The labour market and poverty impacts of COVID-19 in South Africa: An update with NIDS-CRAM Wave 2
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30 September 2020

Abstract

We use Wave 2 of NIDS-CRAM data to provide an update to our original estimates (Jain et al., 2020) of COVID-19-related employment and poverty impacts in South Africa. Compared to the most stringent phase of South Africa’s lockdown in April, we find evidence of a limited recovery in the labour market, a decrease in poverty, and an important role for the new Social Relief of Distress grant by June. While temporary unemployment almost returned to February levels, we find that active employment was still 20% lower in June than February, mostly due to job terminations that persisted into June.

JEL: J21, J48, J63, J68, I32, I38, H84

Keywords: Labour markets, poverty, unemployment, COVID-19, social protection

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The authors contributed equally to this work. Author order is randomized. We are very grateful to Reza Daniels, Vimal Ranchhod, and participants at the NIDS-CRAM Labor workshop, for helpful comments and discussions. We are also especially grateful to the NIDS-CRAM team whose work producing the data made this research possible. The authors gratefully acknowledge funding for this research from the Allan Gray Orbis Foundation Endowment. Any errors remain our own. Declarations of interest: none.
Executive summary

This paper serves to update to our previous paper (Jain et al., 2020), which analysed the employment and poverty impacts of COVID-19 between February and April. We use Wave 2 of the NIDS-CRAM panel to extend the period of analysis to June. These three periods correspond to three distinct phases in the South African experience of COVID19: February can be considered the “pre-COVID” period, April was the most stringent phase of the South African lockdown (Level 5), while June represents substantial easing of lockdown restrictions (Level 3). This paper is not intended as a stand-alone analysis, but is to be read alongside our previous analysis in Jain et al. (2020).

In this update, we investigate the extent and the magnitude of the economic and labour market recovery between April and June, and the role of South Africa’s social protection systems in aiding this recovery. A few key findings emerge:

First, there was only a partial recovery in employment. While paid leave and temporary layoffs decreased in June, the April increase in fully severed employment relationships proved persistent in June. There was a 21 percentage point net decline in the percentage of working age adults in active employment between February and April, but between April and June there was an 11 percentage point recovery in the percentage of working age adults in active employment. In other words, approximately half of the active employment losses between February and April were recovered by June.

However, almost all of this recovery is accounted for by a large decline in the number of adults who we classified as “temporarily laid-off” or on “paid leave” in April. In contrast, there is no detectable net change in the number of adults who report no employment relationship, and almost all of those who reported losing their jobs completely between February and April remained not employed in June.

Maintaining some employment relationship appears to have been crucial for recovering employment. However, this was less true for those who were “temporarily laid-off” in April compared to those who were on “paid leave”. While most individuals who were placed on paid leave had returned to work by June, less than half of those who were temporarily laid off returned to work, with about 40 percent falling into non-employment.

Second, comparing April incomes to June incomes for the same individuals, we estimate that overall poverty rates decreased by approximately 3 to 6 percentage points over this period, depending on the poverty line used. Since direct comparisons of February to April incomes were not possible given the lack of household income data collected retrospectively for February, we cannot say how much this overall April to June decrease in poverty compensated for the February to April increase.

Third, we provide evidence of considerable receipt of the Social Relief of Distress (SRD) Grant. In June, approximately one third of job losers had at least one SRD recipient in their household, while at the bottom half of the income distribution approximately 10% of the adult population received the SRD. At the time of interview in July and August, approximately 17% of these adults in the bottom half of the income distribution had successfully applied for the SRD. The SRD also demonstrates generally progressive targeting, with poorer job-losers, those formerly in manual occupations or informal employment being receiving better coverage. However men and urban dwellers were also more effectively reached by the SRD, likely due to the SRD ineligibility of those who receive other grants.

Additionally, we show that subtracting the amount transferred to SRD grant recipients appears to increase the poverty rate by up to 2 percentage points in June, but we outline methodological and data concerns which make this a highly approximate finding.

1 As in our earlier paper, we do not attempt to separate the economic impact of the pandemic from that of lockdown.
1. Introduction to this update

This update supplements our previous analysis (Jain et al., 2020), in which we observed changes between February (pre-lockdown) and April (during lockdown) employment and earnings and provided estimates of the poverty impact of COVID-19 on job-losers. In this update, we use Wave 2 of NIDS-CRAM to add a third period of observations for June. South Africa, during June, was in Lockdown Level 3, which saw a substantial relaxation of the economic restrictions imposed during Lockdown Level 5 (which lasted until the end of April). The availability of data covering June allows us to investigate the nature and extent of South Africa’s labour market recovery and related changes in aggregate poverty.

This update is not intended as a stand-alone paper: For details on context, sampling, data, definitions and for an in-depth discussion on findings, readers are referred to the paper on which this update builds (Jain et al., 2020) and to the NIDS-CRAM User Manual (Ingle, Brophy, and Daniels, 2020).

The structure of this update is as follows: In the first section we provide updated results on employment between April and June. In Section 2 we report the aggregate change in poverty rates between April and June. In a third and final section we analyse the coverage and impact of South Africa’s social protection mechanisms.

2. Employment

2.1. Employment transitions

In Figure 1 we illustrate how individuals have transitioned between labour market states between April and June 2020. These four labour market states are those used throughout this paper and defined in Jain et al. (2020). They are: “active employment”, “paid leave”, “temporary layoff”, and “not employed”. The four groups of bars are organized according to individuals’ labour market status in April, with the differently-coloured bars then showing the proportion of this group by labour market status in June. For example, the first group of bars show that 79% of those who were actively employed in April remained actively employed in June, while 15% of the April actively employed were not employed in June.

Looking at these individual job status transitions, we find that the majority of those on paid leave in April moved back into active employment (65 percent), while only 8 percent remained on paid leave and 18 percent transition into non-employment. For workers who reported that they were temporarily laid off in April, less than half returned to active employment by June, and almost 40 percent transitioned into non-employment. This highlights that those who were “temporarily” laid off without pay during the lockdown were in a precarious position in the labour market and were more than twice as likely to lose their jobs completely compared to those who were put on paid leave.

The left-most and right-most sets of bars show that active employment and nonemployment respectively were the least volatile categories between April and June: In both cases, approximately 80 percent of workers remained in the same category between April and June. Transitions out of these categories likely reflect a combination of usual labour market churn as well as COVID-related causes, such as sectoral labour reallocation and business failures.

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2 The definitions are as follows: 1. “Active employment”: Engages in economic activity for profit or pay (reports positive workdays). 2. “Paid leave”: Reports an active employment relationship and earns labour income, but works zero days. 3. “Temporary lay-off”: Reports an active employment relationship or job to return to, but works zero days and reports zero earnings. 4. “Not employed”: Not engaging in any economic activity for pay or profit, whether willing to accept work or not. See Jain et al. (2020) for details.
2.2. Aggregate employment changes

While in Figure 1 we show individual job status transitions, in Figure 2 we depict changes (across February, April and June) in the aggregate percentage of adults in our four labour market states. The first three groups of bars show the proportion of adults in each labour market category as of February, April and June, while the last three groups show net changes in these proportions between February-April, April-June and February-June.

**Figure 1: Individual Employment Transitions from April to June**

*Notes:* The figure shows the job status transition patterns of individuals who in April were in one of the following employment status categories: “Active employment”, “Paid leave”, “Temporary layoff” and “Not employed” (left to right groups across the figure). For each group, employment status categories in June are represented by the colored bars. Within each group, colored bars sum to 100. While Figure 3 shows the net change in employment, this figure shows employment transitions for individuals. We use a balanced NIDS-CRAM Wave 1 and Wave 2 panel and estimates are weighted using the survey design weights.
Figure 2: Employment Status for Working-Age Adults (18-64 years) over three periods and change over these periods

Figure 2 shows that between February and April 2020 we observed a 21 percentage point net decline in active employment. Almost half of this decline was accounted for by shifts into non-employment, while the remainder was accounted for by shifts into either “paid-leave” (reporting zero days worked but a positive wage) or “temporary layoffs” (reporting zero days and zero wage, yet reporting a continuing employment relationship).

In June we observe that, compared to April, there was an 11 percentage point gain in net active employment. This partial recovery has come almost entirely from a reduction in the percentage of adults in the “paid leave” and “temporary layoff” categories. There was little change in levels of non-employment between April and June. To the extent that there was a recovery, this appears to have benefited primarily those who maintained a live employment relationship. These findings confirm the concern expressed in Jain et al. (2020) that approximately half of the employment loss observed between February and April would persist beyond the lockdown.

Taken together, compared to the pre-lockdown period in February, net active employment has declined by 10 percentage points, while rates of non-employment have increased by 8 percentage points among working-age adults. The growth of the proportion of working age adults in “paid leave” and “temporary layoff” categories which was observed in April has disappeared.

Figure 3 is subdivided into two panels, with Panel (a) illustrating changes in net active employment between February and June, and Panel (b) illustrating changes in net active employment between April and June.

Panel (a) shows the net percentage loss in active employment between February and June as a percentage of employment in February. Employment loss is defined as a transition out of active employment into one of the following employment status categories: “paid leave”, “temporary layoff” and “not employed”. These net reductions in active employment are decomposed into the changes in the relative size of the “paid leave”, “temporary layoff” and “not employed” categories. For simplicity of presentation we combine the “paid leave” and “temporary layoff” categories.
**Figure 3: Composition of Net Active Employment Change by Worker Characteristics**

(a) Feb. to June, net active employment loss

Notes: Panel (a) shows the net loss in active employment between February and June, as a percentage of February employment. Employment loss is a transition out of active employment into “Paid leave”, “Temporary layoff” or “Not employed”. For each bar, the proportion of active employment loss due to net increases (in percentage points) in not employed versus increases in temporary layoff or paid leave is shown. Panel (b) shows the net gain in active employment between April and June, as a percentage of the February to April loss in active employment. For each bar, the proportion of active employment gain due to net decreases in “Paid leave”, “Temporary layoff” or “Not employed” is shown. We use a balanced NIDS-CRAM Wave 1 and Wave 2 panel and all estimates are weighted using the survey design weights.
Compared to the active employment levels observed in February, the "All" bar in Panel (a) shows that overall there was a 20 percent decline in active employment by June, most of which (16 percentage points) is comprised of an increase in the state of nonemployment, while 4 percentage points is due to an increase in paid leave and temporary layoffs.

Looking at heterogeneity by various worker characteristics, workers in manual occupations and in the poorest quartiles experienced the greatest active employment loss compared to February (approximately 30 percent). Non-tertiary educated workers also experienced disproportionately large net active employment losses (22 percent for this group compared to 15 percent for tertiary-educated workers). Otherwise differences in the magnitude of employment effects across worker heterogeneity groups ought to be interpreted with caution: as shown in Figure A1, these other differences are not statistically significant. However Panel (a) of Figure 3 does show that for all types of worker heterogeneity, the loss of active employment from February to June was overwhelmingly constituted by increases in non-employment rather than temporary leave/lay-off categories.

Panel (b) of Figure 3 shows the net percentage recovery in active employment between April and June as a proportion of the February to April employment loss. The first vertical bar indicates that the net increase in actively employed adults between April and June was 52% of the net decrease in adult active employment between February in April – loosely this means about half of the "jobs lost" in April were recovered by June. This same statistic can also be read off of Figure 2, which shows a February-April decrease in active employment of 21 percentage points and an April-June recovery of 11 percentage points – 11/21 gives the 52% in Figure 3.

Panel (b) of Figure 3 also shows the extent to which this active employment recovery was driven by decreases in the "paid leave", "temporary layoff" and "not employed" categories in June. The first column shows that 27 percentage points of the 52 percent recovery were due to the decrease in the prevalence of paid leave, while 21 percentage points were due to the decreases in temporary layoffs. With little net change in the size of non-employed category, very little of the recovery comes from shifts out of this status.

While the pattern in worker heterogeneity consistently accord with what we have come to expect – the most vulnerable have the smallest recovery – as Figure A1 shows, wide confidence intervals mean that we do not find statistically significant differences in gains in employment between April and June across worker heterogeneity groups. A notable exception is that women experienced a significantly higher recovery rate in active employment than men (57 percent compared to 42 percent).

### 2.3. Earnings

In Jain et al. (2020) we presented evidence on earnings changes for individuals who had positive earnings in both February and April, both in aggregate and for heterogeneity categories. In general Jain et al. (2020) did not detect wage changes along this margin, and concluded that changes in employment seemed to be more important for understanding the impact of the pandemic on the labour market.

We do not present results of an updated earnings-change analysis for June. This is because while the median change in income is still very close to zero percent, and a majority of the sample have only small percent changes in earnings, a substantial proportion of individuals (over 10%) report very large percent increases in earnings – which causes the mean earnings change to be skewed and unrepresentative. We were unable to determine the cause of these large changes, and determine whether they are legitimate or measurement error. We therefore refrain from simply replicating the approach of Jain et al. (2020) for analyzing earnings changes for the updated data from Wave 2 of NIDS-CRAM.
3. Poverty

3.1. Aggregate poverty changes, April to June

In order to undertake a poverty comparison between April and June, we use household income as reported in NIDS-CRAM, converting this to a per capita measure by dividing household income by household size. In June household income can be reported in brackets, and where individuals report income in a bracket we assign them the median household income of non-bracket households whose incomes fall in the bracket bounds. Household income is not always reported by respondents in April and June, and in particular there is substantially more income non-response in April. We therefore model the probability of reporting income in April using a logit specification and the same predictors as are used for constructing the Wave 2 attrition weights in Ingle, Brophy, and Daniels (2020), and create inverse probability weights which are used for our April-June income analysis.

Figure 4 plots the adult poverty headcount ratio in South Africa across a range of possible poverty lines for April and for June. As in Jain et al. (2020), we use this range of poverty lines because it is not clear how income reported in NIDS-CRAM corresponds to income in other South African household surveys – including those used to calibrate poverty lines. We thus prefer to avoid attaching too much significance to any one line in particular. The World Bank $1.90-a-day poverty line and the Stats SA upper poverty line (respectively the two dotted vertical lines) are respectively used as lower and upper bounds for "poverty". We emphasize that the poverty rates and changes shown are for the adult population aged 18-64, which is our NIDS-CRAM sample. NIDS-CRAM does not include children in the sample.

Figure 4: Aggregate poverty rates in April and June

Notes: The figure plots South African adult poverty headcount ratios in April and June – the proportion of adults whose per capita household income falls below a given poverty line – for a continuum of poverty lines on the horizontal axis. From left to right the dashed vertical lines indicate the World Bank $1.90a-day poverty line (converted in PPP terms) and the Statistics South Africa upper-bound poverty line (respectively R436 and R1265 per person per month in March 2020 Rands). The dashed lines in red show the April and June poverty rates for each poverty line, and correspond to the left vertical axis (these are essentially per capita income cumulative densities). The difference in the poverty rate between April and June for each poverty line (i.e. the poverty reduction) is shown by the solid green line, shaded with the associated 95% confidence interval and read off the right vertical axis. We use a balanced NIDS-CRAM Wave 1 and Wave 2 panel and estimates are weighted using the survey design weights.

3 While this rather simple bracket imputation does create bunching in the household income distribution, the household per capita income distribution is suitably smooth.

4 Specifically these new weights are the product of the inverse of the propensity score estimated in the logit model and the Wave 2 panel weights.
June poverty rates (red dotted line) are, for all plausible poverty lines, lower than their April equivalents (red dashed line). This suggests a decrease in poverty between April and June, in line with the partial recovery we see in the labour market. The poverty rate decreases between 3 and 6 percentage points (green solid line), depending on the poverty line used; this corresponds to 1-2 million out of an adult population of 34 million. The poverty decrease is larger at lower poverty lines, suggesting that the poverty recovery was strongest at the bottom of the income distribution. This difference in incidence along the distribution is magnified when considering the change in poverty rate as a percentage of April poverty – approximately a 13% reduction in poverty at the $1.90-a-day poverty line and a 4% reduction at the Stats SA upper bound.

The confidence intervals of the poverty decrease (grey shaded area) show that the poverty decrease point estimate is generally statistically different from 0, but there is a non-negligible margin of error around these estimates.

3.2. Changes in poverty from February

Because the NIDS-CRAM questionnaire did not retrospectively ask for February household incomes, we cannot implement a straightforward February-April or February-June poverty analysis. In Jain et al. (2020), we estimate the poverty effects of job-loss between February and April by comparing the April incomes of job-losers and re-weighted job retainers. We repeat this analysis for job-loss between February and June and show the results in Appendix Figure A2, but we place little emphasis on this analysis in this update. This is because we do not expect the local treatment effect identified by our procedure – the effect of job-loss on income for job losers – to be substantially different to our analogous April results. Panel (d) of Appendix Figure A2 shows that this is indeed the case. However this misses what we except are the substantive changes from April to June in terms of poverty: 1) fewer job losers, and 2) increased social assistance due to grant top-ups and the expanded roll-out of the Social Relief of Distress (SRD) grant. Our job-loss approach is particularly ill-equipped to identify this latter effect.

The unfortunate implication is that we cannot estimate the February to June poverty change, and also cannot determine the extent to which the April to June poverty reduction is a recovery to pre-COVID levels of poverty. Our tentative overall February to April poverty increase estimates in Jain et al. (2020), which included job-loser dependents, also cannot be used to benchmark our April to June poverty result, as our April-June result does not include children (who are not in the NIDS-CRAM sample), and we cannot reconstruct households without a household roster or household ID variable.

4. Social protection

4.1. Social protection coverage in June

The poverty impact of the economic disruption caused by the lockdown will jointly depend on the nature of the shock and the compensatory relief delivered through social protection mechanisms. Apart from South Africa’s existing grant infrastructure, which was supplemented from May onward, we would expect two additional social protection measures to affect job-losers and the non-employed specifically. First, the new Social Relief of Distress (SRD) grant invited applications from individuals where eligibility was defined as any adult not in employment and not receiving any of South Africa’s existing grants. Job-losers would in many cases have been eligible for the SRD, valued at R350 per month. The SRD is a form of non-contributory social assistance, much like South Africa’s other grants, but is designed to support those non-employed individuals not covered by the existing grants during the COVID shock. Second, workers who were contributing to the Unemployment

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5. See Jain et al. (2020) for an in-depth discussion of this approach and its identifying assumptions. In this update, we perform the same procedure for June rather than April job-loss, except that we do not select job-loss predictors using LASSO because of convergence difficulties. Instead to estimate propensity scores we use the same predictors as for April job-loss in Jain et al. (2020), and re-estimate the logit model to estimate new coefficients for June job-loss.
Insurance Fund (UIF) would have been eligible for UIF benefits following the termination of their employment relationship.

In Figure 5 we show the extent to which job-losers who remained not-employed in June were covered by various forms of social protection, with a focus on the SRD and UIF schemes. Panel (a) focuses on coverage through the SRD grant, distinguishing this from coverage by any other household or individual social protection, including UIF. We find that, overall, around 17 percent of workers who were actively employed in February but not employed by June did not receive social protection in June. However 33 percent of these individuals were part of a household which received at least one SRD grant. In terms of reach on the extensive margin, South Africa’s existing grant system remains crucial and accounts for the vast majority of those covered by social protection. 6

We find that coverage of SRD grant was much higher among men (38 percent) compared to women (28 percent). However, we do observe that it has otherwise been progressively targeted – the receipt of SRD was over 20 percentage points higher in the bottom two quartiles of the February earnings distribution than in the upper two quartiles. Similarly, coverage was almost twice as high for those workers who in 2017 were classified as employed in the informal economy (37 percent versus 22 percent respectively). Coverage was also approximately 10 percentage points higher in rural areas than in urban areas.

Panel (b) focuses on coverage through individual receipt of a UIF payout, distinguishing this from coverage by social grants in the household. Again, these coverage rates are depicted for those not employed in June but who were actively employed in February. Note that only those individuals who have previously contributed to UIF during a period of employment would be eligible for relief through the UIF, which largely excludes informal workers.

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6 Note that while grant coverage is at the household level, we only observe UIF receipt for individuals.
Figure 5: Social Protection Coverage for job losers

(a) Social Relief of Distress (SRD) grant coverage

<table>
<thead>
<tr>
<th>% job losers by each group</th>
<th>All</th>
<th>Sex</th>
<th>Occupation</th>
<th>Earnings quartile (Feb)</th>
<th>Contract (2017)</th>
<th>Urban</th>
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<tr>
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</tr>
<tr>
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Notes: The figure shows the June social protection received by individuals who were in active employment in February and were not employed in June. Panel (a) distinguishes household coverage by the Social Relief of Distress (SRD) Grant and coverage by any other form of social protection. SRD coverage means at least one household member receives the SRD in June. “Other protection” means receipt of a non-SRD social grant within the household or individual receipt of an Unemployment Insurance Fund (UIF) payout. Panel (b) distinguishes individual receipt of an Unemployment Insurance Fund (UIF) payout and coverage through any other grant receipt in the household, where the latter can include SRD receipt. We use a balanced NIDS-CRAM Wave 1 and Wave 2 panel and estimates are weighted using the survey design weights.
Only 7 percent of job losers are covered by the UIF. Direct comparisons to Panel (a) are not straightforward as SRD receipt in Panel (a) is measured at the household level, while only individual level UIF receipt questions were included in NIDS-CRAM, constraining us to reporting individual level coverage. Another point of dissimilarity is that UIF payments will generally be significantly larger than the SRD payout.

Although the coverage of the UIF does not seem to vary substantially across most worker characteristics, notable heterogeneity does exist along February earnings quartiles and informality of work. We find that job losers in upper income quartiles had greater coverage from UIF than those in the bottom half of the February earnings distribution (8 percentage points higher). Unsurprisingly, UIF covered job losers who were previously employed in the formal sector much more effectively than those who had previously been employed in the informal sector – the difference in the coverage rate is 13 percentage points. Also worth noting is that UIF coverage is mostly received by those job losers who also receive other household level grants – overall, the coverage of job losers by the UIF only is only 1 percent.

*Figure 6* investigates further the receipt of the SRD grant across per capita household income deciles. The dashed blue line shows household-level receipt rates for all adults – that is, the percentage of all adults in each income decile residing in a household which has a member receiving the SRD grant. The red line shows individual-level receipt rates for all adults – that is, the percentage of all adults in each income decile directly receiving the SRD grant. The dashed green line shows individual-level receipt rates for only those adults who are eligible for the SRD grant - i.e. are not employed and are not directly receiving any other state grant.

The red line shows that the proportion of all adults receiving the SRD grant receipt is just over 10 percent for individuals in the bottom half of the June per capita household income distribution and declines steeply for the upper 5 deciles. The green line shows that the percentage of eligible adults receiving the SRD grant is close to but less than 20 percent in the bottom half the June income distribution and then declines steeply.
Figure 6: Receipt of Social Relief of Distress Grant

Notes: The figure shows receipt rates of the SRD grant across per capita household income deciles, for different sub-populations and receipt definitions. The dashed blue line shows household-level receipt rates for all adults – that is, the percentage of all adults in each income decile residing in a household which has a member receiving the SRD grant. The red line shows individual-level receipt rates for all adults – that is, the percentage of all adults in each income decile directly receiving the SRD grant. The dashed green line shows individual-level receipt rates for only those adults who are eligible for the SRD grant – i.e. are not employed and are not directly receiving any other state grant. We use a balanced NIDS-CRAM Wave 1 and Wave 2 panel and estimates are weighted using the survey design weights.
If we broaden the definition of receipt to include receipt at the household level, we see that coverage of the SRD grant is of course higher, at around 30 percent for the bottom five deciles, with receipt rates declining as one moves up the income distributions. The progressive decline in the proportion receiving SRD grants across the per capita household income distribution reflects the progressivity of the grant, though the relatively flat slopes before the 6th decile also indicate that the extremely vulnerable do not receive accordingly greater protection – likely because the SRD targeting mechanism excludes those who already receive grants.

4.2. SRD applications in July/August

While NIDS-CRAM Wave 2 respondents were interviewed between 13 July and 13 August, the SRD grant receipt questions used for Figure A3 and Figure 6 – like those for many other topics – were asked retrospectively of June. Since roll-out of the SRD increased between June and July/August, we expect coverage to have increased over this period. NIDS-CRAM includes a question regarding the status of an individual’s SRD application as of the date of interview, which can be used to investigate this increase in coverage. Figure 7 shows that compared to Figure 6, by July/August, SRD grant receipt looks to have increased by between 50 and 100 percent, with greater increases at the bottom half of the income distribution, where the approval rate is approximately 17% in aggregate. This increase in coverage is also evident for what we call the “SRD-eligible” (Panel (b)).

The substantial number of rejected SRD applications for this group may reflect NIDS-CRAM incompleteness or inconsistencies in the timing of SRD application versus survey questionnaires, but could also reflect errors on the part of the grant administrator (SASSA) – which has acknowledged significant errors of exclusion.
Figure 7: SRD applications at time of interview

(a) All adults

![Graph showing SRD applications at time of interview for all adults.](image)

(b) SRD-eligible adults

![Graph showing SRD applications at time of interview for SRD-eligible adults.](image)

Notes: Figure shows the outcomes of individual SRD applications, reported the time of interview in July/August, by per capita household income decile. Panel (a) shows outcomes for all adults, while Panel (b) shows outcomes for “SRD-eligible” adults, i.e. those who are not employed and are not directly receiving any other state grant. We use a balanced NIDS-CRAM Wave 1 and Wave 2 panel and all estimates are weighted using the survey design weights.
4.3. Poverty and the SRD grant

In Appendix Figure A3 we repeat the poverty analysis of Figure 4, but include a counterfactual where no SRD grants are received in June. We do this by subtracting the amount received through the SRD grant (R350) from reported household income for each SRD grant a household receives. Panel (a) depicts poverty rates and differences for the entire adult population, while Panel (b) depicts poverty rates and differences for only the adult population which fulfils the SRD’s eligibility criteria.

June incomes minus the SRD (dotted blue line) fall between actual June incomes and April incomes, though as expected this line is only different from actual June incomes towards the bottom of the income distribution. This means that the poverty reduction between April and June is relatively unaffected by subtracting SRD incomes when income is close to the upper bound poverty line (where the red solid and blue solid lines are very similar), but removing the SRD substantially reduces the April-June poverty reduction at the bottom of the distribution (the solid blue line is substantially lower than the solid red line). According to this analysis, then, the SRD seems to have played a substantial role in reducing poverty amongst the poorest adults – making a difference of approximately 2 percentage points. A qualitatively similar story is evident when looking only at the adult population eligible for the SRD (Panel (b)), though the poverty-reducing effect is larger amongst the poorest adults.

However some significant caveats must be borne in mind when considering this figure, which is why we present it in the appendix rather than main text. Firstly, the large confidence intervals around the observed April-June poverty reduction almost always include the no-SRD counterfactual, suggesting that differences between the observed and simulated poverty reduction may be overstated. Secondly, income in NIDS-CRAM is frequently under-reported relative to the sum of reported income sub-components. This is discussed in detail in Jain et al. (2020) with regard to Wave 1, and the same issue applies to Wave 2. Subtracting R350 from June incomes – the actual additional income due to the SRD – may therefore be an artificially large income loss relative to the increased income people actually report when they receive the SRD. In this case, the difference between actual June and no-SRD June incomes would be overstated, as would the poverty-reducing effect of the SRD.

This latter issue in particular may bias our results, and we therefore attach little significance to the particular percentage point poverty reduction due to the SRD. However the overall balance of evidence, such as the relatively widespread receipt of the SRD shown in the previous section, means that there is likely to have been a notable poverty reducing effect, which would only become larger in July/August as the grant rollout was expanded.
REFERENCES


Appendices

Figure A1: Heterogeneity in employment rates

(a) June vs. April

Notes: The figure shows the net percentage change in employment between periods along various worker characteristics: Panel (a) shows this change between April and June (as a percentage of active employment in April) while Panel (b) shows this change between February and June (as a percentage of "active employment" in February). "Active employment" denotes positive days of work; Any income denotes any wage (either actively employed or on paid leave); and any job denotes any employment relationship ("actively employed", "paid leave" or "temporarily laid off"). Standard errors are clustered and stratified following the survey design, while estimates are weighted using the survey design weights. We use a balanced NIDS-CRAM Wave 1 and Wave 2 panel.
Figure A2: Welfare Effects of job loss, February-June

(a) Propensity Score Overlap

(b) Placebo Test

(c) Household income effect

(d) Poverty effect

Notes: The figure presents poverty impact estimates, where we DFL re-weight February-June job-losers to match February-June job-retainers. From left to right the dashed vertical lines show the World Bank $1.90-a-day poverty line (converted in PPP terms) and the Statistics South Africa upper-bound poverty line. Panel (a) shows the overlap in job-loss propensity scores for job-losers and retainers. Empty bars show observations dropped from the matched sample because their propensity scores are below the 1st percentile or above the 99th percentile of propensity scores for job-losers. Panel (b) presents a type of placebo test, showing how our re-weighting procedures successfully re-weights job-retainers (from 2020) such that their reweighted 2017 income distribution closely matches the 2017 income distributions of 2020 joblosers. Panels (c) and (d) show changes in poverty associated with job loss. Panel (c) shows the household per capita income distributions for job losers (solid line) and for job retainers (dotted line). The dashed line is household income of the job retainers after DFL re-weighting. The difference between the solid and dashed lines reflects the treatment effect of job loss. Panel (d) shows the cumulative density of log household income per capita for job losers (dashed line) and job retainers after re-weighting (dotted line). Their difference is shown by the solid line shaded with the associated 95% confidence interval (bootstrapped). This line therefore gives the increase in poverty associated with losing income if the poverty line is defined to be at any point along the x-axis. We use a balanced NIDS-CRAM Wave 1 and Wave 2 panel and estimates are weighted using the survey design weights.
Figure A3: Poverty rates in April and June: the contribution of the SRD

(a) All adults

Notes: See notes to Figure 4. Panel (a) is the same as Figure 4 but extends this analysis by presenting counterfactual poverty results when SRD income is removed from June income. The dashed blue line shows June headcount ratios if R350 is subtracted from the household income of SRD recipients, while the solid blue line shows the difference between April poverty and this counterfactual no-SRD June poverty. Differences between the solid blue and red lines therefore present an approximate estimate of poverty reduction due to the SRD. Panel (b) is the same as Panel (a) but the sample is restricted to individuals eligible for the SRD. We use a balanced NIDS-CRAM Wave 1 and Wave 2 panel and estimates are weighted using the survey design weights.