Using the 2018 General Household Survey microdata to think about economic policy responses to Covid-19 in South Africa

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DataFirst

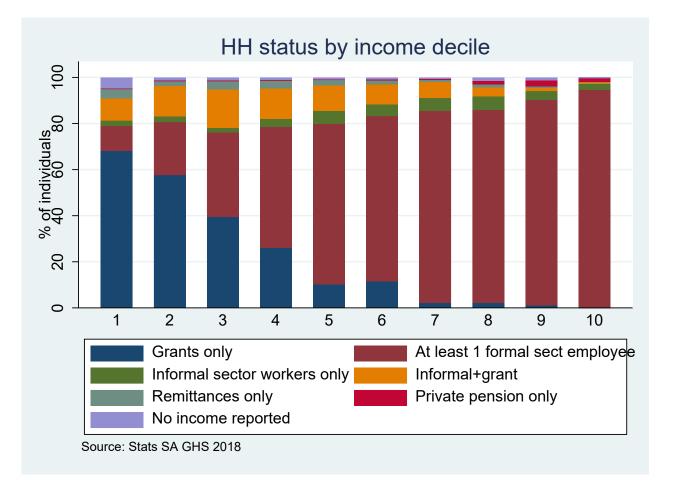University of Cape Town

April 2020

Outline

- Covid-19 is having a substantial economic impact due to lockdowns in place around the world.
- South Africa is no different.
- Governments around the world have put in place new economic policies to mitigate the economic impacts
- Q I want to answer is who the government could easily help, how and whether it could help those at the bottom of the income distribution.
- The Statistics South Africa General Household Survey has a number of questions that allow one to get an answer to these questions.
- The aim is to show people how they could use this data themselves to answer this and related questions.
- This webinar is aimed at people who have a basic knowledge of Stata and is not meant to be an introduction to Stata. Datafirst offers such courses!
- It was produced very quickly and so may be a little rough around the edges.
  - If you see some major errors let me know.

Why this webinar?

- The value add of this webinar is hopefully that it will show people how to do this type of work themselves, and ask new and important questions.
- I'm going to use Stata. If you're an experienced user of another stats programme you should be able to translate the code.
  - If you aren't, sorry!
- While I was preparing this webinar a research group at SALDRU put out this great article which does similar research.
- https://theconversation.com/south-africa-can-and-should-top-up-child-support-grants-to-avoid-a-humanitarian-crisis-135222
- These researchers used the National Income Dynamics Study wave 5 data from 2017.
  - Different data means answers might be somewhat different, but not wildly so.
- So you can do this type of work too after attending this webinar!

Where we will get to- a useful graph

HH status by income decile

Source: Stats SA GHS 2018

Download GHS microdata from DataFirst

- Requires registration at
  https://www.datafirst.uct.ac.za/dataportal/index.php/auth/register

- Usually takes <24 hours.

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South Africa - General Household Survey 2018

Reference ID	zaf-statssa-ghs-2018-v1	
Year	2018	
Country	South Africa	
Producer(s)	Statistics South Africa - Government of South Africa	
Collection(s)	Statistics South Africa	

Created on	Aug 19, 2019
Last modified	Mar 29, 2020
Page views	9491
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Documentation | Study Description | Data Description | ⊕ Get Microdata | Related Publications

Documentation

Download the questionnaires, technical documents and reports that describe the survey process and the key results for this study.

Questionnaires

☑ General Household Survey 2018   📄 10.27 MB

Reports

☑ General Household Survey 2018 Statistical Release   📄 2.67 MB

GHS 2018

- There are lots of useful questions in GHS: education, health, social security, employment, households and service delivery, communication and transport, food security, agriculture, household income, expenditure and assets, mortality.

- The focus in this webinar is on income and social security

- Qs are asked both about individuals and the household.
  - Eg is person X employed,
  - Does person Y receive a child support grant?
  - Does the household receive remittances from migrants living elsewhere?

- We need to use both individual and household level data to construct a measure of household income from all sources, to be able to say who is rich and who is poor.

Income sources

- There are lots of sources of income.
- The GHS asks individuals about income from social grants, earnings from work,
- It asks households about private pension income and remittances.
- We will aggregate these to get a total household income from all sources.
- We then then get a per capita (per person) income amount by dividing by household size.
- We can then ask how households at different levels of income survive (eg through grants, having a member with formal sector employment)
- This sounds easy, and it is conceptually, but takes some work using in the data.

Individual income: social grants

3.1b	*If "Yes" in Q3.1a*																			
	Does ... receive a(n) .....? *Answer for each person who qualified for the grant and NOT for the person who applied on behalf of/physically receives the money. Someone who used to work for the Government and receive a pension do **not get** an old age grant* *Read all the options*	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
	1 = Old-age grant (60–74; R1600; 75+; R1620)	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2
	2 = Disability grant (18–59; R1600)	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2
	3 = Child support grant (0–17; R380)	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2
	4 = Care dependency grant (0–17; R1600)	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2
	5 = Foster child grant (<22; R920)	1	2	1	2	1	2	1	2	1	2	1	2	1	2	5	2	1	2	1	2
	6 = War veterans grant (60+; R1620)	1	2	1	2	1	2	1	2	1	2	1	2	1	2	6	2	1	2	1	2
	7 = Grant-in-aid (R380 and should have another grant)	1	2	1	2	1	2	1	2	1	2	1	2	1	2	7	2	1	2	1	2
	8 = Social relief of distress	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2

Employment

SECTION 4 : ECONOMIC ACTIVITIES

Ask for all household members 15 years and older

		01	02	03	04	05	06	07	08	09	10
4.1a	In the last week (Monday to Sunday) did ….. work for a wage, salary, commission or any payment in kind (including paid domestic work), even if it was for only one hour? *Examples: a regular job, contract, casual or piece work for pay, work in exchange for food or housing, paid domestic work.* 1 = Yes 2 = No	□ 1 □ 2	□ 1 □ 2	□ 1 □ 2	□ 1 □ 2	□ 1 □ 2	□ 1 □ 2	□ 1 □ 2	□ 1 □ 2	□ 1 □ 2	□ 1 □ 2
4.1b	In the last week (Monday to Sunday) did … run or do any kind of business, big or small, for himself/ herself or with one or more partners, even if it was for only one hour? *Examples: Commercial farming, selling things, making things for sale, construction, repairing things, guarding cars, brewing beer, collecting wood or water for sale, hairdressing, crèche businesses, taxi or other transport business, having a legal or medical practice, performing in public, having a public phone shop, etc.* 1 = Yes 2 = No	□ 1 □ 2	□ 1 □ 2	□ 1 □ 2	□ 1 □ 2	□ 1 □ 2	□ 1 □ 2	□ 1 □ 2	□ 1 □ 2	□ 1 □ 2	□ 1 □ 2
4.1c	In the last week (Monday to Sunday) did ….. help without being paid in any kind of business, run by his/her household even if it was for only one hour? *Examples: Commercial farming, production of agricultural produce to sell, help to sell things, make things for sale or exchange, doing the accounts, cleaning up for the business, etc.* 1 = Yes 2 = No	□ 1 □ 2	□ 1 □ 2	□ 1 □ 2	□ 1 □ 2	□ 1 □ 2	□ 1 □ 2	□ 1 □ 2	□ 1 □ 2	□ 1 □ 2	□ 1 □ 2

Individual Income: earnings from work

		01	02	03	04	05	06	07	08	09	10
4.2a	**What is ……'s total salary/pay at his/her main job?** *Including overtime, allowances and bonus, before any tax or deductions. Give amount in whole figures, without any text or decimals. If "NONE", "REFUSE" or "DO NOT KNOW" write 999 999 999 and* ⟶ ***Go to Q4.3***	Rands	Rands	Rands	Rands	Rands	Rands	Rands	Rands	Rands	Rands
4.2b	**Ask only if an amount is given in Q4.2a Is this ….** 1 = Per week 2 = Per month 3 = Per year ⟶ ***Go to Q4.4a***	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3	☐ 1 ☐ 2 ☐ 3
4.3	**Only if "NONE", "REFUSE" or "DO NOT KNOW" in Q 4.2a.** *Mark the applicable code*										

4.3 detail:

	Weekly	Monthly	Annually
01	NONE	NONE	NONE
02	R1 - R46	R1 - R200	R1 - R2 400
03	R47 - R115	R201 - R500	R2 401 - R6 000
04	R116 - R231	R501 - R1 000	R6 001 - R12 000
05	R232 - R346	R1 001 - R1 500	R12 001 - R18 000
06	R347 - R577	R1 501 - R2 500	R18 001 - R30 000
07	R578 - R808	R2 501 - R3 500	R30 001 - R42 000
08	R809 - R1 039	R3 501 - R4 500	R42 001 - R54 000
09	R1 040 - R1 386	R4 501 - R6 000	R54 001 - R72 000
10	R1 387 - R1 848	R6 001 - R8 000	R72 001 - R96 000
11	R1 849 - R2 540	R8 001 - R11 000	R96 001 - R132 000
12	R2 541 - R3 695	R11 001 - R16 000	R132 001 - R192 000
13	R3 696 - R6 928	R16 001 - R30 000	R192 001 - R360 000
14	R6 929 OR MORE	R30 001 OR MORE	R360 001 OR MORE
15	DON'T KNOW	DON'T KNOW	DON'T KNOW
16	REFUSE	REFUSE	REFUSE

Household Income: remittances and expenditures

HOUSEHOLD INCOME SOURCES AND EXPENDITURE

Ask all households

8.9a	What are the sources of income for this household?	Yes	No
	Read all the options		
	1 = Salaries/wages/commission	1	2
	2 = Income from a business	1	2
	3 = Remittances (money/goods received from people living elsewhere)	1	2
	4 = Pensions	1	2
	5 = Grants (include old age grant here)	1	2
	6 = Sales of farming products and services	1	2
	7 = Other income sources e.g. rental income, interest	1	2
	8 = No income → Go to Q8.12	1	2
8.9b	Which one of the above income sources is the main source of income? *Write the option number in the block provided. If only one source of income write the code of that one source.*		
8.10	If the household receives an income from remittances, please specify approximately how much they receive per month? *If no income received from remittances write 0.*		
8.11	If the household receives an income from pensions (do not include income from old age grants), please specify approximately how much they receive per month? *If no income received from pensions write 0.*		
8.12	Which net household income per month in Rand would be the absolute minimum for your household? That is to say, that you would not able to make ends meet if you earned less.		

8.13	Is the total monthly income of your household higher, lower or more or less the same as the minimum income given above?	
	1 = Much higher	1
	2 = Higher	2
	3 = More or less the same	3
	4 = Lower	4
	5 = Much lower	5
8.14	What was the total household expenditure in the last month? *Include money spent on food, clothing, transport, rent and rates, alcohol and tobacco, school fees, entertainment and any other expenses.*	
	01 = R0	
	02 = R1 - R199	
	03 = R200 - R399	
	04 = R400 - R799	
	05 = R800 - R1 199	
	06 = R1 200 - R1 799	
	07 = R1 800 - R2 499	
	08 = R2 500 - R4 999	
	09 = R5 000 - R9 999	
	10 = R10 000 or more	
	11 = Do not know	
	12 = Refuse	

Remember: the GHS is a survey!

- The GHS is a survey, sampling around 33 000 households.
- It is not a census, and there is uncertainty about the true totals, proportions etc.
- These are expressed in standard errors or confidence intervals.
- I won't really emphasise this much and I assume you know this
  - If you don't, stop and make sure you do.
- I will use weights in making graphs- there are both person and household weights, which one you use depends on what question you're answering.
  - This is important in some situations but I will mostly gloss over now
  - I will use household weights when estimating household-level statistics
    - What % of hh survive only on social grants
  - And person weights when estimating individual-level statistics
    - What % of people are employed?

On to the GHS data

- I will create a dataset that merges the individual and household data.
- This means each row of the dataset will be a person, but they will also have the information about the household.
  - Eg: If I appeared in the data you would know that I am employed, my income sources and then **also** that I live with one other person in the household, who is married to me, we live in a flat etc.

Plan for the data work

1. Basic check on sample

2. Create individual and household incomes in the last month for 5 income sources

3. Add these together to get total household income and divide by hh size to get per person income

4. Calculate what decile a person is in, based on their income per person

5. Use this to show household income sources by decile (the graph I showed earlier)