



N.i.D.S.

NATIONAL INCOME DYNAMICS STUDY

Intra-household Decision Making & Development: Analysis of the NIDS Wave 1 Dataset

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1. Introduction

People make choices every day, and those choices affect their living standards and life outcomes. Recent research suggests that most people do not always make the best choices for themselves: As an example, it is widely recognized that most of us tend to succumb to short-term impulses at the expense of long-term interests (Benabou and Tirole, 2004). Most people don't save as much money as they ought to (especially not for old age), they spend more money on curative care than preventive care despite the fact that preventive care often is a more cost effective investment, and they procrastinate on economic and other choices in their life.

Much of what we know about household decision making comes from laboratory studies (by social psychologists or behavioral economists) and a few experimental studies on pension policies. Cross-sectional data has been used primarily to estimate the link between female income (as a share of total household income) and spending on certain goods, like child education and clothes, in its own right or as a proxy for female bargaining power within households. Attanasio and Lechene (2004) utilized the experimental design of the Progresa roll-out across different villages to identify an exogenous variation in the share of income of the wife and test its causal effect on the budget shares of expenditures on clothing for children of both genders and alcohol spending. They find that the effect of additional income to the wife on expenditures on clothing for boys is not significantly different from the effect on clothing for girls (Attanasio and Lechene, 2004).

Household composition and structures are rapidly changing in South Africa. Yet, we know surprisingly little about the intra-household dynamics underlying these choices. Exclusion from household decisions that affect members' daily life and future prospects could be an important form of marginalization that should be, but currently is not, well studied. This paper highlights a few, preliminary findings on decision-making and wellbeing in South Africa using the NIDS Wave 1 data. In an environment in which South African households are becoming smaller on average, and more adult South Africans are in charge of their own households, the NIDS Wave 1 data suggests that decision makers are on average more satisfied with their life than other adults in the household. They are, however, also more likely to experience emotional stress, like depression, and suffer from restless sleep. Intra-household decision power is delineated primarily on the basis of association to the head of the household. Level of education, and whether a person contributes financially to the households, may inform who a person lives with and is linked to, but only weakly, the decision-making power in the household.

1.1. Overview of the module

The National Income Dynamics Survey (NIDS) asked all adult respondents to identify the main decision maker in the household on day-to-day household expenditures (e.g. groceries); large unusual purchases such as appliances, vehicles or furniture; where children should go to school; who is allowed to live as part of the household; and where the household should live. For each question, the adult respondent was asked to name the main decision maker and, if decisions are taken jointly with others, the second most important decision maker. The adult survey was administered to all core adults within the household. To analyze the data, these responses must be linked to the correct individuals within the household. Thus, if the head of the household identifies himself and his partner as the main decision-makers on where the household should live, both he and his partner should be assigned to be decision makers. Because more than one adult in the household was asked these questions, it is possible to get inconsistent answers across different respondents within the same household. It is also possible that a person indicated that she is not a decision maker but other members of the household disagree and mention her as a decision maker. Personal perceptions of intra-household decision power may differ across the household.

Based on a similar module on decision making in the KwaZulu-Natal Income Dynamics Survey (KIDS), Gumede (2006) compares consumption patterns across households that take decisions jointly, consistently identifies a single, main decision-makers across all interviewed respondents within the household, and households where members provide inconsistent answers across members within the same household, and finds that differences in how households reach decisions have a statistically significant effect on consumption behaviour. Specifically, households where members take decisions jointly spend a larger share of their consumption on items that benefit all household members (like housing and household goods like refrigerators and electronic compliances, clothing, and insurance) whereas households with a single decision-maker or households with inconsistent answers on decision-makers spend more on personal goods, like tobacco, alcohol, and entertainment and transportation.

The NIDS module places less emphasis on whether decisions were taken *jointly* by household members, or in a less coordinated manner. As such, it is not possible to reach a similar distinction between households who take decisions jointly and households who disagree on who takes decisions. We discuss this in more details below.

1.2. Research questions

This report seeks to answer the following questions:

- Who are the “decision-makers” in South Africa?
- What might we be measuring with the data on decision making?
- What more can we learn about decision-making, wellbeing and marginalization in South Africa from future NIDS waves?

There are several reasons why statistics on cross sectional data on intra-household decision making may not constitute evidence on internal bargaining processes and capacities. The first one is that we know very little about the best way to collect data on decision processes. Very few household surveys collect this information. The NIDS adopted a module that was utilized in a large survey in Mexico, and later replicated in the second module of the KIDS panel dataset.

Secondly, even if we observe an association between such things as decision making characteristics and poverty, it is not clear whether decision-making caused poverty, or the other way around. In fact, it might also be that poverty and decision-making are not linked at all and the association comes entirely from the size of the household. If larger households are more likely to be poorer and also tend to make decisions in a certain way, cross sectional data would show an association between these measures. Because of its longitudinal nature, future NIDS waves will help establish whether there is a causal link between decision-making and other measures of wellbeing and development.

2. South African households

South African households are becoming smaller. A decade ago, the average household was home to 4.6 members (1996 Census, Stats SA). This had dropped to 3.9 individuals in the 2001 Census and the 2006 Community Survey. The NIDS households house an average of only 3.5 residents, which is statistically significantly different from the 2001 Census and Community Survey averages. The smaller household sizes are seen across the 9 provinces: Households in the Eastern Cape have fallen below 4 persons per household on average; households in Gauteng are smaller than 3 persons on average, and in Limpopo, the average household size has declined by more than half a member on average since the 2001 Census and the Community Survey. Households in informal rural settlements or in tribal areas are larger on average (around 4.5 members), while urban formal households have an average of 3.1 members and urban informal households house 3.7 members.

Table 1: Average household size (number of residents) across Provinces, NIDS data set

	Eastern Cape	Free State	Gauteng	KZN	Limpopo	Mpumalanga	North West	Northern Cape	Western Cape	Total
Census 1996	4.9	4.2	3.9	5.3	5.3	4.9	4.6	4.9	4.1	4.6
Census 2001	4.2	3.6	3.2	4.4	4.3	4.1	3.7	3.9	3.7	3.9
CS 2006	4.1	3.5	3.3	4.6	4.3	3.9	3.7	4.0	3.8	3.9
NIDS	3.8*	3.5	2.9*	4.4	3.7*	3.6*	3.4*	3.6	3.5	3.5*

Note: A star reflects a statistically significant change (drop) in average household size.

One in three households only has a single adult household member, and more than half of the population live in households with two or fewer adults, aged 18 years or above. Only 10 percent of South African households have 8 or more members. In the 1993 Project on Living Standards Survey, 16 percent of all households were single-person households, and 72 percent of all South African lived in households with more than 2 adults (own calculations, SALDRU data). As the average size of households decline and the number of households increase, more adult South Africans become household heads, absent heads, or a spouse or partner of a head. A total of 63 percent of all adults fall within these three categories. Adult sons and daughters make up another 22 percent of the adult population aged 18 years or more. Only 16 percent of South African adults, aged 18 years or above, live in households that they do not head or are the immediate spouse or partner of the head or a child of the head. As we shall see below, this is directly associated with more decision power as most household decisions are taken by the head and his/her partner or spouse.

Table 2: Female headed households across race, hh composition

	Africans	Coloured	Indian/Asian	Whites	Total
Average hhsizes	3.7	3.8	3.7	2.6	3.5
% hh have 1 member	21.7	9.4	7.4	16.7	19.1
% hh with one adult member	35.9	18.6	20.4	25.1	33.5
% female head, average	43.7	32.6	23.0	26.2	39.5
% female head, >1 member	50.5	32.4	21.5	23.0	43.5
% female head, one adult only	42.5	57.8	49.9	46.8	42.7
% age 18+ not head, partner, child	18	11	16	8	16

Female headship has become more common across all races than in 1993. Households with more than one member are as often headed by a female than a male amongst Africans. This is the case for only one in three Coloured households and less than one in four Indian/Asian and White households. In 1993, 32 percent of African households were headed by a female, and 23 percent of Coloured households, 14 percent of Indian households and 8 percent of White households had female heads.

3. Decision makers

South African decision makers – on issues of food and other purchases, household composition, location of household and schooling – are women, heads or the immediate spouse or partner of the head of the household. Across the range of decisions, three out of five decision makers are women (if households are larger than a single member). Age, years of education and whether a person can contribute financially to the household, may determine the kind of household and members that a person settles down with but have a much weaker association with intra-household decision power within a given household. Based on the NIDS Wave 1 data, it appears that intra-household decision power is delineated primarily on the basis of association to the head of the household. The Old Age pension grant however does not have such an effect. This might be explained by the fact that most adults of pension eligible age already are decision makers through their status as head or partner or spouse.

Most households identify the same decision-maker(s) across the five questions. The one exception is schooling where 29 percent of households indicated that the decision was taken by an individual outside of the household. The respondents could also identify a second decision-maker who would take decisions jointly with the primary decision maker, or indicate that the primary decision maker takes decisions unilaterally.

Table 3: OLS estimation of the probability of being a decision maker on issues of food purchases, larger and more unusual purchases, where to live, who lives in the household and schooling, all adults aged 18 years or older.

	Dec. maker on food purchases	Dec maker on larger purchases	Dec. maker on who to live in hh	Dec. maker on where to live	Dec. maker on schooling
R	45.3	32.9	46.2	46.2	13.9
obs	13306	13306	13306	13306	13306
Head of hh	0.557 [48.20]	0.597 [38.47]	0.611 [51.07]	0.617 [51.31]	0.158 [2.30]
Spouse or partner of head	0.471 [33.69]	0.49 [26.07]	0.479 [33.13]	0.471 [32.4]	-0.076 [-0.91]
Child of head	-0.077 [-6.71]	-0.065 [-4.20]	-0.062 [-5.21]	-0.074 [-6.21]	0.342 [4.99]
Male	-0.091 [-10.54]	-0.033 [-2.83]	-0.046 [-5.17]	-0.041 [-4.57]	-0.291 [-5.66]
Years of education	0.003 [3.52]	0.007 [6.22]	0.004 [4.72]	0.005 [5.83]	-0.043 [-9.16]
Age in years	0.004 [11.22]	0.005 [11.79]	0.004 [12.87]	0.004 [13.06]	-0.008 [-4.26]
Receives remittance	0.034 [3.15]	0.028 [1.92]	0 [0.00]	0.003 [0.24]	-0.051 [-0.78]
Receives CS grant	0.027 [3.04]	0.043 [3.58]	0.01 [1.12]	0.012 [1.31]	0.786 [14.67]
Is employed	0.07 [9.38]	0.89 [8.90]	0.061 [7.91]	0.067 [8.63]	0.044 [1.00]
Receives OAP	-0.031 [-2.23]	-0.057 [-2.99]	-0.031 [-2.10]	-0.017 [-1.17]	0.448 [0.36]
Controls	X	X	X	X	X

Decision-makers are more likely to be satisfied with their life as a whole compared to other members of the household (measured as the likelihood of answering 8, 9, 10 on a scale from 1-10 of how satisfied are you with your life as a whole right now). On average, one in four decision makers answered that they were satisfied with life, compared to 20 percent for non-decision-makers. Despite their greater satisfaction with their life at present, decision-makers also experience more emotional stress than non-decision makers. They are more likely to report feeling depressed or fearful and suffer from restless sleep. Non-decision makers are more likely to feel happy but they are also more likely to feel lonely. It is possible that this association might be driven by the age

difference between decision makers (average 43 years old) and non decision-makers (average 29 years old).

Table 4: Percent of adults who reported feeling the following emotions, across decision makers and others

	Decision-makers	Non decision-makers
Satisfied with life: 8,9 or 10 on a scale of 10	25.3*	20.4
Feel depressed, more than rarely	50.3*	45.6
Feel that everything is an effort, more than rarely	56.8	55.2
Feel hopeful about the future, more than rarely	74.9	73.9
Feel fearful, more than rarely	45.1*	41.6
Feel happy, more than rarely	51.8	55.1*
Feel lonely, more than rarely	40.1	44.0*
Sleep is restless, more than rarely	0.06*	0.05

Note: a star reflects a statistically significant difference between decision makers and other in their responses. No other controls were included.

4. Household coordination and wellbeing

Female headed households are more likely than male headed households to report having only a single decision-maker. In three out of five female headed households, members consistently point out a single decision maker as the primary decision maker. One in two male headed households share decision-making between its members (in that way that members answered consistently in interviews), usually the head and his partner/ spouse. Only 17 percent of female headed households take decision jointly. This is partly because female headed households are made up of more children, including grandchildren (8 percent of all adult members) and children of the head (37 percent of all adult members), while male headed household are more likely to include a spouse or a partner and have fewer children (only 22 percent of adult members) and grandchildren (3 percent of adult members) in the household. On average, female heads are 47 years old, compared to a mean of 43 years for males. The average age of all other household members is 18 years for female headed households and 22 years for male headed households.

One in three male headed households and one in four female headed gave inconsistent responses across household members on who the main decision makers are. These households tend to be larger. African households are more likely to have a single decision maker, while Coloured and White households tend to take decisions jointly. Indian/Asian households have the highest probability of providing inconsistent answers across the household members.

Table 5: Decision-making: Single decision makers, jointly or disagreement

	Single	Jointly	Disagree
Male-headed	20.2	46.4	33.7
Female-headed	58.9	17.3	25.6
Household size*	4.4	4.4	5.3
Poorest 20%	45.2	29.7	26.6
Poorest 40%	42.8	30.3	28.2
Africans	39.1	34.5	26.5
Coloured	25.1	43.6	32.0
Indian/Asian	30.2	32.4	37.5
Whites	18.2	62.0	20.5

Note: These are larger than the national averages because only households with more than one member were included in the analysis

Households with a single decision maker are substantially more likely to fall within the poorest 20 percent, or poorest 40 percent, of households. This might partly reflect the fact that larger households are more likely to be headed by a single decision-maker, and that female headed households are more likely than male headed households to fall within the lowest income per capita deciles.

Consistent with findings from the KIDS dataset, households with inconsistent decision-making responses spend a larger fraction of their total expenditures on personal items (such as cigarettes, alcohol, entertainment, haircuts, lotto and jewellery). Those households who take decisions jointly spend on average more on insurance.

Table 6: Share of expenditures on items, across different decision making models

% Expenditure	Household has a single decision maker	Two household members take decisions jointly	Inconsistent responses on decision makers
Personal items	8.6	10.5	11.1
Transport	6.1	9.5	9.4
Insurance	3.8	4.1	3.4
Household items	2.7	2.6	3.0
Clothes	2.6	3.1	3.1
Medical expenses	1.9	4.0	3.8
Education	9.1	5.7	8.5
Food	51.8	46.6	45.6

5. Discussion of measurements

As illustrated above, the NIDS Wave 1 data provides a “snapshot” of adult respondents’ perceptions of decision making within the household. Is it done jointly amongst household members? Or is there just one decision maker? Is it the same person or different people who decide on things such as food, large purchases, where to live, who to live with and where to send children to school? Do adults agree on who make decisions?

We control for the possibility that some households, and not others, provided consistent answers across members on questions on decision making because fewer members were interviewed or other members were present under the interview. The household models of decision making is therefore based solely on responses from households where more than 1 adult participated in the survey and where none of the respondents received any help or had any other household member listening to their interview.

Differences in decision making process across households appear to be the product of cultural differences (e.g. Africans are more likely to have a single decision maker, while Coloured and White households tend to take decisions jointly). Size matters too. Large households are more likely to provide inconsistent responses on decision making. Household composition plays a role in the way female and male headed households differ in how they manage intra-household decision making.

Further research would be required to assess the extent to which intra-household decision power reflects a form of social capital or “freedom” that is related to improved wellbeing and happiness.

6. Conclusion and future research questions

The NIDS Wave 1 data shows that South African households are becoming smaller on average. Compared to a decade ago, the average South African household has declined by a full household member to consist of 3.5 members from 4.6 in the 1996 census. This is consistent with the trend observed in the 2001 Census and the Community Survey. Most South Africans live in households with two or fewer adult members. Extended family households are becoming fewer. Only 16 percent of South African adults, aged 18 years or above, live in households that they do not head or are the immediate spouse or partner of the head or a child of the head.

Proximity to the head (being a head or a partner or a spouse) is the predominant way in which intra-household decision power is distributed. Young adults have very limited decision power (on the particular questions of focus in the NIDS Questionnaire). Having a job, or receiving a child support grant, helps strengthen a member's intra-household decision power but it falls short of making up for the lack of proximity to the head.

More and smaller households translate into more decision makers. The NIDS Wave 1 data suggests that decision makers on average are more satisfied with life "on a whole right now" than other adults in the household. This comes at a cost. Decision makers are on average also more likely to suffer from emotional stress, including feeling depressed, fearful and suffering from restless sleep. Further research will be needed to assess the extent to which intra-household decision power reflects a form of social capital or "freedom" that is related to improved wellbeing and happiness.

Through its panel structure, future NIDS waves will provide an opportunity to track households over time and gain a better understanding of the intertemporal dynamics underlying current transformations of South Africa households. As an example, it will help us to link changes in the external environment (such as negative and positive shocks, including policy initiatives) to internal decision-making processes and measures of marginalization within households; as well as measures of intra-household bargaining power to intertemporal changes in the life trajectories of individual members of the household. To what extent does intra-household decision power remain fixed or change over time? Do variations in job status or education background over time translate into changes in intra-household decision power?

References

- Bourguignon, F., Browning, M., Chiappori, P.-A., and Lechene, V. (1993). "Intra-Household Allocation of Consumption: A Model and Preliminary Evidence," *Annales d'Economie et de Statistique*.
- Browning, M. (1995). "Saving and the Intra-Household Allocation of Income," *Ricerche Economiche* 48, 277-292.
- Browning, M., Bourguignon, F., Chiappori, P.-A., and Lechene, V. (1994). "Incomes and Outcomes: A Structural Model of Intra-Household Allocation," *Journal of Political Economy* 102(6), 1067-1096.
- Gumede, K. (2006) "Decision Making and Wellbeing." Unpublished paper.
- Lundberg, S., Pollak, R., and Wales, T. (1997). "Do Husbands and Wives Pool Their Resources? Evidence from the UK Child Benefit," *Journal of Human Resources* 32(3), 463-480.
- Phipps, S., and Burton, P. (1998). "What's Mine Is Yours? The Influence of Male and Female Income on Patterns of Household Expenditure," *Economica* 65(260), 599-613.
- Schultz, T. (1990). "Testing the Neoclassical Model of Family Labour Supply and Fertility," *Journal of Human Resources* 25(4), 599-634.
- Thomas, D. (1990). "Intra-Household Allocation: An Inferential Approach," *Journal of Human Resources* 25(4), 635-664.
- Ward-Batts, J. (2000). "Out of the Wallet and into the Purse: Modeling Family Expenditures to Test Income Pooling," Population Studies Center, University of Michigan, Report 01-466.