The Link Between Social Grant and Employment in South Africa

South Africa

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2023
JUN

IMF Selected Issues Paper
African Department

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Authorized for distribution by Papa N'Diaye
June 2023

ABSTRACT: The literature has analyzed the link between social grants, means-tested and unconditional on employment, and employment in South Africa. The country's social grant expenditure is relatively large amid persistently high unemployment. This study uses a large panel household survey spanning a decade to find that old-age and disability grant recipients are less in employment as intended by the social program, consistent with the literature. The study adds to the literature by showing that, among "indirect recipients," younger members typically have lower employment prospects than other indirect recipients. There could be various explanation for this finding, including that the youth are more discouraged from seeking jobs, face larger constraints in the labor market, or have less job opportunities.
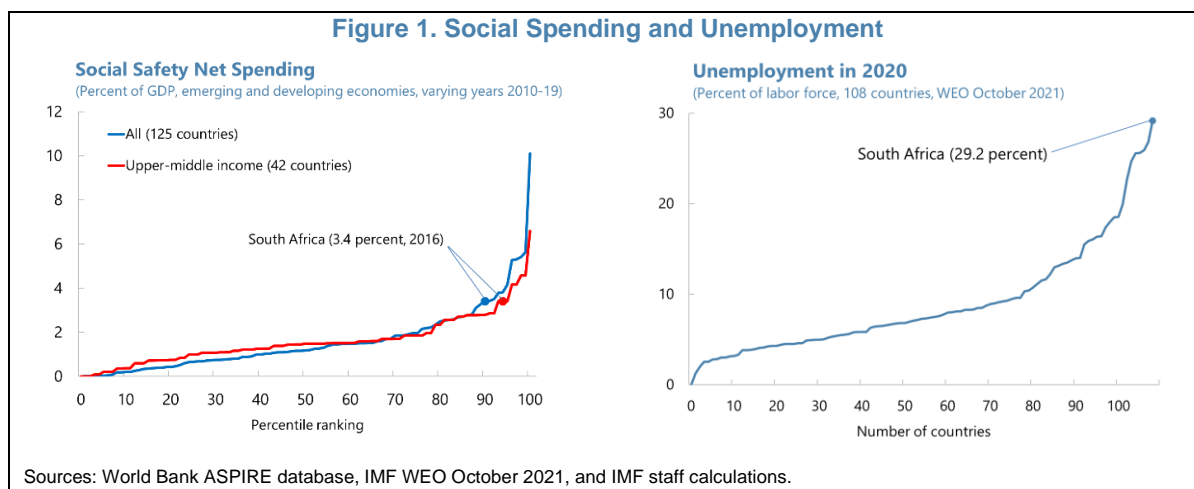
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South Africa

A. Introduction

1.   Social grants have played an important role in alleviating poverty and inequality in South Africa (World Bank, 2021). The nation's social grants are extensive compared with its peers (Figure 1, left panel; World Bank, 2018). Social grants are means-tested, unconditional on employment status, and well-targeted, with approximately one in three South Africans being a direct beneficiary of social grants. The World Bank estimates that transfers are equivalent to about 60 percent of household expenditure for the poorest 20 percent of the population, significantly above the 7 percent estimated for the entire population. Table 1 shows that in the survey data used for this study, grants represent 18 percent (6 percent) of the total income of households receiving grants (all households). Amid high poverty, inequality, and unemployment (right panel), grants have supported livelihoods of the most vulnerable, including during the pandemic. Social grants are estimated to reduce the poverty rate by between 10 and 40 percentage points, depending on the choice of official poverty line, and lower the Gini coefficient, a measure of inequality, by about 7 percentage points, according to the World Bank.

2.   As well-targeted grants help improve the livelihoods of direct recipients, those of family members also benefit from income sharing. In addition to one in three South Africans that directly receive grants, another one-third of the population are indirectly beneficiaries, that is, benefit indirectly from grants paid to eligible household members (World Bank, 2021). In this context, low labor force participation and persistently high unemployment have raised the question of whether grants discourage job search among those who indirectly benefit from them through households' income sharing mechanisms, and thus lower employment.[1]

Figure 1. Social Spending and Unemployment

Sources: World Bank ASPIRE database, IMF WEO October 2021, and IMF staff calculations.

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[1] See Loewald, Makrelov, and Wörgötter (2021) for a comprehensive study of the factors behind low labor utilization in South Africa.

| Table 1. South Africa: Average Per-capita Monthly Household Income and Expenditure (In rand)			
	NIDS Wave 5		National Account
	Households receiving grants	Households not receiving grants	
Total income	1,881	7,853	4,674
Grants	320	0	...
Wages	1,184	6,314	...
Other	377	1,539	...
Expenditure	1,276	5,760	...
Memorandum item :			
Average household size	5.2	2.3	...

Sources: National Income Dynamic Study Wave 5 (2017) and IMF staff calculations.

Note: Households in wave 5 are restricted to those reporting wages, income, and expenditure. Household size as reported in NIDS. Data for econometric analysis are restricted to adults successfully surveyed in all 5 waves and differ from those reported in Table 1. "Other" income is calculated from total, grants, and wages. Total income from National Account is "Disposable income per capita of households" in 2017 divided by 12.

3.   Data on grants and employment show that some of indirect grant recipients may indeed leave employment. Direct recipients of old age and disability grants, two of the three major types of grants in size, tend to have lower employment prospects than those that do not, which is as intended (even though some of the recipients remain in employment; Figure 2, solid red lines). Probably more intriguing is that indirect recipients have lower employment prospects than the total sample as well, even though the gap is less pronounced than for direct recipients (dashed red lines). This is consistent with findings in the literature that the old age and disability grants tend to prompt direct recipients or of the members living in the same household, that is, indirect recipients, to stop working (Ranchhod, 2006; Bertrand et al, 2003; Abel, 2019; Mutasa, 2012). This may also reflect potentially that those out of employment move into households with grant recipients. Understanding the link between grants and the willingness to look for a job could help shed light on the ongoing discussions around the extension or lack thereof of the social relief of distress (SRD) grant, introduced at the start of the COVID-19 pandemic, after it expires in March 2024.

Figure 2. Employment Probability by Age: Overall and Grant Recipients
(Percent)
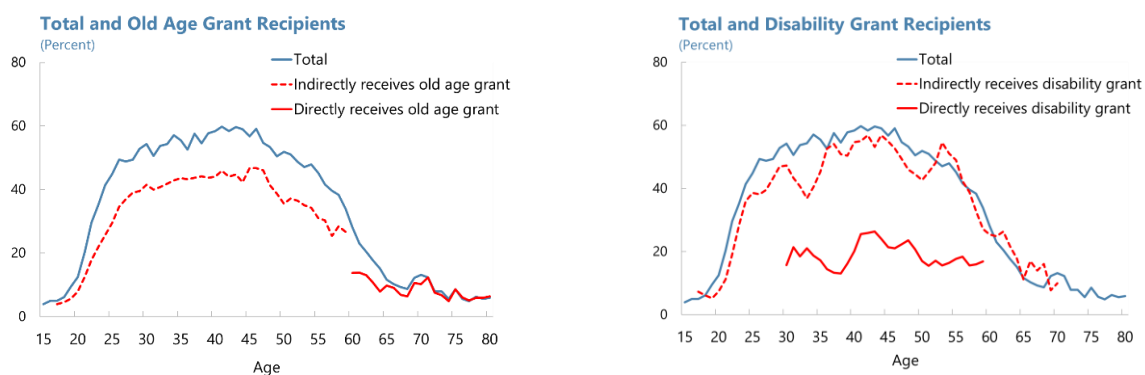
Sources: NIDS and IMF staff calculations.

Note: Indirect recipients 3 year moving average for readability. Left panel = For old age grant showing indirect recipients up to age 59 after which sample size falls significantly, probably as some of the individuals start receiving directly; and direct recipients from eligible age of 60 (before which data include a small number of recipients). Right panel = For disability grants showing indirect recipients up to age 70 after which sample size falls; and direct recipients from age 30 before which sample size is small, and up to 59 after which sample size falls due likely to migration to old age grant.

4.   **Thus, this note assesses the impact of grants on employment in South Africa.** It looks at all types of grants, and both direct and indirect recipients, using a large panel of household data spanning a decade. Recognizing that direct grant recipients could have lower employment prospects because a large fraction of them are naturally out of workforce (relatively old or individuals with disability), this note pays particular attention to potential channels through which grants tend to reduce employment probabilities. Robustness is checked looking at whether estimated results capture causality. The rest of the note summarizes the literature, discuses the data and methodology, estimation, and results. It concludes with a summary discussion.

B.   The Literature

5.   The impact of grants on employment in South Africa has been studied extensively and findings are mixed. The results vary with the datasets used--cross section data, data from different regions, and time series data by chaining national household surveys--and types of grants.[2]

- **Old age grant:** Also known as the state old-age pension, it is meant to help older residents (citizens, permanent residents, or refugees) 60 years or older cope financially during their old age. The maximum monthly amount was increased to R1,990 in October 2022 (those over 75 years of age receive R20 additionally). The old age grant is perhaps the most extensively studied type for its size. Findings are mixed--some studies find that grants reduce the labor supply of direct recipients (Ranchhod, 2006) and that of prime-age household members indirectly benefitting from grants via income sharing within the household (Bertrand et al, 2003; Abel, 2019). Others find a positive impact on employment as the old age grant facilitates migration for employment (Posel et al, 2006; Ardington et al, 2009). Some studies find no employment effect as the recipient keeps the job amid poverty or the old age grant tends to crowd out intra-family transfers (Jensen, 2003).

- **Child support grant:** The child support grant is aimed at helping parents in lower-income households with the costs of the basic needs of their children. To qualify, a child under 18 years old needs to be living in South Africa with the primary caregiver-- a parent, grandparent, or anyone mainly responsible for looking after the child, but not paid to look after the child--who either is a South African citizen or has permanent residency. The maximum monthly amount is R480 per child, and an additional R240 top up was introduced in 2022. Studies tend to find positive effects of the child support grant on employment. One channel through which these positive effects may be playing out is that the grants allow mothers to pay for childcare and thus free time to look for employment (Eyal and Woolard, 2011; Williams, 2007). Other studies highlight favorable effects of the grant on the children's school attendance, educational attainment, and hunger (Heinrich et al, 2012; Williams, 2007).

- **Disability grant:** Those permanently unable to work, or temporarily unable to work for longer than 6 months due to a physical or mental disability, are eligible to apply for the disability grant. After one meets the legal requirements and receives confirmation by a medical assessment, the authorities make the final decision on awarding the grant. The maximum monthly amount is R1,990, same as the old age grant. The disability grant is relatively less studied than the two grants discussed above. Empirical studies tend to find that this type of grant has either negative or no effects on employment. The size of negative effects could be large, up to about a 20 percentage-point reduction in employment

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[2] Banerjee et al (2017), an often-cited study arguing that grants have little impact on work incentive, is based on conditional cash transfers across different countries, different from unconditional grants in South Africa.

probability in some studies (Mutasa, 2012). Other studies find no effects on employment and conjecture that the disability grant absorbs those already out, sometimes for a long time, of labor force (Mitra, 2010).

6.   High transportation costs are widely regarded as a key impediment to job search and employment in South Africa (Kerr, 2017; Loewald, Makrelov, and Wörgötter, 2021; Shah and Sturzenegger, 2022; Van Der Merwe and Krygsman, 2022). The average direct transport cost (excluding time spent) is close to 40 percent of after-tax labor income for those in the lowest per-capital household income quintile (Shah and Sturzenegger, 2022). Related observations in the NIDS data provides useful insight (even though the size of observations is too small for the econometric analysis in this paper). For instance, in wave 5, about ½ of those reporting transport cost during job search spent none. The other ½ reporting transport costs spent a median value of 100 rands per week, with the interquartile range of 60–200 rands (Table 2). This is equivalent to about 30 percent of total grants received by the household (interquartile range of about 15–80 percent). The share exceeds 180 percent when transport costs are scaled by per-capita household grants (that is, total household grants adjusted for household size).[3]

Table 2. South Africa: Weekly Transport Cost for Job Search, Interquartile Range (NIDS Wave 5)			
		In percent of :	
Percentile	In rand	Total household grants	Per-capita household grants
25	58	14	81
50 (median)	100	30	184
75	200	79	418

Sources: NIDS and IMF staff calculations.

Note: Based on response to "amount spent on transport during job search in the past week." Household grants are reported per month in NIDS data and are divided by 4 before scaling weekly transport cost. Those reporting zero transport cost are not included in calculating interquartile range. In wave 5, 2,588 individuals report transport costs for job search. 1,261 individuals report non-zero costs and are age 15–74 years old. Wave 5 includes 29,027 individuals in the same age range of 15–74.

C.   Data and Methodology

7.   This study relies on the National Income Dynamics Study (NIDS) data. NIDS is the first national household panel study in South Africa. It started in 2008 with a nationally representative sample of over 28,000 individuals in 7,300 households across the country. The survey is conducted approximately every two years, tracking the livelihoods of the same individuals with unique IDs. At present, five waves are available: 2008, 2010–11, 2012, 2014–15, and 2017. The analysis in this paper uses all waves of data, 10 years in the time series dimension (2008–17), but cross-sectionally the sample is restricted to the adults who are successfully surveyed in all 5 waves (about 6,700 adults).

8.   In the empirical model used in this note, the dependent variable is a binary indicator of employment status. Individual i's employment status dummy at time t takes value of 1 when the individual is "employed" and zero otherwise (either "not economically active", "unemployed strict", "unemployed discouraged", or "refused" to respond). In the sampled data, the share of employed rises from around 35 percent to 45 percent as the job qualification of sampled individuals improves with age. In the comparable

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[3] A family member in or outside the household is the main source of funds for transport during job search. See Annex Table 1.

official data, the share of employment is steadier, at 40–45 percent of working age population (15–64 years old).

9.   **The explanatory variables aim at capturing a range of individual characteristics and macroeconomic conditions.** Most of them are lagged by one period (or wave) to reduce the risk of reverse causality. For the variable of interest--the status of receiving grants--several sets of indicators are constructed. In our sample, about two-thirds of the individuals receive grants either directly or indirectly in each weave. One-third receive in all waves and 90 percent receive at least in one wave.

- *The total grant dummy* uses a household-level variable and takes value of 1 if any members of the household to which the individual belongs receive grants, any type, and 0 otherwise.[4]

- *The total grant direct dummy* is constructed using an individual-level variable showing whether the individual received grants. Using this, and the dummy above, indirect recipients of grants are identified and used to construct the total grant indirect dummy.

- *The grant type dummy* takes value of 1 if any member of the household to which the individual belongs receives one of the five types of grants--old age, child support, disability, foster care, and care dependency, and 0 otherwise. The social relief of distress (SRD) grant--or the COVID grant--is not used, as the COVID-19 rapid survey results are not included due to data limitations. Direct and indirect grant recipients are identified the same way as for the total grant dummy.

- *The total grant amount* captures the amount of grants received (any type) by individual i. Since there is no information on the whether and how much household members living with direct grant recipients benefit from income sharing, the note follows the approach used by Schotte et al. (2018) and Zizzamia (2020). Specifically, the total amount received by the household to which the individual belongs to is divided by the number of adults to capture income-sharing in multi-generational households. The variable is further adjusted for age, guided by by-age consumption data (Miyajima, 2021).[5]

10.   **Our assumptions as to how indirect grant recipients benefit from income sharing have limitations.** The indicators of grants for individual i are constructed assuming that, when a household member receives grants, family members benefit equally (e.g., the total grant dummy) or in proportion to consumption by age (e.g., the grant amount). In reality, grants may be shared by the direct recipients to a lesser extent, systematically but differently than assumed, or less systematically. Therefore, results of this study need to be interpreted with this caveat in mind.

11.   **Indicators of educational attainment are created for 5 groups.** These are no education (including "other" and "don't know"), lower primary (grades 1–7), upper primary (grades 8 and 9), secondary (grades 10–12, National Technical Certificate, and National Vocational Certificate), and tertiary (everything above secondary). In wave 5, the share of primary level education is the highest (36 percent), followed by secondary (32 percent), tertiary (19 percent), and no schooling (13 percent).

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[4] This, and how we compute individual-level expenditure, help capture household-level strategies, which extend to sending a migrant, choosing who to receive more education, saving and investing money, and starting small businesses.

[5] Average consumption by age group is not available for South Africa and proxied by the U.S. Consumer Expenditure Survey. We use the data to adjust per-capita household consumption in South Africa for 7 age groups. For instance, adults in the 45–54 age group tend to consume the most, twice as much as those that consume the least (below 25 and above 75).

12. **Other individual variables include the lagged dependent variable for individual i to control for persistence in employment status, geography, age, and household size.**[6] Real expenditure level in log for individual i captures resource availability.[7] Similar to some of the grant dummies, this variable is calculated as household-level consumption divided by the number of adults in the household, adjusted for age. The variable is further adjusted for the annual inflation index of the survey year--individuals are surveyed in different years even in the same wave. Time invariant individual-level controls include gender and ethnicity.

13. **Macro-level conditions are controlled for by an estimated output gap, contemporaneously introduced assuming limited feedback from individual i's decision.**

D. Estimation

14. **To estimate the impact of grants on employment, a dynamic random-effects Probit model with unobservable heterogeneity is used.** Dynamic random-effects specifications are increasingly used in the literature dealing with the persistence of dichotomous outcomes. With unobserved effects, the treatment of the initial observations is an important theoretical and practical problem (Wooldridge, 2005). This note relies on an approach where unobservable heterogeneity is addressed by including the initial period value of the dependent variable and the initial period and within-unit averages of time-varying explanatory variables (Grotti and Cutuli, 2018).

15. **The note conducts several analyses using dynamic random-effects Probit.** First, the impact of grants on employment is estimated using the total grant dummy, which combines all types of grants and recipients (direct and indirect). Second, grants are separated by type (care dependency, child support, foster care, state pension--or old age, and disability) to tease out each grant's idiosyncratic characteristics. The literature finds that a negative impact applies to the old age and disability grants. This note posits out that this negative impact reflects the intended effects of the grants which are paid to individuals who are either relatively old or less able to work. Third, the note considers how the size of grants and educational attainment affect the impact of grants (all types combined) on employment (all recipients combined). One view is that the negative impact would be stronger for those who receive relatively larger grants in size or with lower educational attainment. The literature suggests that the negative impact could also apply to indirect recipients. Therefore, as a final step, we unpack the negative impact among indirect recipients along the age spectrum, and find that the negative impact could be stronger among the youth as they face greater constraints to work.

16. **To check the robustness of the causal relationship between grants and employment, we also implement Propensity Score Matching, or PSM, focusing on indirect recipients.** In this statistical technique, an artificial control group is constructed by matching each treated unit with a non-treated unit of similar characteristics to estimate the impact of an intervention. In our case, the sample is separated into two groups, those with grants and those without. From each group "similar" individuals are identified based on a set of characteristics. Finally, employment status in the next wave is compared between the similar individuals with grants and without. PSM is estimated using by-wave cross-section data focusing on indirect recipients (both total and the first age quantile, or the youngest). This reduces sample size relative to the panel time series estimation.

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[6] Informality in South Africa is relatively low, at about 20–25 percent along with Mauritius and Namibia, and significantly below 50–65 percent in Benin, Tanzania, and Nigeria (Medina et al, 2017).

[7] Income data in the NIDS are less complete than expenditure data. Income data tend to be under reported.

E. Results From Dynamic Random-Effects Probit

17.   The old age and disability grants are doing what they were designed to do, gauging from the negative association between grants and employment. Those receiving grants of any kind, directly or indirectly, tend to have on average 4 percentage points lower probability of being employed in the next period (Figure 3a, upper left panel). This negative association applies to the old-age and disability grants (-8 and -5 percentage points, respectively). By design, these grants support individuals less able to work due to age or physical conditions. The other three types of grants (care dependency, child support, and foster care) do not have statistically significant association with employment. This is in contrast to findings in the literature that indicate a positive link between grants and employment among recipients of the child support grant (Eyal and Woolard, 2011; Williams, 2007).

18.   While most of them may be naturally out of employment, grants also tend to reduce employment probabilities through several channels. In particular, individuals, both direct and indirect recipients combined, either receiving larger grants in size or with lower education attainment (likely earning lower wages) tend to leave employment (Figure 3a, upper right and lower panels). No association is found between grants and employment when grants are small in size (quintiles 1 and 2). As grants become larger in size (quintiles 3–5), the extent of the negative association increases. Those receiving largest grants in size (quintile 5) have lower employment probability by 10 percentage points than those with no grants. When the education dummies are interacted with the grant dummy, no association is found for those with relatively high education attainment (upper primary, secondary, and tertiary education). The association however is negative for those with lower levels of education (lower primary education and no schooling), between -8 to -10 percentage points.

19.   For indirect recipients, the negative association mainly applies to the youth. Those receiving grants directly tend to have a stronger negative association (-6 percentage points) than those indirectly (-3 percentage points). Among indirect recipients, the negative association applies to those in the lowest age quintile (-7 percentage points)--those 17, 19, 21, 24, or 27 years old or below in wave 1, 2, 3, 4, or 5, broadly comparable to the age ranges of 15–24 and 15–34 years old used for official youth unemployment statistics in South Africa. No association is found for those in higher age quintiles (2–5).

Figure 3a. Impact of Grants on Employment Probability

(Percentage point change in employment probability derived from Probit coefficient, by type, size, and education)
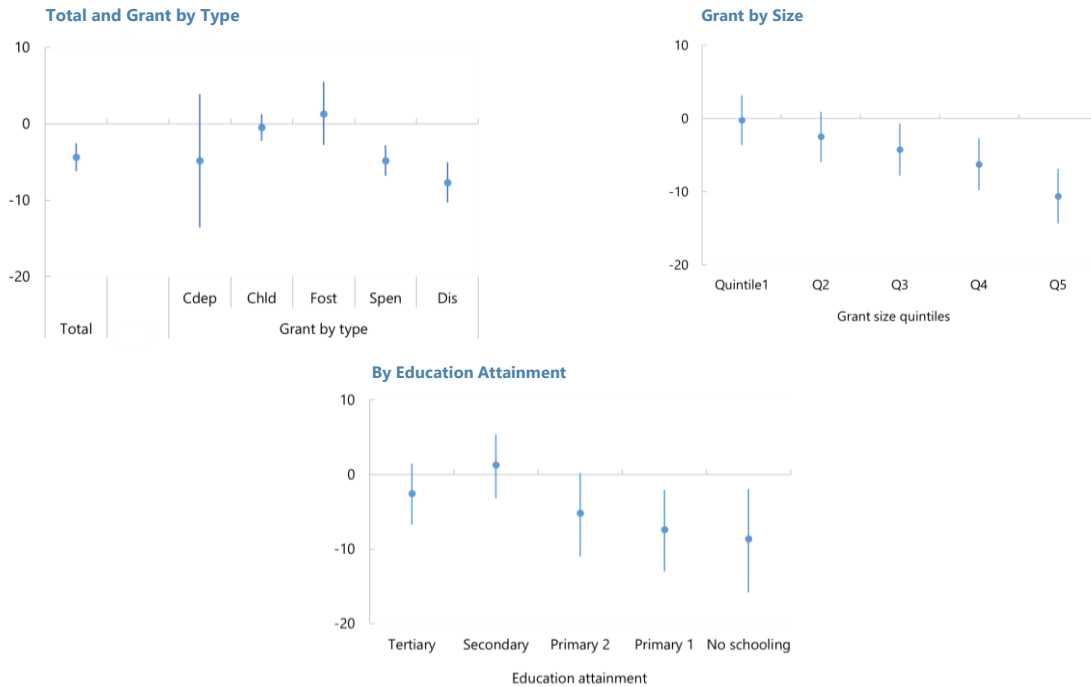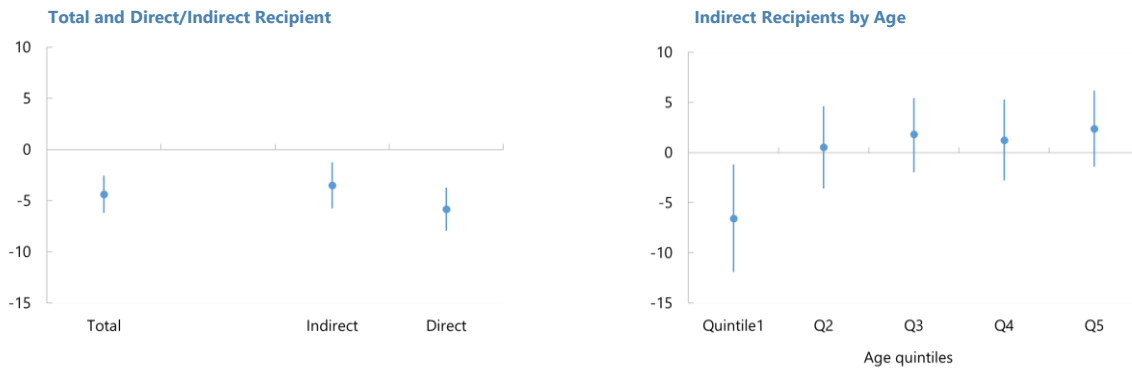
Sources: NIDS and IMF staff calculations.

Note: The vertical bars represent the 95 percent confidence intervals. Cdep = Care dependency grant. Child = Child support grant. Fost = Foster care grant. Spen = state pension, or old age grant. Dis = Disability grant.

Figure 3b. Impact of Grants on Employment Probability

(Percentage point change in employment probability derived from Probit coefficient, direct and indirect)
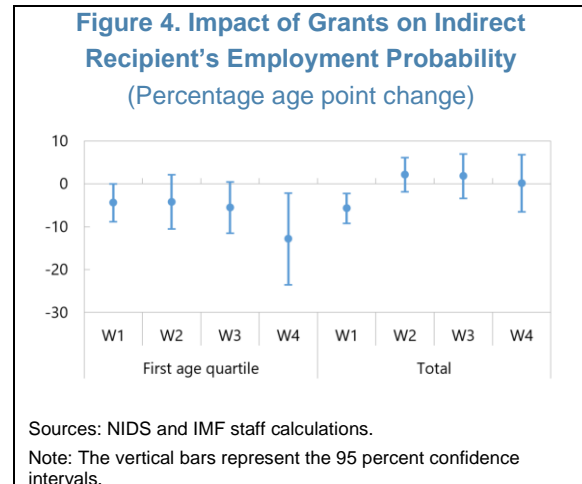
Sources: NIDS and IMF staff calculations.

Note: The vertical bars represent the 95 percent confidence intervals.

F. Results From Propensity Score Matching

20. Results from PSM are mixed but continue to suggest that grants reduce the employment probability of younger, indirect recipients. For younger individuals (the first age quartile), grants reduce employment probability by about 5 percent in waves 1 and 3 (both results are borderline at the 95 percent confidence level) and 12 percent in wave 4. Results suggest no systematic impact in wave 2. By contrast, for total indirect recipients, grants have no systematic impact on employment probability (waves 2–4). Only in wave 1 employment probability falls by about 5 percent. The small sample size may reduce precision and make results more sensitive to model specifications. Results are available for up to wave 4 where employment status in wave 5 is used.

Figure 4. Impact of Grants on Indirect Recipient's Employment Probability
(Percentage age point change)

Sources: NIDS and IMF staff calculations.
Note: The vertical bars represent the 95 percent confidence intervals.

G. Discussion

21. This study analyzes the impact of grants on employment. It uses NIDS, large panel household data spanning a decade and covering over six thousand individuals in our sample. The study adds to the literature by focusing on individuals indirectly receiving grants through potential income sharing within households. Since there is no information on the extent to which direct grant recipients share income within the households, this study follows the literature in making specific assumptions. The results should be interpreted with this caveat in mind.

22. The old age and disability grants support those who are less able work. This intended effect is captured in the results by the negative association between grants and employment probability, which is consistent with the literature. While most of them may be naturally out of employment, this study finds a link between grants and lower employment probabilities through several channels—grant recipients who either needs to (because grants are relatively small in size) or can (as higher education attainment helps find and/or maintain a better paying) tend to remain in employment.

23. A novel finding is that younger household members indirectly receiving grants through income sharing tend to have lower employment probability than other indirect recipients. This finding could reflect the fact that the youth face limited job opportunities and are discouraged from seeking jobs. To the extent that the youth tend to have lower skills and earnings, additional income can create greater disincentive to seek employment. This effect would be further amplified for those facing spatial inequality¬¬ that raise cost of job search.

24. These findings also highlight the importance of implementing measures to reduce the cost of job search, boost labor supply, and job creation. Policies to durably raise employment and lower costs to job creation include addressing school-to-job transitions, improving the employability of the inactive population, and making job search more effective. Interventions to increase entrepreneurial capacity, lift the basic education level, and reform social housing policies would increase the participation in economic activity of people living in remote and traditional settlement areas (Loewald, Makrelov, and Wörgötter. 2021). These measures would complement policies to reduce rigidities and increase competition in the product and labor markets, boost growth, and enhance demand for labor.

Annex I. Data Summary

Table AI.1. South Africa: Source of Funds for Transport During Job Search (NIDS Wave 5)		
	Frequency	Percent of total
A family member in the household	779	62
A family member outside the household	221	18
Own savings	97	8
A friend outside the household	79	6
Own grants	74	6
A friend in the household	8	1
A money lender	3	0
Total	1261	100

Sources: NIDS and IMF staff calculations.

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