SOCIAL SAFETY NETS AND HOUSEHOLD FOOD SECURITY IN THE FACE OF COVID-19 AND RELATED CONTAINMENT MEASURES

Addendum: May 2020

Food & Nutrition Council
Every Zimbabwean Free from Hunger & Malnutrition

REACH
ACCELERATING THE SCALE-UP OF FOOD AND NUTRITION ACTIONS
Hosted by the World Food Programme

VAC
ZIMBABWE
Vulnerability Assessment Committee

CHAPTER 1

BACKGROUND

1.1. Introduction

Social protection measures such as social safety nets provide direct support either in the form of cash or in-kind goods and services to smooth consumption, compensate for loss of incomes, and prevent falls into poverty. More so, social protection measures can play a decisive role in protecting lives and livelihoods by securing incomes, ensuring access to safe, sufficient and nutritious food, providing support with childcare, cash or other allowances, and facilitating access to health care[1]. Implementing adequate social protection measures in response to COVID-19 is therefore critical to saving both lives and livelihoods. Ensuring that social protection measures reach all vulnerable rural and urban populations will be crucial to avoid further spread of poverty and hunger[2]. Protecting and supporting livelihoods will require the combination of social protection interventions to protect income and prevent negative coping strategies, and measures to support production throughout the agri-food system (e.g., market access; public purchases from small producers) while ensuring that occupational safety and health measures are put in place and accessible. This approach can provide the right stimulus on the supply side, while avoiding imbalances in supply and demand[3]. During crisis times like the COVID-19 pandemic, there is also need to temporarily extend social protection programmes to new households, e.g. to households which were deemed ineligible in social protection programmes implemented before the COVID-19 pandemic[4]. There are two challenges for social protection; the first is to protect vulnerable populations that already qualify to receive government support and the second

[1] Nuriddin A, *et al*. *BMJ Glob Health* 2018;**3**:e000410. doi:10.1136/bmjgh-2017-000410
[2] FAO (2020). http://www.fao.org/3/ca8561en/CA8561EN.pdf
[3] FAO (2020), Anticipating the impacts of COVID-19 in humanitarian and food crisis contexts
[4] Gerard, Imbert and Orkin (2020). Social Protection Response to the COVID-19 Crisis: Options for Developing Countries. Policy Brief. https://econfip.org/policy-brief/social-protection-response-to-the-covid-19-crisis-options-for-developing-countries/

challenge is to create mechanisms to reach populations likely to be severely impacted by the economic downturn associated with the pandemic, e.g. workers in restaurants, hotels etc[5].

1.2. Assessment methodology

1.2.1. Data generation process

The 2019 ZimVAC rural and urban livelihoods assessments were informed by the multi-sectoral objectives generated by a multi-stakeholder consultation process. Appropriate survey designs and protocols informed by the survey objectives were developed. The assessments employed both a structured household questionnaire and a community focus group discussion questionnaire as the two primary data collection instruments. ZimVAC national supervisors and enumerators were recruited from Government Ministries/departments, United Nations and Non-Governmental Organizations and underwent training in all aspects of the assessments. The Ministry of Public Works and National Housing coordinated the recruitment of provincial level enumerators and mobilisation of vehicles in each of the country's 10 provinces.

1.2.2. Sample size determination and description

As already stated above, the 2019 assessment comprised the rural and the urban livelihoods assessment and the criteria for the selection of the sample observations for the two assessments are outlined below. The use of secondary data and relevant literature review were an integral part of the methodology for both the rural and urban livelihoods assessments including this consolidated report. In addition, both livelihoods assessments used a structured household questionnaire and a community focus group discussion questionnaire as the two primary data collection instruments. ZimVAC national supervisors and enumerators were recruited from Government Ministries/departments, United Nations and Non- Governmental Organizations

[5] Inter-American Development Bank (2020.).Social Policy Responses To The Effects Of Covid-19. http://idbdocs.iadb.org/wsdocs/getdocument.aspx?docnum=EZSHARE-1132863027-3

and underwent training in all aspects of the assessment. The Ministry of Local Government, Public Works and National Housing coordinated the recruitment of provincial level enumerators and mobilization of vehicles in each of the 10 provinces.

Rural assessment

The assessment used structured household and community key informant Focus Group Discussion (FGD) tools as the primary data collection tools, both of which were android based. ZimVAC national supervisors (including Provincial Agritex Extension Officers and Provincial Nutritionists) and enumerators were recruited from Government, United Nations, Technical partners and Non-Governmental Organizations. These underwent training in all aspects of the assessment. The Ministry of Local Government, Public Works and National Housing through the Provincial Administrators' offices coordinated the recruitment of district level enumerators and mobilization of provincial and district enumeration vehicles. Primary data collection took place from 10th to the 24th of May 2019.

Urban assessment

The assessment used an android based structured household questionnaire as the primary data collection tool. ZimVAC national supervisors (including Provincial Agritex Extension Officers and Provincial Nutritionists) and enumerators were recruited from Government, United Nations, Technical partners and Non-Governmental Organizations. These underwent training in all aspects of the assessment. The Ministry of Local Government, Public Works and National Housing through the Provincial Administrators' offices coordinated the recruitment of district level enumerators and mobilization of provincial and district enumeration vehicles. Primary data collection took place from 12th to the 23rdof August 2019.

1.2.3. Consolidated data

The consolidated rural and urban data comprises a total of 25,790 households, composed of data from 15,154 households during the rural survey and from 10,636 households collected during the urban survey in 2019. The consolidated data includes all common variables in the rural and urban questionnaires. In cases where the variables do not match, the analysis is done separately.

CHAPTER 2

Social Safety Nets

2.1. Introduction

Social protection increases the resilience of populations in three main ways. It builds anticipatory capacity by helping people prepare and plan for shocks and disasters; increases absorptive capacity during a shock by providing people with a safety net to meet their basic needs and builds adaptive capacity in the long term through sustainable livelihood promotion.[6] ZimVAC collects data on different forms of social protection provided by government, relatives and others (UN/NGO; churches) to make households resilient to food and nutrition insecurity.

2.2. Descriptive analysis of forms of social support

Table 1 shows the sources of social support that households in Zimbabwe received. Save for support from churches and urban non-relatives, rural households are more likely to have received support from any other source. The largest source of support for rural households in Zimbabwe is the government. At least 56.4% of rural households received support from the government versus 6.2% of the urban households. Urban relatives and rural relatives constitute the second and third largest source of support for the rural households, respectively. UN/NGOs constitute the fourth most important source of support for the rural households, with 13.8% of the households having received support from UN/NGOs.

Table 1. Forms of social support

Source	National	Urban[U]	Rural[R]	Difference [U – R]
Government	0.355	0.062	0.564	-0.502***
UN/NGO	0.094	0.032	0.138	-0.107***

[6]Ulrich, M (2016): Increasing people's resilience through social protection, Resilience Intel, May 2016 Issue no. 3.

Churches	0.041	0.049	0.034	0.015***
Rural relatives	0.145	0.126	0.158	-0.032***
Rural non-relatives	0.098	0.099	0.098	0.001
Urban relatives	0.169	0.160	0.175	-0.016***
Urban non-relatives	0.021	0.027	0.016	0.011***
Diaspora	0.111	0.110	0.112	-0.001
Mutual group	0.020	0.008	0.028	-0.020***
Civic group	0.010	0.006	0.013	-0.006***
Charitable group	0.008	0.010	0.007	0.003***

Notes: The fifth column shows the results of two-tailed t-test for the difference in the means. ***, **, and * indicate the 1, 5, and 10 percent levels of significance.

When one looks at the sources of support for the urban households, urban and rural relatives form the first and second largest forms of support for the urban households. Rural non-relatives and the government constitute the third and fourth most important sources of support for the urban households in Zimbabwe.

2.3. Inferential analysis of forms of social support

2.3.1. Determinants of government support

Table 2 shows that being in the rural areas increases the probability of a household receiving any form of government support. Column (I) of the table shows that a household in rural areas has 42.1% more likelihood of receiving any form of government support than its urban counterpart holding all things equal. Government support generally is not statistically gender specific as the results in Column (I) to (III) generally display no statistically significant gender heterogeneity. Furthermore, the age of the household head increases the probability of the household receiving support from the government.

Table 2. Determinants of receiving government support

VARIABLES	OLS	Probit	Logit
	(I)	(II)	(III)
Household is located in rural area	0.421***	1.519***	2.683***
	(0.00799)	(0.0340)	(0.0646)
Household head is female	0.0169*	0.0552	0.0931
	(0.0102)	(0.0385)	(0.0655)
Household head age [Years]	0.00611***	0.0196***	0.0330***
	(0.000237)	(0.000807)	(0.00138)
Married living together	-0.0406**	-0.114	-0.173

	(0.0180)	(0.0796)	(0.138)
Married living apart	-0.0446**	-0.110	-0.157
	(0.0196)	(0.0842)	(0.146)
Divorced/separated	-0.0529***	-0.145*	-0.234
	(0.0202)	(0.0874)	(0.152)
Primary level	-0.0214**	-0.0318	-0.0475
	(0.0108)	(0.0330)	(0.0555)
ZJC level	-0.0329**	-0.0496	-0.0711
	(0.0129)	(0.0404)	(0.0678)
O' level	-0.0319***	-0.0623*	-0.0919
	(0.0119)	(0.0372)	(0.0623)
A' level	-0.0377**	-0.236***	-0.464***
	(0.0163)	(0.0896)	(0.161)
Diploma/Certificate after secondary	-0.0409**	-0.0926	-0.221
	(0.0168)	(0.0813)	(0.151)
Graduate/Post-Graduate	-0.0345*	-0.0570	-0.184
	(0.0190)	(0.104)	(0.201)
Household size	0.0103***	0.0389***	0.0672***
	(0.00266)	(0.00923)	(0.0159)
ln(Income)	-0.00343*	-0.00811	-0.0125
	(0.00429)	(0.0141)	(0.0240)
Constant	-0.0985***	-2.014***	-3.394***
	(0.0290)	(0.122)	(0.213)
Observations	21,569	21,569	21,569
R-squared	0.308		

Robust standard errors in parentheses: *** p<0.01, ** p<0.05, * p<0.1. The results control for 9 province dummies and 9 religion dummies

2.3.2. Determinants of UN/NGO support

Table 3 shows that the probability of a household receiving support from UN/NGOs largely follows the same pattern as that of receiving support from the government as highlighted in the previous section. The major difference between the targeting of the government and UN/NGOs is that UN/NGOs have gender heterogenic targeting with female headed households more likely to receive social support from UN/NGOs than their male headed counterparts. The targeting of rural households by both the government and UN/NGOs is highly commendable given the high prevalence of food insecurity in rural areas in Zimbabwe.

Table 3. Determinants of the household receiving social support from UN/NGO

VARIABLES	OLS	Probit	Logit
	(I)	(II)	(III)
Household is located in rural area	0.106***	0.779***	1.641***
	(0.00528)	(0.0429)	(0.0935)
Household head is female	0.0145**	0.109**	0.196**
	(0.00714)	(0.0493)	(0.0959)
Household head age [Years]	0.000480***	0.00274***	0.00502***
	(0.000170)	(0.000973)	(0.00182)

Married living apart	-0.0373***	-0.252**	-0.511***
	(0.0139)	(0.101)	(0.196)
Primary level	-0.0236***	-0.0923**	-0.156**
	(0.00851)	(0.0384)	(0.0701)
ZJC level	-0.0347***	-0.138***	-0.247***
	(0.00964)	(0.0492)	(0.0920)
O' level	-0.0382***	-0.174***	-0.324***
	(0.00891)	(0.0453)	(0.0850)
A' level	-0.0454***	-0.270**	-0.563**
	(0.0117)	(0.109)	(0.234)
Diploma/Certificate after secondary	-0.0604***	-0.384***	-0.817***
	(0.0110)	(0.111)	(0.242)
Graduate/Post-Graduate	-0.0592***	-0.337**	-0.774***
	(0.0125)	(0.136)	(0.299)
Household size	0.00824***	0.0465***	0.0843***
	(0.00206)	(0.0108)	(0.0201)
ln(Income)	0.0129***	0.0708***	0.140***
	(0.00123)	(0.00721)	(0.0141)
Constant	-0.0742***	-2.825***	-5.438***
	(0.0186)	(0.201)	(0.488)
Observations	21,568	21,568	21,568
R-squared	0.068		

Robust standard errors in parentheses: *** p<0.01, ** p<0.05, * p<0.1. The results control for 9 province dummies and 9 religion dummies

2.4 Chapter summary and implications of the results in relation to COVID-19 pandemic

The results show that traditionally, more social protection programmes are directed towards rural households as compared to urban households. More so, the results show that government is the largest source of support for rural households in Zimbabwe. Only 6.2% of the surveyed households indicated that they receive support from government as compared to 56.4% of rural households that indicated they receive support from the government. Furthermore, the results reveal that a household in rural areas has 42.1% more likelihood of receiving any form of government support than its urban counterpart holding all things equal. Urban relatives and rural relatives constitute the second and third largest source of support for the rural households with UN/NGOs constituting the fourth most important source of support for the rural households. The results also show that government support is not statistically gender specific and that age of the household head increases the probability of the household receiving support from the government.

As for the sources of social support for the urban households, urban and rural relatives form the first and second largest forms of support. In addition, the results show that the probability of a household receiving support from UN/NGOs is gender heterogenic targeting with female headed households more likely to receive social support from UN/NGOs than their male headed counterparts. The targeting of rural households by both the government and UN/NGOs is highly commendable given the high prevalence of food insecurity in rural areas in Zimbabwe.

There is however need for both the government and NGOs to extend their social support programmes to urban households as the containment strategy of the lockdown has negatively affected household income levels for those households reliant of the informal sector making them food insecure and in need of social protection. More so, urban households are more vulnerable to the effects of COVID-19 as their safety nets were greatly affected by the lockdown. For example, the results revealed that urban and rural relatives form the first and second largest forms of social support for urban households and due to mobility restrictions and social distancing measures due to the lockdown, this immediate safety net for the urban households is greatly affected. Such a situation makes urban households vulnerable. Hence the need to extend the social protection programmes to urban households that usually did not qualify for social protection programmes implemented by both government and its development partners.

CHAPTER 3

Remittances

3.1. Introduction

For most emerging economies, remittances are the most important buffer for unexpected life expenses and investments into a better future. Remittances are extremely important to household survival and sustainability in Zimbabwe, crucial financing lifeline for many poor families and have a direct impact on nutrition and health[7]. Remittance inflows to GDP (%) in Zimbabwe were reported at 7.58 % in 2017, according to the World Bank collection of development indicators[8]. According to World Remit[9], Zimbabwe was one of the top five beneficiaries of international remittances in Africa for 2019. This statistic underlines the importance of diaspora remittances as a source of social protection. Zimbabwe received more than US$505 million in international remittances from January to June 2019 and indications are that the annual figure will fall slightly short of the US$1,1 billion received in 2018. Of the 2018 figure, US$620 million was the share for diaspora remittances[6]. While remittances generally involve cash transfers, another popular source of remittances had been through non-cash remittances. The most common non-cash remittances include foodstuffs (for example, maize-meal, sugar, salt, and cooking oil).

3.2. Descriptive analysis of remittances

Table 4 shows that at the 1% level of significance, rural households are less likely to receive remittances than their urban counterparts before controlling for observed confounders. Furthermore, the amount of remittances that rural households receive as remittances is ceteris paribus lower than that of urban households.

[7] Tevera & Chikanda (2009). Migrant Remittances and Household Survival in Zimbabwe. Southern African Migration Programme. https://scholars.wlu.ca/samp/
[8] https//data.worldbank.org
[9] www.worldremit.com

Table 4. Summary of remittances

	Rural [R]		Urban [U]		Difference
	Mean	S.D	Mean	S.D	[R – U]
Household received remittances	0.132	0.339	0.151	0.358	-0.019***
Remittances [ZWL]	10.006	70.326	82.509	564.193	-72.503***

Notes: The fifth column shows the results of two-tailed t-test for the difference in the means. ***, **, and * indicate the 1, 5, and 10 percent levels of significance.

3.3. Inferential analysis of remittances

Table 5 shows that ceteris paribus households located in rural areas and female headed households are more likely to receive remittances or receive more remittances than their counterparts after controlling for observed confounding variables. The result is also the same when one looks at the age of the household head. An increase in the age of the household head increases the probability that the household receives remittances or the amount of remittances received all else being equal.

Table 5. OLS estimates of determinants of remittances

	Household received remittances	Amount of remittances [ZWL]
VARIABLES	(I)	(II)
Household is located in rural area	0.0350***	0.228***
	(0.00729)	(0.0357)
Household head is female	0.0582***	0.269***
	(0.00917)	(0.0410)
Household head age [Years]	0.00360***	0.0174***
	(0.000210)	(0.00100)
Married living together	-0.151***	-0.722***
	(0.0198)	(0.0766)
Married living apart	-0.0444**	-0.257***
	(0.0219)	(0.0797)
Divorced/separated	-0.133***	-0.577***
	(0.0221)	(0.0858)
Widow/widower	-0.123***	-0.605***
	(0.0211)	(0.0799)
O' level	-0.0151	-0.110**
	(0.00993)	(0.0492)
Diploma/Certificate after primary	-0.0444	-0.296*

	(0.0359)	(0.172)
Diploma/Certificate after secondary	-0.0327*	-0.191**
	(0.0178)	(0.0848)
Graduate/Post-Graduate	-0.0578***	-0.355***
	(0.0199)	(0.103)
Household size	-0.0118***	-0.0580***
	(0.00222)	(0.0109)
ln(Income)	0.0347***	0.221***
	(0.00112)	(0.00771)
Members with mother alive	0.00637	0.0490**
	(0.00406)	(0.0192)
Constant	-0.0506**	-2.401***
	(0.0249)	(0.111)
Observations	18,404	18,404
R-squared	0.089	

Robust standard errors in parentheses: *** p<0.01, ** p<0.05, * p<0.1. The results control for 9 province dummies and 9 religion dummies

3.4 Chapter summary and implication of the results in relation to COVID-19 pandemic

During crisis periods such at the COVID-19 pandemic, containment measures such as lockdowns usually present challenges for those trying to access funds sent to them[10]. Receiving cash remittances can become mission impossible as some agents may be closed without any specific provisions recognizing them as essential services. In some cases clients often face long queues, due to the lower number of agents and the shorter operating hours. Concerning non-cash remittances, the lockdown and mobility restrictions, both in-country and between countries are likely to affect non-cash remittances such as groceries. For examples, thousands of Zimbabweans across the borders usually send non-cash groceries to their parents or relatives in the urban and rural areas monthly and due to the closure of the borders by neighbouring countries, non-cash remittances have been greatly affected, exposing the usual recipients to food and nutrition insecurities.

Cash remittances normally attract some transaction fees to the sender and in crises times such as the COVID-19 pandemic, there is need to reduce the transaction charges by operators of the platforms used for such transactions, e.g. Mukuru, Worldremit, Ecocash, One Wallet etc. According to the

WorldBank[10], even small changes in remittance policy can have a big effect on both the sender and receiver. Given the scale and importance of remittances in emerging economies, actions to reduce the cost of transactions and make it easier to send and receive them can immediately improve livelihoods[11].

[10] https//data.worldbank.org
[11] Mora&Rutkowski (2020). https://blogs.worldbank.org/psd/remittances-times-coronavirus-keep-them-flowing

CHAPTER 4

Treatment Evaluation

4.1. Introduction

This section assesses the treatment effects of binary treatment using propensity score matching and of continuous treatment variables such as the amount of remittances that the household receives using dose response modelling which are propensity score matching based.

4.2. Treatment evaluation with a binary treatment variable

4.2.1. Treatment effect of government support on food insecurity

Table 6 shows the treatment effect of government support on food insecurity. Column (III) of the table shows that at the 5% level of significance, receiving government support is associated with a 1.51% decline in the probability of the rural household being food insecure. The impact of government support whilst being negative in urban areas (Column II) or at the national level (Column III) is not statistically valid at those levels. This finding is consistent with the notion on social protection that government support largely focuses on food and crop support.

Table 6.Treatment effect of government support on food insecurity

	National	Urban	Rural
VARIABLES	(I)	(II)	(III)
Household received government support	-0.0140	-0.00961	-0.0151**
	(0.0112)	(0.0241)	(0.00598)
Observations	24,114	10,203	13,911

Robust standard errors in parentheses: *** p<0.01, ** p<0.05, * p<0.1.

4.2.2. Treatment effect of UN/NGO support on food insecurity

Table 7 shows the average treatment effect of UN/NGO support on food insecurity. Columns (I) and (II) of the table shows that UN/NGO treatment effect is valid at the national level and in the urban areas. In these two columns, receiving UN/NGO support is associated with a reduction in household food insecurity. Column (II) however shows that whilst the impact on food insecurity is negative in rural areas, it is not statistically valid.

Table 7. Treatment effect of UN/NGO support on food insecurity

VARIABLES	National	Urban	Rural
	(I)	(II)	(III)
Household received UN/NGO support	-0.0420**	-0.0680**	-0.0110
	(0.0169)	(0.0308)	(0.0157)
Observations	24,114	10,203	13,911

Robust standard errors in parentheses: *** p<0.01, ** p<0.05, * p<0.1.

Table 8 shows that remittances improve the household dietary diversity score at the 1% level of significance. Figure 1a shows the kernel estimation of the distribution of ATE(x,t), ATET(x,t) andATENT(x,t). As for the distributions, it is immediate to see that the household dietary diversity score shows a more disperse distribution for ATET(x,t) compared with ATE(x,t) and ATENT(x,t). Moreover, ATET(x,t) appears much more concentrated on lower values, thus indicating that the effect on treated units seems surprisingly not only less regular, but also weaker for treated than for untreated units.

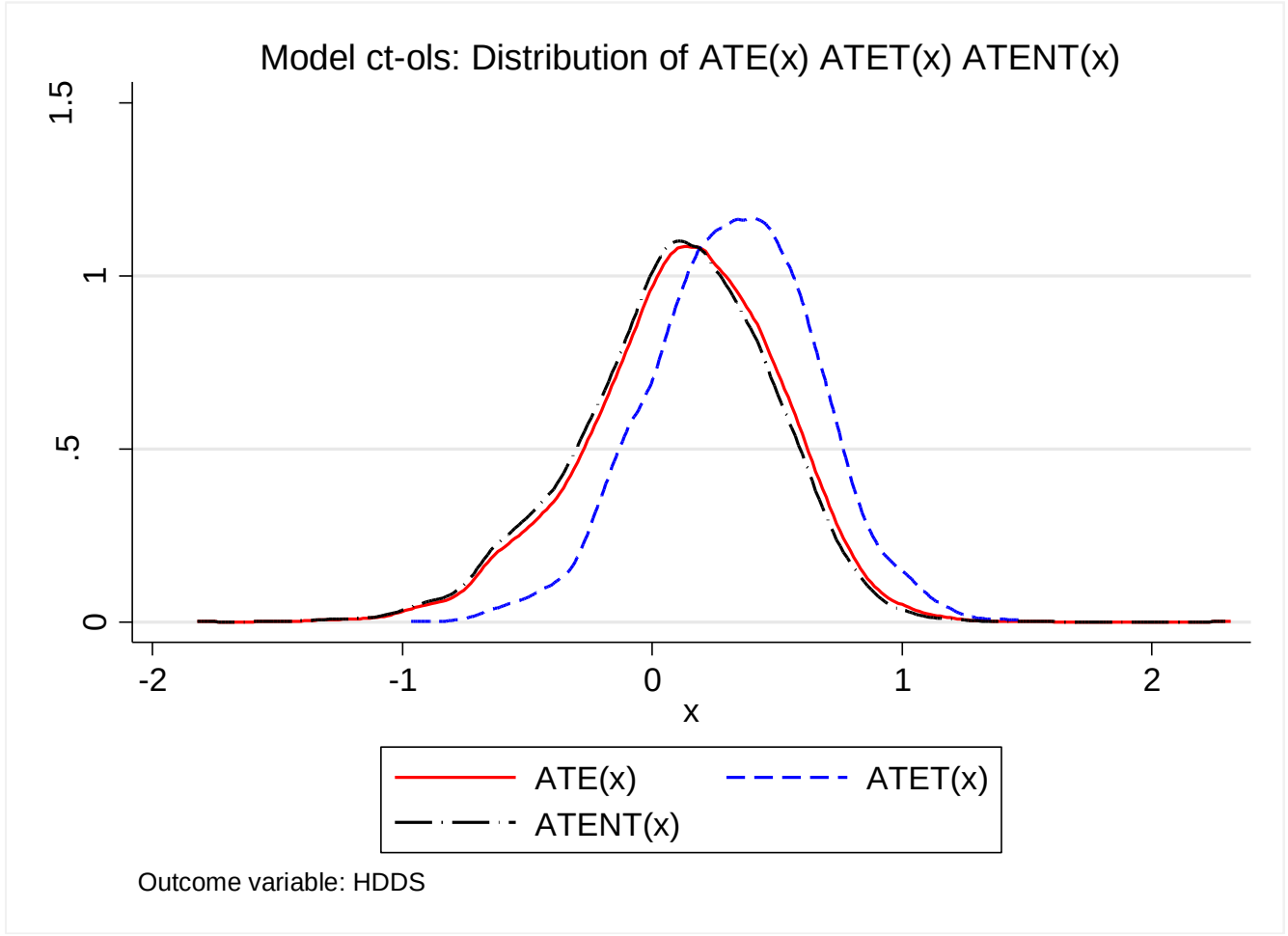
More interesting for the aim of this paper is the pattern of the dose-response functions. As for both gross and net R&D, it is easy to see that the dose-response function has two turning points, a maxima followed by a minima. This result says that the overall positive effect of the policy found in the previous regression results in Table is mainly driven by those households receiving lower remittances and those receiving very high remittances. This finding is consistent with the Engel law.

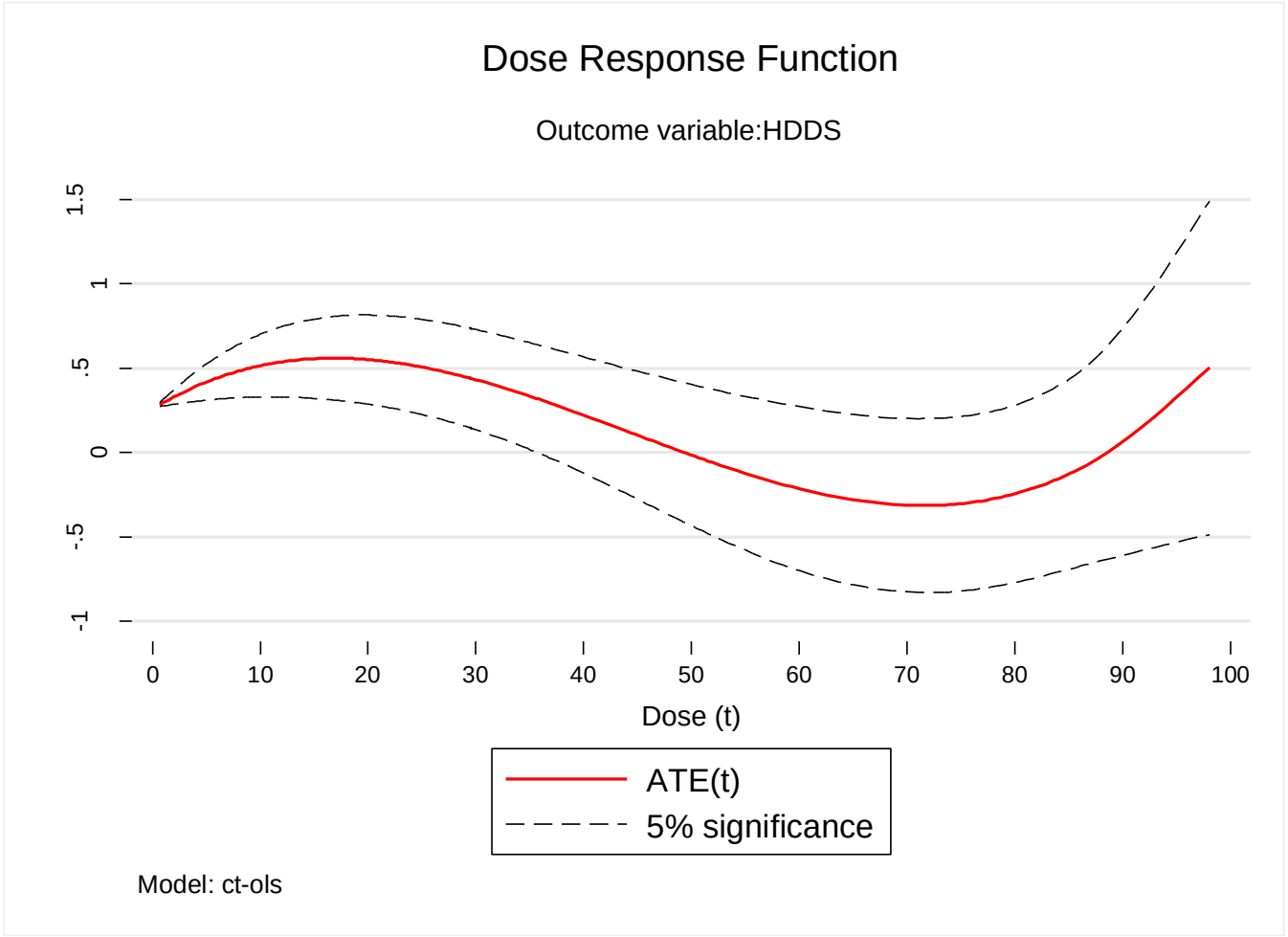
Table 8. Baseline regression for assessing the effect of remittances on household dietary diversity score

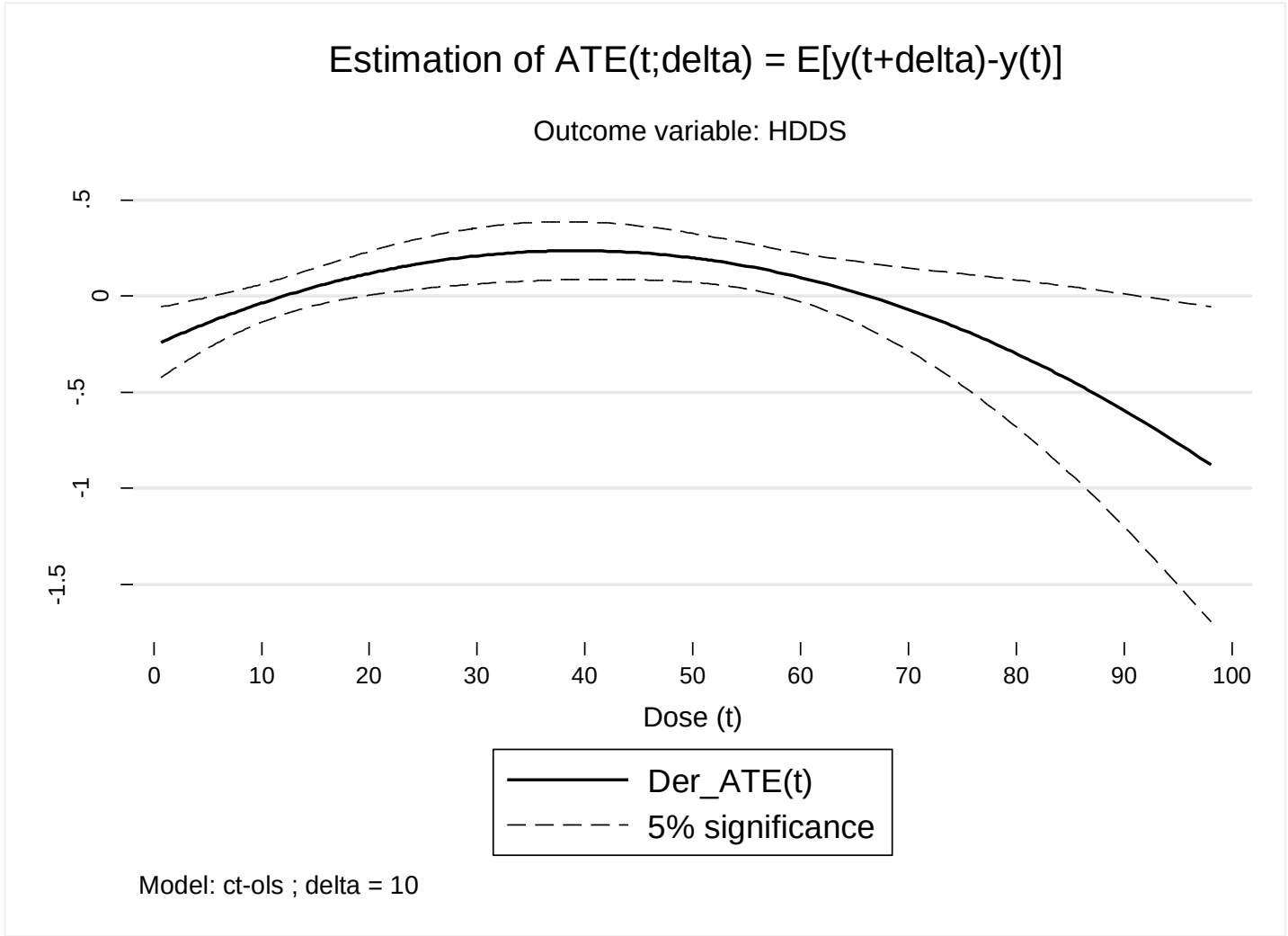
Treatment [Household received remittances]	0.125***
	(0.0441)
Household is located in rural area	0.102***
	(0.0347)
Household head is female	0.107***
	(0.0412)
Household head age [Years]	0.00706***
	(0.00100)
Primary level	0.444***
	(0.0458)
ZJC level	0.698***
	(0.0547)
O' level	0.948***
	(0.0497)
A' level	1.259***
	(0.0834)
Diploma/Certificate after primary	1.352***
	(0.150)
Diploma/Certificate after secondary	1.451***
	(0.0737)
Graduate/Post-Graduate	1.491***
	(0.0846)
Household size	0.0195*
	(0.0109)
ln(Income)	0.182***
	(0.00730)
Mentally ill members	-0.125***
	(0.0309)
Members with mother alive	-0.0972***
	(0.0201)
Parameter a	0.0388***
	(0.0137)
Parameter b	-0.00142***
	(0.000477)
Parameter c	1.07e-05***
	(3.90e-06)
Observations	18,396
R-squared	0.182

Robust standard errors in parentheses: *** p<0.01, ** p<0.05, * p<0.1. The results control for 9 province dummies and 9 religion dummies

Figure 1


Model ct-ols: Distribution of ATE(x) ATET(x) ATENT(x)
1.5
1
.5
0
-2
-1
0
1
2
x
ATE(x)
ATET(x)
ATENT(x)
Outcome variable: HDDS


Dose Response Function
Outcome variable:HDDS
1.5
1
.5
0
-.5
-1
0
10
20
30
40
50
60
70
80
90
100
Dose (t)
ATE(t)
5% significance
Model: ct-ols


Estimation of ATE(t;delta) = E[y(t+delta)-y(t)]
Outcome variable: HDDS
.5
0
-.5
-1
-1.5
0
10
20
30
40
50
60
70
80
90
100
Dose (t)
Der_ATE(t)
5% significance
Model: ct-ols ; delta = 10

FNC is housed at SIRDC: 1574 Alpes Road, Hatcliffe, Harare

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