ANCOVA estimation of lending impacts

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Contents

Need: packages lmtest, sandwich.
To reach to this file:

1. read_cleaned_data: This reads survey files. Corrects errors.
2. read_admin_data: This reads administrative file. Corrects errors, define TradGroup2 "NotReceivedLoan".
3. ReadFilesMergeAdminRoster: This merges survey files with admin file (e.g., AssetAdminData.rds). Create ar, arA and attach o800, o1600. Attrition in o800 is 92. Define BStatus.

In what follows,

1. Read RosterAdminData.rds, etc., create dummy interactions and trim observations if `grepl("tw|dou", TradGroup)` is true.
2. Summarise descriptive statistics, estimate ANCOVA, graph estimates and IGAs.

```
qs 0.26.3
```

This note uses ANCOVA as the estimator of choice. ANCOVA assumes the initial value of outcome variable is a pure nusissance that it only adds a noise and is uncorrelated with the main regressor of interest, hence uses it as a covariate. Under such assumptions, it is shown that ANCOVA is more efficient than DID as it renders data to control for baseline differences in outcomes (Frison and Pocock, 1992). ANCOVA become numerically the same as DID if the estimated coefficient on the covariate is unity. As shown in the results, we see that it smaller and the claim that DID overcorrects for the initial values applies to our data.

Read: c:/data/GUK/analysis/save/EstimationMemo/AllMeetingsRosterAdminData.rds.

Original data files (incl. Abu-san's correction files) → (read_cleaned_data.rnw) → `data_read_in_a_list_wit` → add admin data in ReadFilesMergeAdminRoster.rnw → Individual data files (RosterAdminSchoolingData.rds, RosterAdminData.rds, AllMeetingsRosterAdminData.rds, AssetAdminData.rds, LivestockAdminData.rds, LivestockLongAdminData.rds, LivestockProductsAdminData.rds, LabourIncomeAdminData.rds, FarmRevenueAdminData.rds, ConsumptionAdminData.rds, OtherBorrowingAdminData.rds, Shocks.rds) in c:/data/GUK/analysis/save/EstimationMemo/.

Further data preparations (trimming, adding shocks, round numbering, creating dummy vectors, interaction terms) are done in this file for estimation. Produces files: SchoolingAdminDataUsedForEstimation.prn, AllMeetingsRepaymentAdminDataUsedForEstimation.prn, RepaymentAdminDataUsedForEstimation.prn, AssetAdminDataUsedForEstimation.prn, LivestockAdminDataUsedForEstimation.prn, LivestockLongAdminDataUsedForEstimation.prn, LivestockProductsAdminDataUsedForEstimation.prn, LabourIncomeAdminDataUsedForEstimation.prn, FarmIncomeAdminDataUsedForEstimation.prn, ConsumptionAdminDataUsedForEstimation.prn, OtherBorrowingAdminDataUsedForEstimation.prn.

```
 [1] "s1"   "arA"  "ar"   "ass"  "lvo"  "lvoL" "lvp"  "lab"  "far"  "con"
[11] "obr"
```

Create RepaymentTrimmed.rds sample from RosterAdminData.rds.

Original HHs are 800 HHs at the baseline, whose size shrinks by attrition: 743, 745, 708. They are used for attrition and randomisation tests.

Add BStatus etc. to all files and save as:

c:/data/GUK/analysis/save/EstimationMemo/RepaymentTrimmed.rds

for example. It is trimmed as we keep only `grepl("old|iRej|^g", Mstatus)` (old members, individual rejection, group rejection, group erosion). Here, we have not yet dropped `grepl("tw|dou", TradGroup)` (twice received, double received in tradional arm).

This is done in EstimationMemo_ANCOVA3.rnw: Dropping members who received only 2 loans (twice and double in TradGroup) and save as an estimating sample, for example:

Save: c:/data/GUK/analysis/save/EstimationMemo/RepaymentInitialSample.rds

As we use RepaymentInitialSample.rds as our base to merge other files, files ending with InitialSample.rds are the data we use.

Check asset file entries. There are 797 households who respond at least once to asset questionnaire, but only 741 households respond at baseline (out of 800, response rate of 92.62%). Below displays the timing of first reponse on assets by HHs.

```
addmargins(table0(ass[o800 == 1L, .(Arm, survey, tee = 1:.N),
  by = .(hhid)][tee == 1, .(survey, Arm)]))
```

```
      Arm
survey traditional large large grace cattle Sum
   1           184   189         189    179 741
   2            14    10          10     19  53
   3             0     1           0      2   3
   Sum         198   200         199    200 797
```

Among which, if we drop the sample in Traditional arm who receive the loan only twice, we have:

```
addmargins(table0(ass[o800 == 1L & !grepl("tw|dou", TradGroup) &
  hhid %in% hhid[survey==1],
  .(Arm, tee = 1:.N), by = .(survey, hhid)][tee == 1, .(survey, Arm)]))
```

```
      Arm
survey traditional large large grace cattle  Sum
   1           162   189         189    179  719
   2           153   181         161    169  664
   3           154   182         164    169  669
   4           135   182         161    156  634
   Sum         604   734         675    673 2686
```

TABLE 1: DATA TRIMMING RESULTS

file	old|iRej|^g in Mstatus		No tw|dou in TradGroup		
all rounds					
s1	9007	⇒	6013	⇒	5677
arA	91344	⇒	66240	⇒	61200
ar	33223	⇒	24806	⇒	23210
ass	7869	⇒	5839	⇒	5437
lvo	7616	⇒	5661	⇒	5277
lvoL	22848	⇒	16983	⇒	15831
lvp	15964	⇒	11914	⇒	11088
lab	16004	⇒	12102	⇒	11307
far	589	⇒	411	⇒	391
con	5888	⇒	4360	⇒	4051
obr	7989	⇒	5958	⇒	5545
round 1 only					
s1	2582	⇒	1931	⇒	1827
arA	602	⇒	81	⇒	79
ar	2123	⇒	1600	⇒	1496
ass	1986	⇒	1486	⇒	1392
lvo	2073	⇒	1571	⇒	1467
lvoL	2099	⇒	1595	⇒	1491
lvp	2097	⇒	1595	⇒	1491
lab	2097	⇒	1593	⇒	1489
far	24	⇒	22	⇒	20
con	1980	⇒	1472	⇒	1369
obr	2097	⇒	1595	⇒	1491
original 800, round 1 only					
s1	964	⇒	964	⇒	937
arA	33	⇒	33	⇒	33
ar	800	⇒	800	⇒	776
ass	741	⇒	741	⇒	719
lvo	785	⇒	785	⇒	761
lvoL	796	⇒	796	⇒	772
lvp	796	⇒	796	⇒	772
lab	796	⇒	796	⇒	772
far	12	⇒	12	⇒	12
con	741	⇒	741	⇒	717
obr	796	⇒	796	⇒	772

Source: GUK survey data.

Notes: 1. Top panel is observations for all rounds. Middle panel is observations for round 1 only. Bottom panel is observations for original 800 households at round 1. old|iRej|^g in Mstatus are strings for old members, individual rejecters, group rejecters, group erosion. con|^dro|^rep in Mgroup indicates continuing, dropouts, replacing members. tw|dou in TradGroup are members who received loans twice and double amount in the 2nd loans. They are omitted from analysis because they are under a different treatment arm.

2. ar lists all survey respondents, arA lists all loan recipients. There are 0 members in traditional arm who received loans twice, not three times. They will be omitted from ITT effects estimation. Consumption is sampled in round 2.

Tabulate number of obs in each files. Read: c:/data/GUK/analysis/save/EstimationMemo/AllMeetingsRepaym

Tabulate number of obs in each files for original 800 households (before dropping 24 HHs in trad).

```
x
traditional       large large grace      cattle         Sum
        168         192         171         177         708
x
traditional       large large grace      cattle         Sum
        168         192         171         177         708
```

TABLE 2: NUMBER OF OBSERVATIONS IN EACH FILE AT ROUND 1 FROM HHS WITH SINGLE TREATMENT

files	rounds	traditional	large	large grace	cattle	total
s1	1	728	622	618	614	2582
	2	610	501	452	496	2059
	3	555	474	433	449	1911
	4	488	427	393	388	1696
ar	1	605	504	507	507	2123
	2	590	491	457	485	2023
	3	583	487	453	473	1996
	4	539	482	447	442	1910
ass	1	602	503	506	505	2116
	2	588	490	457	483	2018
	3	580	484	452	463	1979
	4	497	457	416	381	1751
lvo	1	603	504	507	506	2120
	2	576	488	454	473	1991
	3	546	477	440	449	1912
	4	414	409	357	385	1565
lvp	1	601	504	507	507	2119
	2	588	491	457	485	2021
	3	581	487	453	472	1993
	4	538	483	447	444	1912
lab	1	601	504	507	507	2119
	2	588	491	457	485	2021
	3	581	487	453	472	1993
	4	534	481	443	433	1891
far	1	78	123	70	64	335
	2	35	68	39	30	172
	3	13	27	25	12	77
	4	2	1	2	1	6
con	2	590	490	457	484	2021
	3	581	484	453	470	1988
	4	536	477	435	428	1876
obr	1	1184	994	960	979	4117
	2	583	485	453	470	1991
	4	534	478	435	428	1875

Source: Estimated with GUK administrative and survey data.

Notes: 1. Sample is all households: Original 1600 and added households through new groups and individuals replacing opt-out members. All households in traditional arm who received more than one loan are excluded.

2.

TABLE 3: NUMBER OF OBSERVATIONS IN EACH FILE AT ROUND 1 FROM ORIGINAL 1600 HHS

files	rounds	traditional	large	large grace	cattle	total
s1	1	356	479	505	487	1827
	2	293	379	350	381	1403
	3	263	358	337	349	1307
	4	214	321	304	301	1140
ar	1	296	400	400	400	1496
	2	283	389	352	379	1403
	3	277	386	349	367	1379
	4	240	382	343	341	1306
ass	1	293	399	399	398	1489
	2	281	388	352	377	1398
	3	275	383	348	361	1367
	4	218	357	316	292	1183
lvo	1	294	400	400	399	1493
	2	274	386	349	368	1377
	3	256	377	339	350	1322
	4	183	317	282	303	1085
lvp	1	294	400	400	400	1494
	2	283	389	352	379	1403
	3	277	386	349	366	1378
	4	240	382	343	342	1307
lab	1	294	400	400	400	1494
	2	283	389	352	379	1403
	3	277	386	349	367	1379
	4	240	381	342	340	1303
far	1	19	96	52	57	224
	2	5	51	28	27	111
	3	2	22	17	12	53
	4	2	1	2	1	6
con	2	283	388	352	378	1401
	3	276	383	349	365	1373
	4	238	377	331	331	1277
obr	1	577	788	751	777	2893
	2	276	384	349	365	1374
	4	238	378	331	331	1278

Source: Estimated with GUK administrative and survey data.

Notes: 1. Sample is original 1600 households who agree to join the group. This includes households who later dropped out due to flood, group rejections, and individual rejections. All original 1600 households are tracked but some attrit from the sample.

2.

TABLE 4: NUMBER OF OBSERVATIONS IN EACH FILE AT ROUND 1 FROM ORIGINAL 800 HHS ADMIN DATA BEFORE TRIMMING

files	rounds	traditional	large	large grace	cattle	total
s1	1	232	246	251	235	964
	2	180	197	177	191	745
	3	164	185	165	173	687
	4	134	171	147	143	595
ar	1	200	200	200	200	800
	2	190	191	172	190	743
	3	188	193	174	190	745
	4	168	192	171	177	708
ass	1	198	200	199	200	797
	2	190	194	177	195	756
	3	186	191	174	188	739
	4	154	179	155	151	639
lvo	1	199	200	200	199	798
	2	186	194	175	188	743
	3	177	188	168	180	713
	4	135	166	142	160	603
lvp	1	199	200	200	200	799
	2	192	195	177	195	759
	3	188	193	174	190	745
	4	168	192	171	177	708
lab	1	199	200	200	200	799
	2	192	195	177	195	759
	3	188	193	174	190	745
	4	168	191	170	175	704
far	1	12	46	24	25	107
	2	4	26	13	10	53
	3	2	9	8	4	23
	4	1	1	1	1	4
con	2	192	194	177	195	758
	3	187	191	174	190	742
	4	167	188	165	172	692
obr	1	199	199	199	199	796
	2	190	191	171	190	742
	4	168	192	171	177	708

Source: Estimated with GUK administrative and survey data.

Notes: 1. Sample is original 800 households who agree to join the group in RosterAdmin.rds. This includes households who later dropped out due to flood, group rejections, and individual rejections. All original 800 households are tracked but some attrit from the sample.

2.

TABLE 5: NUMBER OF OBSERVATIONS IN EACH FILE AT ROUND 1 FROM ORIGINAL 800 HHS TRIMMED FOR MSTATUS

files	rounds	traditional	large	large grace	cattle	total
s1	1	232	246	251	235	964
	2	180	197	177	191	745
	3	164	185	165	173	687
	4	134	171	147	143	595
ar	1	200	200	200	200	800
	2	190	191	172	190	743
	3	188	193	174	190	745
	4	168	192	171	177	708
ass	1	198	200	199	200	797
	2	190	194	177	195	756
	3	186	191	174	188	739
	4	154	179	155	151	639
lvo	1	199	200	189	199	787
	2	186	194	175	188	743
	3	177	188	168	180	713
	4	135	166	142	160	603
lvp	1	199	200	200	200	799
	2	192	195	177	195	759
	3	188	193	174	190	745
	4	168	192	171	177	708
lab	1	199	200	200	200	799
	2	192	195	177	195	759
	3	188	193	174	190	745
	4	168	191	170	175	704
far	1	12	46	24	25	107
	2	4	26	13	10	53
	3	2	9	8	4	23
	4	1	1	1	1	4
con	2	192	194	177	195	758
	3	187	191	174	190	742
	4	167	188	165	172	692
obr	1	199	199	199	199	796
	2	190	191	171	190	742
	4	168	192	171	177	708

Source: Estimated with GUK administrative and survey data.

Notes: 1. Sample is based on original 800 households who agree to join the group in RosterAdmin.rds, and keeping old member, individual and group rejecters, and flood eroded households. Some households later drop out due to flood, group rejections, and individual rejections.

2.

This file reads data from a list data_read_in_a_list_with_baseline_patched.rds, merge all non-roster files with admin-roster, and saves in c:/data/GUK/analysis/save/EstimationMemo/.

I Summary

I.1 Definitions

I.1.1 Arms

(125*45*3) or, CumRepaid/(190*45*2)

Traditional A cash loan of Tk. 5600 with one year maturity. Repay Tk 125 * 45 weeks = 5625 each year for 3 years.

Large A cash loan of Tk. 16800 with three year maturity. Repay Tk 125 * 45 weeks * 3 years =

16875

Large Grace A cash loan of Tk. 16800 with a one year grace period and three year maturity. Repay Tk 190 * 45 weeks * 2 years = 17100.

Cow An in-kind loan of a cow worth Tk. 16800 with a one year grace period and three year maturity. Repay Tk 190 * 45 weeks * 2 years = 17100.

LargeSize An indicator variable takes the value of 1 if the arm is Large, Large Grace, or Cow.

WithGrace An indicator variable takes the value of 1 if the arm is Large Grace or Cow.

InKind Same as Cow.

When one uses covariates Large, Large Grace, Cow in estimation, their estimates represent each arm's characteristics relative to Traditional. When one uses covariates LargeSize, WithGrace, InKind, their estimates represent their labeled names.

I.1.2 Assets

Net assets, net broad assets, and livestock values are computed/defined in MergeAllNarrowNetAssetsANCOVA.R. All other asset components are summed/defined in read_cleaned_data.rnw.

Household assets Non-livestock asset items, excluding land holding, reported in all rounds. Tubewell, mobile phone, bicycle, wrist watch, sewing machine, rickshaw/van, wall clock, radio/tv, solar, electric fan, cassette player.

Broad household assets All non-livestock asset items (some are reported only in some rounds). Land holding at baseline is asked as a recall in round 2. When land is added, we assume its baseline value to be zero. This may inflate the asset growth.

Total imputed value of livestock Livestock holding. Median sales price through out the survey rounds are used to impute values.

Total imputed 2 value of livestock Livestock holding. Median annual sales price are used to impute values.

Productive assets Tractor, thresher, power tiller, power pump, hand pump, deep tube-well, shallow tube-well, treddle pump, rower pump, done/swing basket, plough and yoke, spray, husking machine, ginning machine, country boat, engine boat, fishing net, cage incubator, brooder, bees-box, weeder, ladder (moi), sickle/dao/axe/spade, gola (grain storage), dheki, jata, sewing machine, rickshaw, etc.

Net assets TotalImputedValue + NLAssetAmount - DebtOutstanding.before - NonNGOBal. I.e., household assets + productive assets + livestock holding + net saving - debt to GUK - debts to relatives and money lenders. Assets use only items observed for all 4 rounds for household assets *including* radios and cassette players (which have possibly large errors) but exclusing land.

Net broad assets TotalImputedValue + BroadNLAssetAmount - DebtOutstanding.before - NonNGOBal. I.e., broad household assets + productive assets + livestock holding + net saving - debt to GUK - debts to relatives and money lenders. Assets use all items observed for household assets, including land.

Net non-livestock assets NLAssetAmount - DebtOutstanding.before - NonNGOBal. I.e., household assets + productive assets + net saving - debt to GUK - debts to relatives and money lenders. Assets use only items observed for all 4 rounds for household assets *including* radios and cassette players (which have possibly large errors) but exclusing land.

Cattle holding Number of cattlle holding in counts, not in monetary units.

I.2 Inference

- First-difference estimators are used. This can be seen as an extension of DID to multi-periods (although historically the latter precedes the former). FD is used also for a binary indicator such as schooling.
- All the standard errors are clustered at the group (char) level.
- To aid the understanding if the data is more suited to the assumption of first-difference rather than fixed-effects, I used a check suggested by Wooldridge (2010, 10.71). It is an AR(1) regression of FD residuals. Most of results show low autocorrelations which is consistent with the assumption of FD estimator. The use of cluster-robust standard errors gives consistent estimates of SEs, so it boils down to efficiency.
- I rely more on the formulation using LargeSize, WithGrace, InKind than Large, LargeGrace, Cow due to an ease in interpretation. Numerically, both are equivalent.
- A caution on reading the estimates: All are estimates on increments. If LargeSize has an estimate of 10, then it is a 10 unit larger change than the baseline (traditional). If the interaction of LargeSize with rd 2-3 is 10, then it is a 10 unit larger change than rd 2-3 change of baseline. If the estimated value of intercept is 10 and rd 2-3 is 10, then rd 2-3 change is 20 for baseline, 30 for LargeSize.

I.3 Findings

Overall, the intervention reveals that larger sized loans accerelate the timing of becoming an owner of large livestock without adversely affecting the repayments. This applies to both the ultra poor and the moderately poor. A loan amount seems to have convex returns at a low level of assets. Higher growths come at a cost of slower school progression of older girls and smaller increases in consumption for the arm of in-kind, so the welfare implication is mixed. In addition, given that the number of cows per owner remains the similar after 2 years, it does not provide evidence for accelerated growth of livestock after becoming an owner in this short window. Another note is that the loan repayment was poor for unknown reasons so, in the hindsight, the risks required a higher margin for this type of lending to the target population, which could have reduced participation.

Net saving and repayments Sample uses administrative records of all borrowers in the original 800 households. Smaller net saving for traditional arm. Period of rds 2, 3 saw a positive net saving, then became negative in rd 4 for LargeGrace, Cow. Repayment is greater for Large, LargeGrace, Cow in rds 2, 3. In rd 4, repayment of Large becomes statistically the same with Traditional while LargeGrace, Cow are greater (Table **??**). Table **??** (1) reveals LargeSize have larger net saving while (2) shows WithGrace has a faster decline in rds 2, 3, 4. Repayment is larger with LargeSize but smaller with WithGrace in (3). (4) shows rd 2-3 have larger repayment for WithGrace, which is by design. Repayment is positively autocorrelated and is negatively correlated with previous net saving. The ultra poor repaid just as much as the moderately poor, (Table **??**). This is evidence against the popular belief that the ultra poor are riskier.

Schooling Enrollment changes are larger for primary school girls in Large and Cow arms for primary but smaller for junior in rd 1 vs rd 4 comparisons (Table 17). When seen by attributes in Table 18, LargeSize shows smaller changes especially for primary school boys. Primary school girls in LargeSize and InKind show larger changes, while junior and high school girls in LargeSize show smaller changes than boys. This indicates that large sized arms have

detrimetal impacts on older girls' schooling but promotional impacts on primary school aged girls. No decline in enrollment changes when repaying for the arms of WithGrace, despite the larger installments.

Assets Household assets increased in all arms. Asset values initially increased then decreased, but do not fully cancel out and remain increased. There might have been liquidation of assets to repay the loans. Productive assets declined consecutively. Flood in rd 1 makes the increase in household assets smaller. Productive assets see a major decline among Large during rd 3-4 period (TABLE **??**). Comparison by attributes (TABLE **??**) or of rd 2 and rd 4 gives the same picture (TABLE **??**). Comparison against the loan non-recipients shows that they also experience a similar, increase-increase-decrease pattern. This indicates that the pattern observed among the loan recipients may be a systemic pattern of the area, not necessarily reflecting the repayment burdern (TABLE **??**). Comparison of productive asset holding of loan recipients (FIGURE **??**) and loan nonrecipients (FIGURE **??**) reveals that productive asset holding declined at the top end of loan nonrecipients in all arms (they only save or left the program). This indicates that the decline in productive asset holding among the loan recipients are not due to the repayment burden but a general pattern of the area.

Livestock Larger increases in holding values in rd 1-2, smaller increases in rd 2-3, no change in rd 3-4. Previous cow owners show a smaller increase in rd 1-2 while not rd 3-4 or rd 2-3 in the Cow arm (TABLE **??**). Figures show that cow ownership increased for all arms but the traditional arm (see FIGURE **??**). TABLE **??** shows baseline trend is a large increse in rd 1-2, a small increase in rd 2-3, a small decline in rd 3-4, while LargeSize sees an even larger increase in rd 1-2 and similar trend as baseline afterwards. This shows that member who received a larger sized disbursement could hold on to its level of livestock accumulation. TABLE **??** shows, albeit at p values around 10%, the ultra poor has a larger increase relative to the moderately poor, which is another manifestation against the popular notion that the ultra poor are riskier.

Total asset values Similar resulsts as assets.

Labour incomes Small sample. Increased during rd 2-3 in all arms (TABLE **??**).

Consumption Increased during rd 2-3 in all arms, a decrese in rd 3-4 (TABLE **??**). Another notable result is that InKind reduced the consumption in rd 3-4 even further than the baseline loan (TABLE **??**).

IGAs Multiple IGAs for Tradtional arm. Everyone else chose to invest in cows, suggesting entrepreneurship does not seem to matter in the uptake of loans. It is consistent with the presence of a poverty trap induced by a liquidity constraint and convexity in livestock production technology.

Project choice Traditional arm has a smaller rate of second investments, and second investment amounts are generally smaller (FIGURE 49). This confirms that most of Traditional arm members do not use own fund to increase the size of investments even after a few years into the program.

One sees changes in investment choices when one compares traditional and all other arms. However, consumption does not seem to differ. Repayments and asset holding are greater in all other arms. These are consistent with households are enforcing the repayment disciplines and reinvesting the proceeds rather than increasing consumption.

```
Warning in `[.data.table`(s1xR, , `:=`(c("Age_1", grepout("Primary", colnames(s1xR))), : C
```

```
Dropped 902 obs due to NA.
Dropped 902 obs due to NA.
Dropped 223 obs due to T<2.
Dropped 574 obs due to NA.
```

Enrollment pattern in original schooling panel. 'n' indicates NA (either attrition or not reported).

```
          SchPattern
ObPattern 0000 0001 000n 0011 001n 00nn 010n 0111 011n 01nn 0nnn 1000 1001 100n
     0111    0    0    0    0    0    0    0    0    2    1    2    0    0    0
     1000    0    0    0    0    0    0    0    0    0    0   32    0    0    0
     1010    0    0    0    0    0    1    0    0    0    0    2    0    0    0
     1011    0    0    0    0    0    0    0    0    0    0    0    0    0    0
     1100    0    0    0    0    0    0    0    0    0    3    1    0    0    0
     1110    0    0    5    0    2    1    0    0    3    0    2    0    0    1
     1111   21    2   21   12    2   28    1   83    8    6   68    5    1    4
          SchPattern
ObPattern 1011 101n 10nn 1100 1101 110n 1110 1111 111n 11n1 11nn 1nnn
     0111    0    0    0    0    0    0    0    0    6    0    0    1
     1000    0    0    0    0    0    0    0    0    0    0    0   22
     1010    0    0    0    0    0    0    0    0    0    0    1    2
     1011    0    0    0    0    0    0    0    0    0    0    0    0
     1100    0    0    0    0    0    0    0    0    0    0    6    0
     1110    0    1    0    0    0    0    0    0   25    0    3    0
     1111    6    3   10    8    1    9    3  397   41    1   29   42
```

Left panel is before dropping nnn, right panel is after: Original panel.

```
  traditional large large grace cattle traditional large large grace cattle
1         205   246         251    235         166   208         186    203
2         166   208         186    203         166   208         186    203
3         148   184         168    173         148   184         168    173
4         113   161         135    131         113   161         135    131
```

sch has 2913 rows. Drop 174 observations in sch with nnn in SchPattern.

With OLS, 89, 135, 539 individuals are repeatedly observed for 2, 3, 4 times, respectively. With FD, sch is reduced to 1837 rows after first-differencing with 75, 129, 499 individuals with repeatedly observed for 1, 2, 3 times, respectively. Individuals with NAs in Enrolled: 0 obs for sch. Check missingness in schooling level information.

```
x
   0    1
1575 1164
```

Drop 1575 obs without school level information.

```
Dropped 902 obs due to NA.
Dropped 902 obs due to NA.
Dropped 223 obs due to T<2.
Dropped 574 obs due to NA.
```

```
要求されたパッケージ
sandwich をロード中です
```

```
要求されたパッケージ
lmtest をロード中です
```

```
要求されたパッケージ
zoo をロード中です
```

```
次のパッケージを付け加えます

: 'zoo'
```

```
以下のオブジェクトは
'package:data.table' からマスクされています:

    yearmon, yearqtr
```

```
以下のオブジェクトは
'package:base' からマスクされています:

    as.Date, as.Date.numeric
```

II Data preparation

II.1 Define initial sample

c:/data/GUK/analysis/save/EstimationMemo/RosterAdmin.rds keeps all 800 members which will be used in attrition and randomisation tests. They are maked as o800==1L.

c:/data/GUK/analysis/save/EstimationMemo/RepaymentTrimmed.rds keeps 798 members after keeping only old members, individual rejecters, and group rejecters. Trimmed sample is produced in EstimationMemo_ChildFile1.rnw.

InitialSample is produced by dropping 24 HHs of traditional arm (who received only 2 loans [twice and double in TradGroup]) from Trimmed Sample . c:/data/GUK/analysis/save/EstimationMemo/Repaym

```
             Only2Loans
Arm           FALSE TRUE Sum
  traditional   176   24 200
  large         200    0 200
  large grace   200    0 200
  cattle        200    0 200
  Sum           776   24 800
```

```
x
traditional       large large grace      cattle         Sum
        200         200          200         200         800
```

```
Empty data.table (0 rows and 5 cols): hhid,VArm,Mstatus,BStatus,ObPattern
```

```
     AttritIn
Tee     2   3   4   9 Sum
  1    41   0   0   0  41
  2     0  14   0   0  14
  3     0   0  37   0  37
  4     0   0   0 684 684
  Sum  41  14  37 684 776
```

The study followed the stepped wedge design within each group due to administrative and budgetary constraints. Our initial identification strategy was comaprison between arms and did not use the stepped wedge design to estimate impacts because of possible spillovers within a group and a relatively short period for outcomes to change before the control gets treated [We can estimate within-group, we may just have underestimated impacts]. A half of members in a group, approximately 800 in total, are assigned initially as the treated and then the rest was treated in the following months. So the number of the treated increased as time passes.

We restrict ourselves to this initial 800 members in estimating the impacts. We do so because of possible spill overs within groups. We compare between arms, not individuals in a group. One can see how impacts may differ if we compare between-group and within-group estimates. Such comparison is left as future exercises.

We will add a binary indicator function o800 to indicate the initial sample. In below, we first use the roster-administrative data to choose the households of o800, because it has the most complete record. Then, I look for these households in other files and create o800 variable in them.

Correct NAs in LoanYear to -1 when members start repayment before disbursement.

II.2 Descriptive statistics

The majority of descriptive statistics are related to assets. We base our descriptive statistics on the asset data.

```
Number of obs by Arm and attrition
             AttritIn
Arm             2   3   4   9 Sum
  traditional   6   4  20 144 174
  large         5   2   1 192 200
  large grace  22   3   3 171 199
  cattle        5   5  13 177 200
  Sum          38  14  37 684 773


Number of obs by membership status and attrition
                     AttritIn
BStatus                 2   3   4   9 Sum
  borrower              8   6   8 578 600
  pure saver            0   0   0   0   0
  individual rejection  9   4   1  75  89
  group rejection       9   4   0  55  68
  rejection by flood   12   0  28   0  40
  Sum                  38  14  37 708 797
```

```
Arm
traditional       large large grace      cattle         Sum
        200         200          200         200         800
```

There are 24 members with TradGroup = twice, double. They were dropped from estimation sample. If UseTrimmedSample==T, attrition is based on all 800 members, if F, attrition is analysed using 776 members. We use the 'initial' sample (has only 776 members after dropping members who received loans only twice), not the 'trimmed' sample (has all 800 members).

```
cat("UseTrimmedSample is", UseTrimmedSample, "\n")
```

```
UseTrimmedSample is FALSE
```

```
if (!UseTrimmedSample)
  ar ← ar[!grepl("tw|dou", TradGroup), ]
addmargins(table0(ar[o800 == 1L & tee == 1, .(Tee, AttritIn)]))
```

```
     AttritIn
Tee     2   3   4   9 Sum
  1    41   0   0   0  41
  2     0  14   0   0  14
  3     0   0  37   0  37
  4     0   0   0 684 684
  Sum  41  14  37 684 776
```

Out of 776 members, there are 92 members who attrited.

```
                     AttritIn
BStatus                2  3  4 Sum
  borrower             8  6  8  22
  pure saver           0  0  0   0
  individual rejection 10  4  1  15
```

```
  group rejection      11  4  0  15
  rejection by flood   12  0 28  40
  Sum                  41 14 37  92
```

```
             AttritIn
Arm             2   3   4   9 Sum
  traditional   8   4  20 144 176
  large         5   2   1 192 200
  large grace  23   3   3 171 200
  cattle        5   5  13 177 200
  Sum          41  14  37 684 776
```

```
             Attrited
Arm             0   1 Sum
  traditional 144  32 176
  large       192   8 200
  large grace 171  29 200
  cattle      177  23 200
  Sum         684  92 776
```

TABLE 6: BASELINE DESCRIPTIVE STATISTICS BY ARM FOR ALL HOUSEHOLDS INCLUDING NONPARTICIPANTS

Variable	Traditional	Large	Large grace	Cattle	Overall
HeadLiteracy (Head literate)	0.097 (0.296)	0.110 (0.314)	0.105 (0.307)	0.155 (0.363)	0.117 (0.322)
HeadAge (Head age)	38.429 (10.115)	37.465 (10.165)	38.409 (9.271)	38.015 (10.746)	38.067 (10.075)
HHsize (Household size)	4.091 (1.447)	4.295 (1.506)	4.245 (1.492)	4.115 (1.368)	4.189 (1.454)
FloodInRd1 (Flood in round 1)	0.463 (0.500)	0.618 (0.487)	0.407 (0.493)	0.497 (0.501)	0.497 (0.500)
NLHAssetAmount (Household asset value$_{(1)}$)	1428 (922)	1268 (762)	1317 (698)	1534 (1174)	1383 (910)
PAssetAmount (Productive asset value$_{(1)}$)	1020 (1724)	1234 (2330)	2022 (9364)	1027 (2572)	1332 (5118)
TotalImputedValue (Livestock value$_{(1)}$)	4343 (11116)	6500 (14725)	5397 (13147)	4121 (10304)	5111 (12490)
NumCows (Number of cattle)	0.217 (0.556)	0.325 (0.736)	0.270 (0.657)	0.206 (0.515)	0.256 (0.624)
NetValue (Net asset value$_{(1)}$)	8011 (14877)	10074 (16402)	9671 (21510)	5649 (11752)	8375 (16557)
NetBroadValue (NetBroad Value)	9012 (15030)	10830 (16604)	9931 (21371)	6962 (12878)	9206 (16784)
Attrited (Attrited)	0.182 (0.387)	0.040 (0.196)	0.145 (0.353)	0.115 (0.320)	0.119 (0.323)
IRejected (Individually rejected)	0.176 (0.382)	0.045 (0.208)	0.065 (0.247)	0.185 (0.389)	0.116 (0.320)
GRejected (Group rejected)	0.227 (0.420)	0.100 (0.301)	0.050 (0.218)	0.000 (0.000)	0.090 (0.287)
Non-attriting borrowers (Non-attriting borrowers)	0.472 (0.501)	0.820 (0.385)	0.800 (0.401)	0.735 (0.442)	0.714 (0.452)
RiskPrefVal (Risk preference value)	115 (31)	108 (32)	113 (37)	110 (32)	111 (33)
TimePref1Val (Time preference value 1)	374 (132)	373 (153)	376 (147)	407 (142)	383 (144)
TimePref2Val (Time preference value 2)	483 (127)	485 (137)	476 (155)	512 (121)	490 (136)
PresentBias (Present bias)	0.470 (0.501)	0.450 (0.499)	0.480 (0.501)	0.458 (0.500)	0.464 (0.499)
N	176	200	200	200	776

Source: Estimated with GUK administrative and survey data at the period 2. Survey respondents include nonparticipants to the experiments.

Notes: 1. Information of original 800 households. Values are means, values in brackets are standard deviations.

2 HeadLiteracy, HeadAge are literacy and ages of household heads. HHsize is total number of household members. FloodInRd1 is flood exposure at period 2. NLHAssetAmount is non-land household asset holding value, PAssetAmount is productive asset holding value, TotalImputedAmount is imputed value of livestock holding. NumCows is cattle holding per household. NetValue is net asset values per housheold for asset items observed in all 4 rounds given by NLHAssetAmount+PAssetAmount+TotalImputedAmount - total debt. NetBroadValue is net asset values per housheold for all asset items. All asset values are expressed in BDT. Attrited indicates attrition rates in the household survey, and GRejected and IRejected show group rejection rates and individual rejection rates to the lending program. Active indicates the nonattrited borrower ratios. Because attrition and rejection are separate events, a household can reject and attrit, so active members $\geqslant$ total - (rejected members + attrited members). Risk preference is the respondent's choice of the acceptable minimum excess monetary value of the risky option over a certainty option. Lower values indicate a greater risk tolerance. Time preference 1 is the respondent's choice of the acceptable minimum excess monetary value in 3 months that is no smaller than present monetary benefit, and Time preference 2 is the the minimum excess value in 1 year and 3 months that is no smaller than monetary benefits of 1 year from now. Lower values indicate a greater patience. If a respondent's Time preference 1 is greater than Time preference 2, the respondent is considered to be present-biased. Present bias is an indicator function that takes the value of 1 if the respondent is considered to be present-biased, 0 otherwise.

II.3 Changes in assets

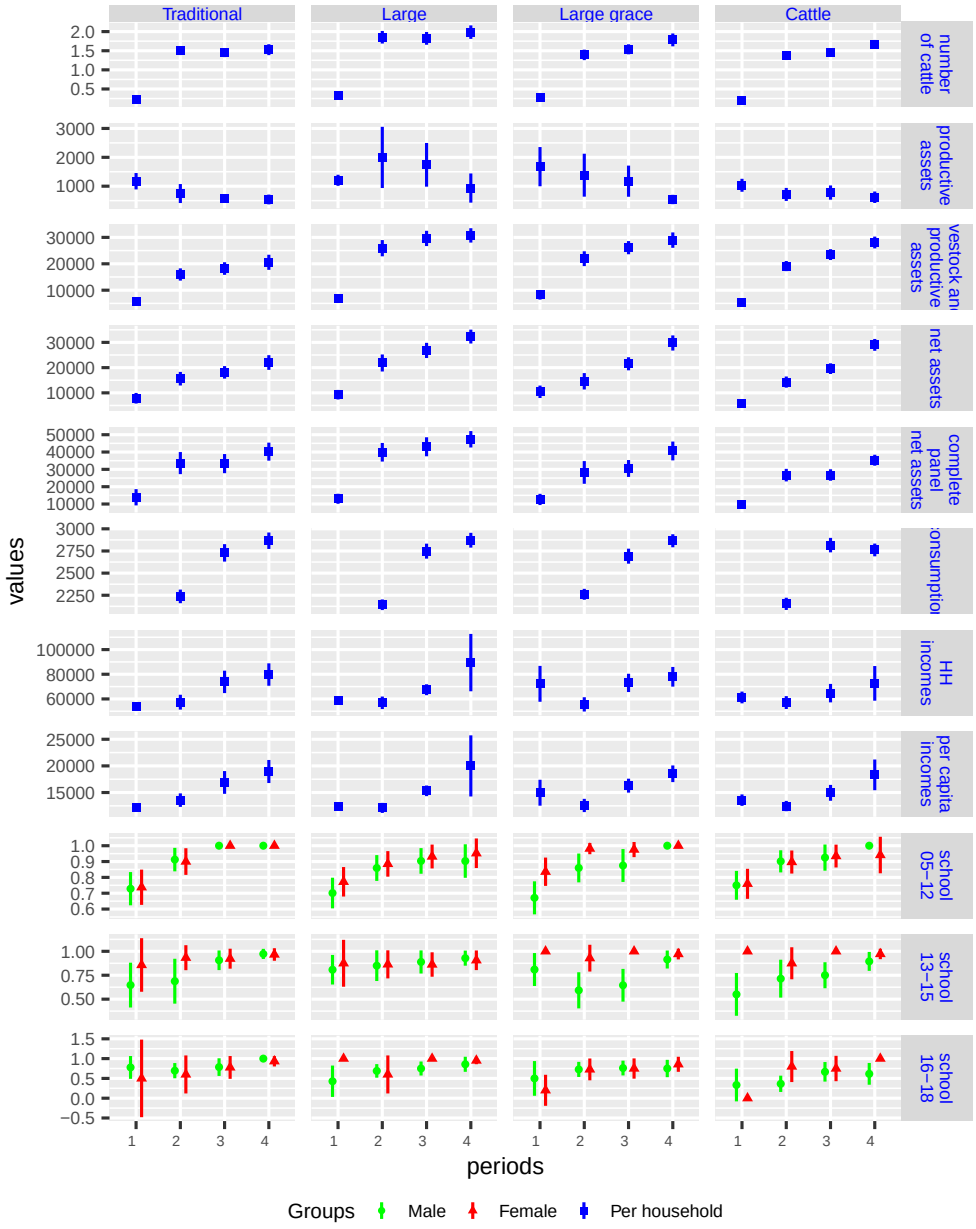
After winsorising cassette players, radios, and bicycles, there is no HH with anomalous asset values (changes in narrow net asset values < -50000).

```
Key: <hhid>
            Arm    hhid     t              type amount     H     BH NLHAssetNum
         <fctr>   <num> <num>            <char>  <int> <int>  <int>       <int>
 1: traditional 8169717     1          tubewell   1500  1500   1500           1
 2: traditional 8169717     2          tubewell   1600  1600   7600           1
 3: traditional 8169717     2 residential land   6000  1600   7600           1
 4: traditional 8169717     3          tubewell   1200 82600 121600           3
 5: traditional 8169717     3  almirah/cabinet   2600 82600 121600           3
```

```
 6: traditional 8169717     3          jewelry    400 82600 121600           3
 7: traditional 8169717     3     mobile phone   1400 82600 121600           3
 8: traditional 8169717     3 residential land  36000 82600 121600           3
 9: traditional 8169717     3     rickshaw/van  80000 82600 121600           3
10: traditional 8169717     4         tubewell    400  3300  46400           3
11: traditional 8169717     4  almirah/cabinet   2500  3300  46400           3
12: traditional 8169717     4          jewelry    600  3300  46400           3
13: traditional 8169717     4 residential land  40000  3300  46400           3
14: traditional 8169717     4          bicycle   2500  3300  46400           3
15: traditional 8169717     4     mobile phone    400  3300  46400           3
```

II.4 Error bar graphs of outcomes

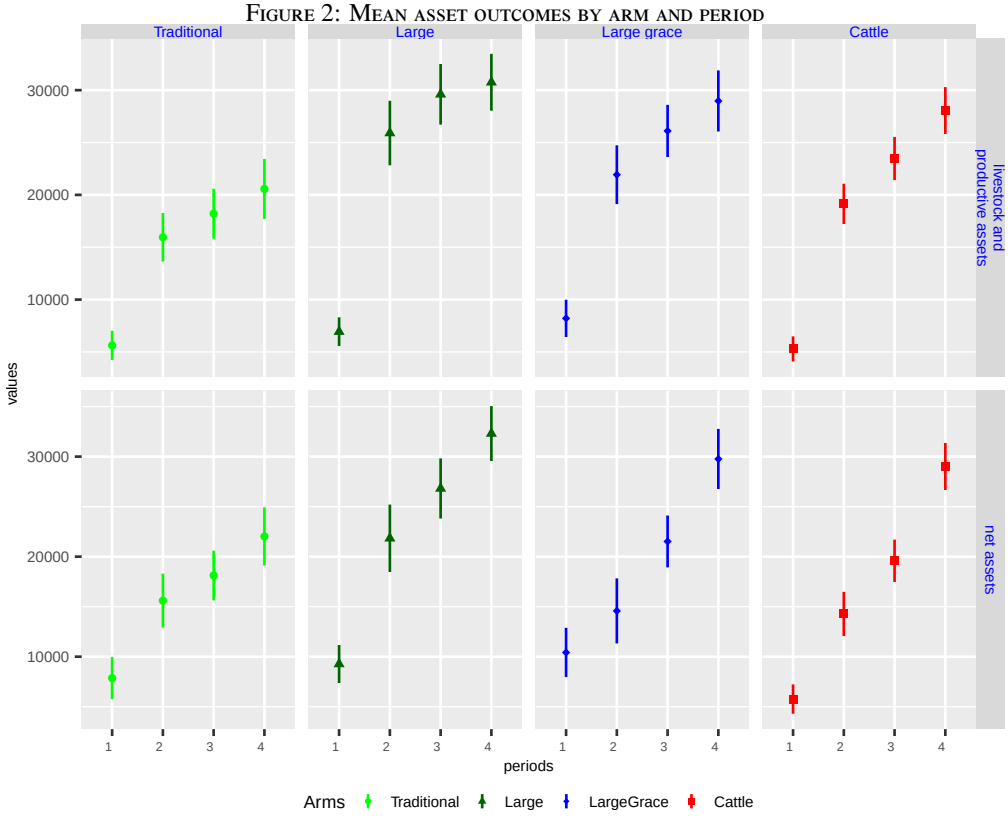
FIGURE 1: MEAN OUTCOMES BY ARM AND PERIOD



Source: Survey data.

Note: Points indicate means, vertical bars indicate 95% confidence intervals. NumCows is number of cattle owned. NetValue is net asset values per housheold for asset items observed in all 4 rounds. Consumption is annualised per capita consumption in Taka. Per capita consumption is a total of food, hygiene, social, and energy expenditure divided by the number of household members. In-kind consumption of home made products is imputed at median prices. HHIncomes is labour incomes of household, pcHHIncomes is per capita housheold labour incomes. Sch0512, Sch1315, Sch1618 are enrollment at primary, secondary, and tertiary levels. Female and Male are female and male enrollment, respectively.

FIGURE 2: MEAN ASSET OUTCOMES BY ARM AND PERIOD



Source: Survey data.

Note: Points indicate means, vertical bars indicate 95% confidence intervals. NetAssets is total assets less debt outstanding to all sources. Livestock and productive assets is total assets less household assets and debt outstanding to all sources.

FIGURE 3: MEAN INCOME AND CONSUMPTION OUTCOMES BY ARM AND PERIOD

Source: Survey data.

Note: Points indicate means, vertical bars indicate 95% confidence intervals. Consumption is annualised per capita consumption in Taka. Per capita consumption is a total of food, hygiene, social, and energy expenditure divided by the number of household members. In-kind consumption of home made products is imputed at median prices. Incomes is labour incomes of household in 1000 Taka units.

II.5 Graphs of repayments

In TABLE 10, one sees that later receivers of large grace and cattle arm members could prepare better by saving before disbursement.

```
Number of obs by Arm and attrition
             AttritIn
Arm             2   3   4   9 Sum
  traditional   6   4  20 144 174
  large         5   2   1 192 200
  large grace  22   3   3 171 199
  cattle        5   5  13 177 200
  Sum          38  14  37 684 773


Number of obs by membership status and attrition
                     AttritIn
BStatus                 2   3   4   9 Sum
  borrower              8   6   8 578 600
  pure saver            0   0   0   0   0
  individual rejection  9   4   1  75  89
  group rejection       9   4   0  55  68
  rejection by flood   12   0  28   0  40
  Sum                  38  14  37 708 797
UseTrimmedSample is FALSE
```

One also sees that traditional has lower repayment rates in the 2nd and 3rd loan years. This can be due to lower returns on small assets, or, moral hazard that they get new disbursements irrespective of loan delinquency.

```
ar : Number of member entries are less than 12 per year (good).
[1] "Year"     "LoanYear" "MtgYear"  "LYear"
arA : Number of member entries are less than 12 per year (good).
[1] "Year"     "LoanYear" "MtgYear"  "LYear"
arACompletePanel : Number of member entries are less than 12 per year (good).
[1] "Year"     "LoanYear" "MtgYear"  "LYear"
```

One may worry if flood affected repayments. Split sample into flood affected and unaffected. Affected by flood does not seem to change the repayment numbers.

```
ar
arA
Flood dummy = 0
              variables traditional    large large grace   cattle   stat
                 <char>      <char>   <char>      <char>   <char> <char>
1: repay in Loan Year-1       56.47    35.57        0.00     0.00    sum
2:  repay in Loan Year1     3238.29  4253.51      566.28   597.21    sum
3:  repay in Loan Year2     2218.53  3924.16     4998.00  4973.81    sum
4:  repay in Loan Year3     2046.90  3836.48     5403.50  4679.49    sum
5:  repay in Loan Year4     3046.93  2820.97     3031.19  2764.97    sum
6:      Total repayment    10607.12 14870.69    13998.96 13015.47    sum
Flood dummy = 1
              variables traditional    large large grace   cattle   stat
                 <char>      <char>   <char>      <char>   <char> <char>
1: repay in Loan Year-1       41.30    50.65        0.00     0.00    sum
2:  repay in Loan Year1     3244.31  4355.89      528.25   497.85    sum
3:  repay in Loan Year2     2052.53  3716.43     4879.90  4303.48    sum
4:  repay in Loan Year3     1920.05  3813.12     5007.63  4362.31    sum
```

```
5:  repay in Loan Year4     3190.27  3259.28     2787.62  4714.35     sum
6:      Total repayment    10448.48 15195.37    13203.41 13878.00     sum
arACompletePanel
Flood dummy = 0
              variables traditional    large large grace   cattle    stat
                 <char>      <char>   <char>      <char>   <char>  <char>
1: repay in Loan Year-1       55.32    40.54        0.00     0.00     sum
2:  repay in Loan Year1     2941.92  4347.92      590.32   494.34     sum
3:  repay in Loan Year2     2104.38  3927.98     5139.65  5210.10     sum
4:  repay in Loan Year3     2004.32  3972.16     5451.62  5197.27     sum
5:  repay in Loan Year4     3126.27  2625.90     3052.12  2553.86     sum
6:      Total repayment    10232.21 14914.50    14233.71 13455.58     sum
Flood dummy = 1
              variables traditional    large large grace   cattle    stat
                 <char>      <char>   <char>      <char>   <char>  <char>
1: repay in Loan Year-1       12.50    55.75        0.00     0.00     sum
2:  repay in Loan Year1     3399.77  4511.78      526.88   572.72     sum
3:  repay in Loan Year2     2580.30  3827.31     4804.22  4219.91     sum
4:  repay in Loan Year3     2220.68  3858.15     4630.91  3776.60     sum
5:  repay in Loan Year4     3371.37  3057.95     2818.86  4915.04     sum
6:      Total repayment    11584.61 15310.94    12780.87 13484.27     sum
```

Combine descriptive statistics and produce LaTeXtables.

TABLE 7: DESCRIPTIVE STATISTICS BY ARM FOR ALL HOUSEHOLDS INCLUDING NONPARTICIPANTS

variables	traditional	large	large grace	cattle
Head Literacy	0.10	0.11	0.10	0.15
Head Age	38.43	37.47	38.41	38.02
Household size	4.09	4.29	4.25	4.12
Flood in round 1	0.46	0.62	0.41	0.50
Repaid amount in Loan Year1	1964	1244	0	0
Repaid amount in Loan Year2	229	947	1969	1553
Repaid amount in Loan Year3	989	1737	2300	2064
Repaid amount in Loan Year4	3899	3065	2427	3179
Total repaid sum	7082	6993	6696	6796
Net saving + repaid amount in Loan Year1	2186	1502	1464	674
Net saving + repaid amount in Loan Year2	356	1129	2072	1641
Net saving + repaid amount in Loan Year3	1188	1806	2368	2184
Net saving + repaid amount in Loan Year4	3979	3276	2455	3424
Net saving + total repaid sum	7709	7712	8359	7923
Number of members	176	200	200	200

Source: Estimated with GUK administrative and survey data. Based on data ar which has all survey respondents. Survey respondents include nonparticipants to the experimental part of study.

Notes: 1. Information of original 776 households. Net saving as percentage of loan amount is a mean over loan recipients whose first disbursement is in 2013. Effective repayment is a sum of repayment and net saving.

Table 8: Descriptive statistics by arm for borrowers

variables	traditional	large	large grace	cattle
Head Literacy	0.11	0.11	0.10	0.14
Head Age	38.40	37.96	38.66	38.12
Household size	4.11	4.37	4.17	4.08
Flood in round 1	0.52	0.58	0.36	0.50
Net saving (% of loan) in 2013	4.40	4.02	5.49	6.70
Repaid amount in Loan Year-1	119	70	0	0
Repaid amount in Loan Year1	4178	5048	514	452
Repaid amount in Loan Year2	1938	3275	5559	5044
Repaid amount in Loan Year3	2571	4068	6459	6069
Repaid amount in Loan Year4	3344	3144	2946	3542
Total repaid sum	12151	15604	15478	15107
Net saving + repaid amount in Loan Year-1	405	929	921	1186
Net saving + repaid amount in Loan Year1	4806	5921	2552	2540
Net saving + repaid amount in Loan Year2	2401	3841	5991	5465
Net saving + repaid amount in Loan Year3	3067	4589	6796	6423
Net saving + repaid amount in Loan Year4	3633	3387	3080	3717
Net saving + total repaid sum	14312	18667	19338	19332
Number of loan receiving members	140	180	180	190

Source: Estimated with GUK administrative and survey data. Based on arA which has only borrowers and does not include nonparticipants.

Notes: 1. Information of borrowing members among original 776 households. Net saving as percentage of loan amount is a mean over loan recipients whose first disbursement is in 2013. Effective repayment is a sum of repayment and net saving.

2. Loan year -1 is preparation period for loan disbursement when only saving is allowed.

Table 9: Descriptive statistics by arm for borrowers, complete panel

variables	traditional	large	large grace	cattle
Head Literacy	0.15	0.11	0.16	0.16
Head Age	39.65	38.76	37.96	38.63
Household size	4.60	4.70	4.48	4.36
Flood in round 1	0.48	0.50	0.31	0.42
Net saving (% of loan) in 2013	5.62	3.72	4.47	6.27
Repaid amount in Loan Year-1	84	66	0	0
Repaid amount in Loan Year1	4047	5190	587	462
Repaid amount in Loan Year2	2209	3559	5765	5397
Repaid amount in Loan Year3	2776	4081	6506	6234
Repaid amount in Loan Year4	3449	2791	2968	3079
Total repaid sum	12565	15687	15826	15171
Net saving + repaid amount in Loan Year-1	452	860	671	1010
Net saving + repaid amount in Loan Year1	4717	6066	2509	2629
Net saving + repaid amount in Loan Year2	2692	4149	6205	5821
Net saving + repaid amount in Loan Year3	3303	4602	6867	6601
Net saving + repaid amount in Loan Year4	3746	3070	3143	3240
Net saving + total repaid sum	14909	18747	19394	19302
Number of loan receiving members	60	108	93	91

Source: Estimated with GUK administrative and survey data. Based on arACompletePanel which has only non-attriting members who were surveyed at period 2.

Notes: 1. Information of borrowing members among original 776 households. Net saving as percentage of loan amount is a mean over loan recipients whose first disbursement is in 2013. Effective repayment is a sum of repayment and net saving.

2. Loan year -1 is preparation period for loan disbursement when only saving is allowed.

TABLE 10: DESCRIPTIVE STATISTICS BY ARM FOR ALL MEMBERS AND BORROWING MEMBERS

variables	traditional	large	large grace	cattle
All members				
Head Literacy	0.10	0.11	0.10	0.15
Head Age	38.43	37.47	38.41	38.02
Household size	4.09	4.29	4.25	4.12
Flood in round 1	0.46	0.62	0.41	0.50
Number of members	176	200	200	200
Only loan receiving members				
Head Literacy	0.11	0.11	0.10	0.14
Head Age	38.40	37.96	38.66	38.12
Household size	4.11	4.37	4.17	4.08
Flood in round 1	0.52	0.58	0.36	0.50
Net saving (% of loan) in 2013	4.40	4.02	5.49	6.70
Repaid amount in Loan Year-1	119	70	0	0
Repaid amount in Loan Year1	4178	5048	514	452
Repaid amount in Loan Year2	1938	3275	5559	5044
Repaid amount in Loan Year3	2571	4068	6459	6069
Repaid amount in Loan Year4	3344	3144	2946	3542
Total repaid sum	12151	15604	15478	15107
Net saving + repaid amount in Loan Year-1	405	929	921	1186
Net saving + repaid amount in Loan Year1	4806	5921	2552	2540
Net saving + repaid amount in Loan Year2	2401	3841	5991	5465
Net saving + repaid amount in Loan Year3	3067	4589	6796	6423
Net saving + repaid amount in Loan Year4	3633	3387	3080	3717
Net saving + total repaid sum	14312	18667	19338	19332
Number of loan receiving members	140	180	180	190

Source: Estimated with GUK administrative and survey data. Based on data ar which has all survey respondents.

Note: All members are 776 households. Survey respondents include nonparticipants to the experimental part of study.

III Estimation using initial sample HHs

III.1 Repayment and net saving

In estimating impacts on repayment and saving, we use borrower only data arA.

```
            used  (Mb) gc trigger   (Mb) limit (Mb)  max used   (Mb)
Ncells   1329364  71.0    2616520  139.8         NA   2616520  139.8
Vcells 91392612 697.3  145848282 1112.8      56320 145845570 1112.8
```

By survey rounds, in repayment and saving file, there are 28, 561, 555, 554 observations of households in rounds 1, 2, 3, 4, respectively. This is smaller than the InitialSample size of 776 in the survey roster file because the survey includes rejecters and residents whose houses are washed away by flood, while repayment is defined only for the borrowers.

Saving started in rd 1. Repayment and saving are more frequent than survey rounds. In repayment and saving regressions, we aggregate the data at survey rounds. This is because we have no household survey information at the monthly frequency that we can attribute the causes of monthly repayment and saving fluctuations.

TABLE 11: INITIAL SAMPLE BY ARM IN ADMINISTRATIVE DATA

	initial sample					all sample				
	traditional	large	large grace	cattle	total	traditional	large	large grace	cattle	total
borrower	85	171	167	153	576	123	348	338	308	1117
pure saver	0	0	0	0	0	0	0	0	0	0
individual rejection	31	9	13	37	90	53	12	22	72	159
group rejection	40	20	10	0	70	80	40	20	0	140
rejection by flood	20	0	10	10	40	40	0	20	20	80
total	176	200	200	200	776	296	400	400	400	1496

Source: Estimated with GUK administrative and survey data.

Notes: 1. Number of individuals who received a loan/cow. Left panel are initial 800 members who were offered at the first round, including individuals who declined or left the group. Right panel also includes members who were offered on a later date.

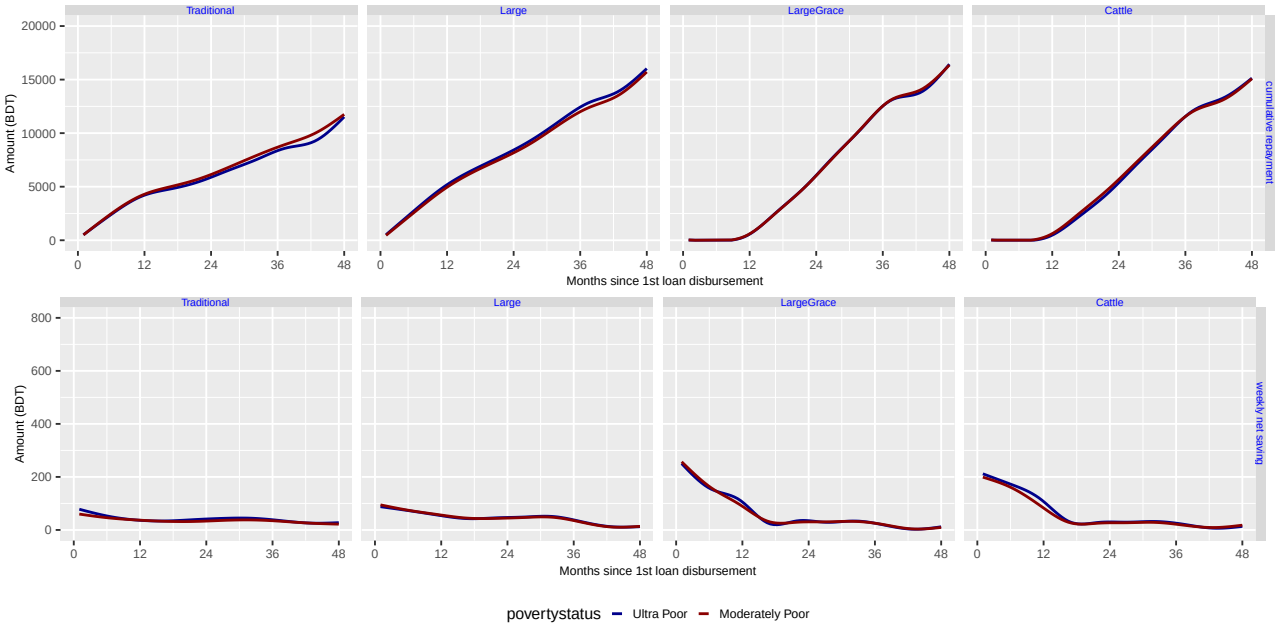


Figure 4: Weekly net saving and cumulative repayment

TABLE 12: INITIAL SAMPLE BY ARM IN REPAYMENT DATA

	initial sample					all sample				
	traditional	large	large grace	cattle	total	traditional	large	large grace	cattle	total
borrower	85	171	167	153	576	96	348	338	308	1090
pure saver	0	0	0	0	0	26	0	0	0	26
individual rejection	31	9	13	37	90	53	12	22	72	159
group rejection	0	0	0	0	0	0	0	0	0	0
rejection by flood	0	0	0	0	0	0	0	0	0	0
total	116	180	180	190	666	175	360	360	380	1275

Source: Estimated with GUK administrative and survey data.

Notes: 1. Number of individuals who received a loan/cow. Left panel in TABLE 12 is initial 800 members who were offered at the first round, including individuals who declined or left the group. Right panel also includes members who were offered on a later date.

TABLE 11 shows the tabuation of InitisalSample by arms. Left panel are InitialSample including borrowers, pure savers, group rejecters, flood victims, and members who left the group. Right panel includes late borrowers who were initially assigned as the control. One can see that traditional arm members have the highest proportion of group-rejecters and individual rejecters. This shows stronger reluctance of traditional arm members in borrowing the small loans.

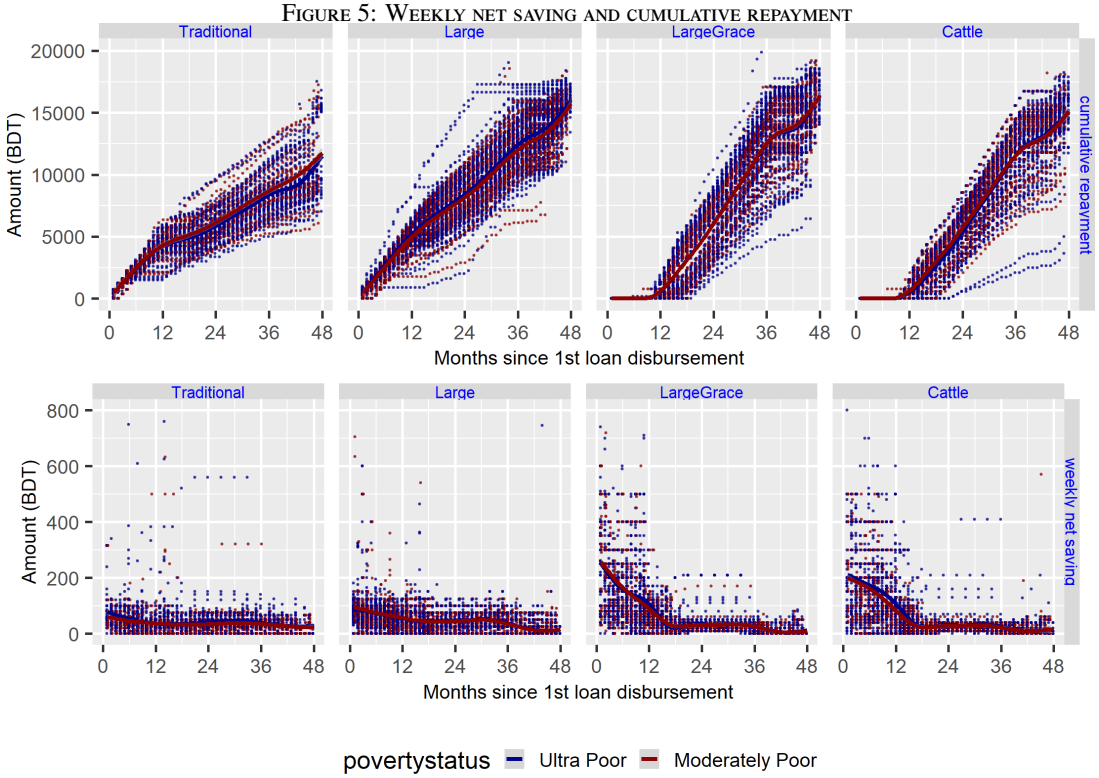
Read administrative meeting data attached with HH information AllMeetingsRepayment (arA). Note all binary interaction terms are demeaned and then interacted.

```
Error in file(filename, "r", encoding = encoding): コネクションを開くことができません
```

Tabulation at rd 1 (12th month):

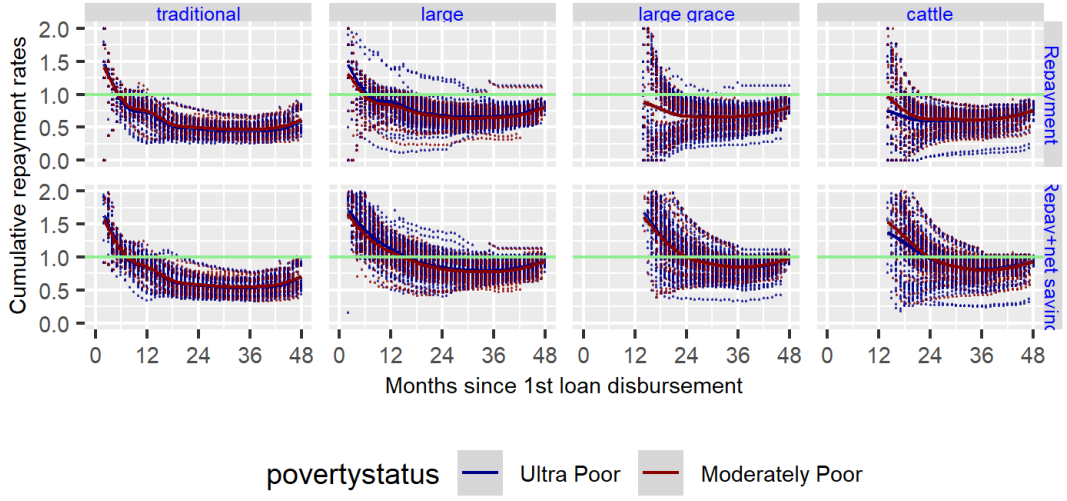
```
             Arm
Mstatus       traditional large large grace cattle Sum
  gErosion              0     0           0      0   0
  gRejection            0     0           0      0   0
  iRejection            0     0           0      0   0
  iReplacement          0     0           0      0   0
  newGroup              0     0           0      0   0
  oldMember            85   171         167    153 576
  Sum                  85   171         167    153 576
```

FIGURE 5: WEEKLY NET SAVING AND CUMULATIVE REPAYMENT



Note: Each dot represents weekly observations. Only members who received loans are shown. Each panel shows weekly net saving (saving - withdrawal) or cumulative repayment against weeks after first disbursement. Lines are smoothed lines with a penalized cubic regression spline in ggplot2::geom_smooth function, originally from mgcv::gam with bs='cs'.

FIGURE 6: CUMULATIVE WEEKLY NET REPAYMENT RATES



Note: Each dot represents weekly observations. Only members who received loans are shown. Each panel shows ratios of cumulative repayment against cumulative due amount, sum of cumulative repayment and cumulative net saving (saving - withdrawal) against cumulative due amount, against weeks after first disbursement. Lines are smoothed lines with a penalized cubic regression spline in ggplot2::geom_smooth function, originally from mgcv::gam with bs='cs'.

```
            used   (Mb) gc trigger   (Mb) limit (Mb)   max used   (Mb)
Ncells   2538872  135.6    4521784  241.5         NA    4521784  241.5
Vcells 275675177 2103.3  436295027 3328.7      56320 363499075 2773.3
```

Table 13: ANCOVA estimation of net saving and repayment

		Net saving					Repayment				
covariates	mean/std	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
(Intercept)		39.8 (0.0)	107.1 (0.0)	39.0 (0.0)	106.3 (0.0)	104.1 (0.0)	250.8 (0.0)	130.3 (0.0)	251.7 (0.0)	132.0 (0.0)	138.4 (0.0)
Large	0.297 (0.46)	7.1 (4.3)	6.6 (6.6)	5.4 (13.9)	4.8 (19.6)	4.6 (20.2)	80.1 (0.0)	80.6 (0.0)	79.8 (0.0)	80.1 (0.0)	80.3 (0.0)
LargeGrace	0.291 (0.45)	20.8 (0.0)	20.3 (0.0)	17.8 (0.0)	17.3 (0.0)	17.8 (0.0)	81.5 (0.0)	82.0 (0.0)	80.6 (0.0)	80.5 (0.0)	78.1 (0.0)
Cattle	0.264 (0.44)	22.6 (0.0)	21.9 (0.0)	19.7 (0.0)	19.0 (0.0)	19.2 (0.0)	75.6 (0.0)	76.0 (0.0)	74.8 (0.0)	74.4 (0.0)	73.0 (0.0)
LY2	0.258 (0.44)		−81.2 (0.0)		−81.1 (0.0)	−81.2 (0.0)		149.3 (0.0)		149.3 (0.0)	148.6 (0.0)
LY3	0.258 (0.44)		−85.7 (0.0)		−85.7 (0.0)	−85.7 (0.0)		223.2 (0.0)		223.2 (0.0)	222.9 (0.0)
LY4	0.233 (0.42)		−102.0 (0.0)		−102.0 (0.0)	−102.0 (0.0)		102.5 (0.1)		102.6 (0.1)	101.6 (0.1)
Flood in round 1	0.477 (0.50)					1.5 (64.7)					−11.7 (2.1)
Head literate0	0.122 (0.33)					1.8 (45.5)					10.2 (12.5)
Net saving0	355.719 (513.67)			0.0 (3.6)	0.0 (3.3)	0.0 (4.5)					
Household size0	4.241 (1.38)					0.3 (64.9)					−0.2 (89.9)
Repaid0	98.890 (195.66)								−0.0 (83.6)	−0.0 (70.5)	−0.0 (72.0)
mean of dependent variable		54	54	54	54	54	318	318	318	318	318
R^2		0.008	0.164	0.009	0.166	0.165	0.005	0.051	0.005	0.051	0.051
N	26627	26758	26758	26758	26758	26627	26758	26758	26758	26758	26627

Source: Estimated with GUK administrative and survey data.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. We annotate the number of periods that a household is observed with T. The total number of households is shown for each values of T. T=4 indicates the number of households with complete panel information, T=3 indicates number of households observed three times, T=2 indicates the number of households observed twice. N indicates total number of observations used in ANCOVA estimation, or N=1×(T=2)+2×(T=3)+3×(T=4). Saving and repayment information is taken from administrative data. Net saving is saving - withdrawal. LY2, LY3, LY4 are dummy variables for second, third, and fourth year into borrowing. Repayment starts from the year 1 for traditional and large arms, from the year 2 for large grace and cattle arms. The first regression of repayment gives a mean monthly repayment for each arms. Mean monthly repayment is zero in the year 1 for large grace and cattle arms.

2. *P* values in percentages in parenthesises. Standard errors are clustered at group (village) level.

TABLE 14: ANCOVA ESTIMATION OF NET SAVING AND REPAYMENT BY ATTRIBUTES

		Net saving					Repayment				
covariates	mean/std	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
(Intercept)		39.8 (0.0)	107.1 (0.0)	39.0 (0.0)	106.3 (0.0)	104.1 (0.0)	250.8 (0.0)	130.3 (0.0)	251.7 (0.0)	132.0 (0.0)	138.4 (0.0)
Upfront	0.851 (0.36)	7.1 (4.3)	6.6 (6.6)	5.4 (13.9)	4.8 (19.6)	4.6 (20.2)	80.1 (0.0)	80.6 (0.0)	79.8 (0.0)	80.1 (0.0)	80.3 (0.0)
WithGrace	0.555 (0.50)	13.7 (0.6)	13.8 (0.6)	12.4 (1.1)	12.5 (1.1)	13.3 (0.4)	1.4 (89.0)	1.4 (88.7)	0.8 (93.9)	0.4 (97.2)	−2.2 (81.9)
InKind	0.264 (0.44)	1.7 (79.1)	1.5 (81.1)	1.9 (75.6)	1.7 (77.5)	1.4 (81.9)	−5.9 (58.7)	−6.0 (57.6)	−5.9 (58.7)	−6.0 (57.5)	−5.1 (62.2)
LY2	0.258 (0.44)		−81.2 (0.0)		−81.1 (0.0)	−81.2 (0.0)		149.3 (0.0)		149.3 (0.0)	148.6 (0.0)
LY3	0.258 (0.44)		−85.7 (0.0)		−85.7 (0.0)	−85.7 (0.0)		223.2 (0.0)		223.2 (0.0)	222.9 (0.0)
LY4	0.233 (0.42)		−102.0 (0.0)		−102.0 (0.0)	−102.0 (0.0)		102.5 (0.1)		102.6 (0.1)	101.6 (0.1)
Flood in round 1	0.477 (0.50)					1.5 (64.7)					−11.7 (2.1)
Head literate0	0.122 (0.33)					1.8 (45.5)					10.2 (12.5)
Net saving0	355.719 (513.67)			0.0 (3.6)	0.0 (3.3)	0.0 (4.5)					
Household size0	4.241 (1.38)					0.3 (64.9)					−0.2 (89.9)
Repaid0	98.890 (195.66)								−0.0 (83.6)	−0.0 (70.5)	−0.0 (72.0)
mean of dependent variable		54	54	54	54	54	318	318	318	318	318
$\bar{R}^2$		0.008	0.164	0.009	0.166	0.165	0.005	0.051	0.005	0.051	0.051
N	26627	26758	26758	26758	26758	26627	26758	26758	26758	26758	26627

Source: Estimated with GUK administrative and survey data.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. We annotate the number of periods that a household is observed with T. The total number of households is shown for each values of T. T=4 indicates the number of households with complete panel information, T=3 indicates number of households observed three times, T=2 indicates the number of households observed twice. N indicates total number of observations used in ANCOVA estimation, or N=1×(T=2)+2×(T=3)+3×(T=4). Saving and repayment information is taken from administrative data. Net saving is saving - withdrawal. LY2, LY3, LY4 are dummy variables for second, third, and fourth year into borrowing. Repayment starts from the year 2 for WithGrace functional attributes. The first regression of repayment gives a mean monthly repayment for each arms. Mean monthly repayment is zero in the year 1 for WithGrace functional attributes.

2. *P* values in percentages in parenthesises. Standard errors are clustered at group (village) level.

TABLE 15: ANCOVA ESTIMATION OF NET SAVING AND REPAYMENT, ULTRA POOR VS. MODERATELY POOR

		Net saving					Repayment				
covariates	mean/std	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
(Intercept)		38.1 (0.0)	105.4 (0.0)	37.3 (0.0)	104.5 (0.0)	102.1 (0.0)	255.5 (0.0)	135.0 (0.0)	256.4 (0.0)	136.7 (0.0)	143.2 (0.0)
Upfront	0.851 (0.36)	7.2 (4.2)	6.6 (6.5)	5.5 (13.6)	4.9 (19.2)	4.6 (19.9)	80.1 (0.0)	80.5 (0.0)	79.8 (0.0)	80.0 (0.0)	80.2 (0.0)
WithGrace	0.555 (0.50)	13.7 (0.6)	13.8 (0.6)	12.4 (1.1)	12.4 (1.1)	13.2 (0.4)	1.6 (87.6)	1.6 (87.2)	1.0 (92.6)	0.5 (96.0)	−2.1 (82.8)
InKind	0.264 (0.44)	1.6 (80.1)	1.5 (82.1)	1.9 (76.3)	1.7 (78.3)	1.3 (83.1)	−5.9 (58.2)	−6.1 (57.1)	−5.9 (58.2)	−6.1 (57.0)	−5.1 (61.9)
UltraPoor	0.714 (0.45)	2.4 (5.7)	2.5 (5.0)	2.4 (6.8)	2.4 (5.8)	2.6 (4.7)	−6.5 (3.8)	−6.6 (3.6)	−6.5 (3.8)	−6.6 (3.7)	−6.2 (5.7)
Upfront × UltraPoor	0.609 (0.49)	−4.8 (15.7)	−4.6 (18.7)	−4.6 (19.4)	−4.4 (22.4)	−4.3 (25.4)	12.7 (42.7)	12.6 (43.1)	12.9 (42.6)	12.9 (42.5)	13.0 (44.3)
WithGrace × UltraPoor	0.401 (0.49)	0.9 (80.7)	0.9 (79.1)	1.2 (73.8)	1.3 (72.0)	1.5 (66.5)	−5.6 (44.8)	−5.6 (44.6)	−5.6 (44.6)	−5.6 (44.4)	−6.6 (35.8)
InKind × UltraPoor	0.191 (0.39)	4.3 (21.8)	4.6 (18.4)	3.3 (33.5)	3.6 (28.8)	3.4 (30.3)	−0.3 (96.8)	−0.4 (95.2)	−0.3 (96.7)	−0.5 (95.0)	0.5 (94.7)
LY2	0.258 (0.44)		−81.2 (0.0)		−81.1 (0.0)	−81.2 (0.0)		149.3 (0.0)		149.3 (0.0)	148.6 (0.0)
LY3	0.258 (0.44)		−85.7 (0.0)		−85.7 (0.0)	−85.7 (0.0)		223.2 (0.0)		223.2 (0.0)	222.9 (0.0)
LY4	0.233 (0.42)		−102.0 (0.0)		−102.0 (0.0)	−102.1 (0.0)		102.5 (0.1)		102.6 (0.1)	101.6 (0.1)
Flood in round 1	0.477 (0.50)					1.5 (64.3)					−11.7 (2.2)
Head literate0	0.122 (0.33)					2.1 (41.2)					9.8 (15.1)
Net saving0	355.719 (513.67)			0.0 (3.7)	0.0 (3.4)	0.0 (4.6)					
Household size0	4.241 (1.38)					0.3 (61.3)					−0.3 (83.3)
Repaid0	98.890 (195.66)								−0.0 (83.3)	−0.0 (70.3)	−0.0 (71.7)
mean of dependent variable		54	54	54	54	54	318	318	318	318	318
R^2		0.008	0.164	0.009	0.166	0.165	0.005	0.051	0.005	0.051	0.051
N	26627	26758	26758	26758	26758	26627	26758	26758	26758	26758	26627

Source: Estimated with GUK administrative and survey data.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. We annotate the number of periods that a household is observed with T. The total number of households is shown for each values of T. T=4 indicates the number of households with complete panel information, T=3 indicates number of households observed three times, T=2 indicates the number of households observed twice. N indicates total number of observations used in ANCOVA estimation, or N=1×(T=2)+2×(T=3)+3×(T=4). Upfront is an indicator variable of the arm with an upfront large disbursement, WithGrace is an indicator variable of the arm with a grace period, InKind is an indicator variable of the arm which lends a heifer. UltraPoor is an indicator variable if the household is classified as the ultra poor. Saving and repayment information is taken from administrative data. Net saving is saving - withdrawal. LY2, LY3, LY4 are dummy variables for second, third, and fourth year into borrowing. Repayment starts from the year 2 for WithGrace functional attributes. The first regression of repayment gives a mean monthly repayment for each arms. Mean monthly repayment is zero in the year 1 for WithGrace functional attributes.

2. *P* values in percentages in parenthesises. Standard errors are clustered at group (village) level.

TABLE 16: ANCOVA ESTIMATION OF NET SAVING AND REPAYMENT, ULTRA POOR VS. MODERATELY POOR, TIME VARYING

		Net saving					Repayment				
covariates	mean/std	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
(Intercept)		28.5 (0.0)	54.7 (0.0)	27.6 (0.0)	53.8 (0.0)	51.4 (0.0)	265.1 (0.0)	218.5 (0.0)	265.8 (0.0)	219.3 (0.0)	225.3 (0.0)
Upfront	0.851 (0.36)	10.9 (7.9)	10.8 (1.6)	9.2 (14.8)	9.1 (5.1)	8.8 (4.9)	93.4 (0.0)	93.3 (0.0)	93.1 (0.0)	93.0 (0.0)	93.4 (0.0)
WithGrace	0.555 (0.50)	24.6 (0.3)	25.0 (0.1)	23.3 (0.3)	23.6 (0.1)	24.5 (0.0)	−33.1 (5.3)	−33.5 (3.8)	−33.5 (5.3)	−34.0 (3.7)	−36.7 (2.0)
InKind	0.264 (0.44)	−0.9 (93.0)	0.7 (93.7)	−0.7 (94.6)	1.0 (91.1)	0.5 (95.0)	−12.9 (45.3)	−15.7 (33.7)	−13.0 (45.3)	−15.7 (33.6)	−14.9 (35.0)
UltraPoor	0.714 (0.45)	3.5 (2.4)	2.7 (5.9)	3.5 (2.7)	2.7 (6.5)	2.8 (5.6)	−5.0 (14.7)	−3.8 (24.2)	−5.0 (15.0)	−3.7 (24.8)	−3.2 (34.2)
Upfront × UltraPoor	0.609 (0.49)	−7.3 (8.3)	−6.9 (8.4)	−7.1 (10.0)	−6.8 (10.1)	−6.7 (11.8)	17.0 (15.9)	16.6 (14.9)	17.2 (16.0)	16.8 (14.9)	17.0 (17.5)
WithGrace × UltraPoor	0.401 (0.49)	3.7 (31.2)	2.4 (49.2)	4.1 (28.7)	2.8 (43.9)	3.2 (37.5)	−9.0 (28.8)	−7.0 (37.6)	−9.0 (28.9)	−7.0 (37.7)	−8.0 (32.0)
InKind × UltraPoor	0.191 (0.39)	6.2 (16.2)	6.6 (9.1)	5.2 (23.3)	5.6 (14.2)	5.3 (15.6)	−5.4 (58.0)	−5.7 (51.7)	−5.4 (58.0)	−5.7 (51.7)	−4.8 (58.2)
LY3	0.258 (0.44)		−45.9 (0.0)		−45.9 (0.0)	−45.9 (0.0)		154.4 (0.0)		154.4 (0.0)	154.7 (0.0)
Upfront × LY3	0.220 (0.41)	−13.4 (45.7)	−14.1 (3.6)	−13.3 (45.8)	−14.0 (3.6)	−13.8 (3.7)	27.4 (65.1)	30.1 (13.8)	27.4 (65.1)	30.1 (13.8)	29.7 (14.5)
WithGrace × LY3	0.143 (0.35)	−53.7 (0.5)	−54.9 (0.0)	−53.7 (0.5)	−54.9 (0.0)	−55.4 (0.0)	283.7 (0.0)	287.7 (0.0)	283.7 (0.0)	287.7 (0.0)	288.6 (0.0)
InKind × LY3	0.069 (0.25)	8.0 (70.8)	1.3 (92.9)	8.0 (70.8)	1.2 (93.0)	1.5 (91.5)	−31.8 (60.5)	−9.2 (75.5)	−31.8 (60.5)	−9.2 (75.5)	−9.2 (75.6)
UltraPoor × LY3	0.184 (0.39)	−5.1 (9.8)	−1.8 (46.1)	−5.1 (9.7)	−1.8 (46.0)	−1.8 (46.8)	16.3 (5.7)	5.2 (45.0)	16.3 (5.7)	5.2 (45.0)	4.8 (48.9)
Upfront × UltraPoor × LY3	0.157 (0.36)	8.8 (26.3)	7.9 (30.5)	8.8 (26.3)	7.9 (30.5)	8.2 (29.1)	−8.0 (72.8)	−5.0 (76.8)	−8.0 (72.8)	−5.0 (76.8)	−5.5 (74.6)
WithGrace × UltraPoor × LY3	0.104 (0.30)	−14.6 (4.1)	−9.5 (12.3)	−14.6 (4.1)	−9.5 (12.3)	−10.3 (10.2)	20.5 (33.1)	3.4 (85.8)	20.5 (33.1)	3.4 (85.8)	4.8 (80.0)
InKind × UltraPoor × LY3	0.050 (0.22)	−2.2 (80.8)	−2.9 (62.3)	−2.1 (80.9)	−2.9 (62.5)	−2.4 (69.3)	37.3 (14.8)	39.7 (4.4)	37.3 (14.8)	39.7 (4.4)	37.1 (6.3)
LY4	0.233 (0.42)		−62.1 (0.0)		−62.2 (0.0)	−62.2 (0.0)		30.1 (20.5)		30.2 (20.5)	29.6 (21.6)
Upfront × LY4	0.198 (0.40)	−18.4 (44.6)	−20.4 (1.7)	−18.4 (44.6)	−20.4 (1.6)	−20.0 (1.7)	−128.5 (3.1)	−128.8 (2.7)	−128.5 (3.1)	−128.8 (2.7)	−129.7 (2.6)
WithGrace × LY4	0.129 (0.34)	−48.7 (4.6)	−49.9 (0.0)	−48.7 (4.7)	−49.9 (0.0)	−50.6 (0.0)	66.6 (28.2)	67.6 (26.8)	66.5 (28.3)	67.5 (26.9)	67.0 (27.5)
InKind × LY4	0.061 (0.24)	14.5 (59.1)	4.4 (78.0)	14.3 (59.7)	4.1 (79.1)	4.4 (77.7)	83.2 (21.8)	87.2 (19.8)	83.2 (21.8)	87.2 (19.8)	88.0 (19.5)
UltraPoor × LY4	0.166 (0.37)	−5.3 (16.3)	−0.6 (82.6)	−5.3 (16.1)	−0.6 (81.7)	−0.5 (83.9)	−25.8 (7.6)	−27.8 (5.3)	−25.8 (7.6)	−27.8 (5.3)	−28.2 (5.0)
Upfront × UltraPoor × LY4	0.142 (0.35)	12.3 (17.7)	11.6 (9.2)	12.3 (17.6)	11.6 (9.1)	12.1 (8.8)	−32.7 (54.1)	−31.8 (55.7)	−32.7 (54.1)	−31.8 (55.7)	−32.7 (54.4)
WithGrace × UltraPoor × LY4	0.093 (0.29)	−11.9 (18.8)	−4.9 (50.4)	−12.0 (18.4)	−5.0 (49.6)	−5.9 (43.3)	13.1 (69.0)	9.8 (76.2)	13.1 (69.0)	9.8 (76.3)	9.1 (77.8)
InKind × UltraPoor × LY4	0.044 (0.21)	−15.0 (17.7)	−14.7 (2.7)	−14.8 (18.0)	−14.5 (2.8)	−13.9 (3.5)	8.9 (81.2)	10.2 (78.4)	8.9 (81.2)	10.2 (78.4)	12.7 (73.6)
Flood in round 1	0.477 (0.50)					1.4 (66.0)					−11.9 (2.0)
Head literate0	0.122 (0.33)					2.1 (39.1)					9.9 (15.0)
Net saving0	355.719 (513.67)			0.0 (3.7)	0.0 (3.1)	0.0 (4.2)					
Household size0	4.241 (1.38)					0.3 (61.7)					−0.2 (85.1)
Repaid0	98.890 (195.66)								−0.0 (87.3)	−0.0 (85.1)	−0.0 (86.2)
mean of dependent variable		54	54	54	54	54	318	318	318	318	318
R^2		0.025	0.1	0.027	0.102	0.102	0.032	0.061	0.032	0.06	0.061
N	26627	26758	26758	26758	26758	26627	26758	26758	26758	26758	26627

Source: Estimated with GUK administrative and survey data.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. We annotate the number of periods that a household is observed with T. The total number of households is shown for each values of T. T=4 indicates the number of households with complete panel information, T=3 indicates number of households observed three times, T=2 indicates the number of households observed twice. N indicates total number of observations used in ANCOVA estimation, or N=1×(T=2)+2×(T=3)+3×(T=4). Upfront is an indicator variable of the arm with an upfront large disbursement, WithGrace is an indicator variable of the arm with a grace period, InKind is an indicator variable of the arm which lends a heifer. UltraPoor is an indicator variable if the household is classified as the ultra poor. Saving and repayment information is taken from administrative data. Net saving is saving - withdrawal. LY2, LY3, LY4 are dummy variables for second, third, and fourth year into borrowing. Repayment starts from the year 2 for WithGrace functional attributes. The first regression of repayment gives a mean monthly repayment for each arms. Mean monthly repayment is zero in the year 1 for WithGrace functional attributes.

2. *P* values in percentages in parenthesises. Standard errors are clustered at group (village) level.

Finding III.1 Table 13 shows regression results for net saving, repayment, and effective repayment (net saving + repayment) using monthly administrative data. Monthly mean repayment is given by 48 times the estimated values in colum (5). One sees that traditional has the lowest mean repayment. It is shown that they repaid loan year 2 and 3

	FullyRepaid		
Arm	0	1	sum
traditional	85	0	85
large	167	4	171
large grace	163	4	167
cattle	152	1	153
sum	567	9	576

Finding III.2 Figure 5 visually presents that repayment is no different between the ultra poor and the moderately poor. The subsequent regression table econometrically confirms this (Table **??**).

III.2 Schooling

ANCOVA is a model that controls for preexisting differences by including initial values of y as a covariate, traditionally for a continuous variable as a nuissance to estimated impacts of a categorical variable (treated/control). In enrollment regressions, initial enrollment is informative only for school age children at the initial period. ANCOVA estimates should be used only to school age children in 2012 who are not old enough that they may naturally stop schooling by the endline.

```
Dropped 902 obs due to NA.
Dropped 902 obs due to NA.
Dropped 223 obs due to T<2.
Dropped 574 obs due to NA.
```

Enrollment pattern in original schooling panel. 'n' indicates NA (either attrition or not reported).

	SchPattern													
ObPattern	0000	0001	000n	0011	001n	00nn	010n	0111	011n	01nn	0nnn	1000	1001	100n
0111	0	0	0	0	0	0	0	0	2	1	2	0	0	0
1000	0	0	0	0	0	0	0	0	0	0	32	0	0	0
1010	0	0	0	0	0	1	0	0	0	0	2	0	0	0
1011	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1100	0	0	0	0	0	0	0	0	0	3	1	0	0	0
1110	0	0	5	0	2	1	0	0	3	0	2	0	0	1
1111	21	2	21	12	2	28	1	83	8	6	68	5	1	4

	SchPattern										
ObPattern	1011	101n	10nn	1100	1101	110n	1110	1111	111n	11n1	11nn	1nnn
0111	0	0	0	0	0	0	0	0	6	0	0	1
1000	0	0	0	0	0	0	0	0	0	0	0	22
1010	0	0	0	0	0	0	0	0	0	0	1	2
1011	0	0	0	0	0	0	0	0	0	0	0	0
1100	0	0	0	0	0	0	0	0	0	0	6	0
1110	0	1	0	0	0	0	0	0	25	0	3	0
1111	6	3	10	8	1	9	3	397	41	1	29	42

Left panel is before dropping nnn, right panel is after: Original panel.

```
  traditional large large grace cattle traditional large large grace cattle
```

```
1          205    246          251     235          166    208          186     203
2          166    208          186     203          166    208          186     203
3          148    184          168     173          148    184          168     173
4          113    161          135     131          113    161          135     131
```

sch has 2913 rows. Drop 174 observations in sch with nnn in SchPattern.

With OLS, 89, 135, 539 individuals are repeatedly observed for 2, 3, 4 times, respectively. Number of individuals with NAs in Enrolled: 0 obs for sch. Check missingness in junior or high school level information at baseline.

```
addmargins(table0(s1x[o800 == 1L & tee == 1, .(dummyJunior, dummyHigh)]))
```

```
           dummyHigh
dummyJunior   0   1 Sum
        0   610  37 647
        1   116   0 116
        Sum 726  37 763
```

Drop 610 obs without school level information. (...?)

Read school initial sample data.

```
            used   (Mb) gc trigger   (Mb) limit (Mb)  max used   (Mb)
Ncells   2539343  135.7    4521784  241.5         NA   4521784  241.5
Vcells 273865419 2089.5  436295027 3328.7      56320 363499075 2773.3
```

TABLE 17: FD ESTIMATION OF SCHOOL ENROLLMENT, ROUND 1 VS. ROUND 4 DIFFERENCES

covariates	(1)	(2)	(3)	(4)
(Intercept)	0.55***	0.72***	0.72***	0.72***
	(0.13)	(0.11)	(0.10)	(0.10)
Secondary	−0.41***	−0.44***	−0.45***	−0.45***
	(0.14)	(0.11)	(0.11)	(0.11)
College	−0.48***	−0.50***	−0.50***	−0.50***
	(0.14)	(0.12)	(0.13)	(0.13)
Large	−0.16*	−0.18**	−0.18**	−0.18**
	(0.09)	(0.08)	(0.08)	(0.08)
LargeGrace	−0.08	−0.09	−0.10	−0.10
	(0.10)	(0.09)	(0.09)	(0.09)
Large × Secondary	−0.03	− 0.00	− 0.00	− 0.00
	(0.16)	(0.14)	(0.14)	(0.14)
LargeGrace × Secondary	−0.11	−0.10	−0.10	−0.10
	(0.16)	(0.14)	(0.14)	(0.14)
Cattle × Secondary	0.04	0.07	0.07	0.07
	(0.16)	(0.14)	(0.14)	(0.14)
Large × College	0.02	0.02	0.02	0.02
	(0.18)	(0.16)	(0.16)	(0.16)
LargeGrace × College	−0.09	−0.10	−0.09	−0.09
	(0.17)	(0.16)	(0.16)	(0.16)
Cattle × College	0.02	0.05	0.05	0.05
	(0.19)	(0.17)	(0.17)	(0.17)
Female		−0.30***	−0.30***	−0.30***
		(0.08)	(0.08)	(0.08)
Secondary × Female		0.61***	0.61***	0.61***
		(0.16)	(0.16)	(0.16)
College × Female		0.52***	0.52***	0.52***
		(0.14)	(0.14)	(0.14)
Large × Female		0.26**	0.26**	0.26**
		(0.13)	(0.13)	(0.13)
LargeGrace × Female		0.14	0.14	0.14
		(0.11)	(0.11)	(0.11)
Cattle × Female		0.36***	0.36***	0.36***
		(0.11)	(0.11)	(0.11)
Large × Secondary × Female		−0.48**	−0.48**	−0.48**
		(0.22)	(0.22)	(0.22)
LargeGrace × Secondary × Female		−0.34	−0.34	−0.34
		(0.22)	(0.22)	(0.22)
Cattle × Secondary × Female		−0.56**	−0.56**	−0.56**
		(0.23)	(0.23)	(0.23)
Large × College × Female		−0.33	−0.33	−0.33
		(0.21)	(0.21)	(0.21)
LargeGrace × College × Female		−0.04	−0.03	−0.03
		(0.23)	(0.23)	(0.23)
Cattle × College × Female		−0.51**	−0.51**	−0.51**
		(0.23)	(0.23)	(0.23)
HadCows	0.09*	0.10**	0.10*	0.10*
	(0.05)	(0.05)	(0.05)	(0.05)
EldestSon			0.00	0.00
			(0.05)	(0.05)
EldestDaughter			− 0.00	− 0.00
			(0.05)	(0.05)
FloodInRd1			−0.01	−0.01
			(0.04)	(0.04)
BStatusindividual rejection	−0.12*	−0.09	−0.09	−0.09
	(0.07)	(0.07)	(0.07)	(0.07)
BStatusgroup rejection	−0.01	−0.03	−0.04	−0.04
	(0.06)	(0.05)	(0.05)	(0.05)
Cattle	−0.12	−0.14	−0.15*	−0.15*
	(0.10)	(0.09)	(0.09)	(0.09)
HHsize	0.03	0.05	0.05	0.05
	(0.02)	(0.03)	(0.03)	(0.03)
ChildAgeOrderAtRd1		−0.05	−0.05	−0.05
		(0.04)	(0.04)	(0.04)
$\bar{R}^2$	0.215	0.228	0.223	0.223
N	506	506	506	506

Source: Estimated with GUK administrative and survey data.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. We annotate the number of periods that a household is observed with T. The total number of households is shown for each values of T. T=4 indicates the number of households with complete panel information, T=3 indicates number of households observed three times, T=2 indicates the number of households observed twice. N indicates total number of observations used in ANCOVA estimation, or N=1×(T=2)+2×(T=3)+3×(T=4).

2. *P* values in percentages in parenthesises. Standard errors are clustered at group (village) level.

TABLE 18: FD ESTIMATION OF SCHOOL ENROLLMENT, ROUND 1 VS. ROUND 4 DIFFERENCES BY ATTRIBUTES

covariates	(1)	(2)	(3)	(4)
(Intercept)	0.56***	0.70***	0.66***	0.66***
	(0.06)	(0.10)	(0.13)	(0.13)
Secondary	−0.44***	−0.44***	−0.45***	−0.45***
	(0.05)	(0.11)	(0.11)	(0.11)
College	−0.49***	−0.48***	−0.50***	−0.50***
	(0.06)	(0.12)	(0.13)	(0.13)
Upfront	−0.15***	−0.16**	−0.17**	−0.17**
	(0.05)	(0.07)	(0.07)	(0.07)
WithGrace	0.05	0.09	0.09	0.09
	(0.05)	(0.08)	(0.07)	(0.07)
InKind	−0.01	−0.06	−0.06	−0.06
	(0.06)	(0.08)	(0.08)	(0.08)
WithGrace × Secondary		−0.09	−0.09	−0.09
		(0.12)	(0.12)	(0.12)
WithGrace × College		−0.11	−0.11	−0.11
		(0.15)	(0.15)	(0.15)
Upfront × Secondary		−0.01	− 0.00	− 0.00
		(0.14)	(0.14)	(0.14)
Upfront × College		0.01	0.01	0.01
		(0.16)	(0.16)	(0.16)
InKind × Secondary		0.16	0.16	0.16
		(0.12)	(0.13)	(0.13)
InKind × College		0.13	0.12	0.12
		(0.16)	(0.16)	(0.16)
Female		−0.31***	−0.31***	−0.31***
		(0.08)	(0.09)	(0.09)
Secondary × Female		0.62***	0.62***	0.62***
		(0.16)	(0.16)	(0.16)
College × Female		0.53***	0.52***	0.52***
		(0.15)	(0.15)	(0.15)
WithGrace × Female		−0.12	−0.11	−0.11
		(0.13)	(0.13)	(0.13)
Upfront × Female		0.27**	0.27**	0.27**
		(0.13)	(0.13)	(0.13)
InKind × Female		0.22**	0.21*	0.21*
		(0.11)	(0.11)	(0.11)
WithGrace × Secondary × Female		0.14	0.14	0.14
		(0.21)	(0.21)	(0.21)
WithGrace × College × Female		0.30	0.29	0.29
		(0.25)	(0.25)	(0.25)
Upfront × Secondary × Female		−0.49**	−0.49**	−0.49**
		(0.22)	(0.22)	(0.22)
Upfront × College × Female		−0.35	−0.33	−0.33
		(0.22)	(0.22)	(0.22)
InKind × Secondary × Female		−0.22	−0.21	−0.21
		(0.22)	(0.22)	(0.22)
InKind × College × Female		−0.47*	−0.48*	−0.48*
		(0.26)	(0.26)	(0.26)
HadCows	0.10*	0.10**	0.11**	0.11**
	(0.05)	(0.05)	(0.05)	(0.05)
Head literate			−0.05	−0.05
			(0.07)	(0.07)
Head age			0.00	0.00
			(0.00)	(0.00)
EldestSon			0.01	0.01
			(0.04)	(0.04)
EldestDaughter			0.01	0.01
			(0.05)	(0.05)
FloodInRd1			−0.01	−0.01
			(0.04)	(0.04)
HHsize	0.03	0.05	0.05	0.05
	(0.02)	(0.03)	(0.03)	(0.03)
ChildAgeOrderAtRd1		−0.05	−0.06	−0.06
		(0.04)	(0.05)	(0.05)
$\bar{R}^2$	0.22	0.229	0.222	0.222
N	506	506	506	506

Source: Estimated with GUK administrative and survey data.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. We annotate the number of periods that a household is observed with T. The total number of households is shown for each values of T. T=4 indicates the number of households with complete panel information, T=3 indicates number of households observed three times, T=2 indicates the number of households observed twice. N indicates total number of observations used in ANCOVA estimation, or N=1×(T=2)+2×(T=3)+3×(T=4). Upfront is an indicator variable of the arm with an upfront large disbursement, WithGrace is an indicator variable of the arm with a grace period, InKind is an indicator variable of the arm which lends a heifer.

2. *P* values in percentages in parenthesises. Standard errors are clustered at group (village) level.

Table 19: ANCOVA estimation of school enrollment

covariates	mean/std	(1)	(2)	(3)	(4)	(5)	(6)
(Intercept)		0.91 (0.0)	0.69 (0.0)	0.75 (0.0)	0.89 (0.0)	0.73 (0.0)	0.86 (0.0)
Secondary	0.338 (0.47)			−0.11 (0.0)	−0.09 (0.0)	−0.11 (0.0)	−0.09 (0.0)
College	0.172 (0.38)			−0.21 (0.0)	−0.18 (0.0)	−0.20 (0.0)	−0.18 (0.0)
Large	0.272 (0.44)	−0.03 (38.5)	−0.04 (20.0)	−0.04 (15.0)	−0.04 (13.6)	−0.04 (16.8)	−0.04 (14.3)
LargeGrace	0.247 (0.43)	−0.04 (21.6)	−0.05 (12.1)	−0.04 (12.5)	−0.05 (9.7)	−0.04 (13.4)	−0.04 (11.3)
Cattle	0.257 (0.44)	−0.05 (16.7)	−0.06 (5.5)	−0.06 (2.3)	−0.06 (3.1)	−0.06 (2.7)	−0.05 (3.9)
Large × Secondary	0.085 (0.28)			−0.01 (90.6)	0.00 (92.5)	−0.00 (95.1)	0.01 (89.4)
LargeGrace × Secondary	0.083 (0.28)			−0.07 (12.8)	−0.08 (11.6)	−0.07 (15.5)	−0.08 (11.0)
Cattle × Secondary	0.088 (0.28)			−0.01 (77.3)	−0.01 (80.0)	−0.01 (82.5)	−0.01 (83.0)
Large × College	0.049 (0.22)			0.03 (68.1)	0.04 (58.4)	0.04 (51.3)	0.06 (34.0)
LargeGrace × College	0.049 (0.22)			−0.02 (72.4)	−0.04 (59.1)	−0.02 (78.6)	−0.03 (68.8)
Cattle × College	0.035 (0.18)			−0.11 (16.2)	−0.13 (8.3)	−0.07 (28.4)	−0.09 (19.7)
Female	0.450 (0.50)					0.05 (2.9)	0.05 (4.9)
Secondary × Female	0.152 (0.36)					0.08 (0.4)	0.08 (0.9)
College × Female	0.059 (0.24)					0.12 (2.0)	0.10 (6.4)
Large × Female	0.121 (0.33)					0.01 (92.1)	0.03 (64.1)
LargeGrace × Female	0.114 (0.32)					0.08 (10.5)	0.06 (19.0)
Cattle × Female	0.114 (0.32)					0.07 (16.0)	0.08 (11.3)
Large × Secondary × Female	0.041 (0.20)					−0.09 (34.0)	−0.11 (20.0)
LargeGrace × Secondary × Female	0.036 (0.19)					0.10 (26.7)	0.12 (18.8)
Cattle × Secondary × Female	0.037 (0.19)					0.05 (58.0)	0.06 (52.9)
Large × College × Female	0.016 (0.12)					0.08 (58.1)	0.11 (46.2)
LargeGrace × College × Female	0.018 (0.13)					−0.03 (84.5)	0.01 (95.2)
Cattle × College × Female	0.010 (0.10)					0.18 (25.5)	0.17 (30.8)
EldestSon	0.267 (0.44)				0.00 (89.8)		0.04 (31.8)
EldestDaughter	0.188 (0.39)				0.04 (23.9)		0.01 (77.2)
Flood in round 1	0.464 (0.50)				−0.04 (4.8)		−0.05 (3.6)
Head literate0	0.108 (0.31)				0.06 (1.8)		0.06 (1.8)
Head age0	39.153 (7.38)				−0.00 (7.7)		−0.00 (7.6)
Enrolled0	0.760 (0.43)		0.29 (0.0)	0.32 (0.0)	0.29 (0.0)	0.31 (0.0)	0.29 (0.0)
ChildAgeOrderAtRd1	1.826 (0.98)				0.02 (21.7)		0.02 (24.6)
Household size0	4.974 (1.15)				−0.02 (21.5)		−0.01 (32.9)
mean of dependent variable $T = 2$		0.88 89	0.88 89	0.88 89	0.88 75	0.88 89	0.88 75
$T = 3$		135	135	135	126	135	126
$T = 4$		539	539	539	500	539	500
$\bar{R}^2$		0.002	0.15	0.208	0.2	0.222	0.209
N	1841	1976	1976	1976	1841	1976	1841

Source: Estimated with GUK administrative and survey data.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. We annotate the number of periods that a household is observed with T. The total number of households is shown for each values of T. T=4 indicates the number of households with complete panel information, T=3 indicates number of households observed three times, T=2 indicates the number of households observed twice. N indicates total number of observations used in ANCOVA estimation, or N=1×(T=2)+2×(T=3)+3×(T=4). Large, LargeGrace, Cattle are indicator variables of the large, large grace, and cattle arms, respectively. The default arm category is traditional arm. Secondary and College are indicator variables of secondary schooling (ages 13-15) and tertiary schooling (ages 16-18), both at the time of baseline. Default category is primary (ages 05-12). Interaction terms of dummy variables are demeaned before interacting. The first column gives mean and standard deviation (in parenthesises) of each covariates before demeaning.

2. *P* values in percentages in parenthesises. Standard errors are clustered at group (village) level.

TABLE 20: ANCOVA ESTIMATION OF SCHOOL ENROLLMENT BY ATTRIBUTES

covariates	mean/std	(1)	(2)	(3)	(4)	(5)	(6)
(Intercept)		0.91	0.69	0.75	0.89	0.73	0.86
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
Secondary	0.338			−0.11	−0.09	−0.11	−0.09
	(0.47)			(0.0)	(0.0)	(0.0)	(0.0)
College	0.172			−0.21	−0.18	−0.20	−0.18
	(0.38)			(0.0)	(0.0)	(0.0)	(0.0)
Upfront	0.776	−0.03	−0.04	−0.04	−0.04	−0.04	−0.04
	(0.42)	(38.5)	(20.0)	(15.0)	(13.6)	(16.8)	(14.3)
WithGrace	0.504	−0.01	−0.01	0.00	−0.00	−0.00	−0.00
	(0.50)	(81.4)	(76.5)	(99.6)	(97.6)	(96.0)	(98.2)
InKind	0.257	−0.01	−0.01	−0.02	−0.01	−0.02	−0.01
	(0.44)	(86.0)	(83.9)	(53.1)	(66.5)	(62.8)	(73.9)
WithGrace × Secondary	0.171			−0.07	−0.09	−0.07	−0.09
	(0.38)			(9.4)	(6.1)	(10.5)	(5.9)
Upfront × Secondary	0.255			−0.01	0.00	−0.00	0.01
	(0.44)			(90.6)	(92.5)	(95.1)	(89.4)
InKind × Secondary	0.088			0.06	0.07	0.06	0.07
	(0.28)			(15.6)	(14.0)	(16.2)	(12.5)
WithGrace × College	0.084			−0.05	−0.07	−0.06	−0.09
	(0.28)			(40.1)	(26.0)	(34.4)	(17.3)
Upfront × College	0.134			0.03	0.04	0.04	0.06
	(0.34)			(68.1)	(58.4)	(51.3)	(34.0)
InKind × College	0.035			−0.08	−0.09	−0.05	−0.06
	(0.18)			(24.8)	(21.2)	(42.5)	(39.7)
Female	0.450					0.05	0.05
	(0.50)					(2.9)	(4.9)
Secondary × Female	0.152					0.08	0.08
	(0.36)					(0.4)	(0.9)
College × Female	0.059					0.12	0.10
	(0.24)					(2.0)	(6.4)
WithGrace × Female	0.228					0.08	0.04
	(0.42)					(22.3)	(57.7)
Upfront × Female	0.349					0.01	0.03
	(0.48)					(92.1)	(64.1)
InKind × Female	0.114					−0.01	0.02
	(0.32)					(84.0)	(79.7)
WithGrace × Secondary × Female	0.074					0.19	0.23
	(0.26)					(0.5)	(0.1)
Upfront × Secondary × Female	0.115					−0.09	−0.11
	(0.32)					(34.0)	(20.0)
InKind × Secondary × Female	0.037					−0.05	−0.06
	(0.19)					(51.7)	(45.0)
WithGrace × College × Female	0.028					−0.11	−0.10
	(0.17)					(40.6)	(48.3)
Upfront × College × Female	0.044					0.08	0.11
	(0.21)					(58.1)	(46.2)
InKind × College × Female	0.010					0.21	0.16
	(0.10)					(15.9)	(32.2)
EldestSon	0.267				0.00		0.04
	(0.44)				(89.8)		(31.8)
EldestDaughter	0.188				0.04		0.01
	(0.39)				(23.9)		(77.2)
Flood in round 1	0.464				−0.04		−0.05
	(0.50)				(4.8)		(3.6)
Head literate0	0.108				0.06		0.06
	(0.31)				(1.8)		(1.8)
Head age0	39.153				−0.00		−0.00
	(7.38)				(7.7)		(7.6)
Enrolled0	0.760		0.29	0.32	0.29	0.31	0.29
	(0.43)		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
ChildAgeOrderAtRd1	1.826				0.02		0.02
	(0.98)				(21.7)		(24.6)
Household size0	4.974				−0.02		−0.01
	(1.15)				(21.5)		(32.9)
mean of dependent variable		0.88	0.88	0.88	0.88	0.88	0.88
$T = 2$		89	89	89	75	89	75
$T = 3$		135	135	135	126	135	126
$T = 4$		539	539	539	500	539	500
$\bar{R}^2$		0.002	0.15	0.208	0.2	0.222	0.209
N	1841	1976	1976	1976	1841	1976	1841

Source: Estimated with GUK administrative and survey data.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. We annotate the number of periods that a household is observed with T. The total number of households is shown for each values of T. T=4 indicates the number of households with complete panel information, T=3 indicates number of households observed three times, T=2 indicates the number of households observed twice. N indicates total number of observations used in ANCOVA estimation, or N=1×(T=2)+2×(T=3)+3×(T=4). Upfront is an indicator variable of the arm with an upfront large disbursement, WithGrace is an indicator variable of the arm with a grace period, InKind is an indicator variable of the arm which lends a heifer. Secondary and College are indicator variables of secondary schooling (ages 13-15) and tertiary schooling (ages 16-18), both at the time of baseline. Default category is primary (ages 05-12). Interaction terms of dummy variables are demeaned before interacting. The first column gives mean and standard deviation (in parenthesises) of each covariates before demeaning.

2. *P* values in percentages in parenthesises. Standard errors are clustered at group (village) level.

TABLE 21: ANCOVA ESTIMATION OF SCHOOL ENROLLMENT BY POVERTY STATUS

covariates	mean/std	(1)	(2)	(3)	(4)	(5)	(6)
(Intercept)		0.93	0.70	0.76	0.90	0.74	0.86
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
Secondary	0.338			−0.11	−0.09	−0.11	−0.09
	(0.47)			(0.0)	(0.0)	(0.0)	(0.0)
College	0.172			−0.21	−0.18	−0.19	−0.18
	(0.38)			(0.0)	(0.0)	(0.0)	(0.0)
Upfront	0.776	−0.05	−0.04	−0.05	−0.05	−0.04	−0.05
	(0.42)	(17.7)	(10.8)	(8.2)	(8.6)	(10.5)	(9.4)
WithGrace	0.504	−0.01	−0.01	−0.00	−0.00	−0.00	−0.00
	(0.50)	(81.7)	(76.7)	(98.7)	(92.8)	(91.9)	(91.6)
InKind	0.257	−0.01	−0.01	−0.02	−0.02	−0.02	−0.01
	(0.44)	(81.2)	(75.6)	(47.5)	(64.0)	(54.6)	(68.0)
UltraPoor	0.612	0.04	0.03	0.03	0.03	0.03	0.03
	(0.49)	(10.6)	(22.0)	(21.2)	(22.9)	(21.2)	(20.4)
WithGrace × Secondary	0.171			−0.07	−0.09	−0.06	−0.08
	(0.38)			(9.3)	(5.4)	(11.4)	(5.9)
Upfront × Secondary	0.255			−0.00	0.01	−0.00	0.01
	(0.44)			(99.2)	(84.5)	(97.5)	(88.4)
InKind × Secondary	0.088			0.06	0.07	0.06	0.08
	(0.28)			(14.5)	(11.8)	(13.2)	(9.1)
WithGrace × College	0.084			−0.05	−0.07	−0.05	−0.08
	(0.28)			(41.1)	(26.0)	(37.0)	(18.0)
Upfront × College	0.134			0.01	0.03	0.02	0.05
	(0.34)			(80.2)	(68.4)	(69.4)	(46.2)
InKind × College	0.035			−0.09	−0.10	−0.05	−0.06
	(0.18)			(23.0)	(18.3)	(40.2)	(38.8)
Upfront × UltraPoor	0.514	−0.04	−0.02	−0.01	0.00	−0.01	−0.00
	(0.50)	(69.1)	(78.1)	(91.1)	(99.2)	(89.1)	(97.8)
WithGrace × UltraPoor	0.350	−0.02	0.00	0.00	0.02	−0.01	0.01
	(0.48)	(79.2)	(97.6)	(96.9)	(74.1)	(94.1)	(84.9)
InKind × UltraPoor	0.186	0.01	0.03	0.01	−0.02	0.03	0.01
	(0.39)	(80.0)	(58.3)	(77.4)	(72.4)	(52.8)	(85.2)
Secondary × UltraPoor	0.215	−0.02	−0.04	−0.03	−0.03	−0.03	−0.03
	(0.41)	(59.5)	(30.4)	(36.1)	(40.6)	(32.4)	(35.5)
College × UltraPoor	0.103	0.09	0.04	0.04	0.05	0.06	0.05
	(0.30)	(19.8)	(48.4)	(40.1)	(39.5)	(25.6)	(32.4)
Female	0.450					0.05	0.05
	(0.50)					(2.7)	(4.9)
Secondary × Female	0.152					0.08	0.08
	(0.36)					(0.6)	(1.3)
College × Female	0.059					0.12	0.11
	(0.24)					(1.3)	(4.4)
Female × UltraPoor	0.276					0.07	0.07
	(0.45)					(7.3)	(7.2)
WithGrace × Female	0.228					0.07	0.03
	(0.42)					(24.9)	(61.9)
Upfront × Female	0.349					−0.00	0.02
	(0.48)					(96.2)	(74.8)
InKind × Female	0.114					−0.02	0.01
	(0.32)					(76.0)	(87.5)
WithGrace × Secondary × Female	0.074					0.19	0.23
	(0.26)					(0.6)	(0.1)
Upfront × Secondary × Female	0.115					−0.10	−0.12
	(0.32)					(27.1)	(17.4)
InKind × Secondary × Female	0.037					−0.04	−0.04
	(0.19)					(61.7)	(57.6)
WithGrace × College × Female	0.028					−0.09	−0.08
	(0.17)					(46.5)	(57.4)
Upfront × College × Female	0.044					0.06	0.09
	(0.21)					(63.9)	(53.4)
InKind × College × Female	0.010					0.22	0.18
	(0.10)					(12.7)	(26.6)
EldestSon	0.267				0.00		0.04
	(0.44)				(94.0)		(31.0)
EldestDaughter	0.188				0.04		0.01
	(0.39)				(22.2)		(70.9)
Flood in round 1	0.464				−0.04		−0.05
	(0.50)				(4.4)		(2.5)
Head literate0	0.108				0.06		0.05
	(0.31)				(2.3)		(2.9)
Head age0	39.153				−0.00		−0.00
	(7.38)				(10.6)		(11.2)
Enrolled0	0.760		0.29	0.32	0.29	0.31	0.29
	(0.43)		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
ChildAgeOrderAtRd1	1.826				0.02		0.02
	(0.98)				(22.9)		(27.4)
Household size0	4.974				−0.02		−0.01
	(1.15)				(19.7)		(36.0)
mean of dependent variable		0.88	0.88	0.88	0.88	0.88	0.88
$T = 2$		89	89	89	75	89	75
$T = 3$		135	135	135	126	135	126
$T = 4$		539	539	539	500	539	500
$\bar{R}^2$		0.008	0.151	0.209	0.201	0.225	0.212
N	1841	1976	1976	1976	1841	1976	1841

Source: Estimated with GUK administrative and survey data.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. We annotate the number of periods that a household is observed with T. The total number of households is shown for each values of T. T=4 indicates the number of households with complete panel information, T=3 indicates number of households observed three times, T=2 indicates the number of households observed twice. N indicates total number of observations used in ANCOVA estimation, or N=1×(T=2)+2×(T=3)+3×(T=4). Large, LargeGrace, Cattle

TABLE 22: ANCOVA ESTIMATION OF SCHOOL ENROLLMENT BY TIME

covariates	mean/std	(1)	(2)	(3)	(4)	(5)	(6)
(Intercept)		0.86 (0.0)	0.65 (0.0)	0.70 (0.0)	0.82 (0.0)	0.69 (0.0)	0.79 (0.0)
Secondary	0.338 (0.47)			−0.14 (0.0)	−0.12 (0.0)	−0.14 (0.0)	−0.12 (0.0)
College	0.172 (0.38)			−0.24 (0.0)	−0.21 (0.0)	−0.23 (0.0)	−0.21 (0.0)
Large	0.272 (0.44)	−0.02 (59.3)	−0.03 (44.7)	−0.04 (23.7)	−0.03 (31.2)	−0.04 (23.9)	−0.03 (29.5)
LargeGrace	0.247 (0.43)	−0.03 (36.5)	−0.04 (26.6)	−0.04 (22.1)	−0.04 (19.0)	−0.03 (25.7)	−0.03 (22.7)
Cattle	0.257 (0.44)	−0.03 (39.5)	−0.04 (16.7)	−0.06 (5.3)	−0.05 (8.5)	−0.05 (6.3)	−0.05 (10.1)
Large × Secondary	0.085 (0.28)	0.08 (30.4)	0.04 (61.0)	0.04 (51.1)	0.05 (41.6)	0.04 (52.5)	0.05 (40.9)
LargeGrace × Secondary	0.083 (0.28)	−0.06 (47.8)	−0.06 (46.6)	−0.07 (30.1)	−0.07 (28.8)	−0.06 (36.9)	−0.07 (31.8)
Cattle × Secondary	0.088 (0.28)	−0.01 (94.5)	0.00 (99.9)	−0.00 (95.7)	0.00 (97.4)	0.00 (96.6)	0.01 (91.3)
Large × College	0.049 (0.22)	0.07 (55.8)	0.05 (68.1)	0.04 (65.8)	0.10 (27.9)	0.04 (56.5)	0.11 (20.1)
LargeGrace × College	0.049 (0.22)	0.02 (89.9)	0.01 (91.9)	0.02 (83.6)	0.02 (77.4)	0.01 (86.1)	0.03 (72.3)
Cattle × College	0.035 (0.18)	−0.04 (76.4)	−0.01 (90.8)	−0.06 (51.2)	−0.06 (48.7)	−0.05 (57.4)	−0.05 (59.2)
Female	0.450 (0.50)					0.04 (6.1)	0.05 (8.1)
Secondary × Female	0.152 (0.36)					0.10 (0.5)	0.09 (1.0)
College × Female	0.059 (0.24)					0.08 (17.0)	0.07 (27.8)
Large × Female	0.121 (0.33)	−0.01 (86.7)	−0.01 (82.8)	−0.01 (87.2)	0.02 (76.8)	0.00 (99.5)	0.02 (64.3)
LargeGrace × Female	0.114 (0.32)	0.10 (11.7)	0.09 (12.1)	0.09 (11.2)	0.07 (15.6)	0.09 (8.1)	0.07 (12.3)
Cattle × Female	0.114 (0.32)	0.06 (45.2)	0.06 (28.3)	0.06 (28.5)	0.07 (15.8)	0.07 (18.5)	0.08 (10.0)
Large × Secondary × Female	0.041 (0.20)	−0.19 (14.3)	−0.17 (16.5)	−0.18 (12.0)	−0.22 (3.1)	−0.17 (11.0)	−0.21 (2.9)
LargeGrace × Secondary × Female	0.036 (0.19)	0.04 (75.8)	0.06 (60.9)	0.05 (69.1)	0.05 (61.8)	0.06 (60.6)	0.06 (51.4)
Cattle × Secondary × Female	0.037 (0.19)	0.01 (91.8)	−0.05 (72.1)	−0.07 (60.9)	−0.04 (76.1)	−0.05 (66.8)	−0.03 (81.6)
Large × College × Female	0.016 (0.12)	0.11 (68.8)	0.10 (63.9)	0.04 (84.3)	0.16 (45.5)	0.04 (81.6)	0.17 (42.8)
LargeGrace × College × Female	0.018 (0.13)	−0.06 (81.3)	−0.02 (94.6)	0.05 (81.7)	0.12 (55.9)	0.03 (88.9)	0.11 (58.7)
Cattle × College × Female	0.010 (0.10)	0.39 (14.5)	0.26 (24.3)	0.22 (26.3)	0.25 (21.9)	0.25 (18.6)	0.27 (18.8)

TABLE 22: ANCOVA ESTIMATION OF SCHOOL ENROLLMENT BY TIME (CONTINUED)

covariates	mean/std	(1)	(2)	(3)	(4)	(5)	(6)
rd 3	0.343 (0.47)	0.05 (0.0)	0.04 (0.1)	0.06 (0.0)	0.05 (0.0)	0.06 (0.0)	0.05 (0.0)
Secondary × rd 3	0.120 (0.32)			−0.01 (84.6)	−0.02 (46.7)	−0.01 (87.6)	−0.02 (47.3)
College × rd 3	0.055 (0.23)			0.03 (49.9)	0.02 (68.7)	0.02 (62.0)	0.01 (79.1)
Large × rd 3	0.091 (0.29)	−0.04 (29.4)	−0.04 (28.5)	−0.05 (17.0)	−0.05 (9.9)	−0.05 (17.3)	−0.06 (8.4)
LargeGrace × rd 3	0.086 (0.28)	−0.07 (5.5)	−0.07 (3.2)	−0.08 (2.2)	−0.08 (2.6)	−0.08 (2.0)	−0.08 (2.2)
Cattle × rd 3	0.089 (0.28)	−0.05 (22.0)	−0.06 (11.0)	−0.06 (11.1)	−0.07 (6.3)	−0.06 (11.2)	−0.06 (7.8)
Large × Secondary × rd 3	0.028 (0.17)	−0.04 (64.5)	0.00 (96.8)	0.00 (99.5)	−0.01 (89.1)	−0.01 (93.5)	−0.02 (81.4)
LargeGrace × Secondary × rd 3	0.028 (0.16)	0.05 (56.2)	0.08 (33.1)	0.08 (33.0)	0.06 (44.4)	0.06 (43.8)	0.05 (53.9)
Cattle × Secondary × rd 3	0.032 (0.18)	0.02 (82.0)	0.06 (49.7)	0.06 (49.6)	0.05 (58.1)	0.06 (48.8)	0.05 (57.7)
Large × College × rd 3	0.015 (0.12)	0.09 (54.0)	0.05 (66.2)	0.09 (44.4)	−0.01 (94.6)	0.09 (42.2)	−0.01 (93.4)
LargeGrace × College × rd 3	0.017 (0.13)	−0.04 (66.6)	−0.03 (72.5)	−0.01 (89.9)	−0.04 (70.1)	0.00 (99.4)	−0.04 (72.5)
Cattle × College × rd 3	0.012 (0.11)	0.05 (74.2)	0.03 (83.5)	0.04 (76.8)	−0.01 (95.0)	0.04 (76.2)	−0.01 (92.7)
Female × rd 3	0.155 (0.36)					0.00 (90.1)	0.01 (69.1)
Large × Female × rd 3	0.040 (0.20)	0.07 (29.9)	0.06 (31.9)	0.07 (23.3)	0.06 (27.9)	0.07 (19.2)	0.07 (24.6)
LargeGrace × Female × rd 3	0.039 (0.19)	0.04 (53.2)	0.03 (55.6)	0.03 (59.4)	0.04 (51.8)	0.04 (48.6)	0.04 (43.0)
Cattle × Female × rd 3	0.040 (0.20)	0.03 (64.0)	0.05 (36.2)	0.05 (37.5)	0.05 (42.4)	0.06 (37.6)	0.06 (41.1)
Large × Secondary × Female × rd 3	0.014 (0.12)	0.16 (43.0)	0.16 (36.8)	0.15 (38.8)	0.14 (30.7)	0.19 (26.2)	0.19 (17.3)
LargeGrace × Secondary × Female ×	0.012 (0.11)	0.23 (25.8)	0.19 (28.8)	0.21 (23.3)	0.22 (17.9)	0.24 (14.9)	0.26 (9.5)
Cattle × Secondary × Female × rd 3	0.012 (0.11)	0.31 (10.1)	0.30 (7.8)	0.29 (9.1)	0.18 (22.6)	0.31 (7.5)	0.22 (14.4)
Large × College × Female × rd 3	0.003 (0.06)	0.29 (32.4)	0.29 (20.5)	0.24 (26.1)	0.08 (76.4)	0.24 (25.9)	0.07 (78.1)
LargeGrace × College × Female × rd 3	0.006 (0.08)	0.08 (72.8)	0.10 (61.7)	−0.05 (78.3)	−0.13 (54.8)	−0.04 (84.0)	−0.12 (58.5)
Cattle × College × Female × rd 3	0.004 (0.06)	−0.43 (16.4)	−0.28 (27.8)	−0.29 (25.7)	−0.30 (28.5)	−0.29 (25.3)	−0.31 (28.4)
Secondary × Female × rd 3	0.052 (0.22)					−0.00 (97.3)	0.04 (46.1)
College × Female × rd 3	0.017 (0.13)					−0.01 (90.4)	−0.02 (85.6)

Source: Estimated with GUK administrative and survey data.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. We annotate the number of periods that a household is observed with T. The total number of households is shown for each values of T. T=4 indicates the number of households with complete panel information, T=3 indicates number of households observed three times, T=2 indicates the number of households observed twice. N indicates total number of observations used in ANCOVA estimation, or N=1×(T=2)+2×(T=3)+3×(T=4). Large, LargeGrace, Cattle are indicator variables of the large, large grace, and cattle arms, respectively. The default arm category is traditional arm. Secondary and College are indicator variables of secondary schooling (ages 13-15) and tertiary schooling (ages 16-18), both at the time of baseline. Default category is primary (ages 05-12). rd2, rd3, rd4 are dummy variables for second, third, and fourth round of survey. Interaction terms of dummy variables are demeaned before interacting. The first column gives mean and standard deviation (in parenthesises) of each covariates before demeaning.

2. *P* values in percentages in parenthesises. Standard errors are clustered at group (village) level.

TABLE 23: ANCOVA ESTIMATION OF SCHOOL ENROLLMENT BY TIME (CONTINUED 2)

covariates	mean/std	(1)	(2)	(3)	(4)	(5)	(6)
rd 4	0.276 (0.45)	0.10 (0.0)	0.08 (0.0)	0.14 (0.0)	0.13 (0.0)	0.14 (0.0)	0.13 (0.0)
Secondary × rd 4	0.143 (0.35)			−0.02 (58.3)	−0.03 (43.3)	−0.02 (54.9)	−0.04 (40.7)
College × rd 4	0.057 (0.23)			0.02 (61.7)	0.00 (94.4)	−0.00 (96.0)	−0.01 (84.5)
WithGrace × rd 4	0.136 (0.34)	0.04 (36.8)	0.03 (54.0)	0.04 (34.8)	0.03 (40.2)	0.04 (32.9)	0.04 (35.9)
Upfront × rd 4	0.216 (0.41)	−0.06 (27.2)	−0.04 (49.1)	−0.07 (10.9)	−0.08 (6.0)	−0.08 (8.5)	−0.09 (3.7)
InKind × rd 4	0.067 (0.25)	−0.02 (69.7)	−0.02 (60.2)	−0.01 (75.8)	−0.01 (89.8)	−0.01 (77.5)	−0.00 (91.9)
WithGrace × Secondary × rd 4	0.073 (0.26)	0.14 (20.4)	0.13 (18.9)	0.10 (29.0)	0.11 (28.9)	0.07 (47.1)	0.09 (38.9)
Upfront × Secondary × rd 4	0.109 (0.31)	−0.11 (37.9)	−0.11 (32.6)	−0.04 (68.7)	−0.06 (52.8)	−0.03 (75.6)	−0.06 (53.2)
InKind × Secondary × rd 4	0.037 (0.19)	−0.05 (67.3)	−0.03 (82.6)	−0.03 (79.7)	−0.04 (75.2)	−0.01 (90.1)	−0.02 (85.0)
WithGrace × College × rd 4	0.026 (0.16)	−0.20 (15.7)	−0.14 (24.2)	−0.20 (6.6)	−0.14 (23.2)	−0.18 (8.0)	−0.12 (27.5)
Upfront × College × rd 4	0.044 (0.21)	−0.10 (57.5)	−0.14 (34.5)	−0.03 (84.5)	−0.11 (44.0)	−0.02 (85.7)	−0.11 (43.0)
InKind × College × rd 4	0.011 (0.10)	0.14 (23.1)	0.14 (13.2)	0.15 (14.4)	0.15 (16.9)	0.15 (9.8)	0.16 (9.5)
Female × rd 4	0.131 (0.34)					−0.07 (0.5)	−0.06 (1.8)
WithGrace × Female × rd 4	0.064 (0.24)	−0.14 (10.2)	−0.12 (13.3)	−0.15 (3.2)	−0.14 (3.9)	−0.16 (1.7)	−0.15 (2.9)
Upfront × Female × rd 4	0.102 (0.30)	0.08 (25.6)	0.12 (12.1)	0.15 (1.1)	0.14 (3.3)	0.16 (0.3)	0.15 (1.3)
InKind × Female × rd 4	0.030 (0.17)	0.06 (51.5)	0.09 (30.6)	0.10 (20.4)	0.09 (21.8)	0.10 (17.3)	0.09 (18.2)
WithGrace × Secondary × Female × rd 4	0.035 (0.18)	−0.12 (57.9)	−0.20 (31.1)	−0.11 (55.8)	−0.13 (45.0)	−0.10 (58.3)	−0.10 (54.1)
Upfront × Secondary × Female × rd	0.052 (0.22)	0.22 (33.7)	0.11 (56.6)	0.05 (80.5)	0.11 (50.1)	0.02 (90.6)	0.07 (66.2)
InKind × Secondary × Female × rd 4	0.018 (0.13)	0.17 (42.1)	0.21 (25.3)	0.17 (36.6)	0.05 (75.5)	0.16 (36.8)	0.05 (76.7)
WithGrace × College × Female × rd	0.010 (0.10)	0.23 (34.6)	0.21 (36.7)	0.04 (88.1)	0.14 (57.9)	0.10 (66.1)	0.21 (41.7)
Upfront × College × Female × rd 4	0.021 (0.14)	0.14 (66.7)	0.06 (80.5)	0.05 (83.9)	−0.20 (49.7)	−0.01 (96.2)	−0.25 (37.9)
InKind × College × Female × rd 4	0.004 (0.06)	−0.34 (30.4)	−0.28 (34.6)	−0.23 (44.0)	−0.14 (62.1)	−0.21 (47.9)	−0.12 (67.8)
Secondary × Female × rd 4	0.067 (0.25)					−0.01 (88.6)	0.02 (78.2)
College × Female × rd 4	0.029 (0.17)					0.14 (15.6)	0.15 (17.0)
EldestSon	0.267 (0.44)				0.01 (80.4)		0.04 (23.2)
EldestDaughter	0.188 (0.39)				0.03 (30.8)		0.01 (77.7)
Flood in round 1	0.464 (0.50)				−0.05 (4.1)		−0.05 (3.2)
Head literate0	0.108 (0.31)				0.06 (2.2)		0.06 (2.3)
Head age0	39.153 (7.38)				−0.00 (17.9)		−0.00 (18.8)
Enrolled0	0.760 (0.43)		0.28 (0.0)	0.32 (0.0)	0.30 (0.0)	0.31 (0.0)	0.29 (0.0)
ChildAgeOrderAtRd1	1.826 (0.98)				0.02 (28.3)		0.02 (25.9)
Household size0	4.974 (1.15)				−0.01 (34.3)		−0.01 (41.1)
mean of dependent variable $T = 2$		0.88 89	0.88 89	0.88 89	0.88 75	0.88 89	0.88 75
$T = 3$ $T = 4$		135 539	135 539	135 539	126 500	135 539	126 500
$\tilde{R}^2$ N	 1841	0.021 1976	0.16 1976	0.232 1976	0.216 1841	0.24 1976	0.222 1841

Source: Estimated with GUK administrative and survey data.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. We annotate the number of periods that a household is observed with T. The total number of households is shown for each values of T. T=4 indicates the number of households with complete panel information, T=3 indicates number of households observed three times, T=2 indicates the number of households observed twice. N indicates total number of observations used in ANCOVA estimation, or N=1×(T=2)+2×(T=3)+3×(T=4). Large, LargeGrace, Cattle are indicator variables of the large, large grace, and cattle arms, respectively. The default arm category is traditional arm. Secondary and College are indicator variables of secondary schooling (ages 13-15) and tertiary schooling (ages 16-18), both at the time of baseline. Default category is primary (ages 05-12). rd2, rd3, rd4 are dummy variables for second, third, and fourth round of survey. Interaction terms of dummy variables are demeaned before interacting. The first column gives mean and standard deviation (in parenthesises) of each covariates before demeaning.

2. P values in percentages in parenthesises. Standard errors are clustered at group (village) level.

TABLE 24: ANCOVA ESTIMATION OF SCHOOL ENROLLMENT BY ATTRIBUTES AND TIME

covariates	mean/std	(1)	(2)	(3)	(4)	(5)	(6)
(Intercept)		0.86 (0.0)	0.65 (0.0)	0.70 (0.0)	0.82 (0.0)	0.69 (0.0)	0.79 (0.0)
Secondary	0.338 (0.47)			−0.14 (0.0)	−0.12 (0.0)	−0.14 (0.0)	−0.12 (0.0)
College	0.172 (0.38)			−0.24 (0.0)	−0.21 (0.0)	−0.23 (0.0)	−0.21 (0.0)
Upfront	0.776 (0.42)	−0.02 (59.3)	−0.03 (44.7)	−0.04 (23.7)	−0.03 (31.2)	−0.04 (23.9)	−0.03 (29.5)
WithGrace	0.504 (0.50)	−0.01 (79.4)	−0.01 (76.0)	0.00 (98.5)	−0.00 (90.5)	0.00 (91.8)	0.00 (99.8)
InKind	0.257 (0.44)	0.00 (98.6)	−0.01 (87.5)	−0.02 (57.9)	−0.01 (71.2)	−0.02 (58.3)	−0.01 (68.9)
WithGrace × Secondary	0.171 (0.38)	−0.13 (6.8)	−0.10 (20.0)	−0.11 (6.3)	−0.13 (5.1)	−0.10 (10.2)	−0.12 (6.3)
Upfront × Secondary	0.255 (0.44)	0.08 (30.4)	0.04 (61.0)	0.04 (51.1)	0.05 (41.6)	0.04 (52.5)	0.05 (40.9)
InKind × Secondary	0.088 (0.28)	0.05 (50.9)	0.06 (44.1)	0.06 (29.6)	0.08 (25.1)	0.06 (31.9)	0.08 (25.6)
WithGrace × College	0.084 (0.28)	−0.06 (60.4)	−0.03 (73.9)	−0.02 (79.4)	−0.07 (34.1)	−0.03 (65.6)	−0.08 (26.8)
Upfront × College	0.134 (0.34)	0.07 (55.8)	0.05 (68.1)	0.04 (65.8)	0.10 (27.9)	0.04 (56.5)	0.11 (20.1)
InKind × College	0.035 (0.18)	−0.06 (63.9)	−0.03 (81.6)	−0.08 (33.1)	−0.09 (26.4)	−0.06 (40.5)	−0.08 (30.5)
Female	0.450 (0.50)					0.04 (6.1)	0.05 (8.1)
Secondary × Female	0.152 (0.36)					0.10 (0.5)	0.09 (1.0)
College × Female	0.059 (0.24)					0.08 (17.0)	0.07 (27.8)
WithGrace × Female	0.228 (0.42)	0.11 (13.3)	0.10 (16.0)	0.10 (17.0)	0.05 (43.7)	0.09 (16.5)	0.05 (45.6)
Upfront × Female	0.349 (0.48)	−0.01 (86.7)	−0.01 (82.8)	−0.01 (87.2)	0.02 (76.8)	0.00 (99.5)	0.02 (64.3)
InKind × Female	0.114 (0.32)	−0.05 (60.2)	−0.03 (71.4)	−0.03 (66.1)	0.00 (97.2)	−0.02 (70.4)	0.01 (92.1)
WithGrace × Secondary × Female	0.074 (0.26)	0.23 (6.2)	0.24 (2.2)	0.22 (2.3)	0.27 (0.2)	0.23 (1.0)	0.27 (0.1)
Upfront × Secondary × Female	0.115 (0.32)	−0.19 (14.3)	−0.17 (16.5)	−0.18 (12.0)	−0.22 (3.1)	−0.17 (11.0)	−0.21 (2.9)
InKind × Secondary × Female	0.037 (0.19)	−0.03 (83.3)	−0.11 (33.6)	−0.11 (33.9)	−0.09 (40.4)	−0.11 (30.0)	−0.09 (35.0)
WithGrace × College × Female	0.028 (0.17)	−0.17 (44.3)	−0.12 (53.6)	0.01 (96.1)	−0.04 (82.9)	−0.02 (91.7)	−0.05 (75.6)
Upfront × College × Female	0.044 (0.21)	0.11 (68.8)	0.10 (63.9)	0.04 (84.3)	0.16 (45.5)	0.04 (81.6)	0.17 (42.8)
InKind × College × Female	0.010 (0.10)	0.46 (4.4)	0.27 (16.1)	0.17 (30.4)	0.13 (44.0)	0.22 (16.2)	0.15 (35.2)

TABLE 24: ANCOVA ESTIMATION OF SCHOOL ENROLLMENT BY ATTRIBUTES AND TIME (CONTINUED)

covariates	mean/std	(1)	(2)	(3)	(4)	(5)	(6)
rd 3	0.343 (0.47)	0.05 (0.0)	0.04 (0.1)	0.06 (0.0)	0.05 (0.0)	0.06 (0.0)	0.05 (0.0)
Secondary × rd 3	0.120 (0.32)			−0.01 (84.6)	−0.02 (46.7)	−0.01 (87.6)	−0.02 (47.3)
College × rd 3	0.055 (0.23)			0.03 (49.9)	0.02 (68.7)	0.02 (62.0)	0.01 (79.1)
WithGrace × rd 3	0.175 (0.38)	−0.03 (38.9)	−0.03 (30.8)	−0.04 (27.4)	−0.03 (43.3)	−0.04 (26.6)	−0.03 (42.1)
Upfront × rd 3	0.266 (0.44)	−0.04 (29.4)	−0.04 (28.5)	−0.05 (17.0)	−0.05 (9.9)	−0.05 (17.3)	−0.06 (8.4)
InKind × rd 3	0.089 (0.28)	0.02 (62.6)	0.01 (72.4)	0.02 (51.6)	0.02 (68.5)	0.03 (46.1)	0.02 (59.5)
WithGrace × Secondary × rd 3	0.060 (0.24)	0.10 (31.9)	0.08 (36.9)	0.08 (36.1)	0.07 (42.8)	0.07 (42.6)	0.07 (46.0)
Upfront × Secondary × rd 3	0.088 (0.28)	−0.04 (64.5)	0.00 (96.8)	0.00 (99.5)	−0.01 (89.1)	−0.01 (93.5)	−0.02 (81.4)
InKind × Secondary × rd 3	0.032 (0.18)	−0.03 (76.9)	−0.02 (83.5)	−0.02 (85.9)	−0.01 (89.5)	0.00 (99.7)	−0.00 (99.1)
WithGrace × College × rd 3	0.029 (0.17)	−0.13 (27.6)	−0.08 (39.8)	−0.10 (29.5)	−0.03 (76.9)	−0.09 (34.6)	−0.03 (81.3)
Upfront × College × rd 3	0.044 (0.21)	0.09 (54.0)	0.05 (66.2)	0.09 (44.4)	−0.01 (94.6)	0.09 (42.2)	−0.01 (93.4)
InKind × College × rd 3	0.012 (0.11)	0.09 (47.3)	0.06 (60.4)	0.05 (67.0)	0.03 (80.7)	0.04 (73.8)	0.02 (85.3)
Female × rd 3	0.155 (0.36)					0.00 (90.1)	0.01 (69.1)
WithGrace × Female × rd 3	0.079 (0.27)	−0.03 (62.9)	−0.03 (66.0)	−0.03 (54.6)	−0.03 (62.8)	−0.03 (54.4)	−0.03 (64.3)
Upfront × Female × rd 3	0.119 (0.32)	0.07 (29.9)	0.06 (31.9)	0.07 (23.3)	0.06 (27.9)	0.07 (19.2)	0.07 (24.6)
InKind × Female × rd 3	0.040 (0.20)	−0.01 (84.3)	0.02 (73.6)	0.02 (73.0)	0.02 (80.4)	0.02 (79.6)	0.01 (85.2)
WithGrace × Secondary × Female × rd 3	0.024 (0.15)	0.07 (69.6)	0.03 (85.8)	0.06 (71.3)	0.08 (63.8)	0.05 (74.6)	0.07 (65.0)
Upfront × Secondary × Female × rd	0.038 (0.19)	0.16 (43.0)	0.16 (36.8)	0.15 (38.8)	0.14 (30.7)	0.19 (26.2)	0.19 (17.3)
InKind × Secondary × Female × rd 3	0.012 (0.11)	0.08 (65.7)	0.11 (48.6)	0.09 (60.1)	−0.04 (80.8)	0.07 (68.9)	−0.05 (75.8)
WithGrace × College × Female × rd	0.010 (0.10)	−0.21 (37.6)	−0.20 (34.1)	−0.29 (10.0)	−0.21 (31.1)	−0.27 (12.8)	−0.19 (38.6)
Upfront × College × Female × rd 3	0.013 (0.11)	0.29 (32.4)	0.29 (20.5)	0.24 (26.1)	0.08 (76.4)	0.24 (25.9)	0.07 (78.1)
InKind × College × Female × rd 3	0.004 (0.06)	−0.50 (5.1)	−0.38 (11.4)	−0.23 (28.9)	−0.18 (44.3)	−0.25 (26.5)	−0.19 (42.8)
Secondary × Female × rd 3	0.052 (0.22)					−0.00 (97.3)	0.04 (46.1)
College × Female × rd 3	0.017 (0.13)					−0.01 (90.4)	−0.02 (85.6)

Source: Estimated with GUK administrative and survey data.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. We annotate the number of periods that a household is observed with T. The total number of households is shown for each values of T. T=4 indicates the number of households with complete panel information, T=3 indicates number of households observed three times, T=2 indicates the number of households observed twice. N indicates total number of observations used in ANCOVA estimation, or N=1×(T=2)+2×(T=3)+3×(T=4). Upfront is an indicator variable of the arm with an upfront large disbursement, WithGrace is an indicator variable of the arm with a grace period, InKind is an indicator variable of the arm which lends a heifer. Secondary and College are indicator variables of secondary schooling (ages 13-15) and tertiary schooling (ages 16-18), both at the time of baseline. Default category is primary (ages 05-12). rd2, rd3, rd4 are dummy variables for second, third, and fourth round of survey. Interaction terms of dummy variables are demeaned before interacting. The first column gives mean and standard deviation (in parenthesises) of each covariates before demeaning.

2. *P* values in percentages in parenthesises. Standard errors are clustered at group (village) level.

TABLE 25: ANCOVA ESTIMATION OF SCHOOL ENROLLMENT BY ATTRIBUTES AND TIME (CONTINUED 2)

covariates	mean/std	(1)	(2)	(3)	(4)	(5)	(6)
rd 4	0.276 (0.45)	0.10 (0.0)	0.08 (0.0)	0.14 (0.0)	0.13 (0.0)	0.14 (0.0)	0.13 (0.0)
Secondary × rd 4	0.143 (0.35)			−0.02 (58.3)	−0.03 (43.3)	−0.02 (54.9)	−0.04 (40.7)
College × rd 4	0.057 (0.23)			0.02 (61.7)	0.00 (94.4)	−0.00 (96.0)	−0.01 (84.5)
WithGrace × rd 4	0.136 (0.34)	0.04 (36.8)	0.03 (54.0)	0.04 (34.8)	0.03 (40.2)	0.04 (32.9)	0.04 (35.9)
Upfront × rd 4	0.216 (0.41)	−0.06 (27.2)	−0.04 (49.1)	−0.07 (10.9)	−0.08 (6.0)	−0.08 (8.5)	−0.09 (3.7)
InKind × rd 4	0.067 (0.25)	−0.02 (69.7)	−0.02 (60.2)	−0.01 (75.8)	−0.01 (89.8)	−0.01 (77.5)	−0.00 (91.9)
WithGrace × Secondary × rd 4	0.073 (0.26)	0.14 (20.4)	0.13 (18.9)	0.10 (29.0)	0.11 (28.9)	0.07 (47.1)	0.09 (38.9)
Upfront × Secondary × rd 4	0.109 (0.31)	−0.11 (37.9)	−0.11 (32.6)	−0.04 (68.7)	−0.06 (52.8)	−0.03 (75.6)	−0.06 (53.2)
InKind × Secondary × rd 4	0.037 (0.19)	−0.05 (67.3)	−0.03 (82.6)	−0.03 (79.7)	−0.04 (75.2)	−0.01 (90.1)	−0.02 (85.0)
WithGrace × College × rd 4	0.026 (0.16)	−0.20 (15.7)	−0.14 (24.2)	−0.20 (6.6)	−0.14 (23.2)	−0.18 (8.0)	−0.12 (27.5)
Upfront × College × rd 4	0.044 (0.21)	−0.10 (57.5)	−0.14 (34.5)	−0.03 (84.5)	−0.11 (44.0)	−0.02 (85.7)	−0.11 (43.0)
InKind × College × rd 4	0.011 (0.10)	0.14 (23.1)	0.14 (13.2)	0.15 (14.4)	0.15 (16.9)	0.15 (9.8)	0.16 (9.5)
Female × rd 4	0.131 (0.34)					−0.07 (0.5)	−0.06 (1.8)
WithGrace × Female × rd 4	0.064 (0.24)	−0.14 (10.2)	−0.12 (13.3)	−0.15 (3.2)	−0.14 (3.9)	−0.16 (1.7)	−0.15 (2.9)
Upfront × Female × rd 4	0.102 (0.30)	0.08 (25.6)	0.12 (12.1)	0.15 (1.1)	0.14 (3.3)	0.16 (0.3)	0.15 (1.3)
InKind × Female × rd 4	0.030 (0.17)	0.06 (51.5)	0.09 (30.6)	0.10 (20.4)	0.09 (21.8)	0.10 (17.3)	0.09 (18.2)
WithGrace × Secondary × Female × rd 4	0.035 (0.18)	−0.12 (57.9)	−0.20 (31.1)	−0.11 (55.8)	−0.13 (45.0)	−0.10 (58.3)	−0.10 (54.1)
Upfront × Secondary × Female × rd	0.052 (0.22)	0.22 (33.7)	0.11 (56.6)	0.05 (80.5)	0.11 (50.1)	0.02 (90.6)	0.07 (66.2)
InKind × Secondary × Female × rd 4	0.018 (0.13)	0.17 (42.1)	0.21 (25.3)	0.17 (36.6)	0.05 (75.5)	0.16 (36.8)	0.05 (76.7)
WithGrace × College × Female × rd	0.010 (0.10)	0.23 (34.6)	0.21 (36.7)	0.04 (88.1)	0.14 (57.9)	0.10 (66.1)	0.21 (41.7)
Upfront × College × Female × rd 4	0.021 (0.14)	0.14 (66.7)	0.06 (80.5)	0.05 (83.9)	−0.20 (49.7)	−0.01 (96.2)	−0.25 (37.9)
InKind × College × Female × rd 4	0.004 (0.06)	−0.34 (30.4)	−0.28 (34.6)	−0.23 (44.0)	−0.14 (62.1)	−0.21 (47.9)	−0.12 (67.8)
Secondary × Female × rd 4	0.067 (0.25)					−0.01 (88.6)	0.02 (78.2)
College × Female × rd 4	0.029 (0.17)					0.14 (15.6)	0.15 (17.0)
EldestSon	0.267 (0.44)				0.01 (80.4)		0.04 (23.2)
EldestDaughter	0.188 (0.39)				0.03 (30.8)		0.01 (77.7)
Flood in round 1	0.464 (0.50)				−0.05 (4.1)		−0.05 (3.2)
Head literate0	0.108 (0.31)				0.06 (2.2)		0.06 (2.3)
Head age0	39.153 (7.38)				−0.00 (17.9)		−0.00 (18.8)
Enrolled0	0.760 (0.43)		0.28 (0.0)	0.32 (0.0)	0.30 (0.0)	0.31 (0.0)	0.29 (0.0)
ChildAgeOrderAtRd1	1.826 (0.98)				0.02 (28.3)		0.02 (25.9)
Household size0	4.974 (1.15)				−0.01 (34.3)		−0.01 (41.1)
mean of dependent variable		0.88	0.88	0.88	0.88	0.88	0.88
$T = 2$		89	89	89	75	89	75
$T = 3$		135	135	135	126	135	126
$T = 4$		539	539	539	500	539	500
$\tilde{R}^2$		0.021	0.16	0.232	0.216	0.24	0.222
N	1841	1976	1976	1976	1841	1976	1841

Source: Estimated with GUK administrative and survey data.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. We annotate the number of periods that a household is observed with T. The total number of households is shown for each values of T. T=4 indicates the number of households with complete panel information, T=3 indicates number of households observed three times, T=2 indicates the number of households observed twice. N indicates total number of observations used in ANCOVA estimation, or N=1×(T=2)+2×(T=3)+3×(T=4). Upfront is an indicator variable of the arm with an upfront large disbursement, WithGrace is an indicator variable of the arm with a grace period, InKind is an indicator variable of the arm which lends a heifer. Secondary and College are indicator variables of secondary schooling (ages 13-15) and tertiary schooling (ages 16-18), both at the time of baseline. Default category is primary (ages 05-12). rd2, rd3, rd4 are dummy variables for second, third, and fourth round of survey. Interaction terms of dummy variables are demeaned before interacting. The first column gives mean and standard deviation (in parenthesises) of each covariates before demeaning.

2. P values in percentages in parenthesises. Standard errors are clustered at group (village) level.

III.3 Incomes

Income sources are mainly labour incomes (lab) and farm revenues (far) with 849 and 53 observations at baseline, respectively.

TABLE 26: ANCOVA ESTIMATION OF HOUSEHOLD LABOUR INCOMES AND FARM INCOMES

A. Labour incomes

covariates	mean/std	(1)	(2)	(3)	(4)	(5)	(6)
(Intercept)		3467.90	4762.90	−51324.87	−51013.61	−51278.10	−51095.75
		(60.8)	(47.5)	(0.0)	(0.0)	(0.0)	(0.0)
Large	0.278	1539.79	1116.21	−1820.99	−1318.49	−1407.42	−1307.09
	(0.45)	(85.9)	(89.6)	(81.5)	(86.5)	(85.6)	(86.6)
LargeGrace	0.248	−1101.37	−5851.84	−4626.75	−4714.40	−4629.61	−4708.50
	(0.43)	(90.5)	(47.9)	(46.3)	(43.0)	(45.6)	(43.1)
Cattle	0.254	−5460.61	−6390.44	−5023.86	−4787.67	−5212.95	−4821.08
	(0.44)	(52.5)	(44.8)	(47.9)	(49.2)	(46.3)	(48.9)
HadCattle	0.182				−9054.34		−7309.60
	(0.39)				(1.0)		(23.8)
HadCattle	0.182				−9054.34		−7309.60
	(0.39)				(1.0)		(23.8)
HadCattle × Large	0.062				2669.83		2761.13
	(0.24)				(80.4)		(79.8)
HadCattle × LargeGrace	0.041				−2179.16		−2144.35
	(0.20)				(82.5)		(82.8)
HadCattle × Cattle	0.042				10936.21		10778.70
	(0.20)				(34.2)		(34.9)
Flood in round 1	0.488			7167.72	7135.10	7211.68	7156.90
	(0.50)			(14.2)	(14.7)	(14.1)	(14.5)
Head literate0	0.113			−6975.05	−6274.69	−6200.28	−6257.83
	(0.32)			(19.6)	(22.0)	(24.5)	(22.2)
TotalHHLabourIncome0	2397.862		0.11	0.09	0.09	0.09	0.09
	(172385.37)		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
Household size0	4.405			12198.30	12450.26	12462.50	12467.29
	(1.53)			(0.0)	(0.0)	(0.0)	(0.0)
Number of cattle0	0.250					−5537.82	−1284.88
	(0.60)					(2.4)	(74.2)
mean of dependent variable		2233	2233	2233	2233	2233	2233
$\bar{R}^2$		0	0.051	0.106	0.107	0.107	0.107
N	2557	2566	2566	2557	2557	2557	2557

B. Farm incomes

covariates	mean/std	(1)	(2)	(3)
(Intercept)		−2300.56	−4771.71	−33850.03
		(24.0)	(9.1)	(11.4)
Large	0.468	2324.78	4927.78	2351.52
	(0.50)	(53.5)	(13.4)	(53.7)
LargeGrace	0.273	27687.83	24706.80	23323.79
	(0.45)	(18.1)	(12.1)	(7.9)
Flood in round 1	0.532			11079.15
	(0.50)			(18.0)
Head literate0	0.156			−6527.84
	(0.37)			(48.5)
TotalRevenue0	2668.874		0.77	0.51
	(15293.24)		(0.9)	(7.0)
Household size0	5.013			5280.49
	(1.41)			(18.7)
mean of dependent variable		6338	6338	6338
$T = 2$		30	30	30
$T = 3$		22	22	22
$T = 4$		1	1	1
$\bar{R}^2$		0.042	0.098	0.102
N	77	77	77	77

Source: Estimated with GUK administrative and survey data.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. We annotate the number of periods that a household is observed with T. The total number of households is shown for each values of T. T=4 indicates the number of households with complete panel information, T=3 indicates number of households observed three times, T=2 indicates the number of households observed twice. N indicates total number of observations used in ANCOVA estimation, or N=1×(T=2)+2×(T=3)+3×(T=4). Large, LargeGrace, Cattle are indicator variables of the large, large grace, and cattle arms, respectively. The default arm category is traditional arm. Labour incomes are in 1000 Tk units and are a sum of all earned labour incomes of household members. Farm revenues are in 1000 Tk units and are a total of agricultural produce sales.

2. P values in percentages in parenthesises. Standard errors are clustered at group (village) level.

TABLE 27: ANCOVA ESTIMATION OF HOUSEHOLD LABOUR INCOMES AND FARM INCOMES BY ATTRIBUTES

A. Labour incomes

covariates	mean/std	(1)	(2)	(3)	(4)	(5)	(6)
(Intercept)		3296.95	5566.63	−50592.91	−49837.24	−50372.76	−49948.55
		(62.9)	(40.6)	(0.0)	(0.0)	(0.0)	(0.0)
Upfront	0.779	2991.60	2525.93	−569.19	−340.56	−296.37	−316.47
	(0.41)	(68.6)	(72.7)	(93.2)	(96.0)	(96.5)	(96.3)
WithGrace	0.502	−2482.13	−6193.09	−2168.17	−2687.66	−2552.34	−2699.26
	(0.50)	(75.7)	(38.9)	(72.8)	(65.9)	(67.6)	(65.7)
InKind	0.254	−3902.13	−723.33	−579.10	−351.37	−769.36	−393.11
	(0.44)	(62.7)	(92.0)	(92.1)	(95.0)	(89.3)	(94.4)
HadCattle	0.182				−8606.65		−6435.88
	(0.39)				(1.0)		(30.6)
UltraPoor	0.621	−2441.68	−3963.23	−3069.32	−3171.66	−3113.92	−3173.01
	(0.49)	(61.6)	(37.9)	(45.8)	(44.6)	(45.9)	(44.7)
Upfront × UltraPoor	0.518	19386.78	18855.00	16329.03	14183.34	14975.68	14288.87
	(0.50)	(21.2)	(21.2)	(24.4)	(30.3)	(28.1)	(30.1)
WithGrace × UltraPoor	0.343	−7082.33	−13043.29	−9797.20	−10395.99	−9766.32	−10355.81
	(0.47)	(62.3)	(29.8)	(43.5)	(41.4)	(44.4)	(41.6)
InKind × UltraPoor	0.167	−9261.96	−2704.97	−2382.29	−1145.05	−2207.01	−1241.30
	(0.37)	(46.9)	(81.0)	(82.9)	(92.0)	(84.6)	(91.3)
HadCattle	0.182				−8606.65		−6435.88
	(0.39)				(1.0)		(30.6)
HadCattle × Upfront	0.145				471.95		562.32
	(0.35)				(96.3)		(95.6)
HadCattle × WithGrace	0.083				−5993.99		−6059.49
	(0.28)				(49.6)		(49.5)
HadCattle × InKind	0.042				13409.74		13162.46
	(0.20)				(14.5)		(15.9)
Flood in round 1	0.488			7757.33	7620.92	7745.48	7651.21
	(0.50)			(12.9)	(13.6)	(13.0)	(13.4)
Head literate0	0.113			−6741.44	−6085.01	−6077.66	−6062.64
	(0.32)			(18.2)	(20.8)	(22.7)	(21.1)
TotalHHLabourIncome0	2397.862		0.11	0.09	0.09	0.09	0.09
	(172385.37)		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
Household size0	4.405			12058.32	12281.43	12314.49	12301.70
	(1.53)			(0.0)	(0.0)	(0.0)	(0.0)
Number of cattle0	0.250					−5271.19	−1593.44
	(0.60)					(2.5)	(69.3)
mean of dependent variable		2233	2233	2233	2233	2233	2233
$\bar{R}^2$		0.001	0.053	0.106	0.107	0.108	0.107
N	2557	2566	2566	2557	2557	2557	2557

B. Farm incomes

covariates	mean/std	(1)	(2)	(3)
(Intercept)		3683.94	−11409.33	−42940.88
		(26.3)	(25.4)	(11.2)
Upfront	0.922	−3659.72	11573.77	10386.47
	(0.27)	(42.6)	(25.6)	(32.7)
WithGrace	0.455	25363.06	19424.19	20090.77
	(0.50)	(22.6)	(19.4)	(13.0)
InKind	0.182	−30252.62	−21739.98	−19464.51
	(0.39)	(14.6)	(14.3)	(10.2)
Flood in round 1	0.532			9792.53
	(0.50)			(21.9)
Head literate0	0.156			−6265.76
	(0.37)			(51.1)
TotalRevenue0	2668.874		0.82	0.59
	(15293.24)		(0.6)	(3.4)
Household size0	5.013			5645.29
	(1.41)			(17.8)
mean of dependent variable		6338	6338	6338
$T = 2$		30	30	30
$T = 3$		22	22	22
$T = 4$		1	1	1
$\bar{R}^2$		0.031	0.087	0.092
N	77	77	77	77

Source: Estimated with GUK administrative and survey data.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. We annotate the number of periods that a household is observed with T. The total number of households is shown for each values of T. T=4 indicates the number of households with complete panel information, T=3 indicates number of households observed three times, T=2 indicates the number of households observed twice. N indicates total number of observations used in ANCOVA estimation, or N=1×(T=2)+2×(T=3)+3×(T=4). Upfront is an indicator variable of the arm with an upfront large disbursement, WithGrace is an indicator variable of the arm with a grace period, InKind is an indicator variable of the arm which lends a heifer. Labour incomes are in 1000 Tk units and are a sum of all earned labour incomes of household members. Farm revenues are in 1000 Tk units and are a total of agricultural produce sales.

2. *P* values in percentages in parenthesises. Standard errors are clustered at group (village) level.

TABLE 28: ANCOVA ESTIMATION OF HOUSEHOLD LABOUR INCOMES AND FARM INCOMES BY PERIOD

A. Labour incomes

covariates	mean/std	(1)	(2)	(3)	(4)	(5)	(6)
(Intercept)		−8816.85 (11.6)	−7430.78 (18.0)	−62547.07 (0.0)	−62677.75 (0.0)	−62495.27 (0.0)	−62763.21 (0.0)
Large	0.278 (0.45)	57.86 (99.4)	−423.32 (95.3)	−4123.79 (52.0)	−3650.26 (57.1)	−3671.96 (56.8)	−3644.75 (57.2)
LargeGrace	0.248 (0.43)	−1640.12 (83.4)	−6062.81 (39.3)	−5711.80 (28.6)	−5623.68 (27.4)	−5680.42 (28.2)	−5618.50 (27.5)
Cattle	0.254 (0.44)	−2639.37 (72.4)	−3736.48 (60.2)	−3779.51 (52.0)	−3437.02 (55.7)	−3936.97 (50.8)	−3470.55 (55.3)
HadCattle	0.182 (0.39)				−6243.86 (4.3)		−4304.91 (46.2)
rd 3	0.343 (0.47)	12756.19 (0.0)	12656.12 (0.0)	12527.04 (0.0)	12455.94 (0.0)	12511.17 (0.0)	12453.48 (0.0)
Large × rd 3	0.094 (0.29)	−5829.95 (35.6)	−5631.78 (36.7)	−3203.30 (57.7)	−3356.01 (56.7)	−3365.26 (55.8)	−3349.47 (56.8)
LargeGrace × rd 3	0.085 (0.28)	936.02 (88.8)	238.98 (97.1)	2477.92 (67.3)	2021.13 (72.8)	2397.09 (68.2)	2021.63 (72.8)
Cattle × rd 3	0.086 (0.28)	−8803.54 (27.0)	−8036.22 (29.7)	−4730.16 (49.8)	−4955.94 (47.6)	−4659.65 (50.2)	−4955.97 (47.6)
rd 4	0.326 (0.47)	23425.62 (0.0)	23178.45 (0.0)	23358.08 (0.0)	23196.86 (0.0)	23281.62 (0.0)	23187.90 (0.0)
Large × rd 4	0.095 (0.29)	10206.37 (43.8)	10316.22 (43.3)	12236.73 (34.5)	12423.59 (34.8)	12155.38 (34.6)	12455.76 (34.6)
LargeGrace × rd 4	0.082 (0.27)	−32.79 (99.7)	−995.65 (89.4)	1417.26 (83.7)	944.34 (88.9)	1313.79 (84.8)	951.48 (88.8)
Cattle × rd 4	0.081 (0.27)	−6838.00 (49.5)	−6698.93 (50.2)	−2219.15 (81.2)	−3239.63 (71.8)	−2454.82 (79.3)	−3267.38 (71.6)
HadCattle	0.182 (0.39)				−6243.86 (4.3)		−4304.91 (46.2)
HadCattle × Large	0.062 (0.24)				7668.70 (36.6)		7737.34 (36.3)
HadCattle × LargeGrace	0.041 (0.20)				2053.10 (80.2)		2088.17 (80.0)
HadCattle × Cattle	0.042 (0.20)				15462.97 (11.1)		15316.35 (11.4)
HadCattle × rd 3	0.063 (0.24)				−2822.82 (51.5)		−2835.09 (51.4)
HadCattle × Large × rd 3	0.020 (0.14)				−4048.82 (80.4)		−4027.17 (80.7)
HadCattle × LargeGrace × rd 3	0.014 (0.12)				−11496.21 (50.3)		−11499.33 (50.5)
HadCattle × Cattle × rd 3	0.016 (0.12)				−2998.49 (85.9)		−3021.18 (85.8)
HadCattle × rd 4	0.058 (0.23)				−12206.87 (5.0)		−12251.58 (4.9)
HadCattle × Large × rd 4	0.021 (0.14)				−17854.54 (35.9)		−17704.72 (36.1)
HadCattle × LargeGrace × rd 4	0.013 (0.11)				−8432.04 (51.9)		−8411.57 (51.9)
HadCattle × Cattle × rd 4	0.012 (0.11)				−21790.20 (20.4)		−21969.19 (20.5)
Flood in round 1	0.488 (0.50)			6929.81 (15.4)	6851.29 (16.1)	6972.80 (15.3)	6875.29 (15.9)
Head literate0	0.113 (0.32)			−6779.24 (21.3)	−6184.79 (22.4)	−6024.13 (26.2)	−6167.96 (22.6)
TotalHHLabourIncome0	2397.862 (172385.37)		0.11 (0.0)	0.09 (0.0)	0.09 (0.0)	0.09 (0.0)	0.09 (0.0)
Household size0	4.405 (1.53)			12181.57 (0.0)	12408.28 (0.0)	12439.85 (0.0)	12426.66 (0.0)
Number of cattle0	0.250 (0.60)					−5434.02 (2.5)	−1421.91 (71.4)
mean of dependent variable		2233	2233	2233	2233	2233	2233
R^2		0.013	0.065	0.119	0.119	0.121	0.118
N	2557	2566	2566	2557	2557	2557	2557

B. Farm incomes

covariates	mean/std	(1)	(2)	(3)
(Intercept)		6127.53 (20.2)	12149.79 (1.2)	−22113.92 (46.9)
Large	0.468 (0.50)	−2993.33 (26.1)	−4893.71 (24.4)	−12983.69 (7.2)
LargeGrace	0.273 (0.45)	6981.60 (68.6)	3214.09 (81.2)	4910.96 (71.6)
rd 3	0.468 (0.50)	1256.59 (90.4)	−4099.95 (62.4)	2343.54 (85.3)
Large × rd 3	0.234 (0.43)	4337.50 (52.0)	23571.16 (2.0)	43554.00 (4.9)
LargeGrace × rd 3	0.130 (0.34)	43932.50 (4.1)	91500.93 (1.1)	82676.16 (0.3)
rd 4	0.481 (0.50)	−2961.43 (50.9)	−11504.25 (1.1)	−4355.08 (36.9)

TABLE 29: ANCOVA ESTIMATION OF HOUSEHOLD LABOUR INCOMES AND FARM INCOMES BY ATTRIBUTES AND PERIOD

A. Labour incomes

covariates	mean/std	(1)	(2)	(3)	(4)	(5)	(6)
(Intercept)		−8816.85 (11.6)	−7430.78 (18.0)	−62547.07 (0.0)	−62677.75 (0.0)	−62495.27 (0.0)	−62763.21 (0.0)
Upfront	0.779 (0.41)	57.86 (99.4)	−423.32 (95.3)	−4123.79 (52.0)	−3650.26 (57.1)	−3671.96 (56.8)	−3644.75 (57.2)
WithGrace	0.502 (0.50)	−1697.98 (81.5)	−5639.49 (37.3)	−1588.01 (75.9)	−1973.43 (69.9)	−2008.46 (69.1)	−1973.76 (69.9)
InKind	0.254 (0.44)	−999.25 (89.1)	2326.34 (71.2)	1932.29 (67.7)	2186.66 (62.5)	1743.45 (70.2)	2147.95 (63.0)
HadCattle	0.182 (0.39)				−6243.86 (4.3)		−4304.91 (46.2)
rd 3	0.343 (0.47)	12756.19 (0.0)	12656.12 (0.0)	12527.04 (0.0)	12455.94 (0.0)	12511.17 (0.0)	12453.48 (0.0)
Upfront × rd 3	0.266 (0.44)	−5829.95 (35.6)	−5631.78 (36.7)	−3203.30 (57.7)	−3356.01 (56.7)	−3365.26 (55.8)	−3349.47 (56.8)
WithGrace × rd 3	0.172 (0.38)	6765.97 (20.2)	5870.76 (25.0)	5681.21 (23.9)	5377.14 (26.4)	5762.35 (22.9)	5371.10 (26.5)
InKind × rd 3	0.086 (0.28)	−9739.55 (17.7)	−8275.20 (22.6)	−7208.08 (24.6)	−6977.07 (24.9)	−7056.74 (25.3)	−6977.60 (24.9)
rd 4	0.326 (0.47)	23425.62 (0.0)	23178.45 (0.0)	23358.08 (0.0)	23196.86 (0.0)	23281.62 (0.0)	23187.90 (0.0)
Upfront × rd 4	0.258 (0.44)	10206.37 (43.8)	10316.22 (43.3)	12236.73 (34.5)	12423.59 (34.8)	12155.38 (34.6)	12455.76 (34.6)
WithGrace × rd 4	0.163 (0.37)	−10239.16 (41.8)	−11311.87 (36.4)	−10819.47 (38.6)	−11479.25 (36.8)	−10841.58 (38.4)	−11504.28 (36.7)
InKind × rd 4	0.081 (0.27)	−6805.21 (46.4)	−5703.29 (53.0)	−3636.42 (67.2)	−4183.97 (60.8)	−3768.62 (66.2)	−4218.86 (60.6)
HadCattle	0.182 (0.39)				−6243.86 (4.3)		−4304.91 (46.2)
HadCattle × Upfront	0.145 (0.35)				7668.70 (36.6)		7737.34 (36.3)
HadCattle × WithGrace	0.083 (0.28)				−5615.59 (48.3)		−5649.17 (48.3)
HadCattle × InKind	0.042 (0.20)				13409.86 (14.0)		13228.17 (14.9)
HadCattle × rd 3	0.063 (0.24)				−2822.82 (51.5)		−2835.09 (51.4)
HadCattle × Upfront × rd 3	0.050 (0.22)				−4048.82 (80.4)		−4027.17 (80.7)
HadCattle × WithGrace × rd 3	0.030 (0.17)				−7447.39 (44.3)		−7472.16 (44.1)
HadCattle × InKind × rd 3	0.016 (0.12)				8497.72 (42.2)		8478.15 (42.3)
HadCattle × rd 4	0.058 (0.23)				−12206.87 (5.0)		−12251.58 (4.9)
HadCattle × Upfront × rd 4	0.046 (0.21)				−17854.54 (35.9)		−17704.72 (36.1)
HadCattle × WithGrace × rd 4	0.025 (0.16)				9422.50 (58.7)		9293.14 (59.2)
HadCattle × InKind × rd 4	0.012 (0.11)				−13358.15 (35.2)		−13557.61 (35.1)
Flood in round 1	0.488 (0.50)			6929.81 (15.4)	6851.29 (16.1)	6972.80 (15.3)	6875.29 (15.9)
Head literate0	0.113 (0.32)			−6779.24 (21.3)	−6184.79 (22.4)	−6024.13 (26.2)	−6167.96 (22.6)
TotalHHLabourIncome0	2397.862 (172385.37)		0.11 (0.0)	0.09 (0.0)	0.09 (0.0)	0.09 (0.0)	0.09 (0.0)
Household size0	4.405 (1.53)			12181.57 (0.0)	12408.28 (0.0)	12439.85 (0.0)	12426.66 (0.0)
Number of cattle0	0.250 (0.60)					−5434.02 (2.5)	−1421.91 (71.4)
mean of dependent variable		2233	2233	2233	2233	2233	2233
R^2		0.013	0.065	0.119	0.119	0.121	0.118
N	2557	2566	2566	2557	2557	2557	2557

B. Farm incomes

covariates	mean/std	(1)	(2)	(3)
(Intercept)		5780.95 (47.5)	−7373.91 (58.0)	−54279.46 (25.5)
Upfront	0.922 (0.27)	−2973.40 (52.0)	13333.59 (26.1)	14697.92 (29.1)
WithGrace	0.455 (0.50)	9974.93 (57.0)	8002.21 (55.4)	17722.59 (33.9)
InKind	0.182 (0.39)	−8911.22 (61.0)	−1330.02 (91.9)	−2374.63 (85.0)
rd 3	0.468 (0.50)	1927.82 (85.7)	−1913.28 (82.5)	6486.76 (65.4)
Upfront × rd 3	0.442 (0.50)	−16156.25 (7.3)	−846.50 (92.9)	−2463.13 (76.0)
WithGrace × rd 3	0.208	79595.00	67270.05	37061.73

III.4 Consumption

Consumption is observed in rd 2-4. There are 1386 observations.

TABLE 30: ANCOVA ESTIMATION OF CONSUMPTION

		Per capita consumption (Tk)			Total consumption (Tk)		
covariates	mean/std	(1)	(2)	(3)	(4)	(5)	(6)
(Intercept)		2753.7 (0.0)	2076.9 (0.0)	3266.6 (0.0)	10918.6 (0.0)	5370.2 (0.0)	3496.7 (0.0)
Large	0.273 (0.45)	47.6 (48.4)	68.9 (27.9)	102.4 (10.2)	671.7 (14.4)	544.3 (8.6)	361.6 (16.0)
LargeGrace	0.244 (0.43)	23.5 (71.2)	14.0 (80.2)	33.9 (59.7)	313.0 (55.2)	49.0 (87.3)	99.4 (68.6)
Cattle	0.261 (0.44)	55.5 (35.0)	74.7 (17.4)	42.4 (45.7)	85.9 (82.5)	348.7 (20.6)	195.7 (41.0)
Flood in round 1	0.489 (0.50)			−48.9 (21.0)			34.6 (83.8)
Head literate0	0.117 (0.32)			118.9 (1.7)			571.1 (2.7)
PCExpenditure0	2212.703 (653.86)		0.3 (0.0)	0.1 (0.1)			
Household size0	4.354 (1.47)			−188.1 (0.0)			1175.5 (0.0)
TotalExpenditure0	9208.982 (3172.47)					0.6 (0.0)	0.3 (0.0)
mean of dependent variable		2787	2787	2787	11201	11201	11201
$T = 2$		50	50	50	50	50	50
$T = 3$		668	668	665	668	668	665
$\bar{R}^2$		−0.001	0.069	0.201	0.004	0.327	0.483
N	77	1386	1386	1380	1386	1386	1380

Source: Estimated with GUK administrative and survey data of round 2 - 4.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. We annotate the number of periods that a household is observed with T. The total number of households is shown for each values of T. T=4 indicates the number of households with complete panel information, T=3 indicates number of households observed three times, T=2 indicates the number of households observed twice. N indicates total number of observations used in ANCOVA estimation, or N=1×(T=2)+2×(T=3)+3×(T=4). Large, LargeGrace, Cattle are indicator variables of the large, large grace, and cattle arms, respectively. The default arm category is traditional arm. Consumption is annualised values.

2. *P* values in percentages in parenthesises. Standard errors are clustered at group (village) level.

Table 31: ANCOVA estimation of consumption by attributes

		Per capita consumption (Tk)			Total consumption (Tk)		
covariates	mean/std	(1)	(2)	(3)	(4)	(5)	(6)
(Intercept)		2753.7 (0.0)	2076.9 (0.0)	3266.6 (0.0)	10918.6 (0.0)	5370.2 (0.0)	3496.7 (0.0)
Upfront	0.778 (0.42)	47.6 (48.4)	68.9 (27.9)	102.4 (10.2)	671.7 (14.4)	544.3 (8.6)	361.6 (16.0)
WithGrace	0.505 (0.50)	−24.1 (74.4)	−54.9 (40.9)	−68.6 (26.7)	−358.7 (50.5)	−495.3 (14.0)	−262.2 (36.5)
InKind	0.261 (0.44)	32.0 (62.8)	60.6 (29.6)	8.5 (87.9)	−227.2 (63.6)	299.7 (32.5)	96.4 (72.1)
Flood in round 1	0.489 (0.50)			−48.9 (21.0)			34.6 (83.8)
Head literate0	0.117 (0.32)			118.9 (1.7)			571.1 (2.7)
PCExpenditure0	2212.703 (653.86)		0.3 (0.0)	0.1 (0.1)			
Household size0	4.354 (1.47)			−188.1 (0.0)			1175.5 (0.0)
TotalExpenditure0	9208.982 (3172.47)					0.6 (0.0)	0.3 (0.0)
mean of dependent variable		2787	2787	2787	11201	11201	11201
$T = 2$		50	50	50	50	50	50
$T = 3$		668	668	665	668	668	665
$\bar{R}^2$		−0.001	0.069	0.201	0.004	0.327	0.483
N	77	1386	1386	1380	1386	1386	1380

Source: Estimated with GUK administrative and survey data.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. We annotate the number of periods that a household is observed with T. The total number of households is shown for each values of T. T=4 indicates the number of households with complete panel information, T=3 indicates number of households observed three times, T=2 indicates the number of households observed twice. N indicates total number of observations used in ANCOVA estimation, or N=1×(T=2)+2×(T=3)+3×(T=4). Upfront is an indicator variable of the arm with an upfront large disbursement, WithGrace is an indicator variable of the arm with a grace period, InKind is an indicator variable of the arm which lends a heifer. Consumption is annualised values.

2. *P* values in percentages in parenthesises. Standard errors are clustered at group (village) level.

Table 32: ANCOVA estimation of consumption by period

		Per capita consumption (Tk)			Total consumption (Tk)		
covariates	mean/std	(1)	(2)	(3)	(4)	(5)	(6)
(Intercept)		2707.8 (0.0)	2032.5 (0.0)	3219.3 (0.0)	10909.2 (0.0)	5376.4 (0.0)	3492.3 (0.0)
Large	0.273 (0.45)	38.8 (61.4)	61.1 (39.5)	94.3 (19.7)	665.8 (18.0)	533.7 (13.4)	342.7 (25.0)
LargeGrace	0.244 (0.43)	7.7 (92.0)	−0.3 (99.6)	20.6 (79.4)	303.9 (59.8)	25.5 (94.3)	64.6 (83.0)
Cattle	0.261 (0.44)	70.5 (31.1)	93.0 (15.2)	57.6 (39.0)	196.5 (64.7)	447.4 (15.5)	267.7 (33.8)
rd 4	0.493 (0.50)	97.3 (2.2)	91.9 (3.3)	101.5 (1.7)	−34.1 (83.5)	−47.9 (77.0)	5.2 (97.4)
Large × rd 4	0.001 (0.24)	30.8 (77.9)	24.1 (82.2)	25.8 (81.0)	7.3 (98.7)	46.2 (91.8)	97.4 (82.8)
LargeGrace × rd 4	0.001 (0.23)	68.4 (61.0)	60.0 (65.1)	52.5 (69.1)	24.7 (96.0)	116.4 (81.3)	181.2 (71.0)
Cattle × rd 4	−0.002 (0.23)	−100.5 (36.7)	−121.6 (26.5)	−103.0 (33.2)	−679.4 (13.9)	−600.5 (18.9)	−435.6 (30.6)
Flood in round 1	0.489 (0.50)			−49.8 (20.2)			33.5 (84.4)
Head literate0	0.117 (0.32)			118.5 (1.7)			566.1 (2.8)
PCExpenditure0	2212.703 (653.86)		0.3 (0.0)	0.1 (0.2)			
Household size0	4.354 (1.47)			−188.2 (0.0)			1173.9 (0.0)
TotalExpenditure0	9208.982 (3172.47)					0.6 (0.0)	0.3 (0.0)
mean of dependent variable $T = 2$		2787 50	2787 50	2787 50	11201 50	11201 50	11201 50
$T = 3$ $\bar{R}^2$		668 0.002	668 0.072	665 0.205	668 0.003	668 0.327	665 0.483
N	77	1386	1386	1380	1386	1386	1380

Source: Estimated with GUK administrative and survey data.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. We annotate the number of periods that a household is observed with T. The total number of households is shown for each values of T. T=4 indicates the number of households with complete panel information, T=3 indicates number of households observed three times, T=2 indicates the number of households observed twice. N indicates total number of observations used in ANCOVA estimation, or N=1×(T=2)+2×(T=3)+3×(T=4). Large, LargeGrace, Cattle are indicator variables of the large, large grace, and cattle arms, respectively. The default arm category is traditional arm. Consumption is annualised values.

2. *P* values in percentages in parenthesises. Standard errors are clustered at group (village) level.

Table 33: ANCOVA estimation of consumption by attributes and period

		Per capita consumption (Tk)			Total consumption (Tk)		
covariates	mean/std	(1)	(2)	(3)	(4)	(5)	(6)
(Intercept)		2707.8 (0.0)	2032.5 (0.0)	3219.3 (0.0)	10909.2 (0.0)	5376.4 (0.0)	3492.3 (0.0)
Upfront	0.778 (0.42)	38.8 (61.4)	61.1 (39.5)	94.3 (19.7)	665.8 (18.0)	533.7 (13.4)	342.7 (25.0)
WithGrace	0.505 (0.50)	−31.0 (71.7)	−61.5 (43.4)	−73.7 (33.9)	−361.9 (53.8)	−508.1 (18.5)	−278.1 (41.0)
InKind	0.261 (0.44)	62.7 (42.7)	93.4 (19.5)	37.0 (60.4)	−107.4 (84.0)	421.9 (23.2)	203.1 (52.6)
rd 4	0.493 (0.50)	97.3 (2.2)	91.9 (3.3)	101.5 (1.7)	−34.1 (83.5)	−47.9 (77.0)	5.2 (97.4)
Upfront × rd 4	0.001 (0.22)	30.8 (77.9)	24.1 (82.2)	25.8 (81.0)	7.3 (98.7)	46.2 (91.8)	97.4 (82.8)
WithGrace × rd 4	−0.001 (0.26)	37.6 (77.0)	35.9 (78.1)	26.7 (83.6)	17.4 (97.0)	70.3 (88.0)	83.8 (85.7)
InKind × rd 4	−0.002 (0.23)	−168.9 (19.4)	−181.6 (16.6)	−155.5 (22.5)	−704.1 (14.2)	−716.9 (13.2)	−616.8 (16.6)
Flood in round 1	0.489 (0.50)			−49.8 (20.2)			33.5 (84.4)
Head literate0	0.117 (0.32)			118.5 (1.7)			566.1 (2.8)
PCExpenditure0	2212.703 (653.86)		0.3 (0.0)	0.1 (0.2)			
Household size0	4.354 (1.47)			−188.2 (0.0)			1173.9 (0.0)
TotalExpenditure0	9208.982 (3172.47)					0.6 (0.0)	0.3 (0.0)
mean of dependent variable		2787	2787	2787	11201	11201	11201
$T = 2$		50	50	50	50	50	50
$T = 3$		668	668	665	668	668	665
$\bar{R}^2$		0.002	0.072	0.205	0.003	0.327	0.483
N	77	1386	1386	1380	1386	1386	1380

Source: Estimated with GUK administrative and survey data.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. We annotate the number of periods that a household is observed with T. The total number of households is shown for each values of T. T=4 indicates the number of households with complete panel information, T=3 indicates number of households observed three times, T=2 indicates the number of households observed twice. N indicates total number of observations used in ANCOVA estimation, or N=1×(T=2)+2×(T=3)+3×(T=4). Upfront is an indicator variable of the arm with an upfront large disbursement, WithGrace is an indicator variable of the arm with a grace period, InKind is an indicator variable of the arm which lends a heifer. Consumption is annualised values.

2. *P* values in percentages in parenthesises. Standard errors are clustered at group (village) level.

Consumption is observed in rd 2-4. There are 1386 observations.

Table 34: OLS estimation of consumption

		Per capita consumption (Tk)			Total consumption (Tk)		
covariates	mean/std	(1)	(2)	(3)	(4)	(5)	(6)
(Intercept)		2595.0 (0.0)	3569.6 (0.0)	2228.6 (0.0)	10325.9 (0.0)	4298.3 (0.0)	2513.9 (0.0)
Large	0.283 (0.45)	−11.0 (86.5)	44.1 (48.0)	59.0 (17.7)	337.8 (37.7)	14.0 (95.6)	81.2 (58.8)
LargeGrace	0.255 (0.44)	5.2 (92.8)	36.1 (59.1)	6.7 (87.2)	397.4 (37.5)	193.2 (48.4)	−14.1 (92.7)
Cattle	0.265 (0.44)	−29.0 (63.2)	2.5 (96.6)	15.0 (68.6)	133.3 (70.4)	−82.4 (71.0)	60.7 (65.0)
Flood in round 1	0.480 (0.50)		−42.4 (20.3)	−28.1 (25.9)		26.0 (85.1)	100.6 (22.0)
Head literate0	0.119 (0.32)		−10.7 (72.6)	21.8 (40.4)		142.7 (34.4)	226.9 (2.5)
Household size0	4.403 (1.50)		−224.0 (0.0)	−140.3 (0.0)		1408.6 (0.0)	685.6 (0.0)
PCExpenditure0	2192.380 (632.03)			0.4 (0.0)			
TotalExpenditure0	9221.300 (3107.21)						0.5 (0.0)
mean of dependent variable		2586	2586	2586	10558	10558	10558
$T = 2$		28	28	28	28	28	28
$T = 3$		96	96	96	96	96	96
$T = 4$		1277	1274	1274	1277	1274	1274
$\bar{R}^2$		0	0.185	0.284	0.001	0.385	0.518
N	77	4051	4042	4042	4051	4042	4042

Source: Estimated with GUK administrative and survey data of round 2 - 4.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. We annotate the number of periods that a household is observed with T. The total number of households is shown for each values of T. T=4 indicates the number of households with complete panel information, T=3 indicates number of households observed three times, T=2 indicates the number of households observed twice. N indicates total number of observations used in ANCOVA estimation, or N=1×(T=2)+2×(T=3)+3×(T=4). Large, LargeGrace, Cattle are indicator variables of the large, large grace, and cattle arms, respectively. The default arm category is traditional arm. Consumption is annualised values.

2. *P* values in percentages in parenthesises. Standard errors are clustered at group (village) level.

Table 35: OLS estimation of consumption by attributes

		Per capita consumption (Tk)			Total consumption (Tk)		
covariates	mean/std	(1)	(2)	(3)	(4)	(5)	(6)
(Intercept)		2595.0 (0.0)	3569.6 (0.0)	2228.6 (0.0)	10325.9 (0.0)	4298.3 (0.0)	2513.9 (0.0)
Upfront	0.803 (0.40)	−11.0 (86.5)	44.1 (48.0)	59.0 (17.7)	337.8 (37.7)	14.0 (95.6)	81.2 (58.8)
WithGrace	0.520 (0.50)	16.2 (79.4)	−8.1 (90.6)	−52.3 (21.1)	59.6 (89.2)	179.2 (56.6)	−95.3 (55.2)
InKind	0.265 (0.44)	−34.2 (55.3)	−33.6 (59.8)	8.3 (81.4)	−264.1 (52.2)	−275.6 (33.0)	74.8 (60.3)
Flood in round 1	0.480 (0.50)		−42.4 (20.3)	−28.1 (25.9)		26.0 (85.1)	100.6 (22.0)
Head literate0	0.119 (0.32)		−10.7 (72.6)	21.8 (40.4)		142.7 (34.4)	226.9 (2.5)
Household size0	4.403 (1.50)		−224.0 (0.0)	−140.3 (0.0)		1408.6 (0.0)	685.6 (0.0)
PCExpenditure0	2192.380 (632.03)			0.4 (0.0)			
TotalExpenditure0	9221.300 (3107.21)						0.5 (0.0)
mean of dependent variable		2586	2586	2586	10558	10558	10558
$T = 2$		28	28	28	28	28	28
$T = 3$		96	96	96	96	96	96
$T = 4$		1277	1274	1274	1277	1274	1274
$\bar{R}^2$		0	0.185	0.284	0.001	0.385	0.518
N	77	4051	4042	4042	4051	4042	4042

Source: Estimated with GUK administrative and survey data.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. We annotate the number of periods that a household is observed with T. The total number of households is shown for each values of T. T=4 indicates the number of households with complete panel information, T=3 indicates number of households observed three times, T=2 indicates the number of households observed twice. N indicates total number of observations used in ANCOVA estimation, or N=1×(T=2)+2×(T=3)+3×(T=4). Upfront is an indicator variable of the arm with an upfront large disbursement, WithGrace is an indicator variable of the arm with a grace period, InKind is an indicator variable of the arm which lends a heifer. Consumption is annualised values.

2. *P* values in percentages in parenthesises. Standard errors are clustered at group (village) level.

Table 36: OLS estimation of consumption by period

		Per capita consumption (Tk)			Total consumption (Tk)		
covariates	mean/std	(1)	(2)	(3)	(4)	(5)	(6)
(Intercept)		2202.0 (0.0)	3179.3 (0.0)	1858.4 (0.0)	8984.1 (0.0)	2955.7 (0.0)	1204.3 (0.0)
Large	0.283 (0.45)	−24.8 (70.7)	30.0 (63.3)	44.6 (31.2)	293.2 (43.8)	−28.5 (90.9)	38.3 (79.8)
LargeGrace	0.255 (0.44)	−9.2 (87.7)	21.2 (75.6)	−8.0 (85.2)	350.0 (43.3)	147.7 (59.4)	−57.8 (70.8)
Cattle	0.265 (0.44)	−36.6 (54.8)	−5.6 (92.3)	6.6 (86.2)	105.4 (76.1)	−108.1 (62.1)	33.6 (80.5)
rd 3	0.340 (0.47)	558.1 (0.0)	552.3 (0.0)	546.5 (0.0)	2077.7 (0.0)	2071.6 (0.0)	2046.6 (0.0)
Large × rd 3	−0.001 (0.21)	131.6 (22.6)	122.9 (25.6)	113.9 (28.7)	389.1 (35.3)	431.3 (30.2)	400.3 (33.4)
LargeGrace × rd 3	−0.001 (0.21)	−80.0 (42.4)	−81.7 (41.3)	−85.3 (38.5)	−367.4 (33.3)	−360.1 (34.3)	−363.1 (33.3)
Cattle × rd 3	0.000 (0.21)	170.7 (8.1)	142.7 (14.5)	135.0 (16.4)	740.4 (7.6)	774.6 (6.1)	750.0 (6.9)
rd 4	0.322 (0.47)	660.0 (0.0)	659.0 (0.0)	653.9 (0.0)	2075.6 (0.0)	2080.1 (0.0)	2050.7 (0.0)
Large × rd 4	0.003 (0.21)	124.3 (18.2)	104.1 (24.2)	88.5 (30.9)	1.6 (99.6)	134.6 (67.6)	101.5 (75.7)
LargeGrace × rd 4	0.003 (0.20)	−18.3 (84.1)	−33.6 (70.1)	−45.4 (59.5)	−432.2 (21.0)	−330.3 (33.4)	−340.5 (32.6)
Cattle × rd 4	−0.001 (0.21)	12.7 (87.4)	−22.7 (76.6)	−42.9 (57.2)	−220.7 (47.7)	−31.9 (91.7)	−91.9 (76.9)
Flood in round 1	0.480 (0.50)		−43.5 (18.9)	−29.4 (23.6)		23.1 (86.8)	97.0 (24.3)
Head literate0	0.119 (0.32)		−9.2 (76.4)	22.8 (38.4)		146.8 (33.0)	229.8 (2.4)
Household size0	4.403 (1.50)		−223.9 (0.0)	−141.3 (0.0)		1408.7 (0.0)	691.5 (0.0)
PCExpenditure0	2192.380 (632.03)			0.4 (0.0)			
TotalExpenditure0	9221.300 (3107.21)						0.5 (0.0)
mean of dependent variable		2586	2586	2586	10558	10558	10558
$T = 2$		28	28	28	28	28	28
$T = 3$		96	96	96	96	96	96
$T = 4$		1277	1274	1274	1277	1274	1274
$\bar{R}^2$		0.137	0.324	0.421	0.086	0.47	0.601
N	77	4051	4042	4042	4051	4042	4042

Source: Estimated with GUK administrative and survey data.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. We annotate the number of periods that a household is observed with T. The total number of households is shown for each values of T. T=4 indicates the number of households with complete panel information, T=3 indicates number of households observed three times, T=2 indicates the number of households observed twice. N indicates total number of observations used in ANCOVA estimation, or N=1×(T=2)+2×(T=3)+3×(T=4). Large, LargeGrace, Cattle are indicator variables of the large, large grace, and cattle arms, respectively. The default arm category is traditional arm. Consumption is annualised values.

2. P values in percentages in parenthesises. Standard errors are clustered at group (village) level.

TABLE 37: OLS ESTIMATION OF CONSUMPTION BY ATTRIBUTES AND PERIOD

		Per capita consumption (Tk)			Total consumption (Tk)		
covariates	mean/std	(1)	(2)	(3)	(4)	(5)	(6)
(Intercept)		2202.0 (0.0)	3179.3 (0.0)	1858.4 (0.0)	8984.1 (0.0)	2955.7 (0.0)	1204.3 (0.0)
Upfront	0.803 (0.40)	−24.8 (70.7)	30.0 (63.3)	44.6 (31.2)	293.2 (43.8)	−28.5 (90.9)	38.3 (79.8)
WithGrace	0.520 (0.50)	15.6 (80.4)	−8.9 (89.8)	−52.6 (21.4)	56.9 (89.7)	176.2 (57.6)	−96.1 (55.2)
InKind	0.265 (0.44)	−27.3 (63.4)	−26.8 (67.5)	14.5 (68.7)	−244.7 (55.5)	−255.7 (36.9)	91.5 (53.8)
rd 3	0.340 (0.47)	558.1 (0.0)	552.3 (0.0)	546.5 (0.0)	2077.7 (0.0)	2071.6 (0.0)	2046.6 (0.0)
Upfront × rd 3	−0.002 (0.19)	131.6 (22.6)	122.9 (25.6)	113.9 (28.7)	389.1 (35.3)	431.3 (30.2)	400.3 (33.4)
WithGrace × rd 3	−0.000 (0.24)	−211.5 (5.0)	−204.6 (5.8)	−199.2 (6.0)	−756.4 (6.5)	−791.5 (5.5)	−763.5 (6.1)
InKind × rd 3	0.000 (0.21)	250.6 (1.0)	224.4 (2.1)	220.3 (2.2)	1107.7 (0.7)	1134.8 (0.5)	1113.1 (0.6)
rd 4	0.322 (0.47)	660.0 (0.0)	659.0 (0.0)	653.9 (0.0)	2075.6 (0.0)	2080.1 (0.0)	2050.7 (0.0)
Upfront × rd 4	0.004 (0.18)	124.3 (18.2)	104.1 (24.2)	88.5 (30.9)	1.6 (99.6)	134.6 (67.6)	101.5 (75.7)
WithGrace × rd 4	0.001 (0.23)	−142.6 (13.4)	−137.7 (14.7)	−133.9 (15.5)	−433.8 (22.4)	−464.9 (19.2)	−441.9 (21.3)
InKind × rd 4	−0.001 (0.21)	31.0 (70.7)	10.9 (89.6)	2.6 (97.6)	211.5 (53.9)	298.4 (38.2)	248.6 (46.5)
Flood in round 1	0.480 (0.50)		−43.5 (18.9)	−29.4 (23.6)		23.1 (86.8)	97.0 (24.3)
Head literate0	0.119 (0.32)		−9.2 (76.4)	22.8 (38.4)		146.8 (33.0)	229.8 (2.4)
Household size0	4.403 (1.50)		−223.9 (0.0)	−141.3 (0.0)		1408.7 (0.0)	691.5 (0.0)
PCExpenditure0	2192.380 (632.03)			0.4 (0.0)			
TotalExpenditure0	9221.300 (3107.21)						0.5 (0.0)
mean of dependent variable		2586	2586	2586	10558	10558	10558
$T = 2$		28	28	28	28	28	28
$T = 3$		96	96	96	96	96	96
$T = 4$		1277	1274	1274	1277	1274	1274
$\bar{R}^2$		0.137	0.324	0.421	0.086	0.47	0.601
N	77	4051	4042	4042	4051	4042	4042

Source: Estimated with GUK administrative and survey data.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. We annotate the number of periods that a household is observed with T. The total number of households is shown for each values of T. T=4 indicates the number of households with complete panel information, T=3 indicates number of households observed three times, T=2 indicates the number of households observed twice. N indicates total number of observations used in ANCOVA estimation, or N=1×(T=2)+2×(T=3)+3×(T=4). Upfront is an indicator variable of the arm with an upfront large disbursement, WithGrace is an indicator variable of the arm with a grace period, InKind is an indicator variable of the arm which lends a heifer. Consumption is annualised values.

2. *P* values in percentages in parenthesises. Standard errors are clustered at group (village) level.

III.5 Assets

III.5.1 Homestead land

Nonzero reported residential land holding among 800 (776) HHs. Around 40-50% of respondents report nonzero residential land holding.

```
           Arm survey  NonZero
        <fctr>  <num>    <num>
1: traditional      1 0.470588
2: traditional      2 0.517647
3: traditional      3 0.552941
4: traditional      4 0.552941
5:       large      1 0.467836
6:       large      2 0.491228
7:       large      3 0.514620
```

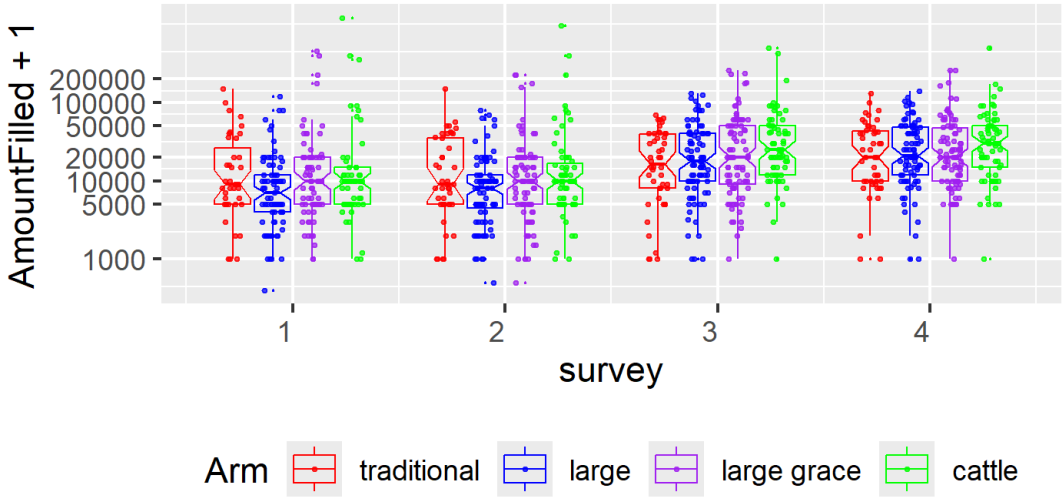
```
 8:        large       4 0.508772
 9:  large grace       1 0.479042
10:  large grace       2 0.508982
11:  large grace       3 0.526946
12:  large grace       4 0.520958
13:       cattle       1 0.379085
14:       cattle       2 0.450980
15:       cattle       3 0.470588
16:       cattle       4 0.470588
```

HHs reporting zero residential land holding are, except for the traditional arm, substantially poorer than HHs who report nonzero residential land holding.

```
            Arm ZeroLandHolding MeanNetValue
         <fctr>           <lgcl>        <num>
1:  traditional            FALSE     11259.46
2:  traditional             TRUE     10612.93
3:        large            FALSE     22738.46
4:        large             TRUE     17915.93
5:  large grace            FALSE     15707.96
6:  large grace             TRUE      9539.76
7:       cattle            FALSE     15232.56
8:       cattle             TRUE      9659.07
```

Abu-san's email on Jan 30, 2020 I checked the questionnaire and found that from round 2, landholding information has been included in the asset information, which made the asset data inflated from round 2. Since landholding is something that is time-invariant for the ultra-poor households, either we can add the landholding information in round 1 or create an asset holding information deleting the landholding information from round 2 onwards, to make the valid comparison. ⇒ This is done and saved as AmountFilled.

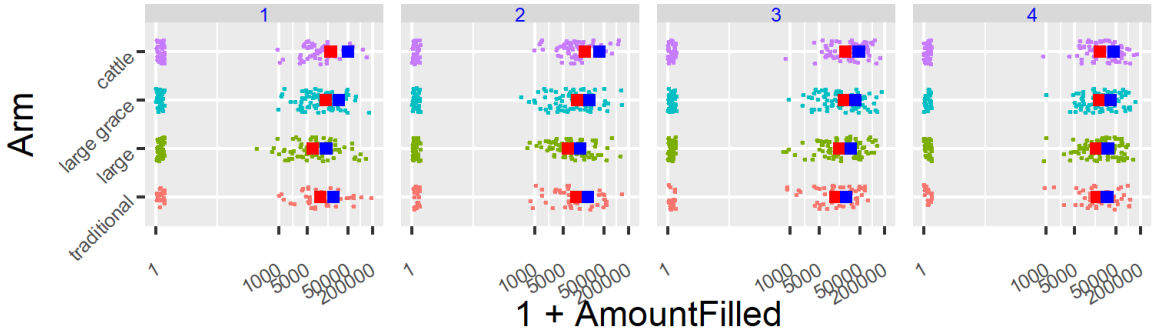
FIGURE 7: HOMESTEAD LAND HOLDING OF LOAN RECIPIENTS



Source: Survey data.

Note: Loan recipients only.

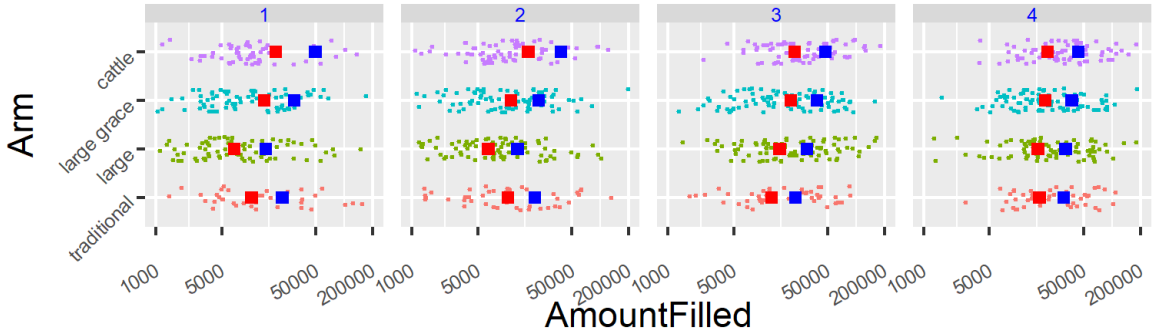
FIGURE 8: HOMESTEAD LAND HOLDING OF LOAN RECIPIENTS, INCLUDING ZERO HOLDING



Source: Survey data.

Note: Log of 1+land holding is displayed on horizontal axises. Red squares are means including zero holding for respective Arm-round. Blue squares are means excluding zero holding for respective Arm-round. Loan recipients only.

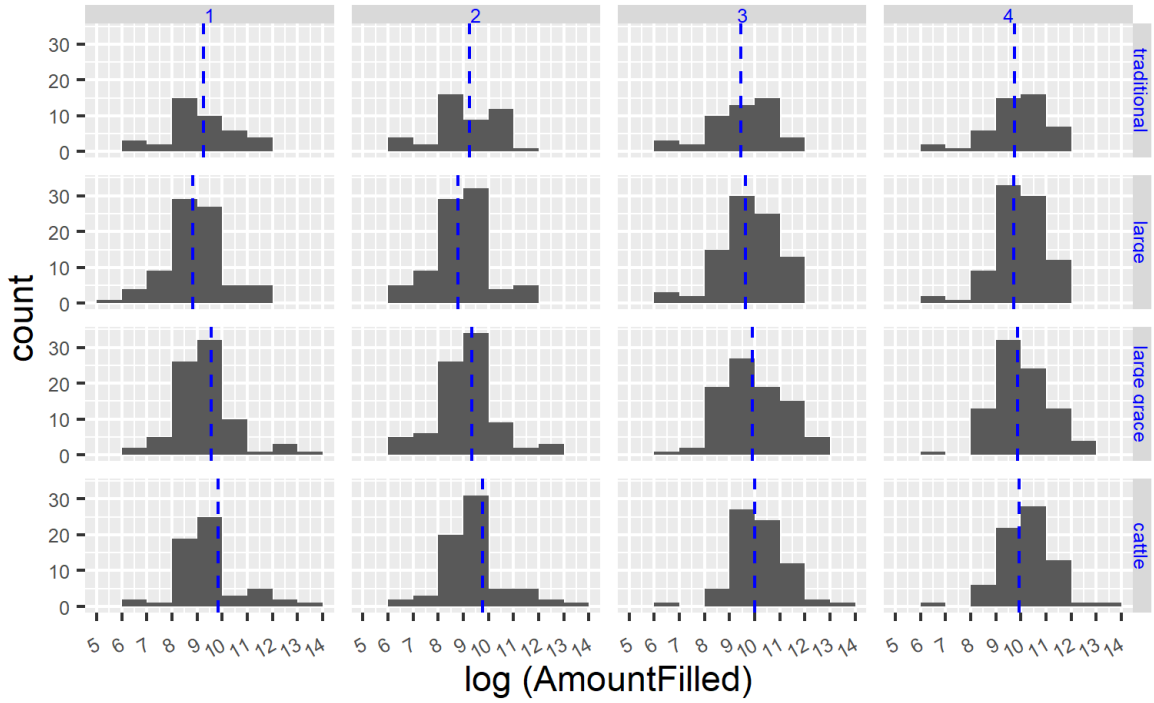
FIGURE 9: HOMESTEAD LAND HOLDING OF LOAN RECIPIENTS, EXCLUDING ZERO HOLDING



Source: Survey data.

Note: Log of land holding is displayed on horizontal axises. Zero land holders are excluded. Red squares are means including zero holding for respective Arm-round. Blue squares are means excluding zero holding for respective Arm-round. Loan recipients only.

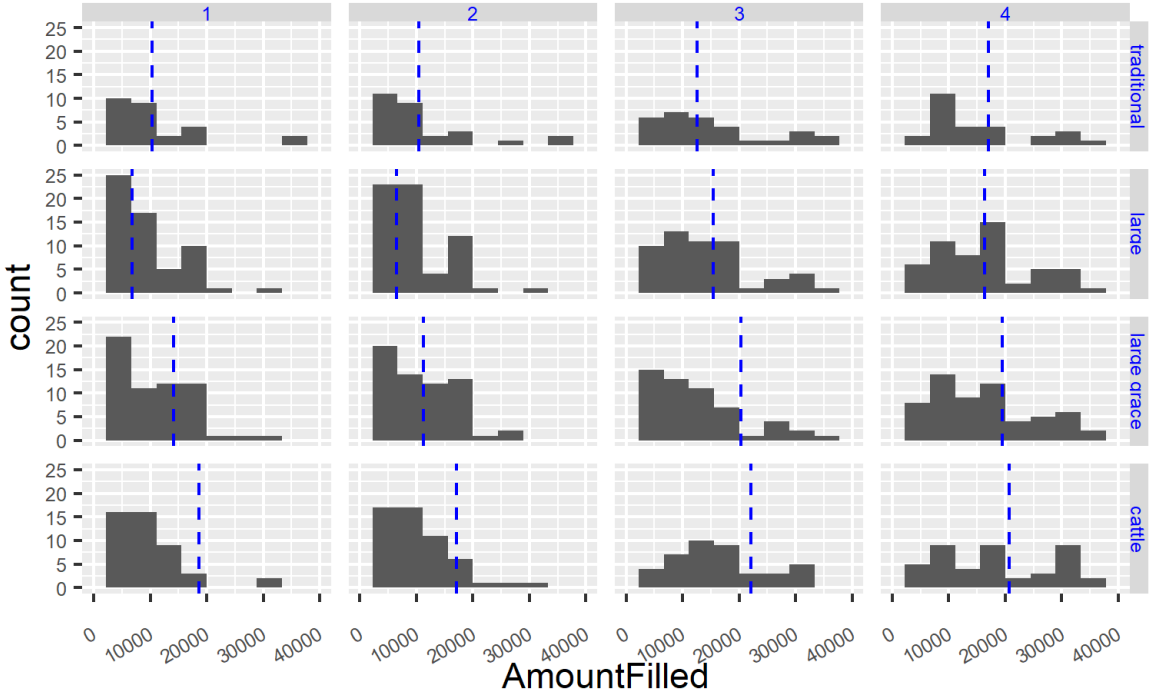
FIGURE 10: HOMESTEAD LAND HOLDING OF LOAN RECIPIENTS, EXCLDUING ZERO



Source: Survey data.

Note: Loan recipients only. Logarithm of land holding is displayed on horizontal axises. Zero land holding is excluded from the graph. Mean including zero holding is shown as a dotted line in each panel.

FIGURE 11: HOMESTEAD LAND HOLDING OF LOAN RECIPIENTS, EXCLDUING ZERO, REAL VALUES



Source: Survey data.

Note: Loan recipients only. Land holding is displayed on horizontal axises. Zero land holding is excluded from the graph. Mean including zero holding is shown as a dotted line in each panel.

Land holding distributions look different between arms at the baseline (FIGURE 10). This can be a consequence of copying the round 2 values which was justified under the assumption that all the round 1 land acquisition is reported in round 2 when our interviewer asks about it. By round 4, distributions become more skewed to left in all arms, indicating that some members have increased their land holding, only that such a tendency is weakest among the traditional arm.

```
Key: <tee>
      tee traditional large large grace cattle   Sum
    <int>       <int> <int>       <int>  <int> <int>
1:      1         174   200         199    200   773
2:      2         166   194         177    195   732
3:      3         162   191         174    188   715
4:      4         133   179         155    151   618
```

Land entries by arm and round:

```
           Arm   NA.1   NA.2   NA.3   NA.4 NonNA.1 NonNA.2 NonNA.3 NonNA.4
        <fctr> <char> <char> <char> <char>  <char>  <char>  <char>  <char>
1:       large     85     85     85     86     139     142     140     141
2:      cattle    108    107    107     96      84      98     100      97
3: large grace     98     78     82     81     103     106     105     103
4: traditional     85     82     81     71      83      91      89      81
5:       Total    376    352    355    334     409     437     434     422
```

```
[1] 6
```

Table 38: ANCOVA estimation of land holding

covariates	mean/std	(1)	(2)	(3)	(4)	(5)	(6)
(Intercept)		22723.0 (0.0)	12661.9 (0.0)	10601.3 (4.0)	10505.4 (4.3)	10601.3 (4.0)	10505.4 (4.3)
Large	0.334 (0.47)	14224.2 (7.4)	12176.0 (1.2)	12059.7 (1.0)	11745.9 (1.6)	12059.7 (1.0)	11745.9 (1.6)
LargeGrace	0.244 (0.43)	19152.4 (1.8)	8830.7 (2.5)	9379.7 (2.9)	9209.4 (3.1)	9379.7 (2.9)	9209.4 (3.1)
Cattle	0.220 (0.41)	32070.1 (14.0)	5946.1 (8.3)	6095.8 (8.3)	6161.8 (8.1)	6095.8 (8.3)	6161.8 (8.1)
HadCattle	0.231 (0.42)				2724.7 (43.7)		2724.7 (43.7)
HadCattle	0.231 (0.42)				2724.7 (43.7)		2724.7 (43.7)
Flood in round 1	0.433 (0.50)			640.4 (85.5)	575.8 (87.2)	640.4 (85.5)	575.8 (87.2)
Head literate0	0.119 (0.32)			−981.9 (75.9)	−1306.3 (67.3)	−981.9 (75.9)	−1306.3 (67.3)
land value$_1$	35511.779 (115082.24)		0.5 (0.0)	0.5 (0.0)	0.5 (0.0)	0.5 (0.0)	0.5 (0.0)
Household size0	4.477 (1.38)			412.3 (70.5)	334.2 (74.7)	412.3 (70.5)	334.2 (74.7)
mean of dependent variable		39256	39256	39256	39256	39256	39256
R^2		0.019	0.737	0.737	0.737	0.737	0.737
N	1248	1256	1256	1248	1248	1248	1248

Source: Estimated with GUK administrative and survey data.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. We annotate the number of periods that a household is observed with T. The total number of households is shown for each values of T. T=4 indicates the number of households with complete panel information, T=3 indicates number of households observed three times, T=2 indicates the number of households observed twice. N indicates total number of observations used in ANCOVA estimation, or N=1×(T=2)+2×(T=3)+3×(T=4). Large, LargeGrace, Cattle are indicator variables of the large, large grace, and cattle arms, respectively. The default arm category is traditional arm. Interaction terms of dummy variables are demeaned before interacting. The first column gives mean and standard deviation (in parenthesises) of each covariates before demeaning.

2. *P* values in percentages in parenthesises. Standard errors are clustered at group (village) level.

Table 39: ANCOVA estimation of land holding by attributes

covariates	mean/std	(1)	(2)	(3)	(4)	(5)	(6)
(Intercept)		22723.0 (0.0)	12661.9 (0.0)	10601.3 (4.0)	10505.4 (4.3)	10601.3 (4.0)	10505.4 (4.3)
Upfront	0.798 (0.40)	14224.2 (7.4)	12176.0 (1.2)	12059.7 (1.0)	11745.9 (1.6)	12059.7 (1.0)	11745.9 (1.6)
WithGrace	0.464 (0.50)	4928.2 (64.5)	−3345.4 (56.8)	−2680.0 (66.3)	−2536.4 (68.4)	−2680.0 (66.3)	−2536.4 (68.4)
InKind	0.220 (0.41)	12917.8 (57.2)	−2884.6 (54.6)	−3284.0 (52.8)	−3047.6 (55.7)	−3284.0 (52.8)	−3047.6 (55.7)
HadCattle	0.231 (0.42)				2724.7 (43.7)		2724.7 (43.7)
HadCattle	0.231 (0.42)				2724.7 (43.7)		2724.7 (43.7)
Flood in round 1	0.433 (0.50)			640.4 (85.5)	575.8 (87.2)	640.4 (85.5)	575.8 (87.2)
Head literate0	0.119 (0.32)			−981.9 (75.9)	−1306.3 (67.3)	−981.9 (75.9)	−1306.3 (67.3)
land value$_1$	35511.779 (115082.24)		0.5 (0.0)	0.5 (0.0)	0.5 (0.0)	0.5 (0.0)	0.5 (0.0)
Household size0	4.477 (1.38)			412.3 (70.5)	334.2 (74.7)	412.3 (70.5)	334.2 (74.7)
mean of dependent variable		39256	39256	39256	39256	39256	39256
R^2		0.019	0.737	0.737	0.737	0.737	0.737
N	1248	1256	1256	1248	1248	1248	1248

Source: Estimated with GUK administrative and survey data.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. We annotate the number of periods that a household is observed with T. The total number of households is shown for each values of T. T=4 indicates the number of households with complete panel information, T=3 indicates number of households observed three times, T=2 indicates the number of households observed twice. N indicates total number of observations used in ANCOVA estimation, or N=1×(T=2)+2×(T=3)+3×(T=4). Upfront is an indicator variable of the arm with an upfront large disbursement, WithGrace is an indicator variable of the arm with a grace period, InKind is an indicator variable of the arm which lends a heifer. Interaction terms of dummy variables are demeaned before interacting. The first column gives mean and standard deviation (in parenthesises) of each covariates before demeaning.

2. *P* values in percentages in parenthesises. Standard errors are clustered at group (village) level.

TABLE 40: ANCOVA ESTIMATION OF LAND HOLDING BY PERIOD, ARM

covariates	mean/std	(1)	(2)	(3)	(4)	(5)	(6)
(Intercept)		14534.1 (0.0)	3803.1 (20.1)	1721.8 (75.2)	1721.8 (75.2)	1721.8 (75.2)	1721.8 (75.2)
Large	0.334 (0.47)	10983.1 (11.3)	8785.1 (1.4)	8649.7 (1.1)	8649.7 (1.1)	8649.7 (1.1)	8649.7 (1.1)
LargeGrace	0.244 (0.43)	17374.5 (3.0)	6906.8 (2.9)	7490.1 (3.2)	7490.1 (3.2)	7490.1 (3.2)	7490.1 (3.2)
Cattle	0.220 (0.41)	35417.0 (18.1)	8173.0 (4.5)	8277.2 (4.7)	8277.2 (4.7)	8277.2 (4.7)	8277.2 (4.7)
rd 3	0.344 (0.48)	11640.6 (5.4)	13296.4 (0.6)	13469.0 (0.5)	13469.0 (0.5)	13469.0 (0.5)	13469.0 (0.5)
Large × rd 3	0.111 (0.31)	17399.6 (0.6)	17900.4 (0.3)	17854.7 (0.3)	17854.7 (0.3)	17854.7 (0.3)	17854.7 (0.3)
LargeGrace × rd 3	0.083 (0.28)	14783.6 (2.7)	15431.6 (1.5)	15891.4 (1.2)	15891.4 (1.2)	15891.4 (1.2)	15891.4 (1.2)
Cattle × rd 3	0.079 (0.27)	−12981.2 (56.4)	−7654.0 (66.4)	−7498.5 (67.0)	−7498.5 (67.0)	−7498.5 (67.0)	−7498.5 (67.0)
rd 4	0.335 (0.47)	14496.7 (3.2)	15758.6 (0.6)	15877.7 (0.6)	15877.7 (0.6)	15877.7 (0.6)	15877.7 (0.6)
Large × rd 4	0.113 (0.32)	18142.6 (6.8)	19404.3 (5.0)	19408.4 (5.2)	19408.4 (5.2)	19408.4 (5.2)	19408.4 (5.2)
LargeGrace × rd 4	0.081 (0.27)	4550.1 (46.3)	5601.9 (36.0)	5962.3 (33.7)	5962.3 (33.7)	5962.3 (33.7)	5962.3 (33.7)
Cattle × rd 4	0.076 (0.27)	−22373.5 (34.5)	−17070.9 (37.8)	−16947.3 (38.3)	−16947.3 (38.3)	−16947.3 (38.3)	−16947.3 (38.3)
Flood in round 1	0.433 (0.50)			787.9 (82.5)	787.9 (82.5)	787.9 (82.5)	787.9 (82.5)
Head literate0	0.119 (0.32)			−976.4 (76.1)	−976.4 (76.1)	−976.4 (76.1)	−976.4 (76.1)
land value$_1$	35511.779 (115082.24)		0.5 (0.0)	0.5 (0.0)	0.5 (0.0)	0.5 (0.0)	0.5 (0.0)
Household size0	4.477 (1.38)			387.3 (72.2)	387.3 (72.2)	387.3 (72.2)	387.3 (72.2)
mean of dependent variable		39256	39256	39256	39256	39256	39256
R^2		0.031	0.753	0.753	0.753	0.753	0.753
N	1248	1256	1256	1248	1248	1248	1248

Source: Estimated with GUK administrative and survey data.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. We annotate the number of periods that a household is observed with T. The total number of households is shown for each values of T. T=4 indicates the number of households with complete panel information, T=3 indicates number of households observed three times, T=2 indicates the number of households observed twice. N indicates total number of observations used in ANCOVA estimation, or N=1×(T=2)+2×(T=3)+3×(T=4). Large, LargeGrace, Cattle are indicator variables of the large, large grace, and cattle arms, respectively. The default arm category is traditional arm. rd2, rd3, rd4 are dummy variables for second, third, and fourth round of survey. Interaction terms of dummy variables are demeaned before interacting. The first column gives mean and standard deviation (in parenthesises) of each covariates before demeaning.

2. *P* values in percentages in parenthesises. Standard errors are clustered at group (village) level.

TABLE 41: ANCOVA ESTIMATION OF LAND HOLDING BY PERIOD, ARM, AND POVERTY STATUS

covariates	mean/std	(1)	(2)	(3)	(4)	(5)	(6)
(Intercept)		27144.3 (8.0)	8022.5 (14.0)	5592.1 (44.1)	5592.1 (44.1)	5592.1 (44.1)	5592.1 (44.1)
Large	0.334 (0.47)	8565.1 (9.7)	7991.4 (0.2)	8061.7 (0.2)	8061.7 (0.2)	8061.7 (0.2)	8061.7 (0.2)
LargeGrace	0.244 (0.43)	14765.8 (6.1)	6821.7 (2.3)	7111.9 (3.3)	7111.9 (3.3)	7111.9 (3.3)	7111.9 (3.3)
Cattle	0.220 (0.41)	43051.1 (20.6)	10104.8 (6.5)	10155.4 (5.6)	10155.4 (5.6)	10155.4 (5.6)	10155.4 (5.6)
UltraPoor	0.594 (0.49)	−17802.4 (34.4)	−5562.9 (13.7)	−5514.5 (13.0)	−5514.5 (13.0)	−5514.5 (13.0)	−5514.5 (13.0)
Large × UltraPoor	0.171 (0.38)	−25089.1 (2.6)	−9518.4 (9.0)	−10186.5 (9.2)	−10186.5 (9.2)	−10186.5 (9.2)	−10186.5 (9.2)
LargeGrace × UltraPoor	0.166 (0.37)	24028.7 (2.8)	8026.5 (14.4)	8426.1 (13.7)	8426.1 (13.7)	8426.1 (13.7)	8426.1 (13.7)
Cattle × UltraPoor	0.158 (0.36)	−82156.9 (25.6)	−10646.6 (43.9)	−10759.3 (41.4)	−10759.3 (41.4)	−10759.3 (41.4)	−10759.3 (41.4)
rd 3	0.344 (0.48)	8922.3 (27.1)	11098.2 (7.0)	11255.9 (7.0)	11255.9 (7.0)	11255.9 (7.0)	11255.9 (7.0)
Large × rd 3	0.111 (0.31)	16613.6 (0.1)	16820.9 (0.1)	16781.6 (0.1)	16781.6 (0.1)	16781.6 (0.1)	16781.6 (0.1)
LargeGrace × rd 3	0.083 (0.28)	16032.0 (1.1)	16335.6 (0.9)	16819.7 (0.7)	16819.7 (0.7)	16819.7 (0.7)	16819.7 (0.7)
Cattle × rd 3	0.079 (0.27)	−18500.6 (55.3)	−11509.0 (62.0)	−11321.3 (63.3)	−11321.3 (63.3)	−11321.3 (63.3)	−11321.3 (63.3)
UltraPoor × rd 3	0.203 (0.40)	6983.9 (70.0)	4282.7 (75.4)	4455.1 (74.9)	4455.1 (74.9)	4455.1 (74.9)	4455.1 (74.9)
Large × UltraPoor × rd 3	0.057 (0.23)	−10406.0 (22.8)	−14529.0 (8.7)	−14620.7 (8.5)	−14620.7 (8.5)	−14620.7 (8.5)	−14620.7 (8.5)
LargeGrace × UltraPoor × rd 3	0.056 (0.23)	12534.5 (37.6)	10449.2 (43.6)	11184.2 (40.8)	11184.2 (40.8)	11184.2 (40.8)	11184.2 (40.8)
Cattle × UltraPoor × rd 3	0.057 (0.23)	73292.3 (29.3)	54340.6 (30.0)	53992.8 (31.2)	53992.8 (31.2)	53992.8 (31.2)	53992.8 (31.2)
rd 4	0.335 (0.47)	11947.4 (16.2)	13796.4 (3.7)	13871.7 (4.0)	13871.7 (4.0)	13871.7 (4.0)	13871.7 (4.0)
Large × rd 4	0.113 (0.32)	16954.7 (2.6)	18022.5 (1.7)	17963.7 (1.8)	17963.7 (1.8)	17963.7 (1.8)	17963.7 (1.8)
LargeGrace × rd 4	0.081 (0.27)	5680.0 (31.4)	6464.9 (25.3)	6765.9 (24.0)	6765.9 (24.0)	6765.9 (24.0)	6765.9 (24.0)
Cattle × rd 4	0.076 (0.27)	−29415.2 (36.2)	−21738.5 (37.4)	−21789.1 (38.3)	−21789.1 (38.3)	−21789.1 (38.3)	−21789.1 (38.3)
UltraPoor × rd 4	0.200 (0.40)	8170.9 (64.7)	4518.1 (74.1)	4736.3 (73.6)	4736.3 (73.6)	4736.3 (73.6)	4736.3 (73.6)
Large × UltraPoor × rd 4	0.058 (0.23)	−15200.4 (39.4)	−15959.3 (36.5)	−15870.7 (37.1)	−15870.7 (37.1)	−15870.7 (37.1)	−15870.7 (37.1)
LargeGrace × UltraPoor × rd 4	0.054 (0.23)	1246.5 (93.8)	1902.1 (90.1)	2548.5 (86.9)	2548.5 (86.9)	2548.5 (86.9)	2548.5 (86.9)
Cattle × UltraPoor × rd 4	0.054 (0.23)	71866.1 (27.5)	55990.0 (24.9)	56348.6 (26.0)	56348.6 (26.0)	56348.6 (26.0)	56348.6 (26.0)
Flood in round 1	0.433 (0.50)			−1098.9 (74.1)	−1098.9 (74.1)	−1098.9 (74.1)	−1098.9 (74.1)
Head literate0	0.119 (0.32)			−1413.8 (64.6)	−1413.8 (64.6)	−1413.8 (64.6)	−1413.8 (64.6)
land value$_1$	35511.779 (115082.24)		0.5 (0.0)	0.5 (0.0)	0.5 (0.0)	0.5 (0.0)	0.5 (0.0)
Household size0	4.477 (1.38)			643.2 (51.3)	643.2 (51.3)	643.2 (51.3)	643.2 (51.3)
mean of dependent variable		39256	39256	39256	39256	39256	39256
R^2		0.085	0.762	0.761	0.761	0.761	0.761
N	1248	1256	1256	1248	1248	1248	1248

Source: Estimated with GUK administrative and survey data.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. We annotate the number of periods that a household is observed with T. The total number of households is shown for each values of T. T=4 indicates the number of households with complete panel information, T=3 indicates number of households observed three times, T=2 indicates the number of households observed twice. N indicates total number of observations used in ANCOVA estimation, or N=1×(T=2)+2×(T=3)+3×(T=4). UltraPoor is an indicator variable if the household is classified as the ultra poor. Large, LargeGrace, Cattle are indicator variables of the large, large grace, and cattle arms, respectively. The default arm category is traditional arm. rd2, rd3, rd4 are dummy variables for second, third, and fourth round of survey. Interaction terms of dummy variables are demeaned before interacting. The first column gives mean and standard deviation (in parenthesises) of each covariates before demeaning.

2. *P* values in percentages in parenthesises. Standard errors are clustered at group (village) level.

Table 42: ANCOVA estimation of land holding by period and attributes

covariates	mean/std	(1)	(2)	(3)	(4)	(5)	(6)
(Intercept)		14534.1 (0.0)	3803.1 (20.1)	1721.8 (75.2)	1721.8 (75.2)	1721.8 (75.2)	1721.8 (75.2)
Upfront	0.798 (0.40)	10983.1 (11.3)	8785.1 (1.4)	8649.7 (1.1)	8649.7 (1.1)	8649.7 (1.1)	8649.7 (1.1)
WithGrace	0.464 (0.50)	6391.4 (51.7)	−1878.3 (68.0)	−1159.6 (81.1)	−1159.6 (81.1)	−1159.6 (81.1)	−1159.6 (81.1)
InKind	0.220 (0.41)	18042.5 (51.0)	1266.1 (79.0)	787.1 (87.5)	787.1 (87.5)	787.1 (87.5)	787.1 (87.5)
rd 3	0.344 (0.48)	11640.6 (5.4)	13296.4 (0.6)	13469.0 (0.5)	13469.0 (0.5)	13469.0 (0.5)	13469.0 (0.5)
Upfront × rd 3	0.272 (0.45)	17399.6 (0.6)	17900.4 (0.3)	17854.7 (0.3)	17854.7 (0.3)	17854.7 (0.3)	17854.7 (0.3)
WithGrace × rd 3	0.161 (0.37)	−2616.0 (71.8)	−2468.8 (73.0)	−1963.2 (78.4)	−1963.2 (78.4)	−1963.2 (78.4)	−1963.2 (78.4)
InKind × rd 3	0.079 (0.27)	−27764.8 (22.3)	−23085.5 (19.9)	−23390.0 (19.4)	−23390.0 (19.4)	−23390.0 (19.4)	−23390.0 (19.4)
rd 4	0.335 (0.47)	14496.7 (3.2)	15758.6 (0.6)	15877.7 (0.6)	15877.7 (0.6)	15877.7 (0.6)	15877.7 (0.6)
Upfront × rd 4	0.270 (0.44)	18142.6 (6.8)	19404.3 (5.0)	19408.4 (5.2)	19408.4 (5.2)	19408.4 (5.2)	19408.4 (5.2)
WithGrace × rd 4	0.157 (0.36)	−13592.5 (20.9)	−13802.4 (20.1)	−13446.1 (21.5)	−13446.1 (21.5)	−13446.1 (21.5)	−13446.1 (21.5)
InKind × rd 4	0.076 (0.27)	−26923.6 (26.4)	−22672.7 (25.2)	−22909.6 (25.0)	−22909.6 (25.0)	−22909.6 (25.0)	−22909.6 (25.0)
Flood in round 1	0.433 (0.50)			787.9 (82.5)	787.9 (82.5)	787.9 (82.5)	787.9 (82.5)
Head literate0	0.119 (0.32)			−976.4 (76.1)	−976.4 (76.1)	−976.4 (76.1)	−976.4 (76.1)
land value$_1$	35511.779 (115082.24)		0.5 (0.0)	0.5 (0.0)	0.5 (0.0)	0.5 (0.0)	0.5 (0.0)
Household size0	4.477 (1.38)			387.3 (72.2)	387.3 (72.2)	387.3 (72.2)	387.3 (72.2)
mean of dependent variable		39256	39256	39256	39256	39256	39256
R^2		0.031	0.753	0.753	0.753	0.753	0.753
N	1248	1256	1256	1248	1248	1248	1248

Source: Estimated with GUK administrative and survey data.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. We annotate the number of periods that a household is observed with T. The total number of households is shown for each values of T. T=4 indicates the number of households with complete panel information, T=3 indicates number of households observed three times, T=2 indicates the number of households observed twice. N indicates total number of observations used in ANCOVA estimation, or N=1×(T=2)+2×(T=3)+3×(T=4). Upfront is an indicator variable of the arm with an upfront large disbursement, WithGrace is an indicator variable of the arm with a grace period, InKind is an indicator variable of the arm which lends a heifer. rd2, rd3, rd4 are dummy variables for second, third, and fourth round of survey. Interaction terms of dummy variables are demeaned before interacting. The first column gives mean and standard deviation (in parenthesises) of each covariates before demeaning.

2. *P* values in percentages in parenthesises. Standard errors are clustered at group (village) level.

TABLE 43: ANCOVA ESTIMATION OF LAND HOLDING BY PERIOD, ATTRIBUTES, AND POVERTY STATUS

covariates	mean/std	(1)	(2)	(3)	(4)	(5)	(6)
(Intercept)		27144.3	8022.5	5592.1	5592.1	5592.1	5592.1
		(8.0)	(14.0)	(44.1)	(44.1)	(44.1)	(44.1)
Upfront	0.798	8565.1	7991.4	8061.7	8061.7	8061.7	8061.7
	(0.40)	(9.7)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)
WithGrace	0.464	6200.7	−1169.8	−949.8	−949.8	−949.8	−949.8
	(0.50)	(46.1)	(75.1)	(82.0)	(82.0)	(82.0)	(82.0)
InKind	0.220	28285.4	3283.1	3043.5	3043.5	3043.5	3043.5
	(0.41)	(41.5)	(57.6)	(60.1)	(60.1)	(60.1)	(60.1)
UltraPoor	0.594	−17802.4	−5562.9	−5514.5	−5514.5	−5514.5	−5514.5
	(0.49)	(34.4)	(13.7)	(13.0)	(13.0)	(13.0)	(13.0)
Upfront × UltraPoor	0.495	−25089.1	−9518.4	−10186.5	−10186.5	−10186.5	−10186.5
	(0.50)	(2.6)	(9.0)	(9.2)	(9.2)	(9.2)	(9.2)
WithGrace × UltraPoor	0.324	49117.8	17545.0	18612.6	18612.6	18612.6	18612.6
	(0.47)	(0.0)	(1.1)	(0.3)	(0.3)	(0.3)	(0.3)
InKind × UltraPoor	0.158	−106185.6	−18673.1	−19185.4	−19185.4	−19185.4	−19185.4
	(0.36)	(14.4)	(20.9)	(18.5)	(18.5)	(18.5)	(18.5)
rd 3	0.344	8922.3	11098.2	11255.9	11255.9	11255.9	11255.9
	(0.48)	(27.1)	(7.0)	(7.0)	(7.0)	(7.0)	(7.0)
UltraPoor × rd 3	0.203	6983.9	4282.7	4455.1	4455.1	4455.1	4455.1
	(0.40)	(70.0)	(75.4)	(74.9)	(74.9)	(74.9)	(74.9)
Upfront × rd 3	0.272	16613.6	16820.9	16781.6	16781.6	16781.6	16781.6
	(0.45)	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)
WithGrace × rd 3	0.161	−581.5	−485.3	38.1	38.1	38.1	38.1
	(0.37)	(92.6)	(93.6)	(99.5)	(99.5)	(99.5)	(99.5)
InKind × rd 3	0.079	−34532.7	−27844.6	−28141.0	−28141.0	−28141.0	−28141.0
	(0.27)	(27.1)	(23.5)	(23.9)	(23.9)	(23.9)	(23.9)
Upfront × UltraPoor × rd 3	0.170	−10406.0	−14529.0	−14620.7	−14620.7	−14620.7	−14620.7
	(0.38)	(22.8)	(8.7)	(8.5)	(8.5)	(8.5)	(8.5)
WithGrace × UltraPoor × rd 3	0.113	22940.5	24978.1	25804.9	25804.9	25804.9	25804.9
	(0.32)	(9.4)	(5.4)	(4.7)	(4.7)	(4.7)	(4.7)
InKind × UltraPoor × rd 3	0.057	60757.8	43891.4	42808.6	42808.6	42808.6	42808.6
	(0.23)	(38.9)	(41.0)	(43.0)	(43.0)	(43.0)	(43.0)
rd 4	0.335	11947.4	13796.4	13871.7	13871.7	13871.7	13871.7
	(0.47)	(16.2)	(3.7)	(4.0)	(4.0)	(4.0)	(4.0)
UltraPoor × rd 4	0.200	8170.9	4518.1	4736.3	4736.3	4736.3	4736.3
	(0.40)	(64.7)	(74.1)	(73.6)	(73.6)	(73.6)	(73.6)
Upfront × rd 4	0.270	16954.7	18022.5	17963.7	17963.7	17963.7	17963.7
	(0.44)	(2.6)	(1.7)	(1.8)	(1.8)	(1.8)	(1.8)
WithGrace × rd 4	0.157	−11274.6	−11557.5	−11197.8	−11197.8	−11197.8	−11197.8
	(0.36)	(17.1)	(15.7)	(17.5)	(17.5)	(17.5)	(17.5)
InKind × rd 4	0.076	−35095.2	−28203.4	−28555.1	−28555.1	−28555.1	−28555.1
	(0.27)	(27.9)	(25.2)	(25.8)	(25.8)	(25.8)	(25.8)
Upfront × UltraPoor × rd 4	0.167	−15200.4	−15959.3	−15870.7	−15870.7	−15870.7	−15870.7
	(0.37)	(39.4)	(36.5)	(37.1)	(37.1)	(37.1)	(37.1)
WithGrace × UltraPoor × rd 4	0.109	16446.8	17861.5	18419.2	18419.2	18419.2	18419.2
	(0.31)	(45.7)	(40.7)	(39.5)	(39.5)	(39.5)	(39.5)
InKind × UltraPoor × rd 4	0.054	70619.7	54087.9	53800.1	53800.1	53800.1	53800.1
	(0.23)	(29.3)	(28.0)	(29.6)	(29.6)	(29.6)	(29.6)
Flood in round 1	0.433			−1098.9	−1098.9	−1098.9	−1098.9
	(0.50)			(74.1)	(74.1)	(74.1)	(74.1)
Head literate0	0.119			−1413.8	−1413.8	−1413.8	−1413.8
	(0.32)			(64.6)	(64.6)	(64.6)	(64.6)
land value$_1$	35511.779		0.5	0.5	0.5	0.5	0.5
	(115082.24)		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
Household size0	4.477			643.2	643.2	643.2	643.2
	(1.38)			(51.3)	(51.3)	(51.3)	(51.3)
mean of dependent variable		39256	39256	39256	39256	39256	39256
R^2		0.085	0.762	0.761	0.761	0.761	0.761
N	1248	1256	1256	1248	1248	1248	1248

Source: Estimated with GUK administrative and survey data.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. We annotate the number of periods that a household is observed with T. The total number of households is shown for each values of T. T=4 indicates the number of households with complete panel information, T=3 indicates number of households observed three times, T=2 indicates the number of households observed twice. N indicates total number of observations used in ANCOVA estimation, or N=1×(T=2)+2×(T=3)+3×(T=4). UltraPoor is an indicator variable if the household is classified as the ultra poor. Upfront is an indicator variable of the arm with an upfront large disbursement, WithGrace is an indicator variable of the arm with a grace period, InKind is an indicator variable of the arm which lends a heifer. rd2, rd3, rd4 are dummy variables for second, third, and fourth round of survey. Interaction terms of dummy variables are demeaned before interacting. The first column gives mean and standard deviation (in parenthesises) of each covariates before demeaning.

2. P values in percentages in parenthesises. Standard errors are clustered at group (village) level.

TABLE 40 shows that, compared to traditional arm, land holding is larger for large, large grace, and cattle arms in round 2. The difference with traditional arm is maintained only for large arm

throughout the rounds, and become negligible for large grace and cattle arms.

III.5.2 Livestock, number of cattle

```
              AttritIn
Arm              2   3   4   9 Sum
  traditional    7   4  20 144 175
  large          5   2   1 192 200
  large grace   12   3   3 171 189
  cattle         5   5  13 176 199
  Sum           29  14  37 683 763
     NumCows
tee       0    1    2    3    4    5    6    7    8    9 <NA>  Sum
  2      15  309  153   40   11    1    2    0    1    1  197  730
  3       5  337  175   40   16    1    2    2    1    0  110  689
  4       4  218  201   54   11    4    2    0    1    1   86  582
  Sum    24  864  529  134   38    6    6    2    3    2  393 2001
```

```
[1] 5
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III.5.3 Cattle holding

```
              AttritIn
Arm              2   3   4   9 Sum
  traditional    7   4  20 144 175
  large          5   2   1 192 200
  large grace   12   3   3 171 189
  cattle         5   5  13 176 199
  Sum           29  14  37 683 763
     NumCows
tee       0    1    2    3    4    5    6    7    8    9 <NA>  Sum
  2      15  309  153   40   11    1    2    0    1    1  197  730
  3       5  337  175   40   16    1    2    2    1    0  110  689
  4       4  218  201   54   11    4    2    0    1    1   86  582
  Sum    24  864  529  134   38    6    6    2    3    2  393 2001
```

```
Warning in `[.data.table`(lvoN, , `:=`(grepout("TotalImputed2?Value.?", : Column 'TotalImp
```

```
[1] 5
```

```
   HoldingClass
tee below 1000 1000-29999 30000-49999 above 50000 Sum
  1         623         100           30          10 763
  2         211         310          153          56 730
  3         115         337          175          62 689
  4          90         218          201          73 582
```

```
                     povertystatus
BStatus               Ultra Poor Moderately Poor <NA>
  borrower                   411             163    0
  pure saver                   0               0    0
  individual rejection        56              33    0
  group rejection              0               0   60
  rejection by flood           0               0   40
```

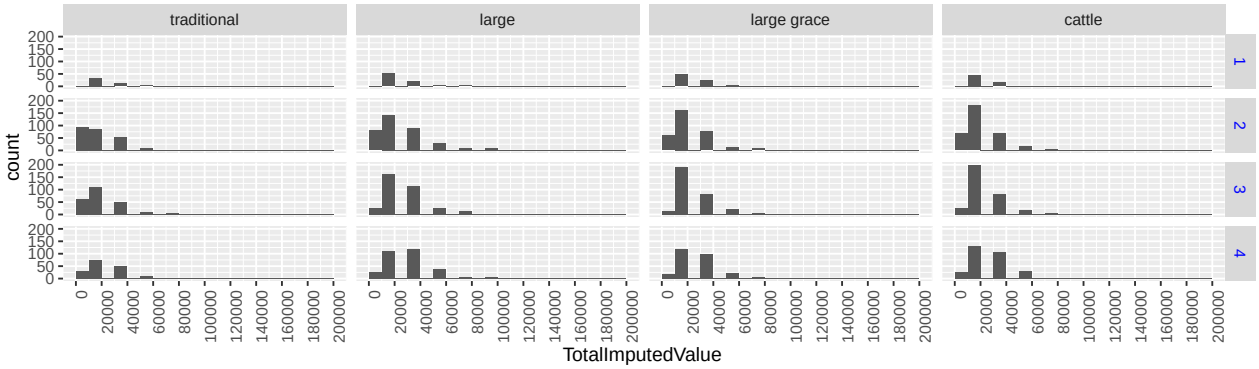


Figure 12: Total imputed value of livestock holding
Livestock holding values are computed by using respective median prices of each year.

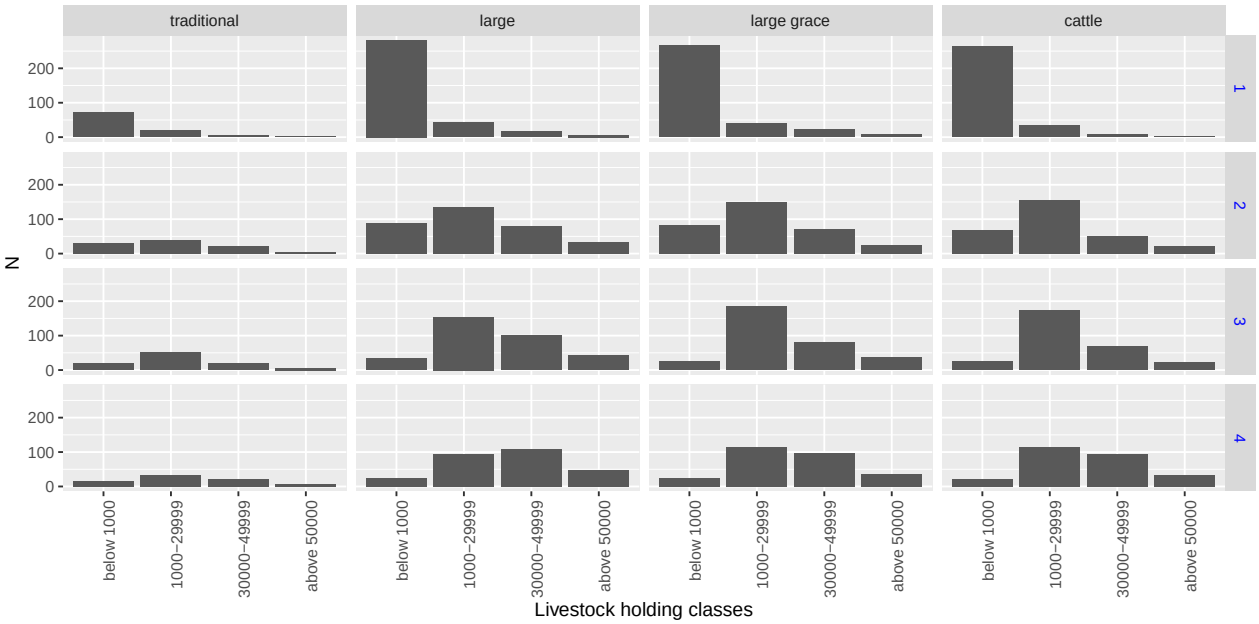
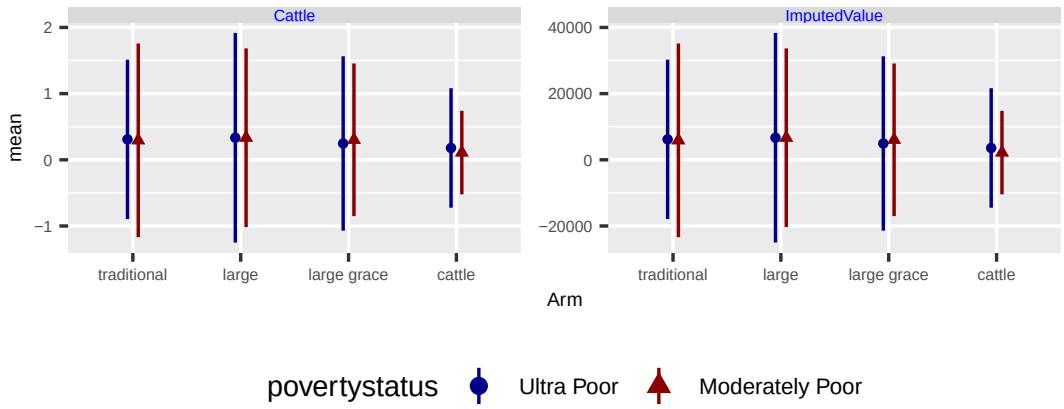


Figure 13: Histogram of livestock holding classes
Livestock holding values are computed by using respective median prices of each year.

FIGURE 15: LVESTOCK HOLDING AT BASELINE



Source: Survey data.

Note:

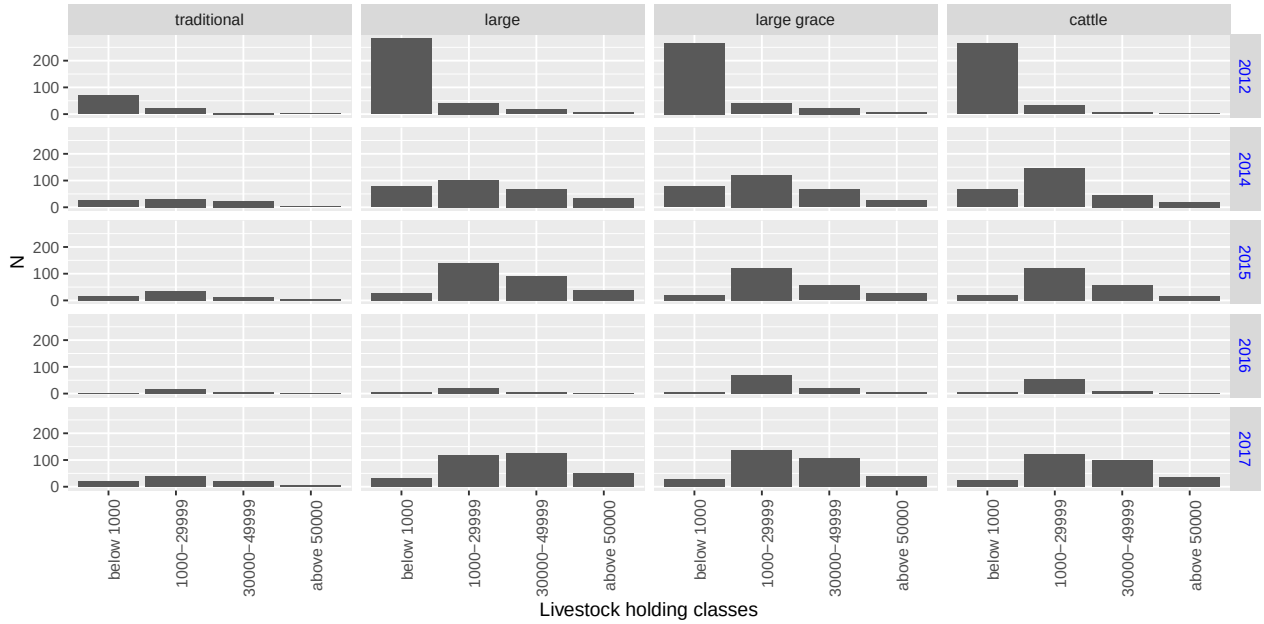
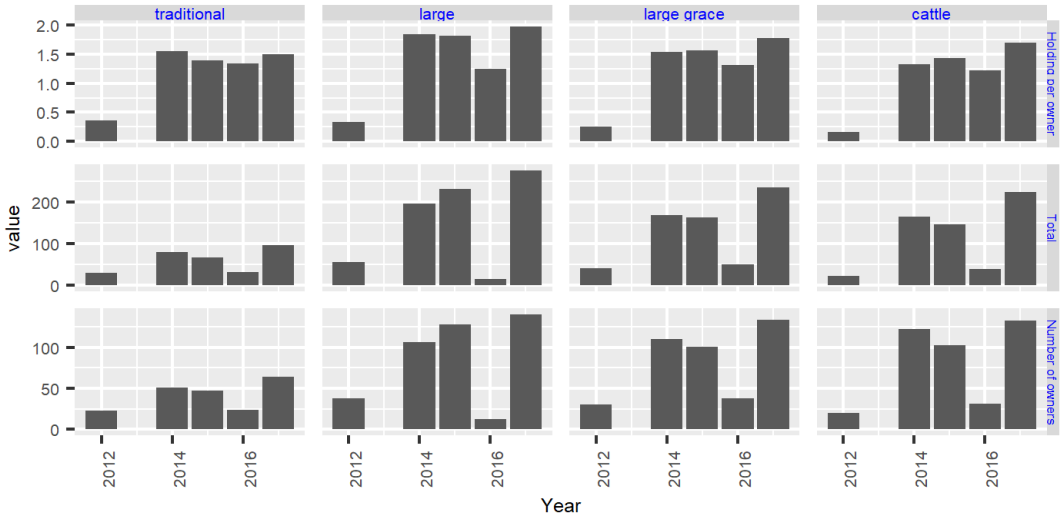


Figure 14: Histogram of livestock holding classes by year
Livestock holding values are computed by using respective median prices of each year.

- cattle reports above 20000 holding in rds 2-4 while traditional does not.

	Arm	survey	MeanImputedVal	MeanNumCows	N
	<fctr>	<num>	<num>	<num>	<int>
1:	traditional	1	4557.82	0.227891	294
2:	traditional	2	18965.26	1.601449	234
3:	traditional	3	21270.53	1.502703	262
4:	traditional	4	23364.52	1.591195	217
5:	large	1	5513.78	0.275689	399
6:	large	2	29214.50	1.979253	327
7:	large	3	31623.09	1.798799	379
8:	large	4	33248.21	1.882175	375
9:	large grace	1	6666.67	0.333333	399
10:	large grace	2	24273.25	1.648649	302
11:	large grace	3	28044.08	1.532051	341
12:	large grace	4	31599.85	1.744108	328
13:	cattle	1	4360.90	0.218045	399
14:	cattle	2	22239.38	1.457031	336
15:	cattle	3	26102.42	1.474522	355
16:	cattle	4	29716.61	1.655405	330

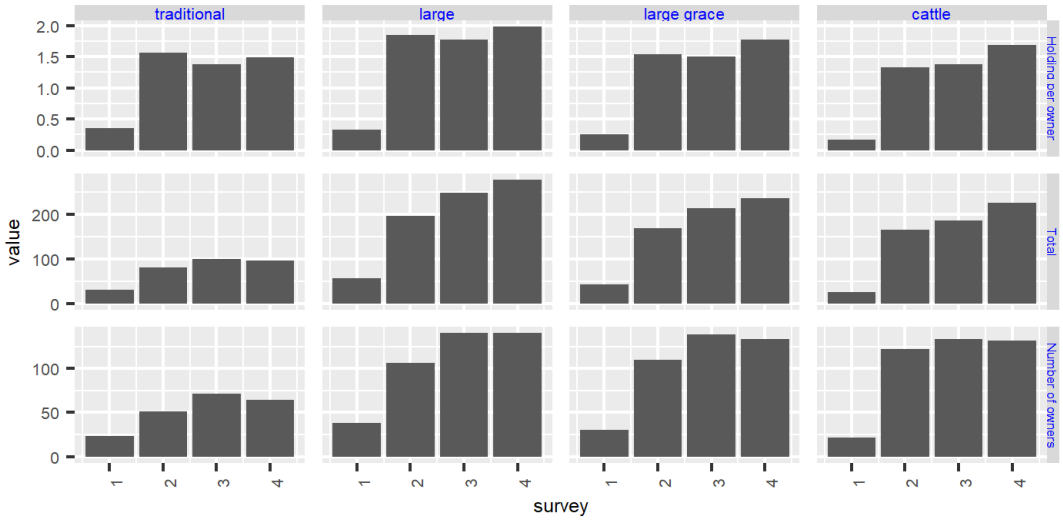
FIGURE 16: NUMBER OF COWS/OXEN BY YEAR



Source: Survey data.

Note:

FIGURE 17: NUMBER OF COWS/OXEN BY SURVEY ROUND



Source: Survey data.

Note:

TABLE 44: ANCOVA ESTIMATION OF LIVESTOCK HOLDING VALUES

covariates	mean/std	(1)	(2)	(3)	(4)
(Intercept)		20988.8 (0.0)	19163.1 (0.0)	13496.7 (0.0)	13383.1 (0.0)
Large	0.273 (0.45)	9658.2 (0.3)	8875.2 (0.1)	8574.2 (0.2)	8296.2 (0.1)
LargeGrace	0.248 (0.43)	4797.2 (5.2)	4507.2 (5.4)	4614.1 (4.1)	4711.8 (3.9)
Cattle	0.264 (0.44)	4448.8 (1.0)	4675.9 (0.5)	4657.5 (0.5)	4582.7 (0.5)
HadCattle	0.195 (0.40)				6935.8 (14.7)
HadCattle	0.195 (0.40)				6935.8 (14.7)
HadCattle × Large	0.063 (0.24)				12418.1 (12.5)
HadCattle × LargeGrace	0.049 (0.22)				746.9 (87.8)
HadCattle × Cattle	0.045 (0.21)				1345.6 (75.7)
Flood in round 1	0.491 (0.50)			1032.3 (53.6)	1144.7 (49.2)
Head literate0	0.114 (0.32)			−560.4 (78.4)	−462.0 (82.0)
TotalImputedValue0	5315.315 (12450.23)		0.4 (0.0)	0.4 (0.1)	0.2 (33.6)
Household size0	4.219 (1.43)			1267.1 (1.5)	1206.0 (2.1)
mean of dependent variable $T = 2$		25997 41	25997 41	25997 40	25997 40
$T = 3$ $T = 4$		107 582	107 582	106 582	106 582
$\bar{R}^2$ N	 1998	0.024 2001	0.075 2001	0.083 1998	0.095 1998

Source: Estimated with GUK administrative and survey data.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. We annotate the number of periods that a household is observed with T. The total number of households is shown for each values of T. T=4 indicates the number of households with complete panel information, T=3 indicates number of households observed three times, T=2 indicates the number of households observed twice. N indicates total number of observations used in ANCOVA estimation, or N=1×(T=2)+2×(T=3)+3×(T=4). Large, LargeGrace, Cattle are indicator variables of the large, large grace, and cattle arms, respectively. The default arm category is traditional arm. Regressand is TotalImputedValue, a sum of all livestock holding values evaluated at respective median market prices in the same year.

2. *P* values in percentages in parenthesises. Standard errors are clustered at group (village) level.*P* values in parenthesises. Standard errors are clustered at group (village) level.

TABLE 45: ANCOVA ESTIMATION OF LIVESTOCK HOLDING VALUES BY ATTRIBUTES

covariates	mean/std	(1)	(2)	(3)	(4)
(Intercept)		20988.8	19163.1	13496.7	13383.1
		(0.0)	(0.0)	(0.0)	(0.0)
Upfront	0.785	9658.2	8875.2	8574.2	8296.2
	(0.41)	(0.3)	(0.1)	(0.2)	(0.1)
WithGrace	0.512	−4861.1	−4368.0	−3960.1	−3584.4
	(0.50)	(16.7)	(16.3)	(21.8)	(23.5)
InKind	0.264	−348.4	168.7	43.5	−129.1
	(0.44)	(87.3)	(93.9)	(98.4)	(95.2)
HadCattle	0.195				6935.8
	(0.40)				(14.7)
HadCattle	0.195				6935.8
	(0.40)				(14.7)
HadCattle × Upfront	0.157				12418.1
	(0.36)				(12.5)
HadCattle × WithGrace	0.094				−11671.2
	(0.29)				(15.6)
HadCattle × InKind	0.045				598.7
	(0.21)				(89.3)
Flood in round 1	0.491			1032.3	1144.7
	(0.50)			(53.6)	(49.2)
Head literate0	0.114			−560.4	−462.0
	(0.32)			(78.4)	(82.0)
TotalImputedValue0	5315.315		0.4	0.4	0.2
	(12450.23)		(0.0)	(0.1)	(33.6)
Household size0	4.219			1267.1	1206.0
	(1.43)			(1.5)	(2.1)
mean of dependent variable		25997	25997	25997	25997
$T = 2$		41	41	40	40
$T = 3$		107	107	106	106
$T = 4$		582	582	582	582
$\bar{R}^2$		0.024	0.075	0.083	0.095
N	1998	2001	2001	1998	1998

Source: Estimated with GUK administrative and survey data.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. We annotate the number of periods that a household is observed with T. The total number of households is shown for each values of T. T=4 indicates the number of households with complete panel information, T=3 indicates number of households observed three times, T=2 indicates the number of households observed twice. N indicates total number of observations used in ANCOVA estimation, or N=1×(T=2)+2×(T=3)+3×(T=4). Upfront is an indicator variable of the arm with an upfront large disbursement, WithGrace is an indicator variable of the arm with a grace period, InKind is an indicator variable of the arm which lends a heifer. Regressand is TotalImputedValue, a sum of all livestock holding values evaluated at respective median market prices in the same year.

2. *P* values in percentages in parenthesises. Standard errors are clustered at group (village) level.

TABLE 46: ANCOVA ESTIMATION OF LIVESTOCK HOLDING VALUES, ULTRA VS. MODERATELY POOR

covariates	mean/std	(1)	(2)	(3)	(4)
(Intercept)		21944.8	20009.2	14138.4	13953.5
		(0.0)	(0.0)	(0.0)	(0.0)
Upfront	0.785	9951.2	9336.0	9053.2	8760.7
	(0.41)	(0.2)	(0.1)	(0.1)	(0.1)
WithGrace	0.512	−5053.9	−4577.6	−4207.4	−3847.6
	(0.50)	(14.7)	(13.5)	(18.5)	(19.5)
InKind	0.264	−189.6	333.2	245.2	81.2
	(0.44)	(93.0)	(88.0)	(90.9)	(97.0)
HadCattle	0.195				6987.1
	(0.40)				(14.9)
UltraPoor	0.630	−1887.9	−2037.9	−1956.6	−1780.7
	(0.48)	(18.8)	(14.9)	(17.6)	(19.8)
Upfront × UltraPoor	0.524	−4713.8	−3522.0	−3531.0	−3069.6
	(0.50)	(28.6)	(37.7)	(37.9)	(44.7)
WithGrace × UltraPoor	0.352	7966.8	8468.0	8910.6	8422.9
	(0.48)	(6.7)	(4.9)	(4.1)	(4.5)
InKind × UltraPoor	0.181	−2282.0	−2237.9	−2366.3	−2562.7
	(0.39)	(50.4)	(55.0)	(52.8)	(47.4)
HadCattle	0.195				6987.1
	(0.40)				(14.9)
HadCattle × Upfront	0.157				11265.2
	(0.36)				(17.6)
HadCattle × WithGrace	0.094				−11119.9
	(0.29)				(18.5)
HadCattle × InKind	0.045				368.9
	(0.21)				(93.3)
Flood in round 1	0.491			911.3	1033.5
	(0.50)			(58.2)	(53.5)
Head literate0	0.114			−828.7	−713.5
	(0.32)			(68.2)	(72.2)
TotalImputedValue0	5315.315		0.4	0.4	0.2
	(12450.23)		(0.0)	(0.1)	(33.8)
Household size0	4.219			1321.7	1255.4
	(1.43)			(0.9)	(1.5)
mean of dependent variable		25997	25997	25997	25997
$T = 2$		41	41	40	40
$T = 3$		107	107	106	106
$T = 4$		582	582	582	582
$\bar{R}^2$		0.029	0.081	0.089	0.1
N	1998	2001	2001	1998	1998

Source: Estimated with GUK administrative and survey data.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. We annotate the number of periods that a household is observed with T. The total number of households is shown for each values of T. T=4 indicates the number of households with complete panel information, T=3 indicates number of households observed three times, T=2 indicates the number of households observed twice. N indicates total number of observations used in ANCOVA estimation, or N=1×(T=2)+2×(T=3)+3×(T=4). UltraPoor is an indicator variable if the household is classified as the ultra poor. Large, LargeGrace, Cattle are indicator variables of the large, large grace, and cattle arms, respectively. The default arm category is traditional arm. Regressand is TotalImputedValue, a sum of all livestock holding values evaluated at respective median market prices in the same year.

2. *P* values in percentages in parenthesises. Standard errors are clustered at group (village) level.

TABLE 47: ANCOVA ESTIMATION OF LIVESTOCK HOLDING VALUES BY ATTRIBUTES AND PERIOD

covariates	mean/std	(1)	(2)	(3)	(4)
(Intercept)		18147.6	16229.4	10386.5	10100.7
		(0.0)	(0.0)	(0.0)	(0.0)
Upfront	0.785	9799.3	9000.6	8661.0	8348.5
	(0.41)	(0.3)	(0.1)	(0.2)	(0.2)
WithGrace	0.512	−5465.6	−4942.8	−4505.7	−4126.4
	(0.50)	(12.0)	(11.4)	(15.8)	(17.0)
InKind	0.264	9.6	502.9	368.0	238.0
	(0.44)	(99.6)	(81.8)	(86.2)	(90.9)
HadCattle	0.195				7657.7
	(0.40)				(10.6)
rd 3	0.348	2846.9	2921.4	3062.4	3128.7
	(0.48)	(0.2)	(0.2)	(0.1)	(0.1)
Upfront × rd 3	0.269	−2110.9	−2095.8	−1726.7	−1435.2
	(0.44)	(46.9)	(46.9)	(55.6)	(62.3)
WithGrace × rd 3	0.176	3194.6	3145.5	2799.9	2661.2
	(0.38)	(27.8)	(27.7)	(34.4)	(35.6)
InKind × rd 3	0.091	−1695.5	−1775.4	−1766.4	−1847.5
	(0.29)	(45.0)	(42.0)	(43.0)	(39.2)
rd 4	0.326	6010.7	6178.3	6249.3	6298.9
	(0.47)	(0.0)	(0.0)	(0.0)	(0.0)
Upfront × rd 4	0.260	−415.0	−351.9	−322.6	−9.8
	(0.44)	(90.5)	(91.8)	(92.5)	(99.8)
WithGrace × rd 4	0.166	4400.9	4195.2	4373.7	4256.5
	(0.37)	(20.6)	(22.2)	(20.8)	(21.2)
InKind × rd 4	0.085	−1962.6	−1556.8	−1559.6	−1804.4
	(0.28)	(47.5)	(57.3)	(57.4)	(51.3)
HadCattle	0.195				7657.7
	(0.40)				(10.6)
HadCattle × Upfront	0.157				11420.4
	(0.36)				(13.5)
HadCattle × WithGrace	0.094				−9187.7
	(0.29)				(22.8)
HadCattle × InKind	0.045				−1531.9
	(0.21)				(71.8)
HadCattle × rd 3	0.067				−4133.9
	(0.25)				(4.5)
HadCattle × Upfront × rd 3	0.054				5340.1
	(0.23)				(32.4)
HadCattle × WithGrace × rd 3	0.033				−13729.8
	(0.18)				(3.0)
HadCattle × InKind × rd 3	0.016				13406.1
	(0.13)				(2.1)
HadCattle × rd 4	0.061				−3786.4
	(0.24)				(16.7)
HadCattle × Upfront × rd 4	0.050				6789.7
	(0.22)				(38.2)
HadCattle × WithGrace × rd 4	0.029				−15645.7
	(0.17)				(5.9)
HadCattle × InKind × rd 4	0.013				12935.4
	(0.11)				(8.2)
Flood in round 1	0.491			1052.6	1157.6
	(0.50)			(52.7)	(48.7)
Head literate0	0.114			−572.7	−480.5
	(0.32)			(78.0)	(81.4)
TotalImputedValue0	5315.315		0.4	0.4	0.2
	(12450.23)		(0.0)	(0.1)	(33.1)
Household size0	4.219			1294.6	1236.7
	(1.43)			(1.3)	(1.9)
mean of dependent variable		25997	25997	25997	25997
$T = 2$		41	41	40	40
$T = 3$		107	107	106	106
$T = 4$		582	582	582	582
$\bar{R}^2$		0.035	0.087	0.095	0.108
N	1998	2001	2001	1998	1998

Source: Estimated with GUK administrative and survey data.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. We annotate the number of periods that a household is observed with T. The total number of households is shown for each values of T. T=4 indicates the number of households with complete panel information, T=3 indicates number of households observed three times, T=2 indicates the number of households observed twice. N indicates total number of observations used in ANCOVA estimation, or N=1×(T=2)+2×(T=3)+3×(T=4). UltraPoor is an indicator variable if the household is classified as the ultra poor. Upfront is an indicator variable of the arm with an upfront large disbursement, WithGrace is an indicator variable of the arm with a grace period, InKind is an indicator variable of the arm which lends a heifer. rd2, rd3, rd4 are dummy variables for second, third, and fourth round of survey. Regressand is TotalImputedValue, a sum of all livestock holding values evaluated at respective median market prices in the same year.

2. *P* values in percentages in parenthesises. Standard errors are clustered at group (village) level.

TABLE 48: ANCOVA ESTIMATION OF LIVESTOCK HOLDING VALUES USING ANNUAL PRICES

covariates	mean/std	(1)	(2)	(3)	(4)
(Intercept)		29833.8	27307.8	20380.3	20397.5
		(0.0)	(0.0)	(0.0)	(0.0)
Large	0.273	14452.8	13369.5	12940.4	12534.5
	(0.45)	(0.2)	(0.1)	(0.2)	(0.1)
LargeGrace	0.248	7723.3	7322.2	7449.7	7586.5
	(0.43)	(3.5)	(3.4)	(2.7)	(2.6)
Cattle	0.264	6838.6	7152.9	7129.0	7029.4
	(0.44)	(0.8)	(0.4)	(0.4)	(0.4)
HadCattle	0.195				7594.1
	(0.40)				(29.3)
HadCattle	0.195				7594.1
	(0.40)				(29.3)
HadCattle × Large	0.063				17919.6
	(0.24)				(13.2)
HadCattle × LargeGrace	0.049				−81.7
	(0.22)				(99.1)
HadCattle × Cattle	0.045				1433.8
	(0.21)				(82.2)
Flood in round 1	0.491			1323.7	1444.6
	(0.50)			(58.3)	(54.8)
Head literate0	0.114			−820.1	−597.0
	(0.32)			(78.6)	(84.1)
TotalImputed2Value0	5315.315		0.5	0.5	0.3
	(12450.23)		(0.1)	(0.3)	(31.7)
Household size0	4.219			1556.0	1455.2
	(1.43)			(3.6)	(5.5)
mean of dependent variable		37511	37511	37511	37511
$T = 2$		41	41	40	40
$T = 3$		107	107	106	106
$T = 4$		582	582	582	582
$\bar{R}^2$		0.02	0.058	0.06	0.069
N	1998	2001	2001	1998	1998

Source: Estimated with GUK administrative and survey data.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. We annotate the number of periods that a household is observed with T. The total number of households is shown for each values of T. T=4 indicates the number of households with complete panel information, T=3 indicates number of households observed three times, T=2 indicates the number of households observed twice. N indicates total number of observations used in ANCOVA estimation, or N=1×(T=2)+2×(T=3)+3×(T=4). Large, LargeGrace, Cattle are indicator variables of the large, large grace, and cattle arms, respectively. The default arm category is traditional arm. Regressand is TotalImputedValue, a sum of all livestock holding values evaluated at respective median market prices in the same year.

2. *P* values in percentages in parenthesises. Standard errors are clustered at group (village) level.*P* values in parenthesises. Standard errors are clustered at group (village) level.

TABLE 49: ANCOVA ESTIMATION OF LIVESTOCK HOLDING VALUES USING ANNUAL PRICES BY ATTRIBUTES

covariates	mean/std	(1)	(2)	(3)	(4)
(Intercept)		29833.8	27307.8	20380.3	20397.5
		(0.0)	(0.0)	(0.0)	(0.0)
Upfront	0.785	14452.8	13369.5	12940.4	12534.5
	(0.41)	(0.2)	(0.1)	(0.2)	(0.1)
WithGrace	0.512	−6729.5	−6047.3	−5490.7	−4948.0
	(0.50)	(18.9)	(18.4)	(24.7)	(26.5)
InKind	0.264	−884.7	−169.3	−320.7	−557.2
	(0.44)	(78.2)	(95.8)	(92.0)	(86.1)
HadCattle	0.195				7594.1
	(0.40)				(29.3)
HadCattle	0.195				7594.1
	(0.40)				(29.3)
HadCattle × Upfront	0.157				17919.6
	(0.36)				(13.2)
HadCattle × WithGrace	0.094				−18001.2
	(0.29)				(14.3)
HadCattle × InKind	0.045				1515.4
	(0.21)				(82.4)
Flood in round 1	0.491			1323.7	1444.6
	(0.50)			(58.3)	(54.8)
Head literate0	0.114			−820.1	−597.0
	(0.32)			(78.6)	(84.1)
TotalImputed2Value0	5315.315		0.5	0.5	0.3
	(12450.23)		(0.1)	(0.3)	(31.7)
Household size0	4.219			1556.0	1455.2
	(1.43)			(3.6)	(5.5)
mean of dependent variable		37511	37511	37511	37511
$T = 2$		41	41	40	40
$T = 3$		107	107	106	106
$T = 4$		582	582	582	582
$\bar{R}^2$		0.02	0.058	0.06	0.069
N	1998	2001	2001	1998	1998

Source: Estimated with GUK administrative and survey data.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. We annotate the number of periods that a household is observed with T. The total number of households is shown for each values of T. T=4 indicates the number of households with complete panel information, T=3 indicates number of households observed three times, T=2 indicates the number of households observed twice. N indicates total number of observations used in ANCOVA estimation, or N=1×(T=2)+2×(T=3)+3×(T=4). Upfront is an indicator variable of the arm with an upfront large disbursement, WithGrace is an indicator variable of the arm with a grace period, InKind is an indicator variable of the arm which lends a heifer. Regressand is TotalImputedValue, a sum of all livestock holding values evaluated at respective median market prices in the same year.

2. *P* values in percentages in parenthesises. Standard errors are clustered at group (village) level.

TABLE 50: ANCOVA ESTIMATION OF LIVESTOCK HOLDING VALUES USING ANNUAL PRICES, ULTRA VS. MODERATELY POOR

covariates	mean/std	(1)	(2)	(3)	(4)
(Intercept)		30712.8 (0.0)	28034.9 (0.0)	20827.7 (0.0)	20777.2 (0.0)
Upfront	0.785 (0.41)	14814.9 (0.2)	13963.7 (0.0)	13551.8 (0.1)	13111.6 (0.0)
WithGrace	0.512 (0.50)	−7021.7 (16.9)	−6362.8 (15.8)	−5847.1 (21.4)	−5315.1 (22.8)
InKind	0.264 (0.44)	−697.8 (82.7)	25.4 (99.4)	−86.9 (97.8)	−322.5 (92.0)
HadCattle	0.195 (0.40)				7693.1 (29.4)
UltraPoor	0.630 (0.48)	−1846.3 (36.9)	−2053.9 (31.8)	−1989.8 (34.0)	−1771.1 (37.3)
Upfront × UltraPoor	0.524 (0.50)	−5719.8 (35.4)	−4070.9 (46.2)	−4214.2 (44.3)	−3733.1 (50.2)
WithGrace × UltraPoor	0.352 (0.48)	10528.0 (9.1)	11221.4 (6.9)	11841.9 (5.7)	11039.6 (6.4)
InKind × UltraPoor	0.181 (0.39)	−2633.9 (61.0)	−2572.9 (65.7)	−2712.7 (64.0)	−2809.0 (60.9)
HadCattle	0.195 (0.40)				7693.1 (29.4)
HadCattle × Upfront	0.157 (0.36)				16484.4 (17.8)
HadCattle × WithGrace	0.094 (0.29)				−17262.5 (16.7)
HadCattle × InKind	0.045 (0.21)				1203.5 (85.7)
Flood in round 1	0.491 (0.50)			1184.7 (62.1)	1314.5 (58.5)
Head literate0	0.114 (0.32)			−1075.9 (71.8)	−837.9 (77.5)
TotalImputed2Value0	5315.315 (12450.23)		0.5 (0.1)	0.5 (0.3)	0.3 (32.1)
Household size0	4.219 (1.43)			1633.5 (2.5)	1525.7 (4.2)
mean of dependent variable $T = 2$		37511 41	37511 41	37511 40	37511 40
$T = 3$ $T = 4$		107 582	107 582	106 582	106 582
$\bar{R}^2$ N	 1998	0.022 2001	0.061 2001	0.063 1998	0.071 1998

Source: Estimated with GUK administrative and survey data.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. We annotate the number of periods that a household is observed with T. The total number of households is shown for each values of T. T=4 indicates the number of households with complete panel information, T=3 indicates number of households observed three times, T=2 indicates the number of households observed twice. N indicates total number of observations used in ANCOVA estimation, or N=1×(T=2)+2×(T=3)+3×(T=4). UltraPoor is an indicator variable if the household is classified as the ultra poor. Large, LargeGrace, Cattle are indicator variables of the large, large grace, and cattle arms, respectively. The default arm category is traditional arm. Regressand is TotalImputedValue, a sum of all livestock holding values evaluated at respective median market prices in the same year.

2. P values in percentages in parenthesises. Standard errors are clustered at group (village) level.

TABLE 51: ANCOVA ESTIMATION OF LIVESTOCK HOLDING VALUES USING ANNUAL PRICES BY ATTRIBUTES AND PERIOD

covariates	mean/std	(1)	(2)	(3)	(4)
(Intercept)		16417.9	13704.0	6119.4	6220.2
		(0.0)	(0.0)	(9.7)	(10.2)
Upfront	0.785	12644.6	11514.6	11055.8	10794.8
	(0.41)	(0.3)	(0.1)	(0.2)	(0.2)
WithGrace	0.512	−6398.5	−5658.8	−5063.0	−4688.1
	(0.50)	(16.3)	(15.9)	(22.3)	(23.5)
InKind	0.264	−285.5	412.4	236.1	53.7
	(0.44)	(91.9)	(88.6)	(93.2)	(98.4)
HadCattle	0.195				7384.0
	(0.40)				(30.3)
rd 3	0.348	9350.8	9456.2	9642.3	9623.2
	(0.48)	(0.0)	(0.0)	(0.0)	(0.0)
Upfront × rd 3	0.269	−24.9	−3.6	486.9	512.6
	(0.44)	(99.4)	(99.9)	(88.2)	(87.2)
WithGrace × rd 3	0.176	2165.1	2095.8	1635.2	1755.6
	(0.38)	(51.0)	(51.8)	(62.4)	(58.4)
InKind × rd 3	0.091	−1895.4	−2008.4	−1995.3	−2005.2
	(0.29)	(45.4)	(41.9)	(43.0)	(41.9)
rd 4	0.326	34453.7	34690.8	34750.6	34655.0
	(0.47)	(0.0)	(0.0)	(0.0)	(0.0)
Upfront × rd 4	0.260	9365.5	9454.8	9339.5	8855.8
	(0.44)	(13.5)	(12.9)	(13.6)	(12.1)
WithGrace × rd 4	0.166	1563.6	1272.6	1702.4	2276.6
	(0.37)	(80.9)	(84.5)	(79.6)	(70.7)
InKind × rd 4	0.085	−2994.9	−2420.8	−2480.4	−2483.2
	(0.28)	(53.0)	(61.4)	(60.6)	(61.0)
HadCattle	0.195				7384.0
	(0.40)				(30.3)
HadCattle × Upfront	0.157				15734.5
	(0.36)				(12.8)
HadCattle × WithGrace	0.094				−14244.8
	(0.29)				(17.3)
HadCattle × InKind	0.045				12.1
	(0.21)				(99.8)
HadCattle × rd 3	0.067				−1526.9
	(0.25)				(54.8)
HadCattle × Upfront × rd 3	0.054				8816.8
	(0.23)				(20.7)
HadCattle × WithGrace × rd 3	0.033				−17856.0
	(0.18)				(2.7)
HadCattle × InKind × rd 3	0.016				14707.2
	(0.13)				(2.8)
HadCattle × rd 4	0.061				6716.8
	(0.24)				(22.7)
HadCattle × Upfront × rd 4	0.050				21766.8
	(0.22)				(20.4)
HadCattle × WithGrace × rd 4	0.029				−33784.7
	(0.17)				(6.1)
HadCattle × InKind × rd 4	0.013				17092.8
	(0.11)				(17.0)
Flood in round 1	0.491			1317.1	1446.8
	(0.50)			(58.3)	(54.6)
Head literate0	0.114			−957.8	−696.0
	(0.32)			(75.2)	(81.6)
TotalImputed2Value0	5315.315		0.5	0.5	0.3
	(12450.23)		(0.1)	(0.2)	(29.4)
Household size0	4.219			1699.5	1600.3
	(1.43)			(2.2)	(3.4)
mean of dependent variable		37511	37511	37511	37511
$T = 2$		41	41	40	40
$T = 3$		107	107	106	106
$T = 4$		582	582	582	582
$\bar{R}^2$		0.196	0.236	0.239	0.252
N	1998	2001	2001	1998	1998

Source: Estimated with GUK administrative and survey data.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. We annotate the number of periods that a household is observed with T. The total number of households is shown for each values of T. T=4 indicates the number of households with complete panel information, T=3 indicates number of households observed three times, T=2 indicates the number of households observed twice. N indicates total number of observations used in ANCOVA estimation, or N=1×(T=2)+2×(T=3)+3×(T=4). UltraPoor is an indicator variable if the household is classified as the ultra poor. Upfront is an indicator variable of the arm with an upfront large disbursement, WithGrace is an indicator variable of the arm with a grace period, InKind is an indicator variable of the arm which lends a heifer. rd2, rd3, rd4 are dummy variables for second, third, and fourth round of survey. Regressand is TotalImputedValue, a sum of all livestock holding values evaluated at respective median market prices in the same year.

2. P values in percentages in parenthesises. Standard errors are clustered at group (village) level.

Table 52: ANCOVA estimation of livestock holding

covariates	mean/std	(1)	(2)	(3)	(4)
(Intercept)		1.49	1.39	1.16	1.15
		(0.0)	(0.0)	(0.0)	(0.0)
Large	0.273	0.40	0.37	0.35	0.35
	(0.45)	(0.8)	(0.5)	(1.1)	(1.1)
LargeGrace	0.248	0.07	0.08	0.09	0.09
	(0.43)	(54.7)	(48.6)	(43.7)	(43.2)
Cattle	0.264	0.00	0.02	0.02	0.02
	(0.44)	(98.8)	(77.7)	(80.6)	(80.4)
HadCattle	0.195				0.14
	(0.40)				(45.8)
HadCattle	0.195				0.14
	(0.40)				(45.8)
Flood in round 1	0.491			0.04	0.04
	(0.50)			(59.7)	(58.9)
Head literate0	0.114			0.01	0.01
	(0.32)			(89.4)	(90.8)
Number of cattle0	0.266		0.31	0.29	0.21
	(0.62)		(0.2)	(0.6)	(21.5)
Household size0	4.219			0.05	0.05
	(1.43)			(4.3)	(4.3)
TotalImputed2Value0	5315.315				
	(12450.23)				
mean of dependent variable		1.62	1.62	1.62	1.62
$T = 2$		87	87	85	85
$T = 3$		168	168	168	168
$T = 4$		395	395	395	395
$\bar{R}^2$		0.031	0.076	0.078	0.079
N	1998	1608	1608	1606	1606

Source: Estimated with GUK administrative and survey data.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. We annotate the number of periods that a household is observed with T. The total number of households is shown for each values of T. T=4 indicates the number of households with complete panel information, T=3 indicates number of households observed three times, T=2 indicates the number of households observed twice. N indicates total number of observations used in ANCOVA estimation, or N=1×(T=2)+2×(T=3)+3×(T=4). UltraPoor is an indicator variable if the household is classified as the ultra poor. Upfront is an indicator variable of the arm with an upfront large disbursement, WithGrace is an indicator variable of the arm with a grace period, InKind is an indicator variable of the arm which lends a heifer. Regressand is TotalImputedValue, a sum of all livestock holding values evaluated at respective median market prices in the same year.

2. P values in percentages in parenthesises. Standard errors are clustered at group (village) level.

TABLE 53: ANCOVA ESTIMATION OF LIVESTOCK HOLDING BY ATTRIBUTES

covariates	mean/std	(1)	(2)	(3)	(4)
(Intercept)		1.49	1.39	1.16	1.15
		(0.0)	(0.0)	(0.0)	(0.0)
Upfront	0.785	0.40	0.37	0.35	0.35
	(0.41)	(0.8)	(0.5)	(1.1)	(1.1)
WithGrace	0.512	−0.33	−0.29	−0.27	−0.27
	(0.50)	(5.6)	(4.8)	(8.7)	(8.9)
InKind	0.264	−0.07	−0.06	−0.07	−0.07
	(0.44)	(51.5)	(58.9)	(51.0)	(50.6)
HadCattle	0.195				0.14
	(0.40)				(45.8)
HadCattle	0.195				0.14
	(0.40)				(45.8)
Flood in round 1	0.491			0.04	0.04
	(0.50)			(59.7)	(58.9)
Head literate0	0.114			0.01	0.01
	(0.32)			(89.4)	(90.8)
Number of cattle0	0.266		0.31	0.29	0.21
	(0.62)		(0.2)	(0.6)	(21.5)
Household size0	4.219			0.05	0.05
	(1.43)			(4.3)	(4.3)
TotalImputed2Value0	5315.315				
	(12450.23)				
mean of dependent variable		1.62	1.62	1.62	1.62
$T = 2$		87	87	85	85
$T = 3$		168	168	168	168
$T = 4$		395	395	395	395
$\bar{R}^2$		0.031	0.076	0.078	0.079
N	1998	1608	1608	1606	1606

Source: Estimated with GUK administrative and survey data.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. We annotate the number of periods that a household is observed with T. The total number of households is shown for each values of T. T=4 indicates the number of households with complete panel information, T=3 indicates number of households observed three times, T=2 indicates the number of households observed twice. N indicates total number of observations used in ANCOVA estimation, or N=1×(T=2)+2×(T=3)+3×(T=4). UltraPoor is an indicator variable if the household is classified as the ultra poor. Upfront is an indicator variable of the arm with an upfront large disbursement, WithGrace is an indicator variable of the arm with a grace period, InKind is an indicator variable of the arm which lends a heifer. Regressand is TotalImputedValue, a sum of all livestock holding values evaluated at respective median market prices in the same year.

2. *P* values in percentages in parenthesises. Standard errors are clustered at group (village) level.

TABLE 54: ANCOVA ESTIMATION OF LIVESTOCK HOLDING, ULTRA VS. MODERATELY POOR

covariates	mean/std	(1)	(2)	(3)	(4)
(Intercept)		1.51	1.41	1.16	1.15
		(0.0)	(0.0)	(0.0)	(0.0)
Upfront	0.785	0.43	0.40	0.39	0.39
	(0.41)	(0.3)	(0.1)	(0.3)	(0.3)
WithGrace	0.512	−0.34	−0.30	−0.28	−0.28
	(0.50)	(4.5)	(3.4)	(7.0)	(7.2)
InKind	0.264	−0.06	−0.05	−0.06	−0.06
	(0.44)	(55.3)	(63.4)	(55.1)	(54.6)
HadCattle	0.195				0.16
	(0.40)				(41.6)
UltraPoor	0.630	−0.08	−0.09	−0.09	−0.09
	(0.48)	(20.1)	(15.6)	(16.9)	(17.0)
Upfront × UltraPoor	0.524	−0.07	−0.01	−0.00	0.02
	(0.50)	(66.1)	(95.5)	(99.4)	(91.2)
WithGrace × UltraPoor	0.352	0.48	0.50	0.52	0.52
	(0.48)	(1.3)	(0.8)	(0.8)	(0.8)
InKind × UltraPoor	0.181	−0.11	−0.10	−0.10	−0.11
	(0.39)	(54.6)	(58.6)	(58.8)	(56.8)
HadCattle	0.195				0.16
	(0.40)				(41.6)
Flood in round 1	0.491			0.05	0.05
	(0.50)			(58.0)	(56.7)
Head literate0	0.114			0.01	0.01
	(0.32)			(90.2)	(91.5)
Number of cattle0	0.266		0.32	0.30	0.21
	(0.62)		(0.2)	(0.6)	(22.7)
Household size0	4.219			0.05	0.05
	(1.43)			(2.2)	(2.2)
TotalImputed2Value0	5315.315				
	(12450.23)				
mean of dependent variable		1.62	1.62	1.62	1.62
$T = 2$		87	87	85	85
$T = 3$		168	168	168	168
$T = 4$		395	395	395	395
$\bar{R}^2$		0.041	0.09	0.093	0.094
N	1998	1608	1608	1606	1606

Source: Estimated with GUK administrative and survey data.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. We annotate the number of periods that a household is observed with T. The total number of households is shown for each values of T. T=4 indicates the number of households with complete panel information, T=3 indicates number of households observed three times, T=2 indicates the number of households observed twice. N indicates total number of observations used in ANCOVA estimation, or N=1×(T=2)+2×(T=3)+3×(T=4). UltraPoor is an indicator variable if the household is classified as the ultra poor. Large, LargeGrace, Cattle are indicator variables of the large, large grace, and cattle arms, respectively. The default arm category is traditional arm. Regressand is TotalImputedValue, a sum of all livestock holding values evaluated at respective median market prices in the same year.

2. P values in percentages in parenthesises. Standard errors are clustered at group (village) level.

TABLE 55: ANCOVA ESTIMATION OF LIVESTOCK HOLDING BY TIME

covariates	mean/std	(1)	(2)	(3)	(4)
(Intercept)		1.47 (0.0)	1.36 (0.0)	1.12 (0.0)	1.11 (0.0)
Large	0.273 (0.45)	0.39 (0.6)	0.37 (0.4)	0.35 (0.8)	0.35 (0.8)
LargeGrace	0.248 (0.43)	0.01 (94.3)	0.02 (88.5)	0.02 (83.9)	0.03 (82.5)
Cattle	0.264 (0.44)	−0.05 (44.1)	−0.03 (72.3)	−0.03 (67.5)	−0.03 (69.1)
HadCattle	0.195 (0.40)				0.14 (45.4)
rd 3	0.348 (0.48)	−0.02 (71.4)	0.00 (96.9)	0.00 (93.8)	0.01 (91.5)
Large × rd 3	0.094 (0.29)	−0.05 (74.9)	−0.05 (75.5)	−0.05 (77.9)	−0.05 (77.2)
LargeGrace × rd 3	0.085 (0.28)	0.19 (28.5)	0.20 (25.5)	0.21 (24.9)	0.21 (25.1)
Cattle × rd 3	0.091 (0.29)	0.17 (18.0)	0.16 (23.6)	0.16 (24.6)	0.15 (25.3)
rd 4	0.326 (0.47)	0.16 (0.9)	0.18 (0.5)	0.19 (0.4)	0.19 (0.4)
Large × rd 4	0.094 (0.29)	0.05 (74.5)	0.04 (79.1)	0.05 (78.2)	0.05 (78.7)
LargeGrace × rd 4	0.081 (0.27)	0.40 (3.3)	0.39 (3.6)	0.40 (3.0)	0.40 (3.0)
Cattle × rd 4	0.085 (0.28)	0.34 (0.8)	0.34 (1.1)	0.35 (1.1)	0.35 (1.2)
HadCattle	0.195 (0.40)				0.14 (45.4)
Flood in round 1	0.491 (0.50)			0.05 (57.2)	0.05 (56.4)
Head literate0	0.114 (0.32)			0.02 (85.6)	0.02 (87.2)
Number of cattle0	0.266 (0.62)		0.31 (0.2)	0.29 (0.6)	0.21 (21.4)
Household size0	4.219 (1.43)			0.05 (3.7)	0.05 (3.8)
TotalImputed2Value0	5315.315 (12450.23)				
mean of dependent variable		1.62	1.62	1.62	1.62
$T = 2$		87	87	85	85
$T = 3$		168	168	168	168
$T = 4$		395	395	395	395
$\bar{R}^2$		0.04	0.086	0.089	0.089
N	1998	1608	1608	1606	1606

Source: Estimated with GUK administrative and survey data.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. We annotate the number of periods that a household is observed with T. The total number of households is shown for each values of T. T=4 indicates the number of households with complete panel information, T=3 indicates number of households observed three times, T=2 indicates the number of households observed twice. N indicates total number of observations used in ANCOVA estimation, or N=1×(T=2)+2×(T=3)+3×(T=4). UltraPoor is an indicator variable if the household is classified as the ultra poor. Upfront is an indicator variable of the arm with an upfront large disbursement, WithGrace is an indicator variable of the arm with a grace period, InKind is an indicator variable of the arm which lends a heifer. rd2, rd3, rd4 are dummy variables for second, third, and fourth round of survey. Regressand is TotalImputedValue, a sum of all livestock holding values evaluated at respective median market prices in the same year.

2. P values in percentages in parenthesises. Standard errors are clustered at group (village) level.

TABLE 56: ANCOVA ESTIMATION OF LIVESTOCK HOLDING BY TIMEAND ATTRIBUTES

covariates	mean/std	(1)	(2)	(3)	(4)
(Intercept)		1.47	1.36	1.12	1.11
		(0.0)	(0.0)	(0.0)	(0.0)
Upfront	0.785	0.39	0.37	0.35	0.35
	(0.41)	(0.6)	(0.4)	(0.8)	(0.8)
WithGrace	0.512	−0.39	−0.35	−0.33	−0.33
	(0.50)	(2.5)	(1.8)	(3.7)	(3.8)
InKind	0.264	−0.06	−0.04	−0.05	−0.06
	(0.44)	(60.6)	(69.6)	(62.1)	(61.7)
HadCattle	0.195				0.14
	(0.40)				(45.4)
rd 3	0.348	−0.02	0.00	0.00	0.01
	(0.48)	(71.4)	(96.9)	(93.8)	(91.5)
Upfront × rd 3	0.269	−0.05	−0.05	−0.05	−0.05
	(0.44)	(74.9)	(75.5)	(77.9)	(77.2)
WithGrace × rd 3	0.176	0.24	0.25	0.25	0.25
	(0.38)	(17.1)	(14.2)	(14.7)	(14.6)
InKind × rd 3	0.091	−0.02	−0.05	−0.05	−0.05
	(0.29)	(90.7)	(74.9)	(72.5)	(72.4)
rd 4	0.326	0.16	0.18	0.19	0.19
	(0.47)	(0.9)	(0.5)	(0.4)	(0.4)
Upfront × rd 4	0.260	0.05	0.04	0.05	0.05
	(0.44)	(74.5)	(79.1)	(78.2)	(78.7)
WithGrace × rd 4	0.166	0.35	0.34	0.36	0.36
	(0.37)	(9.6)	(9.5)	(8.4)	(8.4)
InKind × rd 4	0.085	−0.06	−0.04	−0.05	−0.06
	(0.28)	(75.5)	(80.5)	(76.1)	(75.4)
HadCattle	0.195				0.14
	(0.40)				(45.4)
Flood in round 1	0.491			0.05	0.05
	(0.50)			(57.2)	(56.4)
Head literate0	0.114			0.02	0.02
	(0.32)			(85.6)	(87.2)
Number of cattle0	0.266		0.31	0.29	0.21
	(0.62)		(0.2)	(0.6)	(21.4)
Household size0	4.219			0.05	0.05
	(1.43)			(3.7)	(3.8)
TotalImputed2Value0	5315.315				
	(12450.23)				
mean of dependent variable		1.62	1.62	1.62	1.62
$T = 2$		87	87	85	85
$T = 3$		168	168	168	168
$T = 4$		395	395	395	395
$\bar{R}^2$		0.04	0.086	0.089	0.089
N	1998	1608	1608	1606	1606

Source: Estimated with GUK administrative and survey data.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. We annotate the number of periods that a household is observed with T. The total number of households is shown for each values of T. T=4 indicates the number of households with complete panel information, T=3 indicates number of households observed three times, T=2 indicates the number of households observed twice. N indicates total number of observations used in ANCOVA estimation, or N=1×(T=2)+2×(T=3)+3×(T=4). UltraPoor is an indicator variable if the household is classified as the ultra poor. Upfront is an indicator variable of the arm with an upfront large disbursement, WithGrace is an indicator variable of the arm with a grace period, InKind is an indicator variable of the arm which lends a heifer. rd2, rd3, rd4 are dummy variables for second, third, and fourth round of survey. Regressand is TotalImputedValue, a sum of all livestock holding values evaluated at respective median market prices in the same year.

2. *P* values in percentages in parenthesises. Standard errors are clustered at group (village) level.

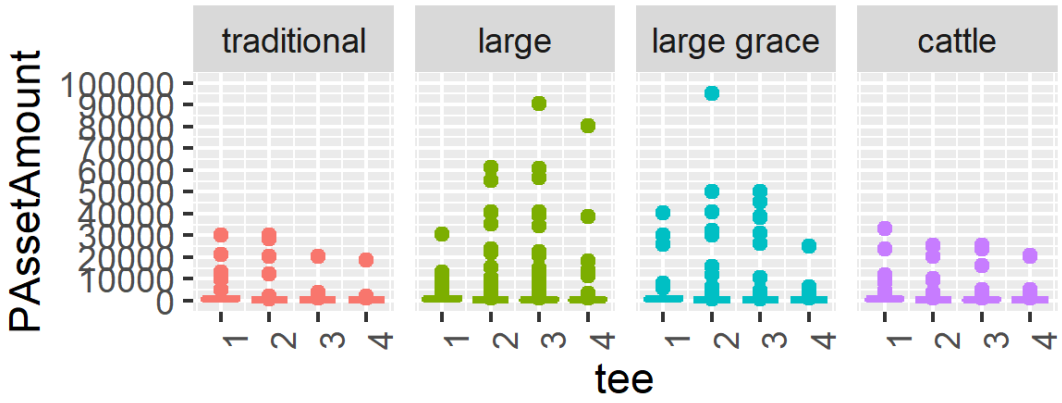
Finding III.3 FIGURE 14 shows increasing livestock accumulation in all arms but traditional. FIGURE 16 shows increasng cow ownership relative to traditional in the bottom panel while the holding per owner is similar across all arms. This is evidence of an acceleration of becoming a large livestock owner for the large sized arms relative to the small size arm. Given that the number of cows per owner remains the similar, it does not provide evidence for accelerated growth of livestock after becoming an owner.

III.5.4 Productive assets

```
Number of obs by Arm and attrition
             AttritIn
Arm             2   3   4   9 Sum
  traditional   6   4  20 144 174
  large         5   2   1 192 200
  large grace  22   3   3 171 199
  cattle        5   5  13 177 200
  Sum          38  14  37 684 773


Number of obs by membership status and attrition
                     AttritIn
BStatus                 2   3   4   9 Sum
  borrower              8   6   8 578 600
  pure saver            0   0   0   0   0
  individual rejection  9   4   1  75  89
  group rejection       9   4   0  55  68
  rejection by flood   12   0  28   0  40
  Sum                  38  14  37 708 797
```

FIGURE 18: PRODUCTIVE ASSET HOLDING



Source: Survey data.

Note:

Table 57: ANCOVA estimation of productive assets

covariates	mean/std	(1)	(2)	(3)	(4)	(5)
(Intercept)		571.2 (0.0)	200.4 (16.1)	313.7 (30.8)	358.2 (33.6)	331.2 (33.9)
Large	0.021 (0.45)	1237.9 (3.5)	1163.6 (4.1)	1281.1 (2.8)	1526.2 (2.5)	1354.3 (2.7)
LargeGrace	0.002 (0.43)	792.4 (9.4)	653.4 (16.0)	609.1 (17.9)	667.1 (17.8)	644.3 (15.7)
Cattle	0.017 (0.44)	148.0 (40.0)	187.7 (32.3)	253.7 (23.5)	291.3 (21.4)	350.6 (13.7)
HadCattle	0.218 (0.41)				88.4 (83.9)	
HadCattle	0.218 (0.41)				88.4 (83.9)	
HadCattle × Large	0.016 (0.22)				139.7 (90.6)	
HadCattle × LargeGrace	0.004 (0.20)				1548.0 (21.3)	
HadCattle × Cattle	−0.006 (0.19)				201.2 (59.7)	
Flood in round 1	0.487 (0.50)			−662.6 (8.8)	−867.9 (6.3)	−709.0 (9.6)
Head literate0	0.121 (0.33)			−595.0 (2.0)	−692.3 (4.2)	−622.5 (2.7)
PAssetAmount0	1255.054 (2646.96)		0.4 (0.3)	0.3 (0.5)	0.4 (0.2)	0.4 (0.2)
Household size0	4.306 (1.43)			58.9 (52.5)	48.3 (68.1)	35.3 (74.2)
Number of cattle0	0.300 (0.66)					93.8 (79.0)
mean of dependent variable		1124	1124	1124	1124	1124
$T = 2$		20	20	20	17	14
$T = 3$		104	104	101	57	56
$T = 4$		632	625	625	529	604
$\bar{R}^2$		0.005	0.026	0.028	0.031	0.03
N	1718	2124	2103	2097	1718	1938

Source: Estimated with GUK administrative and survey data.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. Large, LargeGrace, Cattle are indicator variables of the large, large grace, and cattle arms, respectively. The default arm category is traditional arm. Only households that are observed for all 4 rounds are used. Households are continuing members and replacing members of early rejecters and received loans prior to 2015 Janunary. Productive assets do not include livestock. Regressions (1)-(3), (5)-(6) use only arm and calendar information. (4) and (7) use previous six month repayment and saving information which is lacking in rd 1, hence starts from rd 2.

2. *P* values in percentages in parenthesises. Standard errors are clustered at group (village) level.

Table 58: ANCOVA estimation of productive assets by attributes

covariates	mean/std	(1)	(2)	(3)	(4)	(5)
(Intercept)		571.2 (0.0)	200.4 (16.1)	313.7 (30.8)	358.2 (33.6)	331.2 (33.9)
Upfront	0.040 (0.41)	1237.9 (3.5)	1163.6 (4.1)	1281.1 (2.8)	1526.2 (2.5)	1354.3 (2.7)
WithGrace	0.019 (0.50)	−445.5 (55.2)	−510.2 (48.4)	−672.0 (35.4)	−859.2 (30.3)	−710.0 (35.1)
InKind	0.017 (0.44)	−644.4 (19.3)	−465.7 (34.0)	−355.5 (44.8)	−375.8 (45.0)	−293.7 (53.4)
HadCattle	0.218 (0.41)				88.4 (83.9)	
HadCattle	0.218 (0.41)				88.4 (83.9)	
HadCattle × Upfront	0.014 (0.18)				139.7 (90.6)	
HadCattle × WithGrace	−0.002 (0.23)				1408.3 (40.1)	
HadCattle × InKind	−0.006 (0.19)				−1346.8 (28.3)	
Flood in round 1	0.487 (0.50)			−662.6 (8.8)	−867.9 (6.3)	−709.0 (9.6)
Head literate0	0.121 (0.33)			−595.0 (2.0)	−692.3 (4.2)	−622.5 (2.7)
PAssetAmount0	1255.054 (2646.96)		0.4 (0.3)	0.3 (0.5)	0.4 (0.2)	0.4 (0.2)
Household size0	4.306 (1.43)			58.9 (52.5)	48.3 (68.1)	35.3 (74.2)
Number of cattle0	0.300 (0.66)					93.8 (79.0)
mean of dependent variable		1124	1124	1124	1124	1124
$T = 2$		20	20	20	17	14
$T = 3$		104	104	101	57	56
$T = 4$		632	625	625	529	604
$\bar{R}^2$		0.005	0.026	0.028	0.031	0.03
N	1718	2124	2103	2097	1718	1938

Source: Estimated with GUK administrative and survey data.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. Large, LargeGrace, Cattle are indicator variables of the large, large grace, and cattle arms, respectively. The default arm category is traditional arm. Only households that are observed for all 4 rounds are used. Households are continuing members and replacing members of early rejecters and received loans prior to 2015 Janunary. Productive assets do not include livestock. Regressions (1)-(3), (5)-(6) use only arm and calendar information. (4) and (7) use previous six month repayment and saving information which is lacking in rd 1, hence starts from rd 2.

2. *P* values in percentages in parenthesises. Standard errors are clustered at group (village) level.

Table 59: ANCOVA estimation of broad productive assets by period

covariates	mean/std	(1)	(2)	(3)	(4)	(5)
(Intercept)		842.5 (0.0)	471.1 (1.7)	591.4 (10.7)	657.3 (12.0)	606.0 (13.4)
Large	0.021 (0.45)	1459.9 (3.5)	1387.5 (4.0)	1505.5 (2.8)	1737.5 (2.7)	1545.9 (2.8)
LargeGrace	0.002 (0.43)	926.0 (10.4)	790.5 (15.8)	744.0 (17.4)	766.8 (18.4)	755.4 (16.2)
Cattle	0.017 (0.44)	116.2 (51.8)	164.9 (39.0)	232.5 (28.4)	270.7 (28.1)	307.4 (19.9)
HadCattle	0.218 (0.41)				173.8 (74.1)	
rd 3	0.342 (0.47)	−296.4 (19.0)	−303.0 (18.5)	−303.4 (18.4)	−334.6 (19.3)	−275.7 (22.4)
Large × rd 3	0.094 (0.29)	−816.7 (27.9)	−825.6 (27.6)	−820.2 (27.9)	−826.4 (35.6)	−701.6 (35.5)
LargeGrace × rd 3	0.084 (0.28)	−165.4 (72.3)	−163.3 (73.1)	−144.5 (75.8)	47.8 (92.2)	−26.8 (95.4)
Cattle × rd 3	0.089 (0.28)	226.1 (33.3)	149.3 (55.0)	158.0 (53.3)	182.6 (44.4)	315.4 (21.3)
rd 4	0.316 (0.47)	−747.5 (0.8)	−745.8 (0.8)	−747.7 (0.8)	−855.6 (0.5)	−758.7 (0.7)
Large × rd 4	0.093 (0.29)	−1534.1 (7.1)	−1545.4 (7.0)	−1566.5 (6.8)	−1540.0 (11.0)	−1441.9 (9.0)
LargeGrace × rd 4	0.079 (0.27)	−1223.6 (9.0)	−1258.4 (8.6)	−1271.0 (8.6)	−1178.3 (10.4)	−1189.4 (10.5)
Cattle × rd 4	0.082 (0.27)	111.6 (65.8)	94.2 (71.7)	67.3 (80.4)	75.0 (76.9)	207.1 (44.0)
HadCattle	0.218 (0.41)				173.8 (74.1)	
HadCattle × Large	0.016 (0.22)				40.2 (97.6)	
HadCattle × LargeGrace	0.004 (0.20)				2070.8 (19.4)	
HadCattle × Cattle	−0.006 (0.19)				286.1 (47.1)	
HadCattle × rd 3	0.075 (0.26)				−164.7 (71.5)	
HadCattle × Large × rd 3	0.005 (0.13)				841.8 (46.3)	
HadCattle × LargeGrace × rd 3	0.001 (0.12)				−2020.7 (14.6)	
HadCattle × Cattle × rd 3	−0.001 (0.11)				−583.7 (16.7)	
HadCattle × rd 4	0.068 (0.25)				−829.9 (31.7)	
HadCattle × Large × rd 4	0.006 (0.13)				153.9 (92.8)	
HadCattle × LargeGrace × rd 4	0.002 (0.12)				−3922.5 (16.7)	
HadCattle × Cattle × rd 4	−0.003 (0.10)				−621.5 (15.3)	
Flood in round 1	0.487 (0.50)			−666.2 (8.8)	−868.0 (6.4)	−707.9 (9.7)
Head literate0	0.121 (0.33)			−596.9 (2.0)	−685.4 (4.5)	−621.8 (2.7)
PAssetAmount0	1255.054 (2646.96)		0.4 (0.3)	0.3 (0.6)	0.4 (0.2)	0.4 (0.2)
Household size0	4.306 (1.43)			57.8 (53.4)	48.3 (68.3)	35.9 (73.9)
Number of cattle0	0.300 (0.66)					93.3 (79.2)
mean of dependent variable $T = 2$		1124 20	1124 20	1124 20	1124 17	1124 14
$T = 3$ $T = 4$		104 632	104 625	101 625	57 529	56 604
$\bar{R}^2$ N	1718	0.007 2124	0.027 2103	0.029 2097	0.029 1718	0.031 1938

Source: Estimated with GUK administrative and survey data.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. Large, LargeGrace, Cattle are indicator variables of the large, large grace, and cattle arms, respectively. The default arm category is traditional arm. rd2, rd3, rd4 are dummy variables for second, third, and fourth round of survey. Only households that are observed for all 4 rounds are used. Households are continuing members and replacing members of early rejecters and received loans prior to 2015 Janunary. Productive assets do not include livestock. Regressions (1)-(3), (5)-(6) use only arm and calendar information. (4) and (7) use previous six month repayment and saving information which is lacking in rd 1, hence starts from rd 2.

2. P values in percentages in parenthesises. Standard errors are clustered at group (village) level.

TABLE 60: ANCOVA ESTIMATION OF BROAD PRODUCTIVE ASSETS BY ATTRIBUTES AND PERIOD

covariates	mean/std	(1)	(2)	(3)	(4)	(5)
(Intercept)		842.5	471.1	591.4	657.3	606.0
		(0.0)	(1.7)	(10.7)	(12.0)	(13.4)
Upfront	0.040	1459.9	1387.5	1505.5	1737.5	1545.9
	(0.41)	(3.5)	(4.0)	(2.8)	(2.7)	(2.8)
WithGrace	0.019	−533.9	−597.0	−761.5	−970.7	−790.5
	(0.50)	(54.7)	(49.1)	(37.6)	(31.4)	(37.0)
InKind	0.017	−809.8	−625.6	−511.5	−496.1	−448.0
	(0.44)	(16.5)	(27.4)	(35.2)	(38.4)	(41.0)
HadCattle	0.218				173.8	
	(0.41)				(74.1)	
rd 3	0.342	−296.4	−303.0	−303.4	−334.6	−275.7
	(0.47)	(19.0)	(18.5)	(18.4)	(19.3)	(22.4)
Upfront × rd 3	0.267	−816.7	−825.6	−820.2	−826.4	−701.6
	(0.44)	(27.9)	(27.6)	(27.9)	(35.6)	(35.5)
WithGrace × rd 3	0.173	651.4	662.3	675.7	874.2	674.9
	(0.38)	(44.4)	(44.0)	(43.1)	(36.9)	(42.8)
InKind × rd 3	0.089	391.5	312.6	302.6	134.8	342.1
	(0.28)	(39.2)	(50.5)	(51.5)	(76.1)	(44.8)
rd 4	0.316	−747.5	−745.8	−747.7	−855.6	−758.7
	(0.47)	(0.8)	(0.8)	(0.8)	(0.5)	(0.7)
Upfront × rd 4	0.254	−1534.1	−1545.4	−1566.5	−1540.0	−1441.9
	(0.44)	(7.1)	(7.0)	(6.8)	(11.0)	(9.0)
WithGrace × rd 4	0.161	310.4	287.0	295.5	361.7	252.6
	(0.37)	(77.3)	(79.2)	(78.7)	(75.4)	(81.6)
InKind × rd 4	0.082	1335.2	1352.5	1338.3	1253.3	1396.5
	(0.27)	(6.0)	(6.1)	(6.3)	(6.3)	(5.4)
HadCattle	0.218				173.8	
	(0.41)				(74.1)	
HadCattle × Upfront	0.014				40.2	
	(0.18)				(97.6)	
HadCattle × WithGrace	−0.002				2030.5	
	(0.23)				(32.3)	
HadCattle × InKind	−0.006				−1784.7	
	(0.19)				(26.6)	
HadCattle × rd 3	0.075				−164.7	
	(0.26)				(71.5)	
HadCattle × Upfront × rd 3	0.004				841.8	
	(0.11)				(46.3)	
HadCattle × WithGrace × rd 3	−0.000				−2862.5	
	(0.14)				(10.4)	
HadCattle × InKind × rd 3	−0.001				1437.0	
	(0.11)				(30.6)	
HadCattle × rd 4	0.068				−829.9	
	(0.25)				(31.7)	
HadCattle × Upfront × rd 4	0.005				153.9	
	(0.10)				(92.8)	
HadCattle × WithGrace × rd 4	−0.001				−4076.3	
	(0.13)				(21.6)	
HadCattle × InKind × rd 4	−0.003				3300.9	
	(0.10)				(24.3)	
Flood in round 1	0.487			−666.2	−868.0	−707.9
	(0.50)			(8.8)	(6.4)	(9.7)
Head literate0	0.121			−596.9	−685.4	−621.8
	(0.33)			(2.0)	(4.5)	(2.7)
PAssetAmount0	1255.054		0.4	0.3	0.4	0.4
	(2646.96)		(0.3)	(0.6)	(0.2)	(0.2)
Household size0	4.306			57.8	48.3	35.9
	(1.43)			(53.4)	(68.3)	(73.9)
Number of cattle0	0.300					93.3
	(0.66)					(79.2)
mean of dependent variable		1124	1124	1124	1124	1124
$T = 2$		20	20	20	17	14
$T = 3$		104	104	101	57	56
$T = 4$		632	625	625	529	604
$\bar{R}^2$		0.007	0.027	0.029	0.029	0.031
N	1718	2124	2103	2097	1718	1938

Source: Estimated with GUK administrative and survey data.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. Large, LargeGrace, Cattle are indicator variables of the large, large grace, and cattle arms, respectively. The default arm category is traditional arm. rd2, rd3, rd4 are dummy variables for second, third, and fourth round of survey. Only households that are observed for all 4 rounds are used. Households are continuing members and replacing members of early rejecters and received loans prior to 2015 Janunary. Productive assets do not include livestock. Regressions (1)-(3), (5)-(6) use only arm and calendar information. (4) and (7) use previous six month repayment and saving information which is lacking in rd 1, hence starts from rd 2.

2. P values in percentages in parenthesises. Standard errors are clustered at group (village) level.

TABLE 61: ANCOVA ESTIMATION OF BROAD PRODUCTIVE ASSETS BY ATTRIBUTES, POVERTY STATUS, AND PERIOD

covariates	mean/std	(1)	(2)	(3)	(4)	(5)
(Intercept)		870.1 (0.0)	500.2 (1.7)	643.9 (9.1)	693.1 (11.9)	657.0 (11.9)
Upfront	0.040 (0.41)	1429.3 (3.9)	1349.8 (4.6)	1455.0 (3.1)	1699.9 (3.4)	1489.2 (3.0)
WithGrace	0.019 (0.50)	−574.7 (51.6)	−641.5 (45.9)	−820.9 (34.0)	−1073.4 (27.5)	−849.4 (33.6)
InKind	0.017 (0.44)	−761.0 (19.3)	−569.4 (32.4)	−438.7 (43.1)	−396.5 (48.4)	−378.2 (49.0)
HadCattle	0.218 (0.41)				139.7 (79.2)	
UltraPoor	0.625 (0.48)	−147.8 (75.8)	−143.9 (76.6)	−147.0 (76.3)	−194.3 (73.0)	−146.4 (76.7)
Upfront × UltraPoor	0.051 (0.30)	−1260.0 (47.2)	−1331.7 (45.5)	−1682.8 (37.4)	−2034.2 (35.7)	−1655.9 (39.5)
WithGrace × UltraPoor	0.036 (0.39)	1490.3 (40.6)	1548.4 (39.1)	1723.2 (35.6)	2278.0 (29.5)	1762.8 (35.2)
InKind × UltraPoor	0.019 (0.35)	−705.4 (23.0)	−773.5 (16.0)	−847.1 (12.4)	−1232.3 (4.2)	−837.1 (13.4)
rd 3	0.342 (0.47)	−301.2 (18.0)	−306.6 (17.7)	−308.1 (17.5)	−344.4 (17.5)	−287.0 (20.5)
UltraPoor × rd 3	0.210 (0.41)	−218.0 (57.1)	−250.6 (51.9)	−257.3 (50.8)	−343.9 (40.7)	−233.6 (54.3)
Upfront × rd 3	0.267 (0.44)	−786.2 (30.7)	−796.8 (30.4)	−794.1 (30.6)	−758.6 (40.1)	−657.1 (40.0)
WithGrace × rd 3	0.173 (0.38)	673.3 (41.9)	686.9 (41.3)	705.1 (40.2)	914.3 (33.2)	704.9 (39.9)
InKind × rd 3	0.089 (0.28)	367.7 (37.6)	290.5 (49.5)	280.6 (50.6)	95.9 (81.0)	312.1 (44.7)
Upfront × UltraPoor × rd 3	0.017 (0.18)	−252.2 (85.3)	−266.1 (84.6)	−278.5 (83.9)	−40.3 (97.8)	−209.7 (87.7)
WithGrace × UltraPoor × rd 3	0.012 (0.23)	273.5 (84.8)	287.5 (84.1)	310.3 (82.8)	367.9 (80.7)	426.1 (76.2)
InKind × UltraPoor × rd 3	0.006 (0.20)	343.0 (56.9)	226.6 (71.0)	204.4 (73.8)	59.7 (93.0)	239.8 (69.3)
rd 4	0.316 (0.47)	−729.6 (0.8)	−725.4 (0.9)	−729.8 (0.9)	−837.4 (0.4)	−747.5 (0.7)
UltraPoor × rd 4	0.202 (0.40)	−354.7 (45.8)	−364.8 (44.7)	−381.1 (42.9)	−595.8 (26.5)	−418.6 (38.2)
Upfront × rd 4	0.254 (0.44)	−1487.3 (8.4)	−1497.2 (8.4)	−1511.3 (8.2)	−1443.4 (13.6)	−1370.0 (11.4)
WithGrace × rd 4	0.161 (0.37)	419.5 (68.7)	404.8 (70.0)	415.5 (69.4)	494.0 (65.6)	371.3 (72.4)
InKind × rd 4	0.082 (0.27)	1217.2 (6.1)	1227.0 (6.3)	1213.9 (6.6)	1118.4 (6.7)	1271.8 (5.8)
Upfront × UltraPoor × rd 4	0.017 (0.17)	272.1 (86.9)	255.1 (87.7)	243.1 (88.3)	421.7 (81.3)	344.4 (83.3)
WithGrace × UltraPoor × rd 4	0.011 (0.23)	−1382.3 (44.2)	−1392.0 (44.1)	−1385.5 (44.3)	−1740.3 (38.4)	−1390.7 (43.7)
InKind × UltraPoor × rd 4	0.006 (0.20)	1594.0 (6.4)	1593.8 (6.5)	1565.8 (7.4)	1855.4 (9.2)	1604.9 (6.3)
HadCattle	0.218 (0.41)				139.7 (79.2)	
HadCattle × Upfront	0.014 (0.18)				89.0 (94.8)	
HadCattle × WithGrace	−0.002 (0.23)				2221.2 (28.2)	
HadCattle × InKind	−0.006 (0.19)				−1874.9 (24.0)	
HadCattle × rd 3	0.075 (0.26)				−131.8 (77.0)	
HadCattle × Upfront × rd 3	0.004 (0.11)				701.4 (53.2)	
HadCattle × WithGrace × rd 3	−0.000 (0.14)				−2893.1 (9.9)	
HadCattle × InKind × rd 3	−0.001 (0.11)				1463.0 (31.1)	
HadCattle × rd 4	0.068 (0.25)				−804.0 (33.0)	
HadCattle × Upfront × rd 4	0.005 (0.10)				21.4 (99.0)	
HadCattle × WithGrace × rd 4	−0.001 (0.13)				−4285.7 (19.0)	
HadCattle × InKind × rd 4	−0.003 (0.10)				3551.3 (21.3)	
Flood in round 1	0.487 (0.50)			−728.9 (8.5)	−953.4 (6.4)	−765.9 (9.6)
Head literate0	0.121 (0.33)			−693.8 (2.4)	−812.3 (4.2)	−708.4 (2.9)
PAssetAmount0	1255.054 (2646.96)		0.4 (0.3)	0.3 (0.5)	0.4 (0.2)	0.4 (0.2)
Household size0	4.306 (1.43)			66.7 (49.6)	68.7 (59.3)	46.6 (68.3)
Number of cattle0	0.300 (0.66)					90.8 (79.8)

III.5.5 Narrow productive assets

Narrow productive assets are productive assets that are reported in all rounds. They are bees-box, brooder, cage incubator, country boat, dheki, ginning machine, gola (grain storage), hand pump, husking machine, jata, ladder(moi), sickle/dao/axe/spade, spray, weeder

```
Number of obs by Arm and attrition
             AttritIn
Arm             2   3   4   9 Sum
  traditional   6   4  20 144 174
  large         5   2   1 192 200
  large grace  22   3   3 171 199
  cattle        5   5  13 177 200
  Sum          38  14  37 684 773


Number of obs by membership status and attrition
                     AttritIn
BStatus                 2   3   4   9 Sum
  borrower              8   6   8 578 600
  pure saver            0   0   0   0   0
  individual rejection  9   4   1  75  89
  group rejection       9   4   0  55  68
  rejection by flood   12   0  28   0  40
  Sum                  38  14  37 708 797
```

```
Error in `geom_boxplot()`:
! Problem while computing aesthetics.
i Error occurred in the 1st layer.
Caused by error:
! オブジェクト 'NarrowPAssetAmount' がありません
```

```
Error in `geom_boxplot()`:
! Problem while computing aesthetics.
i Error occurred in the 1st layer.
Caused by error:
! オブジェクト 'NarrowPAssetAmount' がありません
```

FIGURE 19: NARROW PRODUCTIVE ASSET HOLDING

Source: Survey data.

Note: Narrow productive assets are productive assets that are reported in all rounds. They are bees-box, brooder, cage incubator, country boat, dheki, ginning machine, gola (grain storage), hand pump, husking machine, jata, ladder(moi), sickle/dao/axe/spade, spray, weeder.

Table 62: ANCOVA estimation of narrow productive assets

covariates	mean/std	(1)	(2)	(3)	(4)	(5)
(Intercept)		567.5 (0.0)	233.8 (12.9)	134.3 (53.8)	157.2 (57.2)	99.7 (67.8)
Large	0.021 (0.45)	416.2 (9.2)	373.1 (11.6)	363.5 (11.4)	406.3 (7.6)	399.6 (8.0)
LargeGrace	0.002 (0.43)	335.7 (15.0)	144.5 (42.9)	154.6 (40.9)	157.7 (48.1)	159.0 (41.3)
Cattle	0.017 (0.44)	149.2 (39.7)	144.0 (43.9)	153.4 (40.8)	168.2 (38.6)	249.8 (21.7)
HadCattle	0.218 (0.41)				110.4 (66.3)	
HadCattle	0.218 (0.41)				110.4 (66.3)	
HadCattle × Large	0.016 (0.22)				1082.5 (19.8)	
HadCattle × LargeGrace	0.004 (0.20)				−114.0 (77.3)	
HadCattle × Cattle	−0.006 (0.19)				7.2 (98.0)	
Flood in round 1	0.487 (0.50)			70.8 (67.3)	23.0 (90.3)	96.0 (59.0)
Head literate0	0.121 (0.33)			−279.1 (10.4)	−275.4 (17.3)	−300.6 (10.0)
NarrowPAssetAmount0	1041.643 (2111.49)		0.4 (1.4)	0.4 (1.5)	0.5 (0.4)	0.5 (0.3)
Household size0	4.306 (1.43)			23.0 (69.2)	−6.2 (93.2)	1.8 (97.7)
Number of cattle0	0.300 (0.66)					39.0 (77.8)
mean of dependent variable $T = 2$		795 20	795 20	795 20	795 17	795 14
$T = 3$ $T = 4$		104 632	104 625	101 625	57 529	56 604
$\bar{R}^2$ N	1718	0.002 2124	0.076 2103	0.076 2097	0.1 1718	0.092 1938

Source: Estimated with GUK administrative and survey data.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. We annotate the number of periods that a household is observed with T. The total number of households is shown for each values of T. T=4 indicates the number of households with complete panel information, T=3 indicates number of households observed three times, T=2 indicates the number of households observed twice. N indicates total number of observations used in ANCOVA estimation, or N=1×(T=2)+2×(T=3)+3×(T=4). Large, LargeGrace, Cattle are indicator variables of the large, large grace, and cattle arms, respectively. The default arm category is traditional arm. Sample is continuing members and replacing members of early rejecters and received loans prior to 2015 Janunary. Productive assets do not include livestock. Regressions (1)-(3), (5)-(6) use only arm and calendar information. (4) and (7) use previous six month repayment and saving information which is lacking in rd 1, hence starts from rd 2.

2. *P* values in percentages in parenthesises. Standard errors are clustered at group (village) level.

TABLE 63: ANCOVA ESTIMATION OF NARROW PRODUCTIVE ASSETS BY ATTRIBUTES

covariates	mean/std	(1)	(2)	(3)	(4)	(5)
(Intercept)		567.5 (0.0)	233.8 (12.9)	134.3 (53.8)	157.2 (57.2)	99.7 (67.8)
Upfront	0.040 (0.41)	416.2 (9.2)	373.1 (11.6)	363.5 (11.4)	406.3 (7.6)	399.6 (8.0)
WithGrace	0.019 (0.50)	−80.5 (80.4)	−228.6 (42.7)	−208.9 (45.0)	−248.6 (38.8)	−240.6 (38.5)
InKind	0.017 (0.44)	−186.4 (49.8)	−0.5 (99.8)	−1.3 (99.6)	10.4 (96.7)	90.8 (71.3)
HadCattle	0.218 (0.41)				110.4 (66.3)	
HadCattle	0.218 (0.41)				110.4 (66.3)	
HadCattle × Upfront	0.014 (0.18)				1082.5 (19.8)	
HadCattle × WithGrace	−0.002 (0.23)				−1196.5 (19.4)	
HadCattle × InKind	−0.006 (0.19)				121.2 (79.0)	
Flood in round 1	0.487 (0.50)			70.8 (67.3)	23.0 (90.3)	96.0 (59.0)
Head literate0	0.121 (0.33)			−279.1 (10.4)	−275.4 (17.3)	−300.6 (10.0)
NarrowPAssetAmount0	1041.643 (2111.49)		0.4 (1.4)	0.4 (1.5)	0.5 (0.4)	0.5 (0.3)
Household size0	4.306 (1.43)			23.0 (69.2)	−6.2 (93.2)	1.8 (97.7)
Number of cattle0	0.300 (0.66)					39.0 (77.8)
mean of dependent variable		795	795	795	795	795
$T = 2$		20	20	20	17	14
$T = 3$		104	104	101	57	56
$T = 4$		632	625	625	529	604
$\bar{R}^2$		0.002	0.076	0.076	0.1	0.092
N	1718	2124	2103	2097	1718	1938

Source: Estimated with GUK administrative and survey data.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. We annotate the number of periods that a household is observed with T. The total number of households is shown for each values of T. T=4 indicates the number of households with complete panel information, T=3 indicates number of households observed three times, T=2 indicates the number of households observed twice. N indicates total number of observations used in ANCOVA estimation, or N=1×(T=2)+2×(T=3)+3×(T=4). Upfront is an indicator variable of the arm with an upfront large disbursement, WithGrace is an indicator variable of the arm with a grace period, InKind is an indicator variable of the arm which lends a heifer. Sample is continuing members and replacing members of early rejecters and received loans prior to 2015 Janunary. Productive assets do not include livestock. Regressions (1)-(3), (5)-(6) use only arm and calendar information. (4) and (7) use previous six month repayment and saving information which is lacking in rd 1, hence starts from rd 2.

2. P values in percentages in parenthesises. Standard errors are clustered at group (village) level.

Table 64: ANCOVA estimation of narrow productive assets by period

covariates	mean/std	(1)	(2)	(3)	(4)	(5)
(Intercept)		649.2 (0.0)	313.7 (7.3)	216.3 (38.4)	248.7 (43.1)	189.0 (49.0)
Large	0.021 (0.45)	477.1 (10.5)	435.1 (12.6)	425.1 (12.4)	445.0 (10.4)	444.5 (10.3)
LargeGrace	0.002 (0.43)	346.7 (17.4)	155.3 (40.8)	165.5 (38.8)	141.3 (53.6)	157.5 (42.9)
Cattle	0.017 (0.44)	116.2 (51.8)	121.1 (51.9)	132.2 (48.5)	147.4 (49.2)	205.9 (32.2)
HadCattle	0.218 (0.41)				167.5 (55.0)	
rd 3	0.342 (0.47)	−4.2 (96.7)	−11.0 (91.6)	−10.9 (91.8)	−13.4 (90.6)	5.5 (95.9)
Large × rd 3	0.094 (0.29)	−73.9 (78.2)	−79.0 (76.9)	−75.6 (77.9)	18.2 (95.5)	1.8 (99.5)
LargeGrace × rd 3	0.084 (0.28)	228.9 (47.7)	243.7 (45.4)	244.1 (45.7)	424.3 (27.0)	324.8 (34.7)
Cattle × rd 3	0.089 (0.28)	233.2 (31.7)	149.1 (55.4)	143.0 (57.4)	177.4 (45.7)	309.1 (22.0)
rd 4	0.316 (0.47)	−269.2 (4.8)	−263.2 (5.3)	−264.9 (5.4)	−311.0 (2.0)	−282.2 (4.1)
Large × rd 4	0.093 (0.29)	−549.8 (22.1)	−557.4 (21.8)	−557.5 (21.8)	−410.9 (36.8)	−463.2 (30.3)
LargeGrace × rd 4	0.079 (0.27)	−324.4 (31.2)	−336.6 (29.5)	−341.7 (29.3)	−200.5 (55.7)	−263.9 (41.6)
Cattle × rd 4	0.082 (0.27)	117.9 (64.0)	96.9 (70.9)	85.6 (74.8)	90.5 (72.0)	226.2 (38.7)
HadCattle	0.218 (0.41)				167.5 (55.0)	
HadCattle × Large	0.016 (0.22)				1203.8 (20.4)	
HadCattle × LargeGrace	0.004 (0.20)				68.4 (87.9)	
HadCattle × Cattle	−0.006 (0.19)				90.9 (78.1)	
HadCattle × rd 3	0.075 (0.26)				−104.0 (53.1)	
HadCattle × Large × rd 3	0.005 (0.13)				−259.0 (52.8)	
HadCattle × LargeGrace × rd 3	0.001 (0.12)				−675.5 (15.8)	
HadCattle × Cattle × rd 3	−0.001 (0.11)				−576.2 (17.2)	
HadCattle × rd 4	0.068 (0.25)				−574.1 (20.5)	
HadCattle × Large × rd 4	0.006 (0.13)				−1275.4 (31.4)	
HadCattle × LargeGrace × rd 4	0.002 (0.12)				−1445.6 (23.4)	
HadCattle × Cattle × rd 4	−0.003 (0.10)				−592.4 (15.3)	
Flood in round 1	0.487 (0.50)			69.0 (68.1)	22.4 (90.7)	95.9 (59.1)
Head literate0	0.121 (0.33)			−278.7 (10.6)	−273.3 (17.9)	−299.5 (10.2)
NarrowPAssetAmount0	1041.643 (2111.49)		0.4 (1.4)	0.4 (1.5)	0.5 (0.4)	0.5 (0.3)
Household size0	4.306 (1.43)			22.7 (69.7)	−6.3 (93.2)	2.1 (97.3)
Number of cattle0	0.300 (0.66)					39.0 (77.8)
mean of dependent variable $T = 2$		795 20	795 20	795 20	795 17	795 14
$T = 3$ $T = 4$		104 632	104 625	101 625	57 529	56 604
$\bar{R}^2$ N	1718	0.002 2124	0.076 2103	0.076 2097	0.098 1718	0.092 1938

Source: Estimated with GUK administrative and survey data.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. We annotate the number of periods that a household is observed with T. The total number of households is shown for each values of T. T=4 indicates the number of households with complete panel information, T=3 indicates number of households observed three times, T=2 indicates the number of households observed twice. N indicates total number of observations used in ANCOVA estimation, or N=1×(T=2)+2×(T=3)+3×(T=4). Large, LargeGrace, Cattle are indicator variables of the large, large grace, and cattle arms, respectively. The default arm category is traditional arm. rd2, rd3, rd4 are dummy variables for second, third, and fourth round of survey. Productive assets do not include livestock. Regressions (1)-(3), (5)-(6) use only arm and calendar information. (4) and (7) use previous six month repayment and saving information which is lacking in rd 1, hence starts from rd 2.

2. P values in percentages in parenthesises. Standard errors are clustered at group (village) level.

TABLE 65: ANCOVA ESTIMATION OF NARROW PRODUCTIVE ASSETS BY ATTRIBUTES AND PERIOD

covariates	mean/std	(1)	(2)	(3)	(4)	(5)
(Intercept)		649.2 (0.0)	313.7 (7.3)	216.3 (38.4)	248.7 (43.1)	189.0 (49.0)
Upfront	0.040 (0.41)	477.1 (10.5)	435.1 (12.6)	425.1 (12.4)	445.0 (10.4)	444.5 (10.3)
WithGrace	0.019 (0.50)	−130.4 (72.3)	−279.8 (38.5)	−259.6 (40.2)	−303.7 (32.6)	−287.0 (34.6)
InKind	0.017 (0.44)	−230.6 (41.8)	−34.2 (88.3)	−33.3 (88.2)	6.0 (98.0)	48.4 (83.6)
HadCattle	0.218 (0.41)				167.5 (55.0)	
rd 3	0.342 (0.47)	−4.2 (96.7)	−11.0 (91.6)	−10.9 (91.8)	−13.4 (90.6)	5.5 (95.9)
Upfront × rd 3	0.267 (0.44)	−73.9 (78.2)	−79.0 (76.9)	−75.6 (77.9)	18.2 (95.5)	1.8 (99.5)
WithGrace × rd 3	0.173 (0.38)	302.8 (36.5)	322.7 (33.8)	319.7 (34.4)	406.1 (29.5)	323.0 (35.3)
InKind × rd 3	0.089 (0.28)	4.3 (98.9)	−94.6 (76.8)	−101.1 (75.4)	−246.9 (43.8)	−15.7 (96.2)
rd 4	0.316 (0.47)	−269.2 (4.8)	−263.2 (5.3)	−264.9 (5.4)	−311.0 (2.0)	−282.2 (4.1)
Upfront × rd 4	0.254 (0.44)	−549.8 (22.1)	−557.4 (21.8)	−557.5 (21.8)	−410.9 (36.8)	−463.2 (30.3)
WithGrace × rd 4	0.161 (0.37)	225.4 (63.3)	220.8 (64.1)	215.8 (64.9)	210.4 (64.9)	199.4 (67.5)
InKind × rd 4	0.082 (0.27)	442.4 (12.8)	433.5 (13.6)	427.3 (14.3)	291.1 (25.8)	490.1 (10.2)
HadCattle	0.218 (0.41)				167.5 (55.0)	
HadCattle × Upfront	0.014 (0.18)				1203.8 (20.4)	
HadCattle × WithGrace	−0.002 (0.23)				−1135.4 (27.4)	
HadCattle × InKind	−0.006 (0.19)				22.4 (96.5)	
HadCattle × rd 3	0.075 (0.26)				−104.0 (53.1)	
HadCattle × Upfront × rd 3	0.004 (0.11)				−259.0 (52.8)	
HadCattle × WithGrace × rd 3	−0.000 (0.14)				−416.5 (41.6)	
HadCattle × InKind × rd 3	−0.001 (0.11)				99.4 (84.9)	
HadCattle × rd 4	0.068 (0.25)				−574.1 (20.5)	
HadCattle × Upfront × rd 4	0.005 (0.10)				−1275.4 (31.4)	
HadCattle × WithGrace × rd 4	−0.001 (0.13)				−170.2 (92.1)	
HadCattle × InKind × rd 4	−0.003 (0.10)				853.2 (48.6)	
Flood in round 1	0.487 (0.50)			69.0 (68.1)	22.4 (90.7)	95.9 (59.1)
Head literate0	0.121 (0.33)			−278.7 (10.6)	−273.3 (17.9)	−299.5 (10.2)
NarrowPAssetAmount0	1041.643 (2111.49)		0.4 (1.4)	0.4 (1.5)	0.5 (0.4)	0.5 (0.3)
Household size0	4.306 (1.43)			22.7 (69.7)	−6.3 (93.2)	2.1 (97.3)
Number of cattle0	0.300 (0.66)					39.0 (77.8)
mean of dependent variable $T = 2$		795 20	795 20	795 20	795 17	795 14
$T = 3$ $T = 4$		104 632	104 625	101 625	57 529	56 604
$\bar{R}^2$ N	1718	0.002 2124	0.076 2103	0.076 2097	0.098 1718	0.092 1938

Source: Estimated with GUK administrative and survey data.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. We annotate the number of periods that a household is observed with T. The total number of households is shown for each values of T. T=4 indicates the number of households with complete panel information, T=3 indicates number of households observed three times, T=2 indicates the number of households observed twice. N indicates total number of observations used in ANCOVA estimation, or N=1×(T=2)+2×(T=3)+3×(T=4). Upfront is an indicator variable of the arm with an upfront large disbursement, WithGrace is an indicator variable of the arm with a grace period, InKind is an indicator variable of the arm which lends a heifer. rd2, rd3, rd4 are dummy variables for second, third, and fourth round of survey. Productive assets do not include livestock. Regressions (1)-(3), (5)-(6) use only arm and calendar information. (4) and (7) use previous six month repayment and saving information which is lacking in rd 1, hence starts from rd 2.

2. *P* values in percentages in parenthesises. Standard errors are clustered at group (village) level.

TABLE 66: ANCOVA ESTIMATION OF NARROW PRODUCTIVE ASSETS BY ATTRIBUTES, POVERTY STATUS, AND PERIOD

covariates	mean/std	(1)	(2)	(3)	(4)	(5)
(Intercept)		686.7 (0.0)	361.9 (5.6)	279.4 (28.5)	333.2 (33.0)	258.0 (37.9)
Upfront	0.040 (0.41)	445.7 (13.4)	391.9 (17.1)	384.2 (16.8)	396.6 (17.1)	401.2 (15.1)
WithGrace	0.019 (0.50)	−100.7 (79.1)	−254.5 (46.1)	−238.7 (47.4)	−281.6 (41.2)	−268.6 (41.3)
InKind	0.017 (0.44)	−251.7 (41.7)	−50.8 (85.4)	−44.5 (86.8)	−5.2 (98.6)	35.8 (89.6)
HadCattle	0.218 (0.41)				133.6 (64.1)	
UltraPoor	0.625 (0.48)	−132.2 (61.3)	−77.1 (76.4)	−90.6 (73.0)	−113.2 (69.9)	−76.1 (77.4)
Upfront × UltraPoor	0.051 (0.30)	−443.2 (50.7)	−498.5 (45.8)	−532.5 (41.4)	−533.2 (45.0)	−473.2 (46.9)
WithGrace × UltraPoor	0.036 (0.39)	−151.6 (87.2)	−130.7 (88.7)	−111.6 (90.1)	−194.2 (84.4)	−113.1 (90.1)
InKind × UltraPoor	0.019 (0.35)	123.2 (87.8)	43.7 (95.5)	15.6 (98.4)	−19.2 (98.3)	39.8 (96.0)
rd 3	0.342 (0.47)	−20.8 (84.0)	−27.0 (79.9)	−27.0 (80.0)	−43.0 (72.0)	−18.3 (86.8)
UltraPoor × rd 3	0.210 (0.41)	12.1 (94.4)	−21.5 (90.3)	−19.8 (91.1)	−83.0 (67.3)	4.5 (98.0)
Upfront × rd 3	0.267 (0.44)	−39.8 (89.5)	−45.7 (88.0)	−43.5 (88.6)	92.6 (80.5)	53.9 (86.6)
WithGrace × rd 3	0.173 (0.38)	275.1 (38.2)	293.1 (35.4)	290.5 (36.0)	361.5 (32.7)	290.6 (37.6)
InKind × rd 3	0.089 (0.28)	29.0 (91.8)	−63.9 (82.9)	−69.0 (81.7)	−203.6 (49.1)	11.7 (96.9)
Upfront × UltraPoor × rd 3	0.017 (0.18)	152.7 (77.0)	145.0 (78.1)	145.2 (78.2)	372.3 (56.7)	259.4 (63.0)
WithGrace × UltraPoor × rd 3	0.012 (0.23)	441.3 (39.9)	454.2 (39.0)	454.8 (39.1)	701.7 (19.7)	490.0 (36.3)
InKind × UltraPoor × rd 3	0.006 (0.20)	−222.7 (61.5)	−358.9 (43.0)	−370.5 (41.8)	−661.0 (13.7)	−266.5 (57.4)
rd 4	0.316 (0.47)	−279.6 (4.0)	−273.7 (4.4)	−275.5 (4.4)	−333.6 (1.7)	−299.2 (3.0)
UltraPoor × rd 4	0.202 (0.40)	87.4 (76.0)	84.5 (76.9)	83.8 (77.2)	−37.9 (90.4)	59.1 (83.6)
Upfront × rd 4	0.254 (0.44)	−507.8 (27.1)	−511.2 (26.9)	−510.8 (27.1)	−334.8 (49.7)	−396.3 (39.4)
WithGrace × rd 4	0.161 (0.37)	232.7 (60.7)	228.5 (61.3)	222.2 (62.3)	212.9 (63.5)	202.0 (65.7)
InKind × rd 4	0.082 (0.27)	432.7 (10.8)	423.5 (11.5)	418.3 (12.1)	302.5 (19.6)	480.3 (8.5)
Upfront × UltraPoor × rd 4	0.017 (0.17)	820.4 (40.8)	800.4 (42.0)	803.6 (41.9)	1074.8 (32.8)	961.2 (33.4)
WithGrace × UltraPoor × rd 4	0.011 (0.23)	−644.5 (52.4)	−644.3 (52.7)	−648.7 (52.3)	−606.2 (58.2)	−686.0 (50.0)
InKind × UltraPoor × rd 4	0.006 (0.20)	312.8 (54.2)	295.9 (57.0)	293.5 (57.6)	129.0 (83.4)	349.0 (51.5)
HadCattle	0.218 (0.41)				133.6 (64.1)	
HadCattle × Upfront	0.014 (0.18)				1297.3 (16.5)	
HadCattle × WithGrace	−0.002 (0.23)				−1153.9 (26.7)	
HadCattle × InKind	−0.006 (0.19)				52.3 (92.8)	
HadCattle × rd 3	0.075 (0.26)				−51.7 (76.8)	
HadCattle × Upfront × rd 3	0.004 (0.11)				−416.8 (39.9)	
HadCattle × WithGrace × rd 3	−0.000 (0.14)				−358.1 (44.1)	
HadCattle × InKind × rd 3	−0.001 (0.11)				44.2 (92.8)	
HadCattle × rd 4	0.068 (0.25)				−510.2 (26.2)	
HadCattle × Upfront × rd 4	0.005 (0.10)				−1417.5 (25.2)	
HadCattle × WithGrace × rd 4	−0.001 (0.13)				−190.0 (91.1)	
HadCattle × InKind × rd 4	−0.003 (0.10)				900.2 (48.2)	
Flood in round 1	0.487 (0.50)			51.1 (75.1)	9.5 (95.8)	81.1 (63.8)
Head literate0	0.121 (0.33)			−314.7 (8.7)	−314.9 (14.6)	−327.4 (9.1)
NarrowPAssetAmount0	1041.643 (2111.49)		0.4 (1.5)	0.4 (1.6)	0.5 (0.5)	0.5 (0.3)
Household size0	4.306 (1.43)			22.2 (70.0)	−7.0 (92.2)	1.7 (97.8)
Number of cattle0	0.300 (0.66)					31.7 (82.2)

III.5.6 Productive assets+livestock

```
Number of obs by Arm and attrition
             AttritIn
Arm             2   3   4   9 Sum
  traditional   6   4  20 144 174
  large         5   2   1 192 200
  large grace  22   3   3 171 199
  cattle        5   5  13 177 200
  Sum          38  14  37 684 773


Number of obs by membership status and attrition
                     AttritIn
BStatus                 2   3   4   9 Sum
  borrower              8   6   8 578 600
  pure saver            0   0   0   0   0
  individual rejection  9   4   1  75  89
  group rejection       9   4   0  55  68
  rejection by flood   12   0  28   0  40
  Sum                  38  14  37 708 797
```

Table 67: ANCOVA estimation of productive and livestock assets

covariates	mean/std	(1)	(2)	(3)	(4)	(5)	(6)
(Intercept)		15563.7 (0.0)	13164.3 (0.0)	5334.4 (4.0)	13085.9 (0.0)	8045.2 (0.4)	12887.7 (0.0)
Large	0.021 (0.45)	14003.4 (0.0)	12411.4 (0.0)	12331.6 (0.0)	9904.3 (0.0)	10515.4 (0.0)	9910.8 (0.0)
LargeGrace	0.002 (0.43)	8465.5 (0.3)	7148.0 (0.7)	7387.7 (0.4)	5547.8 (2.0)	5297.3 (3.5)	5168.8 (2.7)
Cattle	0.017 (0.44)	6945.8 (0.2)	6784.0 (0.1)	6934.0 (0.1)	4489.0 (1.9)	6017.3 (0.4)	4610.4 (1.6)
HadCattle	0.218 (0.41)				4013.0 (26.1)		7100.0 (12.0)
HadCattle	0.218 (0.41)				4013.0 (26.1)		7100.0 (12.0)
HadCattle × Large	0.016 (0.22)				12282.4 (13.3)		12934.8 (11.9)
HadCattle × LargeGrace	0.004 (0.20)				2432.1 (63.1)		2340.6 (64.1)
HadCattle × Cattle	−0.006 (0.19)				3860.3 (43.5)		3972.2 (42.2)
Flood in round 1	0.487 (0.50)			106.7 (94.4)	596.1 (73.0)	−142.5 (93.3)	591.5 (74.2)
Head literate0	0.121 (0.33)			−943.9 (63.8)	−1533.1 (46.3)	−2136.7 (30.7)	−1429.0 (49.6)
ProdValue0	7262.039 (13742.94)		0.5 (0.0)	0.5 (0.0)	0.3 (2.0)	1.1 (0.4)	1.1 (0.5)
Household size0	4.306 (1.43)			1888.5 (0.0)	1519.5 (0.9)	1844.4 (0.1)	1385.4 (1.7)
Number of cattle0	0.300 (0.66)					−13720.1 (12.2)	−18339.1 (5.5)
mean of dependent variable $T = 2$		23012 20	23012 20	23012 20	23012 17	23012 14	23012 17
$T = 3$ $T = 4$		104 632	104 625	101 625	57 529	56 604	55 529
$\bar{R}^2$ N	 1718	0.046 2124	0.127 2103	0.141 2097	0.106 1718	0.125 1938	0.115 1714

Source: Estimated with GUK administrative and survey data.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. We annotate the number of periods that a household is observed with T. The total number of households is shown for each values of T. T=4 indicates the number of households with complete panel information, T=3 indicates number of households observed three times, T=2 indicates the number of households observed twice. N indicates total number of observations used in ANCOVA estimation, or N=1×(T=2)+2×(T=3)+3×(T=4). Large, LargeGrace, Cattle are indicator variables of the large, large grace, and cattle arms, respectively. The default arm category is traditional arm. Sample is continuing members and replacing members of early rejecters and received loans prior to 2015 Janunary. Household assets do not include livestock. Regressions (1)-(3), (5)-(6) use only arm and calendar information. (4) and (7) use previous six month repayment and saving information which is lacking in rd 1, hence starts from rd 2.

2. *P* values in percentages in parenthesises. Standard errors are clustered at group (village) level.

TABLE 68: ANCOVA ESTIMATION OF PRODUCTIVE AND LIVESTOCK ASSETS BY ATTRIBUTES

covariates	mean/std	(1)	(2)	(3)	(4)	(5)	(6)
(Intercept)		15563.7 (0.0)	13164.3 (0.0)	5334.4 (4.0)	13085.9 (0.0)	8045.2 (0.4)	12887.7 (0.0)
Upfront	0.040 (0.41)	14003.4 (0.0)	12411.4 (0.0)	12331.6 (0.0)	9904.3 (0.0)	10515.4 (0.0)	9910.8 (0.0)
WithGrace	0.019 (0.50)	−5537.9 (12.6)	−5263.4 (9.6)	−4943.9 (11.9)	−4356.5 (14.8)	−5218.0 (11.5)	−4742.0 (12.6)
InKind	0.017 (0.44)	−1519.7 (56.1)	−364.0 (89.1)	−453.8 (85.8)	−1058.7 (64.2)	720.0 (77.2)	−558.4 (80.3)
HadCattle	0.218 (0.41)				4013.0 (26.1)		7100.0 (12.0)
HadCattle	0.218 (0.41)				4013.0 (26.1)		7100.0 (12.0)
HadCattle × Upfront	0.014 (0.18)				12282.4 (13.3)		12934.8 (11.9)
HadCattle × WithGrace	−0.002 (0.23)				−9850.3 (21.9)		−10594.2 (18.6)
HadCattle × InKind	−0.006 (0.19)				1428.2 (75.3)		1631.6 (70.0)
Flood in round 1	0.487 (0.50)			106.7 (94.4)	596.1 (73.0)	−142.5 (93.3)	591.5 (74.2)
Head literate0	0.121 (0.33)			−943.9 (63.8)	−1533.1 (46.3)	−2136.7 (30.7)	−1429.0 (49.6)
ProdValue0	7262.039 (13742.94)		0.5 (0.0)	0.5 (0.0)	0.3 (2.0)	1.1 (0.4)	1.1 (0.5)
Household size0	4.306 (1.43)			1888.5 (0.0)	1519.5 (0.9)	1844.4 (0.1)	1385.4 (1.7)
Number of cattle0	0.300 (0.66)					−13720.1 (12.2)	−18339.1 (5.5)
mean of dependent variable $T = 2$		23012 20	23012 20	23012 20	23012 17	23012 14	23012 17
$T = 3$ $T = 4$		104 632	104 625	101 625	57 529	56 604	55 529
$\bar{R}^2$ N	 1718	0.046 2124	0.127 2103	0.141 2097	0.106 1718	0.125 1938	0.115 1714

Source: Estimated with GUK administrative and survey data.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. We annotate the number of periods that a household is observed with T. The total number of households is shown for each values of T. T=4 indicates the number of households with complete panel information, T=3 indicates number of households observed three times, T=2 indicates the number of households observed twice. N indicates total number of observations used in ANCOVA estimation, or N=1×(T=2)+2×(T=3)+3×(T=4). Upfront is an indicator variable of the arm with an upfront large disbursement, WithGrace is an indicator variable of the arm with a grace period, InKind is an indicator variable of the arm which lends a heifer. Sample is continuing members and replacing members of early rejecters and received loans prior to 2015 Janunary. Household assets do not include livestock. Regressions (1)-(3), (5)-(6) use only arm and calendar information. (4) and (7) use previous six month repayment and saving information which is lacking in rd 1, hence starts from rd 2.

2. *P* values in percentages in parenthesises. Standard errors are clustered at group (village) level.

TABLE 69: ANCOVA ESTIMATION OF LIVESTOCK AND PRODUCTIVE ASSETS BY PERIOD

covariates	mean/std	(1)	(2)	(3)	(4)	(5)	(6)
(Intercept)		14445.8	11964.3	4005.4	10007.4	5794.2	9779.9
		(0.0)	(0.0)	(14.4)	(0.1)	(4.6)	(0.2)
Large	0.021	14260.3	12674.8	12579.7	10230.5	10789.6	10203.8
	(0.45)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
LargeGrace	0.002	8405.2	7073.7	7270.7	5444.8	5213.2	5069.8
	(0.43)	(0.2)	(0.6)	(0.3)	(1.7)	(3.1)	(2.5)
Cattle	0.017	7000.4	6776.1	6892.9	4395.0	5853.1	4521.3
	(0.44)	(0.1)	(0.2)	(0.1)	(2.4)	(0.5)	(2.0)
HadCattle	0.218				4803.8		7901.7
	(0.41)				(17.4)		(8.2)
rd 3	0.342	912.4	1035.3	1232.8	3148.7	2610.8	3217.2
	(0.47)	(33.1)	(26.3)	(18.9)	(0.2)	(0.4)	(0.2)
Large × rd 3	0.094	−2487.6	−2526.3	−2226.5	−3264.6	−2616.3	−3059.7
	(0.29)	(38.9)	(37.9)	(45.0)	(35.2)	(39.1)	(38.4)
LargeGrace × rd 3	0.084	−539.2	−302.8	−79.4	−700.7	−331.0	−716.7
	(0.28)	(78.7)	(87.9)	(96.8)	(77.2)	(88.2)	(76.8)
Cattle × rd 3	0.089	−1476.5	−1429.4	−1283.2	−815.8	−487.9	−843.0
	(0.28)	(53.9)	(53.8)	(58.1)	(73.8)	(81.2)	(73.0)
rd 4	0.316	2208.2	2352.1	2473.8	5600.9	4082.8	5642.4
	(0.47)	(5.6)	(4.3)	(3.4)	(0.0)	(0.0)	(0.0)
Large × rd 4	0.093	−567.0	−644.2	−754.0	−2453.6	−1260.0	−2184.1
	(0.29)	(87.8)	(85.8)	(83.5)	(54.4)	(73.4)	(59.0)
LargeGrace × rd 4	0.079	947.3	827.8	1083.0	426.9	599.9	412.3
	(0.27)	(66.5)	(70.9)	(62.0)	(87.6)	(80.7)	(88.0)
Cattle × rd 4	0.082	849.2	1508.1	1717.2	1179.7	2559.7	1097.4
	(0.27)	(74.6)	(56.8)	(51.5)	(67.1)	(29.8)	(68.9)
HadCattle	0.218				4803.8		7901.7
	(0.41)				(17.4)		(8.2)
HadCattle × Large	0.016				11293.3		11981.0
	(0.22)				(14.7)		(13.1)
HadCattle × LargeGrace	0.004				4373.9		4279.7
	(0.20)				(38.4)		(39.7)
HadCattle × Cattle	−0.006				3396.8		3525.5
	(0.19)				(50.2)		(48.7)
HadCattle × rd 3	0.075				−4650.0		−4706.6
	(0.26)				(2.6)		(2.3)
HadCattle × Large × rd 3	0.005				6632.7		6292.2
	(0.13)				(24.7)		(26.9)
HadCattle × LargeGrace × rd 3	0.001				−9568.2		−9648.5
	(0.12)				(9.3)		(9.0)
HadCattle × Cattle × rd 3	−0.001				4770.5		4704.9
	(0.11)				(30.7)		(31.4)
HadCattle × rd 4	0.068				−4965.5		−5180.3
	(0.25)				(9.7)		(8.0)
HadCattle × Large × rd 4	0.006				6928.4		6797.2
	(0.13)				(42.4)		(42.9)
HadCattle × LargeGrace × rd 4	0.002				−11453.1		−11283.1
	(0.12)				(15.5)		(16.0)
HadCattle × Cattle × rd 4	−0.003				4092.8		3779.0
	(0.10)				(57.3)		(59.2)
Flood in round 1	0.487			103.0	599.3	−156.4	592.6
	(0.50)			(94.6)	(73.1)	(92.7)	(74.2)
Head literate0	0.121			−875.6	−1510.2	−2060.1	−1401.3
	(0.33)			(66.2)	(47.1)	(32.5)	(50.6)
ProdValue0	7262.039		0.5	0.5	0.3	1.1	1.1
	(13742.94)		(0.0)	(0.0)	(2.0)	(0.4)	(0.5)
Household size0	4.306			1897.6	1527.3	1852.3	1393.2
	(1.43)			(0.0)	(0.8)	(0.1)	(1.6)
Number of cattle0	0.300					−13688.1	−18274.2
	(0.66)					(12.4)	(5.8)
mean of dependent variable		23012	23012	23012	23012	23012	23012
$T = 2$		20	20	20	17	14	17
$T = 3$		104	104	101	57	56	55
$T = 4$		632	625	625	529	604	529
$\tilde{R}^2$		0.045	0.126	0.14	0.114	0.128	0.123
N	1718	2124	2103	2097	1718	1938	1714

Source: Estimated with GUK administrative and survey data.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. We annotate the number of periods that a household is observed with T. The total number of households is shown for each values of T. T=4 indicates the number of households with complete panel information, T=3 indicates number of households observed three times, T=2 indicates the number of households observed twice. N indicates total number of observations used in ANCOVA estimation, or N=1×(T=2)+2×(T=3)+3×(T=4). Large, LargeGrace, Cattle are indicator variables of the large, large grace, and cattle arms, respectively. The default arm category is traditional arm. rd2, rd3, rd4 are dummy variables for second, third, and fourth round of survey. Productive assets do not include livestock. Regressions (1)-(3), (5)-(6) use only arm and calendar information. (4) and (7) use previous six month repayment and saving information which is lacking in rd 1, hence starts from rd 2.

2. P values in percentages in parenthesises. Standard errors are clustered at group (village) level.

TABLE 70: ANCOVA ESTIMATION OF LIVESTOCK AND PRODUCTIVE ASSETS BY ATTRIBUTES AND PERIOD

covariates	mean/std	(1)	(2)	(3)	(4)	(5)	(6)
(Intercept)		14445.8	11964.3	4005.4	10007.4	5794.2	9779.9
		(0.0)	(0.0)	(14.4)	(0.1)	(4.6)	(0.2)
Upfront	0.040	14260.3	12674.8	12579.7	10230.5	10789.6	10203.8
	(0.41)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
WithGrace	0.019	−5855.1	−5601.1	−5309.0	−4785.7	−5576.4	−5134.0
	(0.50)	(9.7)	(6.8)	(8.3)	(10.4)	(8.1)	(9.1)
InKind	0.017	−1404.8	−297.6	−377.8	−1049.9	639.9	−548.5
	(0.44)	(57.5)	(90.7)	(87.7)	(63.6)	(79.1)	(80.1)
HadCattle	0.218				4803.8		7901.7
	(0.41)				(17.4)		(8.2)
rd 3	0.342	912.4	1035.3	1232.8	3148.7	2610.8	3217.2
	(0.47)	(33.1)	(26.3)	(18.9)	(0.2)	(0.4)	(0.2)
Upfront × rd 3	0.267	−2487.6	−2526.3	−2226.5	−3264.6	−2616.3	−3059.7
	(0.44)	(38.9)	(37.9)	(45.0)	(35.2)	(39.1)	(38.4)
WithGrace × rd 3	0.173	1948.4	2223.4	2147.2	2563.9	2285.4	2343.0
	(0.38)	(49.0)	(42.8)	(45.2)	(41.7)	(44.1)	(45.9)
InKind × rd 3	0.089	−937.3	−1126.5	−1203.8	−115.1	−156.9	−126.4
	(0.28)	(68.6)	(61.6)	(59.0)	(95.2)	(93.6)	(94.8)
rd 4	0.316	2208.2	2352.1	2473.8	5600.9	4082.8	5642.4
	(0.47)	(5.6)	(4.3)	(3.4)	(0.0)	(0.0)	(0.0)
Upfront × rd 4	0.254	−567.0	−644.2	−754.0	−2453.6	−1260.0	−2184.1
	(0.44)	(87.8)	(85.8)	(83.5)	(54.4)	(73.4)	(59.0)
WithGrace × rd 4	0.161	1514.3	1472.0	1837.0	2880.5	1859.8	2596.4
	(0.37)	(68.2)	(69.1)	(61.9)	(45.5)	(62.1)	(50.3)
InKind × rd 4	0.082	−98.1	680.2	634.3	752.9	1959.8	685.1
	(0.27)	(97.1)	(80.6)	(81.8)	(76.4)	(44.3)	(78.4)
HadCattle	0.218				4803.8		7901.7
	(0.41)				(17.4)		(8.2)
HadCattle × Upfront	0.014				11293.3		11981.0
	(0.18)				(14.7)		(13.1)
HadCattle × WithGrace	−0.002				−6919.5		−7701.2
	(0.23)				(35.4)		(30.4)
HadCattle × InKind	−0.006				−977.0		−754.3
	(0.19)				(82.4)		(85.6)
HadCattle × rd 3	0.075				−4650.0		−4706.6
	(0.26)				(2.6)		(2.3)
HadCattle × Upfront × rd 3	0.004				6632.7		6292.2
	(0.11)				(24.7)		(26.9)
HadCattle × WithGrace × rd 3	−0.000				−16200.9		−15940.7
	(0.14)				(1.8)		(1.9)
HadCattle × InKind × rd 3	−0.001				14338.7		14353.4
	(0.11)				(1.8)		(1.8)
HadCattle × rd 4	0.068				−4965.5		−5180.3
	(0.25)				(9.7)		(8.0)
HadCattle × Upfront × rd 4	0.005				6928.4		6797.2
	(0.10)				(42.4)		(42.9)
HadCattle × WithGrace × rd 4	−0.001				−18381.5		−18080.3
	(0.13)				(5.0)		(5.3)
HadCattle × InKind × rd 4	−0.003				15545.9		15062.1
	(0.10)				(5.7)		(6.2)
Flood in round 1	0.487			103.0	599.3	−156.4	592.6
	(0.50)			(94.6)	(73.1)	(92.7)	(74.2)
Head literate0	0.121			−875.6	−1510.2	−2060.1	−1401.3
	(0.33)			(66.2)	(47.1)	(32.5)	(50.6)
ProdValue0	7262.039		0.5	0.5	0.3	1.1	1.1
	(13742.94)		(0.0)	(0.0)	(2.0)	(0.4)	(0.5)
Household size0	4.306			1897.6	1527.3	1852.3	1393.2
	(1.43)			(0.0)	(0.8)	(0.1)	(1.6)
Number of cattle0	0.300					−13688.1	−18274.2
	(0.66)					(12.4)	(5.8)
mean of dependent variable		23012	23012	23012	23012	23012	23012
$T = 2$		20	20	20	17	14	17
$T = 3$		104	104	101	57	56	55
$T = 4$		632	625	625	529	604	529
$\tilde{R}^2$		0.045	0.126	0.14	0.114	0.128	0.123
N	1718	2124	2103	2097	1718	1938	1714

Source: Estimated with GUK administrative and survey data.

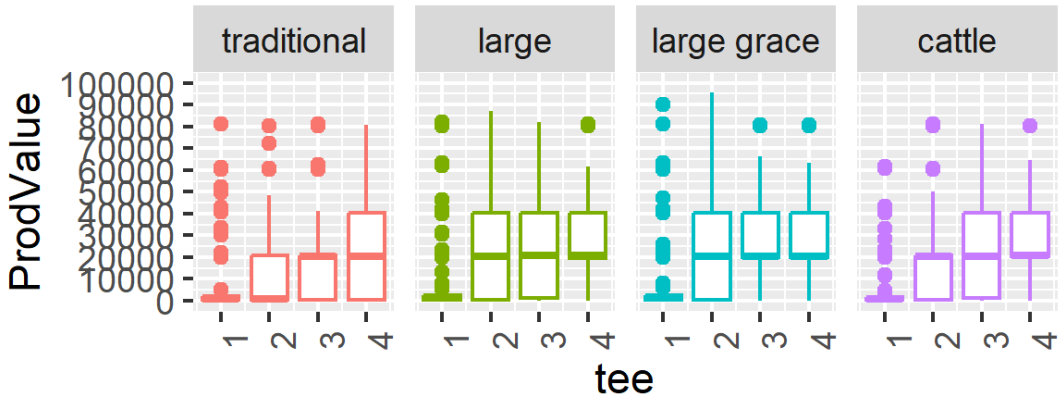
Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. We annotate the number of periods that a household is observed with T. The total number of households is shown for each values of T. T=4 indicates the number of households with complete panel information, T=3 indicates number of households observed three times, T=2 indicates the number of households observed twice. N indicates total number of observations used in ANCOVA estimation, or N=1×(T=2)+2×(T=3)+3×(T=4). Upfront is an indicator variable of the arm with an upfront large disbursement, WithGrace is an indicator variable of the arm with a grace period, InKind is an indicator variable of the arm which lends a heifer. rd2, rd3, rd4 are dummy variables for second, third, and fourth round of survey. Productive assets do not include livestock. Regressions (1)-(3), (5)-(6) use only arm and calendar information. (4) and (7) use previous six month repayment and saving information which is lacking in rd 1, hence starts from rd 2.

2. *P* values in percentages in parenthesises. Standard errors are clustered at group (village) level.

TABLE 71: ANCOVA ESTIMATION OF LIVESTOCK AND PRODUCTIVE ASSETS BY ATTRIBUTES, POVERTY STATUS, AND PERIOD

covariates	mean/std	(1)	(2)	(3)	(4)	(5)	(6)
(Intercept)		14425.7 (0.0)	11755.9 (0.0)	3754.5 (18.5)	9723.0 (0.2)	5638.5 (5.8)	9498.6 (0.3)
Upfront	0.040 (0.41)	14297.2 (0.0)	12837.5 (0.0)	12729.5 (0.0)	10490.9 (0.0)	10845.2 (0.0)	10467.4 (0.0)
WithGrace	0.019 (0.50)	−5740.4 (9.3)	−5540.4 (5.9)	−5294.4 (7.2)	−5076.1 (7.5)	−5604.3 (7.0)	−5430.3 (6.6)
InKind	0.017 (0.44)	−1470.0 (55.0)	−285.6 (91.0)	−305.4 (90.0)	−826.6 (70.8)	717.7 (76.5)	−328.0 (88.0)
HadCattle	0.218 (0.41)				4489.1 (20.5)		7563.7 (9.9)
UltraPoor	0.625 (0.48)	−2456.1 (9.0)	−2565.7 (8.3)	−2522.4 (9.8)	−2488.8 (12.6)	−2058.7 (19.9)	−2437.5 (13.7)
Upfront × UltraPoor	0.051 (0.30)	−5865.0 (22.5)	−4724.0 (31.3)	−5367.9 (28.0)	−7581.5 (16.8)	−6178.3 (24.2)	−7447.9 (17.6)
WithGrace × UltraPoor	0.036 (0.39)	5109.7 (27.6)	6098.2 (19.7)	6921.7 (16.0)	10587.3 (4.2)	7418.7 (14.5)	10554.8 (4.8)
InKind × UltraPoor	0.019 (0.35)	114.7 (96.9)	−600.6 (86.0)	−944.2 (78.0)	−2040.5 (53.6)	−606.9 (85.9)	−2215.4 (51.9)
rd 3	0.342 (0.47)	882.4 (34.4)	1038.3 (26.1)	1234.3 (18.7)	3089.4 (0.2)	2551.8 (0.5)	3159.8 (0.2)
UltraPoor × rd 3	0.210 (0.41)	−499.3 (78.7)	−773.1 (67.7)	−652.2 (72.3)	−335.7 (86.8)	−69.0 (97.0)	−345.1 (86.5)
Upfront × rd 3	0.267 (0.44)	−2131.1 (44.5)	−2212.2 (42.7)	−1937.9 (49.6)	−2942.8 (38.8)	−2216.4 (45.0)	−2715.2 (42.7)
WithGrace × rd 3	0.173 (0.38)	2260.0 (42.5)	2599.9 (35.8)	2513.5 (38.2)	2951.4 (34.8)	2557.6 (38.8)	2721.6 (38.8)
InKind × rd 3	0.089 (0.28)	−1293.5 (59.3)	−1538.6 (51.3)	−1583.3 (49.9)	−472.2 (81.6)	−468.2 (82.3)	−491.0 (80.9)
Upfront × UltraPoor × rd 3	0.017 (0.18)	5424.0 (31.7)	4601.6 (39.5)	5145.9 (33.7)	5677.0 (36.5)	5733.3 (29.7)	5768.7 (36.1)
WithGrace × UltraPoor × rd 3	0.012 (0.23)	−6329.9 (31.1)	−6358.8 (31.3)	−6835.7 (27.3)	−6518.0 (33.3)	−5979.9 (33.9)	−6582.2 (33.1)
InKind × UltraPoor × rd 3	0.006 (0.20)	5216.7 (28.8)	5446.6 (27.2)	4731.6 (33.3)	6163.2 (21.5)	5787.7 (22.6)	6235.0 (21.0)
rd 4	0.316 (0.47)	2152.3 (5.5)	2368.4 (3.8)	2494.8 (2.9)	5510.9 (0.0)	3998.5 (0.0)	5554.3 (0.0)
UltraPoor × rd 4	0.202 (0.40)	752.4 (73.0)	146.2 (94.8)	83.6 (97.0)	−87.8 (97.4)	604.5 (79.1)	−4.8 (99.9)
Upfront × rd 4	0.254 (0.44)	−203.5 (95.4)	−386.9 (91.1)	−507.4 (88.3)	−2034.2 (59.8)	−811.8 (81.9)	−1761.2 (65.0)
WithGrace × rd 4	0.161 (0.37)	1611.6 (65.1)	1611.2 (65.3)	1958.7 (58.4)	3052.6 (41.2)	1907.5 (60.0)	2769.9 (46.0)
InKind × rd 4	0.082 (0.27)	−216.2 (93.6)	598.4 (83.3)	604.4 (83.2)	639.2 (80.2)	1879.7 (47.9)	552.2 (82.8)
Upfront × UltraPoor × rd 4	0.017 (0.17)	10674.3 (11.8)	9698.7 (15.2)	9621.6 (15.5)	11557.7 (18.1)	11336.8 (11.3)	11533.9 (18.4)
WithGrace × UltraPoor × rd 4	0.011 (0.23)	−8394.5 (25.6)	−8364.9 (26.3)	−8190.7 (27.4)	−6882.7 (41.4)	−7485.9 (31.2)	−6994.9 (40.9)
InKind × UltraPoor × rd 4	0.006 (0.20)	2403.2 (64.5)	1088.9 (85.3)	78.8 (98.9)	1266.9 (82.9)	1104.0 (84.5)	1649.6 (77.7)
HadCattle	0.218 (0.41)				4489.1 (20.5)		7563.7 (9.9)
HadCattle × Upfront	0.014 (0.18)				10435.3 (19.3)		11117.8 (17.1)
HadCattle × WithGrace	−0.002 (0.23)				−6154.7 (41.8)		−6921.5 (36.7)
HadCattle × InKind	−0.006 (0.19)				−1103.6 (80.1)		−901.6 (82.9)
HadCattle × rd 3	0.075 (0.26)				−4454.0 (3.7)		−4511.2 (3.4)
HadCattle × Upfront × rd 3	0.004 (0.11)				6306.5 (27.8)		5930.8 (30.5)
HadCattle × WithGrace × rd 3	−0.000 (0.14)				−16995.8 (1.3)		−16720.1 (1.4)
HadCattle × InKind × rd 3	−0.001 (0.11)				14819.5 (1.8)		14840.7 (1.8)
HadCattle × rd 4	0.068 (0.25)				−4501.4 (13.3)		−4727.8 (11.1)
HadCattle × Upfront × rd 4	0.005 (0.10)				6233.8 (46.5)		6100.3 (47.1)
HadCattle × WithGrace × rd 4	−0.001 (0.13)				−19088.4 (3.8)		−18784.2 (4.1)
HadCattle × InKind × rd 4	−0.003 (0.10)				15913.8 (5.7)		15428.6 (6.3)
Flood in round 1	0.487 (0.50)			29.2 (98.5)	355.9 (84.0)	−257.9 (88.1)	366.1 (84.1)
Head literate0	0.121 (0.33)			−1189.9 (56.0)	−1933.6 (34.6)	−2321.0 (27.6)	−1777.2 (38.9)
ProdValue0	7262.039 (13742.94)		0.5 (0.0)	0.5 (0.0)	0.3 (1.8)	1.1 (0.4)	1.1 (0.4)
Household size0	4.306 (1.43)			1928.9 (0.0)	1608.0 (0.5)	1896.5 (0.1)	1472.4 (1.0)
Number of cattle0	0.300 (0.66)					−13650.7 (12.3)	−18058.6 (5.9)

FIGURE 20: LIVESTOCK AND PRODUCTIVE ASSET HOLDING



Source: Survey data.

Note:

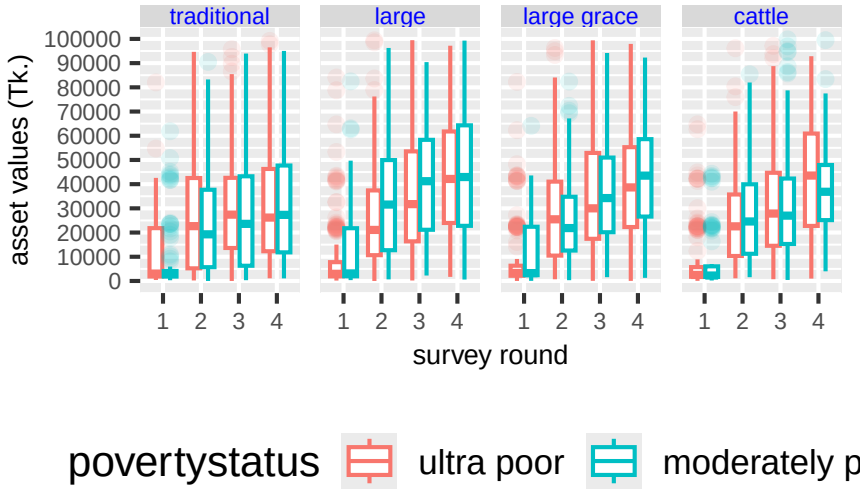
III.5.7 Net broad assets: Broad assets+Livestock-GUK Debt-Other Debts

Net broad assets = Broad assets + net saving - debt to GUK - debts to relatives and money lenders.

```
Number of obs by Arm and attrition
             AttritIn
Arm             2   3   4   9 Sum
  traditional   6   4  20 144 174
  large         5   2   1 192 200
  large grace  22   3   3 171 199
  cattle        5   5  13 177 200
  Sum          38  14  37 684 773


Number of obs by membership status and attrition
                     AttritIn
BStatus                 2   3   4   9 Sum
  borrower              8   6   8 578 600
  pure saver            0   0   0   0   0
  individual rejection  9   4   1  75  89
  group rejection       9   4   0  55  68
  rejection by flood   12   0  28   0  40
  Sum                  38  14  37 708 797
```

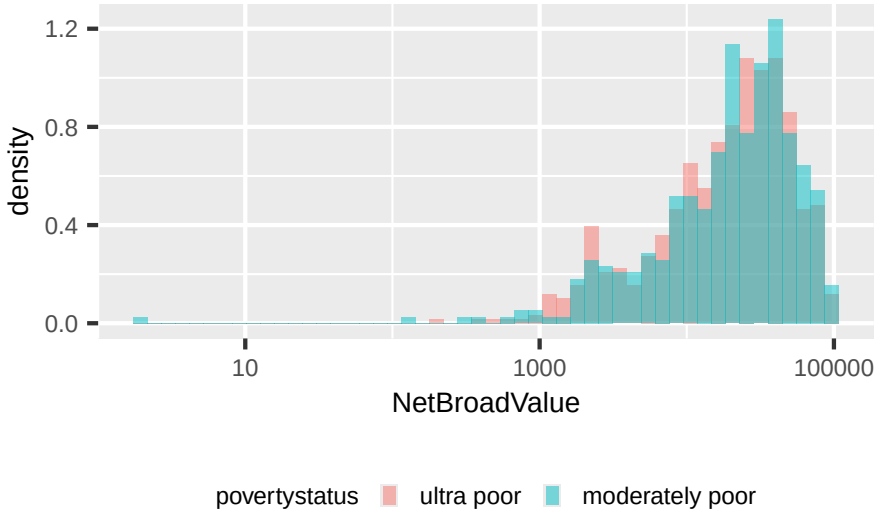
FIGURE 21: TOTAL AND NET BROAD ASSET VALUES



Source: Survey data.

Note: Top panel shows total gross asset values. Bottom panel shows total net broad asset values = total gross broad asset values - debt outstanding. Debt outstanding takes the value of the month immediately after the respective survey round interview.

FIGURE 22: BROAD NET ASSET VALUES AT ROUND 1



Source: Survey data.

Note: Broad net asset values = total gross broad asset values - debt outstanding. Debt outstanding takes the value of the month immediately after the respective survey round interview.

FIGURE 23: TOTAL BROAD ASSET DYNAMICS OF NONBORROWERS

Source: Survey data.

Note: Only for nonborrowers. Scatter plots contrast t vs. $t + 1$ comparison where t and $t + 1$ are given in strip ribbons of each panel.

Table 72: ANCOVA estimation of net broad assets

covariates	mean/std	(1)	(2)	(3)	(4)	(5)	(6)
(Intercept)		27712.5 (0.0)	26429.6 (0.0)	13561.5 (3.2)	22162.5 (0.4)	17249.7 (1.9)	22388.0 (0.3)
Large	0.048 (0.46)	18649.9 (0.0)	16423.3 (0.1)	16992.1 (0.1)	11730.5 (4.7)	14781.4 (0.6)	10668.5 (5.4)
LargeGrace	0.006 (0.43)	11398.8 (0.3)	9173.7 (7.0)	9344.7 (5.6)	4727.2 (37.3)	6712.0 (18.6)	4950.9 (35.8)
Cattle	0.009 (0.44)	11009.7 (2.3)	10053.1 (9.7)	10651.3 (6.8)	5740.7 (39.2)	8154.8 (19.8)	5389.9 (42.1)
HadCattle	0.265 (0.44)				9050.7 (27.7)		8759.9 (34.3)
HadCattle	0.265 (0.44)				9050.7 (27.7)		8759.9 (34.3)
HadCattle × Large	0.024 (0.25)						19791.0 (13.6)
HadCattle × LargeGrace	0.009 (0.23)						1767.4 (86.7)
HadCattle × Cattle	−0.012 (0.21)						10156.7 (32.4)
Flood in round 1	0.414 (0.49)			−4420.7 (23.6)	−2572.9 (54.3)	−4374.1 (28.5)	−2292.4 (58.5)
Head literate0	0.149 (0.36)			2538.6 (64.6)	2909.1 (64.0)	1061.5 (85.2)	3014.7 (63.4)
NetBroad Value0	10261.899 (15197.09)		0.6 (0.0)	0.6 (0.0)	0.2 (42.3)	0.5 (28.9)	0.6 (23.1)
Household size0	4.538 (1.35)			3151.1 (1.0)	2974.3 (3.1)	3255.6 (1.5)	2844.4 (3.1)
Number of cattle0	0.380 (0.73)					330.7 (97.4)	−8526.9 (48.7)
mean of dependent variable		38180	38180	38180	38180	38180	38180
$T = 2$		42	13	13	13	10	13
$T = 3$		137	84	81	38	40	36
$T = 4$		569	377	377	327	362	327
$\bar{R}^2$		0.023	0.054	0.064	0.034	0.047	0.037
N	1081	2023	1312	1306	1070	1176	1066

Source: Estimated with GUK administrative and survey data.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. We annotate the number of periods that a household is observed with T. The total number of households is shown for each values of T. T=4 indicates the number of households with complete panel information, T=3 indicates number of households observed three times, T=2 indicates the number of households observed twice. N indicates total number of observations used in ANCOVA estimation, or N=1×(T=2)+2×(T=3)+3×(T=4). Large, LargeGrace, Cattle are indicator variables of the large, large grace, and cattle arms, respectively. The default arm category is traditional arm. Household assets do not include livestock. Regressions (1)-(3), (5)-(6) use only arm and calendar information. (4) and (7) use previous six month repayment and saving information which is lacking in rd 1, hence starts from rd 2.

2. *P* values in percentages in parenthesises. Standard errors are clustered at group (village) level.

TABLE 73: ANCOVA ESTIMATION OF NET BROAD ASSETS BY ATTRIBUTES

covariates	mean/std	(1)	(2)	(3)	(4)	(5)	(6)
(Intercept)		27712.5 (0.0)	26429.6 (0.0)	13561.5 (3.2)	22162.5 (0.4)	17249.7 (1.9)	22388.0 (0.3)
Upfront	0.063 (0.39)	18649.9 (0.0)	16423.3 (0.1)	16992.1 (0.1)	11730.5 (4.7)	14781.4 (0.6)	10668.5 (5.4)
WithGrace	0.014 (0.50)	−7251.1 (18.8)	−7249.6 (21.9)	−7647.4 (21.0)	−7003.2 (27.3)	−8069.4 (21.6)	−5717.6 (35.7)
InKind	0.009 (0.44)	−389.1 (94.2)	879.4 (89.6)	1306.5 (84.4)	1013.5 (88.5)	1442.8 (84.1)	438.9 (95.2)
HadCattle	0.265 (0.44)				9050.7 (27.7)		8759.9 (34.3)
HadCattle	0.265 (0.44)				9050.7 (27.7)		8759.9 (34.3)
HadCattle × Upfront	0.021 (0.20)						19791.0 (13.6)
HadCattle × WithGrace	−0.003 (0.26)						−18023.6 (19.6)
HadCattle × InKind	−0.012 (0.21)						8389.4 (47.4)
Flood in round 1	0.414 (0.49)			−4420.7 (23.6)	−2572.9 (54.3)	−4374.1 (28.5)	−2292.4 (58.5)
Head literate0	0.149 (0.36)			2538.6 (64.6)	2909.1 (64.0)	1061.5 (85.2)	3014.7 (63.4)
NetBroad Value0	10261.899 (15197.09)		0.6 (0.0)	0.6 (0.0)	0.2 (42.3)	0.5 (28.9)	0.6 (23.1)
Household size0	4.538 (1.35)			3151.1 (1.0)	2974.3 (3.1)	3255.6 (1.5)	2844.4 (3.1)
Number of cattle0	0.380 (0.73)					330.7 (97.4)	−8526.9 (48.7)
mean of dependent variable		38180	38180	38180	38180	38180	38180
$T = 2$		42	13	13	13	10	13
$T = 3$		137	84	81	38	40	36
$T = 4$		569	377	377	327	362	327
$\bar{R}^2$		0.023	0.054	0.064	0.034	0.047	0.037
N	1081	2023	1312	1306	1070	1176	1066

Source: Estimated with GUK administrative and survey data.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. We annotate the number of periods that a household is observed with T. The total number of households is shown for each values of T. T=4 indicates the number of households with complete panel information, T=3 indicates number of households observed three times, T=2 indicates the number of households observed twice. N indicates total number of observations used in ANCOVA estimation, or N=1×(T=2)+2×(T=3)+3×(T=4). Upfront is an indicator variable of the arm with an upfront large disbursement, WithGrace is an indicator variable of the arm with a grace period, InKind is an indicator variable of the arm which lends a heifer. Household assets do not include livestock. Regressions (1)-(3), (5)-(6) use only arm and calendar information. (4) and (7) use previous six month repayment and saving information which is lacking in rd 1, hence starts from rd 2.

2. *P* values in percentages in parenthesises. Standard errors are clustered at group (village) level.

Table 74: ANCOVA estimation of net broad assets by period

covariates	mean/std	(1)	(2)	(3)	(4)	(5)	(6)
(Intercept)		16278.0 (0.0)	14254.8 (0.0)	318.7 (96.3)	8686.5 (27.4)	4284.2 (57.2)	9212.5 (23.2)
Large	0.048 (0.46)	17352.0 (0.0)	15354.5 (0.2)	15924.8 (0.2)	10126.5 (7.5)	13206.9 (1.1)	9255.0 (8.7)
LargeGrace	0.006 (0.43)	9114.6 (0.8)	6774.6 (15.2)	6854.9 (13.6)	2004.6 (68.2)	3964.7 (39.0)	1923.1 (69.6)
Cattle	0.009 (0.44)	10586.5 (4.1)	9973.2 (12.6)	10463.3 (9.5)	5224.4 (45.0)	7663.8 (23.9)	4852.7 (48.4)
HadCattle	0.265 (0.44)				9282.7 (26.4)		7888.9 (39.9)
rd 3	0.342 (0.47)	14774.1 (0.0)	15425.4 (0.0)	15978.9 (0.0)	18035.8 (0.0)	17231.4 (0.0)	17856.9 (0.0)
Large × rd 3	0.104 (0.30)	5227.0 (28.6)	2758.5 (66.9)	3394.0 (59.9)	5603.6 (45.0)	6282.0 (35.5)	4590.5 (52.3)
LargeGrace × rd 3	0.085 (0.28)	11120.3 (4.4)	10478.8 (10.6)	11163.3 (8.0)	13170.2 (8.3)	13549.3 (5.0)	14769.6 (6.8)
Cattle × rd 3	0.087 (0.28)	473.3 (93.1)	239.7 (97.3)	694.6 (92.1)	3347.8 (67.8)	3962.9 (58.8)	3641.5 (66.0)
rd 4	0.315 (0.46)	20830.9 (0.0)	22161.5 (0.0)	22734.9 (0.0)	25861.6 (0.0)	24170.6 (0.0)	26001.2 (0.0)
Large × rd 4	0.102 (0.30)	7410.9 (23.2)	6891.7 (30.0)	6695.4 (31.9)	7467.0 (34.7)	8931.1 (20.4)	7506.9 (31.0)
LargeGrace × rd 4	0.080 (0.27)	9853.3 (7.2)	9793.4 (15.5)	10283.3 (13.3)	11227.8 (18.6)	11703.6 (11.5)	13910.8 (11.4)
Cattle × rd 4	0.079 (0.27)	1456.1 (79.4)	−1140.1 (87.7)	−236.1 (97.2)	89.7 (99.1)	1348.3 (85.0)	658.5 (93.1)
HadCattle	0.265 (0.44)				9282.7 (26.4)		7888.9 (39.9)
HadCattle × Large	0.024 (0.25)						18684.8 (13.6)
HadCattle × LargeGrace	0.009 (0.23)						7006.0 (48.2)
HadCattle × Cattle	−0.012 (0.21)						10421.7 (33.4)
HadCattle × rd 3	0.092 (0.29)						7546.2 (10.4)
HadCattle × Large × rd 3	0.008 (0.15)						10585.1 (41.8)
HadCattle × LargeGrace × rd 3	0.003 (0.14)						−23992.5 (9.3)
HadCattle × Cattle × rd 3	−0.004 (0.12)						286.9 (98.2)
HadCattle × rd 4	0.084 (0.28)						7898.2 (19.5)
HadCattle × Large × rd 4	0.009 (0.14)						−2582.6 (89.0)
HadCattle × LargeGrace × rd 4	0.004 (0.13)						−39105.5 (4.4)
HadCattle × Cattle × rd 4	−0.005 (0.11)						2737.5 (88.2)
Flood in round 1	0.414 (0.49)			−4625.3 (21.8)	−2540.2 (55.0)	−4534.4 (27.1)	−2251.8 (59.4)
Head literate0	0.149 (0.36)			3104.4 (56.6)	2835.3 (64.5)	1335.1 (81.2)	3028.5 (63.0)
NetBroad Value0	10261.899 (15197.09)		0.6 (0.0)	0.6 (0.0)	0.2 (44.2)	0.5 (31.3)	0.6 (26.2)
Household size0	4.538 (1.35)			3316.7 (0.7)	3025.1 (2.7)	3361.8 (1.2)	2911.7 (2.7)
Number of cattle0	0.380 (0.73)					804.6 (93.5)	−7936.6 (51.7)
mean of dependent variable $T = 2$		38180 42	38180 13	38180 13	38180 13	38180 10	38180 13
$T = 3$ $T = 4$		137 569	84 377	81 377	38 327	40 362	36 327
$\tilde{R}^2$ N	 1081	0.062 2023	0.091 1312	0.104 1306	0.084 1070	0.092 1176	0.087 1066

Source: Estimated with GUK administrative and survey data.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. We annotate the number of periods that a household is observed with T. The total number of households is shown for each values of T. T=4 indicates the number of households with complete panel information, T=3 indicates number of households observed three times, T=2 indicates the number of households observed twice. N indicates total number of observations used in ANCOVA estimation, or N=1×(T=2)+2×(T=3)+3×(T=4). Large, LargeGrace, Cattle are indicator variables of the large, large grace, and cattle arms, respectively. The default arm category is traditional arm. rd2, rd3, rd4 are dummy variables for second, third, and fourth round of survey. Household assets do not include livestock. Regressions (1)-(3), (5)-(6) use only arm and calendar information. (4) and (7) use previous six month repayment and saving information which is lacking in rd 1, hence starts from rd 2.

2. *P* values in percentages in parenthesises. Standard errors are clustered at group (village) level.

TABLE 75: ANCOVA ESTIMATION OF NET BROAD ASSETS BY ATTRIBUTES AND PERIOD

covariates	mean/std	(1)	(2)	(3)	(4)	(5)	(6)
(Intercept)		16278.0	14254.8	318.7	8686.5	4284.2	9212.5
		(0.0)	(0.0)	(96.3)	(27.4)	(57.2)	(23.2)
Upfront	0.063	17352.0	15354.5	15924.8	10126.5	13206.9	9255.0
	(0.39)	(0.0)	(0.2)	(0.2)	(7.5)	(1.1)	(8.7)
WithGrace	0.014	−8237.3	−8579.9	−9069.9	−8121.9	−9242.2	−7331.9
	(0.50)	(9.8)	(11.1)	(10.7)	(16.4)	(12.2)	(19.9)
InKind	0.009	1471.9	3198.6	3608.4	3219.8	3699.1	2929.6
	(0.44)	(78.3)	(63.9)	(59.1)	(64.2)	(60.0)	(68.2)
HadCattle	0.265				9282.7		7888.9
	(0.44)				(26.4)		(39.9)
rd 3	0.342	14774.1	15425.4	15978.9	18035.8	17231.4	17856.9
	(0.47)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
Upfront × rd 3	0.276	5227.0	2758.5	3394.0	5603.6	6282.0	4590.5
	(0.45)	(28.6)	(66.9)	(59.9)	(45.0)	(35.5)	(52.3)
WithGrace × rd 3	0.172	5893.3	7720.3	7769.3	7566.6	7267.3	10179.1
	(0.38)	(28.3)	(25.2)	(24.1)	(28.9)	(28.8)	(14.9)
InKind × rd 3	0.087	−10647.0	−10239.0	−10468.7	−9822.4	−9586.4	−11128.1
	(0.28)	(7.7)	(17.0)	(15.2)	(21.8)	(19.9)	(17.9)
rd 4	0.315	20830.9	22161.5	22734.9	25861.6	24170.6	26001.2
	(0.46)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
Upfront × rd 4	0.260	7410.9	6891.7	6695.4	7467.0	8931.1	7506.9
	(0.44)	(23.2)	(30.0)	(31.9)	(34.7)	(20.4)	(31.0)
WithGrace × rd 4	0.158	2442.5	2901.7	3587.9	3760.7	2772.5	6404.0
	(0.37)	(71.9)	(68.6)	(61.5)	(63.4)	(70.6)	(42.8)
InKind × rd 4	0.079	−8397.2	−10933.5	−10519.5	−11138.1	−10355.4	−13252.4
	(0.27)	(17.8)	(16.5)	(16.1)	(17.3)	(17.6)	(11.6)
HadCattle	0.265				9282.7		7888.9
	(0.44)				(26.4)		(39.9)
HadCattle × Upfront	0.021						18684.8
	(0.20)						(13.6)
HadCattle × WithGrace	−0.003						−11678.8
	(0.26)						(36.9)
HadCattle × InKind	−0.012						3415.7
	(0.21)						(77.1)
HadCattle × rd 3	0.092						7546.2
	(0.29)						(10.4)
HadCattle × Upfront × rd 3	0.006						10585.1
	(0.12)						(41.8)
HadCattle × WithGrace × rd 3	−0.001						−34577.6
	(0.15)						(1.2)
HadCattle × InKind × rd 3	−0.004						24279.4
	(0.12)						(7.1)
HadCattle × rd 4	0.084						7898.2
	(0.28)						(19.5)
HadCattle × Upfront × rd 4	0.007						−2582.6
	(0.11)						(89.0)
HadCattle × WithGrace × rd 4	−0.001						−36522.9
	(0.14)						(2.0)
HadCattle × InKind × rd 4	−0.005						41843.0
	(0.11)						(0.7)
Flood in round 1	0.414			−4625.3	−2540.2	−4534.4	−2251.8
	(0.49)			(21.8)	(55.0)	(27.1)	(59.4)
Head literate0	0.149			3104.4	2835.3	1335.1	3028.5
	(0.36)			(56.6)	(64.5)	(81.2)	(63.0)
NetBroad Value0	10261.899		0.6	0.6	0.2	0.5	0.6
	(15197.09)		(0.0)	(0.0)	(44.2)	(31.3)	(26.2)
Household size0	4.538			3316.7	3025.1	3361.8	2911.7
	(1.35)			(0.7)	(2.7)	(1.2)	(2.7)
Number of cattle0	0.380					804.6	−7936.6
	(0.73)					(93.5)	(51.7)
mean of dependent variable		38180	38180	38180	38180	38180	38180
$T = 2$		42	13	13	13	10	13
$T = 3$		137	84	81	38	40	36
$T = 4$		569	377	377	327	362	327
$\tilde{R}^2$		0.062	0.091	0.104	0.084	0.092	0.087
N	1081	2023	1312	1306	1070	1176	1066

Source: Estimated with GUK administrative and survey data.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. We annotate the number of periods that a household is observed with T. The total number of households is shown for each values of T. T=4 indicates the number of households with complete panel information, T=3 indicates number of households observed three times, T=2 indicates the number of households observed twice. N indicates total number of observations used in ANCOVA estimation, or N=1×(T=2)+2×(T=3)+3×(T=4). Upfront is an indicator variable of the arm with an upfront large disbursement, WithGrace is an indicator variable of the arm with a grace period, InKind is an indicator variable of the arm which lends a heifer. rd2, rd3, rd4 are dummy variables for second, third, and fourth round of survey. Household assets do not include livestock. Regressions (1)-(3), (5)-(6) use only arm and calendar information. (4) and (7) use previous six month repayment and saving information which is lacking in rd 1, hence starts from rd 2.

2. *P* values in percentages in parenthesises. Standard errors are clustered at group (village) level.

TABLE 76: ANCOVA ESTIMATION OF NET BROAD ASSETS BY ARM, POVERTY STATUS, AND PERIOD

covariates	mean/std	(1)	(2)	(3)	(4)	(5)	(6)
(Intercept)		16162.8	13358.6	−723.8	6846.0	3759.9	7884.1
		(0.0)	(0.1)	(91.7)	(40.0)	(63.0)	(31.3)
Large	0.048	17382.4	16272.6	16729.6	11807.9	13570.0	10566.5
	(0.46)	(0.0)	(0.1)	(0.1)	(4.0)	(0.8)	(5.1)
LargeGrace	0.006	8943.2	6849.9	6765.7	2175.5	3380.5	1367.1
	(0.43)	(0.9)	(14.5)	(14.2)	(66.4)	(47.7)	(78.8)
Cattle	0.009	10919.5	10653.0	11086.1	6220.1	7887.4	5321.2
	(0.44)	(3.9)	(10.8)	(8.2)	(38.1)	(23.8)	(45.9)
HadCattle	0.265				10279.2		9323.0
	(0.44)				(21.6)		(31.9)
UltraPoor	0.607	−4760.5	−3942.3	−3866.7	−4494.1	−2769.9	−3822.4
	(0.49)	(8.5)	(26.6)	(28.0)	(25.9)	(46.7)	(34.9)
Large × UltraPoor	0.045	−14429.7	−8648.2	−10644.0	−14113.2	−13881.3	−16330.6
	(0.37)	(9.1)	(34.7)	(27.1)	(17.3)	(18.8)	(13.5)
LargeGrace × UltraPoor	0.027	6994.2	12639.9	12235.8	15877.7	10035.4	13653.9
	(0.35)	(15.4)	(10.3)	(8.6)	(4.1)	(21.2)	(8.7)
Cattle × UltraPoor	0.001	−2739.8	−1062.2	−1661.5	1347.1	−2848.8	−1224.4
	(0.34)	(70.1)	(92.3)	(87.0)	(90.5)	(79.5)	(91.6)
rd 3	0.342	14562.3	15203.7	15745.3	17643.1	16834.0	17274.4
	(0.47)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
Large × rd 3	0.104	6360.5	4412.6	4934.0	8186.2	8570.9	8231.2
	(0.30)	(21.6)	(52.4)	(47.9)	(30.4)	(24.6)	(26.9)
LargeGrace × rd 3	0.085	12203.5	12576.3	13123.3	16123.7	16177.3	19098.0
	(0.28)	(2.7)	(6.6)	(5.3)	(4.3)	(2.9)	(2.1)
Cattle × rd 3	0.087	1081.3	2255.1	2588.8	6810.5	6800.0	8147.2
	(0.28)	(85.3)	(75.5)	(71.5)	(40.4)	(36.9)	(31.2)
UltraPoor × rd 3	0.204	−1646.8	79.7	688.4	924.0	1395.3	−728.9
	(0.40)	(64.5)	(98.6)	(88.0)	(85.9)	(77.3)	(89.2)
Large × UltraPoor × rd 3	0.014	−457.5	9269.0	9999.7	13449.2	12142.7	18118.8
	(0.21)	(95.3)	(37.1)	(33.9)	(31.4)	(30.8)	(19.5)
LargeGrace × UltraPoor × rd 3	0.010	4725.1	3828.7	4171.7	10644.6	8424.4	11727.7
	(0.21)	(60.4)	(73.1)	(70.7)	(44.9)	(50.8)	(44.4)
Cattle × UltraPoor × rd 3	−0.000	17475.9	21125.1	20957.1	31362.2	27314.5	34767.1
	(0.19)	(13.2)	(15.5)	(16.1)	(7.3)	(9.1)	(5.2)
rd 4	0.315	20701.6	22118.4	22668.8	26050.8	24280.0	25990.4
	(0.46)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
Large × rd 4	0.102	8466.4	7445.0	7206.7	7753.1	8791.6	8889.9
	(0.30)	(18.7)	(30.4)	(32.5)	(38.6)	(27.2)	(27.1)
LargeGrace × rd 4	0.080	10619.0	10303.3	10724.3	11113.7	11451.7	15243.9
	(0.27)	(5.6)	(15.8)	(14.0)	(22.8)	(16.3)	(9.7)
Cattle × rd 4	0.079	1742.4	−279.6	544.5	674.3	1554.0	2253.8
	(0.27)	(77.2)	(97.1)	(94.0)	(93.9)	(84.5)	(77.7)
UltraPoor × rd 4	0.195	547.0	3521.9	3472.4	4405.1	5617.2	1819.9
	(0.40)	(90.3)	(46.9)	(46.8)	(39.7)	(23.9)	(72.0)
Large × UltraPoor × rd 4	0.016	7458.8	7262.5	7478.0	1209.6	2652.3	6311.1
	(0.21)	(56.4)	(53.9)	(52.9)	(93.0)	(82.4)	(63.1)
LargeGrace × UltraPoor × rd 4	0.008	5626.1	3732.9	4325.7	3140.4	1761.4	3788.6
	(0.20)	(50.3)	(74.2)	(70.4)	(81.6)	(88.5)	(76.0)
Cattle × UltraPoor × rd 4	−0.001	18745.2	17808.2	16325.5	16074.0	14419.3	18859.4
	(0.19)	(11.6)	(24.3)	(27.3)	(33.2)	(34.1)	(22.4)
HadCattle	0.265				10279.2		9323.0
	(0.44)				(21.6)		(31.9)
HadCattle × Large	0.024						16993.9
	(0.25)						(18.0)
HadCattle × LargeGrace	0.009						8773.8
	(0.23)						(39.3)
HadCattle × Cattle	−0.012						10106.7
	(0.21)						(36.5)
HadCattle × rd 3	0.092						8090.7
	(0.29)						(8.7)
HadCattle × Large × rd 3	0.008						6522.0
	(0.15)						(61.4)
HadCattle × LargeGrace × rd 3	0.003						−29665.7
	(0.14)						(4.9)
HadCattle × Cattle × rd 3	−0.004						−5836.4
	(0.12)						(63.2)
HadCattle × rd 4	0.084						7905.3
	(0.28)						(18.3)
HadCattle × Large × rd 4	0.009						−3705.5
	(0.14)						(83.3)
HadCattle × LargeGrace × rd 4	0.004						−41325.4
	(0.13)						(2.7)
HadCattle × Cattle × rd 4	−0.005						−252.3
	(0.11)						(98.8)
Flood in round 1	0.414			−4954.4	−3158.7	−5094.5	−2833.6
	(0.49)			(19.6)	(45.9)	(22.1)	(50.7)
Head literate0	0.149			2340.9	2099.6	555.3	2389.7
	(0.36)			(66.5)	(73.0)	(92.1)	(70.2)
NetBroad Value0	10261.899		0.6	0.6	0.2	0.5	0.6
	(15197.09)		(0.0)	(0.0)	(46.9)	(24.4)	(19.0)
Household size0	4.538			3435.6	3263.1	3484.7	3132.6
	(1.35)			(0.4)	(1.4)	(0.8)	(1.5)
Number of cattle0	0.380					168.3	−9692.3
	(0.73)					(98.6)	(41.6)

TABLE 77: ANCOVA ESTIMATION OF NET BROAD ASSETS BY ATTRIBUTES, POVERTY STATUS, AND PERIOD

covariates	mean/std	(1)	(2)	(3)	(4)	(5)	(6)
(Intercept)		15641.1 (0.0)	13227.6 (0.0)	−957.4 (89.0)	7079.6 (38.9)	3143.8 (68.7)	7807.1 (32.9)
Upfront	0.063 (0.39)	17906.0 (0.0)	16333.7 (0.1)	16855.5 (0.1)	11412.6 (5.5)	14053.6 (1.0)	10558.0 (6.9)
WithGrace	0.014 (0.50)	−7801.2 (9.7)	−8183.0 (11.6)	−8609.6 (11.3)	−7801.7 (16.8)	−8891.5 (12.5)	−7004.3 (20.5)
InKind	0.009 (0.44)	1266.6 (81.3)	2694.7 (69.0)	3094.8 (64.2)	2564.9 (71.1)	3249.8 (64.4)	2221.1 (75.6)
HadCattle	0.265 (0.44)				9191.4 (26.9)		7814.6 (39.9)
UltraPoor	0.607 (0.49)	−5105.3 (9.5)	−4687.5 (21.6)	−4664.6 (22.6)	−5498.3 (22.2)	−3725.8 (36.9)	−5126.0 (26.9)
rd 3	0.342 (0.47)	14763.8 (0.0)	15500.2 (0.0)	16066.7 (0.0)	18105.7 (0.0)	17321.4 (0.0)	17888.5 (0.0)
UltraPoor × rd 3	0.204 (0.40)	−1566.3 (66.1)	600.4 (89.8)	1201.6 (79.7)	2307.4 (66.5)	2409.4 (62.7)	1286.9 (81.3)
Upfront × rd 3	0.276 (0.45)	5548.9 (26.5)	2566.4 (70.1)	3063.5 (64.7)	4970.7 (52.3)	5655.8 (42.4)	4186.2 (57.6)
WithGrace × rd 3	0.172 (0.38)	5932.5 (27.9)	7668.8 (25.4)	7661.0 (24.7)	7366.3 (30.3)	7014.5 (30.5)	10014.8 (15.7)
InKind × rd 3	0.087 (0.28)	−10743.1 (7.1)	−10023.8 (16.4)	−10173.1 (14.8)	−9479.3 (21.7)	−9262.8 (19.8)	−10889.4 (17.4)
rd 4	0.315 (0.46)	20954.3 (0.0)	22353.5 (0.0)	22924.2 (0.0)	26093.7 (0.0)	24424.8 (0.0)	26170.6 (0.0)
UltraPoor × rd 4	0.195 (0.40)	507.0 (91.2)	3999.5 (42.4)	3909.4 (42.6)	4933.2 (36.0)	6167.2 (21.5)	2873.3 (59.5)
Upfront × rd 4	0.260 (0.44)	7275.9 (25.5)	5947.5 (38.8)	5759.9 (40.7)	6167.8 (46.0)	7473.2 (30.8)	6635.4 (39.5)
WithGrace × rd 4	0.158 (0.37)	2299.5 (73.1)	2559.5 (72.0)	3247.1 (64.8)	3440.0 (66.5)	2256.2 (75.9)	6131.0 (45.0)
InKind × rd 4	0.079 (0.27)	−8270.8 (18.3)	−10375.6 (17.6)	−9967.4 (17.4)	−10461.0 (18.9)	−9621.5 (19.6)	−12730.0 (12.1)
HadCattle	0.265 (0.44)				9191.4 (26.9)		7814.6 (39.9)
HadCattle × Upfront	0.021 (0.20)						16888.7 (17.6)
HadCattle × WithGrace	−0.003 (0.26)						−12354.1 (35.0)
HadCattle × InKind	−0.012 (0.21)						5031.2 (67.8)
HadCattle × rd 3	0.092 (0.29)						7468.4 (10.2)
HadCattle × Upfront × rd 3	0.006 (0.12)						11466.1 (37.8)
HadCattle × WithGrace × rd 3	−0.001 (0.15)						−34390.8 (1.4)
HadCattle × InKind × rd 3	−0.004 (0.12)						23861.2 (7.3)
HadCattle × rd 4	0.084 (0.28)						7902.4 (19.6)
HadCattle × Upfront × rd 4	0.007 (0.11)						−1303.6 (94.4)
HadCattle × WithGrace × rd 4	−0.001 (0.14)						−36058.7 (2.2)
HadCattle × InKind × rd 4	−0.005 (0.11)						41290.0 (0.8)
Flood in round 1	0.414 (0.49)			−4412.5 (24.6)	−2410.1 (57.5)	−4407.7 (28.9)	−2203.6 (60.5)
Head literate0	0.149 (0.36)			2838.4 (59.9)	2522.1 (68.0)	1167.4 (83.5)	2841.3 (65.0)
NetBroad Value0	10261.899 (15197.09)		0.6 (0.0)	0.6 (0.0)	0.2 (42.8)	0.5 (32.8)	0.5 (29.7)
Household size0	4.538 (1.35)			3365.1 (0.6)	3101.7 (2.3)	3405.8 (1.1)	2972.8 (2.4)
Number of cattle0	0.380 (0.73)					1137.2 (90.9)	−7101.5 (56.7)
mean of dependent variable		38180	38180	38180	38180	38180	38180
$T = 2$		42	13	13	13	10	13
$T = 3$		137	84	81	38	40	36
$T = 4$		569	377	377	327	362	327
$\bar{R}^2$		0.064	0.091	0.104	0.084	0.091	0.087
N	1081	2023	1312	1306	1070	1176	1066

Source: Estimated with GUK administrative and survey data.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. We annotate the number of periods that a household is observed with T. The total number of households is shown for each values of T. T=4 indicates the number of households with complete panel information, T=3 indicates number of households observed three times, T=2 indicates the number of households observed twice. N indicates total number of observations used in ANCOVA estimation, or N=1×(T=2)+2×(T=3)+3×(T=4). UltraPoor is an indicator variable if the household is classified as the ultra poor. Upfront is an indicator variable of the arm with an upfront large disbursement, WithGrace is an indicator variable of the arm with a grace period, InKind is an indicator variable of the arm which lends

III.5.8 Net assets: Assets+Livestock-GUK Debt-Other Debts

Net assets = Assets + net saving - debt to GUK - debts to relatives and money lenders. Assets use only items observed for all 4 rounds for household assets *including* radios and cassette players (which have possibly large errors).

```
Number of obs by Arm and attrition
             AttritIn
Arm             2   3   4   9 Sum
  traditional   6   4  20 144 174
  large         5   2   1 192 200
  large grace  22   3   3 171 199
  cattle        5   5  13 177 200
  Sum          38  14  37 684 773


Number of obs by membership status and attrition
                     AttritIn
BStatus                 2   3   4   9 Sum
  borrower              8   6   8 578 600
  pure saver            0   0   0   0   0
  individual rejection  9   4   1  75  89
  group rejection       9   4   0  55  68
  rejection by flood   12   0  28   0  40
  Sum                  38  14  37 708 797
```

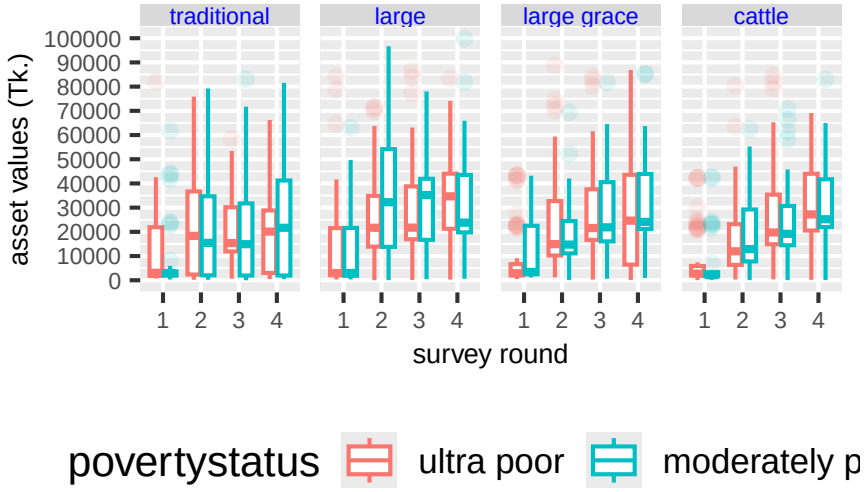
```
      dummyLarge dummyLargeSize dummyLargeGrace dummyWithGrace dummyCattle
           <num>          <num>           <num>          <num>       <num>
   1:          1              1               0              0           0
   2:          1              1               0              0           0
   3:          1              1               0              0           0
   4:          1              1               0              0           0
   5:          1              1               0              0           0
  ---
4243:          0              1               0              1           1
4244:          0              1               0              1           1
4245:          0              1               0              1           1
4246:          0              1               0              1           1
4247:          0              1               0              1           1
      dummyInKind
            <num>
   1:           0
   2:           0
   3:           0
   4:           0
   5:           0
  ---
4243:           1
4244:           1
4245:           1
4246:           1
4247:           1
```

```
[1] TRUE
```

```
[1] TRUE
```

```
[1] TRUE
```

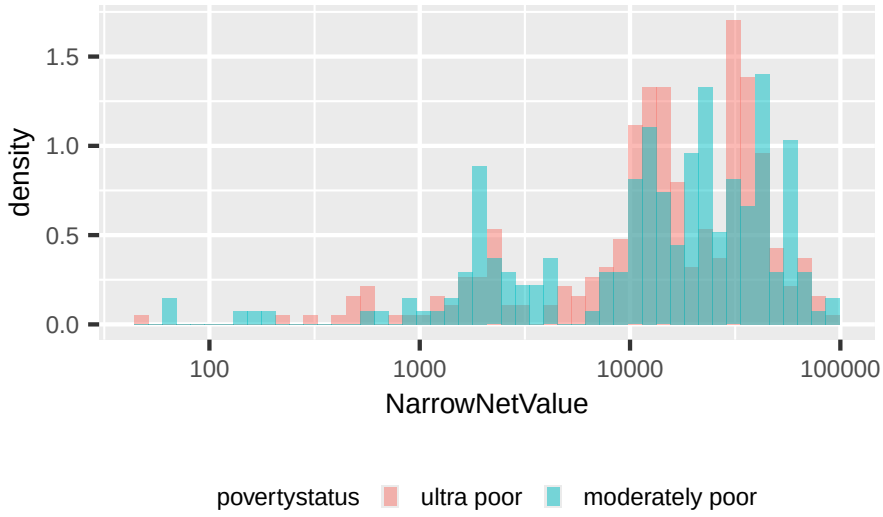
Figure 24: Total and net asset values



Source: Survey data.

Note: Top panel shows total gross asset values. Bottom panel shows total net asset values = total gross asset values - debt outstanding. Debt outstanding takes the value of the month immediately after the respective survey round interview. Net assets uses only assets observed for all 4 rounds in household assets.

Figure 25: Net asset values at round 1



Source: Survey data.

Note: Net asset values = total gross asset values - debt outstanding. Debt outstanding takes the value of the month immediately after the respective survey round interview. Net assets uses only assets observed for all 4 rounds in household assets.

Table 78: ANCOVA estimation of net assets

covariates	mean/std	(1)	(2)	(3)	(4)	(5)	(6)
(Intercept)		14585.8 (0.0)	11514.0 (0.0)	4940.3 (22.1)	14751.7 (0.1)	9090.1 (3.4)	13716.5 (0.3)
Large	0.048 (0.46)	14121.4 (0.0)	14499.4 (0.0)	14384.3 (0.0)	7238.2 (4.5)	11311.1 (0.7)	7314.8 (4.7)
LargeGrace	0.006 (0.43)	7581.8 (1.2)	6949.4 (5.9)	7234.6 (4.6)	2349.8 (45.7)	3847.5 (26.5)	2182.4 (49.8)
Cattle	0.009 (0.44)	6811.2 (0.2)	6533.8 (2.5)	6703.6 (2.1)	1419.3 (58.7)	4083.1 (11.7)	1492.2 (56.3)
HadCattle	0.265 (0.44)				6968.8 (25.6)		9519.6 (14.5)
HadCattle	0.265 (0.44)				6968.8 (25.6)		9519.6 (14.5)
HadCattle × Large	0.024 (0.25)				18150.2 (10.2)		18479.7 (9.5)
HadCattle × LargeGrace	0.009 (0.23)				2418.7 (71.1)		3246.7 (61.0)
HadCattle × Cattle	−0.012 (0.21)				10713.3 (9.1)		10679.0 (8.0)
Flood in round 1	0.414 (0.49)			302.7 (88.7)	1888.4 (42.2)	429.3 (85.9)	2083.2 (39.9)
Head literate0	0.149 (0.36)			−670.1 (80.6)	−1730.8 (55.9)	−2351.7 (40.7)	−1752.8 (55.7)
NetValue0	10261.899 (15197.09)		0.5 (0.0)	0.5 (0.0)	0.2 (36.8)	0.6 (4.8)	0.7 (3.8)
Household size0	4.538 (1.35)			1464.3 (6.2)	1291.8 (16.8)	1546.9 (8.1)	1218.4 (19.1)
Number of cattle0	0.380 (0.73)					−3331.3 (62.1)	−12731.1 (13.5)
mean of dependent variable $T = 2$		21884 42	21884 13	21884 13	21884 13	21884 10	21884 13
$T = 3$ $T = 4$		137 569	84 377	81 377	38 327	40 362	36 327
$\bar{R}^2$ N	 1081	0.041 2023	0.126 1312	0.13 1306	0.088 1070	0.091 1176	0.09 1066

Source: Estimated with GUK administrative and survey data.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. We annotate the number of periods that a household is observed with T. The total number of households is shown for each values of T. T=4 indicates the number of households with complete panel information, T=3 indicates number of households observed three times, T=2 indicates the number of households observed twice. N indicates total number of observations used in ANCOVA estimation, or N=1×(T=2)+2×(T=3)+3×(T=4). Large, LargeGrace, Cattle are indicator variables of the large, large grace, and cattle arms, respectively. The default arm category is traditional arm. Net assets use only assets observed for all 4 rounds in household assets. Household assets do not include livestock. Regressions (1)-(3), (5)-(6) use only arm and calendar information. (4) and (7) use previous six month repayment and saving information which is lacking in rd 1, hence starts from rd 2.

2. *P* values in percentages in parenthesises. Standard errors are clustered at group (village) level.

Table 79: ANCOVA estimation of net assets by attributes

covariates	mean/std	(1)	(2)	(3)	(4)	(5)	(6)
(Intercept)		14585.8 (0.0)	11514.0 (0.0)	4940.3 (22.1)	14751.7 (0.1)	9090.1 (3.4)	13716.5 (0.3)
Upfront	0.063 (0.39)	14121.4 (0.0)	14499.4 (0.0)	14384.3 (0.0)	7238.2 (4.5)	11311.1 (0.7)	7314.8 (4.7)
WithGrace	0.014 (0.50)	−6539.6 (7.8)	−7550.0 (6.5)	−7149.7 (9.0)	−4888.4 (19.3)	−7463.6 (10.2)	−5132.5 (19.1)
InKind	0.009 (0.44)	−770.6 (77.1)	−415.6 (89.2)	−530.9 (85.8)	−930.5 (73.3)	235.7 (93.9)	−690.1 (80.6)
HadCattle	0.265 (0.44)				6968.8 (25.6)		9519.6 (14.5)
HadCattle	0.265 (0.44)				6968.8 (25.6)		9519.6 (14.5)
HadCattle × Upfront	0.021 (0.20)				18150.2 (10.2)		18479.7 (9.5)
HadCattle × WithGrace	−0.003 (0.26)				−15731.5 (13.9)		−15233.0 (16.0)
HadCattle × InKind	−0.012 (0.21)				8294.6 (13.2)		7432.3 (17.7)
Flood in round 1	0.414 (0.49)			302.7 (88.7)	1888.4 (42.2)	429.3 (85.9)	2083.2 (39.9)
Head literate0	0.149 (0.36)			−670.1 (80.6)	−1730.8 (55.9)	−2351.7 (40.7)	−1752.8 (55.7)
NetValue0	10261.899 (15197.09)		0.5 (0.0)	0.5 (0.0)	0.2 (36.8)	0.6 (4.8)	0.7 (3.8)
Household size0	4.538 (1.35)			1464.3 (6.2)	1291.8 (16.8)	1546.9 (8.1)	1218.4 (19.1)
Number of cattle0	0.380 (0.73)					−3331.3 (62.1)	−12731.1 (13.5)
mean of dependent variable		21884	21884	21884	21884	21884	21884
$T = 2$		42	13	13	13	10	13
$T = 3$		137	84	81	38	40	36
$T = 4$		569	377	377	327	362	327
$\bar{R}^2$		0.041	0.126	0.13	0.088	0.091	0.09
N	1081	2023	1312	1306	1070	1176	1066

Source: Estimated with GUK administrative and survey data.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. We annotate the number of periods that a household is observed with T. The total number of households is shown for each values of T. T=4 indicates the number of households with complete panel information, T=3 indicates number of households observed three times, T=2 indicates the number of households observed twice. N indicates total number of observations used in ANCOVA estimation, or N=1×(T=2)+2×(T=3)+3×(T=4). Upfront is an indicator variable of the arm with an upfront large disbursement, WithGrace is an indicator variable of the arm with a grace period, InKind is an indicator variable of the arm which lends a heifer. Net assets use only assets observed for all 4 rounds in household assets. Household assets do not include livestock. Regressions (1)-(3), (5)-(6) use only arm and calendar information. (4) and (7) use previous six month repayment and saving information which is lacking in rd 1, hence starts from rd 2.

2. *P* values in percentages in parenthesises. Standard errors are clustered at group (village) level.

Table 80: ANCOVA estimation of net assets by period

covariates	mean/std	(1)	(2)	(3)	(4)	(5)	(6)
(Intercept)		9866.9 (0.0)	6943.1 (2.3)	−166.6 (97.0)	8022.1 (9.8)	3297.9 (47.0)	6994.4 (15.5)
Large	0.048 (0.46)	13640.0 (0.0)	13700.5 (0.1)	13573.3 (0.1)	6523.4 (8.6)	10458.4 (1.4)	6586.4 (8.6)
LargeGrace	0.006 (0.43)	5845.5 (5.0)	4654.5 (20.7)	4894.7 (18.1)	−142.5 (96.4)	1685.6 (62.1)	−291.9 (92.7)
Cattle	0.009 (0.44)	5617.4 (1.1)	5252.0 (9.8)	5392.0 (8.7)	135.8 (96.2)	2761.9 (32.7)	215.5 (93.9)
HadCattle	0.265 (0.44)				7844.7 (20.3)		10322.0 (11.8)
rd 3	0.342 (0.47)	5544.8 (0.0)	5721.4 (0.0)	6002.1 (0.0)	8494.7 (0.0)	7501.6 (0.0)	8592.1 (0.0)
Large × rd 3	0.104 (0.30)	893.6 (79.1)	2366.2 (56.0)	2863.9 (49.1)	2191.4 (65.3)	3249.5 (45.3)	2519.2 (60.6)
LargeGrace × rd 3	0.085 (0.28)	6979.9 (2.1)	9099.6 (2.3)	9400.5 (1.8)	10981.5 (1.8)	9269.2 (3.3)	10942.2 (1.9)
Cattle × rd 3	0.087 (0.28)	3204.7 (25.3)	4368.0 (17.7)	4449.5 (16.3)	5346.2 (16.3)	5803.4 (7.2)	5332.1 (16.5)
rd 4	0.315 (0.46)	10346.3 (0.0)	10364.5 (0.0)	10531.5 (0.0)	14091.2 (0.0)	12042.9 (0.0)	14153.5 (0.0)
Large × rd 4	0.102 (0.30)	3419.5 (44.1)	5082.2 (25.2)	4896.4 (27.0)	4129.9 (37.8)	5601.6 (21.5)	4453.6 (34.2)
LargeGrace × rd 4	0.080 (0.27)	9104.8 (0.5)	12084.4 (0.2)	12367.1 (0.2)	15469.4 (0.1)	12581.3 (0.3)	15375.2 (0.1)
Cattle × rd 4	0.079 (0.27)	7225.5 (2.3)	8410.3 (1.5)	8680.4 (1.1)	9955.1 (0.8)	10302.6 (0.2)	9753.9 (0.9)
HadCattle	0.265 (0.44)				7844.7 (20.3)		10322.0 (11.8)
HadCattle × Large	0.024 (0.25)				17624.6 (11.2)		17922.7 (10.5)
HadCattle × LargeGrace	0.009 (0.23)				7123.7 (32.2)		7883.5 (26.1)
HadCattle × Cattle	−0.012 (0.21)				11774.6 (8.6)		11719.1 (7.9)
HadCattle × rd 3	0.092 (0.29)				−4533.7 (11.0)		−4613.9 (10.2)
HadCattle × Large × rd 3	0.008 (0.15)				3450.3 (69.2)		3020.9 (72.8)
HadCattle × LargeGrace × rd 3	0.003 (0.14)				−24243.5 (1.1)		−24292.4 (1.1)
HadCattle × Cattle × rd 3	−0.004 (0.12)				−3368.5 (65.9)		−3444.3 (65.1)
HadCattle × rd 4	0.084 (0.28)				−2318.8 (54.3)		−2443.7 (52.1)
HadCattle × Large × rd 4	0.009 (0.14)				818.9 (94.2)		665.8 (95.2)
HadCattle × LargeGrace × rd 4	0.004 (0.13)				−29993.9 (1.7)		−29696.8 (1.8)
HadCattle × Cattle × rd 4	−0.005 (0.11)				−7135.7 (45.5)		−6917.8 (46.7)
Flood in round 1	0.414 (0.49)			217.4 (92.0)	1956.7 (41.3)	377.2 (87.7)	2134.2 (39.4)
Head literate0	0.149 (0.36)			−231.7 (93.2)	−1625.8 (58.6)	−2035.7 (47.3)	−1618.0 (59.1)
NetValue0	10261.899 (15197.09)		0.5 (0.0)	0.5 (0.0)	0.2 (38.7)	0.6 (5.5)	0.7 (4.7)
Household size0	4.538 (1.35)			1551.0 (5.0)	1341.8 (15.2)	1633.0 (6.6)	1273.0 (17.1)
Number of cattle0	0.380 (0.73)					−2867.9 (66.8)	−12092.9 (15.4)
mean of dependent variable $T = 2$		21884 42	21884 13	21884 13	21884 13	21884 10	21884 13
$T = 3$ $T = 4$		137 569	84 377	81 377	38 327	40 362	36 327
$\tilde{R}^2$ N	 1081	0.07 2023	0.151 1312	0.156 1306	0.138 1070	0.127 1176	0.141 1066

Source: Estimated with GUK administrative and survey data.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. We annotate the number of periods that a household is observed with T. The total number of households is shown for each values of T. T=4 indicates the number of households with complete panel information, T=3 indicates number of households observed three times, T=2 indicates the number of households observed twice. N indicates total number of observations used in ANCOVA estimation, or N=1×(T=2)+2×(T=3)+3×(T=4). Large, LargeGrace, Cattle are indicator variables of the large, large grace, and cattle arms, respectively. The default arm category is traditional arm. rd2, rd3, rd4 are dummy variables for second, third, and fourth round of survey. Net assets use only assets observed for all 4 rounds in household assets. Household assets do not include livestock. Regressions (1)-(3), (5)-(6) use only arm and calendar information. (4) and (7) use previous six month repayment and saving information which is lacking in rd 1, hence starts from rd 2.

2. P values in percentages in parenthesises. Standard errors are clustered at group (village) level.

Table 81: ANCOVA estimation of net assets by attributes and period

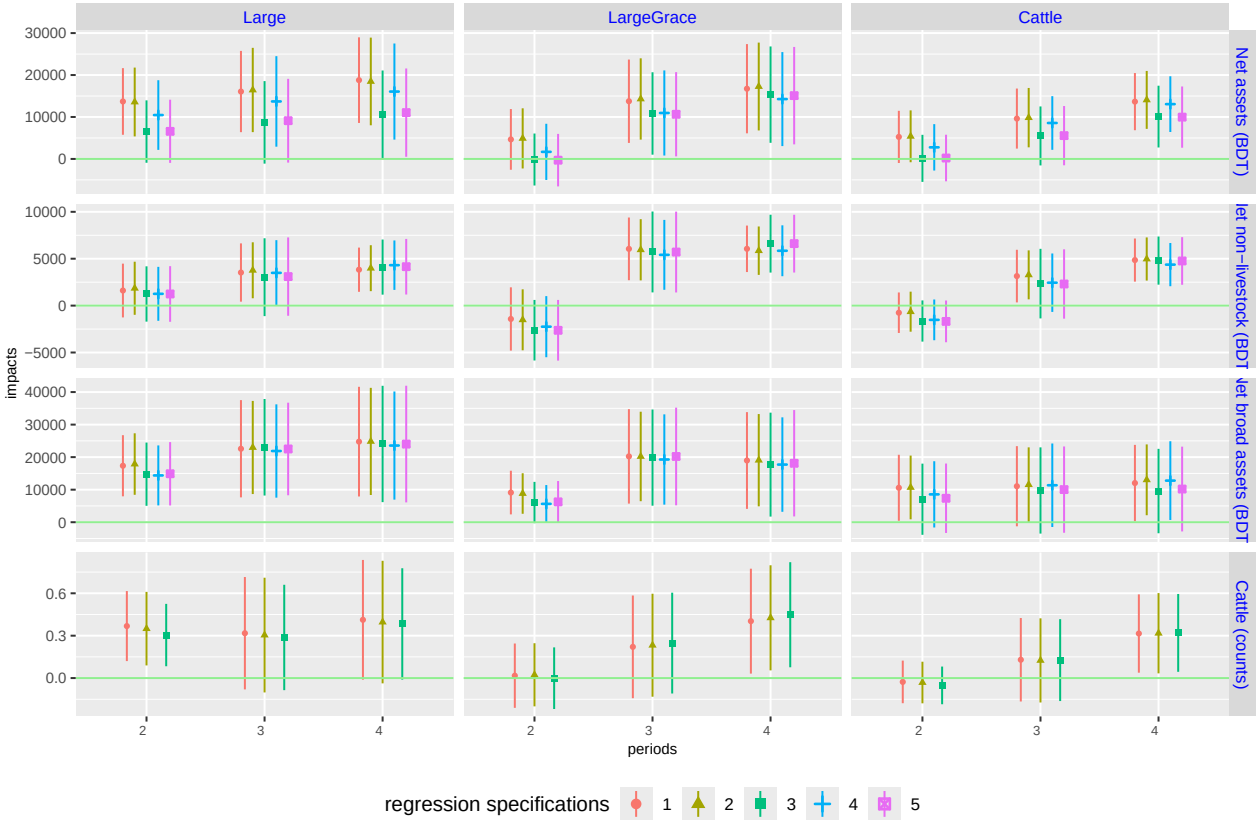
covariates	mean/std	(1)	(2)	(3)	(4)	(5)	(6)
(Intercept)		9866.9 (0.0)	6943.1 (2.3)	−166.6 (97.0)	8022.1 (9.8)	3297.9 (47.0)	6994.4 (15.5)
Upfront	0.063 (0.39)	13640.0 (0.0)	13700.5 (0.1)	13573.3 (0.1)	6523.4 (8.6)	10458.4 (1.4)	6586.4 (8.6)
WithGrace	0.014 (0.50)	−7794.4 (3.1)	−9046.0 (2.3)	−8678.6 (3.5)	−6666.0 (7.1)	−8772.8 (4.5)	−6878.3 (7.3)
InKind	0.009 (0.44)	−228.1 (92.7)	597.6 (84.0)	497.3 (86.3)	278.3 (91.6)	1076.3 (71.2)	507.4 (85.1)
HadCattle	0.265 (0.44)				7844.7 (20.3)		10322.0 (11.8)
rd 3	0.342 (0.47)	5544.8 (0.0)	5721.4 (0.0)	6002.1 (0.0)	8494.7 (0.0)	7501.6 (0.0)	8592.1 (0.0)
Upfront × rd 3	0.276 (0.45)	893.6 (79.1)	2366.2 (56.0)	2863.9 (49.1)	2191.4 (65.3)	3249.5 (45.3)	2519.2 (60.6)
WithGrace × rd 3	0.172 (0.38)	6086.3 (8.9)	6733.5 (13.4)	6536.6 (15.3)	8790.2 (6.4)	6019.7 (20.7)	8423.0 (7.5)
InKind × rd 3	0.087 (0.28)	−3775.2 (21.5)	−4731.7 (21.4)	−4951.0 (18.9)	−5635.3 (12.4)	−3465.8 (36.3)	−5610.1 (12.4)
rd 4	0.315 (0.46)	10346.3 (0.0)	10364.5 (0.0)	10531.5 (0.0)	14091.2 (0.0)	12042.9 (0.0)	14153.5 (0.0)
Upfront × rd 4	0.260 (0.44)	3419.5 (44.1)	5082.2 (25.2)	4896.4 (27.0)	4129.9 (37.8)	5601.6 (21.5)	4453.6 (34.2)
WithGrace × rd 4	0.158 (0.37)	5685.3 (23.0)	7002.3 (16.4)	7470.7 (13.9)	11339.5 (2.9)	6979.7 (18.3)	10921.6 (3.4)
InKind × rd 4	0.079 (0.27)	−1879.3 (60.0)	−3674.1 (38.9)	−3686.7 (38.3)	−5514.3 (20.3)	−2278.7 (59.8)	−5621.3 (19.7)
HadCattle	0.265 (0.44)				7844.7 (20.3)		10322.0 (11.8)
HadCattle × Upfront	0.021 (0.20)				17624.6 (11.2)		17922.7 (10.5)
HadCattle × WithGrace	−0.003 (0.26)				−10500.8 (31.2)		−10039.2 (34.1)
HadCattle × InKind	−0.012 (0.21)				4650.9 (41.6)		3835.7 (50.2)
HadCattle × rd 3	0.092 (0.29)				−4533.7 (11.0)		−4613.9 (10.2)
HadCattle × Upfront × rd 3	0.006 (0.12)				3450.3 (69.2)		3020.9 (72.8)
HadCattle × WithGrace × rd 3	−0.001 (0.15)				−27693.8 (0.1)		−27313.3 (0.1)
HadCattle × InKind × rd 3	−0.004 (0.12)				20875.1 (0.5)		20848.1 (0.5)
HadCattle × rd 4	0.084 (0.28)				−2318.8 (54.3)		−2443.7 (52.1)
HadCattle × Upfront × rd 4	0.007 (0.11)				818.9 (94.2)		665.8 (95.2)
HadCattle × WithGrace × rd 4	−0.001 (0.14)				−30812.8 (1.0)		−30362.7 (1.1)
HadCattle × InKind × rd 4	−0.005 (0.11)				22858.2 (2.9)		22779.1 (2.9)
Flood in round 1	0.414 (0.49)			217.4 (92.0)	1956.7 (41.3)	377.2 (87.7)	2134.2 (39.4)
Head literate0	0.149 (0.36)			−231.7 (93.2)	−1625.8 (58.6)	−2035.7 (47.3)	−1618.0 (59.1)
NetValue0	10261.899 (15197.09)		0.5 (0.0)	0.5 (0.0)	0.2 (38.7)	0.6 (5.5)	0.7 (4.7)
Household size0	4.538 (1.35)			1551.0 (5.0)	1341.8 (15.2)	1633.0 (6.6)	1273.0 (17.1)
Number of cattle0	0.380 (0.73)					−2867.9 (66.8)	−12092.9 (15.4)
mean of dependent variable $T = 2$		21884 42	21884 13	21884 13	21884 13	21884 10	21884 13
$T = 3$ $T = 4$		137 569	84 377	81 377	38 327	40 362	36 327
$\tilde{R}^2$ N	 1081	0.07 2023	0.151 1312	0.156 1306	0.138 1070	0.127 1176	0.141 1066

Source: Estimated with GUK administrative and survey data.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. We annotate the number of periods that a household is observed with T. The total number of households is shown for each values of T. T=4 indicates the number of households with complete panel information, T=3 indicates number of households observed three times, T=2 indicates the number of households observed twice. N indicates total number of observations used in ANCOVA estimation, or N=1×(T=2)+2×(T=3)+3×(T=4). Upfront is an indicator variable of the arm with an upfront large disbursement, WithGrace is an indicator variable of the arm with a grace period, InKind is an indicator variable of the arm which lends a heifer. rd2, rd3, rd4 are dummy variables for second, third, and fourth round of survey. Net assets use only assets observed for all 4 rounds in household assets. Household assets do not include livestock. Regressions (1)-(3), (5)-(6) use only arm and calendar information. (4) and (7) use previous six month repayment and saving information which is lacking in rd 1, hence starts from rd 2.

2. P values in percentages in parenthesises. Standard errors are clustered at group (village) level.

FIGURE 26: IMPACTS ON NET ASSETS AND VARIOUS OTHER MEASURES OF ASSETS



Source: Estimated with survey data.

Note: See the footnote of FIGURE 39.

TABLE 82: ANCOVA ESTIMATION OF BROAD NET ASSETS USING ANNUAL PRICES

covariates	mean/std	(1)	(2)	(3)	(4)	(5)	(6)
(Intercept)		21122.2 (0.0)	16083.1 (0.0)	7574.8 (16.6)	21880.7 (0.1)	13342.9 (2.4)	20636.3 (0.2)
Large	0.048 (0.46)	19986.9 (0.0)	20442.4 (0.0)	20216.7 (0.0)	10595.0 (4.2)	16179.2 (0.7)	10689.6 (4.4)
LargeGrace	0.006 (0.43)	11549.6 (0.8)	10937.1 (3.7)	11380.3 (2.8)	5361.2 (25.6)	7015.8 (16.1)	5160.9 (28.1)
Cattle	0.009 (0.44)	10190.7 (0.1)	9782.9 (1.2)	10029.6 (1.1)	3345.3 (35.5)	6826.5 (5.4)	3442.0 (33.4)
HadCattle	0.265 (0.44)				7049.3 (42.2)		10101.8 (28.6)
HadCattle	0.265 (0.44)				7049.3 (42.2)		10101.8 (28.6)
HadCattle × Large	0.024 (0.25)				25506.6 (11.1)		25905.6 (10.4)
HadCattle × LargeGrace	0.009 (0.23)				−1085.0 (90.2)		−88.2 (99.2)
HadCattle × Cattle	−0.012 (0.21)				12000.2 (15.9)		11962.1 (14.6)
Flood in round 1	0.414 (0.49)			440.3 (88.6)	2628.5 (43.8)	705.4 (84.0)	2829.5 (42.6)
Head literate0	0.149 (0.36)			−1269.7 (74.8)	−2658.4 (53.3)	−3717.1 (36.5)	−2747.7 (52.4)
Net2Value0	10261.899 (15197.09)		0.7 (0.0)	0.7 (0.0)	0.3 (27.1)	0.8 (4.2)	1.0 (4.1)
Household size0	4.538 (1.35)			1915.6 (7.9)	1468.7 (26.5)	1987.7 (10.3)	1385.5 (28.8)
Number of cattle0	0.380 (0.73)					−4056.0 (66.8)	−15243.8 (20.9)
mean of dependent variable		31784	31784	31784	31784	31784	31784
$T = 2$		42	13	13	13	10	13
$T = 3$		137	84	81	38	40	36
$T = 4$		569	377	377	327	362	327
$\bar{R}^2$		0.035	0.115	0.115	0.074	0.079	0.075
N	1081	2023	1312	1306	1070	1176	1066

Source: Estimated with GUK administrative and survey data.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. We annotate the number of periods that a household is observed with T. The total number of households is shown for each values of T. T=4 indicates the number of households with complete panel information. T=3 indicates

TABLE 83: ANCOVA ESTIMATION OF BROAD NET ASSETS USING ANNUAL PRICES BY ATTRIBUTES

covariates	mean/std	(1)	(2)	(3)	(4)	(5)	(6)
(Intercept)		21122.2 (0.0)	16083.1 (0.0)	7574.8 (16.6)	21880.7 (0.1)	13342.9 (2.4)	20636.3 (0.2)
Upfront	0.063 (0.39)	19986.9 (0.0)	20442.4 (0.0)	20216.7 (0.0)	10595.0 (4.2)	16179.2 (0.7)	10689.6 (4.4)
WithGrace	0.014 (0.50)	−8437.3 (12.0)	−9505.3 (11.6)	−8836.4 (16.0)	−5233.8 (35.4)	−9163.5 (17.9)	−5528.7 (34.6)
InKind	0.009 (0.44)	−1358.9 (72.4)	−1154.2 (80.1)	−1350.7 (76.1)	−2015.9 (62.2)	−189.3 (96.7)	−1718.9 (68.1)
HadCattle	0.265 (0.44)				7049.3 (42.2)		10101.8 (28.6)
HadCattle	0.265 (0.44)				7049.3 (42.2)		10101.8 (28.6)
HadCattle × Upfront	0.021 (0.20)				25506.6 (11.1)		25905.6 (10.4)
HadCattle × WithGrace	−0.003 (0.26)				−26591.6 (8.9)		−25993.9 (10.4)
HadCattle × InKind	−0.012 (0.21)				13085.2 (9.2)		12050.3 (11.8)
Flood in round 1	0.414 (0.49)			440.3 (88.6)	2628.5 (43.8)	705.4 (84.0)	2829.5 (42.6)
Head literate0	0.149 (0.36)			−1269.7 (74.8)	−2658.4 (53.3)	−3717.1 (36.5)	−2747.7 (52.4)
Net2Value0	10261.899 (15197.09)		0.7 (0.0)	0.7 (0.0)	0.3 (27.1)	0.8 (4.2)	1.0 (4.1)
Household size0	4.538 (1.35)			1915.6 (7.9)	1468.7 (26.5)	1987.7 (10.3)	1385.5 (28.8)
Number of cattle0	0.380 (0.73)					−4056.0 (66.8)	−15243.8 (20.9)
mean of dependent variable		31784	31784	31784	31784	31784	31784
$T = 2$		42	13	13	13	10	13
$T = 3$		137	84	81	38	40	36
$T = 4$		569	377	377	327	362	327
$\bar{R}^2$		0.035	0.115	0.115	0.074	0.079	0.075
N	1081	2023	1312	1306	1070	1176	1066

Source: Estimated with GUK administrative and survey data.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. We annotate the number of periods that a household is observed with T. The total number of households is shown for each values of T. T=4 indicates the number of households with complete panel information, T=3 indicates number of households observed three times, T=2 indicates the number of households observed twice. N indicates total number of observations used in ANCOVA estimation, or N=1×(T=2)+2×(T=3)+3×(T=4). Upfront is an indicator variable of the arm with an upfront large disbursement, WithGrace is an indicator variable of the arm with a grace period, InKind is an indicator variable of the arm which lends a heifer. Sample is continuing members and replacing members of early rejecters and received loans prior to 2015 Janunary. Household assets do not include livestock. Regressions (1)-(3), (5)-(6) use only arm and calendar information. (4) and (7) use previous six month repayment and saving information which is lacking in rd 1, hence starts from rd 2.

2. P values in percentages in parenthesises. Standard errors are clustered at group (village) level.

TABLE 84: ANCOVA ESTIMATION OF BROAD NET ASSETS USING ANNUAL PRICES BY PERIOD

covariates	mean/std	(1)	(2)	(3)	(4)	(5)	(6)
(Intercept)		7672.3	2538.3	−7235.9	4233.9	−2792.4	3059.3
		(0.3)	(49.8)	(20.6)	(50.5)	(64.5)	(64.0)
Large	0.048	17601.7	17574.3	17382.0	8416.3	13607.7	8556.9
	(0.46)	(0.0)	(0.1)	(0.1)	(8.6)	(1.3)	(8.5)
LargeGrace	0.006	8409.5	6919.4	7293.8	1539.3	3431.0	1371.1
	(0.43)	(2.9)	(15.1)	(12.5)	(71.4)	(44.7)	(74.7)
Cattle	0.009	7813.8	7501.4	7710.6	1392.4	4821.7	1481.2
	(0.44)	(0.6)	(5.7)	(5.0)	(69.5)	(17.1)	(67.3)
HadCattle	0.265				7188.9		10048.0
	(0.44)				(40.8)		(28.8)
rd 3	0.342	10985.4	11525.4	11894.3	15189.0	13763.1	15298.3
	(0.47)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
Large × rd 3	0.104	3711.8	5515.3	6199.9	3700.9	5886.1	4068.9
	(0.30)	(32.1)	(21.7)	(17.5)	(47.3)	(21.9)	(43.1)
LargeGrace × rd 3	0.085	8678.6	11172.6	11556.4	11662.7	10450.9	11619.1
	(0.28)	(1.0)	(1.1)	(0.8)	(2.3)	(2.9)	(2.3)
Cattle × rd 3	0.087	4578.4	5878.8	5975.8	5863.8	6815.2	5848.6
	(0.28)	(14.4)	(8.0)	(7.0)	(14.4)	(4.2)	(14.6)
rd 4	0.315	33216.5	33874.0	34114.2	43152.0	38418.2	43291.2
	(0.46)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
Large × rd 4	0.102	16871.7	20316.4	19863.7	10772.5	17497.5	11400.8
	(0.30)	(2.0)	(0.8)	(1.0)	(13.0)	(3.1)	(11.0)
LargeGrace × rd 4	0.080	17941.8	22330.2	22882.5	21492.8	19914.4	21386.9
	(0.27)	(0.1)	(0.1)	(0.1)	(0.8)	(0.8)	(0.8)
Cattle × rd 4	0.079	14881.3	15736.7	16219.6	13804.5	16369.1	13579.6
	(0.27)	(0.3)	(0.3)	(0.2)	(0.8)	(0.1)	(0.9)
HadCattle	0.265				7188.9		10048.0
	(0.44)				(40.8)		(28.8)
HadCattle × Large	0.024				23182.6		23410.4
	(0.25)				(11.6)		(11.1)
HadCattle × LargeGrace	0.009				4678.2		5509.6
	(0.23)				(59.9)		(52.6)
HadCattle × Cattle	−0.012				13590.3		13501.3
	(0.21)				(11.0)		(10.3)
HadCattle × rd 3	0.092				−1756.2		−1845.3
	(0.29)				(58.9)		(56.8)
HadCattle × Large × rd 3	0.008				7260.7		6785.0
	(0.15)				(47.7)		(50.6)
HadCattle × LargeGrace × rd 3	0.003				−26617.2		−26671.8
	(0.14)				(0.8)		(0.8)
HadCattle × Cattle × rd 3	−0.004				−2358.4		−2442.9
	(0.12)				(76.7)		(75.9)
HadCattle × rd 4	0.084				9728.9		9503.3
	(0.28)				(14.0)		(14.9)
HadCattle × Large × rd 4	0.009				15246.9		14746.2
	(0.14)				(47.6)		(48.9)
HadCattle × LargeGrace × rd 4	0.004				−42333.3		−41999.1
	(0.13)				(2.0)		(2.1)
HadCattle × Cattle × rd 4	−0.005				−6461.5		−6223.4
	(0.11)				(63.4)		(64.5)
Flood in round 1	0.414			212.2	2761.2	514.6	2916.7
	(0.49)			(94.6)	(42.4)	(88.5)	(41.8)
Head literate0	0.149			−219.6	−2446.5	−2985.2	−2433.7
	(0.36)			(95.5)	(56.6)	(46.6)	(57.3)
Net2Value0	10261.899		0.8	0.7	0.3	0.7	0.9
	(15197.09)		(0.0)	(0.0)	(29.9)	(5.6)	(6.0)
Household size0	4.538			2148.6	1622.4	2222.3	1553.0
	(1.35)			(5.1)	(21.1)	(6.9)	(22.6)
Number of cattle0	0.380					−2722.6	−13546.2
	(0.73)					(76.8)	(25.6)
mean of dependent variable		31784	31784	31784	31784	31784	31784
$T = 2$		42	13	13	13	10	13
$T = 3$		137	84	81	38	40	36
$T = 4$		569	377	377	327	362	327
$\tilde{R}^2$		0.174	0.243	0.245	0.287	0.241	0.289
N	1081	2023	1312	1306	1070	1176	1066

Source: Estimated with GUK administrative and survey data.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. We annotate the number of periods that a household is observed with T. The total number of households is shown for each values of T. T=4 indicates the number of households with complete panel information, T=3 indicates number of households observed three times, T=2 indicates the number of households observed twice. N indicates total number of observations used in ANCOVA estimation, or N=1×(T=2)+2×(T=3)+3×(T=4). Large, LargeGrace, Cattle are indicator variables of the large, large grace, and cattle arms, respectively. The default arm category is traditional arm. Sample is continuing members and replacing members of early rejecters and received loans prior to 2015 Janunary. Household assets do not include livestock. Regressions (1)-(3), (5)-(6) use only arm and calendar information. (4) and (7) use previous six month repayment and saving information which is lacking in rd 1, hence starts from rd 2.

2. P values in percentages in parenthesises. Standard errors are clustered at group (village) level.

TABLE 85: ANCOVA ESTIMATION OF BROAD NET ASSETS USING ANNUAL PRICES BY ATTRIBUTES AND PERIOD

covariates	mean/std	(1)	(2)	(3)	(4)	(5)	(6)
(Intercept)		7672.3	2538.3	−7235.9	4233.9	−2792.4	3059.3
		(0.3)	(49.8)	(20.6)	(50.5)	(64.5)	(64.0)
Upfront	0.063	17601.7	17574.3	17382.0	8416.3	13607.7	8556.9
	(0.39)	(0.0)	(0.1)	(0.1)	(8.6)	(1.3)	(8.5)
WithGrace	0.014	−9192.2	−10655.0	−10088.1	−6877.0	−10176.7	−7185.8
	(0.50)	(5.1)	(4.3)	(6.6)	(16.9)	(8.7)	(16.5)
InKind	0.009	−595.7	582.0	416.8	−146.9	1390.7	110.1
	(0.44)	(85.6)	(88.6)	(91.5)	(96.7)	(72.5)	(97.6)
HadCattle	0.265				7188.9		10048.0
	(0.44)				(40.8)		(28.8)
rd 3	0.342	10985.4	11525.4	11894.3	15189.0	13763.1	15298.3
	(0.47)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
Upfront × rd 3	0.276	3711.8	5515.3	6199.9	3700.9	5886.1	4068.9
	(0.45)	(32.1)	(21.7)	(17.5)	(47.3)	(21.9)	(43.1)
WithGrace × rd 3	0.172	4966.9	5657.3	5356.5	7961.8	4564.7	7550.2
	(0.38)	(22.4)	(27.8)	(31.3)	(13.8)	(41.7)	(15.7)
InKind × rd 3	0.087	−4100.3	−5293.8	−5580.6	−5798.9	−3635.6	−5770.5
	(0.28)	(24.7)	(22.9)	(20.0)	(17.2)	(41.4)	(17.3)
rd 4	0.315	33216.5	33874.0	34114.2	43152.0	38418.2	43291.2
	(0.46)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
Upfront × rd 4	0.260	16871.7	20316.4	19863.7	10772.5	17497.5	11400.8
	(0.44)	(2.0)	(0.8)	(1.0)	(13.0)	(3.1)	(11.0)
WithGrace × rd 4	0.158	1070.1	2013.8	3018.7	10720.4	2416.8	9986.1
	(0.37)	(89.5)	(82.7)	(74.5)	(22.2)	(80.6)	(25.6)
InKind × rd 4	0.079	−3060.6	−6593.5	−6662.8	−7688.3	−3545.3	−7807.3
	(0.27)	(62.5)	(37.9)	(37.6)	(29.0)	(63.5)	(28.5)
HadCattle	0.265				7188.9		10048.0
	(0.44)				(40.8)		(28.8)
HadCattle × Upfront	0.021				23182.6		23410.4
	(0.20)				(11.6)		(11.1)
HadCattle × WithGrace	−0.003				−18504.3		−17900.8
	(0.26)				(18.5)		(20.8)
HadCattle × InKind	−0.012				8912.1		7991.8
	(0.21)				(20.3)		(25.1)
HadCattle × rd 3	0.092				−1756.2		−1845.3
	(0.29)				(58.9)		(56.8)
HadCattle × Upfront × rd 3	0.006				7260.7		6785.0
	(0.12)				(47.7)		(50.6)
HadCattle × WithGrace × rd 3	−0.001				−33877.9		−33456.8
	(0.15)				(0.1)		(0.1)
HadCattle × InKind × rd 3	−0.004				24258.8		24228.9
	(0.12)				(0.3)		(0.3)
HadCattle × rd 4	0.084				9728.9		9503.3
	(0.28)				(14.0)		(14.9)
HadCattle × Upfront × rd 4	0.007				15246.9		14746.2
	(0.11)				(47.6)		(48.9)
HadCattle × WithGrace × rd 4	−0.001				−57580.2		−56745.3
	(0.14)				(1.0)		(1.1)
HadCattle × InKind × rd 4	−0.005				35871.8		35775.7
	(0.11)				(1.7)		(1.8)
Flood in round 1	0.414			212.2	2761.2	514.6	2916.7
	(0.49)			(94.6)	(42.4)	(88.5)	(41.8)
Head literate0	0.149			−219.6	−2446.5	−2985.2	−2433.7
	(0.36)			(95.5)	(56.6)	(46.6)	(57.3)
Net2Value0	10261.899		0.8	0.7	0.3	0.7	0.9
	(15197.09)		(0.0)	(0.0)	(29.9)	(5.6)	(6.0)
Household size0	4.538			2148.6	1622.4	2222.3	1553.0
	(1.35)			(5.1)	(21.1)	(6.9)	(22.6)
Number of cattle0	0.380					−2722.6	−13546.2
	(0.73)					(76.8)	(25.6)
mean of dependent variable		31784	31784	31784	31784	31784	31784
$T = 2$		42	13	13	13	10	13
$T = 3$		137	84	81	38	40	36
$T = 4$		569	377	377	327	362	327
$\tilde{R}^2$		0.174	0.243	0.245	0.287	0.241	0.289
N	1081	2023	1312	1306	1070	1176	1066

Source: Estimated with GUK administrative and survey data.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. We annotate the number of periods that a household is observed with T. The total number of households is shown for each values of T. T=4 indicates the number of households with complete panel information, T=3 indicates number of households observed three times, T=2 indicates the number of households observed twice. N indicates total number of observations used in ANCOVA estimation, or N=1×(T=2)+2×(T=3)+3×(T=4). Upfront is an indicator variable of the arm with an upfront large disbursement, WithGrace is an indicator variable of the arm with a grace period, InKind is an indicator variable of the arm which lends a heifer. Sample is continuing members and replacing members of early rejecters and received loans prior to 2015 Janunary. Household assets do not include livestock. Regressions (1)-(3), (5)-(6) use only arm and calendar information. (4) and (7) use previous six month repayment and saving information which is lacking in rd 1, hence starts from rd 2.

2. P values in percentages in parenthesises. Standard errors are clustered at group (village) level.

TABLE 86: ANCOVA ESTIMATION OF BROAD NET ASSETS USING ANNUAL PRICES BY ARM, POVERTY STATUS, AND PERIOD

covariates	mean/std	(1)	(2)	(3)	(4)	(5)	(6)
(Intercept)		7222.1 (0.5)	1553.8 (70.6)	−8524.4 (16.7)	3187.6 (62.5)	−3748.3 (56.5)	1867.5 (78.3)
Large	0.048 (0.46)	17908.8 (0.0)	18450.0 (0.0)	18329.9 (0.1)	9526.2 (5.0)	14283.2 (1.1)	9754.7 (4.8)
LargeGrace	0.006 (0.43)	8940.2 (1.9)	7471.2 (12.9)	7928.9 (10.7)	1715.4 (69.2)	3754.1 (43.4)	1533.6 (72.8)
Cattle	0.009 (0.44)	8347.3 (0.3)	8256.4 (4.8)	8591.9 (3.9)	1941.1 (60.7)	5407.1 (17.2)	2099.4 (57.8)
HadCattle	0.265 (0.44)				7582.1 (39.0)		10659.0 (27.5)
UltraPoor	0.607 (0.49)	−4323.1 (1.6)	−3710.7 (13.1)	−3946.8 (10.6)	−3682.7 (16.3)	−2913.7 (26.5)	−3494.3 (18.6)
Large × UltraPoor	0.045 (0.37)	−4847.6 (40.2)	−4987.5 (49.5)	−5190.3 (50.1)	−11956.0 (13.9)	−7279.2 (38.4)	−11318.1 (16.5)
LargeGrace × UltraPoor	0.027 (0.35)	2722.3 (48.7)	6878.0 (29.7)	7247.9 (25.1)	5716.2 (35.5)	5646.3 (40.5)	7212.1 (26.2)
Cattle × UltraPoor	0.001 (0.34)	794.9 (85.4)	−257.1 (96.7)	−69.6 (99.1)	1646.1 (81.9)	359.8 (96.0)	2001.7 (78.2)
rd 3	0.342 (0.47)	10980.5 (0.0)	11594.9 (0.0)	11951.4 (0.0)	15117.8 (0.0)	13734.7 (0.0)	15239.7 (0.0)
Large × rd 3	0.104 (0.30)	4450.4 (23.3)	5854.7 (21.1)	6475.1 (17.4)	4687.2 (38.2)	6412.1 (20.7)	5093.6 (34.4)
LargeGrace × rd 3	0.085 (0.28)	9648.9 (0.7)	12017.9 (1.9)	12296.5 (1.6)	13633.7 (1.8)	11363.6 (4.0)	13617.3 (1.8)
Cattle × rd 3	0.087 (0.28)	4998.9 (11.4)	6431.8 (7.8)	6478.4 (7.2)	7407.4 (8.3)	7586.6 (4.7)	7398.1 (8.4)
UltraPoor × rd 3	0.204 (0.40)	−1035.8 (65.2)	176.6 (95.5)	657.1 (83.4)	−254.1 (94.3)	1445.2 (64.8)	−248.6 (94.4)
Large × UltraPoor × rd 3	0.014 (0.21)	5730.5 (38.0)	6204.4 (42.9)	7272.9 (34.5)	10253.3 (23.9)	8289.2 (29.9)	10365.1 (23.8)
LargeGrace × UltraPoor × rd 3	0.010 (0.21)	−2029.6 (75.4)	−3026.2 (75.9)	−2552.3 (79.6)	−2815.0 (81.6)	−1031.1 (92.1)	−2801.4 (81.7)
Cattle × UltraPoor × rd 3	−0.000 (0.19)	7535.5 (9.7)	5879.6 (30.8)	5631.2 (33.1)	13375.7 (5.2)	9584.4 (12.8)	13434.0 (5.3)
rd 4	0.315 (0.46)	33261.6 (0.0)	34196.2 (0.0)	34425.1 (0.0)	43276.0 (0.0)	38751.8 (0.0)	43435.2 (0.0)
Large × rd 4	0.102 (0.30)	17350.0 (1.5)	19068.7 (1.4)	18591.2 (1.7)	10742.5 (13.8)	15985.1 (4.8)	11386.3 (11.9)
LargeGrace × rd 4	0.080 (0.27)	18427.7 (0.2)	21009.4 (0.5)	21458.7 (0.4)	21314.9 (1.1)	18119.2 (2.1)	21202.2 (1.2)
Cattle × rd 4	0.079 (0.27)	14959.8 (0.3)	14758.5 (0.8)	15204.4 (0.7)	13998.4 (1.0)	15132.6 (0.3)	13754.5 (1.1)
UltraPoor × rd 4	0.195 (0.40)	1684.5 (61.7)	5321.7 (17.7)	5182.5 (19.1)	3517.4 (45.7)	7793.5 (5.8)	3550.7 (45.4)
Large × UltraPoor × rd 4	0.016 (0.21)	12599.0 (19.7)	3206.3 (73.9)	2841.0 (76.8)	2361.0 (85.5)	2409.2 (81.9)	2475.5 (84.8)
LargeGrace × UltraPoor × rd 4	0.008 (0.20)	350.9 (96.8)	−4693.1 (69.5)	−3719.5 (75.7)	650.2 (96.4)	−2207.3 (86.5)	586.3 (96.8)
Cattle × UltraPoor × rd 4	−0.001 (0.19)	8786.6 (22.8)	−1281.1 (88.3)	−2237.1 (80.1)	9867.6 (38.8)	3108.1 (75.0)	9844.1 (38.8)
HadCattle	0.265 (0.44)				7582.1 (39.0)		10659.0 (27.5)
HadCattle × Large	0.024 (0.25)				21676.1 (14.7)		21771.8 (14.2)
HadCattle × LargeGrace	0.009 (0.23)				4747.5 (59.9)		5673.8 (51.5)
HadCattle × Cattle	−0.012 (0.21)				12883.7 (14.1)		12664.2 (13.4)
HadCattle × rd 3	0.092 (0.29)				−1866.5 (57.2)		−1972.8 (54.7)
HadCattle × Large × rd 3	0.008 (0.15)				6500.6 (50.0)		5986.2 (53.4)
HadCattle × LargeGrace × rd 3	0.003 (0.14)				−29620.5 (0.4)		−29690.8 (0.4)
HadCattle × Cattle × rd 3	−0.004 (0.12)				−4391.7 (54.8)		−4473.1 (54.0)
HadCattle × rd 4	0.084 (0.28)				9461.2 (17.2)		9207.2 (18.3)
HadCattle × Large × rd 4	0.009 (0.14)				15901.0 (47.3)		15368.2 (48.6)
HadCattle × LargeGrace × rd 4	0.004 (0.13)				−42160.6 (3.0)		−41843.9 (3.1)
HadCattle × Cattle × rd 4	−0.005 (0.11)				−7801.3 (60.7)		−7530.6 (61.7)
Flood in round 1	0.414 (0.49)			128.9 (96.8)	2279.7 (51.2)	281.8 (93.7)	2505.8 (49.3)
Head literate0	0.149 (0.36)			−711.2 (86.2)	−2950.9 (49.2)	−3405.8 (42.2)	−2820.6 (51.6)
Net2Value0	10261.899 (15197.09)		0.8 (0.0)	0.8 (0.0)	0.3 (32.3)	0.7 (4.7)	0.9 (5.1)
Household size0	4.538 (1.35)			2223.2 (4.4)	1786.3 (16.5)	2307.3 (5.9)	1709.0 (18.1)
Number of cattle0	0.380					−2822.6	−13899.9

TABLE 87: ANCOVA ESTIMATION OF BROAD NET ASSETS USING ANNUAL PRICES BY ATTRIBUTES, POVERTY STATUS, AND PERIOD

covariates	mean/std	(1)	(2)	(3)	(4)	(5)	(6)
(Intercept)		7222.1 (0.5)	1553.8 (70.6)	−8524.4 (16.7)	3187.6 (62.5)	−3748.3 (56.5)	1867.5 (78.3)
Upfront	0.063 (0.39)	17908.8 (0.0)	18450.0 (0.0)	18329.9 (0.1)	9526.2 (5.0)	14283.2 (1.1)	9754.7 (4.8)
WithGrace	0.014 (0.50)	−8968.7 (4.8)	−10978.8 (3.3)	−10401.0 (5.4)	−7810.8 (10.7)	−10529.1 (7.3)	−8221.1 (10.1)
InKind	0.009 (0.44)	−592.8 (85.4)	785.2 (84.5)	663.0 (86.5)	225.7 (94.9)	1653.0 (67.6)	565.8 (87.5)
HadCattle	0.265 (0.44)				7582.1 (39.0)		10659.0 (27.5)
UltraPoor	0.607 (0.49)	−4323.1 (1.6)	−3710.7 (13.1)	−3946.8 (10.6)	−3682.7 (16.3)	−2913.7 (26.5)	−3494.3 (18.6)
Upfront × UltraPoor	0.072 (0.27)	−4847.6 (40.2)	−4987.5 (49.5)	−5190.3 (50.1)	−11956.0 (13.9)	−7279.2 (38.4)	−11318.1 (16.5)
WithGrace × UltraPoor	0.027 (0.39)	7569.9 (17.7)	11865.4 (13.1)	12438.2 (12.1)	17672.2 (2.6)	12925.5 (10.6)	18530.2 (2.1)
InKind × UltraPoor	0.001 (0.34)	−1927.4 (63.8)	−7135.0 (28.7)	−7317.5 (27.3)	−4070.1 (55.5)	−5286.5 (43.1)	−5210.4 (45.8)
rd 3	0.342 (0.47)	10980.5 (0.0)	11594.9 (0.0)	11951.4 (0.0)	15117.8 (0.0)	13734.7 (0.0)	15239.7 (0.0)
UltraPoor × rd 3	0.204 (0.40)	−1035.8 (65.2)	176.6 (95.5)	657.1 (83.4)	−254.1 (94.3)	1445.2 (64.8)	−248.6 (94.4)
Upfront × rd 3	0.276 (0.45)	4450.4 (23.3)	5854.7 (21.1)	6475.1 (17.4)	4687.2 (38.2)	6412.1 (20.7)	5093.6 (34.4)
WithGrace × rd 3	0.172 (0.38)	5198.5 (21.9)	6163.2 (27.1)	5821.4 (30.6)	8946.5 (12.1)	4951.5 (40.6)	8523.7 (13.9)
InKind × rd 3	0.087 (0.28)	−4649.9 (21.4)	−5586.0 (25.0)	−5818.1 (22.8)	−6226.3 (19.1)	−3777.0 (44.1)	−6219.2 (19.0)
Upfront × UltraPoor × rd 3	0.024 (0.16)	5730.5 (38.0)	6204.4 (42.9)	7272.9 (34.5)	10253.3 (23.9)	8289.2 (29.9)	10365.1 (23.8)
WithGrace × UltraPoor × rd 3	0.010 (0.23)	−7760.1 (32.8)	−9230.6 (40.5)	−9825.2 (37.1)	−13068.3 (29.8)	−9320.3 (40.3)	−13166.5 (29.5)
InKind × UltraPoor × rd 3	−0.000 (0.19)	9565.0 (13.5)	8905.7 (35.5)	8183.4 (39.4)	16190.7 (15.3)	10615.5 (28.1)	16235.5 (15.1)
rd 4	0.315 (0.46)	33261.6 (0.0)	34196.2 (0.0)	34425.1 (0.0)	43276.0 (0.0)	38751.8 (0.0)	43435.2 (0.0)
UltraPoor × rd 4	0.195 (0.40)	1684.5 (61.7)	5321.7 (17.7)	5182.5 (19.1)	3517.4 (45.7)	7793.5 (5.8)	3550.7 (45.4)
Upfront × rd 4	0.260 (0.44)	17350.0 (1.5)	19068.7 (1.4)	18591.2 (1.7)	10742.5 (13.8)	15985.1 (4.8)	11386.3 (11.9)
WithGrace × rd 4	0.158 (0.37)	1077.7 (89.4)	1940.7 (83.6)	2867.5 (76.2)	10572.4 (24.1)	2134.2 (83.0)	9815.9 (27.7)
InKind × rd 4	0.079 (0.27)	−3467.9 (58.4)	−6250.9 (42.1)	−6254.3 (42.3)	−7316.6 (33.4)	−2986.7 (69.8)	−7447.7 (32.7)
Upfront × UltraPoor × rd 4	0.024 (0.16)	12599.0 (19.7)	3206.3 (73.9)	2841.0 (76.8)	2361.0 (85.5)	2409.2 (81.9)	2475.5 (84.8)
WithGrace × UltraPoor × rd 4	0.008 (0.22)	−12248.1 (27.5)	−7899.4 (54.9)	−6560.5 (61.9)	−1710.8 (91.0)	−4616.5 (73.0)	−1889.3 (90.1)
InKind × UltraPoor × rd 4	−0.001 (0.19)	8435.7 (35.7)	3412.0 (78.4)	1482.3 (90.6)	9217.4 (50.2)	5315.3 (67.5)	9257.8 (50.0)
HadCattle	0.265 (0.44)				7582.1 (39.0)		10659.0 (27.5)
HadCattle × Upfront	0.021 (0.20)				21676.1 (14.7)		21771.8 (14.2)
HadCattle × WithGrace	−0.003 (0.26)				−16928.5 (23.0)		−16098.1 (26.4)
HadCattle × InKind	−0.012 (0.21)				8136.2 (27.1)		6990.4 (34.0)
HadCattle × rd 3	0.092 (0.29)				−1866.5 (57.2)		−1972.8 (54.7)
HadCattle × Upfront × rd 3	0.006 (0.12)				6500.6 (50.0)		5986.2 (53.4)
HadCattle × WithGrace × rd 3	−0.001 (0.15)				−36121.1 (0.1)		−35677.0 (0.1)
HadCattle × InKind × rd 3	−0.004 (0.12)				25228.8 (0.7)		25217.6 (0.6)
HadCattle × rd 4	0.084 (0.28)				9461.2 (17.2)		9207.2 (18.3)
HadCattle × Upfront × rd 4	0.007 (0.11)				15901.0 (47.3)		15368.2 (48.6)
HadCattle × WithGrace × rd 4	−0.001 (0.14)				−58061.6 (1.1)		−57212.1 (1.3)
HadCattle × InKind × rd 4	−0.005 (0.11)				34359.3 (3.7)		34313.3 (3.7)
Flood in round 1	0.414 (0.49)			128.9 (96.8)	2279.7 (51.2)	281.8 (93.7)	2505.8 (49.3)
Head literate0	0.149 (0.36)			−711.2 (86.2)	−2950.9 (49.2)	−3405.8 (42.2)	−2820.6 (51.6)
Net2Value0	10261.899 (15197.09)		0.8 (0.0)	0.8 (0.0)	0.3 (32.3)	0.7 (4.7)	0.9 (5.1)
Household size0	4.538 (1.35)			2223.2 (4.4)	1786.3 (16.5)	2307.3 (5.9)	1709.0 (18.1)
Number of cattle0	0.380 (0.73)					−2822.6 (75.4)	−13899.9 (24.5)

III.5.9 Net non-livestock assets: Non-livestock assets-GUK Debt-Other Debts

Net non-livestock assets = Non livestock assets + net saving - debt to GUK - debts to relatives and money lenders.

Number of obs by Arm and attrition

Arm	AttritIn 2	3	4	9	Sum
traditional	6	4	20	144	174
large	5	2	1	192	200
large grace	22	3	3	171	199
cattle	5	5	13	177	200
Sum	38	14	37	684	773

Number of obs by membership status and attrition

BStatus	AttritIn 2	3	4	9	Sum
borrower	8	6	8	578	600
pure saver	0	0	0	0	0
individual rejection	9	4	1	75	89
group rejection	9	4	0	55	68
rejection by flood	12	0	28	0	40
Sum	38	14	37	708	797

TABLE 88: ANCOVA ESTIMATION OF NET NON-LIVESTOCK ASSETS

covariates	mean/std	(1)	(2)	(3)	(4)	(5)	(6)
(Intercept)		−645.9 (30.8)	−536.2 (51.6)	−65.5 (95.2)	−126.3 (91.8)	295.9 (79.1)	−185.8 (88.2)
Large	0.048 (0.46)	1367.8 (18.6)	2051.4 (10.6)	2279.0 (6.7)	1722.0 (21.0)	1776.7 (17.1)	1708.2 (21.8)
LargeGrace	0.006 (0.43)	−137.3 (89.3)	152.6 (91.3)	47.5 (97.1)	−987.0 (47.0)	−699.7 (60.2)	−992.9 (46.8)
Cattle	0.009 (0.44)	−18.2 (98.0)	174.3 (85.1)	293.7 (74.2)	−780.8 (41.9)	−700.7 (44.8)	−812.9 (40.6)
HadCattle	0.265 (0.44)				−607.5 (47.8)		274.2 (87.9)
HadCattle	0.265 (0.44)				−607.5 (47.8)		274.2 (87.9)
HadCattle × Large	0.024 (0.25)				2140.3 (41.7)		2058.3 (43.6)
HadCattle × LargeGrace	0.009 (0.23)				5010.7 (8.3)		5005.6 (8.2)
HadCattle × Cattle	−0.012 (0.21)				4731.7 (2.2)		4594.8 (3.0)
Flood in round 1	0.414 (0.49)			−1359.0 (6.1)	−1566.3 (5.7)	−1694.9 (3.1)	−1554.2 (6.3)
Head literate0	0.149 (0.36)			−39.8 (94.6)	−95.8 (88.4)	17.9 (97.5)	−108.0 (87.0)
NetAssetValue0	2657.829 (2852.68)		0.0 (40.9)	0.0 (33.3)	0.2 (4.0)	0.2 (7.3)	0.2 (4.0)
Household size0	4.538 (1.35)			−1.2 (99.6)	135.6 (62.5)	43.2 (87.5)	150.0 (60.2)
Number of cattle0	0.380 (0.73)					−416.0 (48.4)	−621.9 (57.2)
mean of dependent variable $T = 2$		−315 42	−315 13	−315 13	−315 13	−315 10	−315 13
$T = 3$ $T = 4$		137 569	84 377	81 377	38 327	40 362	36 327
$\bar{R}^2$ N	 1081	0.003 2023	0.005 1312	0.007 1306	0.011 1070	0.01 1176	0.011 1066

Source: Estimated with GUK administrative and survey data.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. We annotate the number of periods that a household is observed with T. The total number of households is shown for each values of T. T=4 indicates the number of households with complete panel information, T=3 indicates number of households observed three times, T=2 indicates the number of households observed twice. N indicates total number of observations used in ANCOVA estimation, or N=1×(T=2)+2×(T=3)+3×(T=4). Large, LargeGrace, Cattle are indicator variables of the large, large grace, and cattle arms, respectively. The default arm category is traditional arm. Non-livestock assets do not include livestock.

2. *P* values in percentages in parenthesises. Standard errors are clustered at group (village) level.

TABLE 89: ANCOVA ESTIMATION OF NET NON-LIVESTOCK ASSETS BY ATTRIBUTES

covariates	mean/std	(1)	(2)	(3)	(4)	(5)	(6)
(Intercept)		−645.9 (30.8)	−536.2 (51.6)	−65.5 (95.2)	−126.3 (91.8)	295.9 (79.1)	−185.8 (88.2)
Upfront	0.063 (0.39)	1367.8 (18.6)	2051.4 (10.6)	2279.0 (6.7)	1722.0 (21.0)	1776.7 (17.1)	1708.2 (21.8)
WithGrace	0.014 (0.50)	−1505.1 (18.7)	−1898.9 (19.6)	−2231.5 (10.7)	−2709.0 (6.4)	−2476.4 (7.8)	−2701.2 (6.6)
InKind	0.009 (0.44)	119.1 (89.3)	21.8 (98.5)	246.2 (82.3)	206.2 (85.3)	−1.0 (99.9)	180.1 (87.0)
HadCattle	0.265 (0.44)				−607.5 (47.8)		274.2 (87.9)
HadCattle	0.265 (0.44)				−607.5 (47.8)		274.2 (87.9)
HadCattle × Upfront	0.021 (0.20)				2140.3 (41.7)		2058.3 (43.6)
HadCattle × WithGrace	−0.003 (0.26)				2870.5 (28.7)		2947.3 (27.2)
HadCattle × InKind	−0.012 (0.21)				−279.0 (90.4)		−410.8 (85.8)
Flood in round 1	0.414 (0.49)			−1359.0 (6.1)	−1566.3 (5.7)	−1694.9 (3.1)	−1554.2 (6.3)
Head literate0	0.149 (0.36)			−39.8 (94.6)	−95.8 (88.4)	17.9 (97.5)	−108.0 (87.0)
NetAssetValue0	2657.829 (2852.68)		0.0 (40.9)	0.0 (33.3)	0.2 (4.0)	0.2 (7.3)	0.2 (4.0)
Household size0	4.538 (1.35)			−1.2 (99.6)	135.6 (62.5)	43.2 (87.5)	150.0 (60.2)
Number of cattle0	0.380 (0.73)					−416.0 (48.4)	−621.9 (57.2)
mean of dependent variable		−315	−315	−315	−315	−315	−315
$T = 2$		42	13	13	13	10	13
$T = 3$		137	84	81	38	40	36
$T = 4$		569	377	377	327	362	327
$\bar{R}^2$		0.003	0.005	0.007	0.011	0.01	0.011
N	1081	2023	1312	1306	1070	1176	1066

Source: Estimated with GUK administrative and survey data.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. We annotate the number of periods that a household is observed with T. The total number of households is shown for each values of T. T=4 indicates the number of households with complete panel information, T=3 indicates number of households observed three times, T=2 indicates the number of households observed twice. N indicates total number of observations used in ANCOVA estimation, or N=1×(T=2)+2×(T=3)+3×(T=4). Large, LargeGrace, Cattle are indicator variables of the large, large grace, and cattle arms, respectively. The default arm category is traditional arm. Net non-livestockassets do not include livestock.

2. P values in percentages in parenthesises. Standard errors are clustered at group (village) level.

Table 90: ANCOVA estimation of net non-livestock assets by period

covariates	mean/std	(1)	(2)	(3)	(4)	(5)	(6)
(Intercept)		−4125.2 (0.0)	−4436.1 (0.0)	−4236.5 (0.0)	−3908.8 (0.0)	−3447.2 (0.1)	−3966.9 (0.0)
Large	0.048 (0.46)	749.4 (52.8)	1607.6 (27.1)	1849.9 (20.0)	1240.8 (40.9)	1256.7 (39.1)	1240.6 (41.2)
LargeGrace	0.006 (0.43)	−1710.5 (14.7)	−1424.1 (40.8)	−1513.8 (36.1)	−2624.6 (11.1)	−2247.0 (17.6)	−2629.4 (11.1)
Cattle	0.009 (0.44)	−1319.7 (12.5)	−758.0 (49.1)	−647.9 (55.2)	−1643.8 (14.2)	−1520.5 (17.0)	−1681.7 (13.8)
HadCattle	0.265 (0.44)				−665.3 (55.3)		268.3 (89.2)
rd 3	0.342 (0.47)	4656.4 (0.0)	5066.9 (0.0)	5076.3 (0.0)	5370.0 (0.0)	5072.1 (0.0)	5388.3 (0.0)
Large × rd 3	0.104 (0.30)	2907.0 (1.1)	1920.1 (21.6)	1915.9 (22.0)	1787.9 (37.3)	2233.7 (20.5)	1852.4 (35.8)
LargeGrace × rd 3	0.085 (0.28)	7428.0 (0.0)	7474.8 (0.0)	7467.4 (0.0)	8343.5 (0.1)	7659.7 (0.1)	8341.9 (0.1)
Cattle × rd 3	0.087 (0.28)	4954.6 (0.0)	3905.5 (0.8)	3926.3 (0.8)	3988.8 (4.1)	3963.6 (2.1)	3986.5 (4.1)
rd 4	0.315 (0.46)	7760.3 (0.0)	7931.5 (0.0)	7937.7 (0.0)	7895.3 (0.0)	7645.7 (0.0)	7904.8 (0.0)
Large × rd 4	0.102 (0.30)	2900.9 (6.1)	2221.9 (24.6)	2139.4 (26.4)	2865.1 (13.3)	3055.2 (11.9)	2905.4 (12.9)
LargeGrace × rd 4	0.080 (0.27)	7275.2 (0.0)	7481.2 (0.3)	7369.8 (0.4)	9231.2 (0.0)	8094.4 (0.2)	9236.4 (0.0)
Cattle × rd 4	0.079 (0.27)	6609.8 (0.0)	5614.4 (0.2)	5618.4 (0.2)	6444.4 (0.1)	5890.8 (0.2)	6441.1 (0.1)
HadCattle	0.265 (0.44)				−665.3 (55.3)		268.3 (89.2)
HadCattle × Large	0.024 (0.25)				2386.6 (49.1)		2262.8 (51.5)
HadCattle × LargeGrace	0.009 (0.23)				6685.1 (8.9)		6663.2 (8.8)
HadCattle × Cattle	−0.012 (0.21)				5578.7 (5.9)		5428.7 (7.3)
HadCattle × rd 3	0.092 (0.29)				58.9 (97.3)		51.4 (97.6)
HadCattle × Large × rd 3	0.008 (0.15)				−1111.6 (85.6)		−1171.7 (84.9)
HadCattle × LargeGrace × rd 3	0.003 (0.14)				−8868.6 (18.0)		−8883.2 (17.8)
HadCattle × Cattle × rd 3	−0.004 (0.12)				−3749.8 (53.4)		−3765.7 (53.2)
HadCattle × rd 4	0.084 (0.28)				1180.3 (56.1)		1175.7 (56.3)
HadCattle × Large × rd 4	0.009 (0.14)				−2954.3 (64.3)		−2958.0 (64.4)
HadCattle × LargeGrace × rd 4	0.004 (0.13)				−11657.5 (12.0)		−11648.0 (12.2)
HadCattle × Cattle × rd 4	−0.005 (0.11)				−4660.8 (46.7)		−4704.6 (46.2)
Flood in round 1	0.414 (0.49)			−1413.8 (4.9)	−1532.3 (6.6)	−1732.7 (2.7)	−1522.9 (7.1)
Head literate0	0.149 (0.36)			271.7 (65.0)	−8.8 (99.0)	210.2 (72.5)	0.1 (100.0)
NetAssetValue0	2657.829 (2852.68)		0.1 (1.1)	0.1 (1.0)	0.2 (6.1)	0.2 (9.6)	0.2 (6.9)
Household size0	4.538 (1.35)			56.9 (80.8)	169.2 (55.1)	96.9 (72.7)	185.9 (52.7)
Number of cattle0	0.380 (0.73)					−422.3 (48.2)	−660.9 (54.7)
mean of dependent variable		−315	−315	−315	−315	−315	−315
$T = 2$		42	13	13	13	10	13
$T = 3$		137	84	81	38	40	36
$T = 4$		569	377	377	327	362	327
$\tilde{R}^2$		0.14	0.113	0.116	0.113	0.113	0.113
N	1081	2023	1312	1306	1070	1176	1066

Source: Estimated with GUK administrative and survey data.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. We annotate the number of periods that a household is observed with T. The total number of households is shown for each values of T. T=4 indicates the number of households with complete panel information, T=3 indicates number of households observed three times, T=2 indicates the number of households observed twice. N indicates total number of observations used in ANCOVA estimation, or N=1×(T=2)+2×(T=3)+3×(T=4). Large, LargeGrace, Cattle are indicator variables of the large, large grace, and cattle arms, respectively. The default arm category is traditional arm. Net non-livestockassets do not include livestock.

2. *P* values in percentages in parenthesises. Standard errors are clustered at group (village) level.

TABLE 91: ANCOVA ESTIMATION OF NET NON-LIVESTOCK ASSETS BY ATTRIBUTES AND PERIOD

covariates	mean/std	(1)	(2)	(3)	(4)	(5)	(6)
(Intercept)		−4125.2	−4436.1	−4236.5	−3908.8	−3447.2	−3966.9
		(0.0)	(0.0)	(0.0)	(0.0)	(0.1)	(0.0)
Upfront	0.063	749.4	1607.6	1849.9	1240.8	1256.7	1240.6
	(0.39)	(52.8)	(27.1)	(20.0)	(40.9)	(39.1)	(41.2)
WithGrace	0.014	−2459.8	−3031.7	−3363.7	−3865.4	−3503.6	−3870.0
	(0.50)	(7.2)	(8.9)	(4.8)	(2.7)	(4.0)	(2.7)
InKind	0.009	390.7	666.1	865.8	980.8	726.5	947.7
	(0.44)	(72.1)	(65.7)	(54.8)	(49.9)	(61.1)	(51.1)
HadCattle	0.265				−665.3		268.3
	(0.44)				(55.3)		(89.2)
rd 3	0.342	4656.4	5066.9	5076.3	5370.0	5072.1	5388.3
	(0.47)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
Upfront × rd 3	0.276	2907.0	1920.1	1915.9	1787.9	2233.7	1852.4
	(0.45)	(1.1)	(21.6)	(22.0)	(37.3)	(20.5)	(35.8)
WithGrace × rd 3	0.172	4521.1	5554.8	5551.5	6555.5	5426.0	6489.5
	(0.38)	(0.2)	(0.4)	(0.4)	(0.1)	(0.5)	(0.1)
InKind × rd 3	0.087	−2473.4	−3569.3	−3541.1	−4354.7	−3696.2	−4355.4
	(0.28)	(7.9)	(5.8)	(6.2)	(2.4)	(4.7)	(2.4)
rd 4	0.315	7760.3	7931.5	7937.7	7895.3	7645.7	7904.8
	(0.46)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
Upfront × rd 4	0.260	2900.9	2221.9	2139.4	2865.1	3055.2	2905.4
	(0.44)	(6.1)	(24.6)	(26.4)	(13.3)	(11.9)	(12.9)
WithGrace × rd 4	0.158	4374.3	5259.3	5230.4	6366.1	5039.2	6330.9
	(0.37)	(2.0)	(3.3)	(3.6)	(1.1)	(4.3)	(1.2)
InKind × rd 4	0.079	−665.3	−1866.8	−1751.4	−2786.8	−2203.6	−2795.2
	(0.27)	(70.1)	(43.4)	(47.1)	(26.2)	(36.3)	(26.2)
HadCattle	0.265				−665.3		268.3
	(0.44)				(55.3)		(89.2)
HadCattle × Upfront	0.021				2386.6		2262.8
	(0.20)				(49.1)		(51.5)
HadCattle × WithGrace	−0.003				4298.5		4400.4
	(0.26)				(19.5)		(18.1)
HadCattle × InKind	−0.012				−1106.4		−1234.6
	(0.21)				(71.3)		(67.9)
HadCattle × rd 3	0.092				58.9		51.4
	(0.29)				(97.3)		(97.6)
HadCattle × Upfront × rd 3	0.006				−1111.6		−1171.7
	(0.12)				(85.6)		(84.9)
HadCattle × WithGrace × rd 3	−0.001				−7757.0		−7711.5
	(0.15)				(1.6)		(1.7)
HadCattle × InKind × rd 3	−0.004				5118.7		5117.5
	(0.12)				(9.3)		(9.3)
HadCattle × rd 4	0.084				1180.3		1175.7
	(0.28)				(56.1)		(56.3)
HadCattle × Upfront × rd 4	0.007				−2954.3		−2958.0
	(0.11)				(64.3)		(64.4)
HadCattle × WithGrace × rd 4	−0.001				−8703.1		−8690.1
	(0.14)				(8.9)		(8.9)
HadCattle × InKind × rd 4	−0.005				6996.7		6943.4
	(0.11)				(16.9)		(17.7)
Flood in round 1	0.414			−1413.8	−1532.3	−1732.7	−1522.9
	(0.49)			(4.9)	(6.6)	(2.7)	(7.1)
Head literate0	0.149			271.7	−8.8	210.2	0.1
	(0.36)			(65.0)	(99.0)	(72.5)	(100.0)
NetAssetValue0	2657.829		0.1	0.1	0.2	0.2	0.2
	(2852.68)		(1.1)	(1.0)	(6.1)	(9.6)	(6.9)
Household size0	4.538			56.9	169.2	96.9	185.9
	(1.35)			(80.8)	(55.1)	(72.7)	(52.7)
Number of cattle0	0.380					−422.3	−660.9
	(0.73)					(48.2)	(54.7)
mean of dependent variable		−315	−315	−315	−315	−315	−315
$T = 2$		42	13	13	13	10	13
$T = 3$		137	84	81	38	40	36
$T = 4$		569	377	377	327	362	327
$\tilde{R}^2$		0.14	0.113	0.116	0.113	0.113	0.113
N	1081	2023	1312	1306	1070	1176	1066

Source: Estimated with GUK administrative and survey data.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. We annotate the number of periods that a household is observed with T. The total number of households is shown for each values of T. T=4 indicates the number of households with complete panel information, T=3 indicates number of households observed three times, T=2 indicates the number of households observed twice. N indicates total number of observations used in ANCOVA estimation, or N=1×(T=2)+2×(T=3)+3×(T=4). Large, LargeGrace, Cattle are indicator variables of the large, large grace, and cattle arms, respectively. The default arm category is traditional arm. Net non-livestockassets do not include livestock.

2. *P* values in percentages in parenthesises. Standard errors are clustered at group (village) level.

TABLE 92: ANCOVA ESTIMATION OF NET NON-LIVESTOCK ASSETS BY ARM, POVERTY STATUS, AND PERIOD

covariates	mean/std	(1)	(2)	(3)	(4)	(5)	(6)
(Intercept)		−4434.6 (0.0)	−5249.1 (0.0)	−5121.4 (0.0)	−4888.0 (0.0)	−4547.6 (0.0)	−4972.6 (0.0)
Large	0.048 (0.46)	998.7 (36.4)	2340.8 (12.2)	2485.8 (10.1)	2025.0 (24.3)	2041.0 (21.8)	2032.0 (24.5)
LargeGrace	0.006 (0.43)	−1502.6 (19.5)	−798.2 (66.2)	−966.4 (58.5)	−2147.0 (25.0)	−1555.6 (40.9)	−2152.3 (25.1)
Cattle	0.009 (0.44)	−996.8 (20.8)	−88.9 (93.8)	−56.3 (96.1)	−1032.0 (43.9)	−759.1 (57.0)	−1069.9 (42.7)
HadCattle	0.265 (0.44)				−397.7 (71.5)		734.3 (69.4)
UltraPoor	0.607 (0.49)	−1303.3 (5.7)	−1669.3 (9.0)	−1595.0 (10.3)	−1570.5 (16.8)	−1763.2 (8.8)	−1557.5 (17.7)
Large × UltraPoor	0.045 (0.37)	−331.4 (87.6)	382.2 (90.2)	−261.7 (93.7)	−781.2 (83.9)	60.2 (98.7)	−746.0 (84.7)
LargeGrace × UltraPoor	0.027 (0.35)	3333.6 (6.4)	4364.4 (11.1)	4029.6 (14.0)	4641.2 (15.6)	4482.3 (14.0)	4796.2 (14.2)
Cattle × UltraPoor	0.001 (0.34)	821.7 (52.4)	2408.9 (24.1)	2036.7 (30.6)	1587.8 (49.4)	2269.8 (33.7)	1652.8 (47.8)
rd 3	0.342 (0.47)	4633.0 (0.0)	5144.3 (0.0)	5154.5 (0.0)	5439.3 (0.0)	5137.3 (0.0)	5461.4 (0.0)
Large × rd 3	0.104 (0.30)	3198.9 (0.6)	1841.3 (34.0)	1821.9 (34.8)	1868.5 (41.0)	2152.7 (34.6)	1948.9 (39.2)
LargeGrace × rd 3	0.085 (0.28)	7790.7 (0.0)	7553.4 (0.3)	7548.4 (0.3)	8759.9 (0.2)	7752.5 (0.5)	8760.4 (0.2)
Cattle × rd 3	0.087 (0.28)	5135.9 (0.0)	3896.4 (3.6)	3908.8 (3.7)	4163.1 (6.0)	3935.9 (7.8)	4162.1 (6.0)
UltraPoor × rd 3	0.204 (0.40)	−305.6 (68.8)	36.8 (97.6)	52.2 (96.5)	−459.7 (73.9)	−21.6 (98.7)	−477.1 (72.9)
Large × UltraPoor × rd 3	0.014 (0.21)	2166.6 (24.9)	−21.2 (99.5)	−98.0 (97.6)	673.5 (84.6)	−116.4 (97.5)	610.6 (86.1)
LargeGrace × UltraPoor × rd 3	0.010 (0.21)	−184.0 (94.5)	−1835.0 (68.3)	−1954.1 (66.5)	−2517.0 (63.1)	−1826.3 (71.1)	−2494.0 (63.5)
Cattle × UltraPoor × rd 3	−0.000 (0.19)	3134.1 (6.3)	1542.4 (60.6)	1624.1 (58.9)	2565.2 (43.0)	1591.7 (65.4)	2573.4 (43.0)
rd 4	0.315 (0.46)	7869.8 (0.0)	8254.3 (0.0)	8257.8 (0.0)	8212.6 (0.0)	8011.9 (0.0)	8224.2 (0.0)
Large × rd 4	0.102 (0.30)	2676.0 (7.3)	1121.5 (61.4)	1048.0 (63.8)	1875.6 (44.2)	1831.8 (45.9)	1912.4 (43.4)
LargeGrace × rd 4	0.080 (0.27)	7163.2 (0.0)	6549.3 (2.2)	6464.2 (2.6)	8605.3 (0.6)	7056.2 (2.3)	8606.5 (0.6)
Cattle × rd 4	0.079 (0.27)	6176.1 (0.0)	4563.5 (3.2)	4560.8 (3.4)	5652.0 (2.1)	4771.5 (4.9)	5644.0 (2.1)
UltraPoor × rd 4	0.195 (0.40)	1551.4 (10.2)	2584.2 (5.6)	2538.1 (6.0)	1886.1 (21.3)	2371.9 (9.2)	1914.9 (20.5)
Large × UltraPoor × rd 4	0.016 (0.21)	304.0 (90.6)	−2967.7 (40.4)	−3055.1 (39.2)	−1371.9 (70.5)	−3022.1 (43.8)	−1340.6 (71.1)
LargeGrace × UltraPoor × rd 4	0.008 (0.20)	−4933.3 (8.0)	−7067.8 (13.0)	−7261.7 (12.2)	−6996.6 (19.4)	−7221.1 (14.8)	−7008.6 (19.3)
Cattle × UltraPoor × rd 4	−0.001 (0.19)	1176.4 (53.8)	−1008.8 (75.3)	−1073.1 (73.8)	−559.7 (86.4)	−1730.9 (62.7)	−548.3 (86.7)
HadCattle	0.265 (0.44)				−397.7 (71.5)		734.3 (69.4)
HadCattle × Large	0.024 (0.25)				1352.6 (66.6)		1192.2 (70.3)
HadCattle × LargeGrace	0.009 (0.23)				6254.7 (9.9)		6235.5 (9.7)
HadCattle × Cattle	−0.012 (0.21)				4863.1 (5.5)		4666.4 (7.2)
HadCattle × rd 3	0.092 (0.29)				−135.7 (93.3)		−144.7 (92.8)
HadCattle × Large × rd 3	0.008 (0.15)				−959.2 (85.7)		−1035.1 (84.6)
HadCattle × LargeGrace × rd 3	0.003 (0.14)				−9460.5 (12.8)		−9477.2 (12.7)
HadCattle × Cattle × rd 3	−0.004 (0.12)				−3847.3 (45.9)		−3867.2 (45.6)
HadCattle × rd 4	0.084 (0.28)				661.0 (74.1)		653.1 (74.4)
HadCattle × Large × rd 4	0.009 (0.14)				−1444.2 (80.5)		−1435.3 (80.7)
HadCattle × LargeGrace × rd 4	0.004 (0.13)				−10967.9 (13.9)		−10951.1 (14.1)
HadCattle × Cattle × rd 4	−0.005 (0.11)				−3767.9 (51.6)		−3819.8 (51.0)
Flood in round 1	0.414 (0.49)			−1351.5 (7.3)	−1568.7 (8.0)	−1665.7 (4.3)	−1542.5 (8.7)
Head literate0	0.149 (0.36)			163.6 (80.5)	−127.7 (86.0)	118.7 (85.7)	−92.7 (89.7)
NetAssetValue0	2657.829 (2852.68)		0.1 (1.1)	0.1 (0.9)	0.2 (5.2)	0.2 (9.0)	0.2 (6.0)
Household size0	4.538 (1.35)			88.5 (70.6)	207.6 (47.4)	130.6 (63.9)	225.9 (44.8)
Number of cattle0	0.380 (0.73)					−345.4 (56.8)	−797.1 (45.7)

TABLE 93: ANCOVA ESTIMATION OF NET NON-LIVESTOCK ASSETS BY ATTRIBUTES, POVERTY STATUS, AND PERIOD

covariates	mean/std	(1)	(2)	(3)	(4)	(5)	(6)
(Intercept)		−4434.6 (0.0)	−5249.1 (0.0)	−5121.4 (0.0)	−4888.0 (0.0)	−4547.6 (0.0)	−4972.6 (0.0)
Upfront	0.063 (0.39)	998.7 (36.4)	2340.8 (12.2)	2485.8 (10.1)	2025.0 (24.3)	2041.0 (21.8)	2032.0 (24.5)
WithGrace	0.014 (0.50)	−2501.3 (6.3)	−3139.0 (9.1)	−3452.3 (5.5)	−4172.0 (2.9)	−3596.6 (4.5)	−4184.4 (2.9)
InKind	0.009 (0.44)	505.8 (64.7)	709.4 (65.1)	910.1 (54.9)	1115.0 (47.1)	796.5 (59.8)	1082.5 (48.3)
HadCattle	0.265 (0.44)				−397.7 (71.5)		734.3 (69.4)
UltraPoor	0.607 (0.49)	−1303.3 (5.7)	−1669.3 (9.0)	−1595.0 (10.3)	−1570.5 (16.8)	−1763.2 (8.8)	−1557.5 (17.7)
Upfront × UltraPoor	0.072 (0.27)	−331.4 (87.6)	382.2 (90.2)	−261.7 (93.7)	−781.2 (83.9)	60.2 (98.7)	−746.0 (84.7)
WithGrace × UltraPoor	0.027 (0.39)	3665.0 (12.4)	3982.2 (23.1)	4291.3 (21.3)	5422.4 (17.3)	4422.1 (20.7)	5542.1 (16.7)
InKind × UltraPoor	0.001 (0.34)	−2511.9 (13.7)	−1955.5 (40.5)	−1992.9 (40.0)	−3053.4 (26.7)	−2212.5 (35.9)	−3143.4 (25.5)
rd 3	0.342 (0.47)	4633.0 (0.0)	5144.3 (0.0)	5154.5 (0.0)	5439.3 (0.0)	5137.3 (0.0)	5461.4 (0.0)
UltraPoor × rd 3	0.204 (0.40)	−305.6 (68.8)	36.8 (97.6)	52.2 (96.5)	−459.7 (73.9)	−21.6 (98.7)	−477.1 (72.9)
Upfront × rd 3	0.276 (0.45)	3198.9 (0.6)	1841.3 (34.0)	1821.9 (34.8)	1868.5 (41.0)	2152.7 (34.6)	1948.9 (39.2)
WithGrace × rd 3	0.172 (0.38)	4591.8 (0.2)	5712.2 (0.6)	5726.5 (0.6)	6891.3 (0.2)	5599.8 (0.7)	6811.5 (0.2)
InKind × rd 3	0.087 (0.28)	−2654.8 (6.7)	−3657.0 (7.0)	−3639.6 (7.3)	−4596.8 (3.1)	−3816.6 (5.6)	−4598.3 (3.1)
Upfront × UltraPoor × rd 3	0.024 (0.16)	2166.6 (24.9)	−21.2 (99.5)	−98.0 (97.6)	673.5 (84.6)	−116.4 (97.5)	610.6 (86.1)
WithGrace × UltraPoor × rd 3	0.010 (0.23)	−2350.6 (35.9)	−1813.8 (63.6)	−1856.1 (62.9)	−3190.4 (47.9)	−1709.9 (65.8)	−3104.5 (49.0)
InKind × UltraPoor × rd 3	−0.000 (0.19)	3318.1 (17.1)	3377.4 (35.3)	3578.2 (32.5)	5082.2 (23.9)	3418.0 (35.1)	5067.4 (24.0)
rd 4	0.315 (0.46)	7869.8 (0.0)	8254.3 (0.0)	8257.8 (0.0)	8212.6 (0.0)	8011.9 (0.0)	8224.2 (0.0)
UltraPoor × rd 4	0.195 (0.40)	1551.4 (10.2)	2584.2 (5.6)	2538.1 (6.0)	1886.1 (21.3)	2371.9 (9.2)	1914.9 (20.5)
Upfront × rd 4	0.260 (0.44)	2676.0 (7.3)	1121.5 (61.4)	1048.0 (63.8)	1875.6 (44.2)	1831.8 (45.9)	1912.4 (43.4)
WithGrace × rd 4	0.158 (0.37)	4487.3 (1.6)	5427.8 (3.5)	5416.3 (3.7)	6729.8 (1.2)	5224.5 (4.4)	6694.1 (1.2)
InKind × rd 4	0.079 (0.27)	−987.2 (57.5)	−1985.9 (42.6)	−1903.4 (45.2)	−2953.3 (26.8)	−2284.8 (36.8)	−2962.6 (26.7)
Upfront × UltraPoor × rd 4	0.024 (0.16)	304.0 (90.6)	−2967.7 (40.4)	−3055.1 (39.2)	−1371.9 (70.5)	−3022.1 (43.8)	−1340.6 (71.1)
WithGrace × UltraPoor × rd 4	0.008 (0.22)	−5237.2 (11.0)	−4100.1 (35.2)	−4206.6 (34.0)	−5624.7 (27.5)	−4198.9 (34.0)	−5668.0 (27.1)
InKind × UltraPoor × rd 4	−0.001 (0.19)	6109.6 (2.8)	6059.0 (14.3)	6188.6 (13.6)	6436.9 (19.1)	5490.1 (18.3)	6460.3 (18.9)
HadCattle	0.265 (0.44)				−397.7 (71.5)		734.3 (69.4)
HadCattle × Upfront	0.021 (0.20)				1352.6 (66.6)		1192.2 (70.3)
HadCattle × WithGrace	−0.003 (0.26)				4902.1 (16.3)		5043.3 (14.7)
HadCattle × InKind	−0.012 (0.21)				−1391.6 (66.1)		−1569.1 (61.6)
HadCattle × rd 3	0.092 (0.29)				−135.7 (93.3)		−144.7 (92.8)
HadCattle × Upfront × rd 3	0.006 (0.12)				−959.2 (85.7)		−1035.1 (84.6)
HadCattle × WithGrace × rd 3	−0.001 (0.15)				−8501.3 (2.5)		−8442.1 (2.6)
HadCattle × InKind × rd 3	−0.004 (0.12)				5613.2 (12.2)		5610.0 (12.2)
HadCattle × rd 4	0.084 (0.28)				661.0 (74.1)		653.1 (74.4)
HadCattle × Upfront × rd 4	0.007 (0.11)				−1444.2 (80.5)		−1435.3 (80.7)
HadCattle × WithGrace × rd 4	−0.001 (0.14)				−9523.8 (9.0)		−9515.8 (8.9)
HadCattle × InKind × rd 4	−0.005 (0.11)				7200.0 (19.4)		7131.3 (20.2)
Flood in round 1	0.414 (0.49)			−1351.5 (7.3)	−1568.7 (8.0)	−1665.7 (4.3)	−1542.5 (8.7)
Head literate0	0.149 (0.36)			163.6 (80.5)	−127.7 (86.0)	118.7 (85.7)	−92.7 (89.7)
NetAssetValue0	2657.829 (2852.68)		0.1 (1.1)	0.1 (0.9)	0.2 (5.2)	0.2 (9.0)	0.2 (6.0)
Household size0	4.538 (1.35)			88.5 (70.6)	207.6 (47.4)	130.6 (63.9)	225.9 (44.8)
Number of cattle0	0.380 (0.73)					−345.4 (56.8)	−797.1 (45.7)

III.5.10 Cattle holding

```
             AttritIn
Arm             2   3   4   9 Sum
  traditional   7   4  20 144 175
  large         5   2   1 192 200
  large grace  12   3   3 171 189
  cattle        5   5  13 176 199
  Sum          29  14  37 683 763
     NumCows
tee      0    1    2    3    4    5    6    7    8    9 <NA>  Sum
  2     15  309  153   40   11    1    2    0    1    1  197  730
  3      5  337  175   40   16    1    2    2    1    0  110  689
  4      4  218  201   54   11    4    2    0    1    1   86  582
  Sum   24  864  529  134   38    6    6    2    3    2  393 2001
```

```
      NumCows0
Cattle   0   1   2   3   4   5 Sum
  Adi  108   0   0   0   0   0 108
  None 484   0   0   0   0   0 484
  Own    0  99  30   5   3   1 138
  Sum  592  99  30   5   3   1 730
```

```
[1]
 ~  + dummyLarge + dummyLargeGrace + dummyCattle

 + NumCows0
FloodInRd1 + HHsize0 + HeadLiteracy0 + NA

 + dummyHadCows
 + TotalImputed2Value0

[2]
 ~  + dummyUltraPoor + dummyLargeSize + dummyWithGrace
 + dummyWithGrace + dummyInKind + UDdummyUltraPoor
 + dummyLargeSize.UltraPoor + UDdummyLargeSize.UltraPoor + dummyWithGrace.UltraPoor
 + UDdummyWithGrace.UltraPoor + dummyInKind.UltraPoor + UDdummyInKind.UltraPoor
 +

 + NumCows0
FloodInRd1 + HHsize0 + HeadLiteracy0 + NA

 + dummyHadCows
 + TotalImputed2Value0

[3]
 ~  + dummyLargeSize + dummyWithGrace + dummyInKind

 + NumCows0
FloodInRd1 + HHsize0 + HeadLiteracy0 + NA

 + dummyHadCows
 + TotalImputed2Value0

[4]
 ~  + Time.3 + Time.4 + dummyLarge
 + dummyLarge + dummyLargeGrace + dummyCattle
```

```
 + dummyLarge.Time3 + dummyLargeGrace.Time3 + dummyCattle.Time3
 + dummyLarge.Time4 + dummyLargeGrace.Time4 + dummyCattle.Time4
 +

 + NumCows0
FloodInRd1 + HHsize0 + HeadLiteracy0 + NA

 + dummyHadCows
 + TotalImputed2Value0

[5]
 ~  + Time.3 + Time.4 + dummyLargeSize
 + dummyLargeSize + dummyWithGrace + dummyInKind
 + dummyLargeSize.Time3 + dummyWithGrace.Time3 + dummyInKind.Time3
 + dummyLargeSize.Time4 + dummyWithGrace.Time4 + dummyInKind.Time4
 +

 + NumCows0
FloodInRd1 + HHsize0 + HeadLiteracy0 + NA

 + dummyHadCows
 + TotalImputed2Value0

[6]
 ~  + Time.3 + Time.4 + dummyLarge
 + dummyLarge + dummyLargeGrace + dummyCattle
 + dummyUltraPoor + dummyLarge.Time3 + dummyLargeGrace.Time3
 + dummyCattle.Time3 + dummyUltraPoor.Time3 + dummyLarge.Time4
 + dummyLargeGrace.Time4 + dummyCattle.Time4 + dummyUltraPoor.Time4
 + dummyLarge.UltraPoor + dummyLargeGrace.UltraPoor + dummyCattle.UltraPoor
 + dummyLarge.UltraPoor.Time3 + dummyLarge.UltraPoor.Time4 + dummyLargeGrace.UltraPoor.Tim
 + dummyLargeGrace.UltraPoor.Time4 + dummyCattle.UltraPoor.Time3 + dummyCattle.UltraPoor.T
 +

 + NumCows0
FloodInRd1 + HHsize0 + HeadLiteracy0 + NA

 + dummyHadCows
 + TotalImputed2Value0

[7]
 ~  + Time.3 + Time.4 + dummyUltraPoor
 + dummyUltraPoor + dummyLargeSize + dummyWithGrace
 + dummyInKind + dummyUltraPoor.Time3 + dummyLargeSize.Time3
 + dummyWithGrace.Time3 + dummyInKind.Time3 + dummyUltraPoor.Time4
 + dummyLargeSize.Time4 + dummyWithGrace.Time4 + dummyInKind.Time4
 + dummyLargeSize.UltraPoor + dummyWithGrace.UltraPoor + dummyInKind.UltraPoor
 + dummyLargeSize.UltraPoor.Time3 + dummyLargeSize.UltraPoor.Time4 + dummyWithGrace.UltraP
 + dummyWithGrace.UltraPoor.Time4 + dummyInKind.UltraPoor.Time3 + dummyInKind.UltraPoor.Ti
 +

 + NumCows0
FloodInRd1 + HHsize0 + HeadLiteracy0 + NA

 + dummyHadCows
 + TotalImputed2Value0
```

Table 94: ANCOVA estimation of cattle holding

covariates	mean/std	(1)	(2)	(3)	(4)
(Intercept)		1.49 (0.0)	1.39 (0.0)	1.16 (0.0)	1.15 (0.0)
Large	0.273 (0.45)	0.40 (0.8)	0.37 (0.5)	0.35 (1.1)	0.35 (1.1)
LargeGrace	0.248 (0.43)	0.07 (54.7)	0.08 (48.6)	0.09 (43.7)	0.09 (43.2)
Cattle	0.264 (0.44)	0.00 (98.8)	0.02 (77.7)	0.02 (80.6)	0.02 (80.4)
HadCattle	0.195 (0.40)				0.14 (45.8)
HadCattle	0.195 (0.40)				0.14 (45.8)
Flood in round 1	0.491 (0.50)			0.04 (59.7)	0.04 (58.9)
Head literate0	0.114 (0.32)			0.01 (89.4)	0.01 (90.8)
Number of cattle0	0.266 (0.62)		0.31 (0.2)	0.29 (0.6)	0.21 (21.5)
Household size0	4.219 (1.43)			0.05 (4.3)	0.05 (4.3)
TotalImputed2Value0	5315.315 (12450.23)				
mean of dependent variable		1.62	1.62	1.62	1.62
$T = 2$		87	87	85	85
$T = 3$		168	168	168	168
$T = 4$		395	395	395	395
$\bar{R}^2$		0.031	0.076	0.078	0.079
N	1998	1608	1608	1606	1606

Source: Estimated with GUK administrative and survey data.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. We annotate the number of periods that a household is observed with T. The total number of households is shown for each values of T. T=4 indicates the number of households with complete panel information, T=3 indicates number of households observed three times, T=2 indicates the number of households observed twice. N indicates total number of observations used in ANCOVA estimation, or N=1×(T=2)+2×(T=3)+3×(T=4). Upfront is an indicator variable of the arm with an upfront large disbursement, WithGrace is an indicator variable of the arm with a grace period, InKind is an indicator variable of the arm which lends a heifer. Regressand is NumCows, number of cattle holding.

2. P values in percentages in parenthesises. Standard errors are clustered at group (village) level.

Table 95: ANCOVA estimation of cattle holding by attributes

covariates	mean/std	(1)	(2)	(3)	(4)
(Intercept)		1.49	1.39	1.16	1.15
		(0.0)	(0.0)	(0.0)	(0.0)
Upfront	0.785	0.40	0.37	0.35	0.35
	(0.41)	(0.8)	(0.5)	(1.1)	(1.1)
WithGrace	0.512	−0.33	−0.29	−0.27	−0.27
	(0.50)	(5.6)	(4.8)	(8.7)	(8.9)
InKind	0.264	−0.07	−0.06	−0.07	−0.07
	(0.44)	(51.5)	(58.9)	(51.0)	(50.6)
HadCattle	0.195				0.14
	(0.40)				(45.8)
HadCattle	0.195				0.14
	(0.40)				(45.8)
Flood in round 1	0.491			0.04	0.04
	(0.50)			(59.7)	(58.9)
Head literate0	0.114			0.01	0.01
	(0.32)			(89.4)	(90.8)
Number of cattle0	0.266		0.31	0.29	0.21
	(0.62)		(0.2)	(0.6)	(21.5)
Household size0	4.219			0.05	0.05
	(1.43)			(4.3)	(4.3)
TotalImputed2Value0	5315.315				
	(12450.23)				
mean of dependent variable		1.62	1.62	1.62	1.62
$T = 2$		87	87	85	85
$T = 3$		168	168	168	168
$T = 4$		395	395	395	395
$\bar{R}^2$		0.031	0.076	0.078	0.079
N	1998	1608	1608	1606	1606

Source: Estimated with GUK administrative and survey data.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. We annotate the number of periods that a household is observed with T. The total number of households is shown for each values of T. T=4 indicates the number of households with complete panel information, T=3 indicates number of households observed three times, T=2 indicates the number of households observed twice. N indicates total number of observations used in ANCOVA estimation, or N=1×(T=2)+2×(T=3)+3×(T=4). Upfront is an indicator variable of the arm with an upfront large disbursement, WithGrace is an indicator variable of the arm with a grace period, InKind is an indicator variable of the arm which lends a heifer. Regressand is NumCows, number of cattle holding.

2. *P* values in percentages in parenthesises. Standard errors are clustered at group (village) level.

Table 96: ANCOVA estimation of cattle holding, ultra vs. moderately poor

covariates	mean/std	(1)	(2)	(3)	(4)
(Intercept)		1.51	1.41	1.16	1.15
		(0.0)	(0.0)	(0.0)	(0.0)
Upfront	0.785	0.43	0.40	0.39	0.39
	(0.41)	(0.3)	(0.1)	(0.3)	(0.3)
WithGrace	0.512	−0.34	−0.30	−0.28	−0.28
	(0.50)	(4.5)	(3.4)	(7.0)	(7.2)
InKind	0.264	−0.06	−0.05	−0.06	−0.06
	(0.44)	(55.3)	(63.4)	(55.1)	(54.6)
HadCattle	0.195				0.16
	(0.40)				(41.6)
UltraPoor	0.630	−0.08	−0.09	−0.09	−0.09
	(0.48)	(20.1)	(15.6)	(16.9)	(17.0)
Upfront × UltraPoor	0.524	−0.07	−0.01	−0.00	0.02
	(0.50)	(66.1)	(95.5)	(99.4)	(91.2)
WithGrace × UltraPoor	0.352	0.48	0.50	0.52	0.52
	(0.48)	(1.3)	(0.8)	(0.8)	(0.8)
InKind × UltraPoor	0.181	−0.11	−0.10	−0.10	−0.11
	(0.39)	(54.6)	(58.6)	(58.8)	(56.8)
HadCattle	0.195				0.16
	(0.40)				(41.6)
Flood in round 1	0.491			0.05	0.05
	(0.50)			(58.0)	(56.7)
Head literate0	0.114			0.01	0.01
	(0.32)			(90.2)	(91.5)
Number of cattle0	0.266		0.32	0.30	0.21
	(0.62)		(0.2)	(0.6)	(22.7)
Household size0	4.219			0.05	0.05
	(1.43)			(2.2)	(2.2)
TotalImputed2Value0	5315.315				
	(12450.23)				
mean of dependent variable		1.62	1.62	1.62	1.62
$T = 2$		87	87	85	85
$T = 3$		168	168	168	168
$T = 4$		395	395	395	395
$\bar{R}^2$		0.041	0.09	0.093	0.094
N	1998	1608	1608	1606	1606

Source: Estimated with GUK administrative and survey data.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. We annotate the number of periods that a household is observed with T. The total number of households is shown for each values of T. T=4 indicates the number of households with complete panel information, T=3 indicates number of households observed three times, T=2 indicates the number of households observed twice. N indicates total number of observations used in ANCOVA estimation, or N=1×(T=2)+2×(T=3)+3×(T=4). Large, LargeGrace, Cattle are indicator variables of the large, large grace, and cattle arms, respectively. The default arm category is traditional arm. UltraPoor is an indicator variable if the household is classified as the ultra poor. Regressand is NumCows, number of cattle holding.

2. P values in percentages in parenthesises. Standard errors are clustered at group (village) level.

TABLE 97: ANCOVA ESTIMATION OF CATTLE HOLDING BY ARM AND PERIOD

covariates	mean/std	(1)	(2)	(3)	(4)
(Intercept)		1.47	1.36	1.12	1.11
		(0.0)	(0.0)	(0.0)	(0.0)
Large	0.273	0.39	0.37	0.35	0.35
	(0.45)	(0.6)	(0.4)	(0.8)	(0.8)
LargeGrace	0.248	0.01	0.02	0.02	0.03
	(0.43)	(94.3)	(88.5)	(83.9)	(82.5)
Cattle	0.264	−0.05	−0.03	−0.03	−0.03
	(0.44)	(44.1)	(72.3)	(67.5)	(69.1)
HadCattle	0.195				0.14
	(0.40)				(45.4)
rd 3	0.348	−0.02	0.00	0.00	0.01
	(0.48)	(71.4)	(96.9)	(93.8)	(91.5)
Large × rd 3	0.094	−0.05	−0.05	−0.05	−0.05
	(0.29)	(74.9)	(75.5)	(77.9)	(77.2)
LargeGrace × rd 3	0.085	0.19	0.20	0.21	0.21
	(0.28)	(28.5)	(25.5)	(24.9)	(25.1)
Cattle × rd 3	0.091	0.17	0.16	0.16	0.15
	(0.29)	(18.0)	(23.6)	(24.6)	(25.3)
rd 4	0.326	0.16	0.18	0.19	0.19
	(0.47)	(0.9)	(0.5)	(0.4)	(0.4)
Large × rd 4	0.094	0.05	0.04	0.05	0.05
	(0.29)	(74.5)	(79.1)	(78.2)	(78.7)
LargeGrace × rd 4	0.081	0.40	0.39	0.40	0.40
	(0.27)	(3.3)	(3.6)	(3.0)	(3.0)
Cattle × rd 4	0.085	0.34	0.34	0.35	0.35
	(0.28)	(0.8)	(1.1)	(1.1)	(1.2)
HadCattle	0.195				0.14
	(0.40)				(45.4)
Flood in round 1	0.491			0.05	0.05
	(0.50)			(57.2)	(56.4)
Head literate0	0.114			0.02	0.02
	(0.32)			(85.6)	(87.2)
Number of cattle0	0.266		0.31	0.29	0.21
	(0.62)		(0.2)	(0.6)	(21.4)
Household size0	4.219			0.05	0.05
	(1.43)			(3.7)	(3.8)
TotalImputed2Value0	5315.315				
	(12450.23)				
mean of dependent variable		1.62	1.62	1.62	1.62
$T = 2$		87	87	85	85
$T = 3$		168	168	168	168
$T = 4$		395	395	395	395
$\bar{R}^2$		0.04	0.086	0.089	0.089
N	1998	1608	1608	1606	1606

Source: Estimated with GUK administrative and survey data.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. We annotate the number of periods that a household is observed with T. The total number of households is shown for each values of T. T=4 indicates the number of households with complete panel information, T=3 indicates number of households observed three times, T=2 indicates the number of households observed twice. N indicates total number of observations used in ANCOVA estimation, or N=1×(T=2)+2×(T=3)+3×(T=4). Large, LargeGrace, Cattle are indicator variables of the large, large grace, and cattle arms, respectively. The default arm category is traditional arm. rd2, rd3, rd4 are dummy variables for second, third, and fourth round of survey. Sample is continuing members and replacing members of early rejecters and received loans prior to 2015 Janunary. Regressand is NumCows, number of cattle holding.

2. P values in percentages in parenthesises. Standard errors are clustered at group (village) level.

TABLE 98: ANCOVA ESTIMATION OF CATTLE HOLDING BY ATTRIBUTES AND PERIOD

covariates	mean/std	(1)	(2)	(3)	(4)
(Intercept)		1.47	1.36	1.12	1.11
		(0.0)	(0.0)	(0.0)	(0.0)
Upfront	0.785	0.39	0.37	0.35	0.35
	(0.41)	(0.6)	(0.4)	(0.8)	(0.8)
WithGrace	0.512	−0.39	−0.35	−0.33	−0.33
	(0.50)	(2.5)	(1.8)	(3.7)	(3.8)
InKind	0.264	−0.06	−0.04	−0.05	−0.06
	(0.44)	(60.6)	(69.6)	(62.1)	(61.7)
HadCattle	0.195				0.14
	(0.40)				(45.4)
rd 3	0.348	−0.02	0.00	0.00	0.01
	(0.48)	(71.4)	(96.9)	(93.8)	(91.5)
Upfront × rd 3	0.269	−0.05	−0.05	−0.05	−0.05
	(0.44)	(74.9)	(75.5)	(77.9)	(77.2)
WithGrace × rd 3	0.176	0.24	0.25	0.25	0.25
	(0.38)	(17.1)	(14.2)	(14.7)	(14.6)
InKind × rd 3	0.091	−0.02	−0.05	−0.05	−0.05
	(0.29)	(90.7)	(74.9)	(72.5)	(72.4)
rd 4	0.326	0.16	0.18	0.19	0.19
	(0.47)	(0.9)	(0.5)	(0.4)	(0.4)
Upfront × rd 4	0.260	0.05	0.04	0.05	0.05
	(0.44)	(74.5)	(79.1)	(78.2)	(78.7)
WithGrace × rd 4	0.166	0.35	0.34	0.36	0.36
	(0.37)	(9.6)	(9.5)	(8.4)	(8.4)
InKind × rd 4	0.085	−0.06	−0.04	−0.05	−0.06
	(0.28)	(75.5)	(80.5)	(76.1)	(75.4)
HadCattle	0.195				0.14
	(0.40)				(45.4)
Flood in round 1	0.491			0.05	0.05
	(0.50)			(57.2)	(56.4)
Head literate0	0.114			0.02	0.02
	(0.32)			(85.6)	(87.2)
Number of cattle0	0.266		0.31	0.29	0.21
	(0.62)		(0.2)	(0.6)	(21.4)
Household size0	4.219			0.05	0.05
	(1.43)			(3.7)	(3.8)
TotalImputed2Value0	5315.315				
	(12450.23)				
mean of dependent variable		1.62	1.62	1.62	1.62
$T = 2$		87	87	85	85
$T = 3$		168	168	168	168
$T = 4$		395	395	395	395
$\bar{R}^2$		0.04	0.086	0.089	0.089
N	1998	1608	1608	1606	1606

Source: Estimated with GUK administrative and survey data.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. We annotate the number of periods that a household is observed with T. The total number of households is shown for each values of T. T=4 indicates the number of households with complete panel information, T=3 indicates number of households observed three times, T=2 indicates the number of households observed twice. N indicates total number of observations used in ANCOVA estimation, or N=1×(T=2)+2×(T=3)+3×(T=4). Upfront is an indicator variable of the arm with an upfront large disbursement, WithGrace is an indicator variable of the arm with a grace period, InKind is an indicator variable of the arm which lends a heifer. rd2, rd3, rd4 are dummy variables for second, third, and fourth round of survey. Sample is continuing members and replacing members of early rejecters and received loans prior to 2015 Janunary. Regressand is NumCows, number of cattle holding.

2. *P* values in percentages in parenthesises. Standard errors are clustered at group (village) level.

TABLE 99: ANCOVA ESTIMATION OF CATTLE HOLDING BY ARM, PERIOD, AND POVERTY CLASS

covariates	mean/std	(1)	(2)	(3)	(4)	(5)
(Intercept)		1.52 (0.0)	1.40 (0.0)	1.36 (0.0)	1.12 (0.0)	1.11 (0.0)
Large	0.273 (0.45)	0.42 (0.2)	0.40 (0.1)	0.40 (0.1)	0.38 (0.2)	0.40 (0.2)
LargeGrace	0.248 (0.43)	0.03 (80.7)	0.04 (67.9)	0.05 (60.9)	0.06 (55.9)	0.07 (50.3)
Cattle	0.264 (0.44)	−0.03 (59.1)	0.00 (100.0)	0.00 (98.7)	−0.00 (98.7)	0.00 (98.2)
AdiCattle0	0.153 (0.36)			0.18 (2.0)	0.16 (4.0)	0.18 (2.1)
UltraPoor	0.630 (0.48)	−0.09 (16.5)	−0.11 (13.3)	−0.11 (12.2)	−0.11 (13.3)	−0.10 (16.5)
Large × UltraPoor	0.172 (0.38)	−0.25 (17.9)	−0.17 (33.8)	−0.19 (29.6)	−0.18 (33.1)	−0.16 (37.2)
LargeGrace × UltraPoor	0.171 (0.38)	0.42 (1.9)	0.50 (1.0)	0.50 (0.9)	0.53 (0.5)	0.54 (0.4)
Cattle × UltraPoor	0.181 (0.39)	0.19 (21.7)	0.29 (9.6)	0.29 (9.4)	0.32 (6.3)	0.31 (6.7)
rd 3	0.348 (0.48)	−0.03 (59.3)	−0.00 (93.9)	−0.00 (96.1)	0.00 (100.0)	−0.00 (99.1)
Large × rd 3	0.094 (0.29)	−0.03 (84.8)	−0.03 (82.8)	−0.03 (82.0)	−0.03 (83.5)	−0.02 (87.9)
LargeGrace × rd 3	0.085 (0.28)	0.24 (15.0)	0.24 (15.3)	0.24 (16.4)	0.24 (16.4)	0.24 (16.2)
Cattle × rd 3	0.091 (0.29)	0.19 (12.3)	0.17 (19.1)	0.17 (19.7)	0.17 (21.0)	0.18 (19.9)
UltraPoor × rd 3	0.217 (0.41)	−0.05 (62.8)	−0.04 (73.2)	−0.03 (77.4)	−0.03 (79.6)	−0.02 (83.6)
Large × UltraPoor × rd 3	0.058 (0.23)	0.70 (0.6)	0.65 (1.1)	0.65 (1.1)	0.65 (1.0)	0.67 (1.0)
LargeGrace × UltraPoor × rd 3	0.060 (0.24)	−0.34 (31.3)	−0.32 (34.6)	−0.30 (35.8)	−0.33 (32.9)	−0.32 (33.1)
Cattle × UltraPoor × rd 3	0.061 (0.24)	0.50 (1.7)	0.46 (3.7)	0.47 (3.3)	0.45 (4.2)	0.45 (4.2)
AdiCattle0 × rd 3	0.054 (0.23)					−0.13 (26.1)
AdiCattle0 × Large × rd 3	0.015 (0.12)					−0.28 (46.8)
AdiCattle0 × LargeGrace × rd 3	0.011 (0.10)					−0.39 (19.9)
AdiCattle0 × Cattle × rd 3	0.016 (0.12)					−0.13 (68.0)

TABLE 100: ANCOVA ESTIMATION OF CATTLE HOLDING BY ARM, PERIOD, AND POVERTY CLASS (CONTINUED)

covariates	mean/std	(1)	(2)	(3)	(4)	(5)
rd 4	0.326 (0.47)	0.15 (0.8)	0.18 (0.4)	0.18 (0.3)	0.18 (0.3)	0.18 (0.3)
Large × rd 4	0.094 (0.29)	0.06 (67.8)	0.05 (75.8)	0.05 (76.4)	0.05 (76.7)	0.04 (77.7)
LargeGrace × rd 4	0.081 (0.27)	0.41 (2.2)	0.39 (2.9)	0.38 (3.2)	0.40 (2.8)	0.40 (2.6)
Cattle × rd 4	0.085 (0.28)	0.34 (0.9)	0.34 (1.5)	0.34 (1.5)	0.34 (1.6)	0.35 (1.5)
UltraPoor × rd 4	0.211 (0.41)	0.09 (44.6)	0.08 (51.7)	0.09 (46.3)	0.09 (46.0)	0.10 (41.4)
Large × UltraPoor × rd 4	0.060 (0.24)	0.79 (1.9)	0.75 (2.7)	0.74 (2.9)	0.74 (2.9)	0.71 (3.9)
LargeGrace × UltraPoor × rd 4	0.056 (0.23)	−0.16 (65.6)	−0.15 (67.5)	−0.15 (67.9)	−0.15 (67.4)	−0.12 (72.8)
Cattle × UltraPoor × rd 4	0.060 (0.24)	0.46 (9.3)	0.37 (21.0)	0.37 (21.0)	0.35 (24.1)	0.33 (26.9)
AdiCattle0 × rd 4	0.050 (0.22)					0.07 (68.6)
AdiCattle0 × Large × rd 4	0.016 (0.12)					−0.08 (85.1)
AdiCattle0 × LargeGrace × rd 4	0.009 (0.09)					−0.01 (98.6)
AdiCattle0 × Cattle × rd 4	0.015 (0.12)					−0.23 (50.8)
AdiCattle0	0.153 (0.36)			0.18 (2.0)	0.16 (4.0)	0.18 (2.1)
AdiCattle0 × rd 3	0.054 (0.23)					−0.13 (26.1)
AdiCattle0 × rd 4	0.050 (0.22)					0.07 (68.6)
Flood in round 1	0.491 (0.50)				0.04 (62.4)	0.03 (67.7)
Head literate0	0.114 (0.32)				0.01 (89.0)	0.02 (79.1)
Number of cattle0	0.266 (0.62)		0.32 (0.2)	0.34 (0.1)	0.32 (0.4)	0.31 (0.3)
Household size0	4.219 (1.43)				0.05 (2.2)	0.05 (2.4)
AdiCattle0 × Large	0.044 (0.21)					−0.37 (10.0)
AdiCattle0 × LargeGrace	0.028 (0.16)					0.23 (39.3)
AdiCattle0 × Cattle	0.046 (0.21)					−0.12 (61.0)
mean of dependent variable		2	2	2	2	2
$T = 2$		87	87	87	85	85
$T = 3$		168	168	168	168	168
$T = 4$		395	395	395	395	395
$\bar{R}^2$		0.055	0.103	0.107	0.11	0.113
N	1998	1608	1608	1608	1606	1606

Source: Estimated with GUK administrative and survey data.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. We annotate the number of periods that a household is observed with T. The total number of households is shown for each values of T. T=4 indicates the number of households with complete panel information, T=3 indicates number of households observed three times, T=2 indicates the number of households observed twice. N indicates total number of observations used in ANCOVA estimation, or N=1×(T=2)+2×(T=3)+3×(T=4). Large, LargeGrace, Cattle are indicator variables of the large, large grace, and cattle arms, respectively. The default arm category is traditional arm. rd2, rd3, rd4 are dummy variables for second, third, and fourth round of survey. Sample is continuing members and replacing members of early rejecters and received loans prior to 2015 Janunary. Regressand is NumCows, number of cattle holding.

2. P values in percentages in parenthesises. Standard errors are clustered at group (village) level.

III.5.11 Net assets, experienced vs. inexperienced

```
        LeaseInCattle
NumCows0    0   1 <NA> Sum
     0    539  94     0 633
     1    100   0     1 101
     2     30   0     0  30
     3      6   0     0   6
     4      2   0     1   3
     5      1   0     0   1
```

```
     Sum 678  94    2 774
```

```
                 LeaseInCattle
YearsSinceLastAdi   0   1 <NA> Sum
             1      3   0    0   3
             2     13   0    0  13
             3      8   0    0   8
             <NA> 654  94    2 750
             Sum  678  94    2 774
```

Even LeaseInCattle == 0 & OwnCattle == 0, some had Adi experiences.

```
                 OwnCattle
YearsSinceLastAdi   0   1 Sum
             1      1   2   3
             2     11   2  13
             3      6   2   8
             <NA> 483 171 654
             Sum  501 177 678
```

Recode to Adi if OwnCattle == 0 & !is.na(YearsSinceLastAdi). This means, LeaseInCattle == 1 if OwnCattle = 0 but has experience of Adi in last 3 years.

If we (and we will) assume that the NumCows0 (computed from "abu_livestockownershipupdated.dta) as the truth, there are 52 false positives in OwnCattle (falsely reporting cattle ownership at baseline).

```
        OwnCattle
NumCows0   0   1 <NA> Sum
     0   581  52    0 633
     1     0 100    1 101
     2     0  30    0  30
     3     0   6    0   6
     4     0   2    1   3
     5     0   1    0   1
     Sum 581 191    2 774
```

NumCows are computed in read_clean_data.rnw by:

```
xloL[, NumCows := as.integer(NA)]
xloL[grepl("ow", LVcode), NumCows := as.integer(number_owned)]
xloL[, NumCows := NumCows[grepl("ow", LVcode)], by = .(hhid, survey)]
```

xloL is the raw data file "abu_livestockownershipupdated.dta.

We will correct Table 8a baseline data such that it becomes consistent with "abu_livestockownershipupdated.d

```
lvLv[NumCows0 == 0 & OwnCattle == 1L, OwnCattle := 0L]
lvLv[NumCows0 > 0 & is.na(OwnCattle), OwnCattle := 1L]
lvLv[, NumCows0 := NULL]
```

We will also correct LeaseInCattle from NA to 0, if NumCows0 > 0 (2 cases). Save it as lvLv, and use it in estimation.

```
                 OwnCattle
YearsSinceLastAdi   0   1 Sum
             1      0   2   2
             2      0   2   2
             3      0   2   2
             <NA> 521 135 656
             Sum  521 141 662
```

```
             OwnCattle
LeaseInCattle   0   1 Sum
          0   521 141 662
          1   112   0 112
          Sum 633 141 774
```

```
             AttritIn
Arm             2   3   4   9 Sum
  traditional   6   4  20 144 174
  large         5   2   1 192 200
  large grace  22   3   3 171 199
  cattle        5   5  13 177 200
  Sum          38  14  37 684 773
                     AttritIn
BStatus                 2   3   4   9 Sum
  borrower              8   6   8 578 600
  pure saver            0   0   0   0   0
  individual rejection  9   4   1  75  89
  group rejection       9   4   0  55  68
  rejection by flood   12   0  28   0  40
  Sum                  38  14  37 708 797
         AttritIn
TradGroup   2   3   4   9 Sum
  planned   0   0   1  83  84
  twice     0   0   0  24  24
  double    0   0   0   0   0
  <NA>     38  14  36 601 689
  Sum      38  14  37 708 797
             AttritIn
Arm             2   3   4   9 Sum
  traditional   6   4  20 168 198
  large         5   2   1 192 200
  large grace  22   3   3 171 199
  cattle        5   5  13 177 200
  Sum          38  14  37 708 797
             AttritIn
Arm             2   3   4   9 Sum
  traditional   6   4  20 144 174
  large         5   2   1 192 200
  large grace  22   3   3 171 199
  cattle        5   5  13 177 200
  Sum          38  14  37 684 773


Number of obs based on assets
             tee
Arm             1    2    3    4  Sum
  traditional 174  166  162  133  635
  large       200  194  191  179  764
  large grace 199  177  174  155  705
  cattle      200  195  188  151  734
  Sum         773  732  715  618 2838
             AttritIn
Arm             2   3   4   9 Sum
  traditional   6   4  20 144 174
  large         5   2   1 192 200
  large grace  22   3   3 171 199
  cattle        5   5  13 177 200
  Sum          38  14  37 684 773
```

```
Number of obs based on roster
              AttritIn
Arm              2   3   4   9 Sum
  traditional    6   4  20 144 174
  large          5   2   1 192 200
  large grace   22   3   3 171 199
  cattle         5   5  13 177 200
  Sum           38  14  37 684 773


Number of nonattriting obs but with lacking 4 entries in assets
              ObPattern
Arm            0111 1111 <NA> Sum
  traditional     1    1    9  11
  large           3    0   10  13
  large grace     5    1   10  16
  cattle          4    1   21  26
  Sum            13    3   50  66
```

TABLE 101: ANCOVA ESTIMATION OF NET ASSETS, CATTLE REARING EXPERIENCES

covariates	mean/std	(1)	(2)	(3)	(4)	(5)
(Intercept)		15972.5	15295.8	7887.8	7999.5	7999.5
		(0.0)	(0.0)	(4.2)	(4.0)	(4.0)
Large	0.290	10820.5	11985.0	11757.8	11064.0	11064.0
	(0.45)	(0.0)	(0.1)	(0.2)	(0.1)	(0.1)
LargeGrace	0.241	5708.0	5582.6	5819.8	6286.5	6286.5
	(0.43)	(2.4)	(9.4)	(7.3)	(6.6)	(6.6)
Cattle	0.261	4860.7	3909.7	3980.2	3871.8	3871.8
	(0.44)	(1.4)	(12.6)	(12.1)	(11.7)	(11.7)
OwnCattle0	0.233	17017.6	10695.9	11131.4	9896.5	9896.5
	(0.42)	(0.0)	(3.5)	(3.2)	(5.7)	(5.7)
AdiCattle0	0.134	6999.3	8721.4	8360.7	9312.1	9312.1
	(0.34)	(0.0)	(0.4)	(0.5)	(0.7)	(0.7)
AdiCattle0	0.134	6999.3	8721.4	8360.7	9312.1	9312.1
	(0.34)	(0.0)	(0.4)	(0.5)	(0.7)	(0.7)
Flood in round 1	0.424			−48.8	−71.7	−71.7
	(0.49)			(98.2)	(97.4)	(97.4)
Head literate0	0.146			−536.8	−303.0	−303.0
	(0.35)			(84.1)	(90.9)	(90.9)
NetValue0	9146.377		0.3	0.2	0.3	0.3
	(14606.38)		(13.7)	(20.7)	(15.3)	(15.3)
Household size0	4.455			1713.7	1694.6	1694.6
	(1.36)			(3.9)	(4.2)	(4.2)
OwnCattle0 × Large	0.080				13483.8	13483.8
	(0.27)				(22.4)	(22.4)
OwnCattle0 × LargeGrace	0.063				−1520.6	−1520.6
	(0.24)				(80.2)	(80.2)
OwnCattle0 × Cattle	0.047				6802.2	6802.2
	(0.21)				(21.4)	(21.4)
AdiCattle0 × Large	0.044				−12183.0	−12183.0
	(0.20)				(6.3)	(6.3)
AdiCattle0 × LargeGrace	0.018				−6674.4	−6674.4
	(0.13)				(59.1)	(59.1)
AdiCattle0 × Cattle	0.042				−6331.0	−6331.0
	(0.20)				(34.4)	(34.4)
mean of dependent variable		25231	25231	25231	25231	25231
$T = 2$		42	13	13	13	13
$T = 3$		132	81	79	79	79
$T = 4$		550	362	362	362	362
$\bar{R}^2$		0.107	0.124	0.131	0.143	0.143
N	1277	1956	1261	1257	1257	1257

Source: Estimated with GUK administrative and survey data.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. We annotate the number of periods that a household is observed with T. The total number of households is shown for each values of T. T=4 indicates the number of households with complete panel information, T=3 indicates number of households observed three times, T=2 indicates the number of households observed twice. N indicates total number of observations used in ANCOVA estimation, or N=1×(T=2)+2×(T=3)+3×(T=4). Large, LargeGrace, Cattle are indicator variables of the large, large grace, and cattle arms, respectively. The default arm category is traditional arm. Net assets uses only assets observed for all 4 rounds in household assets. Household assets do not include livestock. OwnCattle0 is an indicator if a household owned cattle at the baseline. AdiCattle0 is an indicator if a household engaged in the cattle lease-in contract at the baseline.

2. *P* values in percentages in parenthesises. Standard errors are clustered at group (village) level.

TABLE 102: ANCOVA ESTIMATION OF NET ASSETS BY ATTRIBUTES, CATTLE REARING EXPERIENCES

covariates	mean/std	(1)	(2)	(3)	(4)	(5)
(Intercept)		17653.9	14372.5	7551.4	7551.4	7551.4
		(0.0)	(0.0)	(5.4)	(5.4)	(5.4)
Upfront	0.762	14201.9	14765.0	14638.1	14638.1	14638.1
	(0.43)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
WithGrace	0.483	−5905.2	−7081.2	−6640.5	−6640.5	−6640.5
	(0.50)	(10.5)	(8.7)	(12.1)	(12.1)	(12.1)
InKind	0.251	−1137.9	−1192.8	−1321.0	−1321.0	−1321.0
	(0.43)	(65.8)	(69.9)	(65.9)	(65.9)	(65.9)
Flood in round 1	0.422			369.4	369.4	369.4
	(0.49)			(86.0)	(86.0)	(86.0)
Head literate0	0.143			−236.1	−236.1	−236.1
	(0.35)			(93.0)	(93.0)	(93.0)
NetValue0	8901.382		0.5	0.5	0.5	0.5
	(14389.93)		(0.0)	(0.0)	(0.0)	(0.0)
Household size0	4.467			1493.1	1493.1	1493.1
	(1.38)			(5.5)	(5.5)	(5.5)
mean of dependent variable		25231	25231	25231	25231	25231
$T = 2$		42	13	13	13	13
$T = 3$		137	84	81	81	81
$T = 4$		569	377	377	377	377
$\bar{R}^2$		0.044	0.123	0.129	0.129	0.129
N	1326	2023	1312	1306	1306	1306

Source: Estimated with GUK administrative and survey data.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. We annotate the number of periods that a household is observed with T. The total number of households is shown for each values of T. T=4 indicates the number of households with complete panel information, T=3 indicates number of households observed three times, T=2 indicates the number of households observed twice. N indicates total number of observations used in ANCOVA estimation, or N=1×(T=2)+2×(T=3)+3×(T=4). Upfront is an indicator variable of the arm with an upfront large disbursement, WithGrace is an indicator variable of the arm with a grace period, InKind is an indicator variable of the arm which lends a heifer. Net assets uses only assets observed for all 4 rounds in household assets. Household assets do not include livestock. OwnCattle0 is an indicator if a household owned cattle at the baseline. AdiCattle0 is an indicator if a household engaged in the cattle lease-in contract at the baseline.

2. *P* values in percentages in parenthesises. Standard errors are clustered at group (village) level.

TABLE 103: ANCOVA ESTIMATION OF NET ASSETS BY PERIOD, CATTLE REARING EXPERIENCES

covariates	mean/std	(1)	(2)	(3)	(4)	(5)
(Intercept)		13864.5	13833.3	6155.1	5803.3	5803.3
		(0.0)	(0.0)	(14.5)	(16.8)	(16.8)
Large	0.290	11410.1	12260.1	12019.5	11380.8	11380.8
	(0.45)	(0.0)	(0.1)	(0.2)	(0.1)	(0.1)
LargeGrace	0.241	5715.6	5167.9	5330.4	5378.8	5378.8
	(0.43)	(1.9)	(11.5)	(9.8)	(11.5)	(11.5)
Cattle	0.261	5081.9	3866.6	3913.1	3751.8	3751.8
	(0.44)	(0.8)	(14.7)	(14.3)	(14.4)	(14.4)
OwnCattle0	0.233	17064.1	10680.9	11129.1	10292.6	10292.6
	(0.42)	(0.0)	(3.6)	(3.3)	(5.1)	(5.1)
AdiCattle0	0.134	6999.5	8716.1	8352.6	10232.8	10232.8
	(0.34)	(0.0)	(0.4)	(0.5)	(0.3)	(0.3)
rd 3	0.350	2210.1	1702.2	1976.6	2338.6	2338.6
	(0.48)	(4.1)	(22.5)	(16.5)	(7.4)	(7.4)
Large × rd 3	0.099	−3982.2	−2290.7	−1860.3	−1975.7	−1975.7
	(0.30)	(21.3)	(57.7)	(65.7)	(61.1)	(61.1)
LargeGrace × rd 3	0.083	−795.0	1077.7	1465.7	2858.2	2858.2
	(0.28)	(79.8)	(79.5)	(72.3)	(43.9)	(43.9)
Cattle × rd 3	0.093	−2879.0	−1212.2	−1160.5	−974.8	−974.8
	(0.29)	(31.2)	(73.0)	(73.9)	(77.2)	(77.2)
OwnCattle0 × rd 3	0.080				−3147.6	−3147.6
	(0.27)				(28.3)	(28.3)
OwnCattle0 × Large × rd 3	0.027				3645.4	3645.4
	(0.16)				(69.0)	(69.0)
OwnCattle0 × LargeGrace × rd 3	0.021				−19197.0	−19197.0
	(0.14)				(5.6)	(5.6)
OwnCattle0 × Cattle × rd 3	0.016				17.0	17.0
	(0.13)				(99.8)	(99.8)
AdiCattle0 × rd 3	0.046				−6709.3	−6709.3
	(0.21)				(5.6)	(5.6)
AdiCattle0 × Large × rd 3	0.015				45.7	45.7
	(0.12)				(99.7)	(99.7)
AdiCattle0 × LargeGrace × rd 3	0.006				9538.2	9538.2
	(0.08)				(24.5)	(24.5)
AdiCattle0 × Cattle × rd 3	0.015				6007.4	6007.4
	(0.12)				(27.8)	(27.8)
rd 4	0.333	3177.3	2594.0	2765.5	3201.7	3201.7
	(0.47)	(1.2)	(8.3)	(6.6)	(2.2)	(2.2)
Large × rd 4	0.099	−1828.7	−523.8	−795.0	−1101.2	−1101.2
	(0.30)	(64.0)	(90.4)	(85.4)	(77.5)	(77.5)
LargeGrace × rd 4	0.082	662.7	2773.6	3144.8	5032.0	5032.0
	(0.27)	(83.3)	(51.8)	(46.2)	(21.8)	(21.8)
Cattle × rd 4	0.087	579.2	1818.0	1957.9	2356.8	2356.8
	(0.28)	(83.3)	(59.6)	(56.4)	(46.2)	(46.2)
OwnCattle0 × rd 4	0.076				−1506.4	−1506.4
	(0.27)				(67.4)	(67.4)
OwnCattle0 × Large × rd 4	0.027				3209.8	3209.8
	(0.16)				(77.1)	(77.1)
OwnCattle0 × LargeGrace × rd 4	0.021				−19995.3	−19995.3
	(0.14)				(10.2)	(10.2)
OwnCattle0 × Cattle × rd 4	0.014				−451.6	−451.6
	(0.12)				(96.4)	(96.4)
AdiCattle0 × rd 4	0.045				−3682.3	−3682.3
	(0.21)				(49.2)	(49.2)
AdiCattle0 × Large × rd 4	0.015				4803.1	4803.1
	(0.12)				(68.3)	(68.3)
AdiCattle0 × LargeGrace × rd 4	0.006				19044.6	19044.6
	(0.08)				(28.6)	(28.6)
AdiCattle0 × Cattle × rd 4	0.014				2172.2	2172.2
	(0.12)				(74.8)	(74.8)
AdiCattle0	0.134	6999.5	8716.1	8352.6	10232.8	10232.8
	(0.34)	(0.0)	(0.4)	(0.5)	(0.3)	(0.3)
AdiCattle0 × rd 3	0.046				−6709.3	−6709.3
	(0.21)				(5.6)	(5.6)
AdiCattle0 × rd 4	0.045				−3682.3	−3682.3
	(0.21)				(49.2)	(49.2)
Flood in round 1	0.424			−68.4	−106.0	−106.0
	(0.49)			(97.4)	(96.1)	(96.1)
Head literate0	0.146			−393.3	−145.0	−145.0
	(0.35)			(88.3)	(95.7)	(95.7)
NetValue0	9146.377		0.3	0.2	0.3	0.3
	(14606.38)		(13.3)	(20.4)	(15.2)	(15.2)
Household size0	4.455			1743.4	1736.2	1736.2
	(1.36)			(3.7)	(4.0)	(4.0)
OwnCattle0 × Large	0.080				12886.0	12886.0
	(0.27)				(24.7)	(24.7)
OwnCattle0 × LargeGrace	0.063				2307.6	2307.6
	(0.24)				(73.5)	(73.5)
OwnCattle0 × Cattle	0.047				7184.4	7184.4
	(0.21)				(23.6)	(23.6)
AdiCattle0 × Large	0.044				−12744.8	−12744.8
	(0.20)				(6.7)	(6.7)
AdiCattle0 × LargeGrace	0.018				−9920.3	−9920.3
	(0.13)				(41.2)	(41.2)
AdiCattle0 × Cattle	0.042				−7163.2	−7163.2
	(0.20)				(27.6)	(27.6)
mean of dependent variable		25231	25231	25231	25231	25231
$T = 2$		42	13	13	13	13
$T = 3$		132	81	79	79	79
$T = 4$		550	362	362	362	362

TABLE 104: ANCOVA ESTIMATION OF NET ASSETS BY ATTRIBUTES AND PERIOD, CATTLE REARING EXPERIENCES

covariates	mean/std	(1)	(2)	(3)	(4)	(5)
(Intercept)		15774.3	13015.1	5922.6	5922.6	5922.6
		(0.0)	(0.0)	(16.1)	(16.1)	(16.1)
Upfront	0.762	14767.8	15036.9	14879.0	14879.0	14879.0
	(0.43)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
WithGrace	0.483	−6521.3	−7841.5	−7436.3	−7436.3	−7436.3
	(0.50)	(6.4)	(5.1)	(7.4)	(7.4)	(7.4)
InKind	0.251	−877.8	−692.7	−800.1	−800.1	−800.1
	(0.43)	(71.5)	(81.0)	(77.6)	(77.6)	(77.6)
rd 3	0.350	1964.7	1555.2	1854.2	1854.2	1854.2
	(0.48)	(6.5)	(25.1)	(17.8)	(17.8)	(17.8)
Upfront × rd 3	0.265	−3699.3	−2297.5	−1798.6	−1798.6	−1798.6
	(0.44)	(22.7)	(55.0)	(64.8)	(64.8)	(64.8)
WithGrace × rd 3	0.170	3431.8	3746.8	3584.6	3584.6	3584.6
	(0.38)	(28.9)	(37.8)	(40.7)	(40.7)	(40.7)
InKind × rd 3	0.090	−2190.2	−2963.7	−3182.4	−3182.4	−3182.4
	(0.29)	(45.5)	(43.3)	(39.3)	(39.3)	(39.3)
rd 4	0.333	2859.8	2446.9	2653.9	2653.9	2653.9
	(0.47)	(2.4)	(9.1)	(6.9)	(6.9)	(6.9)
Upfront × rd 4	0.258	−1875.5	−511.3	−663.3	−663.3	−663.3
	(0.44)	(62.9)	(90.0)	(87.2)	(87.2)	(87.2)
WithGrace × rd 4	0.163	2599.1	3636.5	4151.8	4151.8	4151.8
	(0.37)	(54.0)	(44.5)	(38.2)	(38.2)	(38.2)
InKind × rd 4	0.084	−465.9	−1604.5	−1624.0	−1624.0	−1624.0
	(0.28)	(88.4)	(69.3)	(68.6)	(68.6)	(68.6)
Flood in round 1	0.422			354.2	354.2	354.2
	(0.49)			(86.6)	(86.6)	(86.6)
Head literate0	0.143			−108.9	−108.9	−108.9
	(0.35)			(96.8)	(96.8)	(96.8)
NetValue0	8901.382		0.5	0.5	0.5	0.5
	(14389.93)		(0.0)	(0.0)	(0.0)	(0.0)
Household size0	4.467			1520.5	1520.5	1520.5
	(1.38)			(5.2)	(5.2)	(5.2)
mean of dependent variable		25231	25231	25231	25231	25231
$T = 2$		42	13	13	13	13
$T = 3$		137	84	81	81	81
$T = 4$		569	377	377	377	377
$\bar{R}^2$		0.044	0.12	0.126	0.126	0.126
N	1326	2023	1312	1306	1306	1306

Source: Estimated with GUK administrative and survey data.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. We annotate the number of periods that a household is observed with T. The total number of households is shown for each values of T. T=4 indicates the number of households with complete panel information, T=3 indicates number of households observed three times, T=2 indicates the number of households observed twice. N indicates total number of observations used in ANCOVA estimation, or N=1×(T=2)+2×(T=3)+3×(T=4). Upfront is an indicator variable of the arm with an upfront large disbursement, WithGrace is an indicator variable of the arm with a grace period, InKind is an indicator variable of the arm which lends a heifer. rd2, rd3, rd4 are dummy variables for second, third, and fourth round of survey. Net assets uses only assets observed for all 4 rounds in household assets. Household assets do not include livestock. OwnCattle0 is an indicator if a household owned cattle at the baseline. AdiCattle0 is an indicator if a household engaged in the cattle lease-in contract at the baseline.

2. P values in percentages in parenthesises. Standard errors are clustered at group (village) level.

TABLE 105: ANCOVA ESTIMATION OF NET ASSETS BY ARM, POVERTY STATUS, AND PERIOD, CATTLE REARING EXPERIENCES

covariates	mean/std	(1)	(2)	(3)	(4)	(5)
(Intercept)		15064.0 (0.0)	14771.0 (0.0)	7023.0 (12.3)	6776.9 (13.8)	6776.9 (13.8)
Large	0.290 (0.45)	11645.5 (0.0)	12569.0 (0.2)	12394.0 (0.3)	11566.2 (0.1)	11566.2 (0.1)
LargeGrace	0.241 (0.43)	5946.7 (1.3)	5116.1 (15.1)	5303.1 (13.3)	5147.7 (15.8)	5147.7 (15.8)
Cattle	0.261 (0.44)	5499.8 (0.4)	4089.9 (18.0)	4227.1 (16.5)	3854.4 (18.4)	3854.4 (18.4)
OwnCattle0	0.233 (0.42)	17215.4 (0.0)	10917.9 (3.2)	11460.4 (2.8)	10532.5 (4.5)	10532.5 (4.5)
AdiCattle0	0.134 (0.34)	7182.9 (0.0)	8721.0 (0.4)	8371.7 (0.5)	10264.4 (0.4)	10264.4 (0.4)
UltraPoor	0.602 (0.49)	−2636.6 (8.3)	−2110.2 (31.6)	−2248.4 (28.1)	−2089.4 (32.1)	−2089.4 (32.1)
Large × UltraPoor	0.182 (0.39)	−4255.4 (36.6)	−6457.3 (31.0)	−6820.5 (30.7)	−7734.9 (27.6)	−7734.9 (27.6)
LargeGrace × UltraPoor	0.172 (0.38)	4298.1 (19.1)	4530.0 (38.5)	4847.8 (32.2)	3166.6 (51.2)	3166.6 (51.2)
Cattle × UltraPoor	0.163 (0.37)	470.9 (89.7)	−1549.0 (76.8)	−1370.6 (79.7)	−2381.7 (66.2)	−2381.7 (66.2)
rd 3	0.350 (0.48)	2289.8 (4.3)	1763.4 (25.8)	2026.5 (19.9)	2498.5 (7.9)	2498.5 (7.9)
Large × rd 3	0.099 (0.30)	−3639.6 (27.3)	−1886.0 (68.3)	−1507.4 (74.8)	−1674.4 (68.8)	−1674.4 (68.8)
LargeGrace × rd 3	0.083 (0.28)	−178.7 (95.8)	2096.1 (67.9)	2391.4 (63.6)	4252.3 (34.0)	4252.3 (34.0)
Cattle × rd 3	0.093 (0.29)	−2775.8 (35.7)	−653.9 (87.4)	−644.2 (87.5)	−501.8 (89.3)	−501.8 (89.3)
UltraPoor × rd 3	0.209 (0.41)	−663.7 (75.0)	−381.4 (89.8)	14.2 (99.6)	−1029.3 (72.9)	−1029.3 (72.9)
Large × UltraPoor × rd 3	0.062 (0.24)	2130.4 (72.2)	6604.6 (40.9)	7216.4 (36.4)	7059.1 (32.5)	7059.1 (32.5)
LargeGrace × UltraPoor × rd 3	0.060 (0.24)	−4958.6 (42.6)	−4549.8 (62.9)	−4101.1 (66.5)	−8355.5 (38.9)	−8355.5 (38.9)
Cattle × UltraPoor × rd 3	0.058 (0.23)	3719.9 (39.7)	3696.2 (55.9)	3652.1 (56.6)	3119.3 (56.4)	3119.3 (56.4)
OwnCattle0 × rd 3	0.080 (0.27)				−3514.6 (23.1)	−3514.6 (23.1)
OwnCattle0 × Large × rd 3	0.027 (0.16)				3405.7 (68.6)	3405.7 (68.6)
OwnCattle0 × LargeGrace × rd 3	0.021 (0.14)				−21929.3 (3.1)	−21929.3 (3.1)
OwnCattle0 × Cattle × rd 3	0.016 (0.13)				−689.1 (93.1)	−689.1 (93.1)
AdiCattle0 × rd 3	0.046 (0.21)				−6814.4 (6.5)	−6814.4 (6.5)
AdiCattle0 × Large × rd 3	0.015 (0.12)				−367.0 (97.5)	−367.0 (97.5)
AdiCattle0 × LargeGrace × rd 3	0.006 (0.08)				8409.5 (33.4)	8409.5 (33.4)
AdiCattle0 × Cattle × rd 3	0.015 (0.12)				5877.2 (28.3)	5877.2 (28.3)
rd 4	0.333 (0.47)	3260.6 (1.0)	2782.1 (8.6)	2939.5 (7.1)	3464.9 (1.9)	3464.9 (1.9)
Large × rd 4	0.099 (0.30)	−1539.0 (68.7)	−1040.9 (82.7)	−1329.5 (77.9)	−1672.1 (67.8)	−1672.1 (67.8)
LargeGrace × rd 4	0.082 (0.27)	1003.8 (76.6)	2466.7 (62.7)	2766.2 (58.6)	5051.6 (27.8)	5051.6 (27.8)
Cattle × rd 4	0.087 (0.28)	618.2 (82.9)	1473.7 (72.0)	1574.3 (69.9)	1963.5 (58.2)	1963.5 (58.2)
UltraPoor × rd 4	0.205 (0.40)	1117.8 (63.1)	3064.0 (28.6)	3121.7 (27.9)	1973.0 (49.9)	1973.0 (49.9)
Large × UltraPoor × rd 4	0.062 (0.24)	8250.2 (24.0)	5942.9 (46.0)	5857.7 (46.8)	5803.8 (44.1)	5803.8 (44.1)
LargeGrace × UltraPoor × rd 4	0.059 (0.24)	−1833.8 (76.4)	−4283.4 (60.7)	−3541.6 (67.3)	−7459.2 (38.3)	−7459.2 (38.3)
Cattle × UltraPoor × rd 4	0.056 (0.23)	4333.6 (37.3)	1087.8 (86.0)	987.7 (87.5)	−197.1 (97.3)	−197.1 (97.3)
OwnCattle0 × rd 4	0.076 (0.27)				−1918.6 (60.0)	−1918.6 (60.0)
OwnCattle0 × Large × rd 4	0.027 (0.16)				4267.2 (69.6)	4267.2 (69.6)
OwnCattle0 × LargeGrace × rd 4	0.021 (0.14)				−20408.5 (10.7)	−20408.5 (10.7)
OwnCattle0 × Cattle × rd 4	0.014 (0.12)				243.6 (98.1)	243.6 (98.1)
AdiCattle0 × rd 4	0.045 (0.21)				−3890.5 (48.6)	−3890.5 (48.6)
AdiCattle0 × Large × rd 4	0.015 (0.12)				4809.3 (70.6)	4809.3 (70.6)
AdiCattle0 × LargeGrace × rd 4	0.006 (0.08)				18456.6 (31.1)	18456.6 (31.1)
AdiCattle0 × Cattle × rd 4	0.014 (0.12)				2469.0 (72.6)	2469.0 (72.6)
AdiCattle0	0.134 (0.34)	7182.9 (0.0)	8721.0 (0.4)	8371.7 (0.5)	10264.4 (0.4)	10264.4 (0.4)
AdiCattle0 × rd 3	0.046 (0.21)				−6814.4 (6.5)	−6814.4 (6.5)

TABLE 106: ANCOVA ESTIMATION OF NET ASSETS BY ATTRIBUTES, POVERTY STATUS, AND PERIOD, CATTLE REARING EXPERIENCES

covariates	mean/std	(1)	(2)	(3)	(4)	(5)
(Intercept)		15064.0 (0.0)	14771.0 (0.0)	7023.0 (12.3)	6776.9 (13.8)	6776.9 (13.8)
Upfront	0.792 (0.41)	11645.5 (0.0)	12569.0 (0.2)	12394.0 (0.3)	11566.2 (0.1)	11566.2 (0.1)
WithGrace	0.502 (0.50)	−5698.8 (4.3)	−7453.0 (6.1)	−7090.9 (8.6)	−6418.5 (8.3)	−6418.5 (8.3)
InKind	0.261 (0.44)	−446.9 (84.3)	−1026.2 (72.5)	−1076.0 (70.6)	−1293.3 (67.4)	−1293.3 (67.4)
OwnCattle0	0.233 (0.42)	17215.4 (0.0)	10917.9 (3.2)	11460.4 (2.8)	10532.5 (4.5)	10532.5 (4.5)
AdiCattle0	0.134 (0.34)	7182.9 (0.0)	8721.0 (0.4)	8371.7 (0.5)	10264.4 (0.4)	10264.4 (0.4)
UltraPoor	0.602 (0.49)	−2636.6 (8.3)	−2110.2 (31.6)	−2248.4 (28.1)	−2089.4 (32.1)	−2089.4 (32.1)
Upfront × UltraPoor	0.517 (0.50)	−4255.4 (36.6)	−6457.3 (31.0)	−6820.5 (30.7)	−7734.9 (27.6)	−7734.9 (27.6)
WithGrace × UltraPoor	0.335 (0.47)	8553.5 (7.5)	10987.3 (9.8)	11668.4 (8.7)	10901.5 (10.5)	10901.5 (10.5)
InKind × UltraPoor	0.163 (0.37)	−3827.3 (28.0)	−6079.0 (23.3)	−6218.4 (21.8)	−5548.3 (27.2)	−5548.3 (27.2)
rd 3	0.350 (0.48)	2289.8 (4.3)	1763.4 (25.8)	2026.5 (19.9)	2498.5 (7.9)	2498.5 (7.9)
UltraPoor × rd 3	0.209 (0.41)	−663.7 (75.0)	−381.4 (89.8)	14.2 (99.6)	−1029.3 (72.9)	−1029.3 (72.9)
Upfront × rd 3	0.275 (0.45)	−3639.6 (27.3)	−1886.0 (68.3)	−1507.4 (74.8)	−1674.4 (68.8)	−1674.4 (68.8)
WithGrace × rd 3	0.176 (0.38)	3460.8 (30.1)	3982.1 (38.4)	3898.7 (40.3)	5926.7 (16.0)	5926.7 (16.0)
InKind × rd 3	0.093 (0.29)	−2597.1 (39.6)	−2750.0 (50.1)	−3035.6 (45.5)	−4754.2 (20.8)	−4754.2 (20.8)
Upfront × UltraPoor × rd 3	0.179 (0.38)	2130.4 (72.2)	6604.6 (40.9)	7216.4 (36.4)	7059.1 (32.5)	7059.1 (32.5)
WithGrace × UltraPoor × rd 3	0.117 (0.32)	−7089.0 (31.6)	−11154.4 (26.6)	−11317.5 (25.7)	−15414.7 (14.9)	−15414.7 (14.9)
InKind × UltraPoor × rd 3	0.058 (0.23)	8678.5 (13.2)	8246.1 (34.4)	7753.1 (37.4)	11474.8 (22.9)	11474.8 (22.9)
OwnCattle0 × rd 3	0.080 (0.27)				−3514.6 (23.1)	−3514.6 (23.1)
OwnCattle0 × Upfront × rd 3	0.064 (0.25)				3405.7 (68.6)	3405.7 (68.6)
OwnCattle0 × WithGrace × rd 3	0.038 (0.19)				−25335.0 (0.4)	−25335.0 (0.4)
OwnCattle0 × InKind × rd 3	0.016 (0.13)				21240.2 (1.1)	21240.2 (1.1)
AdiCattle0 × rd 3	0.046 (0.21)				−6814.4 (6.5)	−6814.4 (6.5)
AdiCattle0 × Upfront × rd 3	0.036 (0.19)				−367.0 (97.5)	−367.0 (97.5)
AdiCattle0 × WithGrace × rd 3	0.021 (0.14)				8776.5 (51.7)	8776.5 (51.7)
AdiCattle0 × InKind × rd 3	0.015 (0.12)				−2532.3 (76.9)	−2532.3 (76.9)
rd 4	0.333 (0.47)	3260.6 (1.0)	2782.1 (8.6)	2939.5 (7.1)	3464.9 (1.9)	3464.9 (1.9)
UltraPoor × rd 4	0.205 (0.40)	1117.8 (63.1)	3064.0 (28.6)	3121.7 (27.9)	1973.0 (49.9)	1973.0 (49.9)
Upfront × rd 4	0.268 (0.44)	−1539.0 (68.7)	−1040.9 (82.7)	−1329.5 (77.9)	−1672.1 (67.8)	−1672.1 (67.8)
WithGrace × rd 4	0.169 (0.38)	2542.8 (53.7)	3507.5 (47.4)	4095.8 (40.4)	6723.7 (14.9)	6723.7 (14.9)
InKind × rd 4	0.087 (0.28)	−385.5 (90.6)	−993.0 (81.7)	−1191.9 (78.0)	−3088.1 (47.3)	−3088.1 (47.3)
Upfront × UltraPoor × rd 4	0.177 (0.38)	8250.2 (24.0)	5942.9 (46.0)	5857.7 (46.8)	5803.8 (44.1)	5803.8 (44.1)
WithGrace × UltraPoor × rd 4	0.115 (0.32)	−10083.9 (19.8)	−10226.3 (29.0)	−9399.3 (33.1)	−13263.0 (19.4)	−13263.0 (19.4)
InKind × UltraPoor × rd 4	0.056 (0.23)	6167.3 (30.1)	5371.2 (50.9)	4529.3 (58.1)	7262.1 (41.7)	7262.1 (41.7)
OwnCattle0 × rd 4	0.076 (0.27)				−1918.6 (60.0)	−1918.6 (60.0)
OwnCattle0 × Upfront × rd 4	0.062 (0.24)				4267.2 (69.6)	4267.2 (69.6)
OwnCattle0 × WithGrace × rd 4	0.035 (0.18)				−24675.7 (2.1)	−24675.7 (2.1)
OwnCattle0 × InKind × rd 4	0.014 (0.12)				20652.2 (3.6)	20652.2 (3.6)
AdiCattle0 × rd 4	0.045 (0.21)				−3890.5 (48.6)	−3890.5 (48.6)
AdiCattle0 × Upfront × rd 4	0.035 (0.18)				4809.3 (70.6)	4809.3 (70.6)
AdiCattle0 × WithGrace × rd 4	0.020 (0.14)				13647.3 (52.3)	13647.3 (52.3)
AdiCattle0 × InKind × rd 4	0.014 (0.12)				−15987.7 (38.9)	−15987.7 (38.9)
AdiCattle0	0.134 (0.34)	7182.9 (0.0)	8721.0 (0.4)	8371.7 (0.5)	10264.4 (0.4)	10264.4 (0.4)
AdiCattle0 × rd 3	0.046 (0.21)				−6814.4 (6.5)	−6814.4 (6.5)
AdiCattle0 × rd 4	0.045 (0.21)				−3890.5 (48.6)	−3890.5 (48.6)

TABLE 107: ANCOVA ESTIMATION OF NET ASSETS, CATTLE REARING EXPERIENCES

	mean/std			(1)		
	Adi	Own	None	Adi	Own	None
(Intercept)				27111.8 (0.0)	27949.6 (0.0)	16216.8 (0.0)
Large	0.327 (0.47)	0.343 (0.48)	0.262 (0.44)	1938.1 (70.5)	21970.8 (0.8)	9413.4 (0.0)
LargeGrace	0.135 (0.34)	0.269 (0.44)	0.253 (0.44)	2293.8 (72.6)	8521.0 (9.1)	6001.6 (2.6)
Cattle	0.316 (0.47)	0.202 (0.40)	0.271 (0.44)	1543.5 (74.1)	7360.3 (8.3)	5043.7 (3.3)
Flood in round 1	0.526 (0.50)	0.444 (0.50)	0.396 (0.49)			
Head literate0	0.135 (0.34)	0.165 (0.37)	0.142 (0.35)			
NetValue0	1344.942 (6621.59)	31070.976 (15261.17)	2746.425 (3434.12)			
Household size0	4.573 (1.24)	4.586 (1.41)	4.382 (1.37)			
mean of dependent variable				28555	39185	21496
$T = 2$				9	6	27
$T = 3$				18	17	97
$T = 4$				83	113	354
$\bar{R}^2$				−0.009	0.067	0.024
N	171	297	809	294	379	1283

TABLE 107: ANCOVA ESTIMATION OF NET ASSETS, CATTLE REARING EXPERIENCES (CONTINUED)

	(2)			(3)		
	Adi	Own	None	Adi	Own	None
(Intercept)	30183.2 (0.0)	23057.0 (0.3)	14968.2 (0.0)	3226.9 (76.5)	23580.6 (8.6)	6986.4 (3.5)
Large	−1135.2 (85.7)	22793.5 (3.3)	10456.1 (0.0)	−3301.9 (59.6)	23487.4 (3.4)	9870.7 (0.1)
LargeGrace	3029.4 (82.9)	3857.9 (46.9)	7814.4 (1.5)	2388.3 (82.5)	5185.1 (37.7)	7385.4 (2.0)
Cattle	−2378.2 (71.6)	8404.3 (9.8)	3743.9 (19.4)	−2474.3 (72.2)	8933.3 (9.2)	3231.7 (25.2)
Flood in round 1				−10782.3 (1.7)	1328.5 (81.5)	1193.6 (58.9)
Head literate0				6365.0 (38.0)	−3549.5 (52.8)	476.4 (86.9)
NetValue0	0.7 (0.7)	0.2 (25.1)	0.3 (31.3)	0.6 (0.0)	0.2 (28.6)	0.3 (36.7)
Household size0				7067.6 (0.3)	−411.5 (86.9)	1827.6 (1.1)
mean of dependent variable	28555	39185	21496	28555	39185	21496
$T = 2$	2	1	10	2	1	10
$T = 3$	10	11	60	10	9	60
$T = 4$	48	92	222	48	92	222
$\bar{R}^2$	0.005	0.084	0.032	0.122	0.079	0.042
N	166	299	796	166	295	796

Source: Estimated with GUK administrative and survey data.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. We annotate the number of periods that a household is observed with T. The total number of households is shown for each values of T. T=4 indicates the number of households with complete panel information, T=3 indicates number of households observed three times, T=2 indicates the number of households observed twice. N indicates total number of observations used in ANCOVA estimation, or N=1×(T=2)+2×(T=3)+3×(T=4). Large, LargeGrace, Cattle are indicator variables of the large, large grace, and cattle arms, respectively. The default arm category is traditional arm. Net assets uses only assets observed for all 4 rounds in household assets. Household assets do not include livestock. OwnCattle0 is an indicator if a household owned cattle at the baseline. AdiCattle0 is an indicator if a household engaged in the cattle lease-in contract at the baseline.

2. *P* values in percentages in parenthesises. Standard errors are clustered at group (village) level.

TABLE 108: ANCOVA ESTIMATION OF NET ASSETS BY ATTRIBUTES, CATTLE REARING EXPERIENCES

	mean/std			(1)		
	Adi	Own	None	Adi	Own	None
(Intercept)				27111.8	27949.6	16216.8
				(0.0)	(0.0)	(0.0)
Upfront	0.778	0.815	0.786	1938.1	21970.8	9413.4
	(0.42)	(0.39)	(0.41)	(70.5)	(0.8)	(0.0)
WithGrace	0.450	0.471	0.524	355.6	−13449.7	−3411.8
	(0.50)	(0.50)	(0.50)	(95.7)	(11.0)	(16.8)
InKind	0.316	0.202	0.271	−750.3	−1160.8	−957.9
	(0.47)	(0.40)	(0.44)	(90.5)	(79.8)	(70.6)
Flood in round 1	0.526	0.444	0.396			
	(0.50)	(0.50)	(0.49)			
Head literate0	0.135	0.165	0.142			
	(0.34)	(0.37)	(0.35)			
NetValue0	1344.942	31070.976	2746.425			
	(6621.59)	(15261.17)	(3434.12)			
Household size0	4.573	4.586	4.382			
	(1.24)	(1.41)	(1.37)			
mean of dependent variable				28555	39185	21496
$T = 2$				9	6	27
$T = 3$				18	17	97
$T = 4$				83	113	354
$\bar{R}^2$				−0.009	0.067	0.024
N	171	297	809	294	379	1283

TABLE 108: ANCOVA ESTIMATION OF NET ASSETS BY ATTRIBUTES, CATTLE REARING EXPERIENCES (CONTINUED)

	(2)			(3)		
	Adi	Own	None	Adi	Own	None
(Intercept)	30183.2	23057.0	14968.2	3226.9	23580.6	6986.4
	(0.0)	(0.3)	(0.0)	(76.5)	(8.6)	(3.5)
Upfront	−1135.2	22793.5	10456.1	−3301.9	23487.4	9870.7
	(85.7)	(3.3)	(0.0)	(59.6)	(3.4)	(0.1)
WithGrace	4164.6	−18935.6	−2641.8	5690.2	−18302.3	−2485.3
	(76.3)	(7.3)	(37.4)	(57.2)	(11.5)	(40.4)
InKind	−5407.6	4546.4	−4070.4	−4862.6	3748.1	−4153.7
	(69.7)	(35.0)	(18.5)	(64.4)	(45.5)	(16.2)
Flood in round 1				−10782.3	1328.5	1193.6
				(1.7)	(81.5)	(58.9)
Head literate0				6365.0	−3549.5	476.4
				(38.0)	(52.8)	(86.9)
NetValue0	0.7	0.2	0.3	0.6	0.2	0.3
	(0.7)	(25.1)	(31.3)	(0.0)	(28.6)	(36.7)
Household size0				7067.6	−411.5	1827.6
				(0.3)	(86.9)	(1.1)
mean of dependent variable	28555	39185	21496	28555	39185	21496
$T = 2$	2	1	10	2	1	10
$T = 3$	10	11	60	10	9	60
$T = 4$	48	92	222	48	92	222
$\bar{R}^2$	0.005	0.084	0.032	0.122	0.079	0.042
N	166	299	796	166	295	796

Source: Estimated with GUK administrative and survey data.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. We annotate the number of periods that a household is observed with T. The total number of households is shown for each values of T. T=4 indicates the number of households with complete panel information, T=3 indicates number of households observed three times, T=2 indicates the number of households observed twice. N indicates total number of observations used in ANCOVA estimation, or N=1×(T=2)+2×(T=3)+3×(T=4). Upfront is an indicator variable of the arm with an upfront large disbursement, WithGrace is an indicator variable of the arm with a grace period, InKind is an indicator variable of the arm which lends a heifer. Net assets uses only assets observed for all 4 rounds in household assets. Household assets do not include livestock.

2. P values in percentages in parenthesises. Standard errors are clustered at group (village) level.

TABLE 109: ANCOVA ESTIMATION OF NET ASSETS BY PERIOD, CATTLE REARING EXPERIENCES

	mean/std			(1)		
	Adi	Own	None	Adi	Own	None
(Intercept)				26892.0 (0.0)	27409.7 (0.0)	13260.5 (0.0)
Large	0.327 (0.47)	0.343 (0.48)	0.262 (0.44)	2749.7 (59.1)	21672.9 (1.0)	10201.1 (0.0)
LargeGrace	0.135 (0.34)	0.269 (0.44)	0.253 (0.44)	1949.7 (75.5)	10698.8 (4.5)	5386.3 (3.6)
Cattle	0.316 (0.47)	0.202 (0.40)	0.271 (0.44)	1985.9 (66.0)	7598.3 (12.1)	5126.8 (2.7)
rd 3	0.345 (0.48)	0.343 (0.48)	0.354 (0.48)	−977.4 (71.3)	−213.2 (93.6)	3679.8 (0.0)
Large × rd 3	0.111 (0.32)	0.114 (0.32)	0.090 (0.29)	−8254.5 (36.9)	−795.1 (92.5)	−3863.7 (17.0)
LargeGrace × rd 3	0.047 (0.21)	0.091 (0.29)	0.088 (0.28)	−1387.6 (82.5)	−12060.0 (18.9)	2699.0 (29.1)
Cattle × rd 3	0.111 (0.32)	0.071 (0.26)	0.098 (0.30)	−3657.0 (50.7)	−3022.4 (69.3)	−2475.6 (39.5)
rd 4	0.333 (0.47)	0.327 (0.47)	0.335 (0.47)	921.9 (79.6)	395.2 (90.1)	4520.5 (0.0)
Large × rd 4	0.111 (0.32)	0.114 (0.32)	0.090 (0.29)	−601.7 (95.4)	4756.1 (62.9)	−3983.4 (21.3)
LargeGrace × rd 4	0.047 (0.21)	0.091 (0.29)	0.087 (0.28)	5087.7 (62.0)	−9613.7 (32.9)	2886.7 (31.8)
Cattle × rd 4	0.105 (0.31)	0.061 (0.24)	0.093 (0.29)	−767.4 (90.9)	1293.0 (87.5)	791.6 (78.1)
Flood in round 1	0.526 (0.50)	0.444 (0.50)	0.396 (0.49)			
Head literate0	0.135 (0.34)	0.165 (0.37)	0.142 (0.35)			
NetValue0	1344.942 (6621.59)	31070.976 (15261.17)	2746.425 (3434.12)			
Household size0	4.573 (1.24)	4.586 (1.41)	4.382 (1.37)			
mean of dependent variable				28555	39185	21496
$T = 2$				9	6	27
$T = 3$				18	17	97
$T = 4$				83	113	354
$\tilde{R}^2$				−0.031	0.054	0.031
N	171	297	809	294	379	1283

TABLE 109: ANCOVA ESTIMATION OF NET ASSETS BY PERIOD, CATTLE REARING EXPERIENCES (CONTINUED)

	(2)			(3)		
	Adi	Own	None	Adi	Own	None
(Intercept)	31829.0 (0.0)	21652.1 (1.4)	12537.5 (0.0)	3882.8 (74.2)	21758.4 (12.5)	4176.1 (26.4)
Large	−1183.5 (85.9)	22742.5 (3.7)	10945.5 (0.0)	−3319.5 (60.3)	23397.4 (3.7)	10379.3 (0.1)
LargeGrace	−1798.0 (89.5)	6710.7 (28.2)	6652.8 (2.9)	−2794.4 (78.9)	7870.4 (23.0)	6186.8 (4.3)
Cattle	−3240.6 (61.8)	8695.5 (13.6)	3695.7 (19.4)	−3402.0 (63.7)	9309.2 (11.6)	3145.2 (26.0)
rd 3	−2205.1 (53.4)	58.2 (98.4)	3679.9 (0.8)	−1217.6 (72.3)	729.8 (79.5)	3846.2 (0.7)
Large × rd 3	−2352.8 (83.8)	−733.2 (93.6)	−2643.4 (46.5)	−2595.9 (82.1)	899.9 (92.3)	−2637.7 (46.9)
LargeGrace × rd 3	18024.1 (2.6)	−14784.7 (14.8)	5097.1 (19.8)	19783.2 (0.2)	−14244.5 (16.7)	5230.4 (19.1)
Cattle × rd 3	4495.1 (40.5)	−1784.8 (83.3)	−1924.8 (59.7)	3908.1 (44.4)	−1935.2 (82.1)	−1778.2 (62.3)
rd 4	881.3 (87.3)	2214.8 (51.7)	3812.7 (0.9)	2324.8 (68.1)	2220.8 (51.5)	3994.3 (0.7)
Large × rd 4	2635.2 (82.9)	1553.1 (88.6)	−2233.2 (49.0)	2269.7 (85.4)	1053.4 (92.4)	−2250.4 (48.8)
LargeGrace × rd 4	28494.3 (12.5)	−14395.7 (22.8)	6145.4 (15.8)	30131.0 (10.3)	−13720.6 (25.2)	6359.5 (14.5)
Cattle × rd 4	4039.4 (51.4)	1204.4 (90.1)	2075.6 (54.9)	5068.8 (41.3)	845.8 (93.2)	2256.1 (51.2)
Flood in round 1				−10818.3 (2.3)	1288.0 (82.4)	1142.1 (60.8)
Head literate0				6543.4 (37.6)	−3614.3 (53.2)	746.4 (79.6)
NetValue0	0.7 (0.8)	0.2 (26.2)	0.3 (32.7)	0.7 (0.1)	0.2 (29.1)	0.3 (38.7)
Household size0				7114.2 (0.5)	−380.9 (88.0)	1887.2 (0.9)
mean of dependent variable $T = 2$	28555 2	39185 1	21496 10	28555 2	39185 1	21496 10
$T = 3$ $T = 4$	10 48	11 92	60 222	10 48	9 92	60 222
$\bar{R}^2$ N	−0.018 166	0.07 299	0.034 796	0.105 166	0.062 295	0.045 796

Source: Estimated with GUK administrative and survey data.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. We annotate the number of periods that a household is observed with T. The total number of households is shown for each values of T. T=4 indicates the number of households with complete panel information, T=3 indicates number of households observed three times, T=2 indicates the number of households observed twice. N indicates total number of observations used in ANCOVA estimation, or N=1×(T=2)+2×(T=3)+3×(T=4). Large, LargeGrace, Cattle are indicator variables of the large, large grace, and cattle arms, respectively. The default arm category is traditional arm. rd2, rd3, rd4 are dummy variables for second, third, and fourth round of survey. Net assets uses only assets observed for all 4 rounds in household assets. Household assets do not include livestock.

2. *P* values in percentages in parenthesises. Standard errors are clustered at group (village) level.

TABLE 109 and TABLE 109 (CONTINUED) show estimation after dividing into three subsamples: Individuals who had a cattle lease contract (Adi, $n = 92$) at the baseline, individuals who owned cattle at the baseline (Own, $n = 137$), and individuals who had neither (None, $n = 505$). The total of 734 is fewer than baseline sample size of 774 as we lost 40 observations by round 2. The number of individuals with Adi is small that makes the estimates inprecise. Specifications (2) - (4) show that the individuals of Own responded well to the non-Traditional lending by round 2, particularly so under Large and Large grace arms. Individuals of None have the smallest net asset holding under Traditional as indicated by the intercept terms. They have excess positive returns under all non-Traditional arms relative to the Traditional arm. Among the individuals of None, or who had no prior cattle rearing experience at the baseline, the Cattle arm gives the higher mean returns than the Large grace arm. As argued in the main text, it strongly suggests that the effective difference of the two arms, the managerial support program, resulted in a higher return for the None group.

The household size is positively correlated with the net asset values in Adi and None groups while not in Own group. This implies that there may be selection into cattle ownership at the baseline that requires a certain household size, either labour and/or a barn, and Own group may already have a way to acquire them as they become necessary. Returns to baseline net asset holding is meaningful only among the Own group, and estimates on other groups are less precise. Adi group has a large

point estimate, although the p value is greater than .1, which is consistent with a conjecture that the skills acquired through Adi have high returns but they are cash constrained.

TABLE 110: ANCOVA ESTIMATION OF NARROW NET ASSETS BY ATTRIBUTES AND PERIOD, CATTLE REARING EXPERIENCES

	mean/std			(1)		
	Adi	Own	None	Adi	Own	None
(Intercept)				26892.0 (0.0)	27409.7 (0.0)	13260.5 (0.0)
Upfront	0.778 (0.42)	0.815 (0.39)	0.786 (0.41)	2749.7 (59.1)	21672.9 (1.0)	10201.1 (0.0)
WithGrace	0.450 (0.50)	0.471 (0.50)	0.524 (0.50)	−800.0 (90.4)	−10974.1 (16.5)	−4814.8 (4.0)
InKind	0.316 (0.47)	0.202 (0.40)	0.271 (0.44)	36.2 (99.5)	−3100.5 (44.1)	−259.5 (90.8)
rd 3	0.345 (0.48)	0.343 (0.48)	0.354 (0.48)	−977.4 (71.3)	−213.2 (93.6)	3679.8 (0.0)
Upfront × rd 3	0.269 (0.44)	0.276 (0.45)	0.276 (0.45)	−8254.5 (36.9)	−795.1 (92.5)	−3863.7 (17.0)
WithGrace × rd 3	0.158 (0.37)	0.162 (0.37)	0.185 (0.39)	6866.9 (43.6)	−11264.9 (12.3)	6562.7 (2.9)
InKind × rd 3	0.111 (0.32)	0.071 (0.26)	0.098 (0.30)	−2269.4 (64.1)	9037.6 (15.7)	−5174.5 (9.5)
rd 4	0.333 (0.47)	0.327 (0.47)	0.335 (0.47)	921.9 (79.6)	395.2 (90.1)	4520.5 (0.0)
Upfront × rd 4	0.263 (0.44)	0.266 (0.44)	0.269 (0.44)	−601.7 (95.4)	4756.1 (62.9)	−3983.4 (21.3)
WithGrace × rd 4	0.152 (0.36)	0.152 (0.36)	0.179 (0.38)	5689.4 (65.0)	−14369.8 (13.5)	6870.1 (5.7)
InKind × rd 4	0.105 (0.31)	0.061 (0.24)	0.093 (0.29)	−5855.1 (54.8)	10906.7 (17.0)	−2095.1 (52.5)
Flood in round 1	0.526 (0.50)	0.444 (0.50)	0.396 (0.49)			
Head literate0	0.135 (0.34)	0.165 (0.37)	0.142 (0.35)			
NetValue0	1344.942 (6621.59)	31070.976 (15261.17)	2746.425 (3434.12)			
Household size0	4.573 (1.24)	4.586 (1.41)	4.382 (1.37)			
mean of dependent variable $T = 2$				28555 9	39185 6	21496 27
$T = 3$				18	17	97
$T = 4$				83	113	354
$\tilde{R}^2$				−0.031	0.054	0.031
N	171	297	809	294	379	1283

TABLE 110: ANCOVA ESTIMATION OF NET ASSETS BY ATTRIBUTES AND PERIOD, CATTLE REARING EXPERIENCES (CONTINUED)

	(2)			(3)		
	Adi	Own	None	Adi	Own	None
(Intercept)	31829.0	21652.1	12537.5	3882.8	21758.4	4176.1
	(0.0)	(1.4)	(0.0)	(74.2)	(12.5)	(26.4)
Upfront	−1183.5	22742.5	10945.5	−3319.5	23397.4	10379.3
	(85.9)	(3.7)	(0.0)	(60.3)	(3.7)	(0.1)
WithGrace	−614.5	−16031.8	−4292.7	525.1	−15527.0	−4192.5
	(96.5)	(12.5)	(13.2)	(95.8)	(17.3)	(14.9)
InKind	−1442.6	1984.8	−2957.1	−607.6	1438.8	−3041.6
	(91.6)	(69.2)	(28.3)	(95.4)	(78.3)	(26.0)
rd 3	−2205.1	58.2	3679.9	−1217.6	729.8	3846.2
	(53.4)	(98.4)	(0.8)	(72.3)	(79.5)	(0.7)
Upfront × rd 3	−2352.8	−733.2	−2643.4	−2595.9	899.9	−2637.7
	(83.8)	(93.6)	(46.5)	(82.1)	(92.3)	(46.9)
WithGrace × rd 3	20376.9	−14051.5	7740.5	22379.1	−15144.3	7868.1
	(11.2)	(6.2)	(7.2)	(6.4)	(4.5)	(7.2)
InKind × rd 3	−13529.0	12999.9	−7021.9	−15875.1	12309.3	−7008.6
	(8.3)	(5.2)	(10.1)	(1.4)	(6.1)	(10.8)
rd 4	881.3	2214.8	3812.7	2324.8	2220.8	3994.3
	(87.3)	(51.7)	(0.9)	(68.1)	(51.5)	(0.7)
Upfront × rd 4	2635.2	1553.1	−2233.2	2269.7	1053.4	−2250.4
	(82.9)	(88.6)	(49.0)	(85.4)	(92.4)	(48.8)
WithGrace × rd 4	25859.0	−15948.7	8378.7	27861.3	−14774.0	8609.9
	(22.6)	(9.4)	(7.9)	(19.3)	(12.9)	(7.3)
InKind × rd 4	−24454.8	15600.1	−4069.8	−25062.3	14566.4	−4103.5
	(18.8)	(6.2)	(40.6)	(17.8)	(6.7)	(40.9)
Flood in round 1				−10818.3	1288.0	1142.1
				(2.3)	(82.4)	(60.8)
Head literate0				6543.4	−3614.3	746.4
				(37.6)	(53.2)	(79.6)
NetValue0	0.7	0.2	0.3	0.7	0.2	0.3
	(0.8)	(26.2)	(32.7)	(0.1)	(29.1)	(38.7)
Household size0				7114.2	−380.9	1887.2
				(0.5)	(88.0)	(0.9)
mean of dependent variable	28555	39185	21496	28555	39185	21496
$T = 2$	2	1	10	2	1	10
$T = 3$	10	11	60	10	9	60
$T = 4$	48	92	222	48	92	222
$\bar{R}^2$	−0.018	0.07	0.034	0.105	0.062	0.045
N	166	299	796	166	295	796

Source: Estimated with GUK administrative and survey data.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. We annotate the number of periods that a household is observed with T. The total number of households is shown for each values of T. T=4 indicates the number of households with complete panel information, T=3 indicates number of households observed three times, T=2 indicates the number of households observed twice. N indicates total number of observations used in ANCOVA estimation, or N=1×(T=2)+2×(T=3)+3×(T=4). Upfront is an indicator variable of the arm with an upfront large disbursement, WithGrace is an indicator variable of the arm with a grace period, InKind is an indicator variable of the arm which lends a heifer. rd2, rd3, rd4 are dummy variables for second, third, and fourth round of survey. Net assets uses only assets observed for all 4 rounds in household assets. Household assets do not include livestock.

2. *P* values in percentages in parenthesises. Standard errors are clustered at group (village) level.

TABLE 111: ANCOVA ESTIMATION OF NET ASSETS BY ARM, POVERTY STATUS, AND PERIOD, CATTLE REARING EXPERIENCES

	mean/std			(1)		
	Adi	Own	None	Adi	Own	None
(Intercept)				28159.5 (0.0)	31859.7 (0.0)	15972.9 (0.0)
Large	0.327 (0.47)	0.343 (0.48)	0.262 (0.44)	2259.6 (64.2)	16723.9 (3.1)	7281.2 (0.0)
LargeGrace	0.135 (0.34)	0.269 (0.44)	0.253 (0.44)	799.2 (89.3)	6458.0 (8.2)	2738.0 (20.9)
Large × UltraPoor	0.205 (0.40)	0.212 (0.41)	0.166 (0.37)	−9355.0 (31.9)	−791.5 (93.2)	−5309.2 (35.7)
LargeGrace × UltraPoor	0.094 (0.29)	0.152 (0.36)	0.197 (0.40)	3786.8 (70.4)	26032.0 (0.0)	−4192.6 (30.9)
rd 3	0.345 (0.48)	0.343 (0.48)	0.354 (0.48)	−1164.0 (66.2)	−216.9 (93.2)	3923.6 (0.1)
Large × rd 3	0.111 (0.32)	0.114 (0.32)	0.090 (0.29)	−6610.5 (44.3)	1563.9 (76.9)	−2804.2 (29.3)
LargeGrace × rd 3	0.047 (0.21)	0.091 (0.29)	0.088 (0.28)	303.1 (94.9)	−10870.8 (11.6)	4308.9 (12.8)
Large × UltraPoor × rd 3	0.070 (0.26)	0.071 (0.26)	0.057 (0.23)	1963.4 (91.5)	14229.2 (20.1)	−3236.3 (61.9)
LargeGrace × UltraPoor × rd 3	0.035 (0.18)	0.051 (0.22)	0.068 (0.25)	−8639.8 (51.8)	−2241.3 (87.6)	−8434.5 (27.3)
rd 4	0.333 (0.47)	0.327 (0.47)	0.335 (0.47)	1074.9 (76.0)	877.9 (77.4)	4775.3 (0.0)
Large × rd 4	0.111 (0.32)	0.114 (0.32)	0.090 (0.29)	382.7 (96.8)	4328.2 (52.7)	−4508.5 (12.2)
LargeGrace × rd 4	0.047 (0.21)	0.091 (0.29)	0.087 (0.28)	5069.6 (58.9)	−11472.6 (14.4)	2755.4 (36.3)
Large × UltraPoor × rd 4	0.070 (0.26)	0.071 (0.26)	0.057 (0.23)	−5066.7 (77.0)	29199.8 (6.2)	894.0 (89.3)
LargeGrace × UltraPoor × rd 4	0.035 (0.18)	0.051 (0.22)	0.067 (0.25)	−409.3 (98.1)	−6531.0 (71.4)	−5254.2 (48.6)
Flood in round 1	0.526 (0.50)	0.444 (0.50)	0.396 (0.49)			
Head literate0	0.135 (0.34)	0.165 (0.37)	0.142 (0.35)			
NetValue0	1344.942 (6621.59)	31070.976 (15261.17)	2746.425 (3434.12)			
Household size0	4.573 (1.24)	4.586 (1.41)	4.382 (1.37)			
mean of dependent variable $T = 2$				28555 9	39185 6	21496 27
$T = 3$ $T = 4$				18 83	17 113	97 354
$\tilde{R}^2$ N	171	297	809	−0.031 294	0.08 379	0.027 1283

TABLE 111: ANCOVA ESTIMATION OF NET ASSETS BY ARM, POVERTY STATUS, AND PERIOD, CATTLE REARING EXPERIENCES (CONTINUED)

	(2)			(3)		
	Adi	Own	None	Adi	Own	None
(Intercept)	30010.9 (0.0)	28150.5 (0.0)	14605.2 (0.0)	3463.0 (76.9)	31530.2 (0.9)	5689.6 (11.1)
Large	661.5 (91.4)	17814.5 (8.0)	8693.5 (0.0)	−1214.3 (81.9)	18322.4 (8.2)	8426.7 (0.1)
LargeGrace	−583.4 (96.6)	3000.5 (55.5)	4471.3 (9.5)	−1711.0 (86.7)	3383.6 (50.1)	4216.0 (12.0)
Large × UltraPoor	−9583.7 (42.6)	−7218.8 (52.0)	−4899.0 (53.9)	−8409.9 (40.6)	−6357.4 (57.6)	−5446.3 (52.1)
LargeGrace × UltraPoor	4425.4 (78.3)	19930.9 (4.3)	−2908.3 (60.8)	4984.7 (73.8)	21290.0 (3.6)	−2542.4 (64.4)
rd 3	−2071.7 (57.1)	−132.6 (96.1)	4171.3 (1.8)	−746.6 (83.0)	616.9 (81.5)	4343.2 (1.5)
Large × rd 3	−4925.2 (66.2)	976.6 (86.0)	−2033.1 (53.9)	−5296.3 (64.2)	2353.2 (67.4)	−2099.1 (52.9)
LargeGrace × rd 3	15522.2 (3.3)	−14207.2 (6.5)	7292.4 (10.0)	17584.9 (0.5)	−13356.4 (7.7)	7391.9 (10.2)
Large × UltraPoor × rd 3	429.4 (98.5)	16517.2 (25.7)	1535.6 (83.0)	−1999.2 (93.2)	19657.6 (19.1)	1715.8 (81.1)
LargeGrace × UltraPoor × rd 3	5335.3 (84.3)	−3771.3 (82.1)	−12828.7 (32.0)	−4649.8 (83.7)	−1842.6 (90.8)	−12974.8 (31.3)
rd 4	522.7 (91.3)	2139.2 (52.7)	4376.2 (1.2)	2347.9 (63.9)	2192.6 (51.1)	4561.1 (1.0)
Large × rd 4	487.2 (96.5)	1328.1 (84.8)	−3810.9 (23.1)	−905.2 (93.5)	848.5 (90.7)	−3906.1 (22.2)
LargeGrace × rd 4	24304.2 (15.1)	−15993.4 (8.8)	5927.3 (21.1)	25321.1 (15.0)	−14887.6 (10.2)	6104.7 (20.5)
Large × UltraPoor × rd 4	−13211.0 (55.2)	29070.7 (12.0)	874.7 (88.9)	−15432.2 (49.1)	27878.4 (13.8)	997.5 (87.5)
LargeGrace × UltraPoor × rd 4	21353.0 (45.1)	−7002.4 (73.9)	−11033.3 (33.3)	11700.7 (63.6)	−6016.2 (76.9)	−11242.8 (32.3)
Flood in round 1				−11755.6 (0.7)	1208.2 (83.8)	1022.2 (67.0)
Head literate0				5142.4 (44.0)	−204.6 (97.2)	481.0 (87.4)
NetValue0	0.8 (2.3)	0.2 (43.1)	0.3 (37.3)	0.8 (0.6)	0.2 (44.1)	0.2 (43.8)
Household size0				6893.7 (0.5)	−1114.1 (65.0)	1967.1 (0.8)
mean of dependent variable	28555	39185	21496	28555	39185	21496
$T = 2$	2	1	10	2	1	10
$T = 3$	10	11	60	10	9	60
$T = 4$	48	92	222	48	92	222
$\tilde{R}^2$	−0.015	0.083	0.031	0.105	0.076	0.044
N	166	299	796	166	295	796

Source: Estimated with GUK administrative and survey data.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. We annotate the number of periods that a household is observed with T. The total number of households is shown for each values of T. T=4 indicates the number of households with complete panel information, T=3 indicates number of households observed three times, T=2 indicates the number of households observed twice. N indicates total number of observations used in ANCOVA estimation, or N=1×(T=2)+2×(T=3)+3×(T=4). UltraPoor is an indicator variable if the household is classified as the ultra poor. Large, LargeGrace, Cattle are indicator variables of the large, large grace, and cattle arms, respectively. The default arm category is traditional arm. rd2, rd3, rd4 are dummy variables for second, third, and fourth round of survey. Net assets uses only assets observed for all 4 rounds in household assets. Household assets do not include livestock.

2. *P* values in percentages in parenthesises. Standard errors are clustered at group (village) level.

TABLE 112: ANCOVA ESTIMATION OF NET ASSETS BY ATTRIBUTES, POVERTY STATUS, AND PERIOD, CATTLE REARING EXPERIENCES

	mean/std			(1)		
	Adi	Own	None	Adi	Own	None
(Intercept)				26973.4	28203.8	13809.6
				(0.0)	(0.0)	(0.0)
Upfront	0.778	0.815	0.786	3584.9	20389.3	9512.0
	(0.42)	(0.39)	(0.41)	(48.2)	(1.7)	(0.0)
WithGrace	0.450	0.471	0.524	−1437.9	−10268.8	−4621.4
	(0.50)	(0.50)	(0.50)	(83.3)	(18.6)	(4.6)
InKind	0.316	0.202	0.271	−45.1	−3254.1	−397.3
	(0.47)	(0.40)	(0.44)	(99.4)	(38.0)	(86.2)
Upfront × UltraPoor	0.444	0.505	0.536	−7440.8	4391.1	−6008.9
	(0.50)	(0.50)	(0.50)	(47.0)	(68.4)	(36.5)
WithGrace × UltraPoor	0.240	0.293	0.371	13186.7	26867.7	1205.5
	(0.43)	(0.46)	(0.48)	(29.3)	(0.5)	(85.3)
InKind × UltraPoor	0.146	0.141	0.174	−2799.1	−21489.7	1394.2
	(0.35)	(0.35)	(0.38)	(80.4)	(2.3)	(75.2)
rd 3	0.345	0.343	0.354	−1374.7	−199.2	3876.8
	(0.48)	(0.48)	(0.48)	(60.6)	(94.0)	(0.1)
Upfront × rd 3	0.269	0.276	0.276	−7524.9	295.6	−4185.5
	(0.44)	(0.45)	(0.45)	(41.1)	(97.1)	(14.2)
WithGrace × rd 3	0.158	0.162	0.185	6907.5	−12432.2	7180.2
	(0.37)	(0.37)	(0.39)	(45.8)	(9.0)	(3.5)
InKind × rd 3	0.111	0.071	0.098	−2083.3	9663.6	−5999.7
	(0.32)	(0.26)	(0.30)	(67.0)	(13.8)	(8.4)
Upfront × UltraPoor × rd 3	0.158	0.168	0.188	9001.9	10568.4	−2206.3
	(0.37)	(0.37)	(0.39)	(65.6)	(46.0)	(75.0)
WithGrace × UltraPoor × rd 3	0.088	0.098	0.131	−10598.7	−16509.3	−5290.9
	(0.28)	(0.30)	(0.34)	(62.7)	(26.2)	(57.6)
InKind × UltraPoor × rd 3	0.053	0.047	0.063	15785.0	−1133.6	10915.6
	(0.22)	(0.21)	(0.24)	(23.2)	(93.8)	(18.8)
rd 4	0.333	0.327	0.335	621.0	845.6	4599.3
	(0.47)	(0.47)	(0.47)	(85.8)	(78.7)	(0.0)
Upfront × rd 4	0.263	0.266	0.269	1791.8	5535.9	−3723.3
	(0.44)	(0.44)	(0.44)	(86.2)	(54.1)	(23.9)
WithGrace × rd 4	0.152	0.152	0.179	4743.1	−15799.9	7292.9
	(0.36)	(0.36)	(0.38)	(70.2)	(8.1)	(5.5)
InKind × rd 4	0.105	0.061	0.093	−5317.9	12601.0	−2679.5
	(0.31)	(0.24)	(0.29)	(58.1)	(12.1)	(45.7)
Upfront × UltraPoor × rd 4	0.152	0.168	0.185	5979.5	25684.4	1625.8
	(0.36)	(0.37)	(0.39)	(75.4)	(16.2)	(82.1)
WithGrace × UltraPoor × rd 4	0.082	0.098	0.129	4797.8	−35745.5	−6208.8
	(0.27)	(0.30)	(0.33)	(83.1)	(6.4)	(50.6)
InKind × UltraPoor × rd 4	0.047	0.047	0.062	9323.6	2730.2	6333.9
	(0.21)	(0.21)	(0.24)	(59.4)	(89.3)	(45.3)
Flood in round 1	0.526	0.444	0.396			
	(0.50)	(0.50)	(0.49)			
Head literate0	0.135	0.165	0.142			
	(0.34)	(0.37)	(0.35)			
NetValue0	1344.942	31070.976	2746.425			
	(6621.59)	(15261.17)	(3434.12)			
Household size0	4.573	4.586	4.382			
	(1.24)	(1.41)	(1.37)			
mean of dependent variable				28555	39185	21496
$T = 2$				9	6	27
$T = 3$				18	17	97
$T = 4$				83	113	354
$\bar{R}^2$				−0.045	0.074	0.029
N	171	297	809	294	379	1283

TABLE 112: ANCOVA ESTIMATION OF NET ASSETS BY ATTRIBUTES, POVERTY STATUS, AND PERIOD, CATTLE REARING EXPERIENCES (CONTINUED)

	(2)			(3)		
	Adi	Own	None	Adi	Own	None
(Intercept)	31177.1 (0.0)	23152.6 (1.2)	14489.7 (0.0)	4835.9 (68.5)	23909.4 (8.9)	6362.6 (17.9)
Upfront	−349.2 (95.7)	22308.0 (4.5)	8891.3 (1.5)	−2742.2 (67.5)	22738.0 (4.9)	8286.5 (3.2)
WithGrace	−1312.6 (92.7)	−14812.1 (16.7)	−4242.9 (15.6)	−267.4 (98.0)	−14286.8 (22.4)	−4295.8 (16.3)
InKind	21.6 (99.9)	1005.6 (84.7)	−3090.5 (28.2)	528.5 (96.2)	275.8 (96.0)	−3035.2 (28.7)
Upfront × UltraPoor	−4088.1 (77.1)	−2493.3 (84.4)	−9574.4 (32.9)	−5898.1 (65.7)	−1959.5 (87.2)	−10802.1 (31.8)
WithGrace × UltraPoor	14586.3 (42.0)	27105.2 (2.3)	2042.4 (82.6)	13126.3 (40.1)	27050.3 (2.2)	3273.1 (74.0)
InKind × UltraPoor	−1205.6 (94.4)	−16312.7 (18.9)	−2382.1 (67.9)	−3427.0 (83.6)	−17523.0 (16.8)	−2695.7 (64.8)
rd 3	−2360.9 (52.2)	64.2 (98.2)	4019.3 (2.9)	−997.0 (77.8)	801.7 (77.7)	4160.5 (2.5)
Upfront × rd 3	−2097.2 (85.9)	−166.9 (98.5)	−2507.9 (53.6)	−3138.1 (79.4)	1238.4 (89.2)	−2442.8 (54.7)
WithGrace × rd 3	20427.2 (11.9)	−15162.2 (5.2)	9361.3 (7.6)	22846.8 (6.7)	−15747.8 (4.2)	9517.5 (7.5)
InKind × rd 3	−13769.3 (7.7)	13947.0 (4.9)	−8483.5 (10.3)	−16281.8 (1.8)	12968.8 (5.8)	−8506.1 (10.7)
Upfront × UltraPoor × rd 3	1017.6 (96.9)	12346.3 (49.6)	4546.9 (58.8)	−3442.0 (89.4)	15738.9 (39.7)	4942.3 (55.7)
WithGrace × UltraPoor × rd 3	4936.4 (89.9)	−20293.8 (26.2)	−14426.4 (29.9)	−2460.0 (94.6)	−21384.3 (24.0)	−14717.7 (28.9)
InKind × UltraPoor × rd 3	−4734.4 (86.0)	748.6 (96.5)	16812.0 (20.7)	3530.4 (87.7)	−1208.2 (94.2)	17117.5 (19.8)
rd 4	125.9 (97.9)	2473.4 (48.7)	4060.4 (2.3)	1958.9 (69.4)	2558.1 (46.7)	4205.8 (2.0)
Upfront × rd 4	4340.2 (70.1)	2058.7 (84.7)	−1913.3 (62.0)	2767.8 (81.2)	1512.0 (88.9)	−1865.4 (62.8)
WithGrace × rd 4	23660.7 (21.5)	−17271.3 (7.1)	9690.0 (7.0)	26087.2 (18.7)	−15735.8 (10.8)	9941.9 (6.6)
InKind × rd 4	−21651.4 (21.3)	18176.9 (4.8)	−5152.4 (34.6)	−22807.0 (21.1)	16980.0 (5.4)	−5257.7 (34.4)
Upfront × UltraPoor × rd 4	−6766.1 (77.8)	20084.4 (34.8)	3398.2 (65.6)	−12079.6 (62.1)	19424.1 (37.4)	3923.0 (60.9)
WithGrace × UltraPoor × rd 4	35291.5 (35.9)	−36030.7 (11.5)	−11845.8 (32.5)	27859.7 (44.2)	−33714.9 (14.3)	−12135.1 (31.3)
InKind × UltraPoor × rd 4	−17761.3 (53.9)	−2933.2 (90.5)	12268.1 (31.6)	−10220.5 (69.1)	−4072.4 (86.7)	12671.9 (30.1)
Flood in round 1				−11106.9 (1.8)	1672.5 (78.5)	560.8 (81.4)
Head literate0				5909.8 (42.6)	−1672.1 (77.1)	−162.5 (96.1)
NetValue0	0.8 (2.5)	0.2 (41.3)	0.3 (35.7)	0.8 (0.7)	0.2 (44.5)	0.3 (41.7)
Household size0				6856.8 (0.6)	−524.9 (83.2)	1940.7 (0.9)
mean of dependent variable $T = 2$	28555 2	39185 1	21496 10	28555 2	39185 1	21496 10
$T = 3$ $T = 4$	10 48	11 92	60 222	10 48	9 92	60 222
$\tilde{R}^2$ N	−0.048 166	0.073 299	0.032 796	0.071 166	0.065 295	0.044 796

Source: Estimated with GUK administrative and survey data.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. We annotate the number of periods that a household is observed with T. The total number of households is shown for each values of T. T=4 indicates the number of households with complete panel information, T=3 indicates number of households observed three times, T=2 indicates the number of households observed twice. N indicates total number of observations used in ANCOVA estimation, or N=1×(T=2)+2×(T=3)+3×(T=4). UltraPoor is an indicator variable if the household is classified as the ultra poor. Upfront is an indicator variable of the arm with an upfront large disbursement, WithGrace is an indicator variable of the arm with a grace period, InKind is an indicator variable of the arm which lends a heifer. rd2, rd3, rd4 are dummy variables for second, third, and fourth round of survey. Net assets uses only assets observed for all 4 rounds in household assets. Household assets do not include livestock.

2. *P* values in percentages in parenthesises. Standard errors are clustered at group (village) level.

III.5.12 Livestock, experienced vs. inexperienced

```
             AttritIn
Arm             2   3   4   9 Sum
  traditional   7   4  20 144 175
```

```
  large          5   2   1 192 200
  large grace   12   3   3 171 189
  cattle         5   5  13 176 199
  Sum           29  14  37 683 763
     NumCows
tee      0    1    2    3    4    5    6    7    8    9 <NA>  Sum
  2     15  309  153   40   11    1    2    0    1    1  197  730
  3      5  337  175   40   16    1    2    2    1    0  110  689
  4      4  218  201   54   11    4    2    0    1    1   86  582
  Sum   24  864  529  134   38    6    6    2    3    2  393 2001
```

```
[1]
 ~  + dummyLarge + dummyLargeGrace + dummyCattle

 + TotalImputedValue0
 + dummyAdiCattle0
FloodInRd1 + HHsize0 + HeadLiteracy0 + NA

dummyAdiCattle0.Large + dummyAdiCattle0.LargeGrace + dummyAdiCattle0.Cattle + NA



[2]
 ~  + dummyUltraPoor + dummyLargeSize + dummyWithGrace
 + dummyWithGrace + dummyInKind + UDdummyUltraPoor
 + dummyLargeSize.UltraPoor + UDdummyLargeSize.UltraPoor + dummyWithGrace.UltraPoor
 + UDdummyWithGrace.UltraPoor + dummyInKind.UltraPoor + UDdummyInKind.UltraPoor
 +

 + TotalImputedValue0
 + dummyAdiCattle0
FloodInRd1 + HHsize0 + HeadLiteracy0 + NA

dummyAdiCattle0.LargeSize + dummyAdiCattle0.WithGrace + dummyAdiCattle0.InKind + NA



[3]
 ~  + dummyLargeSize + dummyWithGrace + dummyInKind

 + TotalImputedValue0
 + dummyAdiCattle0
FloodInRd1 + HHsize0 + HeadLiteracy0 + NA

dummyAdiCattle0.LargeSize + dummyAdiCattle0.WithGrace + dummyAdiCattle0.InKind + NA



[4]
 ~  + Time.3 + Time.4 + dummyLarge
 + dummyLarge + dummyLargeGrace + dummyCattle
 + dummyLarge.Time3 + dummyLargeGrace.Time3 + dummyCattle.Time3
 + dummyLarge.Time4 + dummyLargeGrace.Time4 + dummyCattle.Time4
 +

 + TotalImputedValue0
 + dummyAdiCattle0
FloodInRd1 + HHsize0 + HeadLiteracy0 + NA
```

```
dummyAdiCattle0.Large + dummyAdiCattle0.Time3 + dummyAdiCattle0.Large.Time3 + dummyAdiCatt
 + dummyAdiCattle0.Time4 + dummyAdiCattle0.Large.Time4 + dummyAdiCattle0.LargeGrace
 + dummyAdiCattle0.LargeGrace.Time3 + dummyAdiCattle0.LargeGrace.Time4 + dummyAdiCattle0.C
 + dummyAdiCattle0.Cattle.Time3 + dummyAdiCattle0.Cattle.Time4



[5]
 ~  + Time.3 + Time.4 + dummyLargeSize
 + dummyLargeSize + dummyWithGrace + dummyInKind
 + dummyLargeSize.Time3 + dummyWithGrace.Time3 + dummyInKind.Time3
 + dummyLargeSize.Time4 + dummyWithGrace.Time4 + dummyInKind.Time4
 +

 + TotalImputedValue0
 + dummyAdiCattle0
FloodInRd1 + HHsize0 + HeadLiteracy0 + NA

dummyAdiCattle0.Time3 + dummyAdiCattle0.Time4 + dummyAdiCattle0.LargeSize + dummyAdiCattle
 + dummyAdiCattle0.LargeSize.Time3 + dummyAdiCattle0.LargeSize.Time4 + dummyAdiCattle0.Wit
 + dummyAdiCattle0.WithGrace.Time3 + dummyAdiCattle0.WithGrace.Time4 + dummyAdiCattle0.InK
 + dummyAdiCattle0.InKind.Time3 + dummyAdiCattle0.InKind.Time4



[6]
 ~  + Time.3 + Time.4 + dummyLarge
 + dummyLarge + dummyLargeGrace + dummyCattle
 + dummyUltraPoor + dummyLarge.Time3 + dummyLargeGrace.Time3
 + dummyCattle.Time3 + dummyUltraPoor.Time3 + dummyLarge.Time4
 + dummyLargeGrace.Time4 + dummyCattle.Time4 + dummyUltraPoor.Time4
 + dummyLarge.UltraPoor + dummyLargeGrace.UltraPoor + dummyCattle.UltraPoor
 + dummyLarge.UltraPoor.Time3 + dummyLarge.UltraPoor.Time4 + dummyLargeGrace.UltraPoor.Tim
 + dummyLargeGrace.UltraPoor.Time4 + dummyCattle.UltraPoor.Time3 + dummyCattle.UltraPoor.T
 +

 + TotalImputedValue0
 + dummyAdiCattle0
FloodInRd1 + HHsize0 + HeadLiteracy0 + NA

dummyAdiCattle0.Large + dummyAdiCattle0.Time3 + dummyAdiCattle0.Large.Time3 + dummyAdiCatt
 + dummyAdiCattle0.Time4 + dummyAdiCattle0.Large.Time4 + dummyAdiCattle0.LargeGrace
 + dummyAdiCattle0.LargeGrace.Time3 + dummyAdiCattle0.LargeGrace.Time4 + dummyAdiCattle0.C
 + dummyAdiCattle0.Cattle.Time3 + dummyAdiCattle0.Cattle.Time4



[7]
 ~  + Time.3 + Time.4 + dummyUltraPoor
 + dummyUltraPoor + dummyLargeSize + dummyWithGrace
 + dummyInKind + dummyUltraPoor.Time3 + dummyLargeSize.Time3
 + dummyWithGrace.Time3 + dummyInKind.Time3 + dummyUltraPoor.Time4
 + dummyLargeSize.Time4 + dummyWithGrace.Time4 + dummyInKind.Time4
 + dummyLargeSize.UltraPoor + dummyWithGrace.UltraPoor + dummyInKind.UltraPoor
 + dummyLargeSize.UltraPoor.Time3 + dummyLargeSize.UltraPoor.Time4 + dummyWithGrace.UltraP
 + dummyWithGrace.UltraPoor.Time4 + dummyInKind.UltraPoor.Time3 + dummyInKind.UltraPoor.Ti
 +

 + TotalImputedValue0
 + dummyAdiCattle0
FloodInRd1 + HHsize0 + HeadLiteracy0 + NA
```

```
dummyAdiCattle0.Time3 + dummyAdiCattle0.Time4 + dummyAdiCattle0.LargeSize + dummyAdiCattle
 + dummyAdiCattle0.LargeSize.Time3 + dummyAdiCattle0.LargeSize.Time4 + dummyAdiCattle0.Wit
 + dummyAdiCattle0.WithGrace.Time3 + dummyAdiCattle0.WithGrace.Time4 + dummyAdiCattle0.InK
 + dummyAdiCattle0.InKind.Time3 + dummyAdiCattle0.InKind.Time4
```

TABLE 113: ANCOVA ESTIMATION OF LIVESTOCK VALUES, CATTLE REARING EXPERIENCES

covariates	mean/std	(1)	(2)	(3)	(4)	(5)
(Intercept)		20988.8 (0.0)	19163.1 (0.0)	18376.3 (0.0)	13156.3 (0.0)	12960.5 (0.0)
Large	0.273 (0.45)	9658.2 (0.3)	8875.2 (0.1)	8841.8 (0.1)	8594.1 (0.2)	8817.1 (0.2)
LargeGrace	0.248 (0.43)	4797.2 (5.2)	4507.2 (5.4)	4709.9 (4.1)	4770.8 (3.3)	5000.6 (2.3)
Cattle	0.264 (0.44)	4448.8 (1.0)	4675.9 (0.5)	4642.3 (0.5)	4641.7 (0.5)	4769.6 (0.4)
AdiCattle0	0.153 (0.36)			4190.5 (2.2)	3812.3 (4.0)	4274.4 (2.6)
AdiCattle0	0.153 (0.36)			4190.5 (2.2)	3812.3 (4.0)	4274.4 (2.6)
Flood in round 1	0.491 (0.50)				760.3 (64.4)	689.3 (68.3)
Head literate0	0.114 (0.32)				−637.2 (75.5)	−407.7 (83.9)
TotalImputedValue0	5315.315 (12450.23)		0.4 (0.0)	0.4 (0.0)	0.4 (0.0)	0.4 (0.0)
Household size0	4.219 (1.43)				1207.6 (2.0)	1227.3 (1.9)
AdiCattle0 × Large	0.044 (0.21)					−7693.9 (15.1)
AdiCattle0 × LargeGrace	0.028 (0.16)					4528.2 (39.9)
AdiCattle0 × Cattle	0.046 (0.21)					−4123.7 (39.6)
mean of dependent variable		25997	25997	25997	25997	25997
$T = 2$		41	41	41	40	40
$T = 3$		107	107	107	106	106
$T = 4$		582	582	582	582	582
$\bar{R}^2$		0.024	0.075	0.08	0.086	0.09
N	1998	2001	2001	2001	1998	1998

Source: Estimated with GUK administrative and survey data.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. We annotate the number of periods that a household is observed with T. The total number of households is shown for each values of T. T=4 indicates the number of households with complete panel information, T=3 indicates number of households observed three times, T=2 indicates the number of households observed twice. N indicates total number of observations used in ANCOVA estimation, or N=1×(T=2)+2×(T=3)+3×(T=4). Large, LargeGrace, Cattle are indicator variables of the large, large grace, and cattle arms, respectively. The default arm category is traditional arm. Net assets uses only assets observed for all 4 rounds in household assets. Household assets do not include livestock. OwnCattle0 is an indicator if a household owned cattle at the baseline. AdiCattle0 is an indicator if a household engaged in the cattle lease-in contract at the baseline.

2. *P* values in percentages in parenthesises. Standard errors are clustered at group (village) level.

TABLE 114: ANCOVA ESTIMATION OF LIVESTOCK VALUES BY ATTRIBUTES, CATTLE REARING EXPERIENCES

covariates	mean/std	(1)	(2)	(3)	(4)	(5)
(Intercept)		20988.8 (0.0)	19163.1 (0.0)	18376.3 (0.0)	13156.3 (0.0)	12960.5 (0.0)
Upfront	0.785 (0.41)	9658.2 (0.3)	8875.2 (0.1)	8841.8 (0.1)	8594.1 (0.2)	8817.1 (0.2)
WithGrace	0.512 (0.50)	−4861.1 (16.7)	−4368.0 (16.3)	−4131.9 (18.2)	−3823.4 (23.0)	−3816.5 (23.4)
InKind	0.264 (0.44)	−348.4 (87.3)	168.7 (93.9)	−67.6 (97.5)	−129.0 (95.1)	−231.0 (91.2)
AdiCattle0	0.153 (0.36)			4190.5 (2.2)	3812.3 (4.0)	4274.4 (2.6)
AdiCattle0	0.153 (0.36)			4190.5 (2.2)	3812.3 (4.0)	4274.4 (2.6)
Flood in round 1	0.491 (0.50)				760.3 (64.4)	689.3 (68.3)
Head literate0	0.114 (0.32)				−637.2 (75.5)	−407.7 (83.9)
TotalImputedValue0	5315.315 (12450.23)		0.4 (0.0)	0.4 (0.0)	0.4 (0.0)	0.4 (0.0)
Household size0	4.219 (1.43)				1207.6 (2.0)	1227.3 (1.9)
AdiCattle0 × Upfront	0.118 (0.32)					−7693.9 (15.1)
AdiCattle0 × WithGrace	0.074 (0.26)					12222.1 (3.3)
AdiCattle0 × InKind	0.046 (0.21)					−8651.9 (10.0)
mean of dependent variable		25997	25997	25997	25997	25997
$T = 2$		41	41	41	40	40
$T = 3$		107	107	107	106	106
$T = 4$		582	582	582	582	582
$\bar{R}^2$		0.024	0.075	0.08	0.086	0.09
N	1998	2001	2001	2001	1998	1998

Source: Estimated with GUK administrative and survey data.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. We annotate the number of periods that a household is observed with T. The total number of households is shown for each values of T. T=4 indicates the number of households with complete panel information, T=3 indicates number of households observed three times, T=2 indicates the number of households observed twice. N indicates total number of observations used in ANCOVA estimation, or N=1×(T=2)+2×(T=3)+3×(T=4). Upfront is an indicator variable of the arm with an upfront large disbursement, WithGrace is an indicator variable of the arm with a grace period, InKind is an indicator variable of the arm which lends a heifer. Net assets uses only assets observed for all 4 rounds in household assets. Household assets do not include livestock. OwnCattle0 is an indicator if a household owned cattle at the baseline. AdiCattle0 is an indicator if a household engaged in the cattle lease-in contract at the baseline.

2. *P* values in percentages in parenthesises. Standard errors are clustered at group (village) level.

TABLE 115: ANCOVA ESTIMATION OF LIVESTOCK VALUES BY PERIOD, CATTLE REARING EXPERIENCES

covariates	mean/std	(1)	(2)	(3)	(4)	(5)
(Intercept)		18147.6 (0.0)	16229.4 (0.0)	15428.0 (0.0)	10035.0 (0.0)	9797.7 (0.0)
Large	0.273 (0.45)	9799.3 (0.3)	9000.6 (0.1)	8979.4 (0.1)	8692.0 (0.2)	8880.2 (0.2)
LargeGrace	0.248 (0.43)	4333.7 (7.8)	4057.8 (7.8)	4279.7 (6.0)	4331.0 (4.9)	4579.8 (3.5)
Cattle	0.264 (0.44)	4343.4 (1.3)	4560.8 (0.8)	4534.9 (0.8)	4516.9 (0.7)	4597.4 (0.7)
AdiCattle0	0.153 (0.36)			4207.5 (2.2)	3821.7 (4.0)	4590.9 (1.2)
rd 3	0.348 (0.48)	2846.9 (0.2)	2921.4 (0.2)	2916.1 (0.2)	3056.4 (0.1)	3049.3 (0.1)
Large × rd 3	0.094 (0.29)	−2110.9 (46.9)	−2095.8 (46.9)	−2153.3 (45.8)	−1776.5 (54.6)	−1619.3 (58.0)
LargeGrace × rd 3	0.085 (0.28)	1083.7 (67.0)	1049.7 (67.4)	912.9 (71.4)	943.0 (70.9)	807.4 (74.1)
Cattle × rd 3	0.091 (0.29)	−611.9 (78.1)	−725.7 (74.2)	−767.1 (72.9)	−737.0 (74.0)	−579.1 (79.4)
AdiCattle0 × rd 3	0.054 (0.23)					−2413.8 (25.1)
AdiCattle0 × Large × rd 3	0.015 (0.12)					−6106.0 (36.4)
AdiCattle0 × LargeGrace × rd 3	0.011 (0.10)					−7107.4 (22.2)
AdiCattle0 × Cattle × rd 3	0.016 (0.12)					−5071.1 (31.8)
rd 4	0.326 (0.47)	6010.7 (0.0)	6178.3 (0.0)	6187.5 (0.0)	6256.1 (0.0)	6360.0 (0.0)
Large × rd 4	0.094 (0.29)	−415.0 (90.5)	−351.9 (91.8)	−426.0 (90.1)	−393.4 (90.8)	−197.8 (95.3)
LargeGrace × rd 4	0.081 (0.27)	3985.9 (18.3)	3843.3 (18.7)	3778.0 (18.9)	3973.4 (17.2)	4203.3 (12.9)
Cattle × rd 4	0.085 (0.28)	2023.3 (46.0)	2286.5 (40.6)	2243.8 (41.2)	2430.9 (37.3)	2792.8 (29.7)
AdiCattle0 × rd 4	0.050 (0.22)					−94.2 (97.8)
AdiCattle0 × Large × rd 4	0.016 (0.12)					−6657.6 (40.3)
AdiCattle0 × LargeGrace × rd 4	0.009 (0.09)					474.6 (96.7)
AdiCattle0 × Cattle × rd 4	0.015 (0.12)					−10334.6 (16.3)
AdiCattle0	0.153 (0.36)			4207.5 (2.2)	3821.7 (4.0)	4590.9 (1.2)
AdiCattle0 × rd 3	0.054 (0.23)					−2413.8 (25.1)
AdiCattle0 × rd 4	0.050 (0.22)					−94.2 (97.8)
Flood in round 1	0.491 (0.50)				779.7 (63.5)	698.6 (68.0)
Head literate0	0.114 (0.32)				−649.9 (75.1)	−419.7 (83.5)
TotalImputedValue0	5315.315 (12450.23)		0.4 (0.0)	0.4 (0.0)	0.4 (0.0)	0.4 (0.0)
Household size0	4.219 (1.43)				1234.9 (1.7)	1254.5 (1.6)
AdiCattle0 × Large	0.044 (0.21)					−6683.7 (19.4)
AdiCattle0 × LargeGrace	0.028 (0.16)					5175.1 (30.4)
AdiCattle0 × Cattle	0.046 (0.21)					−2939.2 (53.8)
mean of dependent variable		25997	25997	25997	25997	25997
$T = 2$		41	41	41	40	40
$T = 3$		107	107	107	106	106
$T = 4$		582	582	582	582	582
$\bar{R}^2$		0.035	0.087	0.091	0.098	0.101
N	1998	2001	2001	2001	1998	1998

Source: Estimated with GUK administrative and survey data.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. We annotate the number of periods that a household is observed with T. The total number of households is shown for each values of T. T=4 indicates the number of households with complete panel information, T=3 indicates number of households observed three times, T=2 indicates the number of households observed twice. N indicates total number of observations used in ANCOVA estimation, or N=1×(T=2)+2×(T=3)+3×(T=4). rd2, rd3, rd4 are dummy variables for second, third, and fourth round of survey. Net assets uses only assets observed for all 4 rounds in household assets. Household assets do not include livestock. OwnCattle0 is an indicator if a household owned cattle at the baseline. AdiCattle0 is an indicator if a household engaged in the cattle lease-in contract at the baseline.

2. *P* values in percentages in parenthesises. Standard errors are clustered at group (village) level.

TABLE 116: ANCOVA ESTIMATION OF LIVESTOCK VALUES BY PERIOD, ATTRIBUTES, CATTLE REARING EXPERIENCES

covariates	mean/std	(1)	(2)	(3)	(4)	(5)
(Intercept)		18147.6 (0.0)	16229.4 (0.0)	15428.0 (0.0)	10035.0 (0.0)	9797.7 (0.0)
Upfront	0.785 (0.41)	9799.3 (0.3)	9000.6 (0.1)	8979.4 (0.1)	8692.0 (0.2)	8880.2 (0.2)
WithGrace	0.512 (0.50)	−5465.6 (12.0)	−4942.8 (11.4)	−4699.7 (13.0)	−4361.0 (16.8)	−4300.5 (17.7)
InKind	0.264 (0.44)	9.6 (99.6)	502.9 (81.8)	255.2 (90.6)	185.9 (92.9)	17.6 (99.3)
AdiCattle0	0.153 (0.36)			4207.5 (2.2)	3821.7 (4.0)	4590.9 (1.2)
rd 3	0.348 (0.48)	2846.9 (0.2)	2921.4 (0.2)	2916.1 (0.2)	3056.4 (0.1)	3049.3 (0.1)
Upfront × rd 3	0.269 (0.44)	−2110.9 (46.9)	−2095.8 (46.9)	−2153.3 (45.8)	−1776.5 (54.6)	−1619.3 (58.0)
WithGrace × rd 3	0.176 (0.38)	3194.6 (27.8)	3145.5 (27.7)	3066.2 (28.7)	2719.5 (35.7)	2426.7 (40.3)
InKind × rd 3	0.091 (0.29)	−1695.5 (45.0)	−1775.4 (42.0)	−1680.0 (44.2)	−1680.0 (44.8)	−1386.5 (52.1)
AdiCattle0 × rd 3	0.054 (0.23)					−2413.8 (25.1)
AdiCattle0 × Upfront × rd 3	0.041 (0.20)					−6106.0 (36.4)
AdiCattle0 × WithGrace × rd 3	0.026 (0.16)					−1001.4 (87.9)
AdiCattle0 × InKind × rd 3	0.016 (0.12)					2036.2 (67.5)
rd 4	0.326 (0.47)	6010.7 (0.0)	6178.3 (0.0)	6187.5 (0.0)	6256.1 (0.0)	6360.0 (0.0)
Upfront × rd 4	0.260 (0.44)	−415.0 (90.5)	−351.9 (91.8)	−426.0 (90.1)	−393.4 (90.8)	−197.8 (95.3)
WithGrace × rd 4	0.166 (0.37)	4400.9 (20.6)	4195.2 (22.2)	4204.0 (21.8)	4366.8 (20.6)	4401.1 (19.5)
InKind × rd 4	0.085 (0.28)	−1962.6 (47.5)	−1556.8 (57.3)	−1534.1 (57.4)	−1542.5 (57.3)	−1410.5 (60.2)
AdiCattle0 × rd 4	0.050 (0.22)					−94.2 (97.8)
AdiCattle0 × Upfront × rd 4	0.039 (0.19)					−6657.6 (40.3)
AdiCattle0 × WithGrace × rd 4	0.024 (0.15)					7132.2 (53.7)
AdiCattle0 × InKind × rd 4	0.015 (0.12)					−10809.1 (33.2)
AdiCattle0	0.153 (0.36)			4207.5 (2.2)	3821.7 (4.0)	4590.9 (1.2)
AdiCattle0 × rd 3	0.054 (0.23)					−2413.8 (25.1)
AdiCattle0 × rd 4	0.050 (0.22)					−94.2 (97.8)
Flood in round 1	0.491 (0.50)				779.7 (63.5)	698.6 (68.0)
Head literate0	0.114 (0.32)				−649.9 (75.1)	−419.7 (83.5)
TotalImputedValue0	5315.315 (12450.23)		0.4 (0.0)	0.4 (0.0)	0.4 (0.0)	0.4 (0.0)
Household size0	4.219 (1.43)				1234.9 (1.7)	1254.5 (1.6)
AdiCattle0 × Upfront	0.118 (0.32)					−6683.7 (19.4)
AdiCattle0 × WithGrace	0.074 (0.26)					11858.7 (2.8)
AdiCattle0 × InKind	0.046 (0.21)					−8114.2 (11.1)
mean of dependent variable		25997	25997	25997	25997	25997
$T = 2$		41	41	41	40	40
$T = 3$		107	107	107	106	106
$T = 4$		582	582	582	582	582
$\bar{R}^2$		0.035	0.087	0.091	0.098	0.101
N	1998	2001	2001	2001	1998	1998

Source: Estimated with GUK administrative and survey data.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. We annotate the number of periods that a household is observed with T. The total number of households is shown for each values of T. T=4 indicates the number of households with complete panel information, T=3 indicates number of households observed three times, T=2 indicates the number of households observed twice. N indicates total number of observations used in ANCOVA estimation, or N=1×(T=2)+2×(T=3)+3×(T=4). Upfront is an indicator variable of the arm with an upfront large disbursement, WithGrace is an indicator variable of the arm with a grace period, InKind is an indicator variable of the arm which lends a heifer. rd2, rd3, rd4 are dummy variables for second, third, and fourth round of survey. Net assets uses only assets observed for all 4 rounds in household assets. Household assets do not include livestock. OwnCattle0 is an indicator if a household owned cattle at the baseline. AdiCattle0 is an indicator if a household engaged in the cattle lease-in contract at the baseline.

2. P values in percentages in parenthesises. Standard errors are clustered at group (village) level.

TABLE 117: ANCOVA ESTIMATION OF LIVESTOCK VALUES BY ARM, POVERTY STATUS, AND PERIOD, CATTLE REARING EXPERIENCES

covariates	mean/std	(1)	(2)	(3)	(4)	(5)
(Intercept)		19524.9 (0.0)	17441.3 (0.0)	16618.3 (0.0)	11021.7 (0.0)	10714.5 (0.0)
Large	0.273 (0.45)	9989.3 (0.2)	9386.6 (0.0)	9359.6 (0.0)	9098.4 (0.1)	9240.2 (0.1)
LargeGrace	0.248 (0.43)	4316.5 (7.3)	4222.7 (6.2)	4441.1 (4.6)	4480.3 (3.8)	4695.1 (2.8)
Cattle	0.264 (0.44)	4488.6 (0.8)	4890.6 (0.4)	4842.3 (0.4)	4848.5 (0.4)	4920.1 (0.4)
AdiCattle0	0.153 (0.36)			4428.8 (1.4)	4056.8 (2.5)	4861.9 (0.7)
UltraPoor	0.630 (0.48)	−2211.7 (14.6)	−2333.5 (12.0)	−2347.5 (11.9)	−2278.0 (14.0)	−2160.5 (15.5)
Large × UltraPoor	0.172 (0.38)	−6762.9 (15.5)	−5362.4 (21.9)	−5778.0 (18.7)	−5827.7 (19.2)	−5617.4 (20.1)
LargeGrace × UltraPoor	0.171 (0.38)	2964.1 (40.9)	4713.8 (19.9)	4681.9 (19.5)	5133.0 (14.9)	5161.4 (13.9)
Cattle × UltraPoor	0.181 (0.39)	−329.3 (92.6)	1616.1 (64.6)	1705.1 (62.7)	1994.4 (57.3)	1871.2 (59.3)
rd 3	0.348 (0.48)	2739.0 (0.3)	2824.6 (0.2)	2813.9 (0.2)	2961.2 (0.1)	2959.7 (0.1)
Large × rd 3	0.094 (0.29)	−1701.3 (52.4)	−1771.2 (51.0)	−1834.0 (49.7)	−1503.0 (58.2)	−1338.6 (62.0)
LargeGrace × rd 3	0.085 (0.28)	2068.6 (40.6)	1902.9 (44.2)	1745.7 (48.1)	1741.2 (48.7)	1595.5 (51.3)
Cattle × rd 3	0.091 (0.29)	−176.2 (93.2)	−371.3 (86.1)	−410.7 (84.7)	−409.6 (84.9)	−261.0 (90.4)
UltraPoor × rd 3	0.217 (0.41)	−173.9 (93.4)	−161.2 (93.9)	−129.4 (95.1)	−4.9 (99.8)	137.1 (94.8)
Large × UltraPoor × rd 3	0.058 (0.23)	9482.5 (10.9)	8456.5 (14.9)	8413.9 (15.3)	8795.8 (13.2)	9085.4 (12.9)
LargeGrace × UltraPoor × rd 3	0.060 (0.24)	−2198.5 (70.8)	−2250.9 (69.7)	−2027.0 (72.2)	−2465.8 (66.7)	−2330.0 (68.0)
Cattle × UltraPoor × rd 3	0.061 (0.24)	6790.8 (9.3)	6200.6 (12.4)	6187.8 (12.5)	5865.2 (14.2)	5752.5 (14.7)
AdiCattle0 × rd 3	0.054 (0.23)					−2565.3 (23.8)
AdiCattle0 × Large × rd 3	0.015 (0.12)					−6609.2 (33.7)
AdiCattle0 × LargeGrace × rd 3	0.011 (0.10)					−6827.9 (23.6)
AdiCattle0 × Cattle × rd 3	0.016 (0.12)					−4836.0 (32.3)
rd 4	0.326 (0.47)	5800.8 (0.0)	6028.1 (0.0)	6031.1 (0.0)	6110.0 (0.0)	6223.3 (0.0)
Large × rd 4	0.094 (0.29)	−0.4 (100.0)	−92.1 (97.7)	−182.3 (95.4)	−187.0 (95.3)	−8.9 (99.8)
LargeGrace × rd 4	0.081 (0.27)	4529.1 (11.5)	4206.8 (13.9)	4102.1 (14.5)	4256.3 (13.6)	4415.0 (10.7)
Cattle × rd 4	0.085 (0.28)	2418.1 (34.7)	2622.5 (32.8)	2554.4 (33.7)	2705.5 (31.2)	3060.6 (24.8)
UltraPoor × rd 4	0.211 (0.41)	1631.0 (48.4)	1216.1 (60.4)	1343.5 (56.4)	1315.4 (57.6)	1561.2 (51.0)
Large × UltraPoor × rd 4	0.060 (0.24)	13906.7 (4.1)	12914.2 (5.6)	12668.7 (6.1)	12398.9 (6.5)	12393.2 (7.1)
LargeGrace × UltraPoor × rd 4	0.056 (0.23)	4581.8 (46.7)	4240.1 (49.1)	4381.3 (46.8)	4069.7 (50.1)	4600.5 (43.7)
Cattle × UltraPoor × rd 4	0.060 (0.24)	8720.9 (8.8)	6810.5 (20.7)	6690.5 (21.0)	6298.8 (24.0)	5699.4 (29.5)
AdiCattle0 × rd 4	0.050 (0.22)					−296.6 (93.3)
AdiCattle0 × Large × rd 4	0.016 (0.12)					−6937.5 (39.8)
AdiCattle0 × LargeGrace × rd 4	0.009 (0.09)					1833.7 (87.4)
AdiCattle0 × Cattle × rd 4	0.015 (0.12)					−9663.1 (18.6)
AdiCattle0	0.153 (0.36)			4428.8 (1.4)	4056.8 (2.5)	4861.9 (0.7)
AdiCattle0 × rd 3	0.054 (0.23)					−2565.3 (23.8)
AdiCattle0 × rd 4	0.050 (0.22)					−296.6 (93.3)
Flood in round 1	0.491 (0.50)				659.2 (68.4)	601.2 (71.9)
Head literate0	0.114 (0.32)				−921.0 (64.9)	−673.9 (73.4)
TotalImputedValue0	5315.315 (12450.23)		0.4 (0.0)	0.4 (0.0)	0.4 (0.0)	0.4 (0.0)
Household size0	4.219 (1.43)				1288.2 (1.1)	1306.5 (1.1)
AdiCattle0 × Large	0.044 (0.21)					−5465.2 (26.2)
AdiCattle0 × LargeGrace	0.028 (0.16)					5366.5 (27.1)
AdiCattle0 × Cattle	0.046 (0.21)					−2731.9 (55.8)
mean of dependent variable $T = 2$		25997 41	25997 41	25997 41	25997 40	25997 40

TABLE 118: ANCOVA ESTIMATION OF LIVESTOCK VALUES BY ATTRIBUTES, POVERTY STATUS, AND PERIOD, CATTLE REARING EXPERIENCES

covariates	mean/std	(1)	(2)	(3)	(4)	(5)
(Intercept)		19524.9 (0.0)	17441.3 (0.0)	16618.3 (0.0)	11021.7 (0.0)	10714.5 (0.0)
Upfront	0.785 (0.41)	9989.3 (0.2)	9386.6 (0.0)	9359.6 (0.0)	9098.4 (0.1)	9240.2 (0.1)
WithGrace	0.512 (0.50)	−5672.7 (9.7)	−5163.9 (8.6)	−4918.5 (9.6)	−4618.1 (12.9)	−4545.1 (13.8)
InKind	0.264 (0.44)	172.1 (93.6)	667.9 (75.8)	401.3 (85.0)	368.3 (85.8)	225.0 (91.2)
AdiCattle0	0.153 (0.36)			4428.8 (1.4)	4056.8 (2.5)	4861.9 (0.7)
UltraPoor	0.630 (0.48)	−2211.7 (14.6)	−2333.5 (12.0)	−2347.5 (11.9)	−2278.0 (14.0)	−2160.5 (15.5)
Upfront × UltraPoor	0.524 (0.50)	−6762.9 (15.5)	−5362.4 (21.9)	−5778.0 (18.7)	−5827.7 (19.2)	−5617.4 (20.1)
WithGrace × UltraPoor	0.352 (0.48)	9726.9 (3.7)	10076.2 (2.8)	10460.0 (2.5)	10960.6 (2.1)	10778.8 (2.0)
InKind × UltraPoor	0.181 (0.39)	−3293.4 (33.7)	−3097.7 (40.0)	−2976.8 (41.6)	−3138.6 (38.9)	−3290.2 (36.2)
rd 3	0.348 (0.48)	2739.0 (0.3)	2824.6 (0.2)	2813.9 (0.2)	2961.2 (0.1)	2959.7 (0.1)
UltraPoor × rd 3	0.217 (0.41)	−173.9 (93.4)	−161.2 (93.9)	−129.4 (95.1)	−4.9 (99.8)	137.1 (94.8)
Upfront × rd 3	0.269 (0.44)	−1701.3 (52.4)	−1771.2 (51.0)	−1834.0 (49.7)	−1503.0 (58.2)	−1338.6 (62.0)
WithGrace × rd 3	0.176 (0.38)	3769.9 (19.4)	3674.1 (19.8)	3579.7 (20.7)	3244.2 (26.2)	2934.1 (29.8)
InKind × rd 3	0.091 (0.29)	−2244.8 (34.1)	−2274.1 (32.6)	−2156.4 (34.8)	−2150.8 (35.4)	−1856.5 (41.4)
Upfront × UltraPoor × rd 3	0.179 (0.38)	9482.5 (10.9)	8456.5 (14.9)	8413.9 (15.3)	8795.8 (13.2)	9085.4 (12.9)
WithGrace × UltraPoor × rd 3	0.121 (0.33)	−11681.0 (9.7)	−10707.4 (12.4)	−10440.9 (13.1)	−11261.6 (10.5)	−11415.4 (10.2)
InKind × UltraPoor × rd 3	0.061 (0.24)	8989.3 (10.6)	8451.5 (12.5)	8214.8 (12.9)	8331.0 (12.9)	8082.5 (13.2)
AdiCattle0 × rd 3	0.054 (0.23)					−2565.3 (23.8)
AdiCattle0 × Upfront × rd 3	0.041 (0.20)					−6609.2 (33.7)
AdiCattle0 × WithGrace × rd 3	0.026 (0.16)					−218.7 (97.5)
AdiCattle0 × InKind × rd 3	0.016 (0.12)					1991.9 (68.7)
rd 4	0.326 (0.47)	5800.8 (0.0)	6028.1 (0.0)	6031.1 (0.0)	6110.0 (0.0)	6223.3 (0.0)
UltraPoor × rd 4	0.211 (0.41)	1631.0 (48.4)	1216.1 (60.4)	1343.5 (56.4)	1315.4 (57.6)	1561.2 (51.0)
Upfront × rd 4	0.260 (0.44)	−0.4 (100.0)	−92.1 (97.7)	−182.3 (95.4)	−187.0 (95.3)	−8.9 (99.8)
WithGrace × rd 4	0.166 (0.37)	4529.5 (17.0)	4298.9 (18.7)	4284.4 (18.6)	4443.3 (17.5)	4424.0 (16.7)
InKind × rd 4	0.085 (0.28)	−2111.0 (44.3)	−1584.3 (57.1)	−1547.7 (57.5)	−1550.8 (57.6)	−1354.5 (62.0)
Upfront × UltraPoor × rd 4	0.176 (0.38)	13906.7 (4.1)	12914.2 (5.6)	12668.7 (6.1)	12398.9 (6.5)	12393.2 (7.1)
WithGrace × UltraPoor × rd 4	0.116 (0.32)	−9325.0 (21.1)	−8674.0 (23.8)	−8287.3 (25.6)	−8329.2 (25.6)	−7792.7 (28.7)
InKind × UltraPoor × rd 4	0.060 (0.24)	4139.1 (48.6)	2570.4 (67.4)	2309.2 (69.9)	2229.1 (71.4)	1098.8 (85.4)
AdiCattle0 × rd 4	0.050 (0.22)					−296.6 (93.3)
AdiCattle0 × Upfront × rd 4	0.039 (0.19)					−6937.5 (39.8)
AdiCattle0 × WithGrace × rd 4	0.024 (0.15)					8771.2 (45.8)
AdiCattle0 × InKind × rd 4	0.015 (0.12)					−11496.8 (30.4)
AdiCattle0	0.153 (0.36)			4428.8 (1.4)	4056.8 (2.5)	4861.9 (0.7)
AdiCattle0 × rd 3	0.054 (0.23)					−2565.3 (23.8)
AdiCattle0 × rd 4	0.050 (0.22)					−296.6 (93.3)
Flood in round 1	0.491 (0.50)				659.2 (68.4)	601.2 (71.9)
Head literate0	0.114 (0.32)				−921.0 (64.9)	−673.9 (73.4)
TotalImputedValue0	5315.315 (12450.23)		0.4 (0.0)	0.4 (0.0)	0.4 (0.0)	0.4 (0.0)
Household size0	4.219 (1.43)				1288.2 (1.1)	1306.5 (1.1)
AdiCattle0 × Upfront	0.118 (0.32)					−5465.2 (26.2)
AdiCattle0 × WithGrace	0.074 (0.26)					10831.7 (3.9)
AdiCattle0 × InKind	0.046 (0.21)					−8098.4 (11.1)
mean of dependent variable		25997	25997	25997	25997	25997
$T = 2$		41	41	41	40	40
$T = 3$		107	107	107	106	106
$T = 4$		582	582	582	582	582

TABLE 119: ANCOVA ESTIMATION OF LIVESTOCK VALUES, CATTLE REARING EXPERIENCES

	mean/std			(1)		
	Adi	Own	None	Adi	Own	None
(Intercept)				24608.9 (0.0)	27911.4 (0.0)	18234.3 (0.0)
Large	0.289 (0.45)	0.324 (0.47)	0.255 (0.44)	2460.2 (62.2)	18660.0 (1.9)	7221.6 (0.5)
LargeGrace	0.180 (0.39)	0.252 (0.43)	0.262 (0.44)	8853.0 (12.4)	4424.5 (30.7)	4421.2 (8.0)
Cattle	0.302 (0.46)	0.229 (0.42)	0.266 (0.44)	1499.8 (73.7)	4457.2 (14.9)	5247.6 (2.1)
Flood in round 1	0.613 (0.49)	0.494 (0.50)	0.462 (0.50)			
Head literate0	0.121 (0.33)	0.157 (0.36)	0.099 (0.30)			
TotalImputedValue0		27300.771 (14001.64)				
Household size0	4.364 (1.25)	4.506 (1.39)	4.100 (1.47)			
mean of dependent variable				27368	36134	22629
$T = 2$				1	5	35
$T = 3$				17	12	78
$T = 4$				90	121	371
$\tilde{R}^2$				0.011	0.066	0.018
N	305	389	1304	305	392	1304

TABLE 119: ANCOVA ESTIMATION OF LIVESTOCK VALUES, CATTLE REARING EXPERIENCES (CONTINUED)

	(2)			(3)		
	Adi	Own	None	Adi	Own	None
(Intercept)	24608.9 (0.0)	23332.2 (0.0)	18234.3 (0.0)	11551.0 (5.0)	20057.7 (3.6)	13507.8 (0.0)
Large	2460.2 (62.2)	18276.5 (1.8)	7221.6 (0.5)	1909.0 (68.3)	18336.8 (2.3)	6842.7 (0.7)
LargeGrace	8853.0 (12.4)	4293.8 (33.6)	4421.2 (8.0)	9387.7 (7.7)	5579.9 (22.0)	4305.5 (9.0)
Cattle	1499.8 (73.7)	4822.4 (14.1)	5247.6 (2.1)	921.6 (83.5)	5587.9 (11.7)	5078.3 (2.4)
Flood in round 1				−2605.8 (41.7)	1865.4 (68.9)	1138.4 (50.2)
Head literate0				4546.1 (34.3)	−5026.7 (26.3)	533.9 (79.7)
TotalImputedValue0		0.2 (27.1)			0.2 (35.1)	
Household size0				3286.3 (1.7)	558.8 (76.2)	1053.7 (3.4)
mean of dependent variable	27368	36134	22629	27368	36134	22629
$T = 2$	1	5	35	1	4	35
$T = 3$	17	12	78	17	11	78
$T = 4$	90	121	371	90	121	371
$\tilde{R}^2$	0.011	0.072	0.018	0.046	0.072	0.024
N	305	392	1304	305	389	1304

Source: Estimated with GUK administrative and survey data.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. We annotate the number of periods that a household is observed with T. The total number of households is shown for each values of T. T=4 indicates the number of households with complete panel information, T=3 indicates number of households observed three times, T=2 indicates the number of households observed twice. N indicates total number of observations used in ANCOVA estimation, or N=1×(T=2)+2×(T=3)+3×(T=4). Large, LargeGrace, Cattle are indicator variables of the large, large grace, and cattle arms, respectively. The default arm category is traditional arm. Narrow net assets uses only assets observed for all 4 rounds in household assets. Household assets do not include livestock. OwnCattle0 is an indicator if a household owned cattle at the baseline. AdiCattle0 is an indicator if a household engaged in the cattle lease-in contract at the baseline. Adi and None subgroups do not own cattle at the baseline. We used net asset values at the baseline NetAssets0 in place of NumCows0 in ANCOVA estimation.

2. P values in percentages in parenthesises. Standard errors are clustered at group (village) level.

TABLE 120: ANCOVA ESTIMATION OF LIVESTOCK VALUES BY ATTRIBUTES, CATTLE REARING EXPERIENCES

	mean/std			(1)		
	Adi	Own	None	Adi	Own	None
(Intercept)				24608.9	27911.4	18234.3
				(0.0)	(0.0)	(0.0)
Upfront	0.770	0.805	0.783	2460.2	18660.0	7221.6
	(0.42)	(0.40)	(0.41)	(62.2)	(1.9)	(0.5)
WithGrace	0.482	0.481	0.528	6392.7	−14235.4	−2800.4
	(0.50)	(0.50)	(0.50)	(27.0)	(9.4)	(26.7)
InKind	0.302	0.229	0.266	−7353.1	32.7	826.5
	(0.46)	(0.42)	(0.44)	(16.9)	(99.4)	(71.3)
Flood in round 1	0.613	0.494	0.462			
	(0.49)	(0.50)	(0.50)			
Head literate0	0.121	0.157	0.099			
	(0.33)	(0.36)	(0.30)			
TotalImputedValue0		27300.771				
		(14001.64)				
Household size0	4.364	4.506	4.100			
	(1.25)	(1.39)	(1.47)			
mean of dependent variable				27368	36134	22629
$T = 2$				1	5	35
$T = 3$				17	12	78
$T = 4$				90	121	371
$\bar{R}^2$				0.011	0.066	0.018
N	305	389	1304	305	392	1304

TABLE 120: ANCOVA ESTIMATION OF LIVESTOCK VALUES BY ATTRIBUTES, CATTLE REARING EXPERIENCES (CONTINUED)

	(2)			(3)		
	Adi	Own	None	Adi	Own	None
(Intercept)	24608.9	23332.2	18234.3	11551.0	20057.7	13507.8
	(0.0)	(0.0)	(0.0)	(5.0)	(3.6)	(0.0)
Upfront	2460.2	18276.5	7221.6	1909.0	18336.8	6842.7
	(62.2)	(1.8)	(0.5)	(68.3)	(2.3)	(0.7)
WithGrace	6392.7	−13982.7	−2800.4	7478.7	−12756.9	−2537.2
	(27.0)	(8.9)	(26.7)	(16.2)	(16.2)	(33.3)
InKind	−7353.1	528.5	826.5	−8466.2	8.0	772.8
	(16.9)	(90.6)	(71.3)	(11.2)	(99.9)	(72.9)
Flood in round 1				−2605.8	1865.4	1138.4
				(41.7)	(68.9)	(50.2)
Head literate0				4546.1	−5026.7	533.9
				(34.3)	(26.3)	(79.7)
TotalImputedValue0		0.2			0.2	
		(27.1)			(35.1)	
Household size0				3286.3	558.8	1053.7
				(1.7)	(76.2)	(3.4)
mean of dependent variable	27368	36134	22629	27368	36134	22629
$T = 2$	1	5	35	1	4	35
$T = 3$	17	12	78	17	11	78
$T = 4$	90	121	371	90	121	371
$\bar{R}^2$	0.011	0.072	0.018	0.046	0.072	0.024
N	305	392	1304	305	389	1304

Source: Estimated with GUK administrative and survey data.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. We annotate the number of periods that a household is observed with T. The total number of households is shown for each values of T. T=4 indicates the number of households with complete panel information, T=3 indicates number of households observed three times, T=2 indicates the number of households observed twice. N indicates total number of observations used in ANCOVA estimation, or N=1×(T=2)+2×(T=3)+3×(T=4). Upfront is an indicator variable of the arm with an upfront large disbursement, WithGrace is an indicator variable of the arm with a grace period, InKind is an indicator variable of the arm which lends a heifer. Narrow net assets uses only assets observed for all 4 rounds in household assets. Household assets do not include livestock. OwnCattle0 is an indicator if a household owned cattle at the baseline. AdiCattle0 is an indicator if a household engaged in the cattle lease-in contract at the baseline. Adi and None subgroups do not own cattle at the baseline. We used net asset values at the baseline NetAssets0 in place of NumCows0 in ANCOVA estimation.

2. P values in percentages in parenthesises. Standard errors are clustered at group (village) level.

TABLE 121: ANCOVA ESTIMATION OF LIVESTOCK VALUES BY PERIOD, CATTLE REARING EXPERIENCES

	mean/std			(1)		
	Adi	Own	None	Adi	Own	None
(Intercept)				21787.5 (0.0)	27254.0 (0.0)	14561.5 (0.0)
Large	0.289 (0.45)	0.324 (0.47)	0.255 (0.44)	3420.7 (45.9)	17923.0 (1.8)	7318.5 (0.9)
LargeGrace	0.180 (0.39)	0.252 (0.43)	0.262 (0.44)	9026.8 (9.5)	5177.6 (22.2)	3574.7 (15.0)
Cattle	0.302 (0.46)	0.229 (0.42)	0.266 (0.44)	2367.8 (58.5)	3876.2 (22.1)	5048.1 (3.3)
rd 3	0.351 (0.48)	0.344 (0.48)	0.348 (0.48)	886.0 (66.1)	−475.3 (81.5)	4434.8 (0.0)
Large × rd 3	0.098 (0.30)	0.108 (0.31)	0.088 (0.28)	−6914.6 (32.9)	1673.8 (76.3)	−1486.8 (63.7)
LargeGrace × rd 3	0.069 (0.25)	0.085 (0.28)	0.089 (0.28)	−5485.7 (30.7)	−5765.6 (26.5)	3918.9 (13.4)
Cattle × rd 3	0.102 (0.30)	0.082 (0.28)	0.090 (0.29)	−4923.0 (35.7)	3125.6 (51.0)	−834.8 (72.3)
rd 4	0.325 (0.47)	0.314 (0.46)	0.330 (0.47)	6243.1 (6.5)	3130.2 (23.4)	7236.5 (0.0)
Large × rd 4	0.102 (0.30)	0.105 (0.31)	0.089 (0.28)	−6165.0 (46.9)	6220.8 (40.8)	−391.8 (90.7)
LargeGrace × rd 4	0.056 (0.23)	0.082 (0.28)	0.086 (0.28)	4370.0 (69.5)	−3411.3 (61.6)	6176.6 (4.0)
Cattle × rd 4	0.098 (0.30)	0.067 (0.25)	0.087 (0.28)	−6354.9 (41.2)	4720.0 (44.8)	3412.9 (20.9)
Flood in round 1	0.613 (0.49)	0.494 (0.50)	0.462 (0.50)			
Head literate0	0.121 (0.33)	0.157 (0.36)	0.099 (0.30)			
TotalImputedValue0		27300.771 (14001.64)				
Household size0	4.364 (1.25)	4.506 (1.39)	4.100 (1.47)			
mean of dependent variable				27368	36134	22629
$T = 2$				1	5	35
$T = 3$				17	12	78
$T = 4$				90	121	371
$\tilde{R}^2$				0.009	0.055	0.045
N	305	389	1304	305	392	1304

TABLE 121: ANCOVA ESTIMATION OF LIVESTOCK VALUES BY PERIOD, CATTLE REARING EXPERIENCES (CONTINUED)

	(2)			(3)		
	Adi	Own	None	Adi	Own	None
(Intercept)	21787.5	22677.0	14561.5	8564.6	19093.2	9686.7
	(0.0)	(0.0)	(0.0)	(17.2)	(4.9)	(0.1)
Large	3420.7	17574.3	7318.5	2834.5	17588.7	6912.9
	(45.9)	(1.7)	(0.9)	(50.4)	(2.3)	(1.3)
LargeGrace	9026.8	5037.7	3574.7	9480.2	6293.3	3445.6
	(9.5)	(25.6)	(15.0)	(5.9)	(16.4)	(16.7)
Cattle	2367.8	4205.0	5048.1	1803.5	4981.0	4859.1
	(58.5)	(21.6)	(3.3)	(67.6)	(18.0)	(3.7)
rd 3	886.0	−549.0	4434.8	1134.3	−186.8	4478.3
	(66.1)	(78.8)	(0.0)	(58.0)	(92.6)	(0.0)
Large × rd 3	−6914.6	1519.4	−1486.8	−6910.4	2857.0	−1441.4
	(32.9)	(78.5)	(63.7)	(33.0)	(60.6)	(64.8)
LargeGrace × rd 3	−5485.7	−5683.5	3918.9	−5209.5	−5583.3	3940.2
	(30.7)	(26.8)	(13.4)	(34.0)	(28.2)	(13.9)
Cattle × rd 3	−4923.0	3238.4	−834.8	−5162.9	3324.8	−798.1
	(35.7)	(49.4)	(72.3)	(34.0)	(48.4)	(73.7)
rd 4	6243.1	3176.2	7236.5	6545.1	3182.3	7286.8
	(6.5)	(23.0)	(0.0)	(5.2)	(23.5)	(0.0)
Large × rd 4	−6165.0	5950.6	−391.8	−5766.3	5442.9	−273.6
	(46.9)	(42.5)	(90.7)	(49.4)	(47.7)	(93.5)
LargeGrace × rd 4	4370.0	−3405.7	6176.6	4977.0	−2962.8	6293.8
	(69.5)	(61.6)	(4.0)	(65.1)	(66.9)	(4.0)
Cattle × rd 4	−6354.9	5188.3	3412.9	−6033.8	5322.2	3589.8
	(41.2)	(41.2)	(20.9)	(42.6)	(41.0)	(18.6)
Flood in round 1				−2787.4	1853.4	1186.2
				(39.5)	(69.5)	(48.1)
Head literate0				4669.9	−5011.2	442.7
				(33.8)	(27.0)	(83.2)
TotalImputedValue0		0.2			0.2	
		(27.3)			(35.1)	
Household size0				3308.8	598.2	1082.8
				(1.8)	(74.8)	(3.1)
mean of dependent variable	27368	36134	22629	27368	36134	22629
$T = 2$	1	5	35	1	4	35
$T = 3$	17	12	78	17	11	78
$T = 4$	90	121	371	90	121	371
$\bar{R}^2$	0.009	0.06	0.045	0.046	0.059	0.052
N	305	392	1304	305	389	1304

Source: Estimated with GUK administrative and survey data.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. We annotate the number of periods that a household is observed with T. The total number of households is shown for each values of T. T=4 indicates the number of households with complete panel information, T=3 indicates number of households observed three times, T=2 indicates the number of households observed twice. N indicates total number of observations used in ANCOVA estimation, or N=1×(T=2)+2×(T=3)+3×(T=4). Large, LargeGrace, Cattle are indicator variables of the large, large grace, and cattle arms, respectively. The default arm category is traditional arm. rd2, rd3, rd4 are dummy variables for second, third, and fourth round of survey. Narrow net assets uses only assets observed for all 4 rounds in household assets. Household assets do not include livestock. OwnCattle0 is an indicator if a household owned cattle at the baseline. AdiCattle0 is an indicator if a household engaged in the cattle lease-in contract at the baseline. Adi and None subgroups do not own cattle at the baseline. We used net asset values at the baseline NetAssets0 in place of NumCows0 in ANCOVA estimation.

2. *P* values in percentages in parenthesises. Standard errors are clustered at group (village) level.

TABLE 122: ANCOVA ESTIMATION OF LIVESTOCK VALUES BY ATTRIBUTES AND PERIOD, CATTLE REARING EXPERIENCES

	mean/std			(1)		
	Adi	Own	None	Adi	Own	None
(Intercept)				21787.5 (0.0)	27254.0 (0.0)	14561.5 (0.0)
Upfront	0.770 (0.42)	0.805 (0.40)	0.783 (0.41)	3420.7 (45.9)	17923.0 (1.8)	7318.5 (0.9)
WithGrace	0.482 (0.50)	0.481 (0.50)	0.528 (0.50)	5606.1 (30.3)	−12745.4 (11.1)	−3743.8 (16.2)
InKind	0.302 (0.46)	0.229 (0.42)	0.266 (0.44)	−6659.0 (20.1)	−1301.3 (75.1)	1473.4 (51.0)
rd 3	0.351 (0.48)	0.344 (0.48)	0.348 (0.48)	886.0 (66.1)	−475.3 (81.5)	4434.8 (0.0)
Upfront × rd 3	0.269 (0.44)	0.275 (0.45)	0.268 (0.44)	−6914.6 (32.9)	1673.8 (76.3)	−1486.8 (63.7)
WithGrace × rd 3	0.170 (0.38)	0.167 (0.37)	0.179 (0.38)	1428.8 (81.3)	−7439.4 (23.1)	5405.7 (9.2)
InKind × rd 3	0.102 (0.30)	0.082 (0.28)	0.090 (0.29)	562.8 (88.4)	8891.2 (10.6)	−4753.6 (5.1)
rd 4	0.325 (0.47)	0.314 (0.46)	0.330 (0.47)	6243.1 (6.5)	3130.2 (23.4)	7236.5 (0.0)
Upfront × rd 4	0.256 (0.44)	0.254 (0.44)	0.262 (0.44)	−6165.0 (46.9)	6220.8 (40.8)	−391.8 (90.7)
WithGrace × rd 4	0.154 (0.36)	0.149 (0.36)	0.173 (0.38)	10535.0 (33.5)	−9632.1 (23.2)	6568.4 (5.9)
InKind × rd 4	0.098 (0.30)	0.067 (0.25)	0.087 (0.28)	−10724.8 (30.0)	8131.3 (23.6)	−2763.7 (33.6)
Flood in round 1	0.613 (0.49)	0.494 (0.50)	0.462 (0.50)			
Head literate0	0.121 (0.33)	0.157 (0.36)	0.099 (0.30)			
TotalImputedValue0		27300.771 (14001.64)				
Household size0	4.364 (1.25)	4.506 (1.39)	4.100 (1.47)			
mean of dependent variable				27368	36134	22629
$T = 2$				1	5	35
$T = 3$				17	12	78
$T = 4$				90	121	371
$\bar{R}^2$				0.009	0.055	0.045
N	305	389	1304	305	392	1304

TABLE 122: ANCOVA ESTIMATION OF LIVESTOCK VALUES BY ATTRIBUTES AND PERIOD, CATTLE REARING EXPERIENCES (CONTINUED)

	(2)			(3)		
	Adi	Own	None	Adi	Own	None
(Intercept)	21787.5 (0.0)	22677.0 (0.0)	14561.5 (0.0)	8564.6 (17.2)	19093.2 (4.9)	9686.7 (0.1)
Upfront	3420.7 (45.9)	17574.3 (1.7)	7318.5 (0.9)	2834.5 (50.4)	17588.7 (2.3)	6912.9 (1.3)
WithGrace	5606.1 (30.3)	−12536.6 (10.6)	−3743.8 (16.2)	6645.7 (18.2)	−11295.4 (18.8)	−3467.3 (20.7)
InKind	−6659.0 (20.1)	−832.8 (84.5)	1473.4 (51.0)	−7676.7 (14.8)	−1312.3 (75.1)	1413.5 (52.3)
rd 3	886.0 (66.1)	−549.0 (78.8)	4434.8 (0.0)	1134.3 (58.0)	−186.8 (92.6)	4478.3 (0.0)
Upfront × rd 3	−6914.6 (32.9)	1519.4 (78.5)	−1486.8 (63.7)	−6910.4 (33.0)	2857.0 (60.6)	−1441.4 (64.8)
WithGrace × rd 3	1428.8 (81.3)	−7203.0 (24.1)	5405.7 (9.2)	1700.9 (77.9)	−8440.3 (17.6)	5381.7 (9.7)
InKind × rd 3	562.8 (88.4)	8921.9 (10.5)	−4753.6 (5.1)	46.7 (99.1)	8908.1 (10.8)	−4738.3 (5.6)
rd 4	6243.1 (6.5)	3176.2 (23.0)	7236.5 (0.0)	6545.1 (5.2)	3182.3 (23.5)	7286.8 (0.0)
Upfront × rd 4	−6165.0 (46.9)	5950.6 (42.5)	−391.8 (90.7)	−5766.3 (49.4)	5442.9 (47.7)	−273.6 (93.5)
WithGrace × rd 4	10535.0 (33.5)	−9356.2 (23.8)	6568.4 (5.9)	10743.3 (31.9)	−8405.7 (31.2)	6567.5 (6.2)
InKind × rd 4	−10724.8 (30.0)	8593.9 (22.5)	−2763.7 (33.6)	−11010.8 (28.0)	8285.0 (24.5)	−2704.0 (35.2)
Flood in round 1				−2787.4 (39.5)	1853.4 (69.5)	1186.2 (48.1)
Head literate0				4669.9 (33.8)	−5011.2 (27.0)	442.7 (83.2)
TotalImputedValue0		0.2 (27.3)			0.2 (35.1)	
Household size0				3308.8 (1.8)	598.2 (74.8)	1082.8 (3.1)
mean of dependent variable $T = 2$	27368 1	36134 5	22629 35	27368 1	36134 4	22629 35
$T = 3$ $T = 4$	17 90	12 121	78 371	17 90	11 121	78 371
$\bar{R}^2$ N	0.009 305	0.06 392	0.045 1304	0.046 305	0.059 389	0.052 1304

Source: Estimated with GUK administrative and survey data.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. We annotate the number of periods that a household is observed with T. The total number of households is shown for each values of T. T=4 indicates the number of households with complete panel information, T=3 indicates number of households observed three times, T=2 indicates the number of households observed twice. N indicates total number of observations used in ANCOVA estimation, or N=1×(T=2)+2×(T=3)+3×(T=4). Upfront is an indicator variable of the arm with an upfront large disbursement, WithGrace is an indicator variable of the arm with a grace period, InKind is an indicator variable of the arm which lends a heifer. rd2, rd3, rd4 are dummy variables for second, third, and fourth round of survey. Narrow net assets uses only assets observed for all 4 rounds in household assets. Household assets do not include livestock. OwnCattle0 is an indicator if a household owned cattle at the baseline. AdiCattle0 is an indicator if a household engaged in the cattle lease-in contract at the baseline. Adi and None subgroups do not own cattle at the baseline. We used net asset values at the baseline NetAssets0 in place of NumCows0 in ANCOVA estimation.

2. *P* values in percentages in parenthesises. Standard errors are clustered at group (village) level.

III.5.13 Cattle holding, experienced vs. inexperienced

```
              AttritIn
Arm              2   3   4   9 Sum
  traditional    7   4  20 144 175
  large          5   2   1 192 200
  large grace   12   3   3 171 189
  cattle         5   5  13 176 199
  Sum           29  14  37 683 763
     NumCows
tee      0    1    2    3    4    5    6    7    8    9 <NA>  Sum
  2     15  309  153   40   11    1    2    0    1    1  197  730
  3      5  337  175   40   16    1    2    2    1    0  110  689
  4      4  218  201   54   11    4    2    0    1    1   86  582
  Sum   24  864  529  134   38    6    6    2    3    2  393 2001
```

```
      NumCows0
Cattle   0   1   2   3   4   5 Sum
  Adi  108   0   0   0   0   0 108
  None 484   0   0   0   0   0 484
  Own    0  99  30   5   3   1 138
  Sum  592  99  30   5   3   1 730
```

```
[1]
 ~  + dummyLarge + dummyLargeGrace + dummyCattle

 + NumCows0
 + dummyAdiCattle0
FloodInRd1 + HHsize0 + HeadLiteracy0 + NA

dummyAdiCattle0.Large + dummyAdiCattle0.LargeGrace + dummyAdiCattle0.Cattle + NA



[2]
 ~  + dummyUltraPoor + dummyLargeSize + dummyWithGrace
 + dummyWithGrace + dummyInKind + UDdummyUltraPoor
 + dummyLargeSize.UltraPoor + UDdummyLargeSize.UltraPoor + dummyWithGrace.UltraPoor
 + UDdummyWithGrace.UltraPoor + dummyInKind.UltraPoor + UDdummyInKind.UltraPoor
 +

 + NumCows0
 + dummyAdiCattle0
FloodInRd1 + HHsize0 + HeadLiteracy0 + NA

dummyAdiCattle0.LargeSize + dummyAdiCattle0.WithGrace + dummyAdiCattle0.InKind + NA



[3]
 ~  + dummyLargeSize + dummyWithGrace + dummyInKind

 + NumCows0
 + dummyAdiCattle0
FloodInRd1 + HHsize0 + HeadLiteracy0 + NA

dummyAdiCattle0.LargeSize + dummyAdiCattle0.WithGrace + dummyAdiCattle0.InKind + NA



[4]
 ~  + Time.3 + Time.4 + dummyLarge
 + dummyLarge + dummyLargeGrace + dummyCattle
 + dummyLarge.Time3 + dummyLargeGrace.Time3 + dummyCattle.Time3
 + dummyLarge.Time4 + dummyLargeGrace.Time4 + dummyCattle.Time4
 +

 + NumCows0
 + dummyAdiCattle0
FloodInRd1 + HHsize0 + HeadLiteracy0 + NA

dummyAdiCattle0.Large + dummyAdiCattle0.Time3 + dummyAdiCattle0.Large.Time3 + dummyAdiCatt
 + dummyAdiCattle0.Time4 + dummyAdiCattle0.Large.Time4 + dummyAdiCattle0.LargeGrace
 + dummyAdiCattle0.LargeGrace.Time3 + dummyAdiCattle0.LargeGrace.Time4 + dummyAdiCattle0.C
```

```
 + dummyAdiCattle0.Cattle.Time3 + dummyAdiCattle0.Cattle.Time4



[5]
 ~  + Time.3 + Time.4 + dummyLargeSize
 + dummyLargeSize + dummyWithGrace + dummyInKind
 + dummyLargeSize.Time3 + dummyWithGrace.Time3 + dummyInKind.Time3
 + dummyLargeSize.Time4 + dummyWithGrace.Time4 + dummyInKind.Time4
 +

 + NumCows0
 + dummyAdiCattle0
FloodInRd1 + HHsize0 + HeadLiteracy0 + NA

dummyAdiCattle0.Time3 + dummyAdiCattle0.Time4 + dummyAdiCattle0.LargeSize + dummyAdiCattle
 + dummyAdiCattle0.LargeSize.Time3 + dummyAdiCattle0.LargeSize.Time4 + dummyAdiCattle0.Wit
 + dummyAdiCattle0.WithGrace.Time3 + dummyAdiCattle0.WithGrace.Time4 + dummyAdiCattle0.InK
 + dummyAdiCattle0.InKind.Time3 + dummyAdiCattle0.InKind.Time4



[6]
 ~  + Time.3 + Time.4 + dummyLarge
 + dummyLarge + dummyLargeGrace + dummyCattle
 + dummyUltraPoor + dummyLarge.Time3 + dummyLargeGrace.Time3
 + dummyCattle.Time3 + dummyUltraPoor.Time3 + dummyLarge.Time4
 + dummyLargeGrace.Time4 + dummyCattle.Time4 + dummyUltraPoor.Time4
 + dummyLarge.UltraPoor + dummyLargeGrace.UltraPoor + dummyCattle.UltraPoor
 + dummyLarge.UltraPoor.Time3 + dummyLarge.UltraPoor.Time4 + dummyLargeGrace.UltraPoor.Tim
 + dummyLargeGrace.UltraPoor.Time4 + dummyCattle.UltraPoor.Time3 + dummyCattle.UltraPoor.T
 +

 + NumCows0
 + dummyAdiCattle0
FloodInRd1 + HHsize0 + HeadLiteracy0 + NA

dummyAdiCattle0.Large + dummyAdiCattle0.Time3 + dummyAdiCattle0.Large.Time3 + dummyAdiCatt
 + dummyAdiCattle0.Time4 + dummyAdiCattle0.Large.Time4 + dummyAdiCattle0.LargeGrace
 + dummyAdiCattle0.LargeGrace.Time3 + dummyAdiCattle0.LargeGrace.Time4 + dummyAdiCattle0.C
 + dummyAdiCattle0.Cattle.Time3 + dummyAdiCattle0.Cattle.Time4



[7]
 ~  + Time.3 + Time.4 + dummyUltraPoor
 + dummyUltraPoor + dummyLargeSize + dummyWithGrace
 + dummyInKind + dummyUltraPoor.Time3 + dummyLargeSize.Time3
 + dummyWithGrace.Time3 + dummyInKind.Time3 + dummyUltraPoor.Time4
 + dummyLargeSize.Time4 + dummyWithGrace.Time4 + dummyInKind.Time4
 + dummyLargeSize.UltraPoor + dummyWithGrace.UltraPoor + dummyInKind.UltraPoor
 + dummyLargeSize.UltraPoor.Time3 + dummyLargeSize.UltraPoor.Time4 + dummyWithGrace.UltraP
 + dummyWithGrace.UltraPoor.Time4 + dummyInKind.UltraPoor.Time3 + dummyInKind.UltraPoor.Ti
 +

 + NumCows0
 + dummyAdiCattle0
FloodInRd1 + HHsize0 + HeadLiteracy0 + NA

dummyAdiCattle0.Time3 + dummyAdiCattle0.Time4 + dummyAdiCattle0.LargeSize + dummyAdiCattle
 + dummyAdiCattle0.LargeSize.Time3 + dummyAdiCattle0.LargeSize.Time4 + dummyAdiCattle0.Wit
```

```
+ dummyAdiCattle0.WithGrace.Time3 + dummyAdiCattle0.WithGrace.Time4 + dummyAdiCattle0.InK
+ dummyAdiCattle0.InKind.Time3 + dummyAdiCattle0.InKind.Time4
```

TABLE 123: ANCOVA ESTIMATION OF CATTLE HOLDING, CATTLE REARING EXPERIENCES

covariates	mean/std	(1)	(2)	(3)	(4)	(5)
(Intercept)		1.49 (0.0)	1.39 (0.0)	1.36 (0.0)	1.15 (0.0)	1.14 (0.0)
Large	0.273 (0.45)	0.40 (0.8)	0.37 (0.5)	0.37 (0.5)	0.36 (1.0)	0.37 (0.9)
LargeGrace	0.248 (0.43)	0.07 (54.7)	0.08 (48.6)	0.09 (43.8)	0.09 (40.1)	0.10 (34.9)
Cattle	0.264 (0.44)	0.00 (98.8)	0.02 (77.7)	0.02 (76.6)	0.02 (79.0)	0.03 (73.0)
AdiCattle0	0.153 (0.36)			0.15 (5.5)	0.14 (9.5)	0.16 (7.5)
AdiCattle0	0.153 (0.36)			0.15 (5.5)	0.14 (9.5)	0.16 (7.5)
Flood in round 1	0.491 (0.50)				0.03 (68.1)	0.03 (74.2)
Head literate0	0.114 (0.32)				0.01 (92.7)	0.02 (84.3)
Number of cattle0	0.266 (0.62)		0.31 (0.2)	0.32 (0.1)	0.31 (0.4)	0.30 (0.3)
Household size0	4.219 (1.43)				0.05 (5.2)	0.05 (5.3)
AdiCattle0 × Large	0.044 (0.21)					−0.49 (6.6)
AdiCattle0 × LargeGrace	0.028 (0.16)					0.15 (60.5)
AdiCattle0 × Cattle	0.046 (0.21)					−0.18 (44.3)
mean of dependent variable						
$T = 2$		2 87	2 87	2 87	2 85	2 85
$T = 3$		168	168	168	168	168
$T = 4$		395	395	395	395	395
$\bar{R}^2$		0.031	0.076	0.079	0.08	0.087
N	1998	1608	1608	1608	1606	1606

Source: Estimated with GUK administrative and survey data.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. We annotate the number of periods that a household is observed with T. The total number of households is shown for each values of T. T=4 indicates the number of households with complete panel information, T=3 indicates number of households observed three times, T=2 indicates the number of households observed twice. N indicates total number of observations used in ANCOVA estimation, or N=1×(T=2)+2×(T=3)+3×(T=4). Large, LargeGrace, Cattle are indicator variables of the large, large grace, and cattle arms, respectively. The default arm category is traditional arm. Net assets uses only assets observed for all 4 rounds in household assets. Household assets do not include livestock. OwnCattle0 is an indicator if a household owned cattle at the baseline. AdiCattle0 is an indicator if a household engaged in the cattle lease-in contract at the baseline.

2. *P* values in percentages in parenthesises. Standard errors are clustered at group (village) level.

TABLE 124: ANCOVA ESTIMATION OF CATTLE HOLDING BY ATTRIBUTES, CATTLE REARING EXPERIENCES

covariates	mean/std	(1)	(2)	(3)	(4)	(5)
(Intercept)		1.49	1.39	1.36	1.15	1.14
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
Upfront	0.785	0.40	0.37	0.37	0.36	0.37
	(0.41)	(0.8)	(0.5)	(0.5)	(1.0)	(0.9)
WithGrace	0.512	−0.33	−0.29	−0.28	−0.26	−0.27
	(0.50)	(5.6)	(4.8)	(5.5)	(9.1)	(8.6)
InKind	0.264	−0.07	−0.06	−0.06	−0.07	−0.08
	(0.44)	(51.5)	(58.9)	(53.8)	(47.7)	(45.3)
AdiCattle0	0.153			0.15	0.14	0.16
	(0.36)			(5.5)	(9.5)	(7.5)
AdiCattle0	0.153			0.15	0.14	0.16
	(0.36)			(5.5)	(9.5)	(7.5)
Flood in round 1	0.491				0.03	0.03
	(0.50)				(68.1)	(74.2)
Head literate0	0.114				0.01	0.02
	(0.32)				(92.7)	(84.3)
Number of cattle0	0.266		0.31	0.32	0.31	0.30
	(0.62)		(0.2)	(0.1)	(0.4)	(0.3)
Household size0	4.219				0.05	0.05
	(1.43)				(5.2)	(5.3)
AdiCattle0 × Upfront	0.118					−0.49
	(0.32)					(6.6)
AdiCattle0 × WithGrace	0.074					0.64
	(0.26)					(2.0)
AdiCattle0 × InKind	0.046					−0.33
	(0.21)					(18.3)
mean of dependent variable						
$T = 2$		2	2	2	2	2
		87	87	87	85	85
$T = 3$		168	168	168	168	168
$T = 4$		395	395	395	395	395
$\bar{R}^2$		0.031	0.076	0.079	0.08	0.087
N	1998	1608	1608	1608	1606	1606

Source: Estimated with GUK administrative and survey data.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. We annotate the number of periods that a household is observed with T. The total number of households is shown for each values of T. T=4 indicates the number of households with complete panel information, T=3 indicates number of households observed three times, T=2 indicates the number of households observed twice. N indicates total number of observations used in ANCOVA estimation, or N=1×(T=2)+2×(T=3)+3×(T=4). Upfront is an indicator variable of the arm with an upfront large disbursement, WithGrace is an indicator variable of the arm with a grace period, InKind is an indicator variable of the arm which lends a heifer. Net assets uses only assets observed for all 4 rounds in household assets. Household assets do not include livestock. OwnCattle0 is an indicator if a household owned cattle at the baseline. AdiCattle0 is an indicator if a household engaged in the cattle lease-in contract at the baseline.

2. *P* values in percentages in parenthesises. Standard errors are clustered at group (village) level.

TABLE 125: ANCOVA ESTIMATION OF CATTLE HOLDING BY PERIOD, CATTLE REARING EXPERIENCES

covariates	mean/std	(1)	(2)	(3)	(4)	(5)
(Intercept)		1.47 (0.0)	1.36 (0.0)	1.33 (0.0)	1.11 (0.0)	1.10 (0.0)
Large	0.273 (0.45)	0.39 (0.6)	0.37 (0.4)	0.37 (0.4)	0.35 (0.8)	0.37 (0.7)
LargeGrace	0.248 (0.43)	0.01 (94.3)	0.02 (88.5)	0.03 (81.9)	0.03 (78.5)	0.04 (71.0)
Cattle	0.264 (0.44)	−0.05 (44.1)	−0.03 (72.3)	−0.03 (73.6)	−0.03 (69.5)	−0.03 (74.1)
AdiCattle0	0.153 (0.36)			0.16 (5.0)	0.14 (8.8)	0.16 (5.4)
rd 3	0.348 (0.48)	−0.02 (71.4)	0.00 (96.9)	0.00 (94.6)	0.01 (91.9)	0.00 (93.9)
Large × rd 3	0.094 (0.29)	−0.05 (74.9)	−0.05 (75.5)	−0.05 (75.1)	−0.05 (77.1)	−0.04 (79.1)
LargeGrace × rd 3	0.085 (0.28)	0.19 (28.5)	0.20 (25.5)	0.20 (26.5)	0.20 (26.0)	0.20 (25.9)
Cattle × rd 3	0.091 (0.29)	0.17 (18.0)	0.16 (23.6)	0.16 (24.1)	0.16 (25.1)	0.16 (23.7)
AdiCattle0 × rd 3	0.054 (0.23)					−0.11 (32.2)
AdiCattle0 × Large × rd 3	0.015 (0.12)					−0.20 (58.2)
AdiCattle0 × LargeGrace × rd 3	0.011 (0.10)					−0.39 (21.1)
AdiCattle0 × Cattle × rd 3	0.016 (0.12)					−0.13 (68.4)
rd 4	0.326 (0.47)	0.16 (0.9)	0.18 (0.5)	0.19 (0.4)	0.19 (0.4)	0.19 (0.4)
Large × rd 4	0.094 (0.29)	0.05 (74.5)	0.04 (79.1)	0.04 (79.1)	0.05 (78.7)	0.04 (80.4)
LargeGrace × rd 4	0.081 (0.27)	0.40 (3.3)	0.39 (3.6)	0.38 (3.7)	0.40 (3.1)	0.40 (2.5)
Cattle × rd 4	0.085 (0.28)	0.34 (0.8)	0.34 (1.1)	0.34 (1.1)	0.35 (1.1)	0.36 (0.9)
AdiCattle0 × rd 4	0.050 (0.22)					0.10 (57.0)
AdiCattle0 × Large × rd 4	0.016 (0.12)					−0.02 (94.8)
AdiCattle0 × LargeGrace × rd 4	0.009 (0.09)					−0.10 (87.0)
AdiCattle0 × Cattle × rd 4	0.015 (0.12)					−0.28 (42.8)
AdiCattle0	0.153 (0.36)			0.16 (5.0)	0.14 (8.8)	0.16 (5.4)
AdiCattle0 × rd 3	0.054 (0.23)					−0.11 (32.2)
AdiCattle0 × rd 4	0.050 (0.22)					0.10 (57.0)
Flood in round 1	0.491 (0.50)				0.04 (65.7)	0.03 (72.6)
Head literate0	0.114 (0.32)				0.01 (89.0)	0.02 (80.3)
Number of cattle0	0.266 (0.62)		0.31 (0.2)	0.33 (0.1)	0.31 (0.4)	0.30 (0.3)
Household size0	4.219 (1.43)				0.05 (4.6)	0.05 (4.7)
AdiCattle0 × Large	0.044 (0.21)					−0.47 (6.9)
AdiCattle0 × LargeGrace	0.028 (0.16)					0.21 (44.4)
AdiCattle0 × Cattle	0.046 (0.21)					−0.13 (57.0)
mean of dependent variable						
$T = 2$		87	87	87	85	85
$T = 3$		168	168	168	168	168
$T = 4$		395	395	395	395	395
$\bar{R}^2$		0.04	0.086	0.089	0.091	0.095
N	1998	1608	1608	1608	1606	1606

Source: Estimated with GUK administrative and survey data.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. We annotate the number of periods that a household is observed with T. The total number of households is shown for each values of T. T=4 indicates the number of households with complete panel information, T=3 indicates number of households observed three times, T=2 indicates the number of households observed twice. N indicates total number of observations used in ANCOVA estimation, or N=1×(T=2)+2×(T=3)+3×(T=4). rd2, rd3, rd4 are dummy variables for second, third, and fourth round of survey. Net assets uses only assets observed for all 4 rounds in household assets. Household assets do not include livestock. OwnCattle0 is an indicator if a household owned cattle at the baseline. AdiCattle0 is an indicator if a household engaged in the cattle lease-in contract at the baseline.

2. *P* values in percentages in parenthesises. Standard errors are clustered at group (village) level.

TABLE 126: ANCOVA ESTIMATION OF CATTLE HOLDING BY PERIOD, ATTRIBUTES, CATTLE REARING EXPERIENCES

covariates	mean/std	(1)	(2)	(3)	(4)	(5)
(Intercept)		1.47 (0.0)	1.36 (0.0)	1.33 (0.0)	1.11 (0.0)	1.10 (0.0)
Upfront	0.785 (0.41)	0.39 (0.6)	0.37 (0.4)	0.37 (0.4)	0.35 (0.8)	0.37 (0.7)
WithGrace	0.512 (0.50)	−0.38 (2.6)	−0.35 (1.9)	−0.34 (2.3)	−0.32 (4.0)	−0.33 (3.6)
InKind	0.264 (0.44)	−0.06 (59.8)	−0.05 (68.3)	−0.05 (62.7)	−0.06 (58.3)	−0.07 (53.3)
OwnCattle0	0.195 (0.40)					
AdiCattle0	0.153 (0.36)			0.16 (5.1)	0.14 (8.8)	0.16 (5.4)
AdiCattle0 × Upfront	0.118 (0.32)					−0.47 (6.9)
AdiCattle0 × WithGrace	0.074 (0.26)					0.68 (0.9)
AdiCattle0 × InKind	0.046 (0.21)					−0.34 (16.0)

TABLE 126: ANCOVA ESTIMATION OF CATTLE HOLDING BY PERIOD, ATTRIBUTES, CATTLE REARING EXPERIENCES (CONTINUED)

covariates	mean/std	(1)	(2)	(3)	(4)	(5)
rd 3	0.348 (0.48)	−0.02 (71.4)	0.00 (97.3)	0.00 (95.0)	0.01 (91.9)	0.00 (93.9)
Upfront × rd 3	0.269 (0.44)	−0.05 (74.9)	−0.05 (75.5)	−0.05 (75.1)	−0.05 (77.1)	−0.04 (79.1)
WithGrace × rd 3	0.176 (0.38)	0.24 (17.1)	0.25 (14.2)	0.25 (14.6)	0.25 (15.0)	0.24 (15.6)
InKind × rd 3	0.091 (0.29)	−0.02 (90.7)	−0.05 (75.1)	−0.04 (76.7)	−0.05 (74.0)	−0.04 (78.5)
AdiCattle0 × rd 3	0.054 (0.23)					−0.11 (32.2)
AdiCattle0 × Upfront × rd 3	0.041 (0.20)					−0.20 (58.2)
AdiCattle0 × WithGrace × rd 3	0.026 (0.16)					−0.19 (53.7)
AdiCattle0 × InKind × rd 3	0.016 (0.12)					0.26 (32.2)
rd 4	0.326 (0.47)	0.16 (1.0)	0.18 (0.5)	0.19 (0.4)	0.19 (0.4)	0.19 (0.4)
Upfront × rd 4	0.260 (0.44)	0.04 (80.3)	0.04 (81.9)	0.04 (81.8)	0.05 (78.7)	0.04 (80.4)
WithGrace × rd 4	0.166 (0.37)	0.36 (7.8)	0.35 (8.3)	0.35 (8.6)	0.35 (8.7)	0.36 (7.0)
InKind × rd 4	0.085 (0.28)	−0.06 (73.2)	−0.05 (77.4)	−0.05 (79.4)	−0.05 (77.9)	−0.05 (78.7)
AdiCattle0 × rd 4	0.050 (0.22)					0.10 (57.0)
AdiCattle0 × Upfront × rd 4	0.039 (0.19)					−0.02 (94.8)
AdiCattle0 × WithGrace × rd 4	0.024 (0.15)					−0.07 (90.2)
AdiCattle0 × InKind × rd 4	0.015 (0.12)					−0.19 (74.0)
FloodInRd1	0.491 (0.50)				0.04 (65.7)	0.03 (72.6)
Head literate0	0.114 (0.32)				0.01 (89.0)	0.02 (80.3)
NumCattle0	0.266 (0.62)		0.31 (0.3)	0.32 (0.1)	0.31 (0.4)	0.30 (0.3)
HHsize0	4.219 (1.43)				0.05 (4.6)	0.05 (4.7)
mean of dependent variable						
$T = 2$		2 85	2 85	2 85	2 85	2 85
$T = 3$		168	168	168	168	168
$T = 4$		395	395	395	395	395
$\bar{R}^2$		0.039	0.083	0.086	0.091	0.095
N	1998	1606	1606	1606	1606	1606

Source: Estimated with GUK administrative and survey data.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. We annotate the number of periods that a household is observed with T. The total number of households is shown for each values of T. T=4 indicates the number of households with complete panel information, T=3 indicates number of households observed three times, T=2 indicates the number of households observed twice. N indicates total number of observations used in ANCOVA estimation, or N=1×(T=2)+2×(T=3)+3×(T=4). Upfront is an indicator variable of the arm with an upfront large disbursement, WithGrace is an indicator variable of the arm with a grace period, InKind is an indicator variable of the arm which lends a heifer. rd2, rd3, rd4 are dummy variables for second, third, and fourth round of survey. Net assets uses only assets observed for all 4 rounds in household assets. Household assets do not include livestock. OwnCattle0 is an indicator if a household owned cattle at the baseline. AdiCattle0 is an indicator if a household engaged in the cattle lease-in contract at the baseline.

2. *P* values in percentages in parenthesises. Standard errors are clustered at group (village) level.

TABLE 127: ANCOVA ESTIMATION OF CATTLE HOLDING BY ARM, POVERTY STATUS, AND PERIOD, CATTLE REARING EXPERIENCES

covariates	mean/std	(1)	(2)	(3)	(4)	(5)
(Intercept)		1.52 (0.0)	1.40 (0.0)	1.36 (0.0)	1.12 (0.0)	1.11 (0.0)
Large	0.273 (0.45)	0.42 (0.2)	0.40 (0.1)	0.40 (0.1)	0.38 (0.2)	0.40 (0.2)
LargeGrace	0.248 (0.43)	0.03 (80.7)	0.04 (67.9)	0.05 (60.9)	0.06 (55.9)	0.07 (50.3)
Cattle	0.264 (0.44)	−0.03 (59.1)	0.00 (100.0)	0.00 (98.7)	−0.00 (98.7)	0.00 (98.2)
AdiCattle0	0.153 (0.36)			0.18 (2.0)	0.16 (4.0)	0.18 (2.1)
UltraPoor	0.630 (0.48)	−0.09 (16.5)	−0.11 (13.3)	−0.11 (12.2)	−0.11 (13.3)	−0.10 (16.5)
Large × UltraPoor	0.172 (0.38)	−0.25 (17.9)	−0.17 (33.8)	−0.19 (29.6)	−0.18 (33.1)	−0.16 (37.2)
LargeGrace × UltraPoor	0.171 (0.38)	0.42 (1.9)	0.50 (1.0)	0.50 (0.9)	0.53 (0.5)	0.54 (0.4)
Cattle × UltraPoor	0.181 (0.39)	0.19 (21.7)	0.29 (9.6)	0.29 (9.4)	0.32 (6.3)	0.31 (6.7)
rd 3	0.348 (0.48)	−0.03 (59.3)	−0.00 (93.9)	−0.00 (96.1)	0.00 (100.0)	−0.00 (99.1)
Large × rd 3	0.094 (0.29)	−0.03 (84.8)	−0.03 (82.8)	−0.03 (82.0)	−0.03 (83.5)	−0.02 (87.9)
LargeGrace × rd 3	0.085 (0.28)	0.24 (15.0)	0.24 (15.3)	0.24 (16.4)	0.24 (16.4)	0.24 (16.2)
Cattle × rd 3	0.091 (0.29)	0.19 (12.3)	0.17 (19.1)	0.17 (19.7)	0.17 (21.0)	0.18 (19.9)
UltraPoor × rd 3	0.217 (0.41)	−0.05 (62.8)	−0.04 (73.2)	−0.03 (77.4)	−0.03 (79.6)	−0.02 (83.6)
Large × UltraPoor × rd 3	0.058 (0.23)	0.70 (0.6)	0.65 (1.1)	0.65 (1.1)	0.65 (1.0)	0.67 (1.0)
LargeGrace × UltraPoor × rd 3	0.060 (0.24)	−0.34 (31.3)	−0.32 (34.6)	−0.30 (35.8)	−0.33 (32.9)	−0.32 (33.1)
Cattle × UltraPoor × rd 3	0.061 (0.24)	0.50 (1.7)	0.46 (3.7)	0.47 (3.3)	0.45 (4.2)	0.45 (4.2)
AdiCattle0 × rd 3	0.054 (0.23)					−0.13 (26.1)
AdiCattle0 × Large × rd 3	0.015 (0.12)					−0.28 (46.8)
AdiCattle0 × LargeGrace × rd 3	0.011 (0.10)					−0.39 (19.9)
AdiCattle0 × Cattle × rd 3	0.016 (0.12)					−0.13 (68.0)
rd 4	0.326 (0.47)	0.15 (0.8)	0.18 (0.4)	0.18 (0.3)	0.18 (0.3)	0.18 (0.3)
Large × rd 4	0.094 (0.29)	0.06 (67.8)	0.05 (75.8)	0.05 (76.4)	0.05 (76.7)	0.04 (77.7)
LargeGrace × rd 4	0.081 (0.27)	0.41 (2.2)	0.39 (2.9)	0.38 (3.2)	0.40 (2.8)	0.40 (2.6)
Cattle × rd 4	0.085 (0.28)	0.34 (0.9)	0.34 (1.5)	0.34 (1.5)	0.34 (1.6)	0.35 (1.5)
UltraPoor × rd 4	0.211 (0.41)	0.09 (44.6)	0.08 (51.7)	0.09 (46.3)	0.09 (46.0)	0.10 (41.4)
Large × UltraPoor × rd 4	0.060 (0.24)	0.79 (1.9)	0.75 (2.7)	0.74 (2.9)	0.74 (2.9)	0.71 (3.9)
LargeGrace × UltraPoor × rd 4	0.056 (0.23)	−0.16 (65.6)	−0.15 (67.5)	−0.15 (67.9)	−0.15 (67.4)	−0.12 (72.8)
Cattle × UltraPoor × rd 4	0.060 (0.24)	0.46 (9.3)	0.37 (21.0)	0.37 (21.0)	0.35 (24.1)	0.33 (26.9)
AdiCattle0 × rd 4	0.050 (0.22)					0.07 (68.6)
AdiCattle0 × Large × rd 4	0.016 (0.12)					−0.08 (85.1)
AdiCattle0 × LargeGrace × rd 4	0.009 (0.09)					−0.01 (98.6)
AdiCattle0 × Cattle × rd 4	0.015 (0.12)					−0.23 (50.8)
AdiCattle0	0.153 (0.36)			0.18 (2.0)	0.16 (4.0)	0.18 (2.1)
AdiCattle0 × rd 3	0.054 (0.23)					−0.13 (26.1)
AdiCattle0 × rd 4	0.050 (0.22)					0.07 (68.6)
Flood in round 1	0.491 (0.50)				0.04 (62.4)	0.03 (67.7)
Head literate0	0.114 (0.32)				0.01 (89.0)	0.02 (79.1)
Number of cattle0	0.266 (0.62)		0.32 (0.2)	0.34 (0.1)	0.32 (0.4)	0.31 (0.3)
Household size0	4.219 (1.43)				0.05 (2.2)	0.05 (2.4)
AdiCattle0 × Large	0.044 (0.21)					−0.37 (10.0)
AdiCattle0 × LargeGrace	0.028 (0.16)					0.23 (39.3)
AdiCattle0 × Cattle	0.046 (0.21)					−0.12 (61.0)
mean of dependent variable						
$T = 2$		2 87	2 87	2 87	2 85	2 85

TABLE 128: ANCOVA ESTIMATION OF CATTLE HOLDING BY ATTRIBUTES, POVERTY STATUS, AND PERIOD, CATTLE REARING EXPERIENCES

covariates	mean/std	(1)	(2)	(3)	(4)	(5)
(Intercept)		1.52 (0.0)	1.40 (0.0)	1.36 (0.0)	1.12 (0.0)	1.11 (0.0)
Upfront	0.785 (0.41)	0.42 (0.2)	0.40 (0.1)	0.40 (0.1)	0.38 (0.2)	0.40 (0.2)
WithGrace	0.512 (0.50)	−0.39 (1.7)	−0.36 (1.0)	−0.34 (1.2)	−0.32 (2.6)	−0.33 (2.5)
InKind	0.264 (0.44)	−0.06 (58.0)	−0.04 (67.9)	−0.05 (61.5)	−0.06 (54.9)	−0.07 (50.6)
AdiCattle0	0.153 (0.36)			0.18 (2.0)	0.16 (4.0)	0.18 (2.1)
UltraPoor	0.630 (0.48)	−0.09 (16.5)	−0.11 (13.3)	−0.11 (12.2)	−0.11 (13.3)	−0.10 (16.5)
Upfront × UltraPoor	0.524 (0.50)	−0.25 (17.9)	−0.17 (33.8)	−0.19 (29.6)	−0.18 (33.1)	−0.16 (37.2)
WithGrace × UltraPoor	0.352 (0.48)	0.67 (0.2)	0.68 (0.1)	0.70 (0.1)	0.72 (0.1)	0.70 (0.1)
InKind × UltraPoor	0.181 (0.39)	−0.23 (21.4)	−0.21 (27.9)	−0.21 (26.8)	−0.21 (27.2)	−0.22 (24.5)
rd 3	0.348 (0.48)	−0.03 (59.3)	−0.00 (93.9)	−0.00 (96.1)	0.00 (100.0)	−0.00 (99.1)
UltraPoor × rd 3	0.217 (0.41)	−0.05 (62.8)	−0.04 (73.2)	−0.03 (77.4)	−0.03 (79.6)	−0.02 (83.6)
Upfront × rd 3	0.269 (0.44)	−0.03 (84.8)	−0.03 (82.8)	−0.03 (82.0)	−0.03 (83.5)	−0.02 (87.9)
WithGrace × rd 3	0.176 (0.38)	0.27 (9.2)	0.28 (7.7)	0.27 (8.0)	0.27 (8.3)	0.26 (8.9)
InKind × rd 3	0.091 (0.29)	−0.04 (75.9)	−0.07 (62.2)	−0.06 (64.3)	−0.07 (62.0)	−0.06 (65.9)
Upfront × UltraPoor × rd 3	0.179 (0.38)	0.70 (0.6)	0.65 (1.1)	0.65 (1.1)	0.65 (1.0)	0.67 (1.0)
WithGrace × UltraPoor × rd 3	0.121 (0.33)	−1.04 (0.4)	−0.97 (0.5)	−0.96 (0.6)	−0.98 (0.4)	−0.99 (0.4)
InKind × UltraPoor × rd 3	0.061 (0.24)	0.84 (1.1)	0.78 (1.6)	0.77 (1.6)	0.77 (1.7)	0.77 (1.4)
AdiCattle0 × rd 3	0.054 (0.23)					−0.13 (26.1)
AdiCattle0 × Upfront × rd 3	0.041 (0.20)					−0.28 (46.8)
AdiCattle0 × WithGrace × rd 3	0.026 (0.16)					−0.12 (73.8)
AdiCattle0 × InKind × rd 3	0.016 (0.12)					0.27 (30.7)
rd 4	0.326 (0.47)	0.15 (0.8)	0.18 (0.4)	0.18 (0.3)	0.18 (0.3)	0.18 (0.3)
UltraPoor × rd 4	0.211 (0.41)	0.09 (44.6)	0.08 (51.7)	0.09 (46.3)	0.09 (46.0)	0.10 (41.4)
Upfront × rd 4	0.260 (0.44)	0.06 (67.8)	0.05 (75.8)	0.05 (76.4)	0.05 (76.7)	0.04 (77.7)
WithGrace × rd 4	0.166 (0.37)	0.35 (6.1)	0.34 (6.2)	0.34 (6.5)	0.35 (5.7)	0.35 (4.8)
InKind × rd 4	0.085 (0.28)	−0.06 (70.4)	−0.05 (78.1)	−0.04 (80.9)	−0.05 (76.4)	−0.05 (78.3)
Upfront × UltraPoor × rd 4	0.176 (0.38)	0.79 (1.9)	0.75 (2.7)	0.74 (2.9)	0.74 (2.9)	0.71 (3.9)
WithGrace × UltraPoor × rd 4	0.116 (0.32)	−0.96 (1.7)	−0.91 (2.0)	−0.89 (2.1)	−0.89 (2.1)	−0.84 (3.0)
InKind × UltraPoor × rd 4	0.060 (0.24)	0.62 (7.2)	0.53 (13.6)	0.52 (13.6)	0.50 (15.3)	0.46 (18.4)
AdiCattle0 × rd 4	0.050 (0.22)					0.07 (68.6)
AdiCattle0 × Upfront × rd 4	0.039 (0.19)					−0.08 (85.1)
AdiCattle0 × WithGrace × rd 4	0.024 (0.15)					0.07 (91.2)
AdiCattle0 × InKind × rd 4	0.015 (0.12)					−0.22 (69.7)
AdiCattle0	0.153 (0.36)			0.18 (2.0)	0.16 (4.0)	0.18 (2.1)
AdiCattle0 × rd 3	0.054 (0.23)					−0.13 (26.1)
AdiCattle0 × rd 4	0.050 (0.22)					0.07 (68.6)
Flood in round 1	0.491 (0.50)				0.04 (62.4)	0.03 (67.7)
Head literate0	0.114 (0.32)				0.01 (89.0)	0.02 (79.1)
Number of cattle0	0.266 (0.62)		0.32 (0.2)	0.34 (0.1)	0.32 (0.4)	0.31 (0.3)
Household size0	4.219 (1.43)				0.05 (2.2)	0.05 (2.4)
AdiCattle0 × Upfront	0.118 (0.32)					−0.37 (10.0)
AdiCattle0 × WithGrace	0.074 (0.26)					0.60 (1.2)
AdiCattle0 × InKind	0.046 (0.21)					−0.34 (15.9)
mean of dependent variable		2	2	2	2	2
$T = 2$		87	87	87	85	85
$T = 3$		168	168	168	168	168
$T = 4$		395	395	395	395	395

TABLE 129: ANCOVA ESTIMATION OF LIVESTOCK HOLDING, SUBSAMLES BY CATTLE REARING EXPERIENCES

	mean/std			(1)		
	Adi	Own	None	Adi	Own	None
(Intercept)				1.65 (0.0)	1.54 (0.0)	1.42 (0.0)
Large	0.333 (0.47)	0.342 (0.48)	0.268 (0.44)	−0.05 (84.7)	0.95 (1.3)	0.26 (1.5)
LargeGrace	0.127 (0.33)	0.268 (0.44)	0.254 (0.44)	0.22 (47.7)	0.37 (3.8)	−0.02 (84.3)
Cattle	0.321 (0.47)	0.200 (0.40)	0.278 (0.45)	−0.12 (60.6)	0.18 (24.0)	−0.01 (90.1)
Flood in round 1	0.533 (0.50)	0.447 (0.50)	0.393 (0.49)			
Head literate0	0.133 (0.34)	0.166 (0.37)	0.129 (0.34)			
Number of cattle0		1.420 (0.71)				
NetValue0	959.667 (8196.80)	30907.220 (15484.74)	2795.554 (3689.93)			
Household size0	4.655 (1.17)	4.563 (1.42)	4.346 (1.38)			
mean of dependent variable						
$T = 2$				2 13	2 13	1 61
$T = 3$				24	16	128
$T = 4$				64	104	227
$\bar{R}^2$				0.006	0.074	0.024
N	165	295	791	253	357	998

TABLE 129: ANCOVA ESTIMATION OF LIVESTOCK HOLDING, SUBSAMLES BY CATTLE REARING EXPERIENCES (CONTINUED)

	(2)			(3)		
	Adi	Own	None	Adi	Own	None
(Intercept)	1.65 (0.0)	1.24 (0.0)	1.42 (0.0)	1.02 (0.6)	1.37 (1.5)	1.24 (0.0)
Large	−0.05 (84.7)	0.92 (1.3)	0.26 (1.5)	−0.12 (65.0)	0.93 (9.5)	0.12 (47.6)
LargeGrace	0.22 (47.7)	0.36 (5.0)	−0.02 (84.3)	0.74 (14.5)	0.19 (48.0)	0.02 (91.8)
Cattle	−0.12 (60.6)	0.19 (24.1)	−0.01 (90.1)	−0.08 (80.4)	0.14 (55.8)	−0.08 (61.7)
Flood in round 1				−0.32 (13.8)	0.06 (82.2)	0.20 (4.5)
Head literate0				0.39 (20.9)	−0.18 (52.1)	−0.01 (92.2)
Number of cattle0		0.22 (11.3)			−0.74 (7.6)	
NetValue0				0.00 (2.4)	0.00 (1.0)	−0.00 (93.8)
Household size0				0.16 (4.1)	0.01 (96.3)	0.04 (26.1)
mean of dependent variable						
$T = 2$	2 13	2 13	1 61	2 8	2 6	1 31
$T = 3$	24	16	128	12	12	83
$T = 4$	64	104	227	35	79	134
$\bar{R}^2$	0.006	0.085	0.024	0.074	0.086	0.024
N	253	357	998	137	267	599

Source: Estimated with GUK administrative and survey data.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. We annotate the number of periods that a household is observed with T. The total number of households is shown for each values of T. T=4 indicates the number of households with complete panel information, T=3 indicates number of households observed three times, T=2 indicates the number of households observed twice. N indicates total number of observations used in ANCOVA estimation, or N=1×(T=2)+2×(T=3)+3×(T=4). Large, LargeGrace, Cattle are indicator variables of the large, large grace, and cattle arms, respectively. The default arm category is traditional arm. Narrow net assets uses only assets observed for all 4 rounds in household assets. Household assets do not include livestock. OwnCattle0 is an indicator if a household owned cattle at the baseline. AdiCattle0 is an indicator if a household engaged in the cattle lease-in contract at the baseline. Adi and None subgroups do not own cattle at the baseline. We used net asset values at the baseline NetAssets0 in place of NumCows0 in ANCOVA estimation.

2. P values in percentages in parenthesises. Standard errors are clustered at group (village) level.

TABLE 130: ANCOVA ESTIMATION OF LIVESTOCK HOLDING BY ATTRIBUTES, SUBSAMLES BY CATTLE REARING EXPERIENCES

	mean/std			(1)		
	Adi	Own	None	Adi	Own	None
(Intercept)				1.65	1.54	1.42
				(0.0)	(0.0)	(0.0)
Upfront	0.782	0.810	0.800	−0.05	0.95	0.26
	(0.41)	(0.39)	(0.40)	(84.7)	(1.3)	(1.5)
WithGrace	0.448	0.468	0.532	0.27	−0.58	−0.28
	(0.50)	(0.50)	(0.50)	(34.0)	(14.1)	(1.3)
InKind	0.321	0.200	0.278	−0.34	−0.19	0.01
	(0.47)	(0.40)	(0.45)	(21.0)	(28.5)	(91.2)
Flood in round 1	0.533	0.447	0.393			
	(0.50)	(0.50)	(0.49)			
Head literate0	0.133	0.166	0.129			
	(0.34)	(0.37)	(0.34)			
Number of cattle0		1.420				
		(0.71)				
NetValue0	959.667	30907.220	2795.554			
	(8196.80)	(15484.74)	(3689.93)			
Household size0	4.655	4.563	4.346			
	(1.17)	(1.42)	(1.38)			
mean of dependent variable				2	2	1
$T = 2$				13	13	61
$T = 3$				24	16	128
$T = 4$				64	104	227
$\bar{R}^2$				0.006	0.074	0.024
N	165	295	791	253	357	998

TABLE 130: ANCOVA ESTIMATION OF LIVESTOCK HOLDING BY ATTRIBUTES, SUBSAMLES BY CATTLE REARING EXPERIENCES (CONTINUED)

	(2)			(3)		
	Adi	Own	None	Adi	Own	None
(Intercept)	1.65	1.24	1.42	1.02	1.37	1.24
	(0.0)	(0.0)	(0.0)	(0.6)	(1.5)	(0.0)
Upfront	−0.05	0.92	0.26	−0.12	0.93	0.12
	(84.7)	(1.3)	(1.5)	(65.0)	(9.5)	(47.6)
WithGrace	0.27	−0.56	−0.28	0.86	−0.74	−0.10
	(34.0)	(13.5)	(1.3)	(5.8)	(21.8)	(44.0)
InKind	−0.34	−0.17	0.01	−0.82	−0.05	−0.09
	(21.0)	(36.4)	(91.2)	(8.5)	(84.0)	(39.5)
Flood in round 1				−0.32	0.06	0.20
				(13.8)	(82.2)	(4.5)
Head literate0				0.39	−0.18	−0.01
				(20.9)	(52.1)	(92.2)
Number of cattle0		0.22			−0.74	
		(11.3)			(7.6)	
NetValue0				0.00	0.00	−0.00
				(2.4)	(1.0)	(93.8)
Household size0				0.16	0.01	0.04
				(4.1)	(96.3)	(26.1)
mean of dependent variable	2	2	1	2	2	1
$T = 2$	13	13	61	8	6	31
$T = 3$	24	16	128	12	12	83
$T = 4$	64	104	227	35	79	134
$\bar{R}^2$	0.006	0.085	0.024	0.074	0.086	0.024
N	253	357	998	137	267	599

Source: Estimated with GUK administrative and survey data.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. We annotate the number of periods that a household is observed with T. The total number of households is shown for each values of T. T=4 indicates the number of households with complete panel information, T=3 indicates number of households observed three times, T=2 indicates the number of households observed twice. N indicates total number of observations used in ANCOVA estimation, or N=1×(T=2)+2×(T=3)+3×(T=4). Upfront is an indicator variable of the arm with an upfront large disbursement, WithGrace is an indicator variable of the arm with a grace period, InKind is an indicator variable of the arm which lends a heifer. Narrow net assets uses only assets observed for all 4 rounds in household assets. Household assets do not include livestock. OwnCattle0 is an indicator if a household owned cattle at the baseline. AdiCattle0 is an indicator if a household engaged in the cattle lease-in contract at the baseline. Adi and None subgroups do not own cattle at the baseline. We used net asset values at the baseline NetAssets0 in place of NumCows0 in ANCOVA estimation.

2. *P* values in percentages in parenthesises. Standard errors are clustered at group (village) level.

TABLE 131: ANCOVA ESTIMATION OF LIVESTOCK HOLDING BY PERIOD, SUBSAMLES BY CATTLE REARING EXPERIENCES

	mean/std			(1)		
	Adi	Own	None	Adi	Own	None
(Intercept)				1.60	1.50	1.41
				(0.0)	(0.0)	(0.0)
Large	0.333	0.342	0.268	−0.02	0.92	0.25
	(0.47)	(0.48)	(0.44)	(91.5)	(0.9)	(3.1)
LargeGrace	0.127	0.268	0.254	0.22	0.37	−0.13
	(0.33)	(0.44)	(0.44)	(45.2)	(3.8)	(28.3)
Cattle	0.321	0.200	0.278	−0.12	0.13	−0.08
	(0.47)	(0.40)	(0.45)	(56.3)	(40.1)	(38.6)
rd 3	0.352	0.346	0.349	−0.09	0.04	0.01
	(0.48)	(0.48)	(0.48)	(37.2)	(73.8)	(90.1)
Large × rd 3	0.115	0.115	0.091	−0.23	0.10	−0.01
	(0.32)	(0.32)	(0.29)	(56.4)	(75.9)	(92.5)
LargeGrace × rd 3	0.048	0.092	0.088	−0.15	0.07	0.35
	(0.22)	(0.29)	(0.28)	(62.1)	(83.8)	(5.9)
Cattle × rd 3	0.109	0.071	0.095	0.04	0.29	0.18
	(0.31)	(0.26)	(0.29)	(91.4)	(30.4)	(17.1)
rd 4	0.315	0.319	0.327	0.27	0.14	0.17
	(0.47)	(0.47)	(0.47)	(10.6)	(29.1)	(0.6)
Large × rd 4	0.115	0.112	0.091	−0.00	0.19	0.05
	(0.32)	(0.32)	(0.29)	(99.8)	(63.0)	(75.3)
LargeGrace × rd 4	0.036	0.088	0.083	0.30	−0.08	0.61
	(0.19)	(0.28)	(0.28)	(58.7)	(83.4)	(0.2)
Cattle × rd 4	0.103	0.061	0.091	0.10	0.38	0.42
	(0.30)	(0.24)	(0.29)	(79.1)	(20.0)	(0.2)
Flood in round 1	0.533	0.447	0.393			
	(0.50)	(0.50)	(0.49)			
Head literate0	0.133	0.166	0.129			
	(0.34)	(0.37)	(0.34)			
Number of cattle0		1.420				
		(0.71)				
NetValue0	959.667	30907.220	2795.554			
	(8196.80)	(15484.74)	(3689.93)			
Household size0	4.655	4.563	4.346			
	(1.17)	(1.42)	(1.38)			
mean of dependent variable				2	2	1
$T = 2$				13	13	61
$T = 3$				24	16	128
$T = 4$				64	104	227
$\bar{R}^2$				0.007	0.058	0.05
N	165	295	791	253	357	998

TABLE 131: ANCOVA ESTIMATION OF LIVESTOCK HOLDING BY PERIOD, SUBSAMLES BY CATTLE REARING EXPERIENCES (CONTINUED)

	(2)			(3)		
	Adi	Own	None	Adi	Own	None
(Intercept)	1.60	1.20	1.41	0.98	1.35	1.29
	(0.0)	(0.0)	(0.0)	(1.9)	(2.2)	(0.0)
Large	−0.02	0.89	0.25	−0.03	0.89	0.07
	(91.5)	(0.9)	(3.1)	(91.7)	(9.1)	(68.4)
LargeGrace	0.22	0.36	−0.13	0.59	0.20	−0.09
	(45.2)	(6.1)	(28.3)	(16.6)	(50.0)	(56.8)
Cattle	−0.12	0.14	−0.08	−0.05	0.10	−0.17
	(56.3)	(40.9)	(38.6)	(87.2)	(68.2)	(25.6)
rd 3	−0.09	0.04	0.01	−0.16	−0.00	−0.06
	(37.2)	(72.2)	(90.1)	(32.4)	(96.9)	(33.0)
Large × rd 3	−0.23	0.11	−0.01	−0.54	0.20	0.20
	(56.4)	(73.9)	(92.5)	(29.2)	(57.5)	(28.8)
LargeGrace × rd 3	−0.15	0.11	0.35	0.12	0.06	0.33
	(62.1)	(75.6)	(5.9)	(75.0)	(88.2)	(7.1)
Cattle × rd 3	0.04	0.30	0.18	−0.16	0.24	0.30
	(91.4)	(28.4)	(17.1)	(68.7)	(37.3)	(7.4)
rd 4	0.27	0.14	0.17	0.38	0.09	0.10
	(10.6)	(29.1)	(0.6)	(23.0)	(48.6)	(11.3)
Large × rd 4	−0.00	0.18	0.05	−0.21	0.15	0.16
	(99.8)	(64.6)	(75.3)	(69.5)	(71.1)	(37.2)
LargeGrace × rd 4	0.30	−0.07	0.61	1.37	−0.18	0.58
	(58.7)	(84.0)	(0.2)	(21.6)	(61.3)	(0.3)
Cattle × rd 4	0.10	0.41	0.42	−0.06	0.20	0.47
	(79.1)	(16.8)	(0.2)	(87.6)	(48.5)	(0.7)
Flood in round 1				−0.35	0.06	0.20
				(15.2)	(83.1)	(4.5)
Head literate0				0.39	−0.18	0.00
				(22.1)	(53.7)	(97.7)
Number of cattle0		0.23			−0.74	
		(10.6)			(8.2)	
NetValue0				0.00	0.00	−0.00
				(1.8)	(1.2)	(89.4)
Household size0				0.16	0.01	0.04
				(5.3)	(94.8)	(23.8)
mean of dependent variable	2	2	1	2	2	1
$T = 2$	13	13	61	8	6	31
$T = 3$	24	16	128	12	12	83
$T = 4$	64	104	227	35	79	134
$\bar{R}^2$	0.007	0.07	0.05	0.094	0.06	0.035
N	253	357	998	137	267	599

Source: Estimated with GUK administrative and survey data.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. We annotate the number of periods that a household is observed with T. The total number of households is shown for each values of T. T=4 indicates the number of households with complete panel information, T=3 indicates number of households observed three times, T=2 indicates the number of households observed twice. N indicates total number of observations used in ANCOVA estimation, or N=1×(T=2)+2×(T=3)+3×(T=4). Large, LargeGrace, Cattle are indicator variables of the large, large grace, and cattle arms, respectively. The default arm category is traditional arm. rd2, rd3, rd4 are dummy variables for second, third, and fourth round of survey. Narrow net assets uses only assets observed for all 4 rounds in household assets. Household assets do not include livestock. OwnCattle0 is an indicator if a household owned cattle at the baseline. AdiCattle0 is an indicator if a household engaged in the cattle lease-in contract at the baseline. Adi and None subgroups do not own cattle at the baseline. We used net asset values at the baseline NetAssets0 in place of NumCows0 in ANCOVA estimation.

2. *P* values in percentages in parenthesises. Standard errors are clustered at group (village) level.

TABLE 132: ANCOVA ESTIMATION OF LIVESTOCK HOLDING BY ATTRIBUTES AND PERIOD, SUBSAMLES BY CATTLE REARING EXPERIENCES

	mean/std			(1)		
	Adi	Own	None	Adi	Own	None
(Intercept)				1.60	1.50	1.41
				(0.0)	(0.0)	(0.0)
Upfront	0.782	0.810	0.800	−0.02	0.92	0.25
	(0.41)	(0.39)	(0.40)	(91.5)	(0.9)	(3.1)
WithGrace	0.448	0.468	0.532	0.24	−0.55	−0.38
	(0.50)	(0.50)	(0.50)	(35.7)	(12.7)	(0.3)
InKind	0.321	0.200	0.278	−0.34	−0.24	0.05
	(0.47)	(0.40)	(0.45)	(20.2)	(16.6)	(66.3)
rd 3	0.352	0.346	0.349	−0.09	0.04	0.01
	(0.48)	(0.48)	(0.48)	(37.2)	(73.8)	(90.1)
Upfront × rd 3	0.273	0.278	0.274	−0.23	0.10	−0.01
	(0.45)	(0.45)	(0.45)	(56.4)	(75.9)	(92.5)
WithGrace × rd 3	0.158	0.163	0.183	0.07	−0.03	0.36
	(0.37)	(0.37)	(0.39)	(78.5)	(93.8)	(5.5)
InKind × rd 3	0.109	0.071	0.095	0.19	0.21	−0.17
	(0.31)	(0.26)	(0.29)	(31.1)	(50.0)	(32.0)
rd 4	0.315	0.319	0.327	0.27	0.14	0.17
	(0.47)	(0.47)	(0.47)	(10.6)	(29.1)	(0.6)
Upfront × rd 4	0.255	0.261	0.265	−0.00	0.19	0.05
	(0.44)	(0.44)	(0.44)	(99.8)	(63.0)	(75.3)
WithGrace × rd 4	0.139	0.149	0.174	0.30	−0.27	0.56
	(0.35)	(0.36)	(0.38)	(57.8)	(53.1)	(0.6)
InKind × rd 4	0.103	0.061	0.091	−0.20	0.45	−0.19
	(0.30)	(0.24)	(0.29)	(70.0)	(17.4)	(31.6)
Flood in round 1	0.533	0.447	0.393			
	(0.50)	(0.50)	(0.49)			
Head literate0	0.133	0.166	0.129			
	(0.34)	(0.37)	(0.34)			
Number of cattle0		1.420				
		(0.71)				
NetValue0	959.667	30907.220	2795.554			
	(8196.80)	(15484.74)	(3689.93)			
Household size0	4.655	4.563	4.346			
	(1.17)	(1.42)	(1.38)			
mean of dependent variable				2	2	1
$T = 2$				13	13	61
$T = 3$				24	16	128
$T = 4$				64	104	227
$\bar{R}^2$				0.007	0.058	0.05
N	165	295	791	253	357	998

TABLE 132: ANCOVA ESTIMATION OF LIVESTOCK HOLDING BY ATTRIBUTES AND PERIOD, SUBSAMLES BY CATTLE REARING EXPERIENCES (CONTINUED)

	(2)			(3)		
	Adi	Own	None	Adi	Own	None
(Intercept)	1.60	1.20	1.41	0.98	1.35	1.29
	(0.0)	(0.0)	(0.0)	(1.9)	(2.2)	(0.0)
Upfront	−0.02	0.89	0.25	−0.03	0.89	0.07
	(91.5)	(0.9)	(3.1)	(91.7)	(9.1)	(68.4)
WithGrace	0.24	−0.53	−0.38	0.62	−0.70	−0.16
	(35.7)	(12.2)	(0.3)	(9.5)	(22.8)	(23.6)
InKind	−0.34	−0.21	0.05	−0.64	−0.09	−0.08
	(20.2)	(23.1)	(66.3)	(11.1)	(73.1)	(44.4)
rd 3	−0.09	0.04	0.01	−0.16	−0.00	−0.06
	(37.2)	(72.2)	(90.1)	(32.4)	(96.9)	(33.0)
Upfront × rd 3	−0.23	0.11	−0.01	−0.54	0.20	0.20
	(56.4)	(73.9)	(92.5)	(29.2)	(57.5)	(28.8)
WithGrace × rd 3	0.07	0.00	0.36	0.66	−0.15	0.14
	(78.5)	(99.5)	(5.5)	(15.0)	(69.3)	(43.6)
InKind × rd 3	0.19	0.19	−0.17	−0.28	0.19	−0.04
	(31.1)	(56.9)	(32.0)	(44.1)	(55.1)	(82.1)
rd 4	0.27	0.14	0.17	0.38	0.09	0.10
	(10.6)	(29.1)	(0.6)	(23.0)	(48.6)	(11.3)
Upfront × rd 4	−0.00	0.18	0.05	−0.21	0.15	0.16
	(99.8)	(64.6)	(75.3)	(69.5)	(71.1)	(37.2)
WithGrace × rd 4	0.30	−0.26	0.56	1.57	−0.33	0.42
	(57.8)	(54.7)	(0.6)	(16.1)	(44.0)	(2.4)
InKind × rd 4	−0.20	0.49	−0.19	−1.43	0.38	−0.11
	(70.0)	(16.1)	(31.6)	(19.2)	(22.9)	(53.7)
Flood in round 1				−0.35	0.06	0.20
				(15.2)	(83.1)	(4.5)
Head literate0				0.39	−0.18	0.00
				(22.1)	(53.7)	(97.7)
Number of cattle0		0.23			−0.74	
		(10.6)			(8.2)	
NetValue0				0.00	0.00	−0.00
				(1.8)	(1.2)	(89.4)
Household size0				0.16	0.01	0.04
				(5.3)	(94.8)	(23.8)
mean of dependent variable	2	2	1	2	2	1
$T = 2$	13	13	61	8	6	31
$T = 3$	24	16	128	12	12	83
$T = 4$	64	104	227	35	79	134
$\bar{R}^2$	0.007	0.07	0.05	0.094	0.06	0.035
N	253	357	998	137	267	599

Source: Estimated with GUK administrative and survey data.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. We annotate the number of periods that a household is observed with T. The total number of households is shown for each values of T. T=4 indicates the number of households with complete panel information, T=3 indicates number of households observed three times, T=2 indicates the number of households observed twice. N indicates total number of observations used in ANCOVA estimation, or N=1×(T=2)+2×(T=3)+3×(T=4). Upfront is an indicator variable of the arm with an upfront large disbursement, WithGrace is an indicator variable of the arm with a grace period, InKind is an indicator variable of the arm which lends a heifer. rd2, rd3, rd4 are dummy variables for second, third, and fourth round of survey. Narrow net assets uses only assets observed for all 4 rounds in household assets. Household assets do not include livestock. OwnCattle0 is an indicator if a household owned cattle at the baseline. AdiCattle0 is an indicator if a household engaged in the cattle lease-in contract at the baseline. Adi and None subgroups do not own cattle at the baseline. We used net asset values at the baseline NetAssets0 in place of NumCows0 in ANCOVA estimation.

2. *P* values in percentages in parenthesises. Standard errors are clustered at group (village) level.

IV Estimation using complete panel HHs in household assets

This section uses subsample limited to households which gives complete panel of household assets.

IV.1 Assets

IV.1.1 Productive assets

Productive assets are sorveyed consistently across rounds, except hand pumps that were asked only in round 1. Major productive assets (above 300 entries) are bees-box, cage incubator, dheki, fishing net, ginning machine, hand pump, sickle/dao/axe/spade. Bee boxes have increased dramat-

ically from round 2. Sickles/dao/axes/spades and fishing nets have decreased dramatically since round 2. These indicate that household production may have shifted to more domestic-oriented tasks. There is no indication that productive asset holding related to cattle rearing has increased.

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Error in file(filename, "r", encoding = encoding): コネクションを開くことができません
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```
[1] excl
[[1]]
PAssetAmount ~ dummyLarge + dummyLargeGrace + dummyCattle

[[2]]
PAssetAmount ~ dummyLarge + dummyLargeGrace + dummyCattle + PAssetAmount0

[[3]]
PAssetAmount ~ FloodInRd1 + dummyLarge + dummyLargeGrace + dummyCattle +
    HHsize0 + HeadLiteracy0 + PAssetAmount0

[[4]]
PAssetAmount ~ FloodInRd1 + dummyLarge + dummyLargeGrace + dummyCattle +
    dummyHadCows + HHsize0 + HeadLiteracy0 + PAssetAmount0 +
    dummyHadCows.Large + dummyHadCows.LargeGrace + dummyHadCows.Cattle

[[5]]
PAssetAmount ~ FloodInRd1 + dummyLarge + dummyLargeGrace + dummyCattle +
    HHsize0 + HeadLiteracy0 + PAssetAmount0 + NumCows0

[[6]]
PAssetAmount ~ FloodInRd1 + dummyLarge + dummyLargeGrace + dummyCattle +
    dummyHadCows + HHsize0 + HeadLiteracy0 + PAssetAmount0 +
    NumCows0 + dummyHadCows.Large + dummyHadCows.LargeGrace +
    dummyHadCows.Cattle

[1] exclP
[[1]]
PAssetAmount ~ dummyUltraPoor + dummyLargeSize + dummyWithGrace +
    dummyInKind + dummyLargeSize.UltraPoor + dummyWithGrace.UltraPoor +
    dummyInKind.UltraPoor

[[2]]
PAssetAmount ~ dummyUltraPoor + dummyLargeSize + dummyWithGrace +
    dummyInKind + PAssetAmount0 + dummyLargeSize.UltraPoor +
    dummyWithGrace.UltraPoor + dummyInKind.UltraPoor

[[3]]
PAssetAmount ~ FloodInRd1 + dummyUltraPoor + dummyLargeSize +
    dummyWithGrace + dummyInKind + HHsize0 + HeadLiteracy0 +
    PAssetAmount0 + dummyLargeSize.UltraPoor + dummyWithGrace.UltraPoor +
    dummyInKind.UltraPoor

[[4]]
PAssetAmount ~ FloodInRd1 + dummyUltraPoor + dummyLargeSize +
    dummyWithGrace + dummyInKind + dummyHadCows + HHsize0 + HeadLiteracy0 +
    PAssetAmount0 + dummyLargeSize.UltraPoor + dummyWithGrace.UltraPoor +
    dummyInKind.UltraPoor + dummyHadCows.LargeSize + dummyHadCows.WithGrace +
    dummyHadCows.InKind

[[5]]
PAssetAmount ~ FloodInRd1 + dummyUltraPoor + dummyLargeSize +
    dummyWithGrace + dummyInKind + HHsize0 + HeadLiteracy0 +
    PAssetAmount0 + NumCows0 + dummyLargeSize.UltraPoor + dummyWithGrace.UltraPoor +
    dummyInKind.UltraPoor
```

```
[[6]]
PAssetAmount ~ FloodInRd1 + dummyUltraPoor + dummyLargeSize +
    dummyWithGrace + dummyInKind + dummyHadCows + HHsize0 + HeadLiteracy0 +
    PAssetAmount0 + NumCows0 + dummyLargeSize.UltraPoor + dummyWithGrace.UltraPoor +
    dummyInKind.UltraPoor + dummyHadCows.LargeSize + dummyHadCows.WithGrace +
    dummyHadCows.InKind

[1] excla
[[1]]
PAssetAmount ~ dummyLargeSize + dummyWithGrace + dummyInKind

[[2]]
PAssetAmount ~ dummyLargeSize + dummyWithGrace + dummyInKind +
    PAssetAmount0

[[3]]
PAssetAmount ~ FloodInRd1 + dummyLargeSize + dummyWithGrace +
    dummyInKind + HHsize0 + HeadLiteracy0 + PAssetAmount0

[[4]]
PAssetAmount ~ FloodInRd1 + dummyLargeSize + dummyWithGrace +
    dummyInKind + dummyHadCows + HHsize0 + HeadLiteracy0 + PAssetAmount0 +
    dummyHadCows.LargeSize + dummyHadCows.WithGrace + dummyHadCows.InKind

[[5]]
PAssetAmount ~ FloodInRd1 + dummyLargeSize + dummyWithGrace +
    dummyInKind + HHsize0 + HeadLiteracy0 + PAssetAmount0 + NumCows0

[[6]]
PAssetAmount ~ FloodInRd1 + dummyLargeSize + dummyWithGrace +
    dummyInKind + dummyHadCows + HHsize0 + HeadLiteracy0 + PAssetAmount0 +
    NumCows0 + dummyHadCows.LargeSize + dummyHadCows.WithGrace +
    dummyHadCows.InKind

[1] exclT
[[1]]
PAssetAmount ~ Time.3 + Time.4 + dummyLarge + dummyLargeGrace +
    dummyCattle + dummyLarge.Time3 + dummyLargeGrace.Time3 +
    dummyCattle.Time3 + dummyLarge.Time4 + dummyLargeGrace.Time4 +
    dummyCattle.Time4

[[2]]
PAssetAmount ~ Time.3 + Time.4 + dummyLarge + dummyLargeGrace +
    dummyCattle + dummyLarge.Time3 + dummyLargeGrace.Time3 +
    dummyCattle.Time3 + dummyLarge.Time4 + dummyLargeGrace.Time4 +
    dummyCattle.Time4 + PAssetAmount0

[[3]]
PAssetAmount ~ FloodInRd1 + Time.3 + Time.4 + dummyLarge + dummyLargeGrace +
    dummyCattle + dummyLarge.Time3 + dummyLargeGrace.Time3 +
    dummyCattle.Time3 + dummyLarge.Time4 + dummyLargeGrace.Time4 +
    dummyCattle.Time4 + HHsize0 + HeadLiteracy0 + PAssetAmount0

[[4]]
PAssetAmount ~ FloodInRd1 + Time.3 + Time.4 + dummyLarge + dummyLargeGrace +
    dummyCattle + dummyLarge.Time3 + dummyLargeGrace.Time3 +
    dummyCattle.Time3 + dummyLarge.Time4 + dummyLargeGrace.Time4 +
    dummyCattle.Time4 + dummyHadCows + HHsize0 + HeadLiteracy0 +
    PAssetAmount0 + dummyHadCows.Large + dummyHadCows.Time3 +
    dummyHadCows.Large.Time3 + dummyHadCows.Time4 + dummyHadCows.Large.Time4 +
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    dummyHadCows.LargeGrace + dummyHadCows.LargeGrace.Time3 +
    dummyHadCows.LargeGrace.Time4 + dummyHadCows.Cattle + dummyHadCows.Cattle.Time3 +
    dummyHadCows.Cattle.Time4

[[5]]
PAssetAmount ~ FloodInRd1 + Time.3 + Time.4 + dummyLarge + dummyLargeGrace +
    dummyCattle + dummyLarge.Time3 + dummyLargeGrace.Time3 +
    dummyCattle.Time3 + dummyLarge.Time4 + dummyLargeGrace.Time4 +
    dummyCattle.Time4 + HHsize0 + HeadLiteracy0 + PAssetAmount0 +
    NumCows0

[[6]]
PAssetAmount ~ FloodInRd1 + Time.3 + Time.4 + dummyLarge + dummyLargeGrace +
    dummyCattle + dummyLarge.Time3 + dummyLargeGrace.Time3 +
    dummyCattle.Time3 + dummyLarge.Time4 + dummyLargeGrace.Time4 +
    dummyCattle.Time4 + dummyHadCows + HHsize0 + HeadLiteracy0 +
    PAssetAmount0 + NumCows0 + dummyHadCows.Large + dummyHadCows.Time3 +
    dummyHadCows.Large.Time3 + dummyHadCows.Time4 + dummyHadCows.Large.Time4 +
    dummyHadCows.LargeGrace + dummyHadCows.LargeGrace.Time3 +
    dummyHadCows.LargeGrace.Time4 + dummyHadCows.Cattle + dummyHadCows.Cattle.Time3 +
    dummyHadCows.Cattle.Time4

[1] exclTa
[[1]]
PAssetAmount ~ Time.3 + Time.4 + dummyLargeSize + dummyWithGrace +
    dummyInKind + dummyLargeSize.Time3 + dummyWithGrace.Time3 +
    dummyInKind.Time3 + dummyLargeSize.Time4 + dummyWithGrace.Time4 +
    dummyInKind.Time4

[[2]]
PAssetAmount ~ Time.3 + Time.4 + dummyLargeSize + dummyWithGrace +
    dummyInKind + dummyLargeSize.Time3 + dummyWithGrace.Time3 +
    dummyInKind.Time3 + dummyLargeSize.Time4 + dummyWithGrace.Time4 +
    dummyInKind.Time4 + PAssetAmount0

[[3]]
PAssetAmount ~ FloodInRd1 + Time.3 + Time.4 + dummyLargeSize +
    dummyWithGrace + dummyInKind + dummyLargeSize.Time3 + dummyWithGrace.Time3 +
    dummyInKind.Time3 + dummyLargeSize.Time4 + dummyWithGrace.Time4 +
    dummyInKind.Time4 + HHsize0 + HeadLiteracy0 + PAssetAmount0

[[4]]
PAssetAmount ~ FloodInRd1 + Time.3 + Time.4 + dummyLargeSize +
    dummyWithGrace + dummyInKind + dummyLargeSize.Time3 + dummyWithGrace.Time3 +
    dummyInKind.Time3 + dummyLargeSize.Time4 + dummyWithGrace.Time4 +
    dummyInKind.Time4 + dummyHadCows + HHsize0 + HeadLiteracy0 +
    PAssetAmount0 + dummyHadCows.Time3 + dummyHadCows.Time4 +
    dummyHadCows.LargeSize + dummyHadCows.LargeSize.Time3 + dummyHadCows.LargeSize.Time4 +
    dummyHadCows.WithGrace + dummyHadCows.WithGrace.Time3 + dummyHadCows.WithGrace.Time4 +
    dummyHadCows.InKind + dummyHadCows.InKind.Time3 + dummyHadCows.InKind.Time4

[[5]]
PAssetAmount ~ FloodInRd1 + Time.3 + Time.4 + dummyLargeSize +
    dummyWithGrace + dummyInKind + dummyLargeSize.Time3 + dummyWithGrace.Time3 +
    dummyInKind.Time3 + dummyLargeSize.Time4 + dummyWithGrace.Time4 +
    dummyInKind.Time4 + HHsize0 + HeadLiteracy0 + PAssetAmount0 +
    NumCows0

[[6]]
PAssetAmount ~ FloodInRd1 + Time.3 + Time.4 + dummyLargeSize +
    dummyWithGrace + dummyInKind + dummyLargeSize.Time3 + dummyWithGrace.Time3 +
```

```
    dummyInKind.Time3 + dummyLargeSize.Time4 + dummyWithGrace.Time4 +
    dummyInKind.Time4 + dummyHadCows + HHsize0 + HeadLiteracy0 +
    PAssetAmount0 + NumCows0 + dummyHadCows.Time3 + dummyHadCows.Time4 +
    dummyHadCows.LargeSize + dummyHadCows.LargeSize.Time3 + dummyHadCows.LargeSize.Time4 +
    dummyHadCows.WithGrace + dummyHadCows.WithGrace.Time3 + dummyHadCows.WithGrace.Time4 +
    dummyHadCows.InKind + dummyHadCows.InKind.Time3 + dummyHadCows.InKind.Time4

[1] exclTPa
[[1]]
PAssetAmount ~ Time.3 + Time.4 + dummyUltraPoor + dummyLargeSize +
    dummyWithGrace + dummyInKind + dummyUltraPoor.Time3 + dummyLargeSize.Time3 +
    dummyWithGrace.Time3 + dummyInKind.Time3 + dummyUltraPoor.Time4 +
    dummyLargeSize.Time4 + dummyWithGrace.Time4 + dummyInKind.Time4 +
    dummyLargeSize.UltraPoor + dummyWithGrace.UltraPoor + dummyInKind.UltraPoor +
    dummyLargeSize.UltraPoor.Time3 + dummyLargeSize.UltraPoor.Time4 +
    dummyWithGrace.UltraPoor.Time3 + dummyWithGrace.UltraPoor.Time4 +
    dummyInKind.UltraPoor.Time3 + dummyInKind.UltraPoor.Time4

[[2]]
PAssetAmount ~ Time.3 + Time.4 + dummyUltraPoor + dummyLargeSize +
    dummyWithGrace + dummyInKind + dummyUltraPoor.Time3 + dummyLargeSize.Time3 +
    dummyWithGrace.Time3 + dummyInKind.Time3 + dummyUltraPoor.Time4 +
    dummyLargeSize.Time4 + dummyWithGrace.Time4 + dummyInKind.Time4 +
    PAssetAmount0 + dummyLargeSize.UltraPoor + dummyWithGrace.UltraPoor +
    dummyInKind.UltraPoor + dummyLargeSize.UltraPoor.Time3 +
    dummyLargeSize.UltraPoor.Time4 + dummyWithGrace.UltraPoor.Time3 +
    dummyWithGrace.UltraPoor.Time4 + dummyInKind.UltraPoor.Time3 +
    dummyInKind.UltraPoor.Time4

[[3]]
PAssetAmount ~ FloodInRd1 + Time.3 + Time.4 + dummyUltraPoor +
    dummyLargeSize + dummyWithGrace + dummyInKind + dummyUltraPoor.Time3 +
    dummyLargeSize.Time3 + dummyWithGrace.Time3 + dummyInKind.Time3 +
    dummyUltraPoor.Time4 + dummyLargeSize.Time4 + dummyWithGrace.Time4 +
    dummyInKind.Time4 + HHsize0 + HeadLiteracy0 + PAssetAmount0 +
    dummyLargeSize.UltraPoor + dummyWithGrace.UltraPoor + dummyInKind.UltraPoor +
    dummyLargeSize.UltraPoor.Time3 + dummyLargeSize.UltraPoor.Time4 +
    dummyWithGrace.UltraPoor.Time3 + dummyWithGrace.UltraPoor.Time4 +
    dummyInKind.UltraPoor.Time3 + dummyInKind.UltraPoor.Time4

[[4]]
PAssetAmount ~ FloodInRd1 + Time.3 + Time.4 + dummyUltraPoor +
    dummyLargeSize + dummyWithGrace + dummyInKind + dummyUltraPoor.Time3 +
    dummyLargeSize.Time3 + dummyWithGrace.Time3 + dummyInKind.Time3 +
    dummyUltraPoor.Time4 + dummyLargeSize.Time4 + dummyWithGrace.Time4 +
    dummyInKind.Time4 + dummyHadCows + HHsize0 + HeadLiteracy0 +
    PAssetAmount0 + dummyLargeSize.UltraPoor + dummyWithGrace.UltraPoor +
    dummyInKind.UltraPoor + dummyLargeSize.UltraPoor.Time3 +
    dummyLargeSize.UltraPoor.Time4 + dummyWithGrace.UltraPoor.Time3 +
    dummyWithGrace.UltraPoor.Time4 + dummyInKind.UltraPoor.Time3 +
    dummyInKind.UltraPoor.Time4 + dummyHadCows.Time3 + dummyHadCows.Time4 +
    dummyHadCows.LargeSize + dummyHadCows.LargeSize.Time3 + dummyHadCows.LargeSize.Time4 +
    dummyHadCows.WithGrace + dummyHadCows.WithGrace.Time3 + dummyHadCows.WithGrace.Time4 +
    dummyHadCows.InKind + dummyHadCows.InKind.Time3 + dummyHadCows.InKind.Time4

[[5]]
PAssetAmount ~ FloodInRd1 + Time.3 + Time.4 + dummyUltraPoor +
    dummyLargeSize + dummyWithGrace + dummyInKind + dummyUltraPoor.Time3 +
    dummyLargeSize.Time3 + dummyWithGrace.Time3 + dummyInKind.Time3 +
    dummyUltraPoor.Time4 + dummyLargeSize.Time4 + dummyWithGrace.Time4 +
    dummyInKind.Time4 + HHsize0 + HeadLiteracy0 + PAssetAmount0 +
```

```
    NumCows0 + dummyLargeSize.UltraPoor + dummyWithGrace.UltraPoor +
    dummyInKind.UltraPoor + dummyLargeSize.UltraPoor.Time3 +
    dummyLargeSize.UltraPoor.Time4 + dummyWithGrace.UltraPoor.Time3 +
    dummyWithGrace.UltraPoor.Time4 + dummyInKind.UltraPoor.Time3 +
    dummyInKind.UltraPoor.Time4

[[6]]
PAssetAmount ~ FloodInRd1 + Time.3 + Time.4 + dummyUltraPoor +
    dummyLargeSize + dummyWithGrace + dummyInKind + dummyUltraPoor.Time3 +
    dummyLargeSize.Time3 + dummyWithGrace.Time3 + dummyInKind.Time3 +
    dummyUltraPoor.Time4 + dummyLargeSize.Time4 + dummyWithGrace.Time4 +
    dummyInKind.Time4 + dummyHadCows + HHsize0 + HeadLiteracy0 +
    PAssetAmount0 + NumCows0 + dummyLargeSize.UltraPoor + dummyWithGrace.UltraPoor +
    dummyInKind.UltraPoor + dummyLargeSize.UltraPoor.Time3 +
    dummyLargeSize.UltraPoor.Time4 + dummyWithGrace.UltraPoor.Time3 +
    dummyWithGrace.UltraPoor.Time4 + dummyInKind.UltraPoor.Time3 +
    dummyInKind.UltraPoor.Time4 + dummyHadCows.Time3 + dummyHadCows.Time4 +
    dummyHadCows.LargeSize + dummyHadCows.LargeSize.Time3 + dummyHadCows.LargeSize.Time4 +
    dummyHadCows.WithGrace + dummyHadCows.WithGrace.Time3 + dummyHadCows.WithGrace.Time4 +
    dummyHadCows.InKind + dummyHadCows.InKind.Time3 + dummyHadCows.InKind.Time4
```

```
Error in `geom_boxplot()`:
! Problem while computing aesthetics.
i Error occurred in the 1st layer.
Caused by error:
! オブジェクト 'PAssetAmount' がありません
```

```
Error in `geom_boxplot()`:
! Problem while computing aesthetics.
i Error occurred in the 1st layer.
Caused by error:
! オブジェクト 'PAssetAmount' がありません
```

FIGURE 27: PRODUCTIVE ASSET HOLDING

Source: Survey data.

Note: Productive assets are bees-box, brooder, cage incubator, country boat, deep tube well, dheki, done/swing basket, engine boat, fishing net, ginning machine, gola (grain storage), hand pump, husking machine, jata, ladder(moi), other, specify, plough and yoke, power pump, power tiller, rickshaw, rower pump, saw, sewing machine, shallow tube well, sickle/dao/axe/spade, spray, thresher, tractor, treddle pump, weeder.

TABLE 133: ANCOVA ESTIMATION OF PRODUCTIVE ASSETS

covariates	mean/std	(1)	(2)	(3)	(4)	(5)
(Intercept)		571.2 (0.0)	200.4 (16.1)	313.7 (30.8)	358.2 (33.6)	331.2 (33.9)
Large	0.021 (0.45)	1237.9 (3.5)	1163.6 (4.1)	1281.1 (2.8)	1526.2 (2.5)	1354.3 (2.7)
LargeGrace	0.002 (0.43)	792.4 (9.4)	653.4 (16.0)	609.1 (17.9)	667.1 (17.8)	644.3 (15.7)
Cattle	0.017 (0.44)	148.0 (40.0)	187.7 (32.3)	253.7 (23.5)	291.3 (21.4)	350.6 (13.7)
HadCattle	0.218 (0.41)				88.4 (83.9)	
HadCattle	0.218 (0.41)				88.4 (83.9)	
HadCattle × Large	0.016 (0.22)				139.7 (90.6)	
HadCattle × LargeGrace	0.004 (0.20)				1548.0 (21.3)	
HadCattle × Cattle	−0.006 (0.19)				201.2 (59.7)	
Flood in round 1	0.487 (0.50)			−662.6 (8.8)	−867.9 (6.3)	−709.0 (9.6)
Head literate0	0.121 (0.33)			−595.0 (2.0)	−692.3 (4.2)	−622.5 (2.7)
PAssetAmount0	1255.054 (2646.96)		0.4 (0.3)	0.3 (0.5)	0.4 (0.2)	0.4 (0.2)
Household size0	4.306 (1.43)			58.9 (52.5)	48.3 (68.1)	35.3 (74.2)
Number of cattle0	0.300 (0.66)					93.8 (79.0)
mean of dependent variable		1124	1124	1124	1124	1124
$T = 2$		20	20	20	17	14
$T = 3$		104	104	101	57	56
$T = 4$		632	625	625	529	604
$\bar{R}^2$		0.005	0.026	0.028	0.031	0.03
N	1718	2124	2103	2097	1718	1938

Source: Estimated with GUK administrative and survey data.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. Large, LargeGrace, Cattle are indicator variables of the large, large grace, and cattle arms, respectively. The default arm category is traditional arm. Only households that are observed for all 4 rounds are used. Households are continuing members and replacing members of early rejecters and received loans prior to 2015 Janunary. Productive assets do not include livestock. Regressions (1)-(3), (5)-(6) use only arm and calendar information. (4) and (7) use previous six month repayment and saving information which is lacking in rd 1, hence starts from rd 2.

2. *P* values in percentages in parenthesises. Standard errors are clustered at group (village) level.

TABLE 134: ANCOVA ESTIMATION OF PRODUCTIVE ASSETS BY ATTRIBUTES

covariates	mean/std	(1)	(2)	(3)	(4)	(5)
(Intercept)		571.2 (0.0)	200.4 (16.1)	313.7 (30.8)	358.2 (33.6)	331.2 (33.9)
Upfront	0.040 (0.41)	1237.9 (3.5)	1163.6 (4.1)	1281.1 (2.8)	1526.2 (2.5)	1354.3 (2.7)
WithGrace	0.019 (0.50)	−445.5 (55.2)	−510.2 (48.4)	−672.0 (35.4)	−859.2 (30.3)	−710.0 (35.1)
InKind	0.017 (0.44)	−644.4 (19.3)	−465.7 (34.0)	−355.5 (44.8)	−375.8 (45.0)	−293.7 (53.4)
HadCattle	0.218 (0.41)				88.4 (83.9)	
HadCattle	0.218 (0.41)				88.4 (83.9)	
HadCattle × Upfront	0.014 (0.18)				139.7 (90.6)	
HadCattle × WithGrace	−0.002 (0.23)				1408.3 (40.1)	
HadCattle × InKind	−0.006 (0.19)				−1346.8 (28.3)	
Flood in round 1	0.487 (0.50)			−662.6 (8.8)	−867.9 (6.3)	−709.0 (9.6)
Head literate0	0.121 (0.33)			−595.0 (2.0)	−692.3 (4.2)	−622.5 (2.7)
PAssetAmount0	1255.054 (2646.96)		0.4 (0.3)	0.3 (0.5)	0.4 (0.2)	0.4 (0.2)
Household size0	4.306 (1.43)			58.9 (52.5)	48.3 (68.1)	35.3 (74.2)
Number of cattle0	0.300 (0.66)					93.8 (79.0)
mean of dependent variable $T = 2$		1124 20	1124 20	1124 20	1124 17	1124 14
$T = 3$ $T = 4$		104 632	104 625	101 625	57 529	56 604
$\bar{R}^2$ N	1718	0.005 2124	0.026 2103	0.028 2097	0.031 1718	0.03 1938

Source: Estimated with GUK administrative and survey data.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. Large, LargeGrace, Cattle are indicator variables of the large, large grace, and cattle arms, respectively. The default arm category is traditional arm. Only households that are observed for all 4 rounds are used. Households are continuing members and replacing members of early rejecters and received loans prior to 2015 Janunary. Productive assets do not include livestock. Regressions (1)-(3), (5)-(6) use only arm and calendar information. (4) and (7) use previous six month repayment and saving information which is lacking in rd 1, hence starts from rd 2.

2. *P* values in percentages in parenthesises. Standard errors are clustered at group (village) level.

Table 135: ANCOVA estimation of broad productive assets by period

covariates	mean/std	(1)	(2)	(3)	(4)	(5)
(Intercept)		842.5 (0.0)	471.1 (1.7)	591.4 (10.7)	657.3 (12.0)	606.0 (13.4)
Large	0.021 (0.45)	1459.9 (3.5)	1387.5 (4.0)	1505.5 (2.8)	1737.5 (2.7)	1545.9 (2.8)
LargeGrace	0.002 (0.43)	926.0 (10.4)	790.5 (15.8)	744.0 (17.4)	766.8 (18.4)	755.4 (16.2)
Cattle	0.017 (0.44)	116.2 (51.8)	164.9 (39.0)	232.5 (28.4)	270.7 (28.1)	307.4 (19.9)
HadCattle	0.218 (0.41)				173.8 (74.1)	
rd 3	0.342 (0.47)	−296.4 (19.0)	−303.0 (18.5)	−303.4 (18.4)	−334.6 (19.3)	−275.7 (22.4)
Large × rd 3	0.094 (0.29)	−816.7 (27.9)	−825.6 (27.6)	−820.2 (27.9)	−826.4 (35.6)	−701.6 (35.5)
LargeGrace × rd 3	0.084 (0.28)	−165.4 (72.3)	−163.3 (73.1)	−144.5 (75.8)	47.8 (92.2)	−26.8 (95.4)
Cattle × rd 3	0.089 (0.28)	226.1 (33.3)	149.3 (55.0)	158.0 (53.3)	182.6 (44.4)	315.4 (21.3)
rd 4	0.316 (0.47)	−747.5 (0.8)	−745.8 (0.8)	−747.7 (0.8)	−855.6 (0.5)	−758.7 (0.7)
Large × rd 4	0.093 (0.29)	−1534.1 (7.1)	−1545.4 (7.0)	−1566.5 (6.8)	−1540.0 (11.0)	−1441.9 (9.0)
LargeGrace × rd 4	0.079 (0.27)	−1223.6 (9.0)	−1258.4 (8.6)	−1271.0 (8.6)	−1178.3 (10.4)	−1189.4 (10.5)
Cattle × rd 4	0.082 (0.27)	111.6 (65.8)	94.2 (71.7)	67.3 (80.4)	75.0 (76.9)	207.1 (44.0)
HadCattle	0.218 (0.41)				173.8 (74.1)	
HadCattle × Large	0.016 (0.22)				40.2 (97.6)	
HadCattle × LargeGrace	0.004 (0.20)				2070.8 (19.4)	
HadCattle × Cattle	−0.006 (0.19)				286.1 (47.1)	
HadCattle × rd 3	0.075 (0.26)				−164.7 (71.5)	
HadCattle × Large × rd 3	0.005 (0.13)				841.8 (46.3)	
HadCattle × LargeGrace × rd 3	0.001 (0.12)				−2020.7 (14.6)	
HadCattle × Cattle × rd 3	−0.001 (0.11)				−583.7 (16.7)	
HadCattle × rd 4	0.068 (0.25)				−829.9 (31.7)	
HadCattle × Large × rd 4	0.006 (0.13)				153.9 (92.8)	
HadCattle × LargeGrace × rd 4	0.002 (0.12)				−3922.5 (16.7)	
HadCattle × Cattle × rd 4	−0.003 (0.10)				−621.5 (15.3)	
Flood in round 1	0.487 (0.50)			−666.2 (8.8)	−868.0 (6.4)	−707.9 (9.7)
Head literate0	0.121 (0.33)			−596.9 (2.0)	−685.4 (4.5)	−621.8 (2.7)
PAssetAmount0	1255.054 (2646.96)		0.4 (0.3)	0.3 (0.6)	0.4 (0.2)	0.4 (0.2)
Household size0	4.306 (1.43)			57.8 (53.4)	48.3 (68.3)	35.9 (73.9)
Number of cattle0	0.300 (0.66)					93.3 (79.2)
mean of dependent variable $T = 2$		1124 20	1124 20	1124 20	1124 17	1124 14
$T = 3$ $T = 4$		104 632	104 625	101 625	57 529	56 604
$\bar{R}^2$ N	1718	0.007 2124	0.027 2103	0.029 2097	0.029 1718	0.031 1938

Source: Estimated with GUK administrative and survey data.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. Large, LargeGrace, Cattle are indicator variables of the large, large grace, and cattle arms, respectively. The default arm category is traditional arm. rd2, rd3, rd4 are dummy variables for second, third, and fourth round of survey. Only households that are observed for all 4 rounds are used. Households are continuing members and replacing members of early rejecters and received loans prior to 2015 Janunary. Productive assets do not include livestock. Regressions (1)-(3), (5)-(6) use only arm and calendar information. (4) and (7) use previous six month repayment and saving information which is lacking in rd 1, hence starts from rd 2.

2. P values in percentages in parenthesises. Standard errors are clustered at group (village) level.

TABLE 136: ANCOVA ESTIMATION OF BROAD PRODUCTIVE ASSETS BY ATTRIBUTES AND PERIOD

covariates	mean/std	(1)	(2)	(3)	(4)	(5)
(Intercept)		842.5	471.1	591.4	657.3	606.0
		(0.0)	(1.7)	(10.7)	(12.0)	(13.4)
Upfront	0.040	1459.9	1387.5	1505.5	1737.5	1545.9
	(0.41)	(3.5)	(4.0)	(2.8)	(2.7)	(2.8)
WithGrace	0.019	−533.9	−597.0	−761.5	−970.7	−790.5
	(0.50)	(54.7)	(49.1)	(37.6)	(31.4)	(37.0)
InKind	0.017	−809.8	−625.6	−511.5	−496.1	−448.0
	(0.44)	(16.5)	(27.4)	(35.2)	(38.4)	(41.0)
HadCattle	0.218				173.8	
	(0.41)				(74.1)	
rd 3	0.342	−296.4	−303.0	−303.4	−334.6	−275.7
	(0.47)	(19.0)	(18.5)	(18.4)	(19.3)	(22.4)
Upfront × rd 3	0.267	−816.7	−825.6	−820.2	−826.4	−701.6
	(0.44)	(27.9)	(27.6)	(27.9)	(35.6)	(35.5)
WithGrace × rd 3	0.173	651.4	662.3	675.7	874.2	674.9
	(0.38)	(44.4)	(44.0)	(43.1)	(36.9)	(42.8)
InKind × rd 3	0.089	391.5	312.6	302.6	134.8	342.1
	(0.28)	(39.2)	(50.5)	(51.5)	(76.1)	(44.8)
rd 4	0.316	−747.5	−745.8	−747.7	−855.6	−758.7
	(0.47)	(0.8)	(0.8)	(0.8)	(0.5)	(0.7)
Upfront × rd 4	0.254	−1534.1	−1545.4	−1566.5	−1540.0	−1441.9
	(0.44)	(7.1)	(7.0)	(6.8)	(11.0)	(9.0)
WithGrace × rd 4	0.161	310.4	287.0	295.5	361.7	252.6
	(0.37)	(77.3)	(79.2)	(78.7)	(75.4)	(81.6)
InKind × rd 4	0.082	1335.2	1352.5	1338.3	1253.3	1396.5
	(0.27)	(6.0)	(6.1)	(6.3)	(6.3)	(5.4)
HadCattle	0.218				173.8	
	(0.41)				(74.1)	
HadCattle × Upfront	0.014				40.2	
	(0.18)				(97.6)	
HadCattle × WithGrace	−0.002				2030.5	
	(0.23)				(32.3)	
HadCattle × InKind	−0.006				−1784.7	
	(0.19)				(26.6)	
HadCattle × rd 3	0.075				−164.7	
	(0.26)				(71.5)	
HadCattle × Upfront × rd 3	0.004				841.8	
	(0.11)				(46.3)	
HadCattle × WithGrace × rd 3	−0.000				−2862.5	
	(0.14)				(10.4)	
HadCattle × InKind × rd 3	−0.001				1437.0	
	(0.11)				(30.6)	
HadCattle × rd 4	0.068				−829.9	
	(0.25)				(31.7)	
HadCattle × Upfront × rd 4	0.005				153.9	
	(0.10)				(92.8)	
HadCattle × WithGrace × rd 4	−0.001				−4076.3	
	(0.13)				(21.6)	
HadCattle × InKind × rd 4	−0.003				3300.9	
	(0.10)				(24.3)	
Flood in round 1	0.487			−666.2	−868.0	−707.9
	(0.50)			(8.8)	(6.4)	(9.7)
Head literate0	0.121			−596.9	−685.4	−621.8
	(0.33)			(2.0)	(4.5)	(2.7)
PAssetAmount0	1255.054		0.4	0.3	0.4	0.4
	(2646.96)		(0.3)	(0.6)	(0.2)	(0.2)
Household size0	4.306			57.8	48.3	35.9
	(1.43)			(53.4)	(68.3)	(73.9)
Number of cattle0	0.300					93.3
	(0.66)					(79.2)
mean of dependent variable		1124	1124	1124	1124	1124
$T = 2$		20	20	20	17	14
$T = 3$		104	104	101	57	56
$T = 4$		632	625	625	529	604
$\bar{R}^2$		0.007	0.027	0.029	0.029	0.031
N	1718	2124	2103	2097	1718	1938

Source: Estimated with GUK administrative and survey data.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. Large, LargeGrace, Cattle are indicator variables of the large, large grace, and cattle arms, respectively. The default arm category is traditional arm. rd2, rd3, rd4 are dummy variables for second, third, and fourth round of survey. Only households that are observed for all 4 rounds are used. Households are continuing members and replacing members of early rejecters and received loans prior to 2015 Janunary. Productive assets do not include livestock. Regressions (1)-(3), (5)-(6) use only arm and calendar information. (4) and (7) use previous six month repayment and saving information which is lacking in rd 1, hence starts from rd 2.

2. *P* values in percentages in parenthesises. Standard errors are clustered at group (village) level.

TABLE 137: ANCOVA ESTIMATION OF BROAD PRODUCTIVE ASSETS BY ATTRIBUTES, POVERTY STATUS, AND PERIOD

covariates	mean/std	(1)	(2)	(3)	(4)	(5)
(Intercept)		870.1 (0.0)	500.2 (1.7)	643.9 (9.1)	693.1 (11.9)	657.0 (11.9)
Upfront	0.040 (0.41)	1429.3 (3.9)	1349.8 (4.6)	1455.0 (3.1)	1699.9 (3.4)	1489.2 (3.0)
WithGrace	0.019 (0.50)	−574.7 (51.6)	−641.5 (45.9)	−820.9 (34.0)	−1073.4 (27.5)	−849.4 (33.6)
InKind	0.017 (0.44)	−761.0 (19.3)	−569.4 (32.4)	−438.7 (43.1)	−396.5 (48.4)	−378.2 (49.0)
HadCattle	0.218 (0.41)				139.7 (79.2)	
UltraPoor	0.625 (0.48)	−147.8 (75.8)	−143.9 (76.6)	−147.0 (76.3)	−194.3 (73.0)	−146.4 (76.7)
Upfront × UltraPoor	0.051 (0.30)	−1260.0 (47.2)	−1331.7 (45.5)	−1682.8 (37.4)	−2034.2 (35.7)	−1655.9 (39.5)
WithGrace × UltraPoor	0.036 (0.39)	1490.3 (40.6)	1548.4 (39.1)	1723.2 (35.6)	2278.0 (29.5)	1762.8 (35.2)
InKind × UltraPoor	0.019 (0.35)	−705.4 (23.0)	−773.5 (16.0)	−847.1 (12.4)	−1232.3 (4.2)	−837.1 (13.4)
rd 3	0.342 (0.47)	−301.2 (18.0)	−306.6 (17.7)	−308.1 (17.5)	−344.4 (17.5)	−287.0 (20.5)
UltraPoor × rd 3	0.210 (0.41)	−218.0 (57.1)	−250.6 (51.9)	−257.3 (50.8)	−343.9 (40.7)	−233.6 (54.3)
Upfront × rd 3	0.267 (0.44)	−786.2 (30.7)	−796.8 (30.4)	−794.1 (30.6)	−758.6 (40.1)	−657.1 (40.0)
WithGrace × rd 3	0.173 (0.38)	673.3 (41.9)	686.9 (41.3)	705.1 (40.2)	914.3 (33.2)	704.9 (39.9)
InKind × rd 3	0.089 (0.28)	367.7 (37.6)	290.5 (49.5)	280.6 (50.6)	95.9 (81.0)	312.1 (44.7)
Upfront × UltraPoor × rd 3	0.017 (0.18)	−252.2 (85.3)	−266.1 (84.6)	−278.5 (83.9)	−40.3 (97.8)	−209.7 (87.7)
WithGrace × UltraPoor × rd 3	0.012 (0.23)	273.5 (84.8)	287.5 (84.1)	310.3 (82.8)	367.9 (80.7)	426.1 (76.2)
InKind × UltraPoor × rd 3	0.006 (0.20)	343.0 (56.9)	226.6 (71.0)	204.4 (73.8)	59.7 (93.0)	239.8 (69.3)
rd 4	0.316 (0.47)	−729.6 (0.8)	−725.4 (0.9)	−729.8 (0.9)	−837.4 (0.4)	−747.5 (0.7)
UltraPoor × rd 4	0.202 (0.40)	−354.7 (45.8)	−364.8 (44.7)	−381.1 (42.9)	−595.8 (26.5)	−418.6 (38.2)
Upfront × rd 4	0.254 (0.44)	−1487.3 (8.4)	−1497.2 (8.4)	−1511.3 (8.2)	−1443.4 (13.6)	−1370.0 (11.4)
WithGrace × rd 4	0.161 (0.37)	419.5 (68.7)	404.8 (70.0)	415.5 (69.4)	494.0 (65.6)	371.3 (72.4)
InKind × rd 4	0.082 (0.27)	1217.2 (6.1)	1227.0 (6.3)	1213.9 (6.6)	1118.4 (6.7)	1271.8 (5.8)
Upfront × UltraPoor × rd 4	0.017 (0.17)	272.1 (86.9)	255.1 (87.7)	243.1 (88.3)	421.7 (81.3)	344.4 (83.3)
WithGrace × UltraPoor × rd 4	0.011 (0.23)	−1382.3 (44.2)	−1392.0 (44.1)	−1385.5 (44.3)	−1740.3 (38.4)	−1390.7 (43.7)
InKind × UltraPoor × rd 4	0.006 (0.20)	1594.0 (6.4)	1593.8 (6.5)	1565.8 (7.4)	1855.4 (9.2)	1604.9 (6.3)
HadCattle	0.218 (0.41)				139.7 (79.2)	
HadCattle × Upfront	0.014 (0.18)				89.0 (94.8)	
HadCattle × WithGrace	−0.002 (0.23)				2221.2 (28.2)	
HadCattle × InKind	−0.006 (0.19)				−1874.9 (24.0)	
HadCattle × rd 3	0.075 (0.26)				−131.8 (77.0)	
HadCattle × Upfront × rd 3	0.004 (0.11)				701.4 (53.2)	
HadCattle × WithGrace × rd 3	−0.000 (0.14)				−2893.1 (9.9)	
HadCattle × InKind × rd 3	−0.001 (0.11)				1463.0 (31.1)	
HadCattle × rd 4	0.068 (0.25)				−804.0 (33.0)	
HadCattle × Upfront × rd 4	0.005 (0.10)				21.4 (99.0)	
HadCattle × WithGrace × rd 4	−0.001 (0.13)				−4285.7 (19.0)	
HadCattle × InKind × rd 4	−0.003 (0.10)				3551.3 (21.3)	
Flood in round 1	0.487 (0.50)			−728.9 (8.5)	−953.4 (6.4)	−765.9 (9.6)
Head literate0	0.121 (0.33)			−693.8 (2.4)	−812.3 (4.2)	−708.4 (2.9)
PAssetAmount0	1255.054 (2646.96)		0.4 (0.3)	0.3 (0.5)	0.4 (0.2)	0.4 (0.2)
Household size0	4.306 (1.43)			66.7 (49.6)	68.7 (59.3)	46.6 (68.3)
Number of cattle0	0.300 (0.66)					90.8 (79.8)

IV.1.2 Net assets: Assets+Livestock-GUK Debt-Other Debts

Keep households with baseline household asset information. For productive assets, all households have baseline information but ownership is spattered. Net assets = Assets + net saving - debt to GUK - debts to relatives and money lenders. Assets use only items observed for all 4 rounds for household assets *including* radios and cassette players (which have possibly large errors).

```
Number of obs by Arm and attrition
              AttritIn
Arm             2   3   4   9 Sum
  traditional   6   4  20 144 174
  large         5   2   1 192 200
  large grace  22   3   3 171 199
  cattle        5   5  13 177 200
  Sum          38  14  37 684 773


Number of obs by membership status and attrition
                     AttritIn
BStatus                 2   3   4   9 Sum
  borrower              8   6   8 578 600
  pure saver            0   0   0   0   0
  individual rejection  9   4   1  75  89
  group rejection       9   4   0  55  68
  rejection by flood   12   0  28   0  40
  Sum                  38  14  37 708 797
```

```
NeA1R2
```

```
     NonNA
tee   FALSE TRUE  Sum
  1      14 1474 1488
  2       7 1391 1398
  3       8 1359 1367
  4       6 1178 1184
  Sum    35 5402 5437
```

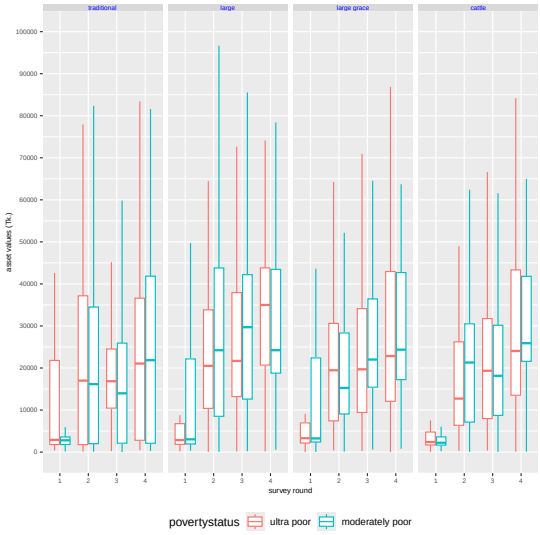
```
     NonNA
tee   FALSE TRUE  Sum
  1     548  940 1488
  2     137 1261 1398
  3      35 1332 1367
  4      12 1172 1184
  Sum   732 4705 5437
```

```
              tee
Arm             2    3    4  Sum
  traditional  58   58   58  174
  large       131  131  131  393
  large grace 118  118  118  354
  cattle      118  118  118  354
  Sum         425  425  425 1275
```

```
              tee
Arm             2    3    4  Sum
  traditional  58   58   58  174
```

```
large          131   131   131   393
large grace    118   118   118   354
cattle         118   118   118   354
Sum            425   425   425  1275
```

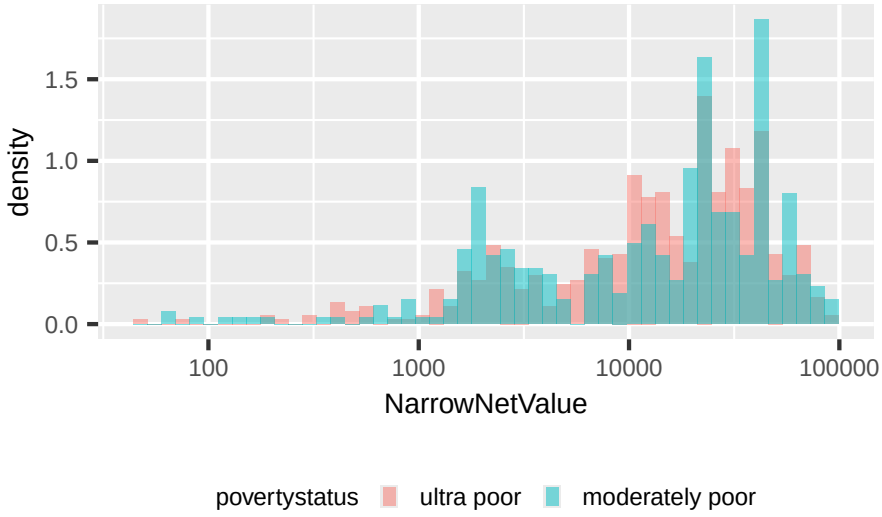
FIGURE 28: NET ASSET VALUES USING ONLY COMPLETE PANEL HOUSEHOLDS



Source: Survey data.

Note: Net asset values = total gross asset values - debt outstanding. Debt outstanding takes the value of the month immediately after the respective survey round interview. Net assets uses only assets observed for all 4 rounds in household assets.

FIGURE 29: NET ASSET VALUES AT ROUND 1 USING ONLY COMPLETE PANEL HOUSEHOLDS



Source: Survey data.

Note: Net asset values = total gross asset values - debt outstanding. Debt outstanding takes the value of the month immediately after the respective survey round interview. Net assets uses only assets observed for all 4 rounds in household assets.

Table 138: ANCOVA estimation of complete panel net assets

covariates	mean/std	(1)	(2)	(3)	(4)	(5)	(6)
(Intercept)		35721.2 (0.0)	29090.5 (0.0)	25209.0 (0.0)	28512.5 (0.0)	25581.7 (0.0)	29233.3 (0.0)
Large	0.047 (0.46)	7700.4 (9.5)	8110.8 (7.4)	7378.2 (12.7)	3455.3 (34.4)	7345.2 (12.9)	3518.6 (34.1)
LargeGrace	0.035 (0.45)	−2603.3 (53.5)	−2008.7 (63.2)	−1377.9 (74.3)	−3785.0 (24.4)	−1490.0 (72.0)	−3891.9 (22.5)
Cattle	0.033 (0.45)	−6158.2 (2.2)	−4169.3 (21.0)	−3776.2 (28.0)	−6102.8 (2.5)	−3915.6 (26.1)	−6239.9 (2.2)
HadCattle	0.322 (0.47)				−9156.3 (25.8)		−10761.6 (24.4)
HadCattle	0.322 (0.47)				−9156.3 (25.8)		−10761.6 (24.4)
HadCattle × Large	0.024 (0.27)				24638.9 (1.7)		24022.7 (1.8)
HadCattle × LargeGrace	0.009 (0.25)				14114.6 (9.5)		13233.7 (10.4)
HadCattle × Cattle	−0.001 (0.24)				14692.2 (7.3)		14396.8 (7.6)
Flood in round 1	0.468 (0.50)			5143.7 (5.4)	6185.1 (1.3)	5116.1 (5.3)	6069.4 (1.2)
Head literate0	0.118 (0.32)			−2608.5 (38.9)	−2498.2 (38.9)	−2595.4 (39.3)	−2455.8 (39.7)
NetValue0	12126.558 (16498.30)		0.5 (0.1)	0.5 (0.1)	0.6 (2.8)	0.2 (48.5)	0.2 (39.0)
Household size0	4.711 (1.40)			374.4 (67.3)	237.1 (78.8)	453.2 (60.5)	328.1 (70.3)
Number of cattle0	0.468 (0.80)					5980.9 (38.0)	9274.6 (35.3)
mean of dependent variable		35662	35662	35662	35662	35662	35662
R^2		0.038	0.118	0.125	0.144	0.126	0.145
N	1275	1275	1275	1275	1275	1275	1275

Source: Estimated with GUK administrative and survey data.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. We annotate the number of periods that a household is observed with T. The total number of households is shown for each values of T. T=4 indicates the number of households with complete panel information, T=3 indicates number of households observed three times, T=2 indicates the number of households observed twice. N indicates total number of observations used in ANCOVA estimation, or N=1×(T=2)+2×(T=3)+3×(T=4). Large, LargeGrace, Cattle are indicator variables of the large, large grace, and cattle arms, respectively. The default arm category is traditional arm. Net assets use only assets observed for all 4 rounds in household assets. Household assets do not include livestock. Regressions (1)-(3), (5)-(6) use only arm and calendar information. (4) and (7) use previous six month repayment and saving information which is lacking in rd 1, hence starts from rd 2.

2. *P* values in percentages in parenthesises. Standard errors are clustered at group (village) level.

TABLE 139: ANCOVA ESTIMATION OF COMPLETE PANEL NET ASSETS BY ATTRIBUTES

covariates	mean/std	(1)	(2)	(3)	(4)	(5)	(6)
(Intercept)		35721.2 (0.0)	29090.5 (0.0)	25209.0 (0.0)	28512.5 (0.0)	25581.7 (0.0)	29233.3 (0.0)
Upfront	0.115 (0.34)	7700.4 (9.5)	8110.8 (7.4)	7378.2 (12.7)	3455.3 (34.4)	7345.2 (12.9)	3518.6 (34.1)
WithGrace	0.068 (0.50)	−10303.7 (4.8)	−10119.5 (2.5)	−8756.1 (6.0)	−7240.2 (5.4)	−8835.2 (5.7)	−7410.6 (4.6)
InKind	0.033 (0.45)	−3554.9 (32.7)	−2160.5 (49.2)	−2398.4 (38.5)	−2317.9 (32.7)	−2425.6 (38.0)	−2347.9 (31.5)
HadCattle	0.322 (0.47)				−9156.3 (25.8)		−10761.6 (24.4)
HadCattle	0.322 (0.47)				−9156.3 (25.8)		−10761.6 (24.4)
HadCattle × Upfront	0.032 (0.21)				24638.9 (1.7)		24022.7 (1.8)
HadCattle × WithGrace	0.008 (0.28)				−10524.3 (20.0)		−10789.0 (19.0)
HadCattle × InKind	−0.001 (0.24)				577.6 (91.4)		1163.0 (82.9)
Flood in round 1	0.468 (0.50)			5143.7 (5.4)	6185.1 (1.3)	5116.1 (5.3)	6069.4 (1.2)
Head literate0	0.118 (0.32)			−2608.5 (38.9)	−2498.2 (38.9)	−2595.4 (39.3)	−2455.8 (39.7)
NetValue0	12126.558 (16498.30)		0.5 (0.1)	0.5 (0.1)	0.6 (2.8)	0.2 (48.5)	0.2 (39.0)
Household size0	4.711 (1.40)			374.4 (67.3)	237.1 (78.8)	453.2 (60.5)	328.1 (70.3)
Number of cattle0	0.468 (0.80)					5980.9 (38.0)	9274.6 (35.3)
mean of dependent variable		35662	35662	35662	35662	35662	35662
R^2		0.038	0.118	0.125	0.144	0.126	0.145
N	1275	1275	1275	1275	1275	1275	1275

Source: Estimated with GUK administrative and survey data.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. We annotate the number of periods that a household is observed with T. The total number of households is shown for each values of T. T=4 indicates the number of households with complete panel information, T=3 indicates number of households observed three times, T=2 indicates the number of households observed twice. N indicates total number of observations used in ANCOVA estimation, or N=1×(T=2)+2×(T=3)+3×(T=4). Upfront is an indicator variable of the arm with an upfront large disbursement, WithGrace is an indicator variable of the arm with a grace period, InKind is an indicator variable of the arm which lends a heifer. Net assets use only assets observed for all 4 rounds in household assets. Household assets do not include livestock. Regressions (1)-(3), (5)-(6) use only arm and calendar information. (4) and (7) use previous six month repayment and saving information which is lacking in rd 1, hence starts from rd 2.

2. *P* values in percentages in parenthesises. Standard errors are clustered at group (village) level.

TABLE 140: ANCOVA ESTIMATION OF COMPLETE PANEL NET ASSETS BY PERIOD

covariates	mean/std	(1)	(2)	(3)	(4)	(5)	(6)
(Intercept)		32690.8 (0.0)	26060.0 (0.0)	22178.6 (0.0)	25062.9 (0.0)	22551.3 (0.0)	25783.7 (0.0)
Large	0.047 (0.46)	7341.4 (12.2)	7751.8 (9.6)	7019.2 (15.9)	3297.7 (37.2)	6986.2 (16.0)	3361.1 (36.8)
LargeGrace	0.035 (0.45)	−3342.9 (46.8)	−2748.3 (54.2)	−2117.4 (64.0)	−4768.8 (16.2)	−2229.5 (61.8)	−4875.8 (14.7)
Cattle	0.033 (0.45)	−6373.8 (2.6)	−4384.9 (19.9)	−3991.9 (26.8)	−6188.7 (2.2)	−4131.2 (24.9)	−6325.7 (2.0)
HadCattle	0.322 (0.47)				−8534.9 (30.1)		−10140.3 (28.1)
rd 3	0.333 (0.47)	1328.6 (45.4)	1328.6 (45.4)	1328.6 (45.5)	1549.2 (33.7)	1328.6 (45.5)	1549.2 (33.7)
Large × rd 3	0.103 (0.30)	3466.4 (55.6)	3466.4 (55.6)	3466.4 (55.6)	1651.4 (75.4)	3466.4 (55.7)	1651.4 (75.4)
LargeGrace × rd 3	0.093 (0.29)	2593.9 (67.7)	2593.9 (67.7)	2593.9 (67.7)	3234.7 (56.0)	2593.9 (67.8)	3234.7 (56.0)
Cattle × rd 3	0.093 (0.29)	377.4 (94.8)	377.4 (94.8)	377.4 (94.8)	−589.7 (91.0)	377.4 (94.8)	−589.7 (91.0)
rd 4	0.333 (0.47)	8740.3 (0.0)	8740.3 (0.0)	8740.3 (0.0)	9316.1 (0.0)	8740.3 (0.0)	9316.1 (0.0)
Large × rd 4	0.103 (0.30)	881.7 (88.8)	881.7 (88.8)	881.7 (88.8)	272.9 (96.1)	881.7 (88.8)	272.9 (96.1)
LargeGrace × rd 4	0.093 (0.29)	5786.1 (31.8)	5786.1 (31.8)	5786.1 (31.8)	7886.5 (13.0)	5786.1 (31.9)	7886.5 (13.0)
Cattle × rd 4	0.093 (0.29)	2017.9 (72.2)	2017.9 (72.3)	2017.9 (72.3)	1449.8 (78.5)	2017.9 (72.3)	1449.8 (78.5)
HadCattle	0.322 (0.47)				−8534.9 (30.1)		−10140.3 (28.1)
HadCattle × Large	0.024 (0.27)				23290.5 (3.4)		22674.3 (3.8)
HadCattle × LargeGrace	0.009 (0.25)				16681.5 (7.1)		15800.6 (7.8)
HadCattle × Cattle	−0.001 (0.24)				13610.2 (13.4)		13314.8 (13.9)
HadCattle × rd 3	0.107 (0.31)				−1952.5 (49.8)		−1952.5 (49.8)
HadCattle × Large × rd 3	0.008 (0.16)				12189.0 (19.7)		12189.0 (19.8)
HadCattle × LargeGrace × rd 3	0.003 (0.15)				−8267.6 (40.8)		−8267.6 (40.8)
HadCattle × Cattle × rd 3	−0.000 (0.14)				7610.7 (37.6)		7610.7 (37.6)
HadCattle × rd 4	0.107 (0.31)				−5059.9 (17.4)		−5059.9 (17.4)
HadCattle × Large × rd 4	0.008 (0.16)				4037.3 (73.9)		4037.3 (73.9)
HadCattle × LargeGrace × rd 4	0.003 (0.15)				−20725.4 (5.8)		−20725.4 (5.8)
HadCattle × Cattle × rd 4	−0.000 (0.14)				5133.7 (60.9)		5133.7 (60.9)
Flood in round 1	0.468 (0.50)			5143.7 (5.5)	6185.1 (1.4)	5116.1 (5.4)	6069.4 (1.3)
Head literate0	0.118 (0.32)			−2608.5 (39.1)	−2498.2 (39.2)	−2595.4 (39.4)	−2455.8 (40.0)
NetValue0	12126.558 (16498.30)		0.5 (0.1)	0.5 (0.1)	0.6 (2.9)	0.2 (48.6)	0.2 (39.3)
Household size0	4.711 (1.40)			374.4 (67.4)	237.1 (79.0)	453.2 (60.6)	328.1 (70.4)
Number of cattle0	0.468 (0.80)					5980.9 (38.2)	9274.6 (35.6)
mean of dependent variable		35662	35662	35662	35662	35662	35662
R^2		0.054	0.135	0.142	0.164	0.142	0.165
N	1275	1275	1275	1275	1275	1275	1275

Source: Estimated with GUK administrative and survey data.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. We annotate the number of periods that a household is observed with T. The total number of households is shown for each values of T. T=4 indicates the number of households with complete panel information, T=3 indicates number of households observed three times, T=2 indicates the number of households observed twice. N indicates total number of observations used in ANCOVA estimation, or N=1×(T=2)+2×(T=3)+3×(T=4). Large, LargeGrace, Cattle are indicator variables of the large, large grace, and cattle arms, respectively. The default arm category is traditional arm. rd2, rd3, rd4 are dummy variables for second, third, and fourth round of survey. Net assets use only assets observed for all 4 rounds in household assets. Household assets do not include livestock. Regressions (1)-(3), (5)-(6) use only arm and calendar information. (4) and (7) use previous six month repayment and saving information which is lacking in rd 1, hence starts from rd 2.

2. *P* values in percentages in parenthesises. Standard errors are clustered at group (village) level.

TABLE 141: ANCOVA ESTIMATION OF COMPLETE PANEL NET ASSETS BY ATTRIBUTES AND PERIOD

covariates	mean/std	(1)	(2)	(3)	(4)	(5)	(6)
(Intercept)		32690.8	26060.0	22178.6	25062.9	22551.3	25783.7
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
Upfront	0.115	7341.4	7751.8	7019.2	3297.7	6986.2	3361.1
	(0.34)	(12.2)	(9.6)	(15.9)	(37.2)	(16.0)	(36.8)
WithGrace	0.068	−10684.3	−10500.1	−9136.6	−8066.6	−9215.8	−8236.9
	(0.50)	(5.6)	(3.2)	(6.7)	(4.7)	(6.5)	(4.1)
InKind	0.033	−3031.0	−1636.6	−1874.4	−1419.9	−1901.7	−1449.9
	(0.45)	(45.9)	(64.8)	(55.3)	(59.6)	(54.8)	(58.5)
HadCattle	0.322				−8534.9		−10140.3
	(0.47)				(30.1)		(28.1)
rd 3	0.333	1328.6	1328.6	1328.6	1549.2	1328.6	1549.2
	(0.47)	(45.4)	(45.4)	(45.5)	(33.7)	(45.5)	(33.7)
Upfront × rd 3	0.288	3466.4	3466.4	3466.4	1651.4	3466.4	1651.4
	(0.45)	(55.6)	(55.6)	(55.6)	(75.4)	(55.7)	(75.4)
WithGrace × rd 3	0.185	−872.5	−872.5	−872.5	1583.3	−872.5	1583.3
	(0.39)	(83.3)	(83.3)	(83.3)	(67.6)	(83.3)	(67.6)
InKind × rd 3	0.093	−2216.5	−2216.5	−2216.5	−3824.4	−2216.5	−3824.4
	(0.29)	(57.5)	(57.5)	(57.6)	(30.3)	(57.6)	(30.4)
rd 4	0.333	8740.3	8740.3	8740.3	9316.1	8740.3	9316.1
	(0.47)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
Upfront × rd 4	0.288	881.7	881.7	881.7	272.9	881.7	272.9
	(0.45)	(88.8)	(88.8)	(88.8)	(96.1)	(88.8)	(96.1)
WithGrace × rd 4	0.185	4904.5	4904.5	4904.5	7613.6	4904.5	7613.6
	(0.39)	(29.0)	(29.0)	(29.1)	(4.8)	(29.1)	(4.8)
InKind × rd 4	0.093	−3768.3	−3768.3	−3768.3	−6436.7	−3768.3	−6436.7
	(0.29)	(32.4)	(32.4)	(32.4)	(6.3)	(32.5)	(6.3)
HadCattle	0.322				−8534.9		−10140.3
	(0.47)				(30.1)		(28.1)
HadCattle × Upfront	0.032				23290.5		22674.3
	(0.21)				(3.4)		(3.8)
HadCattle × WithGrace	0.008				−6609.0		−6873.7
	(0.28)				(43.1)		(41.5)
HadCattle × InKind	−0.001				−3071.2		−2485.8
	(0.24)				(59.0)		(66.7)
HadCattle × rd 3	0.107				−1952.5		−1952.5
	(0.31)				(49.8)		(49.8)
HadCattle × Upfront × rd 3	0.011				12189.0		12189.0
	(0.12)				(19.7)		(19.8)
HadCattle × WithGrace × rd 3	0.003				−20456.5		−20456.5
	(0.16)				(0.7)		(0.7)
HadCattle × InKind × rd 3	−0.000				15878.3		15878.3
	(0.14)				(1.5)		(1.5)
HadCattle × rd 4	0.107				−5059.9		−5059.9
	(0.31)				(17.4)		(17.4)
HadCattle × Upfront × rd 4	0.011				4037.3		4037.3
	(0.12)				(73.9)		(73.9)
HadCattle × WithGrace × rd 4	0.003				−24762.7		−24762.7
	(0.16)				(2.2)		(2.2)
HadCattle × InKind × rd 4	−0.000				25859.2		25859.2
	(0.14)				(0.2)		(0.2)
Flood in round 1	0.468			5143.7	6185.1	5116.1	6069.4
	(0.50)			(5.5)	(1.4)	(5.4)	(1.3)
Head literate0	0.118			−2608.5	−2498.2	−2595.4	−2455.8
	(0.32)			(39.1)	(39.2)	(39.4)	(40.0)
NetValue0	12126.558		0.5	0.5	0.6	0.2	0.2
	(16498.30)		(0.1)	(0.1)	(2.9)	(48.6)	(39.3)
Household size0	4.711			374.4	237.1	453.2	328.1
	(1.40)			(67.4)	(79.0)	(60.6)	(70.4)
Number of cattle0	0.468					5980.9	9274.6
	(0.80)					(38.2)	(35.6)
mean of dependent variable		35662	35662	35662	35662	35662	35662
R^2		0.054	0.135	0.142	0.164	0.142	0.165
N	1275	1275	1275	1275	1275	1275	1275

Source: Estimated with GUK administrative and survey data.

Notes: 1. ANCOVA estimates using administrative and survey data. Post treatment regressands are regressed on categorical variables, pre-treatment regressand and other covariates. FloodInRd1 and HeadLiterate0 are indicator variables for the presence of self reported damage by a flood at the baseline, and literacy of household head, respectively. HHsize0 is household size at the baseline. We annotate the number of periods that a household is observed with T. The total number of households is shown for each values of T. T=4 indicates the number of households with complete panel information, T=3 indicates number of households observed three times, T=2 indicates the number of households observed twice. N indicates total number of observations used in ANCOVA estimation, or N=1×(T=2)+2×(T=3)+3×(T=4). Upfront is an indicator variable of the arm with an upfront large disbursement, WithGrace is an indicator variable of the arm with a grace period, InKind is an indicator variable of the arm which lends a heifer. rd2, rd3, rd4 are dummy variables for second, third, and fourth round of survey. Net assets use only assets observed for all 4 rounds in household assets. Household assets do not include livestock. Regressions (1)-(3), (5)-(6) use only arm and calendar information. (4) and (7) use previous six month repayment and saving information which is lacking in rd 1, hence starts from rd 2.

2. *P* values in percentages in parenthesises. Standard errors are clustered at group (village) level.

TABLE 142: ANCOVA ESTIMATION OF COMPLETE PANEL NET ASSETS BY ARM, POVERTY STATUS, AND PERIOD

covariates	mean/std	(1)	(2)	(3)	(4)	(5)	(6)
(Intercept)		31756.8	24762.5	18945.3	22197.8	19204.9	22794.3
		(0.0)	(0.0)	(0.1)	(0.0)	(0.1)	(0.0)
Large	0.047	7833.7	8711.6	8308.0	4595.1	8270.1	4594.8
	(0.46)	(7.5)	(4.0)	(7.2)	(17.9)	(7.2)	(18.1)
LargeGrace	0.035	−2556.1	−1582.8	−404.3	−3398.1	−489.9	−3515.6
	(0.45)	(59.2)	(73.1)	(93.1)	(32.5)	(91.5)	(30.1)
Cattle	0.033	−5518.2	−3167.2	−2276.0	−4776.4	−2381.7	−4921.6
	(0.45)	(8.4)	(37.3)	(54.3)	(9.3)	(52.2)	(8.3)
UltraPoor	0.595	−5705.5	−6017.0	−6556.0	−5553.3	−6524.8	−5483.9
	(0.49)	(0.5)	(0.1)	(0.0)	(0.1)	(0.0)	(0.2)
Large × UltraPoor	0.030	−13993.8	−9623.3	−8019.0	−9947.7	−8050.6	−10021.0
	(0.36)	(1.9)	(7.0)	(12.5)	(2.7)	(12.2)	(2.8)
LargeGrace × UltraPoor	0.037	7878.6	12027.1	14406.0	12087.4	14142.6	11557.4
	(0.36)	(19.1)	(3.6)	(1.7)	(2.0)	(1.8)	(2.0)
Cattle × UltraPoor	0.021	4227.3	4325.6	6919.6	4718.7	6883.1	4629.2
	(0.35)	(42.8)	(35.8)	(13.0)	(24.6)	(13.0)	(25.8)
rd 3	0.333	1453.3	1453.3	1453.3	1727.6	1453.3	1727.6
	(0.47)	(44.3)	(44.4)	(44.4)	(32.3)	(44.4)	(32.3)
Large × rd 3	0.103	3615.2	3615.2	3615.2	1480.4	3615.2	1480.4
	(0.30)	(57.3)	(57.3)	(57.3)	(80.0)	(57.3)	(80.1)
LargeGrace × rd 3	0.093	2727.3	2727.3	2727.3	3264.2	2727.3	3264.2
	(0.29)	(69.0)	(69.0)	(69.0)	(59.9)	(69.0)	(59.9)
Cattle × rd 3	0.093	434.2	434.2	434.2	−684.3	434.2	−684.3
	(0.29)	(94.5)	(94.5)	(94.5)	(90.7)	(94.5)	(90.7)
UltraPoor × rd 3	0.198	2202.8	2202.8	2202.8	2289.1	2202.8	2289.1
	(0.40)	(45.7)	(45.7)	(45.8)	(44.1)	(45.8)	(44.1)
Large × UltraPoor × rd 3	0.010	9191.0	9191.0	9191.0	8959.0	9191.0	8959.0
	(0.21)	(32.2)	(32.2)	(32.3)	(33.4)	(32.3)	(33.4)
LargeGrace × UltraPoor × rd 3	0.012	−6092.7	−6092.7	−6092.7	−8144.7	−6092.7	−8144.7
	(0.21)	(54.9)	(54.9)	(55.0)	(41.5)	(55.0)	(41.6)
Cattle × UltraPoor × rd 3	0.007	4290.2	4290.2	4290.2	3073.9	4290.2	3073.9
	(0.20)	(62.3)	(62.3)	(62.3)	(72.1)	(62.4)	(72.1)
rd 4	0.333	8866.4	8866.4	8866.4	9442.3	8866.4	9442.3
	(0.47)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
Large × rd 4	0.103	1153.1	1153.1	1153.1	219.4	1153.1	219.4
	(0.30)	(85.4)	(85.5)	(85.5)	(97.0)	(85.5)	(97.0)
LargeGrace × rd 4	0.093	5667.8	5667.8	5667.8	7719.4	5667.8	7719.4
	(0.29)	(36.4)	(36.4)	(36.4)	(17.9)	(36.5)	(17.9)
Cattle × rd 4	0.093	2094.2	2094.2	2094.2	1498.4	2094.2	1498.4
	(0.29)	(72.8)	(72.8)	(72.9)	(79.3)	(72.9)	(79.4)
UltraPoor × rd 4	0.198	6552.4	6552.4	6552.4	6232.5	6552.4	6232.5
	(0.40)	(4.1)	(4.1)	(4.1)	(5.3)	(4.1)	(5.3)
Large × UltraPoor × rd 4	0.010	16456.6	16456.6	16456.6	16289.4	16456.6	16289.4
	(0.21)	(13.3)	(13.3)	(13.4)	(13.9)	(13.4)	(13.9)
LargeGrace × UltraPoor × rd 4	0.012	1430.3	1430.3	1430.3	−871.3	1430.3	−871.3
	(0.21)	(87.9)	(87.9)	(87.9)	(92.8)	(87.9)	(92.8)
Cattle × UltraPoor × rd 4	0.007	6253.8	6253.8	6253.8	5556.5	6253.8	5556.5
	(0.20)	(42.3)	(42.3)	(42.4)	(48.3)	(42.4)	(48.3)
HadCattle	0.322				−7780.4		−8969.0
	(0.47)				(33.1)		(32.7)
HadCattle × rd 3	0.107				−2089.7		−2089.7
	(0.31)				(46.6)		(46.6)
HadCattle × rd 4	0.107				−4962.1		−4962.1
	(0.31)				(17.1)		(17.1)
Flood in round 1	0.468			5787.5	6578.5	5764.3	6483.8
	(0.50)			(3.5)	(1.0)	(3.4)	(0.9)
Head literate0	0.118			−2795.3	−2757.5	−2782.3	−2716.8
	(0.32)			(34.4)	(33.0)	(34.7)	(33.6)
NetValue0	12126.558		0.5	0.5	0.6	0.3	0.3
	(16498.30)		(0.1)	(0.2)	(3.6)	(27.0)	(23.4)
Household size0	4.711			634.3	488.5	681.8	551.8
	(1.40)			(45.6)	(57.2)	(42.1)	(51.2)
HadCattle × Large	0.024				20591.8		20198.1
	(0.27)				(5.1)		(5.3)
HadCattle × Large × rd 3	0.008				13344.3		13344.3
	(0.16)				(15.0)		(15.0)
HadCattle × Large × rd 4	0.008				5767.9		5767.9
	(0.16)				(62.3)		(62.3)
HadCattle × LargeGrace	0.009				16036.0		15410.2
	(0.25)				(7.8)		(8.2)
HadCattle × LargeGrace × rd 3	0.003				−8631.0		−8631.0
	(0.15)				(39.1)		(39.1)
HadCattle × LargeGrace × rd 4	0.003				−20570.1		−20570.1
	(0.15)				(6.5)		(6.5)
HadCattle × Cattle	−0.001				12984.8		12782.6
	(0.24)				(14.0)		(14.4)
HadCattle × Cattle × rd 3	−0.000				7096.7		7096.7
	(0.14)				(40.6)		(40.6)
HadCattle × Cattle × rd 4	−0.000				4180.5		4180.5
	(0.14)				(68.0)		(68.1)
Number of cattle0	0.468					3685.6	6757.2
	(0.80)					(58.1)	(48.9)
mean of dependent variable		35662	35662	35662	35662	35662	35662
R^2		0.08	0.158	0.169	0.187	0.169	0.187

TABLE 143: ANCOVA ESTIMATION OF COMPLETE PANEL NET ASSETS BY ATTRIBUTES, POVERTY STATUS, AND PERIOD

covariates	mean/std	(1)	(2)	(3)	(4)	(5)	(6)
(Intercept)		31756.8 (0.0)	24762.5 (0.0)	18945.3 (0.1)	22197.8 (0.0)	19204.9 (0.1)	22794.3 (0.0)
Upfront	0.115 (0.34)	7833.7 (7.5)	8711.6 (4.0)	8308.0 (7.2)	4595.1 (17.9)	8270.1 (7.2)	4594.8 (18.1)
WithGrace	0.068 (0.50)	−10389.8 (4.0)	−10294.4 (1.8)	−8712.3 (5.1)	−7993.3 (2.8)	−8760.0 (5.0)	−8110.4 (2.4)
InKind	0.033 (0.45)	−2962.0 (46.4)	−1584.4 (65.4)	−1871.7 (53.9)	−1378.3 (59.8)	−1891.8 (53.5)	−1406.0 (58.8)
HadCattle	0.322 (0.47)				−7780.4 (33.1)		−8969.0 (32.7)
UltraPoor	0.595 (0.49)	−5705.5 (0.5)	−6017.0 (0.1)	−6556.0 (0.0)	−5553.3 (0.1)	−6524.8 (0.0)	−5483.9 (0.2)
Upfront × UltraPoor	0.089 (0.25)	−13993.8 (1.9)	−9623.3 (7.0)	−8019.0 (12.5)	−9947.7 (2.7)	−8050.6 (12.2)	−10021.0 (2.8)
WithGrace × UltraPoor	0.058 (0.38)	21872.4 (0.0)	21650.3 (0.0)	22425.0 (0.0)	22035.1 (0.0)	22193.3 (0.0)	21578.4 (0.0)
InKind × UltraPoor	0.021 (0.35)	−3651.3 (49.9)	−7701.4 (16.1)	−7486.4 (17.2)	−7368.7 (17.9)	−7259.6 (17.7)	−6928.2 (18.7)
rd 3	0.333 (0.47)	1453.3 (44.3)	1453.3 (44.4)	1453.3 (44.4)	1727.6 (32.3)	1453.3 (44.4)	1727.6 (32.3)
UltraPoor × rd 3	0.198 (0.40)	2202.8 (45.7)	2202.8 (45.7)	2202.8 (45.8)	2289.1 (44.1)	2202.8 (45.8)	2289.1 (44.1)
Upfront × rd 3	0.288 (0.45)	3615.2 (57.3)	3615.2 (57.3)	3615.2 (57.3)	1480.4 (80.0)	3615.2 (57.3)	1480.4 (80.1)
WithGrace × rd 3	0.185 (0.39)	−887.9 (83.1)	−887.9 (83.1)	−887.9 (83.1)	1783.8 (63.8)	−887.9 (83.1)	1783.8 (63.8)
InKind × rd 3	0.093 (0.29)	−2293.0 (57.1)	−2293.0 (57.1)	−2293.0 (57.2)	−3948.5 (29.9)	−2293.0 (57.2)	−3948.5 (29.9)
Upfront × UltraPoor × rd 3	0.030 (0.15)	9191.0 (32.2)	9191.0 (32.2)	9191.0 (32.3)	8959.0 (33.4)	9191.0 (32.3)	8959.0 (33.4)
WithGrace × UltraPoor × rd 3	0.019 (0.22)	−15283.7 (5.7)	−15283.7 (5.7)	−15283.7 (5.7)	−17103.7 (3.7)	−15283.7 (5.7)	−17103.7 (3.7)
InKind × UltraPoor × rd 3	0.007 (0.20)	10382.9 (15.9)	10382.9 (15.9)	10382.9 (16.0)	11218.6 (13.1)	10382.9 (16.0)	11218.6 (13.1)
rd 4	0.333 (0.47)	8866.4 (0.0)	8866.4 (0.0)	8866.4 (0.0)	9442.3 (0.0)	8866.4 (0.0)	9442.3 (0.0)
UltraPoor × rd 4	0.198 (0.40)	6552.4 (4.1)	6552.4 (4.1)	6552.4 (4.1)	6232.5 (5.3)	6552.4 (4.1)	6232.5 (5.3)
Upfront × rd 4	0.288 (0.45)	1153.1 (85.4)	1153.1 (85.5)	1153.1 (85.5)	219.4 (97.0)	1153.1 (85.5)	219.4 (97.0)
WithGrace × rd 4	0.185 (0.39)	4514.7 (28.8)	4514.7 (28.8)	4514.7 (28.9)	7500.1 (3.7)	4514.7 (28.9)	7500.1 (3.7)
InKind × rd 4	0.093 (0.29)	−3573.6 (35.4)	−3573.6 (35.4)	−3573.6 (35.5)	−6221.1 (7.7)	−3573.6 (35.5)	−6221.1 (7.7)
Upfront × UltraPoor × rd 4	0.030 (0.15)	16456.6 (13.3)	16456.6 (13.3)	16456.6 (13.4)	16289.4 (13.9)	16456.6 (13.4)	16289.4 (13.9)
WithGrace × UltraPoor × rd 4	0.019 (0.22)	−15026.4 (12.9)	−15026.4 (12.9)	−15026.4 (13.0)	−17160.7 (8.4)	−15026.4 (13.0)	−17160.7 (8.4)
InKind × UltraPoor × rd 4	0.007 (0.20)	4823.5 (43.9)	4823.5 (43.9)	4823.5 (44.0)	6427.9 (31.0)	4823.5 (44.0)	6427.9 (31.0)
HadCattle	0.322 (0.47)				−7780.4 (33.1)		−8969.0 (32.7)
HadCattle × Upfront	0.032 (0.21)				20591.8 (5.1)		20198.1 (5.3)
HadCattle × WithGrace	0.008 (0.28)				−4555.9 (57.6)		−4787.8 (55.9)
HadCattle × InKind	−0.001 (0.24)				−3051.1 (60.3)		−2627.6 (65.6)
HadCattle × rd 3	0.107 (0.31)				−2089.7 (46.6)		−2089.7 (46.6)
HadCattle × Upfront × rd 3	0.011 (0.12)				13344.3 (15.0)		13344.3 (15.0)
HadCattle × WithGrace × rd 3	0.003 (0.16)				−21975.3 (0.4)		−21975.3 (0.4)
HadCattle × InKind × rd 3	−0.000 (0.14)				15727.7 (1.9)		15727.7 (1.9)
HadCattle × rd 4	0.107 (0.31)				−4962.1 (17.1)		−4962.1 (17.1)
HadCattle × Upfront × rd 4	0.011 (0.12)				5767.9 (62.3)		5767.9 (62.3)
HadCattle × WithGrace × rd 4	0.003 (0.16)				−26338.0 (1.0)		−26338.0 (1.0)
HadCattle × InKind × rd 4	−0.000 (0.14)				24750.6 (0.3)		24750.6 (0.3)
Flood in round 1	0.468 (0.50)			5787.5 (3.5)	6578.5 (1.0)	5764.3 (3.4)	6483.8 (0.9)
Head literate0	0.118 (0.32)			−2795.3 (34.4)	−2757.5 (33.0)	−2782.3 (34.7)	−2716.8 (33.6)
NetValue0	12126.558 (16498.30)		0.5 (0.1)	0.5 (0.2)	0.6 (3.6)	0.3 (27.0)	0.3 (23.4)
Household size0	4.711 (1.40)			634.3 (45.6)	488.5 (57.2)	681.8 (42.1)	551.8 (51.2)
Number of cattle0	0.468 (0.80)					3685.6 (58.1)	6757.2 (48.9)

V Summarising results

V.1 Counting observations used in ANCOVA estimation

	survey	Arm	BStatus	Num	N
	<num>	<fctr>	<fctr>	<int>	<int>
1:	1	traditional	borrower	1	109
2:	2	traditional	borrower	1	108
3:	3	traditional	borrower	1	108
4:	4	traditional	borrower	1	107
5:	1	traditional individual	rejection	1	31
6:	2	traditional individual	rejection	1	26
7:	3	traditional individual	rejection	1	26
8:	4	traditional individual	rejection	1	25
9:	1	traditional group	rejection	1	40
10:	2	traditional group	rejection	1	39
11:	3	traditional group	rejection	1	36
12:	4	traditional group	rejection	1	36
13:	1	traditional rejection by flood		1	20
14:	2	traditional rejection by flood		1	17
15:	3	traditional rejection by flood		1	18
16:	1	large	borrower	1	171
17:	2	large	borrower	1	163
18:	3	large	borrower	1	165
19:	4	large	borrower	1	164
20:	1	large individual	rejection	1	9
21:	2	large individual	rejection	1	8
22:	3	large individual	rejection	1	9
23:	4	large individual	rejection	1	9
24:	1	large group	rejection	1	20
25:	2	large group	rejection	1	20
26:	3	large group	rejection	1	19
27:	4	large group	rejection	1	19
28:	1	large grace	borrower	1	167
29:	2	large grace	borrower	1	163
30:	3	large grace	borrower	1	163
31:	4	large grace	borrower	1	160
32:	1	large grace individual	rejection	1	13
33:	2	large grace individual	rejection	1	9
34:	3	large grace individual	rejection	1	11
35:	4	large grace individual	rejection	1	11
36:	1	large grace group	rejection	1	10
37:	1	large grace rejection by flood		1	10
38:	1	cattle	borrower	1	153
39:	2	cattle	borrower	1	151
40:	3	cattle	borrower	1	150
41:	4	cattle	borrower	1	147
42:	1	cattle individual	rejection	1	37
43:	2	cattle individual	rejection	1	29
44:	3	cattle individual	rejection	1	30
45:	4	cattle individual	rejection	1	30
46:	1	cattle rejection by flood		1	10
47:	2	cattle rejection by flood		1	10
48:	3	cattle rejection by flood		1	10
	survey	Arm	BStatus	Num	N

Arm	hhid	tee	MaxTee	AttritIn	BStatus	creditstatus
<fctr>	<num>	<int>	<int>	<int>	<fctr>	<fctr>

```
1: cattle 7054319     1      3        9 individual rejection           No
      Mgroup
      <fctr>
1: drop outs
```

```
          Arm       TradGroup                   BStatus       hhid           survey
 traditional:5   planned:0   borrower            :1   Min.   : 7031513   1:4
 large       :0   twice  :0   pure saver          :0   1st Qu.: 7054408   3:1
 large grace:0   double :0   individual rejection:0   Median : 7054413
 cattle      :0   NA's   :5   group rejection     :0   Mean   :36912148
                              rejection by flood  :4   3rd Qu.:81710203
                                                       Max.   :81710203

 NLAssetAmount
 Min.   :1960
 1st Qu.:2780
 Median :3600
 Mean   :4040
 3rd Qu.:5080
 Max.   :6560
 NA's   :2
```

```
           Arm             BStatus     hhid survey NumCows
        <fctr>              <fctr>    <num>  <num>   <int>
1: traditional            borrower  7031513      1       1
2: traditional rejection by flood  7054408      1       0
3: traditional rejection by flood  7054413      1       0
4: traditional rejection by flood 81710203      1       2
5: traditional rejection by flood 81710203      3       2
```

```
Key: <hhid, tee>
Empty data.table (0 rows and 3 cols): BStatus,hhid,tee
```

```
    survey               BStatus   Num     N
     <num>                <fctr> <int> <int>
 1:      1              borrower     1   102
 2:      2              borrower     1   106
 3:      3              borrower     1   108
 4:      4              borrower     1   107
 5:      1 individual rejection     1    28
 6:      2 individual rejection     1    26
 7:      3 individual rejection     1    26
 8:      4 individual rejection     1    25
 9:      1       group rejection     1    35
10:      2       group rejection     1    39
11:      3       group rejection     1    36
12:      4       group rejection     1    36
13:      1    rejection by flood     1    19
14:      2    rejection by flood     1    17
15:      3    rejection by flood     1    18
```

```
            used   (Mb) gc trigger   (Mb) limit (Mb)  max used   (Mb)
Ncells   2843586  151.9    4521784  241.5         NA   4521784  241.5
Vcells 375189468 2862.5  628440838 4794.7      56320 413311950 3153.4
```

```
[1] 1
```

```
[1] 10
```

```
Warning in rbind(c("", "&", rbind(paste0("\\makebox[", hcenter, unit, "]{", : number of co
```

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Warning in rbind(c("", "&", rbind(paste0("\\makebox[", hcenter, unit, "]{", : number of co
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```
Warning in rbind(c("", "&", rbind(paste0("\\makebox[", hcenter, unit, "]{", : number of co
```

TABLE 144: NUMBER OF OBSERVATIONS BY BORROWER STATUS AND ARM

	(a)		(c)	(d)	(e)	(f)
File	BStatus	traditional	large	large grace	cattle	Sum
Schooling	borrower	101	224	205	183	713
	individual rejection	23	9	16	41	89
	group rejection	54	13	17	0	84
	rejection by flood	27	0	13	11	51
	Sum	205	246	251	235	937
Repayment	borrower	85	171	167	153	576
	individual rejection	31	9	13	37	90
	group rejection	40	20	10	0	70
	rejection by flood	20	0	10	10	40
	Sum	176	200	200	200	776
Asset	borrower	85	171	167	153	576
	individual rejection	30	9	13	37	89
	group rejection	39	20	9	0	68
	rejection by flood	20	0	10	10	40
	Sum	174	200	199	200	773
Livestock	borrower	85	171	166	152	574
	individual rejection	30	9	13	37	89
	group rejection	40	20	0	0	60
	rejection by flood	20	0	10	10	40
	Sum	175	200	189	199	763
LivestockProducts	borrower	85	171	167	153	576
	individual rejection	30	9	13	37	89
	group rejection	40	20	10	0	70
	rejection by flood	20	0	10	10	40
	Sum	175	200	200	200	775
LabourIncome	borrower	85	171	167	153	576
	individual rejection	30	9	13	37	89
	group rejection	40	20	10	0	70
	rejection by flood	20	0	10	10	40
	Sum	175	200	200	200	775
FarmIncome	borrower	9	38	24	23	94
	individual rejection	2	0	0	2	4
	group rejection	0	8	0	0	8
	rejection by flood	1	0	0	0	1
	Sum	12	46	24	25	107
Consumption	borrower	84	166	166	152	568
	individual rejection	27	9	11	33	80
	group rejection	39	19	0	0	58
	rejection by flood	18	0	0	10	28
	Sum	168	194	177	195	734
OtherBorrowing	borrower	169	336	332	304	1141
	individual rejection	57	18	24	70	169
	group rejection	79	40	10	0	129
	rejection by flood	38	0	10	20	68
	Sum	343	394	376	394	1507

Source: Survey data.

Note:

Table 145: Number of observations used in estimation by borrower status and arm at period 1

File	(a) BStatus	(b traditional	(c) large	(d) large grace	(e) cattle	(f) sum
Schooling	borrower	82	169	164	146	561
Schooling	individual rejection	15	6	5	30	56
Schooling	group rejection	45	11	0	0	56
Schooling	rejection by flood	18	0	0	10	28
Schooling	sum	160	186	169	186	701
Repayment	borrower	76	120	112	91	399
Repayment	individual rejection	0	0	0	0	0
Repayment	group rejection	0	0	0	0	0
Repayment	rejection by flood	0	0	0	0	0
Repayment	sum	76	120	112	91	399
Asset	borrower	84	166	166	152	568
Asset	individual rejection	27	9	11	33	80
Asset	group rejection	39	20	0	0	59
Asset	rejection by flood	18	0	0	10	28
Asset	sum	168	195	177	195	735
AssetRobustness	borrower	39	108	96	78	321
AssetRobustness	individual rejection	12	3	7	23	45
AssetRobustness	group rejection	28	9	0	0	37
AssetRobustness	rejection by flood	10	0	0	6	16
AssetRobustness	sum	89	120	103	107	419
Land	borrower	55	107	103	88	353
Land	individual rejection	14	4	3	11	32
Land	group rejection	15	33	0	0	48
Land	rejection by flood	8	0	0	0	8
Land	sum	92	144	106	99	441
Livestock	borrower	83	165	164	151	563
Livestock	individual rejection	25	9	11	28	73
Livestock	group rejection	36	19	10	0	65
Livestock	rejection by flood	18	0	0	9	27
Livestock	sum	162	193	185	188	728
NumCows	borrower	59	120	126	129	434
NumCows	individual rejection	13	4	6	17	40
NumCows	group rejection	16	18	10	0	44
NumCows	rejection by flood	7	0	0	7	14
NumCows	sum	95	142	142	153	532
AssetLivestock	borrower	73	150	149	147	519
AssetLivestock	individual rejection	21	5	10	25	61
AssetLivestock	group rejection	32	19	0	0	51
AssetLivestock	rejection by flood	16	0	0	8	24
AssetLivestock	sum	142	174	159	180	655
NetAssetGUK	borrower	33	104	90	75	302
NetAssetGUK	individual rejection	10	2	6	17	35
NetAssetGUK	group rejection	24	9	0	0	33
NetAssetGUK	rejection by flood	8	0	0	5	13
NetAssetGUK	sum	75	115	96	97	383
NetAsset	borrower	73	150	149	147	519
NetAsset	individual rejection	21	5	10	25	61
NetAsset	group rejection	32	19	0	0	51
NetAsset	rejection by flood	16	0	0	8	24
NetAsset	sum	142	174	159	180	655
LabourIncome	borrower	99	194	194	177	664
LabourIncome	individual rejection	27	11	12	31	81
LabourIncome	group rejection	47	21	0	0	68
LabourIncome	rejection by flood	19	0	0	14	33
LabourIncome	sum	192	226	206	222	846
FarmIncome	borrower	4	24	13	10	51
FarmIncome	individual rejection	0	0	0	0	0
FarmIncome	group rejection	0	2	0	0	2
FarmIncome	rejection by flood	0	0	0	0	0
FarmIncome	sum	4	26	13	10	53
Consumption	borrower	84	164	163	150	561
Consumption	individual rejection	26	9	11	30	76
Consumption	group rejection	36	18	0	0	54
Consumption	rejection by flood	17	0	0	10	27
Consumption	sum	163	191	174	190	718

Source: Survey data.

Note:

Table 146: Number of observations used in estimation by borrower status and arm at last period

File	(a) BStatus	(b traditional	(c) large	(d) large grace	(e) cattle	(f) sum
Schooling	borrower	62	134	125	105	426
Schooling	individual rejection	10	5	2	19	36
Schooling	group rejection	38	8	0	0	46
Schooling	rejection by flood	0	0	0	0	0
Schooling	sum	110	147	127	124	508
Repayment	borrower	85	170	166	152	573
Repayment	individual rejection	0	0	0	0	0
Repayment	group rejection	0	0	0	0	0
Repayment	rejection by flood	0	0	0	0	0
Repayment	sum	85	170	166	152	573
Asset	borrower	83	161	155	145	544
Asset	individual rejection	24	8	9	26	67
Asset	group rejection	36	19	0	0	55
Asset	rejection by flood	0	0	0	0	0
Asset	sum	143	188	164	171	666
AssetRobustness	borrower	38	106	93	75	312
AssetRobustness	individual rejection	10	3	6	17	36
AssetRobustness	group rejection	28	9	0	0	37
AssetRobustness	rejection by flood	0	0	0	0	0
AssetRobustness	sum	76	118	99	92	385
Land	borrower	49	100	93	68	310
Land	individual rejection	9	4	3	9	25
Land	group rejection	15	30	0	0	45
Land	rejection by flood	0	0	0	0	0
Land	sum	73	134	96	77	380
Livestock	borrower	70	144	135	139	488
Livestock	individual rejection	16	4	7	21	48
Livestock	group rejection	28	18	0	0	46
Livestock	rejection by flood	0	0	0	0	0
Livestock	sum	114	166	142	160	582
NumCows	borrower	59	126	116	128	429
NumCows	individual rejection	12	3	4	12	31
NumCows	group rejection	20	16	0	0	36
NumCows	rejection by flood	0	0	0	0	0
NumCows	sum	91	145	120	140	496
AssetLivestock	borrower	70	144	135	139	488
AssetLivestock	individual rejection	16	4	7	21	48
AssetLivestock	group rejection	28	18	0	0	46
AssetLivestock	rejection by flood	0	0	0	0	0
AssetLivestock	sum	114	166	142	160	582
NetAssetGUK	borrower	31	100	85	71	287
NetAssetGUK	individual rejection	7	1	5	14	27
NetAssetGUK	group rejection	21	9	0	0	30
NetAssetGUK	rejection by flood	0	0	0	0	0
NetAssetGUK	sum	59	110	90	85	344
NetAsset	borrower	70	144	135	139	488
NetAsset	individual rejection	16	4	7	21	48
NetAsset	group rejection	28	18	0	0	46
NetAsset	rejection by flood	0	0	0	0	0
NetAsset	sum	114	166	142	160	582
LabourIncome	borrower	103	208	196	172	679
LabourIncome	individual rejection	26	12	13	35	86
LabourIncome	group rejection	46	23	0	0	69
LabourIncome	rejection by flood	0	0	0	0	0
LabourIncome	sum	175	243	209	207	834
FarmIncome	borrower	*NA*	1	*NA*	*NA*	1
FarmIncome	individual rejection	*NA*	0	*NA*	*NA*	0
FarmIncome	group rejection	*NA*	0	*NA*	*NA*	0
FarmIncome	rejection by flood	*NA*	0	*NA*	*NA*	0
FarmIncome	sum	*NA*	1	*NA*	*NA*	1
Consumption	borrower	83	162	156	146	547
Consumption	individual rejection	24	8	9	26	67
Consumption	group rejection	36	18	0	0	54
Consumption	rejection by flood	0	0	0	0	0
Consumption	sum	143	188	165	172	668

Source: Survey data.

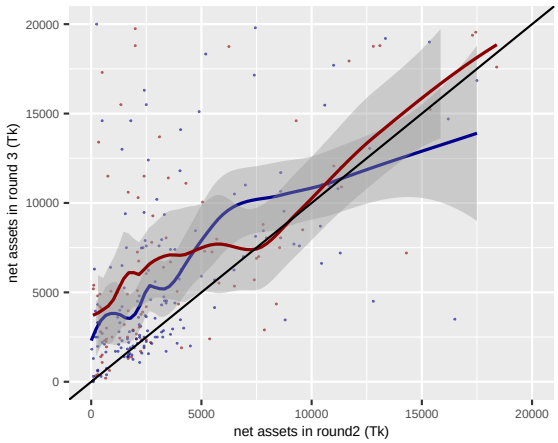
Note:

V.2 IGA

IGA info is from c:/data/GUK/received/cleaned_by_RA/GUKAdminstrativeData.dta.

In traditional arm, there are 33 borrowing members who report cattle as their first IGA, and 76 borrowing members (69.72%) who report other than cattle as their first IGA. This contrasts with the non-traditional arms that 466 borrowing members who report cattle as their first IGA and 25 borrowing members (5.09%) other than cattle as their first IGA.

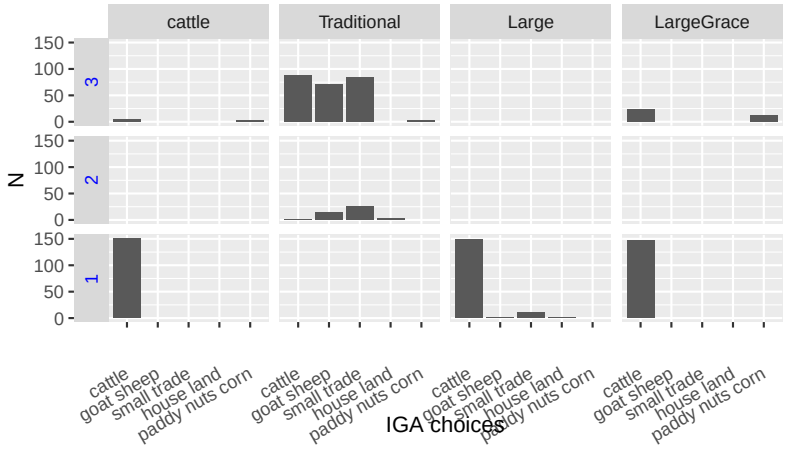
FIGURE 30: FIRST IGA CHOICES



Source: Survey data.

Note: The first income generating activity (IGA) choices are plotted. The rows headed by '$n = 1, 2, 3$' indicate there are n project(s) owned by the household, and displayed type of project on the horizontal axis shows the contents of first project that was invested.

FIGURE 31: ALL IGA CHOICES



Source: Survey data.

Note:

FIGURE 32: ALL IGA CHOICES (COLLAPSED VIEW)

Source: Survey data.

Note:

V.3 Graphs

Cumulative changes of non-traditional arm up to t is given by (Intercept)$+b_{\text{Arm}}+b_t+b_{\text{Arm}*t}$. This is given by Intercept+Arm+TimeX+Arm.TimeX. For the traditional arm, it is given by (Intercept) + b_t.

Time-varying impacts relative to the traditional arm is given by $b_{\text{Arm}} + b_{\text{Arm}*t}$. This is given by Arm+Arm.TimeX.

Need to run construct confi manually and run EstimationMemo.rnw again to draw error bar charts. To compute linear functions of estimated parameters, we use a vector hv giving linear combinations, covariance matrix of the regression thisV, and run *Wald* tests with:

```
glht(model=thisreg, linfct = matrix(hv, byrow = T, nrow=1),
  alternative="two.sided", vcov.=thisV)
```

Object	What it does	Note
hvT0	Picks covariates to test overall change. `"\\(Intercept\\)"`	
hvN0	Overall mean impact of each non-traditional arm. `"\\(Intercept\\)", "dummyInKind"`	
hvN1	Difference of period 2 Arm relative to period 2 trad. `"dummyInKind"`	
hvTinT	Picks covariates to test changes in period t relative to period 2. `"Time.4"`	
hv	Collects all coefficients by far to compute changes. `\\(Intercept\\) + Time.T`	hv < − hvT0 + hvTinT
hvNinT	Picks covariates to test changes in period t relative to period 2 trad. `"Time.4", "dummyInKind.Time4"`	Use this if period 2 trad is the reference.
dhvNinT	Difference relative to concurrent trad. `"dummyInKind.Time4"`	Marginal difference between g and trad in period T.
cumNrelativeT	Cumulative difference relative to concurrent trad. `"dummyInKind.Time2"+"dummyInKind.Time3" +"dummyInKind.Time4"`	cumstrings adds dummyInKind.TimeX as period loops goes, with paste(cumstrings, paste0("^", covadd.nontrad[[i]][2], "$"), sep = "—")
periNrelativeT	Periodwise difference relative to concurrent trad. `"dummyInKind"+"dummyInKind.TimeX"`	Total difference between g and trad in time X. Period X effects relative to trad in perid X. "dummyInKind" is stored in peristrings at hvN1
hvN2	Nontrad gross mean in period t. `\\(Intercept\\)+TimeX+TimeX.Arm =hvT0 + hvNinT`	Baseline trad + change relative to period 2 trad.

```
            used   (Mb) gc trigger   (Mb) limit (Mb)  max used   (Mb)
Ncells   2846584  152.1    4521784  241.5         NA   4521784  241.5
```

```
Vcells 375589631 2865.6  756217989 5769.5       56320 669203001 5105.7
```

```
cumstrings0 <- peristrings0 <- paste0("^", covadd.nontrad[[1]][2], "$") &
peristrings2 <- paste(peristrings0, paste0("^", covadd.nontrad[[i]][2], "$"), sep = "|")
```

Object	What it does	Typical terms	Code
hvT0	picks covariates to test overall change	`[[1]]"\\(Intercept\\)"`	covadd.trad[[1]]
hvN0	Arm	`[[1]]"\\(Intercept\\)", "dummyInKind"`	covadd.nontrad[[1]]
hvN1	Arm - trad, in period 2	`[[1]][2] "dummyInKind"`	covadd.nontrad[[1]][2]
hvTinT	trad in each period - trad in period 2	`[[2]] "Time.4"`	covadd.trad[[i]]
hv	trad in each period	`intercept + Time.T`	hv = hvT0 + hvTinT
hvNinT	Arm in each period - nontrad in period 2. For period 2, period 2 level of Arm is reurned.	`[[2]] "Time.4", "dummyInKind.Time4"`	covadd.nontrad[[i]][c(1, 2)]
dhvNinT	Difference = 0 (of Arm g and trad in time X)	`[[2]][1] "dummyInKind.Time4"`	covadd.nontrad[[i]][2]
hvNinT2	Arm in each period - trad in period 2	`[[2]] Arm  TimeX + Arm.TimeX+`	hvN1+covadd.nontrad[[i]][c(1, 2)]
periNrelativeT	Cumulative difference = 0 (of arm g and trad in time X)	”dummyInKind”+”dummyInKind.TimeX” for cumulative effects relative to trad in time X	periNrelativeT=hvN1+dhvNinT
hvN2	nontrad gross mean in period t = cumulative trad + relative to concurrent trad = 0	`Intercept+TimeX +Arm+TimeX.Arm`	hvT0 + hvNinT
Impacts by baseline experience j			
dhvJ0	Average difference = 0 (of experienced j and trad)	`dummyAdiCattle0`	j
dhvJinT	Difference = 0 (of experienced j and trad in period X)	`dummyAdiCattle0.TimeX`	`paste0("^", j, ".Time.$")`
hvJinT	Cumulative difference = 0 (of experience j and trad in period X)	`dummyAdiCattle0 + dummyAdiCattle0.TimeX`	dhvJ0+dhvJinT
hvJG0	Average difference = 0 (of experience*arm j*g and arm g)	`dummyAdiCattle0.Large`	`paste0("^", j, "$")`
dhvJGinT	Difference = 0 (of experience*arm j*g and arm g in period X)	`dummyAdiCattle0.Large.TimeX`	paste0(“^”, j, “.”, covadd.nontrad[[i]][2])
hvJGinT	Cumulative difference = 0 (of experience*arm j*g and arm g in period X)	`dummyAdiCattle0.Large + dummyAdiCattle0.Large.TimeX`	hvJG0 + dhvJGinT
periJGinT	Cumulative difference = 0 (of experience*arm j*g and trad in time X)	`dummyLarge + dummyLarge.TimeX + dummyAdiCattle0 + dummyAdiCattle0.TimeX + dummyAdiCattle0.Large + dummyAdiCattle0.Large.TimeX`	periNrelativeT+hvJinT+hvJGinT

```
要求されたパッケージ
carData をロード中です
```

```
要求されたパッケージ
mvtnorm をロード中です
```

```
要求されたパッケージ
survival をロード中です
```

```
要求されたパッケージ
TH.data をロード中です
```

```
要求されたパッケージ
MASS をロード中です
```

```
次のパッケージを付け加えます

: 'TH.data'
```

```
以下のオブジェクトは
'package:MASS' からマスクされています:

    geyser
```

Object	What it does	Formula	Code
hvMofTA	average change = 0 (of males in trad school i)	Intercept + School = dMofT	addcovaMofT[c(1, i)]
hvFofTA	average change = 0 (of females in trad school i)	Intercept + School + Female + School.Female = hvMofTA + dFofT	hvMofTA + addcovaFofT[c(1, i)]
hvMofNA	average change = 0 (of nontrad arm g at school i)	intercept + Arm + School + Arm.School = hvMofTA + dMofNA	hvMofTA + addcovaMofN[c(1, i)]
hvFofNA	average change = 0 (of nontrad Arm g at School i for females)	Intercept + Arm + School + Female + Arm.School + Arm.Female + School.Female + Arm.School.Female = Intercept + Arm + School + Arm.School (hvMofNA) + Female + School.Female (dFofT) + Arm.Female + Arm.School.Female (dFofNA) = hvMofNA + dFofT + dFofNA	hvMofNA + dFofT + addcovaFofN[c(1, i)]
hvMofN	average difference = 0 (of nontrad Arm g relative to trad, at School i)	hvMofNA - hvMofTA = Arm + Arm.School	dMofNA
hvFofN	difference = 0 (of nontrad Arm g females to trad females, at School i)	hvFofNA - hvFofTA = Arm + School + Female + Arm.School + Arm.Female + School.Female + Arm.School.Female - (School + Female + School.Female) = Arm + Arm.School + Arm.Female + Arm.School.Female = hvMofNA + dFofNA	hvMofNA + dFofNA
hvMofTinT	difference = 0 (of trad in timeX relative to period 2, at School i)	School + TimeX + School.TimeX - School = TimeX + School.TimeX	addteeMofTinT[c(1 ,i)]
hvFofTinT	difference = 0 (of female trad in timeX relative to period 2, at School i)	School + TimeX + Female + School.TimeX + School.Female + Female.TimeX + School.Female.TimeX - (School + Female + School.Female)= TimeX + School.TimeX + Female.TimeX + School.Female.TimeX = hvMofTinT + FofTinT	hvMofTinT + addteeFofTinT[c(1 ,i)]
hvMofTinTL	cumulative change = 0 (of trad at school i in period X)	Intercept + School + TimeX + School.TimeX = hvMofTA + hvMofTinT	
hvFofTinTL	cumulative change = 0 (of female trad at school i in period X)	Intercept + School + Female + TimeX + School.TimeX + School.Female + Female.TimeX + School.Female.TimeX = hvFofTA + hvFofTinT	
dMofNinT	diff = 0 (of nontrad change relative to concurrent trad change, at school iin period X)	TimeX + Arm.TimeX + School.TimeX + Arm.School.TimeX - (TimeX + School.TimeX) = Arm.TimeX + Arm.School.TimeX	addteeMofNinT[c(1 ,i)]
dFofNinT	diff = 0 (of female nontrad change relative to concurrent female trad change, at school i in period X)	TimeX + Arm.TimeX + Female.TimeX + School.TimeX + Arm.School.TimeX + Arm.Female.TimeX + Female.School.TimeX + Arm.School.Female.TimeX - (TimeX + Female.TimeX + School.TimeX + Female.School.TimeX) = Arm.TimeX + Arm.School.TimeX + Arm.Female.TimeX + Arm.School.Female.TimeX = dMofNinT + Arm.Female.TimeX + Arm.School.Female.TimeX = dMofNinT + dFofNinT0	addteeFofNinT[c(1 ,i)]
hvMofNinT	difference = 0 (of nontrad relative to concurrent trad, at school iin period X)	Arm + School + TimeX + Arm.School + Arm.TimeX + School.TimeX + Arm.School.TimeX - (School + TimeX + School.TimeX)= Arm + Arm.School + Arm.TimeX + Arm.School.TimeX = hvMofN + dMofNinT	hvMofN + dMofNinT
hvFofNinT	difference = 0 (of female nontrad relative to concurrent female trad, at school iin period X)	Arm + School + Female + TimeX + Arm.School + Arm.Female + Arm.TimeX + School.Female + School.TimeX + Female.TimeX + Arm.School.Female + Arm.School.TimeX + Arm.Female.TimeX + School.Female.TimeX + Arm.School.Female.TimeX - (School + Female + TimeX + School.Female + School.TimeX + Female.TimeX) = Arm + Arm.School (MofN) + Arm.Female + Arm.School.Female (dFofN) + Arm.TimeX + Arm.School.TimeX (dMofNinT)+ Arm.Female.TimeX + Arm.School.Female.TimeX (dFofNinT0) = hvMofN + dFofN + dMofNinT + dFofNinT0 = hvMofN + dFofN + dFofNinT	hvMofN + dFofNA + dFofNinT
hvMofNinTL	cumulative change = 0 (of nontrad school i in period X)	(intercept) + Arm + School + TimeX + Arm.School + Arm.TimeX + School.TimeX + Arm.School.TimeX = hvMofTinTL + hvMofNinT	
		(intercept) + School + TimeX + School.TimeX (hvMofTinTL) + Arm + Arm.School (hvMofN) + Arm.TimeX + Arm.School.TimeX (dMofNinT)	
		(intercept) + Arm + School + Arm.School (MofNA) TimeX + School.TimeX (MofTinT) Arm.TimeX + Arm.School.TimeX (dMofNinT)	
hvFofNinTL	cumulative change =	(intercept) + Arm + School + Female + TimeX +	

dMofT=addcovaMofT[c(1, i)] (Intercept), dummyJunior, dummyHigh

dFofT=addcovaFofT[c(1, i)] Female, dummyJunior.Female, dummyHigh.Female

dMofNA=addcovaMofN[c(1, i)] dummyInKind, dummyInKind.dummyJunior, dummyInKind.dummyHigh

dFofNA=addcovaFofN[c(1, i)] dummyInKind.Female, dummyInKind.dummyJunior.Female, dummyInKind.dummyHigh.Female

hvMofTinT=addteeMofTinT[c(1 ,i)] Time.4, dummyJunior.Time4, dummyHigh.Time4

dFofTinT=addteeFofTinT[c(1 ,i)] Female.Time4, dummyJunior.Female.Time4, dummyHigh.Female.Time4

dMofNinT=addteeMofNinT[c(1 ,i)] dummyInKind.Time4, dummyInKind.dummyJunior.Time4, dummyInKind.dummyHigh.Time4

dFofNinT=addteeFofNinT[c(1 ,i)] dummyInKind.Female.Time4, dummyInKind.dummyJunior.Female.Time4 dummyInKind.dummyHigh.Female.Time4

```
                        num
FileName                  1   2   3   4   5   6
  Consumption             0 257 257   0   0   0
  ConsumptionOLS          0 361 361 361 361 361
  LabourIncome            0 361 361 361 361 361
  Land                    0 361 361 361 361 361
  Livestock               0 137 137 137   0   0
  NetAssets               0 361 361 361 361 361
  NetAssetsAnnualPrices   0 361 361 361 361 361
  NetAssetsByExperiencea  0 253 253 253   0   0
  NetAssetsByExperiencen  0 253 253 253   0   0
  NetAssetsByExperienceo  0 253 253 253   0   0
  NetAssetsExperience     0 541 541 541 541   0
  NetBroadAssets          0 355 355 355 355 355
  NetNLAssets             0 361 361 361 361 361
  NumCows               361 361 361 361   0   0
  NumCowsByExperiencea  137 137 137   0   0   0
  NumCowsByExperiencen  137 137 137   0   0   0
  NumCowsByExperienceo  137 137 137   0   0   0
  NumCowsExperience       0 541 541 541 541   0
```

```
          FileName regtype   num attributes experience
            <fctr>  <fctr> <num>     <fctr>     <fctr>
 1:     Consumption       T     2      Large       None
 2:     Consumption       T     2      Large       None
 3:     Consumption       T     3      Large       None
 4:     Consumption       T     3      Large       None
 5:  ConsumptionOLS       T     2      Large       None
 6:  ConsumptionOLS       T     2      Large       None
 7:  ConsumptionOLS       T     2      Large       None
 8:  ConsumptionOLS       T     3      Large       None
 9:  ConsumptionOLS       T     3      Large       None
10:  ConsumptionOLS       T     3      Large       None
11:  ConsumptionOLS       T     4      Large       None
12:  ConsumptionOLS       T     4      Large       None
13:  ConsumptionOLS       T     4      Large       None
14:  ConsumptionOLS       T     5      Large       None
15:  ConsumptionOLS       T     5      Large       None
16:  ConsumptionOLS       T     5      Large       None
17:  ConsumptionOLS       T     6      Large       None
18:  ConsumptionOLS       T     6      Large       None
19:  ConsumptionOLS       T     6      Large       None
                                  ImpactType             hv period estimate
                                      <fctr>         <fctr>  <num>    <num>
 1: sum of (nontrad - trad, in each period) periNrelativeT      2  61.1449
 2: sum of (nontrad - trad, in each period) periNrelativeT      3  85.2276
```

```
 3: sum of (nontrad - trad, in each period) periNrelativeT      2  94.2623
 4: sum of (nontrad - trad, in each period) periNrelativeT      3 120.0333
 5: sum of (nontrad - trad, in each period) periNrelativeT      1  30.0386
 6: sum of (nontrad - trad, in each period) periNrelativeT      2 152.9208
 7: sum of (nontrad - trad, in each period) periNrelativeT      3 134.1695
 8: sum of (nontrad - trad, in each period) periNrelativeT      1  44.5824
 9: sum of (nontrad - trad, in each period) periNrelativeT      2 158.4445
10: sum of (nontrad - trad, in each period) periNrelativeT      3 133.0717
11: sum of (nontrad - trad, in each period) periNrelativeT      1 293.1541
12: sum of (nontrad - trad, in each period) periNrelativeT      2 682.2070
13: sum of (nontrad - trad, in each period) periNrelativeT      3 294.7481
14: sum of (nontrad - trad, in each period) periNrelativeT      1 -28.5149
15: sum of (nontrad - trad, in each period) periNrelativeT      2 402.8235
16: sum of (nontrad - trad, in each period) periNrelativeT      3 106.0482
17: sum of (nontrad - trad, in each period) periNrelativeT      1  38.3050
18: sum of (nontrad - trad, in each period) periNrelativeT      2 438.6247
19: sum of (nontrad - trad, in each period) periNrelativeT      3 139.7646
           lb       ub   pvalue
        <num>    <num>    <num>
 1:  -79.7129  202.003 0.394613
 2:  -90.6428  261.098 0.341953
 3:  -48.9110  237.436 0.196734
 4:  -37.3321  277.399 0.134801
 5:  -93.3558  153.433 0.633197
 6: -116.6002  422.442 0.266042
 7:  -46.7863  315.125 0.146121
 8:  -41.8740  131.039 0.312084
 9: -118.4655  435.355 0.262012
10:  -74.0044  340.148 0.207780
11: -448.2723 1034.580 0.438275
12: -499.4741 1863.888 0.257759
13: -533.4245 1122.921 0.485365
14: -517.8424  460.813 0.909046
15: -594.5254 1400.172 0.428491
16: -495.8928  707.989 0.729808
17: -255.4579  332.068 0.798238
18: -615.9475 1493.197 0.414865
19: -640.7970  920.326 0.725569
```

```
          FileName regtype   num attributes experience
            <fctr>  <fctr> <num>     <fctr>     <fctr>
 1: ConsumptionOLS      Ta     2     InKind       None
 2:    Consumption      Ta     2     InKind       None
 3: ConsumptionOLS      Ta     2     InKind       None
 4:    Consumption      Ta     2     InKind       None
 5: ConsumptionOLS      Ta     2     InKind       None
 6:    Consumption      Ta     2     InKind       None
 7: ConsumptionOLS      Ta     2     InKind       None
 8: ConsumptionOLS      Ta     2     InKind       None
 9:    Consumption      Ta     2     InKind       None
10: ConsumptionOLS      Ta     2     InKind       None
11:    Consumption      Ta     2     InKind       None
12: ConsumptionOLS      Ta     2     InKind       None
13:    Consumption      Ta     2     InKind       None
14: ConsumptionOLS      Ta     2     InKind       None
15: ConsumptionOLS      Ta     2     InKind       None
16:    Consumption      Ta     2     InKind       None
17: ConsumptionOLS      Ta     2     InKind       None
18:    Consumption      Ta     2     InKind       None
19: ConsumptionOLS      Ta     2     InKind       None
20: ConsumptionOLS      Ta     2     InKind       None
```

```
21:    Consumption      Ta     2     InKind       None
22: ConsumptionOLS      Ta     2     InKind       None
23:    Consumption      Ta     2     InKind       None
24: ConsumptionOLS      Ta     2     InKind       None
25: ConsumptionOLS      Ta     2     InKind       None
26:    Consumption      Ta     2     InKind       None
27: ConsumptionOLS      Ta     2     InKind       None
28:    Consumption      Ta     2     InKind       None
29: ConsumptionOLS      Ta     2     InKind       None
30: ConsumptionOLS      Ta     2  LargeSize       None
31:    Consumption      Ta     2  LargeSize       None
32: ConsumptionOLS      Ta     2  LargeSize       None
33:    Consumption      Ta     2  LargeSize       None
34: ConsumptionOLS      Ta     2  LargeSize       None
35:    Consumption      Ta     2  LargeSize       None
36: ConsumptionOLS      Ta     2  LargeSize       None
37: ConsumptionOLS      Ta     2  LargeSize       None
38:    Consumption      Ta     2  LargeSize       None
39: ConsumptionOLS      Ta     2  LargeSize       None
40:    Consumption      Ta     2  LargeSize       None
41: ConsumptionOLS      Ta     2  LargeSize       None
42:    Consumption      Ta     2  LargeSize       None
43: ConsumptionOLS      Ta     2  LargeSize       None
44: ConsumptionOLS      Ta     2  LargeSize       None
45:    Consumption      Ta     2  LargeSize       None
46: ConsumptionOLS      Ta     2  LargeSize       None
47:    Consumption      Ta     2  LargeSize       None
48: ConsumptionOLS      Ta     2  LargeSize       None
49: ConsumptionOLS      Ta     2  LargeSize       None
50:    Consumption      Ta     2  LargeSize       None
51: ConsumptionOLS      Ta     2  LargeSize       None
52:    Consumption      Ta     2  LargeSize       None
53: ConsumptionOLS      Ta     2  LargeSize       None
54: ConsumptionOLS      Ta     2  LargeSize       None
55:    Consumption      Ta     2  LargeSize       None
56: ConsumptionOLS      Ta     2  LargeSize       None
57:    Consumption      Ta     2  LargeSize       None
58: ConsumptionOLS      Ta     2  LargeSize       None
59: ConsumptionOLS      Ta     2       trad       None
60:    Consumption      Ta     2       trad       None
61: ConsumptionOLS      Ta     2       trad       None
62:    Consumption      Ta     2       trad       None
63: ConsumptionOLS      Ta     2       trad       None
64:    Consumption      Ta     2       trad       None
65: ConsumptionOLS      Ta     2       trad       None
66: ConsumptionOLS      Ta     2       trad       None
67:    Consumption      Ta     2       trad       None
68: ConsumptionOLS      Ta     2       trad       None
69:    Consumption      Ta     2       trad       None
70: ConsumptionOLS      Ta     2       trad       None
71: ConsumptionOLS      Ta     2  WithGrace       None
72:    Consumption      Ta     2  WithGrace       None
73: ConsumptionOLS      Ta     2  WithGrace       None
74:    Consumption      Ta     2  WithGrace       None
75: ConsumptionOLS      Ta     2  WithGrace       None
76:    Consumption      Ta     2  WithGrace       None
77: ConsumptionOLS      Ta     2  WithGrace       None
78: ConsumptionOLS      Ta     2  WithGrace       None
79:    Consumption      Ta     2  WithGrace       None
80: ConsumptionOLS      Ta     2  WithGrace       None
81:    Consumption      Ta     2  WithGrace       None
```

```
82: ConsumptionOLS      Ta     2  WithGrace       None
83:    Consumption      Ta     2  WithGrace       None
84: ConsumptionOLS      Ta     2  WithGrace       None
85: ConsumptionOLS      Ta     2  WithGrace       None
86:    Consumption      Ta     2  WithGrace       None
87: ConsumptionOLS      Ta     2  WithGrace       None
88:    Consumption      Ta     2  WithGrace       None
89: ConsumptionOLS      Ta     2  WithGrace       None
90: ConsumptionOLS      Ta     2  WithGrace       None
91:    Consumption      Ta     2  WithGrace       None
92: ConsumptionOLS      Ta     2  WithGrace       None
93:    Consumption      Ta     2  WithGrace       None
94: ConsumptionOLS      Ta     2  WithGrace       None
95: ConsumptionOLS      Ta     2  WithGrace       None
96:    Consumption      Ta     2  WithGrace       None
97: ConsumptionOLS      Ta     2  WithGrace       None
98:    Consumption      Ta     2  WithGrace       None
99: ConsumptionOLS      Ta     2  WithGrace       None
          FileName regtype   num attributes experience
                                      ImpactType            hv period
                                          <fctr>        <fctr>  <num>
 1:                    level of reference nontrad            N0      2
 2:                    level of reference nontrad            N0      3
 3:               level of nontrad in each period            N2      2
 4:               level of nontrad in each period            N2      3
 5:               level of nontrad in each period            N2      3
 6:               level of nontrad in each period            N2      4
 7:               level of nontrad in each period            N2      4
 8:             reference nontrad - reference trad            N1      2
 9:             reference nontrad - reference trad            N1      3
10:    nontrad in each period - trad in period 2         NinT2      2
11:    nontrad in each period - trad in period 2         NinT2      3
12:    nontrad in each period - trad in period 2         NinT2      3
13:    nontrad in each period - trad in period 2         NinT2      4
14:    nontrad in each period - trad in period 2         NinT2      4
15: nontrad in each period - nontrad in period 2          NinT      2
16: nontrad in each period - nontrad in period 2          NinT      3
17: nontrad in each period - nontrad in period 2          NinT      3
18: nontrad in each period - nontrad in period 2          NinT      4
19: nontrad in each period - nontrad in period 2          NinT      4
20:                nontrad - trad, in each period         dNinT      2
21:                nontrad - trad, in each period         dNinT      3
22:                nontrad - trad, in each period         dNinT      3
23:                nontrad - trad, in each period         dNinT      4
24:                nontrad - trad, in each period         dNinT      4
25:      sum of (nontrad - trad, in each period) periNrelativeT      2
26:      sum of (nontrad - trad, in each period) periNrelativeT      3
27:      sum of (nontrad - trad, in each period) periNrelativeT      3
28:      sum of (nontrad - trad, in each period) periNrelativeT      4
29:      sum of (nontrad - trad, in each period) periNrelativeT      4
30:                    level of reference nontrad            N0      2
31:                    level of reference nontrad            N0      3
32:               level of nontrad in each period            N2      2
33:               level of nontrad in each period            N2      3
34:               level of nontrad in each period            N2      3
35:               level of nontrad in each period            N2      4
36:               level of nontrad in each period            N2      4
37:             reference nontrad - reference trad            N1      2
38:             reference nontrad - reference trad            N1      3
39:    nontrad in each period - trad in period 2         NinT2      2
40:    nontrad in each period - trad in period 2         NinT2      3
```

```
41:    nontrad in each period - trad in period 2          NinT2      3
42:    nontrad in each period - trad in period 2          NinT2      4
43:    nontrad in each period - trad in period 2          NinT2      4
44: nontrad in each period - nontrad in period 2           NinT      2
45: nontrad in each period - nontrad in period 2           NinT      3
46: nontrad in each period - nontrad in period 2           NinT      3
47: nontrad in each period - nontrad in period 2           NinT      4
48: nontrad in each period - nontrad in period 2           NinT      4
49:               nontrad - trad, in each period          dNinT      2
50:               nontrad - trad, in each period          dNinT      3
51:               nontrad - trad, in each period          dNinT      3
52:               nontrad - trad, in each period          dNinT      4
53:               nontrad - trad, in each period          dNinT      4
54:      sum of (nontrad - trad, in each period) periNrelativeT      2
55:      sum of (nontrad - trad, in each period) periNrelativeT      3
56:      sum of (nontrad - trad, in each period) periNrelativeT      3
57:      sum of (nontrad - trad, in each period) periNrelativeT      4
58:      sum of (nontrad - trad, in each period) periNrelativeT      4
59:                     level of reference trad             T0      2
60:                     level of reference trad             T0      3
61:                level of trad in each period             TL      2
62:                level of trad in each period             TL      3
63:                level of trad in each period             TL      3
64:                level of trad in each period             TL      4
65:                level of trad in each period             TL      4
66:       trad in each period - trad in period 2           TinT      2
67:       trad in each period - trad in period 2           TinT      3
68:       trad in each period - trad in period 2           TinT      3
69:       trad in each period - trad in period 2           TinT      4
70:       trad in each period - trad in period 2           TinT      4
71:                   level of reference nontrad             N0      2
72:                   level of reference nontrad             N0      3
73:              level of nontrad in each period             N2      2
74:              level of nontrad in each period             N2      3
75:              level of nontrad in each period             N2      3
76:              level of nontrad in each period             N2      4
77:              level of nontrad in each period             N2      4
78:           reference nontrad - reference trad             N1      2
79:           reference nontrad - reference trad             N1      3
80:    nontrad in each period - trad in period 2          NinT2      2
81:    nontrad in each period - trad in period 2          NinT2      3
82:    nontrad in each period - trad in period 2          NinT2      3
83:    nontrad in each period - trad in period 2          NinT2      4
84:    nontrad in each period - trad in period 2          NinT2      4
85: nontrad in each period - nontrad in period 2           NinT      2
86: nontrad in each period - nontrad in period 2           NinT      3
87: nontrad in each period - nontrad in period 2           NinT      3
88: nontrad in each period - nontrad in period 2           NinT      4
89: nontrad in each period - nontrad in period 2           NinT      4
90:               nontrad - trad, in each period          dNinT      2
91:               nontrad - trad, in each period          dNinT      3
92:               nontrad - trad, in each period          dNinT      3
93:               nontrad - trad, in each period          dNinT      4
94:               nontrad - trad, in each period          dNinT      4
95:      sum of (nontrad - trad, in each period) periNrelativeT      2
96:      sum of (nontrad - trad, in each period) periNrelativeT      3
97:      sum of (nontrad - trad, in each period) periNrelativeT      3
98:      sum of (nontrad - trad, in each period) periNrelativeT      4
99:      sum of (nontrad - trad, in each period) periNrelativeT      4
                                      ImpactType             hv period
     estimate         lb         ub      pvalue
```

```
          <num>       <num>       <num>        <num>
 1: 3152.55051 2931.12329 3373.97773 0.00000e+00
 2: 2125.83261 1844.52633 2407.13889 0.00000e+00
 3: 6331.89035 5964.05166 6699.72903 0.00000e+00
 4: 2032.45751 1802.78924 2262.12577 0.00000e+00
 5: 3956.03085 3713.84557 4198.21613 0.00000e+00
 6: 1942.82634 1636.56277 2249.08990 0.00000e+00
 7: 3849.25119 3653.49379 4045.00860 0.00000e+00
 8:  -26.78933 -152.18021   98.60155 6.75337e-01
 9:   93.37511  -47.91065  234.66086 1.95031e-01
10: 3125.76118 2804.79123 3446.73113 0.00000e+00
11:   93.37511  -47.91065  234.66086 1.95031e-01
12:  749.90168  507.84002  991.96334 1.36517e-09
13:    3.74394 -182.97028  190.45815 9.68629e-01
14:  643.12203  496.63702  789.60703 0.00000e+00
15: 3152.55051 2931.12329 3373.97773 0.00000e+00
16:    0.00000    0.00000    0.00000          NA
17:  776.69101  573.38117  980.00085 8.43769e-14
18:  -89.63117 -340.81682  161.55449 4.84049e-01
19:  669.91135  506.36908  833.45363 1.33227e-15
20:  -26.78933 -152.18021   98.60155 6.75337e-01
21:    0.00000    0.00000    0.00000          NA
22:  224.38574   33.39158  415.37990 2.13117e-02
23: -181.55385 -438.70913   75.60144 1.66286e-01
24:   10.87422 -152.10162  173.85006 8.95929e-01
25:  -26.78933 -152.18021   98.60155 6.75337e-01
26:   93.37511  -47.91065  234.66086 1.95031e-01
27:  197.59641  -37.90248  433.09529 1.00046e-01
28:  -88.17874 -275.04293   98.68546 3.54767e-01
29:  -15.91511 -149.05264  117.22243 8.14716e-01
30: 3209.37844 3034.88269 3383.87418 0.00000e+00
31: 2093.60243 1855.30397 2331.90089 0.00000e+00
32: 6388.71828 6074.64903 6702.78752 0.00000e+00
33: 2032.45751 1802.78924 2262.12577 0.00000e+00
34: 3854.52730 3577.88105 4131.17354 0.00000e+00
35: 2148.46284 1827.59827 2469.32742 0.00000e+00
36: 3942.50787 3683.50920 4201.50654 0.00000e+00
37:   30.03860  -93.35580  153.43300 6.33197e-01
38:   61.14492  -79.71293  202.00277 3.94613e-01
39: 3239.41704 2984.72936 3494.10472 0.00000e+00
40:   61.14492  -79.71293  202.00277 3.94613e-01
41:  705.22606  412.76832  997.68380 2.34917e-06
42:  177.15026  -20.07717  374.37768 7.82921e-02
43:  793.20663  594.01172  992.40154 7.43849e-15
44: 3209.37844 3034.88269 3383.87418 0.00000e+00
45:    0.00000    0.00000    0.00000          NA
46:  675.18746  435.69601  914.67891 3.45784e-08
47:  116.00534 -115.21702  347.22769 3.25196e-01
48:  763.16803  564.94641  961.38965 5.41789e-14
49:   30.03860  -93.35580  153.43300 6.33197e-01
50:    0.00000    0.00000    0.00000          NA
51:  122.88219  -89.34666  335.11103 2.56369e-01
52:   24.08266 -186.09489  234.26021 8.22188e-01
53:  104.13090  -70.49236  278.75415 2.42428e-01
54:   30.03860  -93.35580  153.43300 6.33197e-01
55:   61.14492  -79.71293  202.00277 3.94613e-01
56:  152.92079 -116.60017  422.44175 2.66042e-01
57:   85.22758  -90.64283  261.09798 3.41953e-01
58:  134.16950  -46.78632  315.12532 1.46121e-01
59: 3179.33984 3016.60057 3342.07911 0.00000e+00
60: 2032.45751 1802.78924 2262.12577 0.00000e+00
```

```
61: 6358.67968 6033.20114 6684.15821 0.00000e+00
62: 2032.45751 1802.78924 2262.12577 0.00000e+00
63: 3731.64511 3561.36684 3901.92338 0.00000e+00
64: 2124.38018 1876.34097 2372.41940 0.00000e+00
65: 3838.37697 3682.25682 3994.49712 0.00000e+00
66: 3179.33984 3016.60057 3342.07911 0.00000e+00
67:    0.00000    0.00000    0.00000          NA
68:  552.30527  479.66994  624.94060 0.00000e+00
69:   91.92268    7.66953  176.17583 3.25090e-02
70:  659.03713  598.24425  719.83002 0.00000e+00
71: 3170.47099 2976.42379 3364.51819 0.00000e+00
72: 1970.98336 1693.06823 2248.89850 0.00000e+00
73: 6349.81083 6018.12013 6681.50153 0.00000e+00
74: 2032.45751 1802.78924 2262.12577 0.00000e+00
75: 3527.02988 3259.65088 3794.40888 0.00000e+00
76: 2160.25425 1769.65304 2550.85547 0.00000e+00
77: 3700.63560 3449.41085 3951.86035 0.00000e+00
78:   -8.86885 -143.99120  126.25351 8.97616e-01
79:  -61.47414 -215.44427   92.49599 4.33630e-01
80: 3161.60214 2869.47090 3453.73339 0.00000e+00
81:  -61.47414 -215.44427   92.49599 4.33630e-01
82:  338.82120   67.00354  610.63885 1.45748e-02
83:   66.32260 -166.08767  298.73288 5.75704e-01
84:  512.42691  356.44170  668.41213 1.32984e-10
85: 3170.47099 2976.42379 3364.51819 0.00000e+00
86:    0.00000    0.00000    0.00000          NA
87:  347.69004  135.34136  560.03872 1.33722e-03
88:  127.79675 -158.88000  414.47349 3.82001e-01
89:  521.29576  329.21932  713.37220 1.08847e-07
90:   -8.86885 -143.99120  126.25351 8.97616e-01
91:    0.00000    0.00000    0.00000          NA
92: -204.61523 -416.21589    6.98543 5.80539e-02
93:   35.87407 -217.70597  289.45411 7.81422e-01
94: -137.74137 -324.08301   48.60026 1.47355e-01
95:   -8.86885 -143.99120  126.25351 8.97616e-01
96:  -61.47414 -215.44427   92.49599 4.33630e-01
97: -213.48408 -485.40253   58.43438 1.23825e-01
98:  -25.60007 -224.77407  173.57392 8.00972e-01
99: -146.61022 -302.77540    9.55496 6.57542e-02
     estimate         lb         ub      pvalue
```

```
     FileName regtype   num  attributes gender  school              ImpactType
       <char>  <char> <num>      <char> <char>  <char>                  <char>
 1: Schooling       T     2 traditional    all primary level of reference trad
 2: Schooling       T     2 traditional    all  junior level of reference trad
 3: Schooling       T     2 traditional    all    high level of reference trad
 4: Schooling       T     3 traditional    all primary level of reference trad
 5: Schooling       T     3 traditional    all  junior level of reference trad
 6: Schooling       T     3 traditional    all    high level of reference trad
 7: Schooling       T     4 traditional    all primary level of reference trad
 8: Schooling       T     4 traditional    all  junior level of reference trad
 9: Schooling       T     4 traditional    all    high level of reference trad
10: Schooling      Ta     2 traditional    all primary level of reference trad
11: Schooling      Ta     2 traditional    all  junior level of reference trad
12: Schooling      Ta     2 traditional    all    high level of reference trad
13: Schooling      Ta     3 traditional    all primary level of reference trad
14: Schooling      Ta     3 traditional    all  junior level of reference trad
15: Schooling      Ta     3 traditional    all    high level of reference trad
16: Schooling      Ta     4 traditional    all primary level of reference trad
17: Schooling      Ta     4 traditional    all  junior level of reference trad
18: Schooling      Ta     4 traditional    all    high level of reference trad
```

```
    period     hv estimate       lb       ub      pvalue
     <num> <char>    <num>    <num>    <num>       <num>
 1:     NA  MofTA 0.654996 0.570694 0.739298 0.00000e+00
 2:     NA  MofTA 0.654996 0.570694 0.739298 0.00000e+00
 3:     NA  MofTA 0.654996 0.570694 0.739298 0.00000e+00
 4:     NA  MofTA 0.703637 0.628657 0.778617 0.00000e+00
 5:     NA  MofTA 0.558788 0.463473 0.654103 0.00000e+00
 6:     NA  MofTA 0.465110 0.375061 0.555160 0.00000e+00
 7:     NA  MofTA 0.816777 0.679928 0.953626 0.00000e+00
 8:     NA  MofTA 0.698685 0.547135 0.850235 0.00000e+00
 9:     NA  MofTA 0.606556 0.447721 0.765391 1.08358e-13
10:     NA  MofTA 0.654996 0.570694 0.739298 0.00000e+00
11:     NA  MofTA 0.654996 0.570694 0.739298 0.00000e+00
12:     NA  MofTA 0.654996 0.570694 0.739298 0.00000e+00
13:     NA  MofTA 0.703637 0.628657 0.778617 0.00000e+00
14:     NA  MofTA 0.558788 0.463473 0.654103 0.00000e+00
15:     NA  MofTA 0.465110 0.375061 0.555160 0.00000e+00
16:     NA  MofTA 0.816777 0.679928 0.953626 0.00000e+00
17:     NA  MofTA 0.698685 0.547135 0.850235 0.00000e+00
18:     NA  MofTA 0.606556 0.447721 0.765391 1.08358e-13
```

```
    FileName regtype   num attributes
      <fctr>  <fctr> <num>     <fctr>
1: Schooling       T     5      Large
2: Schooling       T     5      Large
3: Schooling       T     5      Large
4: Schooling       T     5      Large
5: Schooling       T     5      Large
6: Schooling       T     5      Large
                                                  ImpactType period         lb
                                                      <fctr>  <num>      <num>
1: female nontrad - female trad, in each period, at school      2 -0.407138
2: female nontrad - female trad, in each period, at school      3 -0.260304
3: female nontrad - female trad, in each period, at school      4 -0.392079
4:               nontrad - trad, in each period, at school      2 -0.140731
5:               nontrad - trad, in each period, at school      3 -0.194737
6:               nontrad - trad, in each period, at school      4 -0.243397
       estimate        ub gender school      hv   pvalue
          <num>     <num> <fctr> <fctr>  <fctr>    <num>
1: -0.172937656 0.0612629 female junior FofNinT 0.147728
2:  0.035773671 0.3318515 female junior FofNinT 0.812710
3: -0.095465521 0.2011480 female junior FofNinT 0.527973
4: -0.000432567 0.1398662   male junior MofNinT 0.995176
5:  0.001223819 0.1971844   male junior MofNinT 0.990229
6:  0.009168600 0.2617341   male junior MofNinT 0.943250
                          AtType
                          <fctr>
1: Arms (relative to Traditional)
2: Arms (relative to Traditional)
3: Arms (relative to Traditional)
4: Arms (relative to Traditional)
5: Arms (relative to Traditional)
6: Arms (relative to Traditional)
```

```
Error in factor(variables, labels = c("Broad net assets", "Net assets", : 無効な
'labels' です; 長さ 4 は 1 または 3 であるべきです
```

```
Error in factor(variables, labels = c("Broad net assets", "Net assets", : 無効な
'labels' です; 長さ 4 は 1 または 3 であるべきです
```

```
               regressand
attributes      land net non-livestock assets net assets cattle
  Large/Upfront   15                        15         15     12
  LargeGrace      15                        15         15     12
  Cattle          15                        15         15     12
  WithGrace       15                        15         15     12
  InKind          15                        15         15     12
```

```
Error in factor(regressand, labels = c("Net assets (BDT)", "Net non-livestock assets (BDT)
効な 'labels' です; 長さ 3 は 1 または 2 であるべきです
```

```
               regressand
attributes      net assets net non livestock assets cattle
  Large/Upfront         15                        0     12
  LargeGrace            15                        0     12
  Cattle                15                        0     12
  WithGrace             15                        0     12
  InKind                15                        0     12
```

```
             num
SubGroup       1   2   3   4 Sum
  All members  9   9   9   9  36
  Owner        9   9   9   0  27
  Adi          9   9   9   0  27
  None         9   9   9   0  27
  Sum         36  36  36   9 117
```

```
            regressand
attributes   Net assets,\nannual price (BDT) Net non-livestock\n assets (BDT)
  Large                                  15                                15
  LargeGrace                             15                                15
  Cattle                                 15                                15
            regressand
attributes   Net broad assets\n (BDT) Cattle (counts)
  Large                           15              9
  LargeGrace                      15              9
  Cattle                          15              9
```

```
            regressand
attributes   Net assets (BDT) Net non-livestock assets\n(BDT) Cattle (counts)
  Large                   15                              15              12
  LargeGrace              15                              15              12
  Cattle                  15                              15              12
```

```
                                                    attributes
ImpactType                                           Traditional Large
  level of trad in each period at school                      18     0
  level of female trad in each period at school               18     0
  nontrad - trad, in each period, at school                    0    18
  female nontrad - female trad, in each period, at school      0    18
                                                    attributes
ImpactType                                           LargeGrace Cattle
  level of trad in each period at school                      0      0
  level of female trad in each period at school               0      0
  nontrad - trad, in each period, at school                  18     18
  female nontrad - female trad, in each period, at school    18     18
```

```
                                                          attributes
ImpactType                                                 Traditional Upfront
  level of trad in each period at school                            18       0
  level of female trad in each period at school                     18       0
  nontrad - trad, in each period, at school                          0      18
  female nontrad - female trad, in each period, at school            0      18
                                                          attributes
ImpactType                                                 WithGrace InKind
  level of trad in each period at school                           0      0
  level of female trad in each period at school                    0      0
  nontrad - trad, in each period, at school                       18     18
  female nontrad - female trad, in each period, at school         18     18
```

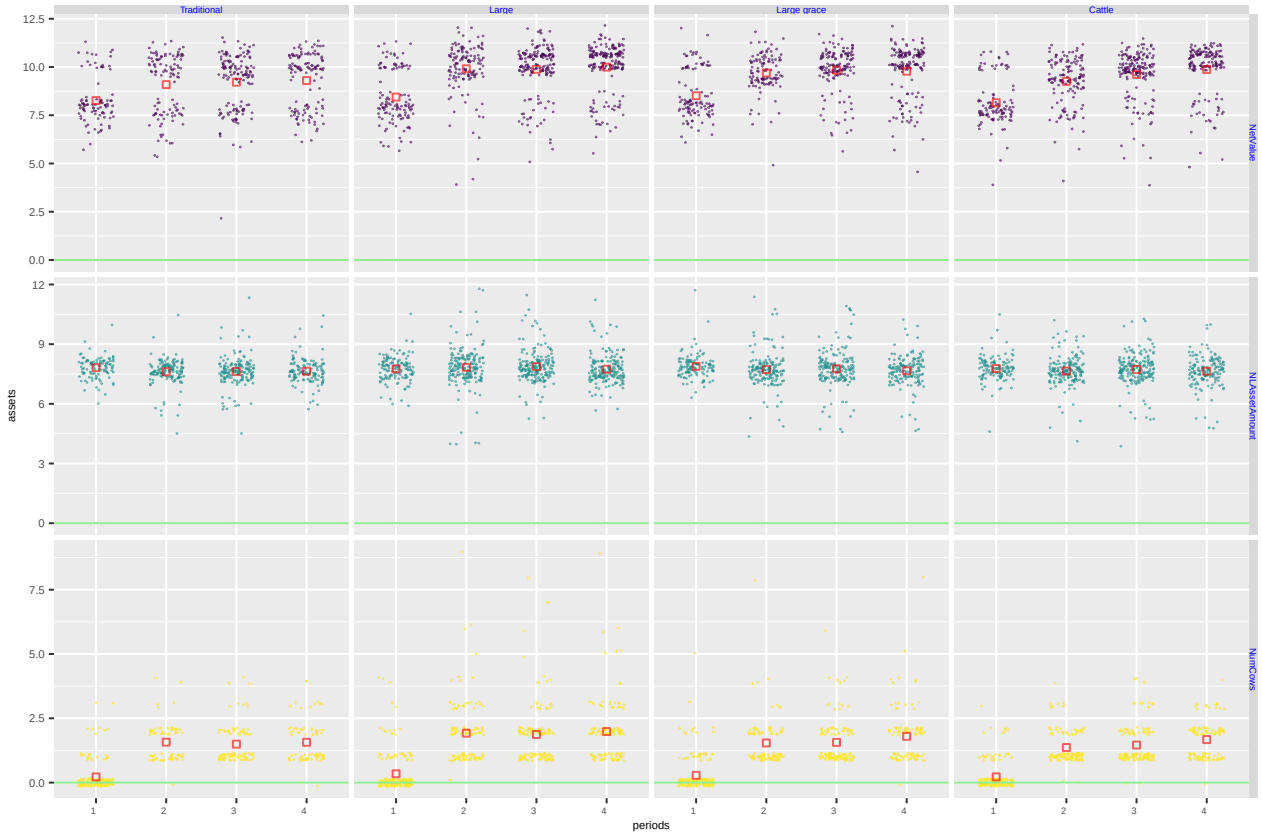
```
                                                                    attributes
ImpactType                                                           Traditional
  level of trad in each period at school
18
  level of female trad in each period at school
18
  nontrad change - trad change, in each period, at school
0
  female nontrad change - female trad change, in each period, at school
0
                                                                    attributes
ImpactType                                                           Large
  level of trad in each period at school                                 0
  level of female trad in each period at school                          0
  nontrad change - trad change, in each period, at school               18
  female nontrad change - female trad change, in each period, at school 18
                                                                    attributes
ImpactType                                                           LargeGrace
  level of trad in each period at school
0
  level of female trad in each period at school
0
  nontrad change - trad change, in each period, at school
18
  female nontrad change - female trad change, in each period, at school
18
                                                                    attributes
ImpactType                                                           Cattle
  level of trad in each period at school                                 0
  level of female trad in each period at school                          0
  nontrad change - trad change, in each period, at school               18
  female nontrad change - female trad change, in each period, at school  18
```

```
                                                                    attributes
ImpactType                                                           Traditional
  level of trad in each period at school
18
  level of female trad in each period at school
18
  nontrad change - trad change, in each period, at school
0
  female nontrad change - female trad change, in each period, at school
0
                                                                    attributes
ImpactType                                                           Upfront
  level of trad in each period at school                                 0
  level of female trad in each period at school                          0
```

```
  nontrad change - trad change, in each period, at school                    18
  female nontrad change - female trad change, in each period, at school      18
                                                                        attributes
ImpactType                                                               WithGrace
  level of trad in each period at school
0
  level of female trad in each period at school
0
  nontrad change - trad change, in each period, at school
18
  female nontrad change - female trad change, in each period, at school
18
                                                                        attributes
ImpactType                                                                InKind
  level of trad in each period at school                                       0
  level of female trad in each period at school                                0
  nontrad change - trad change, in each period, at school                     18
  female nontrad change - female trad change, in each period, at school       18
```

```
          OwnCattle
AdiCattle   0   1 <NA> Sum
     0    519 141    0 660
     1    112   0    0 112
     <NA>   0   0    1   1
     Sum  631 141    1 773
```

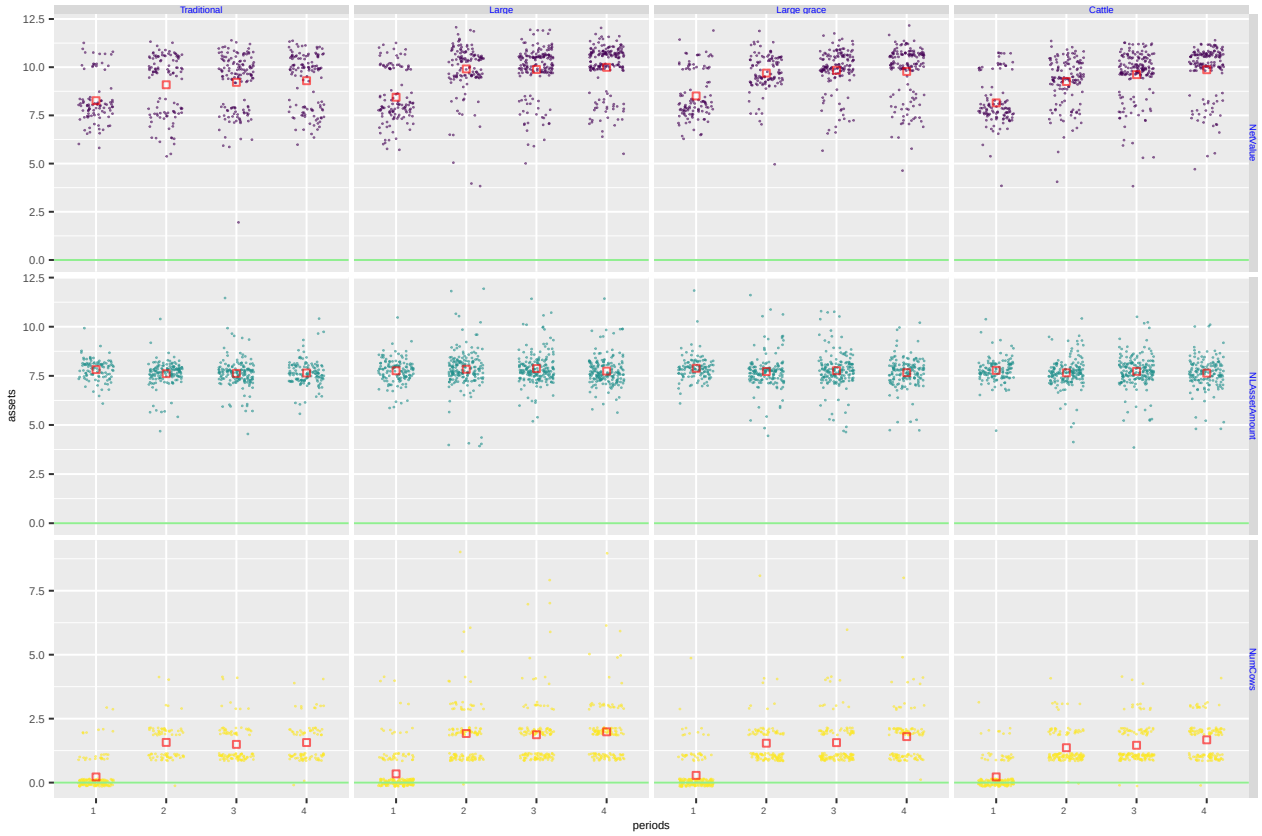
FIGURE 33: ASSETS BY PERIOD



Source: Tabulated with survey data.

Note: Red squares are means of respective data. Asset values are expressed in BDT. Net assets=total assets - debts. Debts include outstanding loaned amount of the experiment. Total assets use items observed in all 4 rounds of household surveys. Net non livestock assets=net assets-livestock asset values. Number of cattle is a headcount of cattle holding. All net assets are in logarithms, number of cattle is in natural numbers.

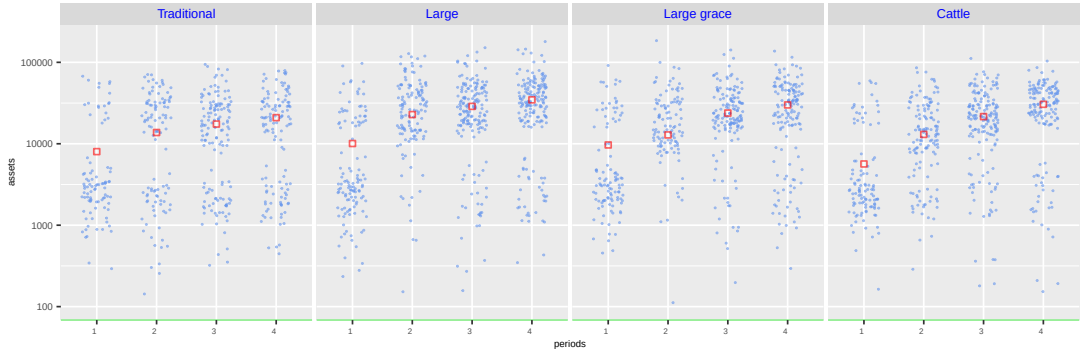
FIGURE 34: ASSETS BY PERIOD AMONG OUT OF SAMPLE MEMBERS



Source: Tabulated with survey data. Out of sample members are households who were not a part of 800 members and treated with the same intervention arms as in our experiment.

Note: Red squares are means of respective data. Asset values are expressed in BDT. Net assets=total assets - debts. Debts include outstanding loaned amount of the experiment. Total assets use items observed in all 4 rounds of household surveys. Net non livestock assets=net assets-livestock asset values. Number of cattle is a headcount of cattle holding. All net assets are in logarithms, number of cattle is in natural numbers.

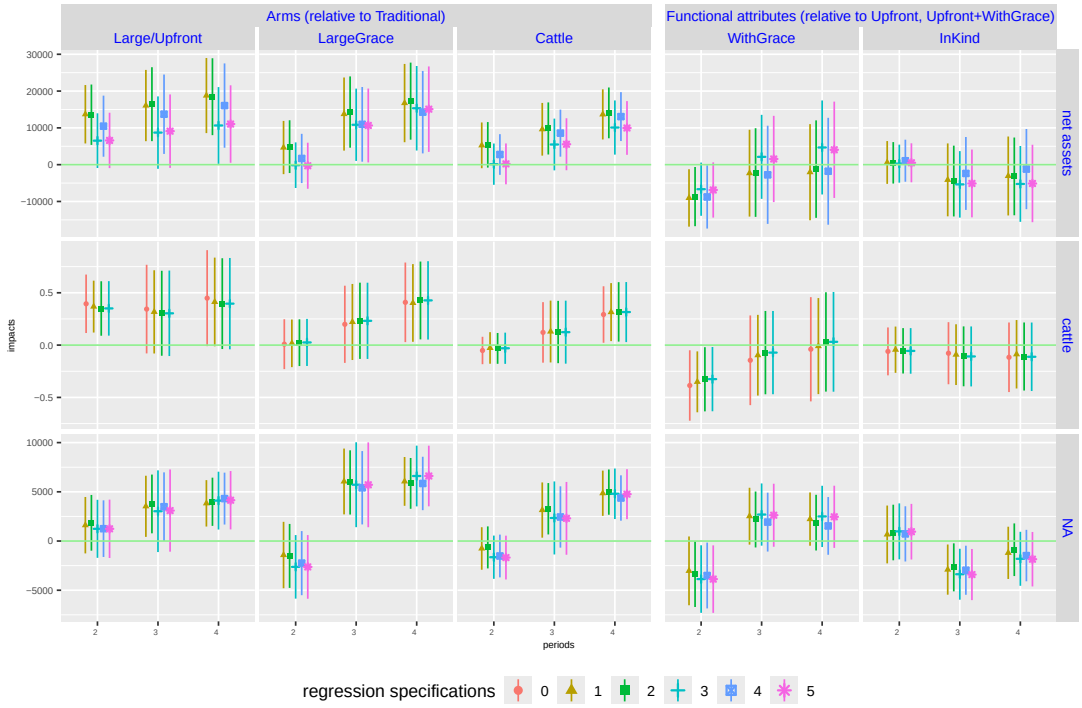
FIGURE 35: NET ASSETS BY PERIOD



Source: Tabulated with survey data.

Note: Red squares are means of respective data. Net assets are in logarithms.

FIGURE 36: IMPACTS ON NET ASSETS RELATIVE TO CONCURRENT TRADITIONAL ARM



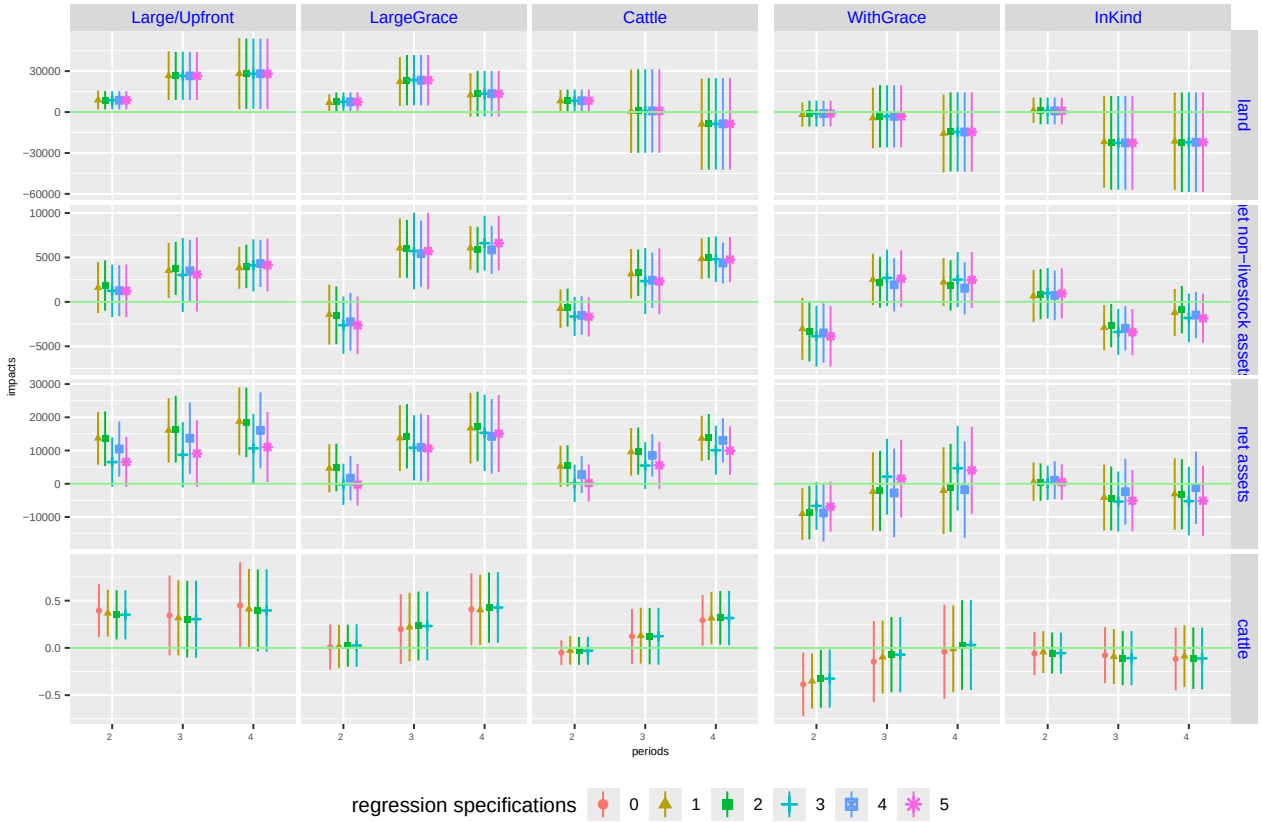
Source: Estimated with survey data.

Note: Cumulative impacts on net assets. Large/Upfront, Large grace, Cattle are impacts relative to Traditional arm. WithGrace and InKind are the impacts of respective marginal functional attributes. Panels show cumulative impacts of respective arm or attributes k relative to tradiotional arm which are obtained by 2nd period $= b_{2k}$, 3rd period $= b_{2k} + b_{3k}$, 4th period $= b_{2k} + b_{4k}$ in the estimating equation $y_{it} = b_1 y_{i1} + b_2 + \boldsymbol{b}_2' \mathbf{d}_i + b_3 c_{3t} + \boldsymbol{b}_3' \mathbf{d}_i c_{3t} + b_4 c_{4t} + \boldsymbol{b}_4' \mathbf{d}_i c_{4t} + e_{it}$, $t = 2, 3, 4$, where y_{it} is the outcome measure of member i in period t, $\mathbf{d}_i$ is a vector of arms or functional attributes, c_{3t}, c_{4t} are indicator variables of period 3 and 4. Bars show 95% confidence intervals using cluster robust standard errors. Asset values are expressed in Taka. Net assets=total assets - debts. Debts include outstanding loaned amount of the experiment. Total assets use items observed in all 4 rounds of household surveys.

- All non-Traditional arms achieve larger net assets than Traditional arm by period 4.
- This is achieved through increases in both livestock and non-livestock assets relative to Traditional arm.
- Large arm shows an earlier increase in all non-Traditional arms. This indicates the borrowers of this arm may be better prepared than other non-Traditional arms as they had to build up cash holding before the loan is disbursed. The impacts in period 4 are similar in all non-Traditional arms. It implies that better preparation may affect the time course of impacts, but not their size (in midium term).
- Cattle arm confidence intervals are tightest among the all non-Traditional arms. While its

sample size is largest ($n = 199$), it is the same as the Large arm and rejection and flood caused attrition are greater (47 vs. 29). This hints that the limited room of discretionary decision making under this arm may have resulted in smaller variations in project returns.

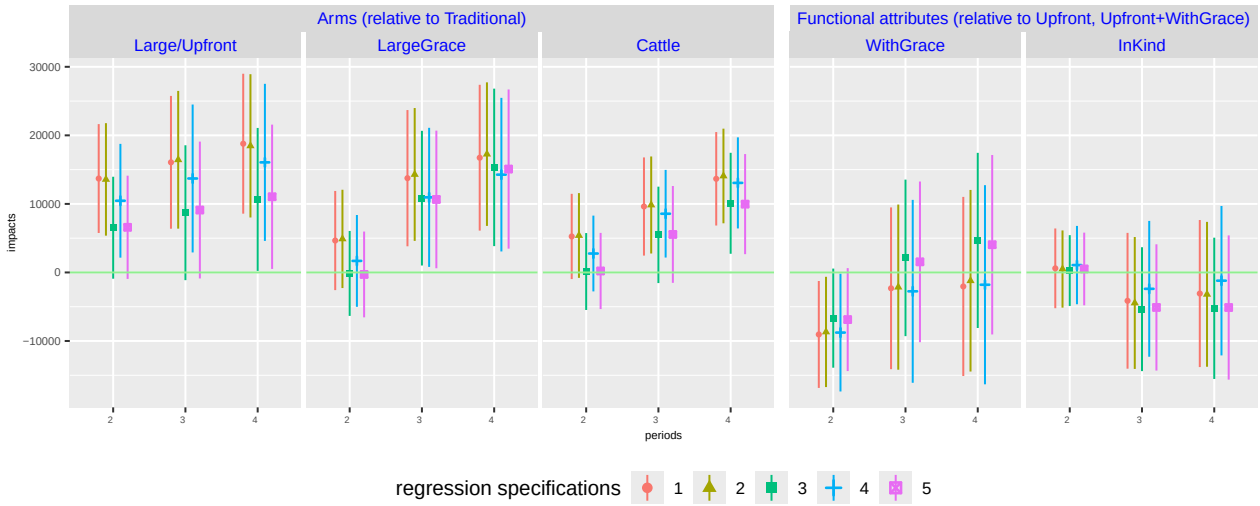
FIGURE 37: CUMULATIVE IMPACTS ON VARIOUS ASSETS RELATIVE TO CONCURRENT TRADITIONAL ARM



Source: Estimated with survey data.

Note: Cumulative impacts on various asset measures. Large/Upfront, Large grace, Cattle are impacts relative to Traditional arm. WithGrace and InKind are the impacts of respective marginal functional attributes. Panels show cumulative impacts of respective arm or attributes k relative to tradiotional arm which are obtained by 2nd period = b_{2k}, 3rd period = $b_{2k} + b_{3k}$, 4th period = $b_{2k} + b_{4k}$ in the estimating equation $y_{it} = b_1 y_{i1} + b_2 + \boldsymbol{b}_2' \mathbf{d}_i + b_3 c_{3t} + \boldsymbol{b}_3' \mathbf{d}_i c_{3t} + b_4 c_{4t} + \boldsymbol{b}_4' \mathbf{d}_i c_{4t} + e_{it}$, $t = 2, 3, 4$, where y_{it} is the outcome measure of member i in period t, $\mathbf{d}_i$ is a vector of arms or functional attributes, c_{3t}, c_{4t} are indicator variables of period 3 and 4. Bars show 95% confidence intervals using cluster robust standard errors. Asset values are expressed in BDT. Net assets=total assets - debts. Debts include outstanding loaned amount of the experiment. Total assets use items observed in all 4 rounds of household surveys. Net non livestock assets=net assets-livestock asset values. Number of cattle is a headcount of cattle holding.

FIGURE 38: CUMULATIVE IMPACTS ON NET ASSETS RELATIVE TO CONCURRENT TRADITIONAL ARM



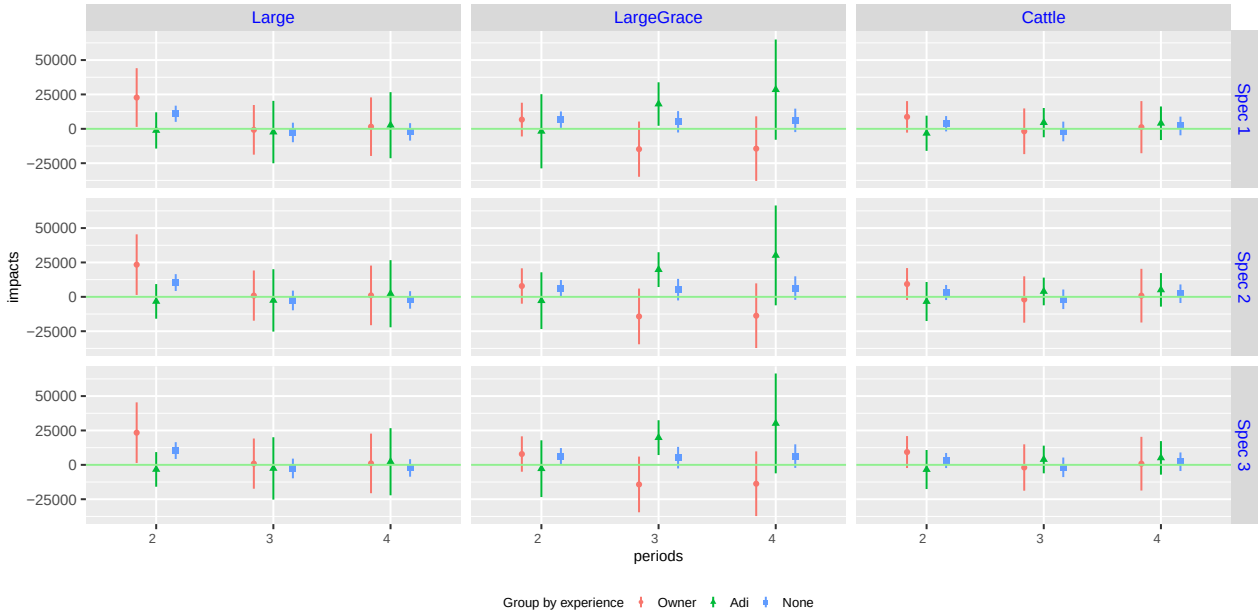
Source: Estimated with survey data.

Note: Cumulative impacts on net assets of non-Traditional arms relative to Traditional arm. Large/Upfront, Large grace, Cattle are impacts relative to Traditional arm. WithGrace and InKind are the impacts of respective marginal functional attributes. Panels show cumulative impacts of respective arm or attributes k relative to tradiotional arm which are obtained by 2nd period $= b_{2k}$, 3rd period $= b_{2k} + b_{3k}$, 4th period $= b_{2k} + b_{4k}$ in the estimating equation $y_{it} = b_1 y_{i1} + b_2 + \boldsymbol{b}_2' \mathbf{d}_i + b_3 c_{3t} + \boldsymbol{b}_3' \mathbf{d}_i c_{3t} + b_4 c_{4t} + \boldsymbol{b}_4' \mathbf{d}_i c_{4t} + e_{it}$, $t = 2, 3, 4$, where y_{it} is the outcome measure of member i in period t, $\mathbf{d}_i$ is a vector of arms or functional attributes, c_{3t}, c_{4t} are indicator variables of period 3 and 4. Bars show 95% confidence intervals using cluster robust standard errors., Asset values are expressed in BDT. Net assets=total assets - debts. Debts include outstanding loaned amount of the experiment. Total assets use items observed in all 4 rounds of household surveys. Net non livestock assets=net assets-livestock asset values. Number of cattle is a headcount of cattle holding.

Results of land holding is similar to net assets, as it is a part of net assets, but the gap widens as period progresses. This is seen in the point estimates of non-traditional arms that are positive, yet most of estimates are imprecise and have their 95% confidence intervals crossing zero. Among all three assets, land holding may be most reliable indicator of wealth for fewer missingness. Net assets are defined as total assets less debt outstanding, yet we have smaller coverage of asset items in the first period which inflates the increasing trend.[†]

[†] This change in coverage is common to all arms, and given randomisation, this should not affect identification of imapcts by ANCOVA estimator as it is captured in the estimates of traditional arm, although it adds an extra noise.

FIGURE 39: CUMULATIVE IMPACTS ON NET ASSETS RELATIVE TO TRADITIONAL ARM BY EXPERIENCE



Source: Estimated with survey data.

Note: Asset values are expressed in BDT. Net assets=total assets - debts. Debts include outstanding loaned amount of the experiment. Total assets use items observed in all 4 rounds of household surveys. Net non livestock assets=net assets-livestock asset values. Number of cattle is a headcount of cattle holding. Adi is a group who has an experience of lease-in cattle contract at the period 2, Own is a group who holds cattle at the period 2, and None are all other individuals. There are 141 members who owned cattle at the period 2, 112 members who ever practiced Adi at the period 2, and 523 members who have no experience in cattle rearing.

FIGURE 40: CUMULATIVE IMPACTS ON CATTLE HOLDING RELATIVE TO TRADITIONAL ARM BY EXPERIENCE

Source: Estimated with survey data.

Note: Asset values are expressed in BDT. Net assets=total assets - debts. Debts include outstanding loaned amount of the experiment. Total assets use items observed in all 4 rounds of household surveys. Net non livestock assets=net assets-livestock asset values. Number of cattle is a headcount of cattle holding. Adi is a group who has an experience of lease-in cattle contract at the period 2, Own is a group who holds cattle at the period 2, and None are all other individuals. There are 141 members who owned cattle at the period 2, 112 members who ever practiced Adi at the period 2, and 523 members who have no experience in cattle rearing.

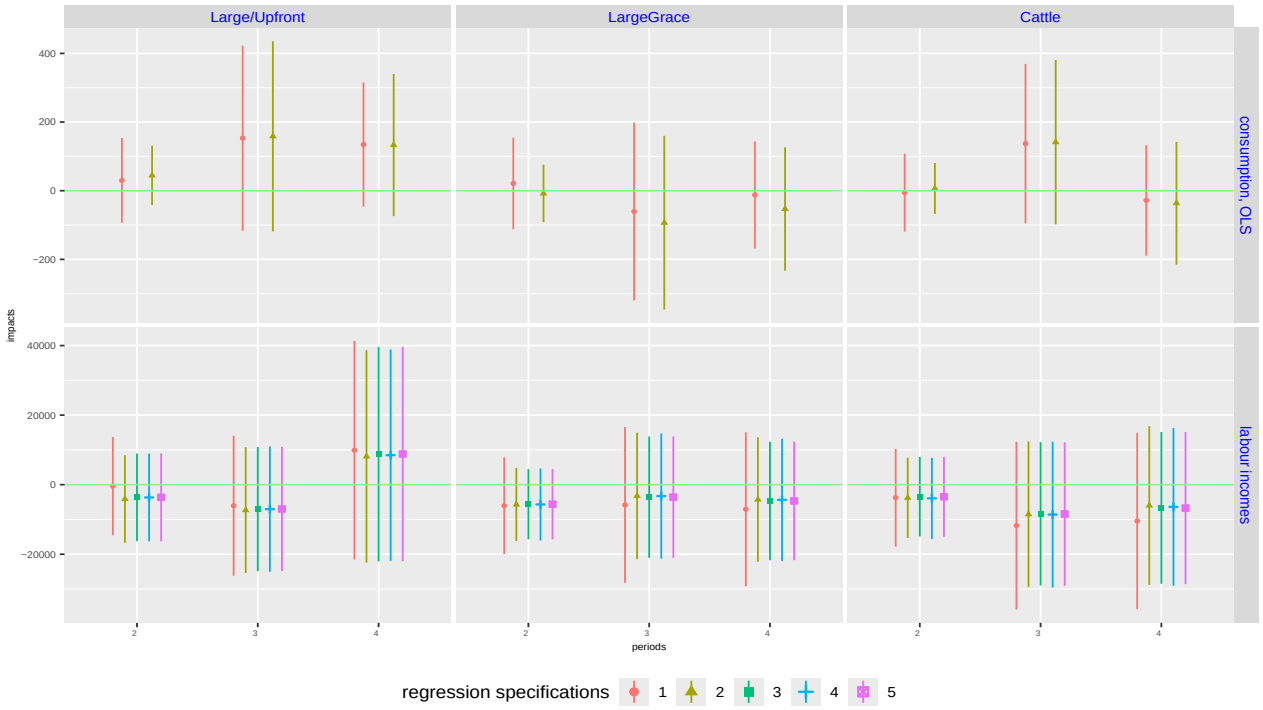
- FIGURE 42 shows negative impacts of nontraditional arm among boys of primary school. Impacts on the boys are always negative among non-traditional arms for all school levels. But only primary school impacts are estimated precisely enough to be statistically distinct from zero.
- FIGURE 43 shows the negative impacts on primary school aged boys are due to the upfront nature of the leding.
- Given that the Upfront nature of the lending causes borrowers to purchase a heiffer, the negative impacts on the boy's schooling is most likely to be due to heiffer related labour. Impacts in period 4 are -0.038646, -0.034893, -0.052939 percentage points for Large, LargeGrace, and Cattle arms, respectively.

V.4 Project cycle

There are issues with the project cycle data.

- There are 94 members who report multiple entries (rows). This is the intended way of reporting multiple projects. However, 12 members report IGAs (iga1_1st, etc.) that do not match with respective project_type. Among all members, project_type is less in details ("cow") and IGAs are more detailed ("cow, trade, goat"). In the majority cases, the contents in the former is a subset of the contents of the latter. In other cases, they simply differ: There are 96 unmatching members of which 60 with NAs in project_type. Given that there are (a rel-

FIGURE 41: CUMULATIVE EFFECTS ON LABOUR INCOME AND PER CAPITA CONSUMPTION



Source: Constructed from ANCOVA estimation results TABLE 36, TABLE 37, TABLE 28, TABLE 29.

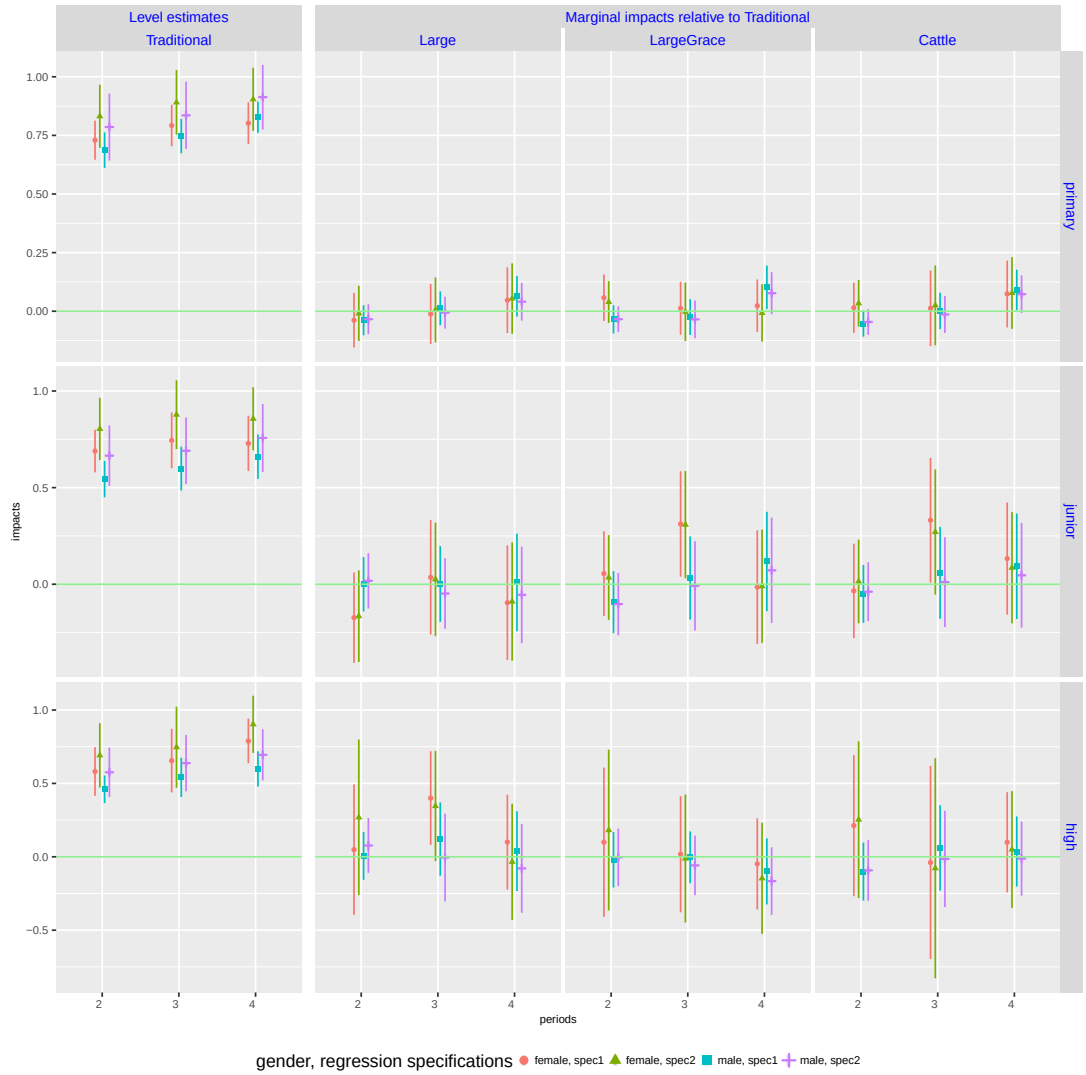
Note: Style and placement of panels follow the FIGURE **??**. Large/Upfront, Large grace, Cattle are impacts relative to Traditional arm. WithGrace and InKind are the impacts of respective marginal functional attributes. Panels show cumulative impacts of respective arm or attributes k relative to tradiotional arm which are obtained by 2nd period $= b_{2k}$, 3rd period $= b_{2k} + b_{3k}$, 4th period $= b_{2k} + b_{4k}$ in the estimating equation $y_{it} = b_1 y_{i1} + b_2 + \boldsymbol{b}_2' \mathbf{d}_i + b_3 c_{3t} + \boldsymbol{b}_3' \mathbf{d}_i c_{3t} + b_4 c_{4t} + \boldsymbol{b}_4' \mathbf{d}_i c_{4t} + e_{it}$, $t = 2, 3, 4$, where y_{it} is the outcome measure of member i in period t, $\mathbf{d}_i$ is a vector of arms or functional attributes, c_{3t}, c_{4t} are indicator variables of period 3 and 4. Bars show 95% confidence intervals using cluster robust standard errors. Per capita consumption is a total of food, hygiene, social, and energy expenditure divided by the number of household members, expressed as the annuaslied values in BDT. In-kind consumption of home made products is imputed at median prices. Labour income is labour incomes of household in 1000 BDT units.

atively small number of) 36 cases of nonNAs in project type and detailed IGAs, I will use information only in igaX_Y and ignore project_type.

- There is one piece of information that may not to be dropped with project_type where 0 members report ox in their project while IGAs report cows. I will overwrite cow as IGA with ox.
- igaX_Y supposedly indicates X-th income generating activity in Y-th most recent project. But year_Y shows that igaX_Y is Y-th oldest project. year_2nd (all 2014), year_3rd (all 2015) are reported only for traditional indicates that year_Y refers to disbursement years, not necessarily the project starting year. This is further supported by no year_2nd is recorded for other arms. Information exists in iga1_1st, iga1_2nd, iga1_3rd (most, 2nd most, 3rd most recent igas), but not in iga2_1st, iga2_2nd, iga2_3rd, iga3_1st, iga3_2nd, iga3_3rd.

	Project					
IGAs	cow	ox	goat/sheep	business/trade	land	sum
2 cows,goat	0	0	2	0	0	2
2 cows,land	6	0	0	0	0	6
2 cows,trade	5	0	0	3	0	8
2 goats,cow	3	0	4	0	0	7
2 goats,trade	0	0	3	2	0	5
2 trades,cow	2	0	0	2	0	4
2 trades,goat	0	0	0	1	0	1

FIGURE 42: EFFECTS ON CHILD SCHOOLING BY ARM



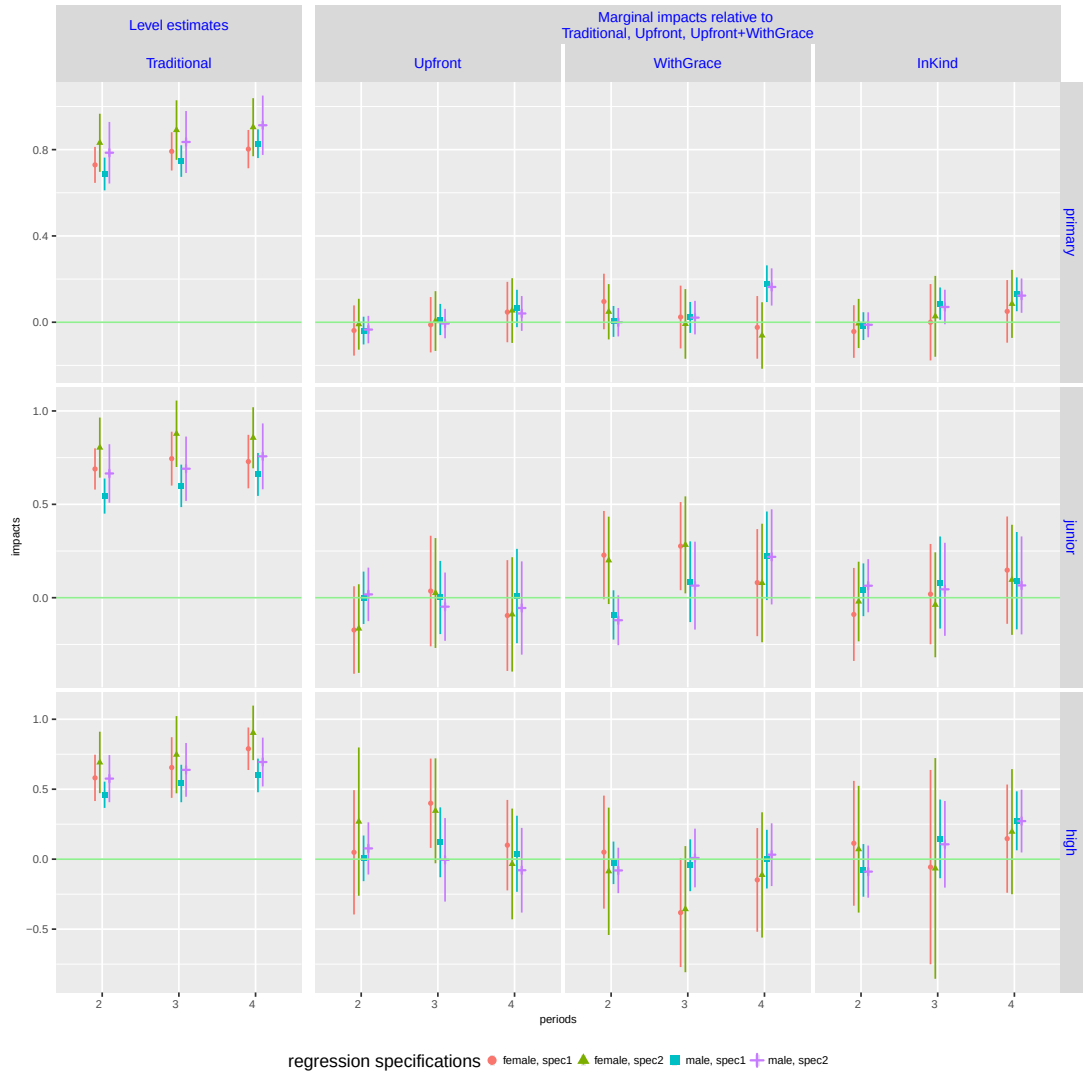
Source: Constructed from ANCOVA estimation results of TABLE **??**.

Note: The left most column shows schooling level of Traditional arm. The right three columns show marginal impacts of each arms relative to the Traditional arm. Each rows are grouped into primary, junior, and high school levels. Large/Upfront, Large grace, Cattle are impacts relative to Traditional arm. WithGrace and InKind are the impacts of respective marginal functional attributes. Panels show cumulative impacts of respective arm or attributes k relative to tradiotional arm which are obtained by 2nd period = b_{2k}, 3rd period = $b_{2k} + b_{3k}$, 4th period = $b_{2k} + b_{4k}$ in the estimating equation $y_{it} = b_1 y_{i1} + b_2 + \mathbf{b}_2'\mathbf{d}_i + b_3 c_{3t} + \mathbf{b}_3'\mathbf{d}_i c_{3t} + b_4 c_{4t} + \mathbf{b}_4'\mathbf{d}_i c_{4t} + e_{it}$, $t = 2, 3, 4$, where y_{it} is the outcome measure of member i in period t, $\mathbf{d}_i$ is a vector of arms or functional attributes, c_{3t}, c_{4t} are indicator variables of period 3 and 4. Bars show 95% confidence intervals using cluster robust standard errors.

cow	327	0	0	0	0	327
cow,goat,land	1	0	0	0	0	1
cow,goat,trade	4	0	7	2	0	13
cow,land,nutcorn	9	0	0	0	0	9
cow,land,trade	3	0	0	0	0	3
land	0	0	0	0	2	2
ox	0	1	0	0	0	1
trade	0	0	0	1	0	1
sum	360	1	16	11	2	390

	Project						
IGAs	cow	ox	goat/sheep	business/trade	land	<NA>	sum
2 cows,goat	0	3	0	0	0	0	3

FIGURE 43: EFFECTS ON CHILD SCHOOLING BY FUNCTIONAL ATTRIBUTE

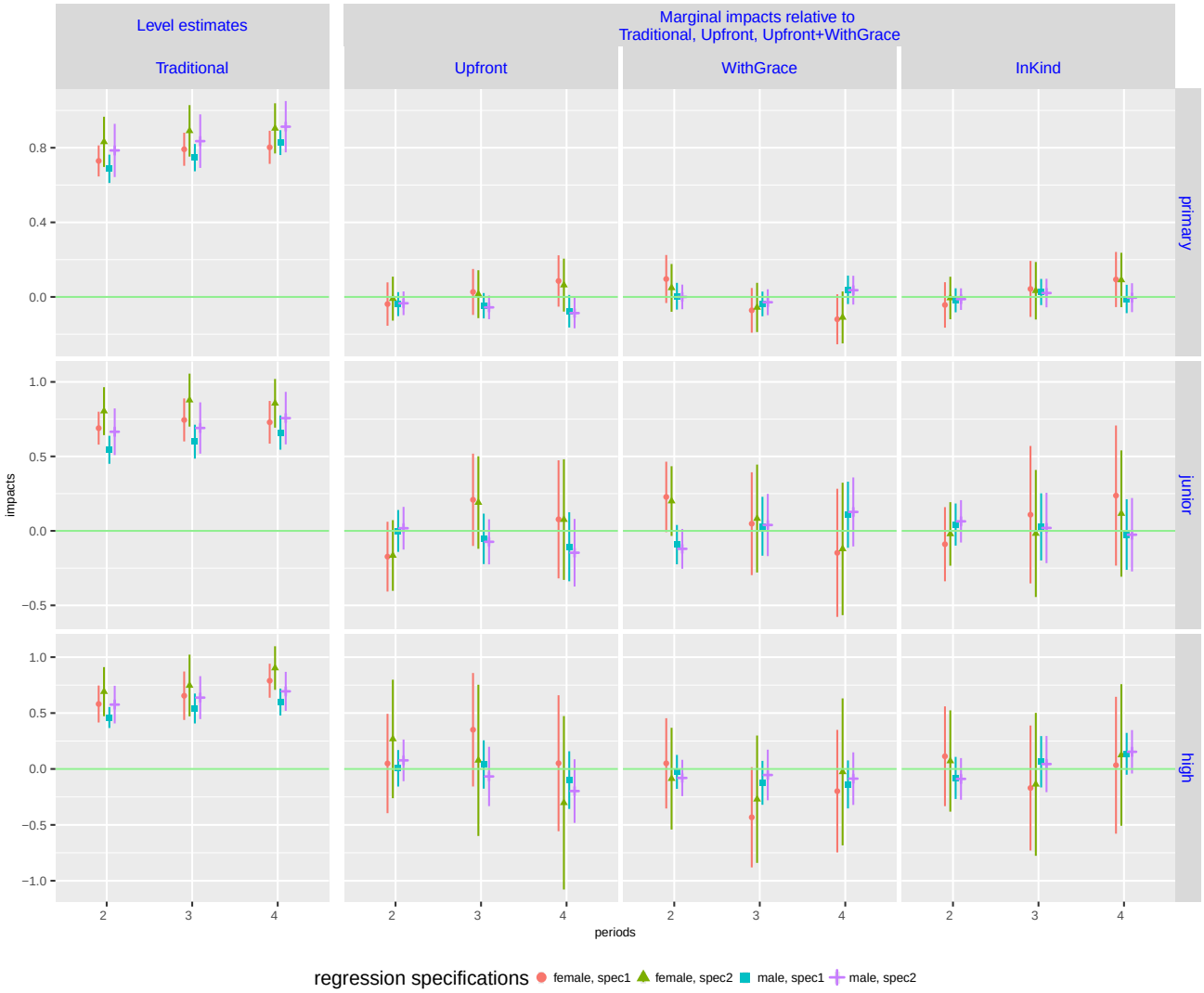


Source: Constructed from ANCOVA estimation results of TABLE **??**.

Note: The left most column shows schooling level of Traditional arm. The right three columns show marginal impacts of each functional attributes. Upfront shows impacts relative to the Traditional arm, With grace shows impacts relative to Traditional arm and Upfront, and In Kind shows impacts relative to Traditional arm, Upfront, and With grace. Each rows are grouped into primary, junior, and high school levels. Large/Upfront, Large grace, Cattle are impacts relative to Traditional arm. WithGrace and InKind are the impacts of respective marginal functional attributes. Panels show cumulative impacts of respective arm or attributes k relative to tradiotional arm which are obtained by 2nd period = b_{2k}, 3rd period = $b_{2k}+b_{3k}$, 4th period = $b_{2k}+b_{4k}$ in the estimating equation $y_{it} = b_1 y_{i1} + b_2 + \boldsymbol{b}_2'\mathbf{d}_i + b_3 c_{3t} + \boldsymbol{b}_3'\mathbf{d}_i c_{3t} + b_4 c_{4t} + \boldsymbol{b}_4'\mathbf{d}_i c_{4t} + e_{it},\ t = 2,3,4$, where y_{it} is the outcome measure of member i in period t, $\mathbf{d}_i$ is a vector of arms or functional attributes, c_{3t}, c_{4t} are indicator variables of period 3 and 4. Bars show 95% confidence intervals using cluster robust standard errors.

2 cows,land	0	4	1	0	0	0	5
2 cows,nutcorn	0	1	0	0	0	0	1
2 cows,trade	0	5	3	0	0	3	11
2 goats,cow	0	5	0	0	0	0	5
2 goats,trade	2	1	0	0	0	7	10
2 trades,cow	0	0	3	0	0	4	7
2 trades,goat	0	1	0	0	0	2	3
cow	0	179	5	1	1	34	220
cow,goat,trade	0	5	0	0	0	1	6
cow,land,nutcorn	0	8	0	0	0	1	9
cow,land,trade	0	1	0	0	0	2	3
goat	0	0	0	0	0	1	1

FIGURE 44: CONCURRENT EFFECTS ON CHILD SCHOOLING BY FUNCTIONAL ATTRIBUTE



Source: Constructed from ANCOVA estimation results of TABLE **??**.

Note: The left most column shows schooling level of Traditional arm. The right three columns show marginal impacts of each functional attributes. Upfront shows impacts relative to the Traditional arm, With grace and In Kind show impacts relative to Upfront. Each rows are grouped into primary, junior, and high school levels. Impacts are per period effects b_{2t} relative to concurrent respective comparison group, not the total effects $b_0 + b_{2t}$.

```
  house              0   0          0              0    0    1   1
  land               5   1          0              0    0    4  10
  ox                 1   0          0              0    0    0   1
  trade              6   5          1              0    0    0  12
  sum               14 219         13              1    1   60 308
```

```
        year_2nd
year_1st   0 2014
    2013  27   95
```

```
        year_3rd
year_1st   0 2015
    2013  27   95
```

```
          Arm          BStatus                    IGAs     Project
```

```
traditional: 0   borrower:27   2 cows,land      : 8   cow :14
large      : 0                 2 cows,nutcorn   : 1   ox  :12
large grace:22                 cow,land,nutcorn:18   NA's: 1
cow        : 0
NA's       : 5
```

```
          Arm          BStatus                IGAs                Project    year_2nd
traditional:95   borrower:95   2 cows,trade   :19   cow             :21   2014:95
                               cow,goat,trade:19   ox              :22
                               2 goats,trade  :15   goat/sheep      :23
                               2 goats,cow    :12   business/trade:10
                               2 trades,cow   :11   NA's            :19
                               cow,land,trade: 6
                               (Other)        :13
 year_3rd
 2015:95
```

```
          Arm          BStatus                  IGAs    Project   year_3rd
large grace:22   borrower:27   2 cows,land      : 8   cow :14   0:27
NA's       : 5                 2 cows,nutcorn   : 1   ox  :12
                               cow,land,nutcorn:18   NA's: 1
```

Tabulation of loan projects shows that there is no member invested all in goats and goats are not the members' main assets. Among the 85 tradtional loan recipients who report their loan projects, there are 27 members who report to have purchased a goat twice and 15 who have invested in a retail trade twice. It is also puzzling that, among traditional arm members, 27 report to have invested in a cow twice, which seems unlikely with their purchasing powers.

```
x
   2 cows,goat     2 cows,land    2 cows,trade     2 goats,cow   2 goats,trade
2 trades,cow
             5               3              19              12              15
11
 2 trades,goat   cow,goat,land cow,goat,trade cow,land,trade
             4               1              19               6
```

Number of reported IGAs by arm shows that traditional members report a project everytime they receive a loan, hence all have 3 IGAs. Interestingly, none has three goats.

```
                1      3 sum
traditional   0.00 100.00  95
large       100.00   0.00 217
large grace  88.83  11.17 197
cow            NaN    NaN   0
<NA>         97.35   2.65 189
```

```
x
   2 cows,goat     2 cows,land    2 cows,trade     2 goats,cow   2 goats,trade
2 trades,cow
             5               3              19              12              15
11
 2 trades,goat   cow,goat,land cow,goat,trade cow,land,trade
             4               1              19               6
```

Goat holding size and total holding increase by the final round but the number of holders is decreasing, indicating a limited number of expansion in goat holding. Interestingly, it is only traditional arm holding that are increasing while all ther arms reduce the goat holding size.

```
addmargins(table0(lvo[o800==1L & tee == 1, .(Arm, Num)]))
```

```
             Num
Arm             1   2   3   4 Sum
  traditional  13   9  39 114 175
  large         6   6  22 166 200
  large grace  14   7  26 142 189
  cattle       11   8  20 160 199
  Sum          44  30 107 582 763
```

```
          Arm           hhid           survey  NumOwned.goatsheep NumOwned.chickenduck
 traditional:20   Min.   : 7010103   1:116   0:100              0      :63
 large      :14   1st Qu.: 7021186            1:  6              2      :19
 large grace:51   Median : 7036864            2:  7              4      :16
 cattle     :31   Mean   : 7818279            4:  3              3      : 6
                  3rd Qu.: 7096233                               5      : 5
                  Max.   :81710316                               1      : 3
                                                                 (Other): 4

 NumCows ObPattern
 0:104   0111: 1
 1:  8   1000:91
 2:  3   1010: 1
 3:  1   1011: 0
         1100: 8
         1110: 1
         1111:14
```

Cattle ownership at rd 1.

```
             NumCows
Arm             0   1   2   3   4   5 Sum
  traditional 147  20   6   2   0   0 175
  large       156  31   8   2   2   0 199
  large grace 163  25   9   1   0   1 199
  cattle      167  24   7   1   0   0 199
  Sum         633 100  30   6   2   1 772
```

Cattle ownership of attriters (at round 4) at rd 1.

```
             NumCows
Arm             0  1  2  3 Sum
  traditional  18  1  1  0  20
  large         1  0  0  0   1
  large grace   3  0  0  0   3
  cattle        7  2  3  1  13
  Sum          29  3  4  1  37
```

Cattle ownership at rd 4

```
             NumCows
Arm             0   1   2   3   4   5   6   8   9 <NA> Sum
  traditional   2  59  30   8   2   0   0   0   0   31 132
  large         0  62  67  21   4   3   2   0   1   29 189
  large grace   1  61  58  11   5   1   0   1   0   24 162
  cattle        1  68  61  16   2   0   0   0   0   22 170
  Sum           4 250 216  56  13   4   2   1   1  106 653
```

```
            Arm survey     N MeanNumCow MedianNumCow
         <fctr>  <num> <int>       <num>        <num>
 1: traditional      1   175    0.217143            0
 2: traditional      2   140    1.542169            1
 3: traditional      3   157    1.440678            1
 4: traditional      4   132    1.495050            1
```

```
 5:        large       1   199   0.306533            0
 6:        large       2   172   1.953125            2
 7:        large       3   188   1.784810            2
 8:        large       4   189   1.943750            2
 9:  large grace       1   199   0.256281            0
10:  large grace       2   154   1.530435            1
11:  large grace       3   170   1.496599            1
12:  large grace       4   162   1.760870            2
13:       cattle       1   199   0.206030            0
14:       cattle       2   177   1.365517            1
15:       cattle       3   181   1.436709            1
16:       cattle       4   170   1.662162            2
```

Last observed round.

```
                     LastObservedRound
BStatus                    1   2   3   4 sum
  borrower                11   7  19 538 575
  pure saver               0   0   0   0   0
  individual rejection    16   3   4  66  89
  group rejection         15   2   4  49  70
  rejection by flood      13   1  26   0  40
  sum                     55  13  53 653 774
```

Attach 0 cattle ownership when nothing is reported.

```
              NumCows
Arm              0   1   2   3   4   5 sum
  traditional  147  20   6   2   0   0 175
  large        156  31   8   2   2   0 199
  large grace  163  25   9   1   0   1 199
  cattle       167  24   7   1   0   0 199
  sum          633 100  30   6   2   1 772
```

Number of cattle in round 4.

```
              NumCows
Arm              0   1   2   3   4   5   6   8   9 sum
  traditional   33  59  30   8   2   0   0   0   0 132
  large         29  62  67  21   4   3   2   0   1 189
  large grace   25  61  58  11   5   1   0   1   0 162
  cattle        23  68  61  16   2   0   0   0   0 170
  sum          110 250 216  56  13   4   2   1   1 653
```

There are 5 members in cattle arm who report not to own cattle at least once after receiving cattle. Total holding size and holders may be too low. Below gives holding size of cattle among nonattriting members in cattle arm.

```
       NumOwned.cowx
survey   0   1   2   3   4 <NA> Sum
     1 150  22   4   0   0    0 176
     2   2  93  28  10   1   29 163
     3   2  97  36   9   3   22 169
     4   1  68  61  16   2   22 170
```

Members of traditional arm have the smallest cattle holding. In Table 147, ANOVA and Kruskal-Wallis tests indicate that means of cattle holding are different between arms in 2017. Tukey HST gives test results that account for multiple testing and shows that there is a difference between traditional and large, and other arms are in between yet their standard errors are too large to be considered statistically different from both extremes.

```
              NumCows
```

```
Arm              0   1   2   3   4   5   6   8   9 sum
  Traditional   33  59  30   8   2   0   0   0   0 132
  Large         29  62  67  21   4   3   2   0   1 189
  Large grace   25  61  58  11   5   1   0   1   0 162
  Cattle        23  68  61  16   2   0   0   0   0 170
  sum          110 250 216  56  13   4   2   1   1 653
```

Cattle arm: add a cow for borrowers if NumCows is NA or zero in rd 2 onwards.

```
             NumCows
Arm              0   1   2   3   4   5   6   8   9 sum
  Traditional   33  59  30   8   2   0   0   0   0 132
  Large         29  62  67  21   4   3   2   0   1 189
  Large grace   25  61  58  11   5   1   0   1   0 162
  Cattle        11  80  61  16   2   0   0   0   0 170
  sum           98 262 216  56  13   4   2   1   1 653
```

```
Margins computed over dimensions
in the following order:
1: Arm
2: groupid
```

```
             groupid
Arm           70203 70206 70210 70538 70962 sum
  Traditional     0     0     0     0     0   0
  Large           1     0     0     1     4   6
  Large grace     0     1     1     0     0   2
  Cattle          0     0     0     0     0   0
  sum             1     1     1     1     4   8
```

Table 147: Anova results for cattle holding equality by arm

Tests	(1) rd4	(2) rd4 edited	(3) rd3	(4) rd2	(5) rd1
a	b	c	d	e	f
ANOVA	(0.06)	(0.04)	(0.17)	(0.01)	(34.90)
Kruskal-Wallis	(0.07)	(0.02)	(0.52)	(0.10)	(42.63)
Tukey HST					
Large-Traditional	0.5016	0.5016	0.4172	0.5392	0.0894
	(0.02)	(0.02)	(0.07)	(0.01)	(48.58)
Large grace-Traditional	0.3561	0.3561	0.2113	0.2286	0.0391
	(2.35)	(2.05)	(22.54)	(24.96)	(92.48)
Cattle-Traditional	0.3031	0.3737	0.1713	0.2044	−0.0111
	(6.90)	(1.19)	(39.63)	(31.90)	(99.80)
Large grace-Large	−0.1455	−0.1455	−0.2059	−0.3106	−0.0503
	(57.96)	(56.63)	(21.05)	(4.09)	(84.19)
Cattle-Large	−0.1984	−0.1279	−0.2459	−0.3348	−0.1005
	(29.35)	(65.68)	(8.59)	(1.68)	(34.97)
Cattle-Large grace	−0.0529	0.0176	−0.0400	−0.0242	−0.0503
	(96.92)	(99.87)	(98.21)	(99.68)	(84.19)

Source: Survey data.

Note: Each column uses respective year cattle ownership information. For ANOVA and Kruskal-Wallis, each entry indicates p values. ANOVA tests for the null of equality of means under normality. Kruskal-Wallis tests for the null of no stochastic dominance among samples without using the normality assumption. Tukey's honest significant tests show difference in means and p values in parenthesis that account for multiple testing under normality. In column 2, we edited data by assigning 1 to members of cattle arm at dates after disbursement if reported holding is NA or zero.

```
   1  2  3  4 5 6 7 sum total HoldingSize
1 39 44 14 33 3 6 1 140   359        2.56
2  0  0  0  0 0 0 0   0     0         NaN
3  0  0  0  0 0 0 0   0     0         NaN
4  0  0  0  0 0 0 0   0     0         NaN
```

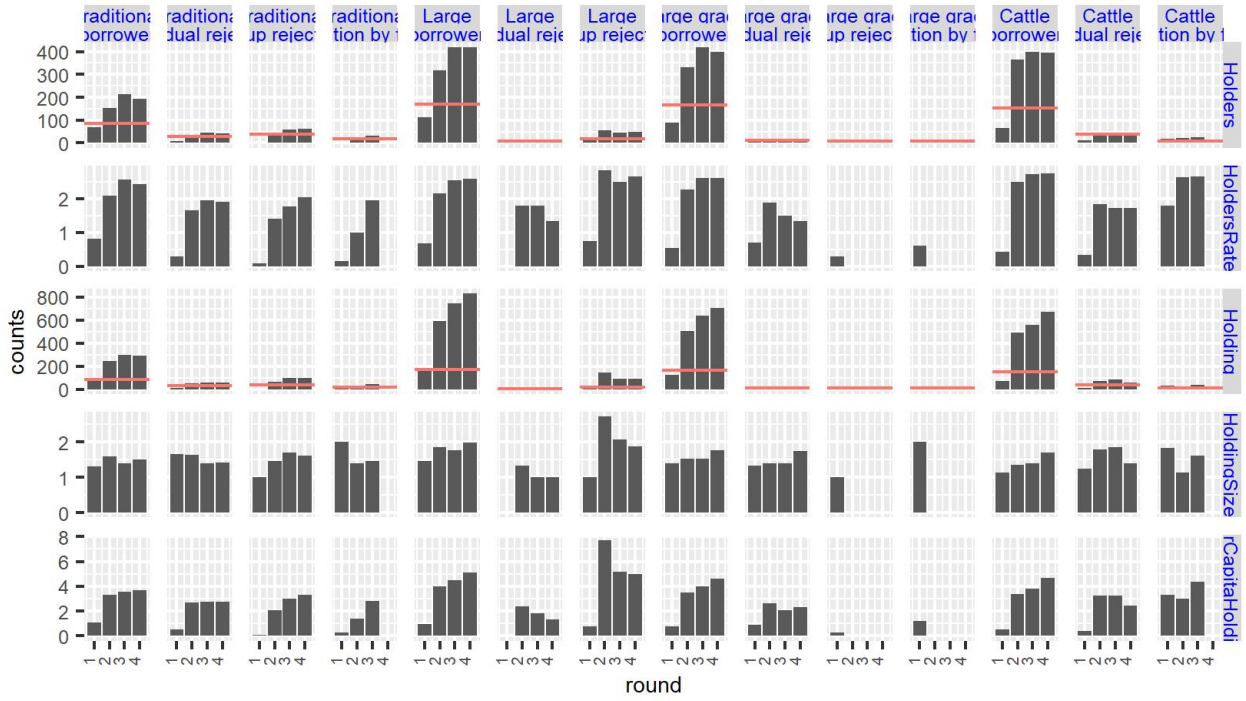
```
Warning: Invalid .internal.selfref detected and fixed by taking a (shallow) copy of the da
```

```
             InitialOwner
Arm             0   1 Sum
  Traditional 147  28 175
  Large       156  43 199
  Large grace 163  36 199
  Cattle      167  32 199
  Sum         633 139 772
```

```
Warning: Invalid .internal.selfref detected and fixed by taking a (shallow) copy of the da
```

Given the misreporting in large loans arms, the power may get affected and only large seems to stand out from all other arms, while large grace, cattle are not different in terms of cattle ownership against traditional.

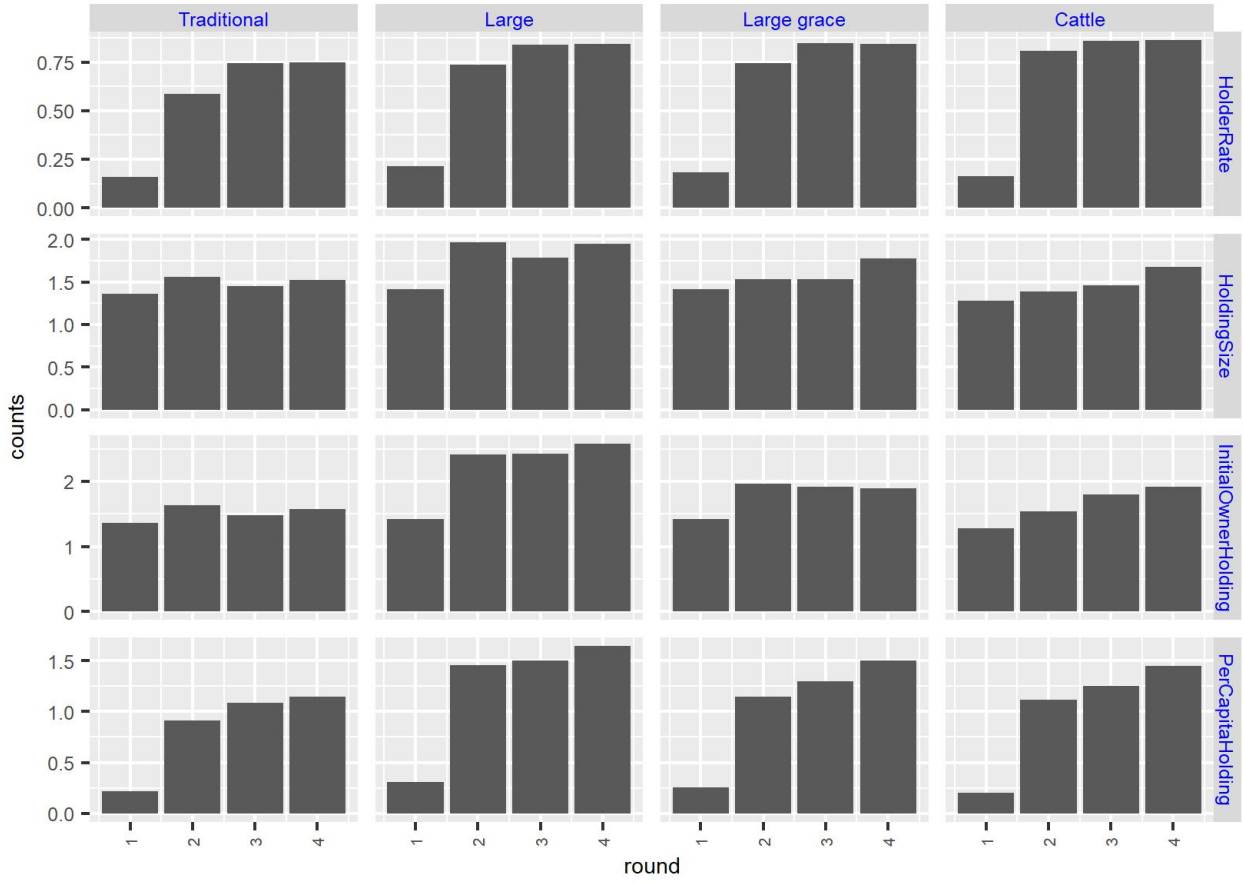
FIGURE 45: CATTLE HOLDING BY ARM AND BORROWER STATUS



Source: Survey data.

Note: Numbers of loan recipients are 85, 170, 166, 152, numbers of reported livestock holding are 85, 170, 166, 152 for traditional, large, large grace, cattle arms, respectively. Red horizontal lines indicate number of loan recipients.

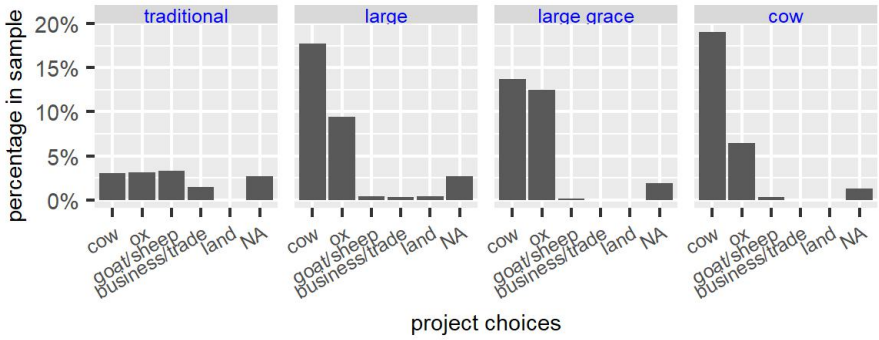
FIGURE 46: CATTLE HOLDING BY ARM



Source: Survey data.

Note: Numbers of survey participants are 175, 199, 199, 199 for traditional, large, large grace, cattle arms in round 1, respectively. Holders rates are the number of cattle owners per arm size, holding size is average holding per owner, initial owner holding are average holding per owner who held cattle at period 2, and per capita holding is cattle owned per arm member. Initial owner holding and holder rates show impacts on the intensive and extensive margins, respectively. Per capita holding shows the total impacts on cattle holding.

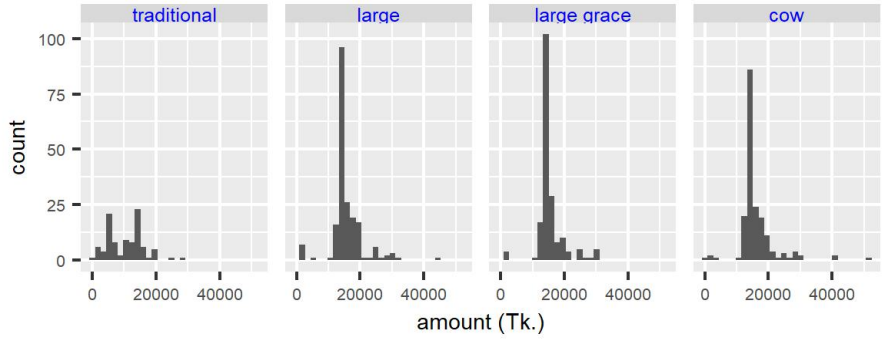
FIGURE 47: PROJECT CHOICES



Source: Survey data.

Note: Ratios of reported project choices using the lending to total number of projects in InitialSample. NAs include nonresponse to the question and dropped out individuals.

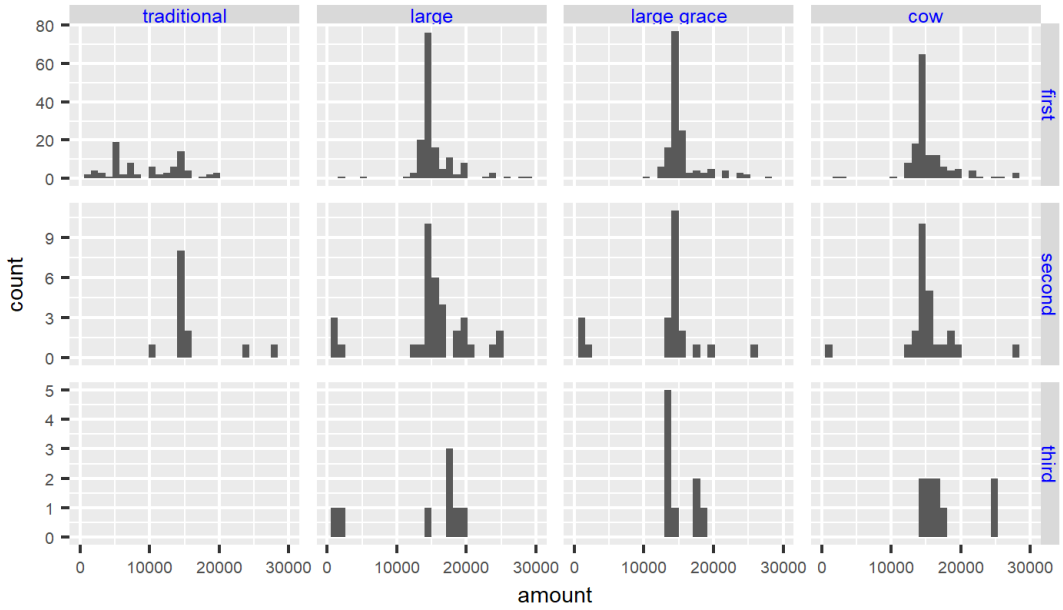
FIGURE 48: LARGEST FIXED INVESTMENT AMOUNT



Source: Survey data.

Note: Reported largest one-off investment amounts of the lending.

FIGURE 49: FIXED INVESTMENT SEQUENCE AND AMOUNTS



Source: Survey data.

Note: Reported largest one-off investment amounts of the lending. Top figure is the first investments reported by year, bottom figure is later investments reported by the sequence of investment projects.

References

Frison, Lars and Stuart J. Pocock, "Repeated measures in clinical trials: Analysis using mean summary statistics and its implications for design," *Statistics in Medicine*, 1992, *11* (13), 1685–1704.

Wooldridge, Jeffrey M., *Econometric Analysis of Cross Section and Panel Data*, MIT Press, 2010.

```
objectName memorySize
         Z  113.52 MB
      adw2   93.18 MB
       arA   77.64 MB
   estlist   76.85 MB
    linhyp   61.49 MB
   svTP11   53.09 MB
    svTP5   52.27 MB
   svTP10   52.27 MB
    svTP4   50.33 MB
    svTP9   50.33 MB
    svTP2   49.51 MB
    svTP7   49.51 MB
    svTP3   48.69 MB
    svTP8   48.69 MB
    svTP1   47.87 MB
    svTP6   47.87 MB
```

```
             arA2     46.4 MB
              aob    45.51 MB
arACompletePanel    45.51 MB
            svP11    44.08 MB
```