African Studies*, pp. 805–824. doi: 10.1080/03057070500370597.
- WHO (2015) Technical Meeting report: Fiscal Policies for Diet and Prevention of Noncommunicable Diseases. Geneva: World Health Organisation
- World Bank (2014) Fiscal Policy and Redistribution in an Unequal Society
- World Bank (2015) Fiscal Policy poverty and redistribution in South Africa Available at: <http://www.worldbank.org/content/dam/Worldbank/document/Africa/South%20Africa/za-south-africa-economic-update-fiscal-policy-redistribution-unequal-society-infographic.pdf>
- World Bank (2017) Operationalizing A Multi-Sectoral Approach For The Reduction Of Stunting In Indonesia Available at: <http://documents.worldbank.org/curated/en/689631492008789686/pdf/114207-REVISED-may-8-v1-Nutrition-Policy-Brief-FINAL-9May2017.pdf>
- World Bank (2018) An Incomplete Transition : Overcoming the Legacy of Exclusion in South Africa. Systematic Country Diagnostic;. World Bank, Washington, DC. Available at: <https://openknowledge.worldbank.org/handle/10986/29793> License: CC BY 3.0 IGO.