

The Impacts of Microcredit: Evidence from Ethiopia

By Alessandro Tarozzi and Jaikishan Desai and Kristin Johnson

A GUIDE TO THE REPLICATION FILES

The zip file includes a list of files for the replication of the results displayed in the tables of the paper and of the Online Appendix. All files are in Stata format. We include the necessary data sets (.dta), the codes that replicate the results (.do) and the log files that show the results of the codes (.log). The log files are in ASCII format and can thus be seen with virtually any text editor.

THE **IDENTIFIERS** IN THE DATA ARE THE FOLLOWING:

- pa:** Identified a *kebele* or Peasant Association (PA). This was the unit of randomization. All villages within the same PA were exposed to the same treatment. There are 133 PAs.
- id_v:** Identifies the specific village where the survey was completed. There are 356 villages.
- hid:** Uniquely identifies a specific household interviewed. Recall that the data are *not* a panel of households, so the same household never appears at both baseline and endline.
- time:** Indicates whether the data were collected at baseline (time=0) or endline (t=1).
- indno:** This identifies the specific household member. This code is unique only within a household, so that *an individual is uniquely identified by the combination of hid and indno*.

Note: The data *do not include individual or village names*, in order to protect privacy and confidentiality. The region, zone and woreda are included in the data and labelled accordingly.

Virtually all variables have **variable labels**, and all categorical variables have **value labels**, so it should be easy to see what each variable represents and what each specific code represents.

Sampling weights are represented by the variable `fwthh`.

The variables `patypen` and `patypeactual2` indicate respectively the randomly assigned treatment arm and the actual treatment. Each data set also includes a number of transformations from these two categorical variables that are used in the actual estimation. For instance, the key regressor is `t_D_MF`, the interaction between what the paper defines as *Post* (time=1) multiplied by a dummy equal to one when the PA was assigned to microcredit only.

STATA FILES

- data.dta** Household-level data collected at baseline (time=0) and endline (time=1). The identifier is `hid`.
- empowerment.dta** Individual-level data collected at baseline and endline. This includes data on measures of women's empowerment. There is only one observation per household, so the identifier is `hid`.
- timeuse.dta** This individual-level file includes individual-level information about time allocation and schooling. The identifier is a combination of `hid` and `indno`.

All datasets also include the PA-specific dummies, named `_FE*`

PRINT-OUT OF THE CONTENT OF THE STATA DTA FILES

timeuse.dta

Contains data from C:\Users\tarozzino\Documents\Microfinance\AEJfinal\Stata\timeuse.dta

obs: 57,434 Employment
vars: 189 2 Jun 2014 16:03
size: 16,943,030

variable name	storage type	display format	value label	variable label
indno	byte	%9.0g		Individual no.
hid	float	%9.0g		Unique Household ID
region	byte	%9.0g	region1	
zone	byte	%12.0g	zone1	
woreda	byte	%13.0g	woredal	
pa	int	%32.0g	pa	P.A. (Peasant Association or Kebele)
vill	byte	%9.0g		
id_v	int	%8.0f	vill	Village
gregorian_m	byte	%9.0g		(Gregorian) Month of interview
patypen	byte	%8.0g	patypen	Randomly assigned treatment group
patypeactual2	byte	%9.0g	patypen	Actual treatment group
time	byte	%8.0g	time	Baseline (0) or Endline (1)
T	float	%9.0g		
D	float	%9.0g		
t_a	float	%9.0g		Post x Amhara
t_o	float	%9.0g		Post x Oromiya
t_Cr_a	float	%9.0g		Post x Amhara x Credit
t_Cr_o	float	%9.0g		Post x Oromiya x Credit
a	float	%9.0g		Amhara
o	float	%9.0g		Oromiya
Cr_a	float	%9.0g		Credit x Amhara
Cr_o	float	%9.0g		Credit x Oromiya
t_T	float	%9.0g		Time x Credit (Treated)
t_D	float	%9.0g		Time x Credit (Assigned)
D_MF	float	%9.0g		Assigned MF
D_Both	float	%9.0g		Assigned Both
D_FP	float	%9.0g		Assigned FP
D_None	float	%9.0g		Assigned None
T_MF	float	%9.0g		Treated MF
T_Both	float	%9.0g		Treated Both
T_FP	float	%9.0g		Treated FP
T_None	float	%9.0g		Treated None
t_D_MF	float	%9.0g		Post x Assigned MF
t_D_Both	float	%9.0g		Post x Assigned Both
t_D_FP	float	%9.0g		Post x Assigned FP
t_D_None	float	%9.0g		Post x Assigned None
t_T_MF	float	%9.0g		Post x Treated MF

t_T_Both	float	%9.0g		Post x Treated Both
t_T_FP	float	%9.0g		Post x Treated FP
t_T_None	float	%9.0g		Post x Treated None
sex	byte	%9.0g	S01Q02	Sex
age	int	%9.0g		Age
relhead	byte	%19.0g	S01Q04	Relationship with the head
ed_any	byte	%9.0g	yn	Formal Education
ed_compl	byte	%31.0g	S01Q12	Highest grade completed
ed_attend	byte	%9.0g	yn	Currently attending school
ed_gradeatt	byte	%31.0g	S01Q14	Grade attending
fwt_hh	byte	%9.0g		Sampling weights
act_sch	byte	%9.0g		Main activity last 12 months was schooling
act_hswk	byte	%9.0g		Main activity last 12 months was housework
act_work	byte	%9.0g		Main activity last 12 months was work
hw	float	%9.0g		# hours worked last 12 months, two main activities, Age > 9
hw_self	float	%9.0g		# hours worked last 12 months, two main SELF-EMPLOYMENT activities, Age > 9
hw_outside	int	%9.0g		# hours worked last 12 months, two main OUTSIDE activities, Age > 9
hw_wk	float	%9.0g		Average hours work / week last 12 months
hw_wk_self	float	%9.0g		Average hours work / week last 12 months, Self-employment
hw_wk_outside	float	%9.0g		Average hours work / week last 12 months, outside employment
_FEpa_2	byte	%8.0g		pa==2
_FEpa_3	byte	%8.0g		pa==3
_FEpa_4	byte	%8.0g		pa==4
THESE ARE ALL THE PA DUMMIES				
_FEpa_132	byte	%8.0g		pa==132
_FEpa_133	byte	%8.0g		pa==133
_FEpa_134	byte	%8.0g		pa==134

Sorted by: time

data.dta

Contains data from C:\Users\tarozzino\Documents\Microfinance\AEJfinal\Stata\data.dta

```
obs:      12,675      All data, pooled
vars:      336        2 Jun 2014 16:33
size:    11,901,825
```

variable name	storage type	display format	value label	variable label
time	float	%9.0g	time	Baseline (0) or Endline (1)
region	float	%9.0g	region1	
zone	float	%12.0g	zone1	
woreda	float	%13.0g	woreda1	
pa	double	%32.0g	pa	P.A. (Peasant Association or Kebele)
id_v	double	%8.0f	vill	Village
hid	float	%9.0g		Unique Household ID
fwt_hh	byte	%9.0g		Sampling weights
patypen	byte	%8.0g	patypen	Randomly assigned treatment group
patypeactual2	byte	%9.0g	patypen	Actual treatment group
dist_health	int	%9.0g		Distance (in minutes) to the nearest health facility
dist_market	int	%9.0g		Distance from the nearest market
nofood	byte	%9.0g		Number of months at which members of this household do not h
weather3	byte	%18.0g	S03Q23	In the past 3 years has the weather (for crops) been
bsns_main_con~r	byte	%27.0g	s6cq091	Main constraint in increasing income from non-farm business
bsns_noconstr~t	float	%9.0g		List no constraints in increasing income from non-farm business
bsns_borrow_m~n	float	%9.0g		Difficulty in borrowing is main constraint in increasing income from non-farm bu
bsns_borrow_imp	float	%9.0g		Difficulty in borrowing is one of 3 main constraints in increasing income from n
gregorian_m	float	%9.0g		(Gregorian) Month of interview
timetowater	double	%9.0g		Time to water source in dry season (min.)
id_water	double	%20.0g	S02Q151	Water collection: ID of member primary responsible
id_fuel	double	%20.0g	S02Q17	Fuel collection: ID of member primary responsible
group	byte	%9.0g	S02Q21	Is any member of your HH a member of any association/ group?
moved4	float	%9.0g		Household lived in village <=4 years
id_watersex	byte	%9.0g	yesno	Water collection: Female primary responsible
id_waterage	int	%9.0g		Water collection: Age of primary responsible
id_waterrel	byte	%19.0g	S01Q04	Water collection: Relation to head of primary responsible
headmale	float	%9.0g		Household head is male

headprimary	float	%9.0g		Household head has at least completed primary education
male_head	float	%9.0g		HH Head is Male
female_head	float	%9.0g		HH Head is Female
head_age	float	%9.0g		Age of household head
head_noeduc	float	%9.0g		Household head has no formal education
id_fuelsex	byte	%9.0g	yesno	Fuel collection: Female primary responsible
id_fuelage	int	%9.0g		Fuel collection: Age of primary responsible
id_fuelrel	byte	%19.0g	S01Q04	Fuel collection: relation to head of primary responsible
hhsize	float	%9.0g		Household size
u6	float	%9.0g		# children <6yo
m6_15	float	%9.0g		# males 6<=age<=15
f6_15	float	%9.0g		# females 6<=age<=15
m6_10	float	%9.0g		# males 6<=age<=10
f6_10	float	%9.0g		# females 6<=age<=10
m9_13	float	%9.0g		# males 9<=age<=13
f9_13	float	%9.0g		# females 9<=age<=13
m11_16	float	%9.0g		# males 11<=age<=16
f11_16	float	%9.0g		# females 11<=age<=16
m6_15_school	float	%9.0g		# males 6<=age<=15 currently attending school
f6_15_school	float	%9.0g		# females 6<=age<=15 currently attending school
m6_10_school	float	%9.0g		# males 6<=age<=10 currently attending school
f6_10_school	float	%9.0g		# females 6<=age<=10 currently attending school
m6_9	float	%9.0g		
f6_9	float	%9.0g		
m10_16	float	%9.0g		
f10_16	float	%9.0g		
m6_9_school	float	%9.0g		
f6_9_school	float	%9.0g		
m10_16_school	float	%9.0g		
f10_16_school	float	%9.0g		
m9_13_school	float	%9.0g		# males 9<=age<=13 currently attending school
f9_13_school	float	%9.0g		# females 9<=age<=13 currently attending school
m11_16_school	float	%9.0g		# males 11<=age<=16 currently attending school
f11_16_school	float	%9.0g		# females 11<=age<=16 currently attending school
hh_adults	float	%9.0g		# Members of age >= 16
hh_children	float	%9.0g		# Members of age < 16
rel_orthodox	float	%9.0g		Head is Christian orthodox
rel_protest	float	%9.0g		Head is Christian protestant
lang_oro	float	%9.0g		Language is Oromiffa
ethn_oro	float	%9.0g		Oromo ethnicity
bsns_sales	double	%9.0g		Total revenues from business last 12mts
bsns_costs	double	%9.0g		Total costs for business last 12mts

bsns_labor	double	%9.0g		Total hired labor costs for business last 12mts
bsns_mater	double	%9.0g		Total material costs for business last 12mts
bsns_equip	double	%9.0g		Total equipment/machinery costs for business last 12mts
b_u3	float	%9.0g		HH has a business < 3 years old
b_u4	float	%9.0g		HH has a business < 4 years old
bsns_f	float	%9.0g		# of non-farm business activities led by a female
bsns_n	float	%9.0g		# of non-farm business activities
bsns_netsls	float	%9.0g		Total net revenues from business last 12mts
bsns_some	float	%9.0g		HH has a non-farm business
anim_main_con~r	byte	%49.0g	S6BQ12	What are the main constraints that you face in increasing in
anim_big_n	float	%9.0g		# large animals owned
anim_big_value	float	%9.0g		Tot value of large animals owned (2006 Birr)
anim_big_sold	float	%9.0g		# large animals sold last 12mts
anim_big_sales	float	%9.0g		Revenues from sales of large animals last 12mts (2006 Birr)
anim_ckn_n	float	%9.0g		# chicken owned
anim_ckn_value	float	%9.0g		Tot value of chicken owned (2006 Birr)
anim_ckn_sold	float	%9.0g		# chicken sold last 12mts
anim_ckn_sales	float	%9.0g		Revenues from sales of chicken last 12mts (2006 Birr)
anim_med_n	float	%9.0g		# sheep/goats/other owned
anim_med_value	float	%9.0g		Tot value of sheep/goats/other owned (2006 Birr)
anim_med_sold	float	%9.0g		# sheep/goats/other sold last 12mts
anim_med_sales	float	%9.0g		Revenues from sales of sheep/goats/other last 12mts (2006 Birr)
anim_exp	float	%9.0g		Total expenditure in livestock purchases (2006 Birr)
anim_total	float	%9.0g		Total value of livestock owned (2006 Birr)
anim_totsales	float	%9.0g		Total value of livestock sales last year (2006 Birr)
cropsales	double	%9.0g		Cash revenues from crops
cropsales_c	double	%9.0g		Cash revenues from coffee
cropnetsls	double	%9.0g		Net cash revenues from crops
cropnetsls_c	double	%9.0g		Net cash revenues from coffee
cropcosts	double	%9.0g		Total costs for crop production
cropcosts_c	double	%9.0g		Total costs for coffee production
landowncult	float	%9.0g		Cultivable land owned (Hectars)
landcult	double	%9.0g		Cultivated land in last 12 months (Hectares)
crop_main_con~r	byte	%45.0g	S6AQ12	Main constraint in increasing income from crop cultivation
crop_noconstr~t	float	%9.0g		List no constraints in increasing income from crop cultivation
crop_borrow_m~n	float	%9.0g		Difficulty in borrowing is main constraint in increasing income from crop cultiv
crop_borrow_imp	float	%9.0g		Difficulty in borrowing is one of 3 main constraints in increasing income from c
inc_otherall	float	%9.0g		Income from all other sources
inc_trans	float	%9.0g		Income from transfers, last 12mts
inc_other	float	%9.0g		Income from other sources (excludes sale of assets/cattle), last

				12mts
mainecon	byte	%37.0g	yn	Agriculture is main activity of hh. head
inc_wage	float	%9.0g		Income from wages, last 12mts
loans_informal	float	%9.0g		Outstanding loans from informal sources
loans_formal	float	%9.0g		Outstanding loans from banks/cooperatives
loans_rca	float	%9.0g		Outstanding loans from revolving credit associations
loans_ngo	float	%9.0g		Outstanding loans from NGO
loans_mf	byte	%9.0g		Outstanding loans from MF (Follow-up only)
loans_ml	float	%9.0g		Outstanding loans from Money Lenders
loans_rca_w	float	%9.0g		Women's outstanding loans from RCA
loans_mf_w	byte	%9.0g		Women's outstanding loans from MF (Follow-up only)
loanw_k	float	%9.0g		Outstanding loans for capital investment
loanw_var	float	%9.0g		Outstanding loans to purchase variable inputs
loanw_c	float	%9.0g		Outstanding loans for consumption
loanw_s	float	%9.0g		Outstanding loans to pay for schooling costs
loanp_owncrop	float	%9.0g		Outstanding loans to finance production of food crops
loanp_cashcrop	float	%9.0g		Outstanding loans to finance production of cash crops
loanp_animals	float	%9.0g		Outstanding loans to finance livestock activity
loanp_other	float	%9.0g		Outstanding loans to finance other economic activity
loanstot	float	%9.0g		Total outstanding loans (2006 Birr)
loanstot_prod	float	%9.0g		Total outstanding loans for productive purposes (2006 Birr)
loanstot_rca	float	%9.0g		Total outstanding loans from RC Associations (2006 Birr)
loanstot_mf	float	%9.0g		Total outstanding loans from MF (2006 Birr, Follow-up only)
loanstot_info~1	float	%9.0g		Total outstanding loans from informal sources (2003 Birr)
loanstot_formal	float	%9.0g		Total outstanding loans from banks/cooperatives (2003 Birr)
loanstot_ngo	float	%9.0g		Total outstanding loans from NGO (2003 Birr)
loanstot_woman	float	%9.0g		Total outstanding loans initiated by women
loans	float	%9.0g		Any outstanding loan in household
loans_nothead	float	%9.0g		Any outstanding loan not initiated by household head
loans_woman	float	%9.0g		Any outstanding loan initiated by a woman
loans_any	byte	%9.0g	yesno	Household has any outstanding loan
loans_rep12	byte	%9.0g	yesno	Household repaid any loan last 12 months
mf_heard	byte	%9.0g	yesno	Have you heard of a credit program operated by (Amhara Credit)
mf_when	int	%17.0g	calconveth	
				When did the program start lending in this village? Year
mf_visit	byte	%10.0g	yesno	Has a program officer ever visited this village?
mf_knows	byte	%9.0g	yesno	Do you know how the program operates?
mf_coll	byte	%9.0g	yesno	Is there any collateral that borrowers have to put up to get
mf_borrow	byte	%9.0g	yesno	Have you or any member of your HH borrowed any money from th
mf_fp	byte	%9.0g	yesno	Family Planning discussed at meetings
mf_whopoor	byte	%9.0g	yesno	Think anyone/poor can borrow from MF
mf_whorich	byte	%9.0g	yesno	Think the rich can borrow from MF

mf_members	byte	%9.0g	members	# members in MF borrowing group
sick	byte	%9.0g		Some was seriously ill in hh. last 3 years
sick_child	byte	%9.0g		A child (U6) was seriously ill in hh. last 3 years
health_exp	double	%9.0g		Tot. expenditure in health for serious illnesses last 3 years (Birr)
assets	double	%9.0g		Total value of assets (2006 Birr)
yearsinvill	double	%9.0g		# years hh lived in village
roomsleep	double	%9.0g		# Sleeping rooms in dwelling
repairs	float	%9.0g		Amount spent for repairs (FUp only), 2006 Birr
surface	double	%27.0g	yesno	Drink surface water
frac_f610	float	%9.0g		
frac_m610	float	%9.0g		
frac_f1116	float	%9.0g		
frac_m1116	float	%9.0g		
frac_f69	float	%9.0g		
frac_f1016	float	%9.0g		
frac_m69	float	%9.0g		
frac_m1016	float	%9.0g		
D	float	%9.0g		Credit, assigned (patypen = 1 or 2)
T	float	%9.0g		Credit (Actual, patypeactual = 1 or 2)
C_as	float	%9.0g		Control, assigned (patypen = 3 or 4)
C	float	%9.0g		Control, actual (patypeactual = 3 or 4)
FP	float	%9.0g		Family Planning, actual (patypeactual = 1 or 3)
D_MF	float	%9.0g		Assigned MF
D_Both	float	%9.0g		Assigned Both
D_FP	float	%9.0g		Assigned FP
D_None	float	%9.0g		Assigned None
T_MF	float	%9.0g		Treated MF
T_Both	float	%9.0g		Treated Both
T_FP	float	%9.0g		Treated FP
T_None	float	%9.0g		Treated None
t_D	float	%9.0g		Time x Credit (Assigned)
t_D_MF	float	%9.0g		Post x Assigned MF
t_D_Both	float	%9.0g		Post x Assigned Both
t_D_FP	float	%9.0g		Post x Assigned FP
t_D_None	float	%9.0g		Post x Assigned None
t_T	float	%9.0g		Time x Credit (Treated)
t_T_MF	float	%9.0g		Post x Treated MF
t_T_Both	float	%9.0g		Post x Treated Both
t_T_FP	float	%9.0g		Post x Treated FP
t_T_None	float	%9.0g		Post x Treated None
t_a	float	%9.0g		Post x Amhara

t_o	float	%9.0g	Post x Oromiya
t_Cr_a	float	%9.0g	Post x Amhara x Credit
t_Cr_o	float	%9.0g	Post x Oromiya x Credit
a	float	%9.0g	Amhara
o	float	%9.0g	Oromiya
Cr_a	float	%9.0g	Credit x Amhara
Cr_o	float	%9.0g	Credit x Oromiya
oldbusiness	float	%9.0g	
hh_6_15	float	%9.0g	
p_borrow	float	%9.0g	Pr(Borrow at follow-up)
costs	float	%9.0g	Tot exp. for crops + livestock purchases + non-farm business
revenues	float	%9.0g	Tot revenues (cropsales + bsns_sales + anim_totsales)
net	float	%9.0g	Revenues - costs
_FEpa_2	byte	%8.0g	pa==2
_FEpa_3	byte	%8.0g	pa==3
. . . ALL THE PA DUMMIES			
_FEpa_134	byte	%8.0g	pa==134

Sorted by: time

empowerment.dta

Contains data from C:\Users\tarozzino\Documents\Microfinance\AEJfinal\Stata\empowerment.dta

```

obs:      12,635      Employment
vars:      166        2 Jun 2014 17:13
size:      2,223,760

```

variable name	storage type	display format	value label	variable label
time	byte	%8.0g	time	Baseline (0) or Endline (1)
pa	int	%8.0g		P.A. (Peasant Association or Kebele)
patypen	byte	%9.0g	type	Randomly assigned experimental arm
hid	int	%9.0g		Unique Household ID
fwt_hh	byte	%9.0g		Sampling weights
wife_age	int	%9.0g		
head_sex	byte	%9.0g	S01Q02	Sex
head_age	int	%9.0g		Age
dec_self	float	%9.0g		% Decisions where respondent is involved
dec_self_ec	float	%9.0g		% Economic decisions where respondent is involved
T	byte	%9.0g		
D	byte	%9.0g		
t_a	byte	%9.0g		Post x Amhara
t_o	byte	%9.0g		Post x Oromiya
t_Cr_a	byte	%9.0g		Post x Amhara x Credit
t_Cr_o	byte	%9.0g		Post x Oromiya x Credit
t_T	byte	%9.0g		Time x Credit (Treated)
t_D	byte	%9.0g		Time x Credit (Assigned)
D_MF	byte	%9.0g		Assigned MF
D_Both	byte	%9.0g		Assigned Both
D_FP	byte	%9.0g		Assigned FP
D_None	byte	%9.0g		Assigned None
T_MF	byte	%9.0g		Treated MF
T_Both	byte	%9.0g		Treated Both
T_FP	byte	%9.0g		Treated FP
T_None	byte	%9.0g		Treated None
t_D_MF	byte	%9.0g		Post x Assigned MF
t_D_Both	byte	%9.0g		Post x Assigned Both
t_D_FP	byte	%9.0g		Post x Assigned FP

t_D_None	byte	%9.0g	Post x Assigned None
t_T_MF	byte	%9.0g	Post x Treated MF
t_T_Both	byte	%9.0g	Post x Treated Both
t_T_FP	byte	%9.0g	Post x Treated FP
t_T_None	byte	%9.0g	Post x Treated None
_FEpa_2	byte	%8.0g	pa==2
_FEpa_3	byte	%8.0g	pa==3

ALL THE PA DUMMIES

_FEpa_133	byte	%8.0g	pa==133
_FEpa_134	byte	%8.0g	pa==134

Sorted by: