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POLICY BRIEF

Mind the gap:
Analysing the effects of South Africa's national lockdown on gender wage inequality

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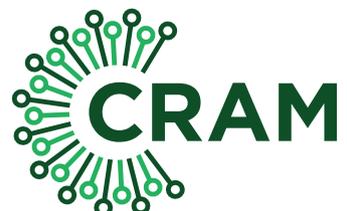
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Mind the gap: Analysing the effects of South Africa's national lockdown on gender wage inequality

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- **The unconditional gender wage gap was large and evident both before and during lockdown, while the average gap widened during the period.** This was driven by higher average wages of both men and women in June relative to February 2020, however men's wages increased at a marginally higher rate. This is indicative of higher earners being more likely to remain employed during the lockdown period, rather than individual's actual wages increasing.

- **Even after accounting for several confounding factors, the gender wage gap was higher in June 2020 relative to February on average.** After controlling for several confounding factors, we find that women earned 29% less hourly wages than men before the lockdown, which increased to 43% less in June - indicative of an increase in the conditional gender wage gap of about 46%, at least on average.

- **There is some evidence of a widening monthly gender wage gap amongst the poorest 40% of wage earners, but not the remainder of the distribution.** This deepening of the gender wage gap for the poorest members of the population has seen wage inequality increase by a factor of up to 5.

- **Although there is evidence of an increasing monthly gender wage gap between February and June 2020, there is no evidence of a deepening hourly gender wage gap over this period.** Taken together, these results suggest that the driving force behind the deepening monthly gender wage gap is an adjustment in hours worked that has been disproportionately borne by women – i.e. women have had to decrease their working hours relatively more than men. Possible explanations for this that arise in the literature include the fact that women are more likely to be employed in jobs that are less amenable to working remotely (Alon et al., 2020), or that women have had to disproportionately pick up childcare responsibilities during the lockdown period (Collins et al., 2020).

- **The widening of the size of the conditional gender wage gap amongst poorer earners is of particular concern for policy.** Policymakers ought to consider using South Africa' sophisticated grant system to provide targeted income relief to this group. One option is an extension of the expansion of the Child Support Grant beyond its cessation in October, given the grant is relatively well-targeted at the poor and that 98% of primary caregivers are women.

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1.   Introduction

Wave 1 of the NIDS-CRAM project showed that women have been disproportionately affected by the national lockdown. Of the estimated three million less people employed in April relative to February 2020, two million were women. However, less is known about the impact the national lockdown has had on those women who have remained in employment. This paper investigates this hypothesis by using representative survey data collected prior to and during the lockdown to construct comparable estimates of the evolution of the unconditional and conditional gender wage gaps. Given the evidence of heterogeneity across the earnings distribution (Mosomi, 2018), we also estimate the gender wage gap across the entire distribution of earners both before and during the lockdown, while accounting for selection into labour market participation, and make use of new information collected in Wave 2 of the NIDS-CRAM. Evidence from the local and global literature has indicated that the gender wage gap can be impacted by a wide range of socio-economic characteristics, as well as broader economic trends. The onset of the COVID-19 pandemic has been particularly interesting as far as the gender wage gap is concerned, as preliminary studies have shown that the effects of this "pandemic-recession" do not accord with the effects of past recessions (Alon et al., 2020). In particular, the impact of the Global Financial Crisis of 2007/2008 was disproportionately felt by men, however, it is clear that the COVID-19 pandemic is disproportionately impacting women and their economic standing (Alon et al., 2020). In South Africa, in particular, it is known that women bore the brunt of job loss as a result of the hard lockdown initiated in March 2020, with two out of every three job-losers being female (Casale & Posel, 2020).

After making several adjustments to the raw wage data in the NIDS-CRAM as outlined in our complete policy paper, we begin by analysing differences in average real monthly and hourly wages between men and women before lockdown (February 2020) and during lockdown (June 2020). We first do so in an unconditional environment where we do not account for differences in wages explained by characteristics other than gender itself. We then explore inter-gender wage variation in a conditional environment; that is, we analyse the average monthly and hourly wages of women relative to men of the same multiple observable characteristics. We then analyse how the gender wage gap varies across the distribution of earners, while accounting for non-random selection into the labour market. We conclude this brief with several policy considerations.

2.   The effects of the national lockdown on the average gender wage gap

The unconditional gender wage gap was large and evident both before and during lockdown, while the average gap widened during the period. The gender wage gap – before accounting for any confounding factors like age, marital status, and occupation for example – was evident in both February and June 2020, regardless of whether monthly or hourly real wages are used. Figure 1 presents the average real monthly and hourly wages for men and women in February and June 2020. On average, our point estimates suggest that this unconditional gap was higher in June relative to February, although the differences are not statistically significant. This was driven by higher average wages of both men and women, however men's wages increased at a marginally higher rate (11%) than women's (9%). The average man's real monthly wage increased from R9 500 to R10 600 while that of the average woman increased from R5 600 to R6 100. Similar patterns exist once we account for working hours. Both changes in average monthly and hourly wages may be indicative of higher earners being more likely to remain employed during the lockdown period, rather than individual's actual wages increasing.

Figure 1: Mean real monthly and hourly wage by gender in February and June 2020
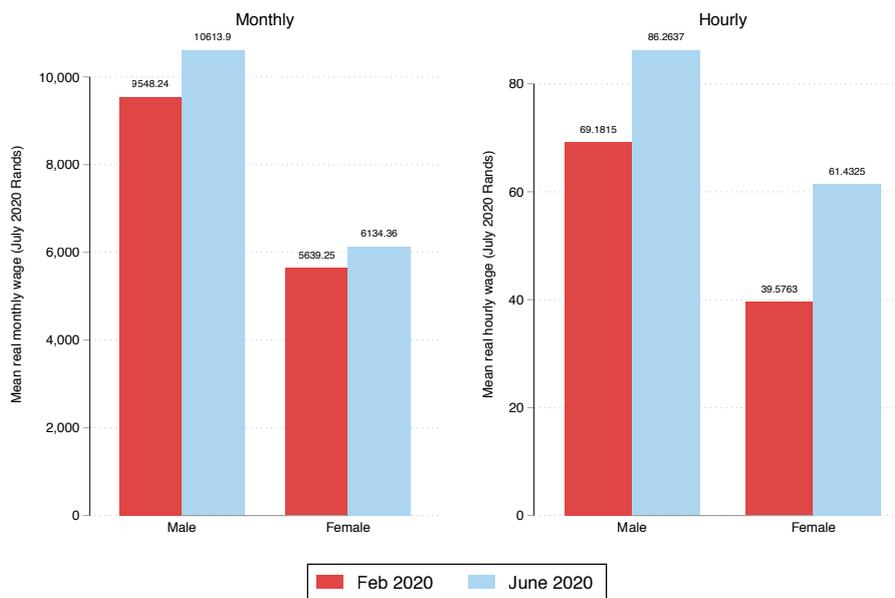
The unconditional gender wage gap widened most amongst poorer earners and remained particularly large amongst White individuals, those living in urban areas, and those with a tertiary qualification. Table 1 presents the unconditional wage gap across varied groups of individuals; that is, the ratio of the average women's real hourly wage relative to men within a given group and period. The gap seems to have widened amongst the poorest 20% of earners. In June 2020, the average women in this group earned about 83% of the average man's wage for a given hour of work – down from approximately parity in February. On the other hand, the unconditional gap seems to have narrowed amongst the richest quintile of earners. The gap remains largest and unchanged amongst White individuals. In both February and June, for every Rand earned by the average White man for a given hour of work, the average women earned half. In both periods, the gap amongst those living in urban areas exceeded that of those in non-urban areas. Turning to education, the gap remains highest amongst those with a tertiary qualification. For a given hour of work in June, the average woman within this group earned 56 cents for every Rand earned by the average man, up from just 45 cents in February.

Table 1: Mean real hourly wage by gender and unconditional gender wage gaps across select groups in February and June 2020

	NIDS-CRAM Wave 1			NIDS-CRAM Wave 2		
	February 2020			June 2020		
	Male	Female	Ratio (F/M)	Male	Female	Ratio (F/M)
Real hourly wage quintile						
1	4.73	4.86	1.03	10.82	9.01	0.83
2	13.74	14.31	1.04	20.25	20.49	1.01
3	24.17	24.44	1.01	32.70	31.94	0.98
4	47.82	47.78	1.00	65.43	69.59	1.06
5	221.60	134.67	0.61	257.66	232.45	0.90
Area						
Urban	73.97	41.13	0.56	97.81	63.40	0.65
Non-urban	39.35	29.14	0.74	57.80	57.89	1.00
Education						
Up to primary	19.21	16.97	0.88	52.30	60.44	1.16
Up to secondary	29.90	20.30	0.68	59.17	45.80	0.77
Complete secondary	43.43	27.20	0.63	56.44	37.49	0.66
Tertiary	148.49	66.13	0.45	153.91	86.00	0.56

Notes:
[1] Authors' own calculations. Source: NIDS-CRAM Waves 1 and 2.
[2] Within-wave samples restricted to employed individuals aged 18-64 years.
[3] Estimates are weighted using computed bracket weights after accounting for complex survey designs.
[4] All hourly wages inflated to July 2020 Rands.

Even after accounting for several confounding factors, the gender wage gap was 46% - 73% higher in June 2020 relative to February on average. Of course, differences in wages between men and women can be partially explained by factors other than gender itself. We control for several of these observable characteristics including age, marital status, level of education, and occupation to name just a few. Our results are presented in Figure 2 which plots the average gender wage gaps in February and June 2020 with and without accounting for these confounders. We find that women earned 29% less hourly wages than men before the lockdown in February, which increased to 43% in June - indicative of an increase in the conditional gender wage gap of about 46%, at least on average. When we consider monthly rather than hourly wages but control for working hours, the increase in the conditional gender wage gap is even larger (73%). Although the conditional gender wage gap is statistically significant in each period, the changes in the gaps over the period are not statistically significant. Despite this, the differences in the magnitudes of our point estimates are compelling and as such, we interpret these changes as indicative of a widening gender wage gap at the mean.

Figure 2: Mincerian estimates of the average unconditional and conditional gender wage gaps in February and June 2020
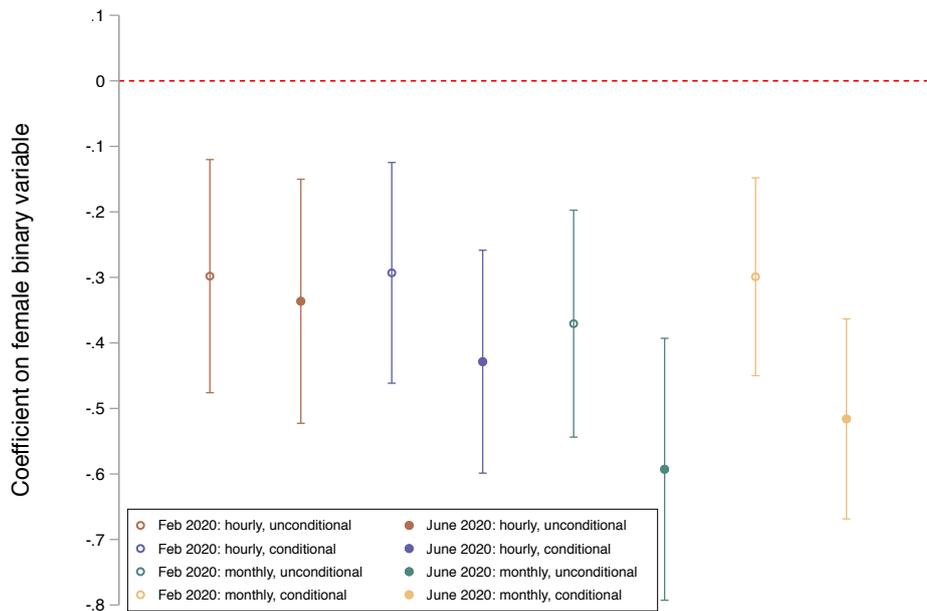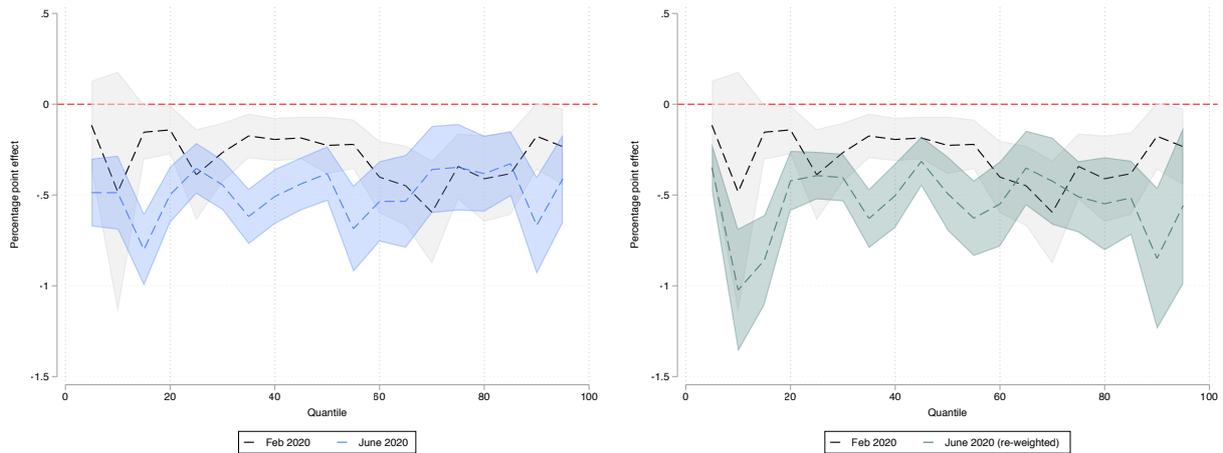

Notes:
[1] Within-wave samples restricted to employed individuals aged 18-64 years.
[2] Estimates are weighted using computed bracket weights and account for complex survey design.
[3] Wages inflated to July 2020 Rands.
[4] 95\% confidence intervals presented as capped spikes.

3. The effects of the national lockdown on the gender wage gap across the distribution of earners

The monthly gender wage gap in the bottom third of the wage distribution increased up to five-fold from its February size by June 2020. Figure 3 presents the results of the RIF regressions across the quantiles for February 2020, June 2020, and the reweighted June 2020 samples. Overall, the only statistically significant changes in the gender wage gap occurred below the 40th percentile of the wage distribution, while there was little to no significant change above the 60th percentile. This is indicative of inequality-deepening effects between genders amongst the most vulnerable individuals in the economy. These results are robust to specifications that include industry-level effects for June 2020, as well as a reweighting technique used to adjust for sample selection.

Figure 3: Estimates of the conditional gender wage gap in real monthly wages across the wage distribution, February 2020, June 2020, and June 2020 (reweighted)
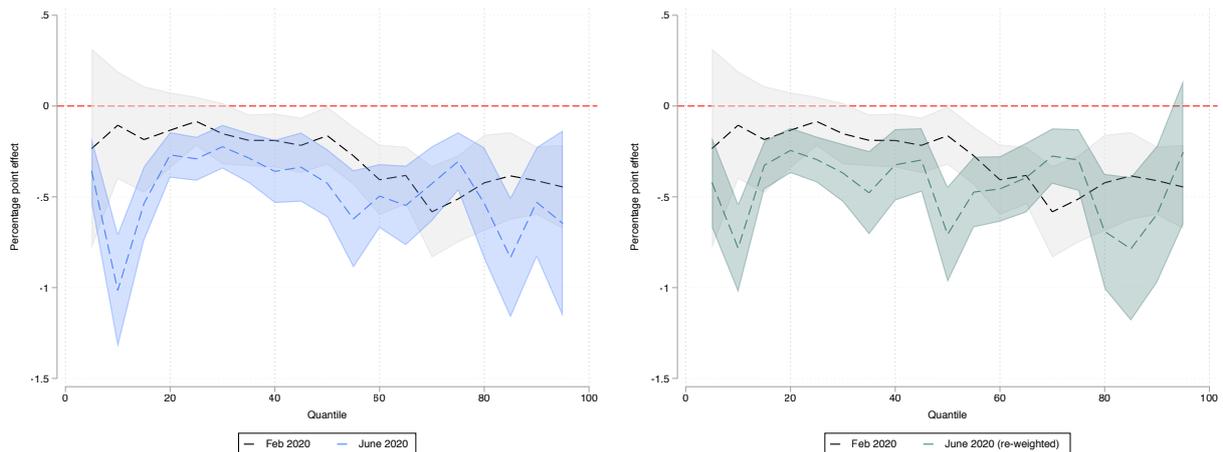

Notes:
[1] Left-hand panel shows February 2020 estimated gender wage gap compared to June 2020 estimated gender wage gap. Right-hand panel shows February 2020 estimated gender wage gap compared to reweighted June 2020 gender wage gap.
[2] Variables controlled for in regressions include age, age squared, race, highest level of education, main occupation, area of residence, province, home language, marital status, presence of a written contract, number of cohabiting children under age 18, and weekly hours worked.
[3] Estimates are weighted using computed bracket weights, or DFL reweighted bracket weights.
[4] Wages inflated to July 2020 Rands.
[5] Shaded areas represent 90% Confidence Intervals.

When estimating the hourly gender wage gap, there is no statistically significant difference between February 2020 and June 2020. This lack of a statistically significant result shows that the hourly gender wage gap has not necessarily changed between February and June 2020. Figure 4, below, presents the hourly gender wage gap in February 2020, June 2020 and in the June 2020 reweighted sample. Even when only considering point estimates of the February-to-June gender wage gap ratio, the results are milder for hourly wage inequality than they are for monthly inequality.

Figure 4: Estimates of the conditional gender wage gap in real hourly wages across the wage distribution, February 2020, June 2020, and June 2020 (reweighted)

Notes:
[1] Left-hand panel shows February 2020 estimated gender wage gap compared to June 2020 estimated gender wage gap. Right-hand panel shows February 2020 estimated gender wage gap compared to reweighted June 2020 gender wage gap.
[2] Variables controlled for in regressions include age, age squared, race, highest level of education, main occupation, area of residence, province, home language, marital status, presence of a written contract, and number of cohabiting children under age 18.
[3] Estimates are weighted using computed bracket weights, or DFL reweighted bracket weights.
[4] Wages inflated to July 2020 Rands.
[5] Shaded areas represent 90% Confidence Intervals.

Taken together, changes in the monthly and hourly gender wage gaps speak to women decreasing their working hours relatively more than men. This could be as the result of women being employed in jobs that are less amenable to working from home, or as a result of women bearing a greater share of the increased childcare responsibilities that arose during the lockdown due to school closures.

4.   Conclusion and policy considerations

How might these new insights assist policymakers? The widening of the size of the conditional gender wage gap amongst poorer earners is of particular concern for policymakers, given that this result speaks to deepening inequality amongst an already vulnerable group. This observation may have to do with the disproportionate incidence of childcare responsibilities on women during the pandemic, particularly amongst those who are unable to afford or access childcare. Policy which seeks to mitigate the adverse implications of such widening wage inequality ought to consider providing targeted income support to such workers at the bottom of the distribution. Several policy options are available.

In their analysis of the NIDS-CRAM Wave 2 data, Köhler and Bhorat (2020) find that the distribution of personal and household-level receipt of the special COVID-19 Social Relief of Distress (SRD) grant, despite not being means-tested, is relatively pro-poor. However, the authors note that because other grant recipients are not eligible to apply for the grant, and because nearly 85% of all grant recipients are women, most recipients (two-thirds) of the COVID-19 SRD grant are men. Therefore, despite it being progressively targeted, this grant in its current form may not be appropriate in this context. **However, considering the Child Support Grant is also progressively targeted and that about 98% of recipients (caregivers) are women, the pandemic-induced intensive margin expansion[2] of the grant may be an optimal mechanism to provide such income support.** Policymakers ought to consider further extending this expansion of social assistance beyond October 2020.

State-subsidised childcare at schools may also assist in remedying the deepening gender wage gap that has arisen during lockdown. With schools reopening, women already have more opportunity to engage in labour market activities and increase their hours worked. However, if the state could provide after-school care for children, this may afford women the opportunity to further increase working hours, and hep remedy the inequality that arose during the lockdown period. Careful structuring of this care could also benefit students through academic assistance, food provision, and ultimately better educational attainment outcomes.

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2 R300 per grant for May and R500 per caregiver for June to October 2020.

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