

Intra-household Expenditures and Transfers: Evidence From a Choice Experiment in Rural Tanzania*

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January 2018

Abstract

We contribute new evidence on the effects of cash transfers, in particular about to whom and how external cash transfers should be delivered. We use a choice experiment on expenditure choices with external cash transfers in rural Tanzania with 678 couples. Each spouse makes expenditure choices for the household, distributing the external cash transfer between household members and whether or not this additional money is disclosed to the respondent's spouse is randomized. We combine the experimental data with survey data on intra-household transfers to see how these influence expenditure choices. We find women spend more on children while men transfer more to their spouse. We find disclosure of an external cash transfer increases the amount women choose to spend on their spouses, but it does not influence their expenditures on children. Disclosure of an external cash transfer does not change men's expenditure choices. Furthermore, the interaction of an intra-household transfer and the disclosure of an external transfer increase women's expenditure on children. These findings suggest that intra-household transfers and information distribution should be considered in external cash transfer programs.

1. Introduction

Cash transfer programs have become one of the most common poverty alleviation methods in development programs by governments and NGOs, especially for the rural populations. Reviews of cash transfer programs can be found in Adato and Hoddinott (2007), Rawlings and Rubio (2005), and Yoong (2012). The most common outcomes within this literature aim at improving

*Acknowledgments: We are grateful to Simon Sichalwe and the team of enumerators in Tanzania for their support during the fieldwork, and to MITU-NIMR for institutional support. We acknowledge the financial support of the ESRC-DFID grant ES/N014618/1. D'Exelle: University of East Anglia, UK; Ignowski: KU Leuven, Belgium; emails: B.DExelle@uea.ac.uk and liz.ignowski@kuleuven.be

education and health for children (Akresh et al., 2016; Baird et al., 2011; Benhassine et al., 2013; Paxson and Schady, 2010; Rawlings and Rubio, 2005; Sebastian et al., 2016) but there are a wide variety of other outcome options as well. If the outcome is not aimed toward children, then often the goal is to improve household welfare (Aker et al., 2011; Haushofer and Shapiro, 2016). However, the outcome goal of cash transfer programs can also be as specific as lowering HIV risks like in De Walque et al. (2012). These are only a handful of the outcome possibilities when using a cash transfer program which is why they are such a powerful tool for poverty reduction.

The numerous implementation strategies and desired outcomes of cash transfer programs, while mostly positive, have also been met with mixed results. Policymakers are still in need of better evidence for the best implementation process for cash transfer programs. The two main design factors for these programs that are often considered are the ‘who’ (who in the household receives the transfer) and the ‘how’ (cash, credit, or mobile money distributed in public or private).¹ While these are crucial aspects to influence the outcome, we think there is another variable that has been overlooked in the research that may influence the effectiveness of the ‘who’ and ‘how’. This variable is intra-household transfers, the way money moves within these households.

Intra-household transfers in the developing world are common because usually income is sporadic or only earned by one household member and then distributed to others. In Cox and Jimenez (1990), the authors noted how important it would be for policy to consider private transfers within households, yet the cash transfer literature has not included this. Taking into consideration how money moves within households, along with including the ‘who’ and the ‘how’, could better direct cash transfer programs therefore improving outcomes in a more cost effective way.

The question of who should receive transfers seemed to be answered after a number papers concluded that money in control by women tends to benefit the children more (and therefore the growth of the next generation) than money in control by men (Thomas, 1990, 1993; Haddad et al., 1997; Duflo, 2003; Duflo and Udry, 2004; Lundberg et al., 1997; Hoddinott and Haddad, 1995). The early cash transfer programs began in Latin America and gained momentum quickly. These large scale programs usually gave the transfers to the mother in the household.² This result led to many programs and projects in the developing world to focus on aiming resources

¹Another important design choice in cash transfer programs is whether it is conditional, in which the transfer is only paid upon completion of certain task or outcome, or unconditional, in which the transfer is paid no matter what. Our study does not distinguish between these two but our literature review includes evidence from both kinds of programs.

²A few examples of these programs are PROGRESA in Mexico, Bolsa familia in Brazil, Bono de Desarrollo Humano in Ecuador and Familias en Accin in Colombia.

(namely transfers) to mothers. However, more recent studies have not found the same gender result. Haushofer and Shapiro (2016) and Benhassine et al. (2013) both find no differences in outcomes when unconditional cash transfers are made to the husband or the wife.³ Additionally, other studies have started identifying other factors that are influencing how external cash transfer programs impact children. For example, Doepke and Tertilt (2014) create a noncooperative model and, using data from PROGRESA, show that transfers to women can help or hurt economic growth depending on production functions. Akresh et al. (2016) show children benefit from conditional transfers in Burkina Faso but there is only a minor difference between randomly assigned treatments of who received the transfer, the mother or father. Sebastian et al. (2016) studied conditional transfers in Lesotho and concluded that it is the structure of the household and its labor and time constraints that determine the effects of the transfer, not the preferences (or gender) of the recipient. The literature has thus far shown that mothers' decisions for children are important but there may be other factors than just the 'who' influencing the outcomes as well.

How external cash transfers are distributed is equally as important as to whom they are distributed. When we discuss the 'how', we are referring to both the form of the actual transfer and the method. Programs have given cash, access to credit, and mobile money transfers and usually these programs were public knowledge to the household and often to the entire village. When additional income is public knowledge the recipient can face strong social pressure. Using an experiment, Jakiela and Ozier (2015) find that women in Kenya change their choices if they know their income will be publicized, many even choosing to pay in order keep their income private, due to the high social pressure to distribute money among relatives and friends, otherwise known as the "kin tax". Almås et al. (2015) matched data from a lab in the field choice experiment with data from a conditional cash transfer program in which the transfer recipient was randomized between the husband and wife. They showed that women would rather be the transfer recipient for a lower amount than have their husband be the transfer recipient. Baland et al. (2011) found women in Cameroon applied for loans even when they had a savings account in order to signal they do not have money and therefore do not have the social pressure to distribute their savings. Goldberg (2010) and di Falco and Bulte (2011) both also found that public distribution of money and strong social networks lead to more sharing. Sometimes the form of the transfer inherently helps with the method such as in Aker et al. (2011). They found that mobile money transfers in Niger, which allowed for more privacy, led to the households having increased diet diversity and purchasing more diverse set of goods than those who were given a cash transfer in person.

³The outcome in Haushofer and Shapiro (2016) was household consumption and the outcome in Benhassine et al. (2013) was child education. In both studies the transfers were unconditional.

It also led to households growing more cash crops that tend to be grown by women.

Additionally, while external cash transfers are a cost effective method to aid in poverty reduction, programs need to consider secondary outcomes that may arise from such programs and include some measures that may not seem obvious. Some examples from the literature include studies from Mexico. Using PROGRESA data, Tommasi (2016) concluded that transfers can increase disagreements between spouses which perpetuate inefficient allocation of resources. Also from Mexico, using Mexican Oportunidades data, Bobonis et al. (2013) concludes that women who receive a transfer are less likely to experience physical abuse but more likely to experience emotional abuse and threats to violence. These threats allow the husbands to receive transfers from their wives who have received money from the program. This evidence suggests that privacy could improve the outcomes of some transfer programs.

Lastly, we also study intra-household transfers because we feel this is an under researched variable but can add valuable data on household dynamics. Intra-household transfers, transfers between members in the same household (and in our case spouses), are difficult to measure given that most surveys are collected on the household level and not looking within households. Some researchers have started modeling transfers between spouses but we have not seen any empirical evidence. Rasul (2008), who tested a model for household bargaining which included transfers between spouses, stated "reliable data on transfers between spouses however remains relatively scarce in nearly all household surveys" and did not use empirical data for these transfers. Doepke and Tertilt (2014) also modeled transfers between spouses, stating "in reality voluntary transfers between spouses are frequently observed", but in their empirical analysis they only included the transfers from the PROGRESA program. Other than these papers, there is little literature about transfers between spouses but we think these play an important role in household dynamics and therefore household outcomes.

In sum, we have seen that the older literature show that mother's should control income to benefit their children more which led to a number of programs focusing resources to mother's. However, more recent literature has found mixed results of this gender result. Furthermore, the literature on external transfers has shown evidence that women would prefer cash transfers to be undisclosed to others due to the social pressure they face to share there transfers. Lastly, intra-household transfers are extremely common but lacking in empirical evidence on how they influence household dynamics. This leads us to an under researched area of how disclosure and intra-household transfers, transfers given within a household, influence the outcomes of external transfer programs which is what we are analyzing in this paper.

For this, we conducted a survey with 701 couples from 30 rural villages in Tanzania. We interviewed both spouses separately, which is a special aspect to this data. This data set has

information on intra-household transfers given and received as reported by both spouses separately. This together with an expenditure choice experiment completed by both spouses give us insight into how real intra-households transfers influence expenditure choices. Our experiment includes a randomization of whether or not the expenditure choices made would be disclosed to the respondent's spouse, which allows us to explore how expenditure choices change with disclosure.

We find women choose to spend more on children while men transfer more to their spouse. The disclosure of an external cash transfer increases the amount women choose to spend on their spouses, while it leaves men's expenditure choices unchanged. Additionally, we find disclosure of an external cash transfer increases expenditures on spouses, but it does not influence expenditures on children. Also, the interaction of an intra-household transfer and the disclosure of an external transfer increase women's expenditure on children.

The rest of the paper is structured as follows. Section 2 explains our data, Section 3 presents our results and Section 4 concludes.

2. Data

Our main outcome of interest is the result of a choice experiment completed during the survey in which we are able to exploit the random allocation of the treatment (whether or not expenditure choices are disclosed to the respondent's spouse). Data collection for this analysis occurred in the Misungwi district in the Mwanza region of Tanzania between May and September 2017 in 30 hamlets.⁴ Selection of the hamlets occurred by multistage cluster sampling at the different administrative levels. From this district, eight wards were randomly selected, then from each selected ward two villages were randomly selected and finally two hamlets per village.⁵ Our sample includes married couples in which the wife had has at least one living child. The women of the couple needed to be younger than 40 years old.⁶ In the case of polygamous couples which is not uncommon in this region, only one wife of the husband was randomly chosen to be interviewed. 98% of the respondents in our sample belong to the Sukuma tribe. Our final sample includes 701 couples, some have missing decision data which leaves us with 678 couples.⁷

⁴Also known as sub-villages. These are the lowest administrative level.

⁵2 of the 32 hamlets selected were used for piloting and not included in final sample.

⁶This information was collected during the census by the hamlet leader which may have led to some inaccuracies here.

⁷We have 679 women, one man is missing his age, therefore not included in the analysis.

Table 1: Individual Socio-economic Characteristics

	<u>MEN</u>			<u>WOMEN</u>			T-test
	count	mean	sd	count	mean	sd	p-value
Age	678	36.91	10.68	678	30.45	9.10	0.000***
Age of Marriage	677	25.37	6.80	642	19.24	4.75	0.000***
From Village	678	72%	0.45	678	28%	0.45	0.000***
Education	678	5.00	2.76	678	4.66	2.95	0.030**
Income	678	648,917	1,351,052	678	310,894	790,958	0.000***
Family Paid Bride Price	678	79%	0.41	678	73%	0.44	0.011**
Bride Price Amt	527	757,884	621,150	469	781,490	778,678	0.395

P-value refers to a paired t-test between spouses. The lower sample size in Age of Marriage for women is due to women not knowing their age at marriage.

2.1. Expenditure Exercise

The expenditure choice experiment is a unique aspect to this analysis. During the survey each respondent was presented with an experimental situation in which they would receive 200,000 TZS.⁸ This amount of money was represented with 20 cardboard counters, each representing 10,000 TZS. First, the participants were asked if given this money, would they tell their spouse and if they thought their spouse would tell them if their spouse received this money. Then the enumerator put three sheets in front of the respondent (on a table, a bench or the floor), each representing one category (their children, them self and their spouse). The respondent was asked to divide the 20 counters between the three options according to their expenditure, by putting them on the respective sheets. This exercise was done twice, once telling the participant that this additional income was disclosed to their spouse and once telling the participant that this additional income was not disclosed to their spouse. The order of these two scenarios was randomized. Due to the fact that this was done with 20 counters, the results of our analysis will be measured by counter which can then be interpreted into a monetary amount.

2.2. Descriptives

From Table 1 we see that within our sample, in general, the wives are on average six years younger than their husbands. The average age of marriage for this sample is 19 years for women and 25 for men. In this region it is not uncommon for women to be married and childbearing in their teenage years. The Sukuma culture is a patrilineal one therefore it is tradition for a wife to move where her husband lives once they are married. Therefore only 28% of women are from the village they are living in compared to 72% of men. Primary school attendance has continued to increase since tuition fees were stopped in 2002 but families must pay for uniforms and supplies.

⁸approximately 90 USD

As seen in Table 1, men have on average 5 years of education while women have 4.66. Also, men tend to earn over double of women, 648,917 TZS to 310,894 TZS.⁹

An uncommon but culturally appropriate variable that is included in our analysis is that of the bride price. The tradition of bride price is a very common occurrence in Tanzania. This tradition is the payment from the soon-to-be husband to the family of the wife which is to help cover the loss of labor from the wife moving away. The bride price is negotiated between families and nowadays is more a reflection of the family (their income, position and respect within their village, etc.) than the bride. The gender norms are so strong in the Sukuma culture and it is very much the woman's responsibility to take care of the children that we feel that bride price could influence the expenditure choices on the children. For example, a man may feel that because he paid a bride price that he should not have to spend as much on the children, his wife should take care of them. Or a woman who knows her husband paid a large bride price choose to give her spouse more therefore taking away from her children. It is unclear which direction this variable will go but we feel it is important to control for this.

3. Results

We now move onto the results of our data. We will first have a deeper look at the descriptives of the areas we are most interested in which are the expenditure choices of the respondents and explore these by different characteristics such as gender and disclosure.

3.1. Expenditures

As mentioned earlier, each person made the expenditure choice twice, however to ensure the exogeneity of our results we will only use the first decision made by each respondent. In the following sections we evaluate the choices looking at differences in gender, disclosure and real intra-household transfers.

3.1.1. Gender

First, we look at the expenditure choices by gender. In Table 2 we see there are statistically different results across all three choices. Women spend more on the children and themselves while men spend the most on their spouse and the least on children. These results confirm the traditional spending pattern that has been known in many parts of the developing world. It is

⁹In order for a smoother interpretation of our analysis, in all regressions the income of men and women will be divided by 100,000 TZS.

the responsibility of the women to care for the children and women tend to get income from their husband.

Table 2: Expenditures by Gender

	Men	Women	
	mean	mean	p-value
Exp for Children	5.7	7.4	0.00***
Exp for Spouse	7.3	4.6	0.00***
Exp for Self	7.0	8.0	0.00***

Notes. n=678. Paired t-test. ***, **, * indicate significance levels at 1, 5, and 10 %, respectively.

3.1.2. Disclosure

As mentioned in the explanation of the expenditure exercise, we randomly varied whether the external transfer in the experiment is disclosed to the respondent’s spouse. The concept of disclosure is included in our analysis because, as mentioned in the literature section, it is not uncommon for people in developing countries to attempt to hide income due to the high social pressures to share. We feel this is important to explore because we are assuming that people will behave differently based on if their choice will be disclosed or not to their spouse.

Table 3: Disclosure Effect by Gender

	Men			Women		
	<u>Disclosed</u>	<u>Undisclosed</u>	p-value	<u>Disclosed</u>	<u>Undisclosed</u>	p-value
	mean	mean		mean	mean	
Exp for Children	5.5	5.9	0.18	7.4	7.5	0.63
Exp for Spouse	7.4	7.2	0.39	5.1	4.1	0.000***
Exp for Self	7.0	6.9	0.76	7.6	8.4	0.002***

Notes. n=678. Unpaired t-test. These are the first decisions and the order of disclosed and undisclosed expenditures was randomized. ***, **, * indicate significance levels at 1, 5, and 10 %, respectively.

Table 3 shows us the results of a t-test that looks at the effect of disclosure on choices by men and women. We see that male expenditures do not change if the external transfer is disclosed to their wife or not. The choices of the wife, in contrast, do change in terms of expenditures for themselves or their husband depending on disclosure. We also see that female expenditure choices for children do not depend on disclosure.

3.1.3. Intra-Household Transfers

As mentioned earlier, intra-household transfers among spouses are not uncommon in developing countries. We also think they are an important factor to consider when designing an external

transfer program as outside money could influence intra-household transfers. For example, a husband may decrease the transfer to his wife if he knows she received an external transfer. This would take away from the desired outcome of the external transfer program and lead to underestimated results. Also, real transfers, captured by our survey data, may have heterogeneous effects on the choices made in the experiment. If women give too much to their spouse in the choice experiment, this could signal that she has more resources and could hurt the transfers she receives.

Table 4 shows the prevalence of intra-household transfers in our sample as reported by the husbands and wives and the average amount of these transfers. 87% of men say they give transfers to their wife and 62% of women say they have received transfers from their husbands. Since many women do not earn income (21% in our sample) then transfers from their husbands are used to buy items for the household, for example food or items for the children. The most common type of transfer is from husbands to wives but men also receive transfers from some women who do earn income.

Table 4: Intra-Household Transfers

	Men	Women
% Give Transfer	87%	17%
Avg Amt Given	68,025 TZS	60,957 TZS
% Receive Transfer	21%	62%
Avg Amt Received	26,742 TZS	176,066 TZS
<i>Avg Differences Btw Spouses</i>		
Transfer H to W	-49,913 TZS***	
Transfer W to H		4,997 TZS**

Average amounts given and received are calculated by excluding those who said they did not give or receive those transfers. For the average differences between spouses, those missing transfer data were changed to zero in order to capture all discordant reporting. *** indicates a paired t-test performed on the difference in transfer amounts reported. There was no statistical difference on transfer amounts reported from wife to husband.

Table 4 also shows a bit of discordance between what men report they give their wife and what the wives say they receive, 68,025 TZS versus 176,066 TZS with the average difference being 49,913 TZS.¹⁰ The concept of transfers is a complex one and there are most likely recall differences depending on if transfers were given or received. This is why for our main analysis we will use the participant's response about transfers when looking at their expenditure choices for their family. When looking at the man's expenditure on their children, we will use his response about transfers, not his wife's and vice versa. We do use the opposite spouse's response about transfer as a robustness test.

¹⁰In order for a smoother interpretation of our analysis, in all regressions the amount of transfers will be divided by 10,000 TZS.

Next, we study correlations of the expenditure choices of the spouses and the amount of the intra-household transfer. Since the most common transfer is from husband to wife, this is the relationship we will explore with the correlations. We see some evidence of the link between the participant’s choices in the expenditure exercise and the intra-household transfers they give or receive in Tables 5 and 6.

Table 5: Correlation of Transfer Amount and Expenditure Choices

	<u>Exp Children</u>		<u>Exp Spouse</u>	
	<i>Corr Coef.</i>	<i>Pvalue</i>	<i>Corr Coef.</i>	<i>Pvalue</i>
Male	-0.004	<i>0.925</i>	0.048	<i>0.215</i>
<i>[Transfers Reported By Spouse]</i>	-0.050	<i>0.192</i>	-0.038	<i>0.319</i>
Female	0.072*	<i>0.059</i>	0.038	<i>0.322</i>
<i>[Transfers Reported By Spouse]</i>	0.047	<i>0.217</i>	-0.063*	<i>0.098</i>

n=678 Note: Transfers refer to males giving transfers and females receiving transfers.

In Table 5 we see that the larger the transfer the woman receives, the more she chooses to spend on the children. When using the transfer amount as reported by the men we see that women give less to their spouse when they receive a larger transfer from their husband. These results are not that surprising given the difficulties in measuring transfers but they do give some interesting insight to the perspectives of giving and receiving transfers by men and women.

Table 6: Correlation of Transfer Amount and Expenditure Choices by Disclosure

	<u>Exp Children</u>				<u>Exp Spouse</u>			
	<u>Disclosed</u>		<u>Undisclosed</u>		<u>Disclosed</u>		<u>Undisclosed</u>	
	<i>Corr Coef.</i>	<i>Pvalue</i>	<i>Corr Coef.</i>	<i>Pvalue</i>	<i>Corr Coef.</i>	<i>Pvalue</i>	<i>Corr Coef.</i>	<i>Pvalue</i>
Male	0.020	<i>0.715</i>	-0.025	<i>0.648</i>	0.035	<i>0.511</i>	0.060	<i>0.273</i>
<i>[Transfers Reported By Spouse]</i>	-0.043	<i>0.427</i>	-0.064	<i>0.243</i>	-0.003	<i>0.951</i>	-0.109**	<i>0.047</i>
Female	0.038	<i>0.473</i>	0.137**	<i>0.013</i>	0.066	<i>0.221</i>	-0.008	<i>0.887</i>
<i>[Transfers Reported By Spouse]</i>	0.117**	<i>0.029</i>	-0.017	<i>0.756</i>	-0.089*	<i>0.098</i>	-0.044	<i>0.422</i>

n=678 Note: Transfers refer to males giving transfers and females receiving transfers.

Then in Table 6, we break this down by disclosure and women giving more to their children only holds true when the external cash transfer is undisclosed to the husband. This means, the larger the transfer a woman receives from her husband, the more she chooses to give her children only if the husband does not know about the additional external cash transfer. When using the transfer amount as reported by the men we see that women give more to their children and less to their spouse with a larger transfer when the external cash transfer is disclosed. Men also give less to their spouse with a larger transfer (as reported by the women) when the external cash transfer is undisclosed.

Our preliminary analysis shows that both disclosure and real intra-household transfers seem

to influence the expenditure choices made from an external cash transfer. In the next section we look at this further with regression analyses.

3.2. Regressions

We continue our analysis with regressions exploring the relationship between who receives the external transfer, how it is received (disclosed or undisclosed), and intra-household transfers.

3.2.1. Gender and Disclosure

First we explore the effect of gender and disclosure on expenditure choices. Table 7 shows an OLS model for Equation 1, the expenditure choices for children and spouses. F_i and D_i are binary variables for gender and if the decisions was disclosed or not. \mathbf{X} includes control variables of age, education, women’s income and bride price. We have also included μ_j and ϵ_i which are enumerator and hamlet level fixed effects.

$$Exp_i = \beta_0 + F_i\beta_1 + D_i\beta_2 + F_i * D\beta_3 + \mathbf{X}\beta + \mu_j + \epsilon_i \quad (1)$$

In Table 7, we study the influence of gender and disclosure on the expenditure choices for children and spouses. Columns 1 and 4 use gender and disclosure as separate regressors. Columns 2 and 5 further include an interaction term and columns 3 and 6 are the full model which include control variables with the interaction. In all models we see that women significantly give more to their children and less to their spouse as compared to men. Also, the disclosure effect is only significant in the case of the spouse (column 4). We also have the interaction of gender and disclosure which is significant for the spouse (columns 5 and 6).

Table 7: Gender and Disclosure

	<i>Expenditure for Children</i>			<i>Expenditure for Spouse</i>		
	(1)	(2)	(3)	(4)	(5)	(6)
Female=1	1.743*** (0.177)	1.605*** (0.254)	1.027** (0.490)	-2.702*** (0.188)	-3.038*** (0.270)	-3.643*** (0.530)
Disclosed=1	-0.226 (0.179)	-0.361 (0.251)	-0.235 (0.244)	0.607*** (0.190)	0.281 (0.267)	0.236 (0.264)
Female=1 × Disclosed=1		0.270 (0.354)	0.155 (0.344)		0.654* (0.376)	0.642* (0.372)
R^2	0.069	0.070	0.135	0.141	0.143	0.178
Observations	1356	1356	1355	1356	1356	1355
Controls	No	No	Yes	No	No	Yes

Notes. OLS regressions with fixed effects at the hamlet level. ***, **, * indicate two-sided significance levels at 1, 5, and 10 %, respectively. The controls used are, age, education, the wife’s income and whether a bride price was paid.

3.2.2. Gender, Disclosure and Transfers

As we saw earlier, our sample seems to follow the traditional spending pattern in which the husband gives the wife money for the children. We also saw in Tables 5 and 6 that once real intra-household transfers were included, significant results were seen for expenditure choices for children from their mother. Therefore we feel it is important to include these transfers in our analysis and focus on the women’s choices for their children.

$$Exp_i = \beta_0 + F_i\beta_1 + D_i\beta_2 + T_i\beta_3 + D_i * T_i\beta_4 + \mathbf{X}\beta + \mu_j + \epsilon_i \quad (2)$$

Table 8 shows an OLS model for Equation 2. This model is the same as Equation 1 but with the inclusion of T_i . In columns 1-3, T_i is a binary variable of whether the wife reported receiving a transfer from her husband and in columns 4-6 this is the amount of transfer.¹¹

Table 8: Female Exp for Children with Transfers

<i>Female Exp for Children</i>						
	(1)	(2)	(3)	(4)	(5)	(6)
F Disclosed=1	-0.064 (0.242)	-0.625 (0.393)	-0.650* (0.384)	-0.073 (0.241)	0.083 (0.257)	0.092 (0.253)
Wife Rec Transfer=1	0.182 (0.251)	-0.289 (0.361)	-0.665* (0.400)			
F Disclosed=1 × Wife Rec Transfer=1		0.914* (0.505)	0.982** (0.495)			
Transfer Rec Amt (F)				0.007* (0.004)	0.018** (0.007)	0.017** (0.008)
F Disclosed=1 × Transfer Rec Amt (F)					-0.015* (0.009)	-0.014 (0.009)
R^2	0.001	0.006	0.069	0.005	0.010	0.070
Observations	678	678	678	678	678	678
Controls	No	No	Yes	No	No	Yes

Notes. OLS regressions with fixed effects at the hamlet level. ***, **, * indicate two-sided significance levels at 1, 5, and 10 %, respectively. The controls used are, age, education, the wife’s income and whether a bride price was paid.

Columns 1 and 4 use disclosure and transfers as separate regressors. Columns 2 and 5 further include an interaction term and columns 3 and 6 are the full models which include control variables with the interaction. In column 2 we see that women give more to their children when the external cash transfer is disclosed to their husband and they receive transfers from him. Once we include our controls in column 3 this result becomes stronger and disclosure and transfer alone also become negatively significant while the interaction of the two is positively significant. When we include the continuous variable, the amount of intra-household transfer received (columns

¹¹This is coded 0 for those who did not receive a transfer

3-6), we see that the amount does positively and significantly influence the expenditure choices for children in all three models. The interaction of this with disclosure is weakly significant in column 5 but this disappears once we include all controls in column 6 but it is still negative. These results tell us that no matter disclosure, the larger a transfer women receive from their husbands, the more they will give the children from the external cash transfer. Columns 5 and 6 show that the positive effect of receiving transfers from the husband is weaker with disclosure, as women then feel they need to share more with their spouse which is saw in Table 7.

3.3. Robustness Checks

Here we run a robustness check for our regression results. Table 9 shows us the result of the same models in Table 8 with the transfer amount given now reported by the men. The results are not as robust as the original model. The transfer amount given is weakly significant for increasing the amount given to children but this is no longer significant once we include the interaction or controls.

Table 9: Robustness Test: Female Exp for Children with Male Transfers

	<i>Female Exp for Children</i>					
	(1)	(2)	(3)	(4)	(5)	(6)
F Disclosed=1	-0.058 (0.242)	-0.497 (0.668)	-0.333 (0.655)	-0.068 (0.241)	-0.317 (0.299)	-0.290 (0.294)
Husband Gives Transfer=1	0.422 (0.361)	0.149 (0.528)	0.261 (0.516)			
F Disclosed=1 × Husband Gives Transfer=1		0.505 (0.716)	0.333 (0.702)			
Transfer Given Amt (M)				0.028* (0.015)	0.009 (0.020)	0.007 (0.020)
F Disclosed=1 × Transfer Given Amt (M)					0.042 (0.030)	0.040 (0.029)
R^2	0.002	0.003	0.066	0.006	0.009	0.070
Observations	678	678	678	678	678	678
Controls	No	No	Yes	No	No	Yes

Notes. OLS regressions with fixed effects at the hamlet level. ***, **, * indicate two-sided significance levels at 1, 5, and 10 %, respectively.

4. Discussion and Conclusion

In this paper we study how cash transfer programs could be improved with evidence from a choice experiment and survey data from rural Tanzania. Earlier studies showed evidence that cash to the mothers would help improve child outcomes and this was then taken as a given by policymakers. But further studies have since shown that there are varying degrees to which this

is true and that other factors play a role when it comes to improving welfare with cash transfer programs. One of these important factors is whether the cash transfer is public knowledge or not. Other studies have shown there is a strong social pressure to share income among your network in the developing world. Our experiment randomizes if the choice made by the participant will be disclosed to their spouse or not which allows us to study how disclosure of cash transfers can influence decisions made by husbands and wives. Furthermore, we include a measure for real intra-household transfers, the money moving between spouses. These kinds of transfers are a common occurrence in our sample and have not been studied in the cash transfer literature thus far. Including this measure is important because the movement of money within a household could lead to strategic decisions made by husbands and wives when it comes to an external cash transfer program.

Our analysis provides evidence of the social pressure and cultural norms faced by women when an external cash transfer is disclosed to the husband. This was seen in Table 3, when the husband knows of additional money, the wife shares more with him. However her expenditure choices for children do not change with disclosure which is evidence of her cultural role to care for the children. Table 7 also shows that women may face a higher social pressure than their husband to share because women give more to their husband, compared to what men give to their wife, when the money is disclosed. We also see evidence of the cultural roles women are intended to fill, in Tables 5 and 8 women who have received a larger transfer will spend more on children because culturally that is what they are supposed to do.

Overall, we find that disclosure alone impacts women more than men but does not change the women's choices for children. We learned that women spend more on children while men transfer more to their spouse. Furthermore, the interaction of an intra-household transfer and the disclosure of an external transfer increase women's expenditure on children. Cash transfer programs will continue to be used in poverty alleviation programs but we have provided additional evidence that how this programs are implemented needs to be considered further in order to ensure the desired outcomes.

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