

Child Grants and Time Use of Single Parents in South Africa

Tanima Ahmed

American University
ta2983a@american.edu

December 31, 2019

Research Objective

Examine the effect of child grants on gendered time allocation of single parents across SNA production work, household work, care work, leisure, self-care and other-activities in South Africa.

Motivation

- Child grants and subsidies are widely used to support family with children.
- Existing studies only analyze the effect of grants on labor force participation or market work following a labor-leisure time trade-off model.
- No paper has assessed the effect of child grants on overall time allocation of individuals.

- Individuals spend more time on work, be it paid or unpaid, they have less time to spend on leisure and rest.
- Feminist discussion argues that social welfare grants can impact time spent in household and care work and reduce work intensities of caregivers.
- Social safety net programs aimed at child welfare may also reinforce the roles of caregivers.

Conceptual Framework

Income Effect

- Look for job.
- Disincentive to work.

Social Transformation Effect

- Empower caregiver.
- Spend in personal care rather than child care.
- Withdrawal from care work.

Market Substitution Effect

- Use time-saving technologies.
- Afford paid care support.

Human Capital Accumulation Effect

- Improve Health and schooling of children.
- Spend time to provide quality childcare.

Child Grants in South Africa

- Three types of unconditional child grants available: Child Support Grant (CSG), Foster Care Grant (FCG) and Care Dependency Grant (CDG).
- Purpose(s):
 - Primary: Advance the human capital of the children to reduce future poverty.
 - Secondary: Improve the welfare of the household members, especially caregivers, and increase the resilience of the poor against shocks.
- Eligibility Criteria:
 - Age of children: Children younger than 18 years.
 - Income of primary caregivers: Single - below R2,500 per month (\approx \$166) and Married - below R5000 per month (\approx \$322).
 - Nationality and residency of children: Live with the primary caregivers.

- 2010 Time Use Survey (TUS) of South Africa.
- Collects time diaries of 2 randomly selected household members - 1 female and 1 male.
- Records socio-demographic and labor market information.
- Representative by provinces, geography types (urban formal, urban informal, rural formal and tribal areas) and metro or non-metro areas.

Sample: Eligible Single Parents

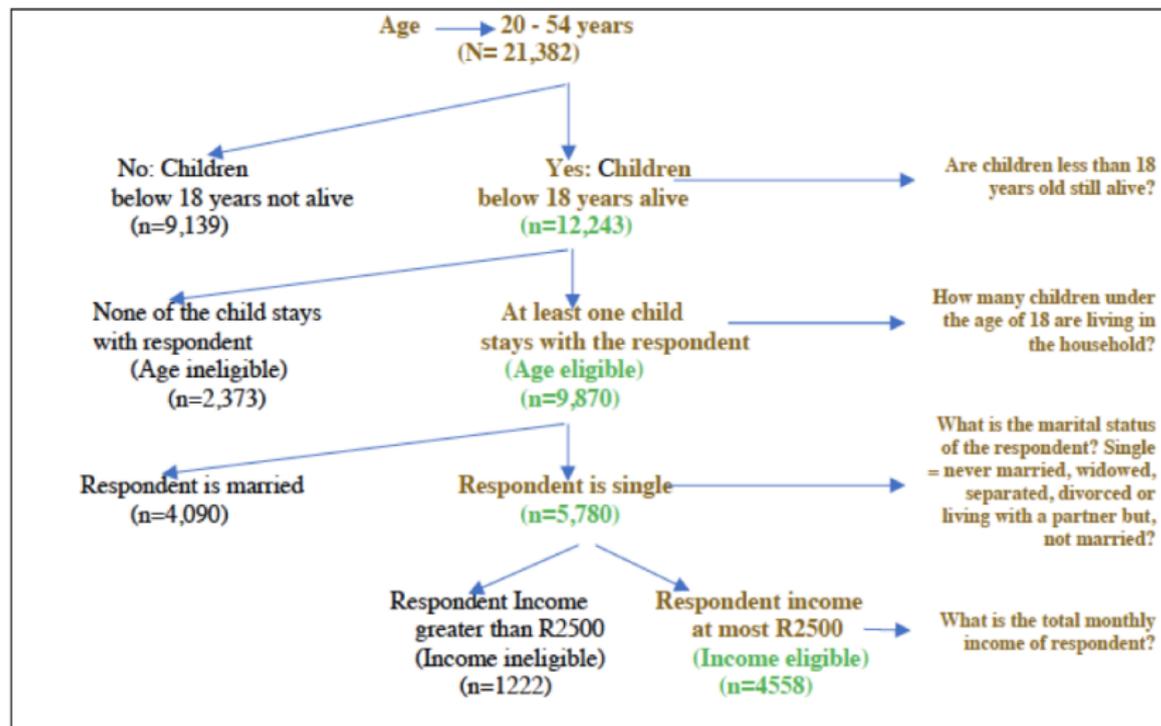
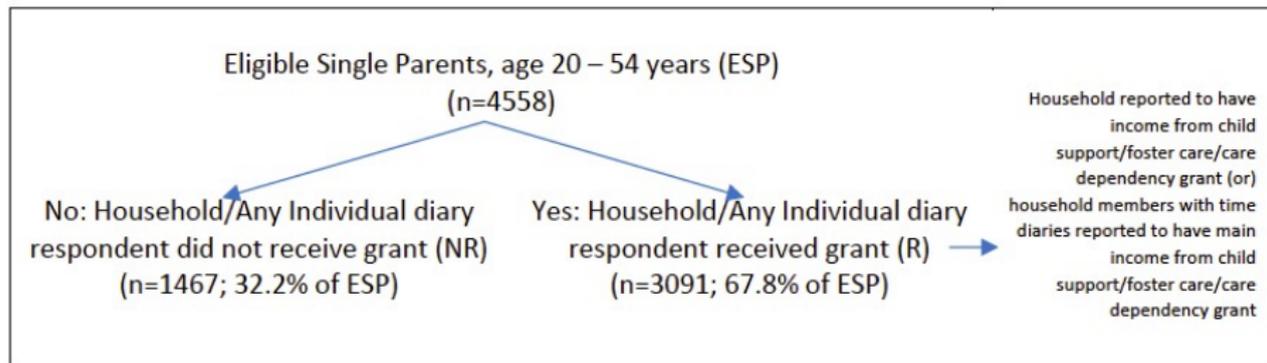


Figure 1. Stepwise identification of the eligible parents aged 20 to 54 years

Sample: Grant Recipient and Non-recipient



Time Use Activity Classification

- SNA production work: Work in establishment + Primary production not for establishment + Other production of goods and services not for establishment
- Domestic chore: Household maintenance + Water and fuel collection
- Care work: Care for household members
- Leisure: Mass media use + Doing Nothing
- Self-maintenance: Personal Care such as bathing, sleeping etc.
- Other non-work activities: Learning + Social and cultural activities

$$H_{iagpd} = \beta_{a0} + \beta_{a1}R_{igp} + \beta_{a2}F_i + \beta_{a3}R_{igp} \times F_i + \beta_{aX}X_i + \mu_{ag} + \gamma_{ap} + d_{ad} + \epsilon_{ia} \quad (1)$$

$$R_{igp}^* = \alpha_0 + \alpha_1Z_i + \alpha_{a2}F_i + \alpha_3Z_i \times F_i + \alpha_XX_i + \mu_g + \gamma_p + \eta_i \quad (2)$$
$$R = \mathbb{I}(R^* > 0);$$

Instrumental Variable

- IV: Median travel time to the welfare office from geographical area g of province p .
- Constructed from 2008 Generalized Household Survey (GHS).
- Increase in the median travel time to the welfare office reduces the probability of child welfare grant receipt.

Empirical Result

Table 3. Marginal effects of probit selection model and SUR estimates of the impact of child grants on time allocation of eligible single parents aged 20 to 54 years

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Probit model (marginal effects)	SNA production work ^a	Household maintenance ^a	Care work ^a	Leisure ^a	Self-care ^a	Other activities ^{ab}
Median regional distance to welfare office	-0.01*** (0.003)						
Single mother=1	-0.01 (0.06)	-101.0*** (21.6)	125.6*** (12.8)	43.9*** (6.4)	-11.2 (11.6)	0.6 (11.3)	-57.8*** (12.5)
Median regional distance to welfare office X Single mother	0.003* (0.002)						
Grant receipt =1		-64.9* (38.0)	50.9** (24.9)	30.2** (14.9)	-4.9 (37.2)	-47.6 (32.9)	36.3 (37.0)
Grant receipt X Single mother		-51.4** (24.9)	45.4*** (14.3)	15.6** (6.8)	2.4 (12.9)	-18.4 (12.4)	6.4 (14.2)

Robustness and Sensitivity Check

- Limit sample of eligible single parents to never married, widowed, separated and divorced.
- Limit age of the eligible single parents to 20 to 45 years.

Conclusion

- Living in child grants recipients households decrease the time spent in SNA production work, but increase the time spent in unpaid household and care work.
- Disproportionate effect of children grants by single fathers and mothers.
- Child welfare programs certainly have the potential to shift caregivers' time allocation.
- The reinforcing effect of the child grants on caregiving and the overall increase in work time not only increases stress and fatigue but also may worsen the intrahousehold inequalities inherent to division of labor.

Thank You

Individual Characteristics R vs. NR

	Living in the grant recipient household (R)	Living in the grant non- recipient household (NR)	R vs. NR (ttest)
Sex			
Father	20	34.1	-14.1***
Mother	80	65.9	14.1***
Age (in years)			
20 to 24	20.1	19.3	0.7
25 to 34	45	42.5	2.5
35 to 44	24.9	25.5	-0.6
45 to 54	10	12.6	-2.6**
Average Age	32.0	32.8	-0.8**
Educational Level			
No School	4.5	2.2	2.3***
Class 1 to 7	20	21.4	-1.4
Class 8 to 11	54.1	46.7	7.3***
Above Class 11	21.4	29.7	-8.3***
Marital Status			
Never Married	62.1	57.5	4.6**
Widowed/divorced/separated	9.6	9.5	0.07
Living with a partner, but not married	28.3	33	-4.7**
African=1	94.2	90.1	4.1***
Individual had a typical day =1	91.4	94.2	-2.8***
Observations	3091	1467	4558

Household and Regional Characteristics R vs. NR

	Living in the grant recipient household (R)	Living in the grant non- recipient household (NR)	R vs. NR (ttest)
Family Income (in RAND)			
0 to 500	12.1	11.6	0.5
501 to 1500	39.4	37.8	0.2
1501 to 2500	25.4	21.1	4.3**
2501 to 4500	18.3	15.9	2.3
4501 to 8000	4.2	8.3	-4.2***
8001 and above	0.7	5.3	-4.6***
Average of Normalized Wealth Index	0.33	0.37	-0.05***
Household has income from remittance	9.4	6.3	-3.0***
Household has income from Unemployment Fund	0.5	0.4	0.05
Household has income from other state welfare grant	29.5	24.1	5.3***
Has bus/train/taxi within 30 minutes (2 kilometer)	91.6	91.9	-0.3
Has hospital/clinic within 30 minutes (2 kilometer)	57.4	61.3	-3.9*
Has shop within 30 minutes (2 kilometer)	77.7	78.7	-0.06
Has primary/secondary school within 30 minutes (2 kilometer)	83.9	84	-1.1
Average Number of children aged 0 to 5 years	1.26	0.70	0.6***
Average Number of children aged 6 to 10 years	0.86	0.43	0.4***
Average Number of children aged 11 to 17 years	0.94	0.55	0.4***
Average Female Household members of age 18 years and older	1.11	1.12	-0.01
Average Male Household members of age 18 years and older	2.00	1.53	0.5***
Household has given interview in English/Afrikan/Zulu/Xhosa	57.4	60.7	-3.3
Geographical Type			
Urban Formal	37.5	52.2	-14.7***
Urban Informal	11.5	14.4	-2.9**
Tribal Areas	46.6	27.9	18.7***
Rural Formal	4.4	5.4	-1.0
Metropolitan Area = 1	21.2	40.2	-19.0***
Observations	3091	1467	4558

Time Allocation by Grant Receipt

Activities	Living in the grant recipient household (R)		Living in the grant non-recipient household (NR)		t-test Differences in average minutes (R - NR)
	Average minutes (minutes/per day)	% of total ^a	Average minutes (minutes/per day)	% of total ^a	
A. Single mothers					
SNA production work ^b	95.1	6.6	189.0	13.1	-93.9***
Household maintenance ^c	270.8	18.8	226.1	15.7	44.7***
Care work ^d	73.1	5.1	63.8	4.4	9.3*
Leisure ^e	165.0	11.5	171.6	11.9	-6.6
Self-care ^f	703.7	48.9	686.7	47.7	17.0***
Other activities ^g	132.3	9.2	102.8	7.1	29.5***
Total time	1440	100.0	1440	100.0	
B. Single fathers					
SNA production work ^b	258.2	17.9	288.9	20.1	-30.8
Household maintenance ^c	108.2	7.5	112.3	7.8	-4.2
Care work ^d	14.5	1.0	16.4	1.1	-1.9
Leisure ^e	173.9	12.1	174.5	12.1	-0.6
Self-care ^f	721.4	50.1	699.6	48.6	21.8*
Other activities ^g	163.7	11.4	148.2	10.3	15.6
Total time	1440	100.0	1440	100.0	
C. Differences in average minutes (Single mothers – Single fathers): t-test					
SNA production work ^b	-163.1***	...	-99.9***	...	...
Household maintenance ^c	162.6***	...	113.7***	...	...
Care work ^d	58.5***	...	47.4***	...	...
Leisure ^e	-8.9***	...	-2.9***	...	...
Self-care ^f	-17.7***	...	-12.9***	...	...
Other activities ^g	-31.4***	...	-45.4***	...	...

Instrumental Variable Construction

- GHS dataset records the travel time in interval I , $[t_{gp}, t_{gp} + \Delta t_{gp}]$
- For each g of p , calculate the frequency, f_l , where, f is the frequency of travel time for $l=1, \dots, 5$.
- $[Position \text{ of median}]_{gp} = \lceil \frac{n+1}{2} \rceil = \lceil \frac{\sum_{l=1}^n f_l}{2} \rceil^{th} \text{ value}$
- The interval I which contains the median is g of p is identified based on the position, denoted as m .

- $Median_{gp} = t_{gp} + \frac{(\sum_{l=1}^n f_l)_{gp} - (\sum_{l=1}^m f_l)_{gp}}{(\sum_{l=1}^m f_l)_{gp}} \times \Delta_{gp}$

Instrumental Variable Check

	(1)	(2)	(3)	(4)	(5)
	IV constructed from GHS 2008			IV constructed from GHS 2007	
	Without control	With individual controls	With individual and household controls	All controls (Individual, household and regional)	Grant receipt (R)
Effect of instrument					
Mean regional distance to the welfare office	0.007*** (0.001)	0.007*** (0.001)	0.003*** (0.001)	-0.01*** (0.002)	-0.01*** (0.003)
Observations	4558	4558	4558	4558	4558
Provincial FE	No	No	No	Yes	Yes
Diary FE	No	Yes	Yes	Yes	Yes

Robustness Test 1

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Selection ME	Market Work	Domestic Chores	Care Work	Leisure	Other Activities	Self- Maintenance
Limit Eligible Single Parents Sample to Only who are Never Married, Widowed, Separated and Divorced							
Median Regional Distance to Welfare Office	-0.01*** (0.003)						
Median regional distance to welfare office X Female	0.003 (0.002)						
Grant Receipt=1		-117.9** (55.5)	87.9*** (26.9)	54.9*** (18.1)	-0.4 (52.4)	29.5 (58.5)	-54.1* (31.7)
Grant Receipt X Female		-48.6 (33.5)	33.2* (19.4)	17.0* (9.4)	9.0 (18.7)	1.83 (20.6)	-12.4 (16.0)
Number of observations	3164	3164	3164	3164	3164	3164	3164
Provincial FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Control for interview day	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Other controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Robustness Test 2

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Selection ME	Market Work	Domestic Chores	Care Work	Leisure	Other Activities	Self- Maintenance
Limit Age of the Eligible Single Parents Sample to 20 to 45 years							
Median Regional Distance to Welfare Office	-0.01*** (0.002)						
Median regional distance to welfare office X Female	0.004** (0.002)						
Grant Receipt=1		-72.5* (39.7)	67.8*** (21.8)	38.5** (17.1)	-12.3 (35.5)	33.4 (43.4)	-54.8* (32.3)
Grant Receipt X Female		-55.4** (26.9)	44.2*** (14.4)	17.1** (7.6)	3.6 (13.7)	6.9 (15.1)	-16.3 (13.3)
Number of observations	4053	4053	4053	4053	4053	4053	4053
Provincial FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Control for interview day	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Other controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes