

Permutation tests using o800 == 1

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11:40

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Use the ‘trimmed’ sample (has all 800 members) rather than the ‘initial’ sample (has only 776 members after dropping members who received loans only twice). To set to the trimmed sample, set the parameter UseTrimmedSample to T.

```
UseTrimmedSample ← T
```

```
TestMedian ← F
```

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

Correct AttritIn for these 24 members. Keep only the 1st obs for all members.

```
9 Sum
24 24
```

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 786 members.

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

	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
cow	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
cow	177	23	200
Sum	684	92	776

Attrition of members who were not affected by floods.

Arm						
Attrited	traditional	large	large	grace	cow	Sum
0	107	164		160	147	578
1	2	7		7	6	22
Sum	109	171		167	153	600

Among 800 observations, there are 4 whose villages are washed away and 70 who by group rejected the assigned arms which are traditional, large, large grace with 40, 20, 10, 0 individuals, respectively. There are 31, 9, 13, 37 individuals who individually rejected traditional, large, large grace, cow, respectively. Among attrited HHs, when were they lost?

1
92

Reasons for attrition and relation to flood damage.

BStatus				
FloodInRd1	borrower	individual	rejection	group rejection
0	11		7	2
1	11		7	13
<NA>	0		1	0

BStatus				
AssignOriginal	borrower	individual	rejection	group rejection
traditional	2		6	0
large	7		0	0
large grace	7		2	0
cow	6		7	0
<NA>	0		0	15

Use coin package's `independence.test`: Approximate permutation tests by randomly resampling 100000 times.

.1 Trimmed sample

TABLE 1: PERMUTATION TEST RESULTS OF ATTRITION

variables	NonAttrited	Attrited	p-value.lower	p-value.mid	p-value.upper
HeadLiteracy	0.115	0.130	0.609	0.670	0.731
HeadAge	37.996	38.598	0.591	0.593	0.595
HHsize	4.178	4.272	0.542	0.555	0.568
Arm	0.789	0.652	0.000	0.000	0.000
FloodInRd1	0.493	0.527	0.502	0.540	0.577
HAssetAmount	763	741	0.833	0.834	0.836
PAssetAmount	1109	2181	0.105	0.105	0.105
LivestockValue	5124	5000	0.924	0.962	1.000
NumCows	0.256	0.250	0.923	0.962	1.000
NetValue	6786	7446	0.696	0.696	0.697
n	684	92	(rate: 0.119)		

Source: Estimated with GUK administrative and survey data.

Notes: 1. R's package coin is used for baseline mean covariates to conduct approximate permutation tests. Number of repetition is set to 100000.

2. See footnotes of TABLE 17.

TABLE 2: PERMUTATION TEST RESULTS OF ATTRITION AMONG TRADITIONAL ARM

variables	NonAttrited	Attrited	p-value.lower	p-value.mid	p-value.upper
HeadLiteracy	0.118	0.000	0.018	0.032	0.046
HeadAge	38.497	38.125	0.848	0.852	0.856
HHsize	4.167	3.750	0.137	0.147	0.156
FloodInRd1	0.479	0.387	0.326	0.377	0.428
HAssetAmount	702	842	0.470	0.473	0.475
PAssetAmount	997	926	0.813	0.813	0.814
LivestockValue	4722	2581	0.283	0.336	0.388
NumCows	0.236	0.129	0.285	0.336	0.388
NetValue	6206	4343	0.446	0.446	0.446
n	144	32	(rate: 0.182)		

Source: Estimated with GUK administrative and survey data.

Notes: 1. R's package coin is used for baseline mean covariates to conduct approximate permutation tests. Number of repetition is set to 100000.

2. See footnotes of TABLE 18.

TABLE 3: PERMUTATION TEST RESULTS OF ATTRITION AMONG NON-TRADITIONAL ARM

variables	NonAttrited	Attrited	p-value.lower	p-value.mid	p-value.upper
HeadLiteracy	0.115	0.200	0.036	0.051	0.065
HeadAge	37.862	38.850	0.470	0.472	0.474
HHsize	4.181	4.550	0.061	0.064	0.067
FloodInRd1	0.497	0.600	0.102	0.120	0.138
HAssetAmount	779	688	0.473	0.475	0.477
PAssetAmount	1139	2829	0.093	0.093	0.093
LivestockValue	5232	6531	0.498	0.530	0.563
NumCows	0.262	0.327	0.499	0.531	0.564
NetValue	6941	9409	0.255	0.255	0.255
n	540	60	(rate: 0.100)		

Source: Estimated with GUK administrative and survey data.

Notes: 1. R's package coin is used for baseline mean covariates to conduct approximate permutation tests. Number of repetition is set to 100000.

2. See footnotes of TABLE 18.

TABLE 4: PERMUTATION TEST RESULTS OF ATTRITERS OF TRADITIONAL AND NON-TRADITIONAL ARMS

variables	NonTradArm	TradArm	p-value.lower	p-value.mid	p-value.upper
HeadLiteracy	0.200	0.000	0.003	0.005	0.007
HeadAge	38.850	38.125	0.768	0.772	0.776
HHsize	4.550	3.750	0.021	0.023	0.026
FloodInRd1	0.600	0.387	0.048	0.062	0.075
HAssetAmount	688	842	0.522	0.525	0.528
PAssetAmount	2829	926	0.834	0.834	0.834
LivestockValue	6531	2581	0.170	0.203	0.237
NumCows	0.327	0.129	0.171	0.204	0.237
NetValue	9409	4343	0.309	0.309	0.309
n	60	32	(rate: 0.348)		

Source: Estimated with GUK administrative and survey data.

Notes: 1. R's package coin is used for baseline mean covariates to conduct approximate permutation tests. Number of repetition is set to 100000.

2. See footnotes of TABLE 18.

TABLE 5: PERMUTATION TEST RESULTS OF NON-FLOOD ATTRITION

variables	NonAttrited	Attrited	p-value.lower	p-value.mid	p-value.upper
HeadLiteracy	0.115	0.096	0.650	0.736	0.823
HeadAge	37.996	38.769	0.588	0.590	0.593
HHsize	4.178	4.077	0.617	0.635	0.654
Arm	0.789	0.769	0.153	0.159	0.165
FloodInRd1	0.493	0.608	0.114	0.131	0.148
HAssetAmount	763	678	0.536	0.538	0.540
PAssetAmount	1109	720	0.187	0.187	0.187
LivestockValue	5124	1500	0.059	0.068	0.077
NumCows	0.256	0.075	0.057	0.066	0.075
NetValue	6786	2570	0.043	0.043	0.043
n	684	52	(rate: 0.071)		

Source: Estimated with GUK administrative and survey data.

Notes: 1. R's package coin is used for baseline mean covariates to conduct approximate permutation tests. Number of repetition is set to 100000.

2. See footnotes of TABLE 17.

TABLE 6: PERMUTATION TEST RESULTS OF NON-FLOOD ATTRITION AMONG TRADITIONAL ARM

variables	NonAttrited	Attrited	p-value.lower	p-value.mid	p-value.upper
HeadLiteracy	0.118	0.000	0.126	0.245	0.364
HeadAge	38.497	34.083	0.140	0.142	0.144
HHsize	4.167	3.417	0.067	0.076	0.084
FloodInRd1	0.479	0.455	0.758	0.879	1.000
HAssetAmount	702	1027	0.278	0.281	0.283
PAssetAmount	997	819	0.604	0.604	0.605
LivestockValue	4722	3636	0.597	0.707	0.817
NumCows	0.236	0.182	0.596	0.706	0.817
NetValue	6206	5483	0.882	0.882	0.882
n	144	12	(rate: 0.077)		

Source: Estimated with GUK administrative and survey data.

Notes: 1. R's package coin is used for baseline mean covariates to conduct approximate permutation tests. Number of repetition is set to 100000.

2. See footnotes of TABLE 18.

TABLE 7: PERMUTATION TEST RESULTS OF NON-FLOOD ATTRITION AMONG NON-TRADITIONAL ARM

variables	NonAttrited	Attrited	p-value.lower	p-value.mid	p-value.upper
HeadLiteracy	0.115	0.125	0.810	0.905	1.000
HeadAge	37.862	40.175	0.160	0.161	0.163
HHsize	4.181	4.275	0.695	0.715	0.736
FloodInRd1	0.497	0.650	0.048	0.060	0.071
HAssetAmount	779	582	0.195	0.196	0.197
PAssetAmount	1139	693	0.191	0.191	0.191
LivestockValue	5232	690	0.043	0.049	0.055
NumCows	0.262	0.034	0.041	0.047	0.053
NetValue	6941	1466	0.029	0.029	0.029
n	540	40	(rate: 0.069)		

Source: Estimated with GUK administrative and survey data.

Notes: 1. R's package coin is used for baseline mean covariates to conduct approximate permutation tests. Number of repetition is set to 100000.

2. See footnotes of TABLE 18.

TABLE 8: PERMUTATION TEST RESULTS OF NON-FLOOD ATTRITERS OF TRADITIONAL AND NON-TRADITIONAL ARMS

variables	NonTradArm	TradArm	p-value.lower	p-value.mid	p-value.upper
HeadLiteracy	0.125	0.000	0.076	0.202	0.328
HeadAge	40.175	34.083	0.127	0.128	0.130
HHsize	4.275	3.417	0.076	0.085	0.095
Arm	1.000	0.000	0.000	0.000	0.000
FloodInRd1	0.650	0.455	0.166	0.235	0.305
HAssetAmount	582	1027	0.278	0.281	0.284
PAssetAmount	693	819	0.673	0.675	0.676
LivestockValue	690	3636	0.016	0.098	0.180
NumCows	0.034	0.182	0.017	0.097	0.178
NetValue	1466	5483	0.051	0.051	0.051
n	40	12	(rate: 0.231)		

Source: Estimated with GUK administrative and survey data.

Notes: 1. R's package coin is used for baseline mean covariates to conduct approximate permutation tests. Number of repetition is set to 100000.

2. See footnotes of TABLE 18.

TABLE 9: PERMUTATION TEST RESULTS OF NON-FLOOD ATTRITERS OF CATTLE AND ALL OTHER ARMS

variables	NonCowArm	CowArm	p-value.lower	p-value.mid	p-value.upper
HeadLiteracy	0.026	0.308	0.000	0.006	0.011
HeadAge	37.487	42.615	0.185	0.189	0.193
HHsize	4.000	4.308	0.454	0.524	0.594
FloodInRd1	0.632	0.538	0.529	0.636	0.744
HAssetAmount	613	869	0.549	0.552	0.556
PAssetAmount	670	867	0.485	0.487	0.488
LivestockValue	2222	0	0.242	0.390	0.537
NumCows	0.111	0.000	0.243	0.391	0.539
NetValue	3657	313	0.103	0.103	0.103
n	39	13	(rate: 0.250)		

Source: Estimated with GUK administrative and survey data.

Notes: 1. R's package coin is used for baseline mean covariates to conduct approximate permutation tests. Number of repetition is set to 100000.

2. See footnotes of TABLE 18.

TABLE 10: PERMUTATION TEST RESULTS OF NON-FLOOD ATTRITERS OF CATTLE AND LARGE GRACE

variables	NonCowArm	CowArm	p-value.lower	p-value.mid	p-value.upper
HeadLiteracy	0.000	0.308	0.000	0.010	0.020
HeadAge	41.263	42.615	0.783	0.788	0.793
HHsize	4.368	4.308	0.913	0.956	1.000
FloodInRd1	0.684	0.538	0.267	0.371	0.475
HAssetAmount	426	869	0.265	0.270	0.275
PAssetAmount	595	867	0.417	0.417	0.418
LivestockValue	0	0	NA	NA	NA
NumCows	0.000	0.000	NA	NA	NA
NetValue	1175	313	0.522	0.523	0.523
n	19	13	(rate: 0.406)		

Source: Estimated with GUK administrative and survey data.

Notes: 1. R's package coin is used for baseline mean covariates to conduct approximate permutation tests. Number of repetition is set to 100000.

2. See footnotes of TABLE 18.

TABLE 11: PERMUTATION TEST RESULTS OF SURVIVAL

variables	NonSurvived	Survived	p-value.lower	p-value.mid	p-value.upper
HeadLiteracy	0.104	0.123	0.389	0.427	0.465
HeadAge	37.835	38.159	0.688	0.690	0.691
HHsize	4.072	4.236	0.149	0.153	0.157
Arm	0.581	0.850	0.000	0.000	0.000
FloodInRd1	0.548	0.477	0.066	0.072	0.079
HAssetAmount	707	781	0.321	0.322	0.322
PAssetAmount	1440	1154	0.550	0.550	0.550
LivestockValue	3714	5642	0.052	0.056	0.060
NumCows	0.186	0.282	0.050	0.054	0.058
NetValue	5521	7362	0.108	0.108	0.108
n	222	554	(rate: 0.714)		

Source: Estimated with GUK administrative and survey data.

Notes: 1. R's package coin is used for baseline mean covariates to conduct approximate permutation tests. Number of repetition is set to 100000.

2. See footnotes of TABLE 17.

TABLE 12: PERMUTATION TEST RESULTS OF SURVIVAL AMONG TRADITIONAL ARM

variables	NonSurvived	Survived	p-value.lower	p-value.mid	p-value.upper
HeadLiteracy	0.075	0.120	0.324	0.384	0.444
HeadAge	38.370	38.494	0.935	0.938	0.941
HHsize	3.957	4.241	0.192	0.201	0.210
FloodInRd1	0.370	0.566	0.006	0.008	0.010
HAssetAmount	803	641	0.273	0.273	0.274
PAssetAmount	967	1004	0.957	0.957	0.957
LivestockValue	2174	6747	0.005	0.006	0.008
NumCows	0.109	0.337	0.005	0.007	0.008
NetValue	3741	8241	0.013	0.013	0.013
n	93	83	(rate: 0.472)		

Source: Estimated with GUK administrative and survey data.

Notes: 1. R's package coin is used for baseline mean covariates to conduct approximate permutation tests. Number of repetition is set to 100000.

2. See footnotes of TABLE 18.

TABLE 13: PERMUTATION TEST RESULTS OF SURVIVAL AMONG NON-TRADITIONAL ARMS

variables	NonSurvived	Survived	p-value.lower	p-value.mid	p-value.upper
HeadLiteracy	0.124	0.123	0.880	0.940	1.000
HeadAge	37.444	38.100	0.516	0.518	0.520
HHsize	4.155	4.236	0.564	0.575	0.587
FloodInRd1	0.674	0.462	0.000	0.000	0.000
HAssetAmount	638	806	0.070	0.070	0.070
PAssetAmount	1777	1180	0.239	0.239	0.239
LivestockValue	4915	5447	0.633	0.663	0.693
NumCows	0.246	0.272	0.633	0.664	0.695
NetValue	6909	7206	0.845	0.845	0.845
n	129	471	(rate: 0.785)		

Source: Estimated with GUK administrative and survey data.

Notes: 1. R's package coin is used for baseline mean covariates to conduct approximate permutation tests. Number of repetition is set to 100000.

2. See footnotes of TABLE 18.

TABLE 14: PERMUTATION TEST RESULTS OF SURVIVING MEMBERS OF TRADITIONAL AND NON-TRADITIONAL ARMS

variables	NonTradArm	TradArm	p-value.lower	p-value.mid	p-value.upper
HeadLiteracy	0.123	0.120	0.857	0.928	1.000
HeadAge	38.100	38.494	0.731	0.733	0.735
HHsize	4.236	4.241	0.966	0.983	1.000
FloodInRd1	0.462	0.566	0.074	0.085	0.095
HAssetAmount	806	641	0.152	0.152	0.152
PAssetAmount	1180	1004	0.649	0.649	0.649
LivestockValue	5447	6747	0.361	0.385	0.409
NumCows	0.272	0.337	0.366	0.390	0.414
NetValue	7206	8241	0.535	0.535	0.535
n	471	83	(rate: 0.150)		

Source: Estimated with GUK administrative and survey data.

Notes: 1. R's package coin is used for baseline mean covariates to conduct approximate permutation tests. Number of repetition is set to 100000.

2. See footnotes of TABLE 18.

TABLE 15: PERMUTATION TEST RESULTS OF SURVIVING MEMBERS OF CATTLE AND ALL OTHER ARMS

variables	NonCowArm	CowArm	p-value.lower	p-value.mid	p-value.upper
HeadLiteracy	0.113	0.150	0.246	0.275	0.304
HeadAge	38.226	37.973	0.786	0.788	0.790
HHsize	4.285	4.102	0.166	0.171	0.177
FloodInRd1	0.484	0.459	0.561	0.595	0.629
HAssetAmount	780	785	0.956	0.956	0.957
PAssetAmount	1298	753	0.028	0.028	0.028
LivestockValue	6437	3425	0.015	0.016	0.018
NumCows	0.322	0.171	0.015	0.016	0.018
NetValue	8315	4702	0.007	0.007	0.007
n	407	147	(rate: 0.265)		

Source: Estimated with GUK administrative and survey data.

Notes: 1. R's package coin is used for baseline mean covariates to conduct approximate permutation tests. Number of repetition is set to 100000.

2. See footnotes of TABLE 18.

TABLE 16: PERMUTATION TEST RESULTS OF SURVIVING MEMBERS OF CATTLE AND LARGE GRACE ARMS

variables	NonCowArm	CowArm	p-value.lower	p-value.mid	p-value.upper
HeadLiteracy	0.106	0.150	0.236	0.271	0.306
HeadAge	38.481	37.973	0.644	0.647	0.649
HHsize	4.181	4.102	0.573	0.589	0.604
FloodInRd1	0.352	0.459	0.046	0.055	0.063
HAssetAmount	798	785	0.905	0.906	0.907
PAssetAmount	1480	753	0.003	0.003	0.003
LivestockValue	5375	3425	0.126	0.139	0.152
NumCows	0.269	0.171	0.124	0.137	0.150
NetValue	7448	4702	0.046	0.046	0.046
n	160	147	(rate: 0.479)		

Source: Estimated with GUK administrative and survey data.

Notes: 1. R's package coin is used for baseline mean covariates to conduct approximate permutation tests. Number of repetition is set to 100000.

2. See footnotes of TABLE 18.

TABLE 17: PERMUTATION TEST RESULTS OF REJECTION

variables	NonRejected	Rejected	p-value.lower	p-value.mid	p-value.upper
HeadLiteracy	0.127	0.081	0.096	0.112	0.128
HeadAge	38.145	37.763	0.669	0.671	0.673
HHsize	4.255	3.938	0.014	0.015	0.015
Arm	0.830	0.556	0.000	0.000	0.000
FloodInRd1	0.475	0.585	0.013	0.015	0.017
HAssetAmount	780	682	0.238	0.239	0.239
PAssetAmount	1324	889	0.295	0.295	0.295
LivestockValue	5700	2685	0.007	0.008	0.008
NumCows	0.285	0.134	0.007	0.008	0.008
NetValue	7518	4125	0.008	0.008	0.008
n	616	160	(rate: 0.206)		

Source: Estimated with GUK administrative and survey data.

- Notes: 1. R's package coin is used for baseline mean covariates to conduct approximate permutation tests. Number of repetition is set to 100000. Step-down method is used to adjust for multiple testing of a multi-factor grouping variable. The second and third columns show means of each group. For Arm, proportions of non-traditional arm between two groups are tested.
2. Standard errors are clustered at group (village) level. p-value.lower, p-value.mid, p-value.upper indicate lower-bound, mid p value, and upper-bound of the observed test statistic and the null distribution.
3. See the footnote of TABLE ?? for description of variables.

TABLE 18: PERMUTATION TEST RESULTS OF REJECTION AMONG TRADITIONAL ARM

variables	NonRejected	Rejected	p-value.lower	p-value.mid	p-value.upper
HeadLiteracy	0.095	0.099	0.795	0.897	1.000
HeadAge	38.848	37.800	0.498	0.503	0.508
HHsize	4.181	3.958	0.318	0.331	0.344
FloodInRd1	0.514	0.386	0.090	0.106	0.122
HAssetAmount	714	744	0.839	0.841	0.843
PAssetAmount	996	967	0.959	0.959	0.959
LivestockValue	6095	1714	0.007	0.009	0.011
NumCows	0.305	0.086	0.007	0.009	0.011
NetValue	7685	3161	0.014	0.014	0.014
n	105	71	(rate: 0.403)		

Source: Estimated with GUK administrative and survey data.

- Notes: 1. R's package coin is used for baseline mean covariates to conduct approximate permutation tests. Number of repetition is set to 100000. Step-down method is used to adjust for multiple testing of a multi-factor grouping variable. The second and third columns show means of each group.
2. Standard errors are clustered at group (village) level. p-value.lower, p-value.mid, p-value.upper indicate lower-bound, mid p value, and upper-bound of the observed test statistic and the null distribution.
3. See the footnote of TABLE ?? for description of variables.

TABLE 19: PERMUTATION TEST RESULTS OF REJECTION AMONG NON-TRADITIONAL ARM

variables	NonRejected	Rejected	p-value.lower	p-value.mid	p-value.upper
HeadLiteracy	0.133	0.067	0.083	0.099	0.115
HeadAge	38.000	37.733	0.819	0.821	0.823
HHsize	4.270	3.921	0.036	0.038	0.039
FloodInRd1	0.467	0.742	0.000	0.000	0.000
HAssetAmount	794	633	0.131	0.131	0.131
PAssetAmount	1392	828	0.215	0.215	0.215
LivestockValue	5619	3544	0.156	0.173	0.190
NumCows	0.281	0.177	0.156	0.173	0.190
NetValue	7483	4979	0.156	0.156	0.156
n	511	89	(rate: 0.148)		

Source: Estimated with GUK administrative and survey data.

- Notes: 1. R's package coin is used for baseline mean covariates to conduct approximate permutation tests. Number of repetition is set to 100000.
2. See footnotes of TABLE 18.

TABLE 20: PERMUTATION TEST RESULTS OF REJECTERS, TRADITIONAL VS. NON-TRADITIONAL ARM

variables	NonTradArm	TradArm	p-value.lower	p-value.mid	p-value.upper
HeadLiteracy	0.067	0.099	0.386	0.474	0.562
HeadAge	37.733	37.800	0.967	0.969	0.972
HHsize	3.921	3.958	0.881	0.901	0.920
FloodInRd1	0.742	0.386	0.000	0.000	0.000
HAssetAmount	633	744	0.389	0.391	0.392
PAssetAmount	828	967	0.329	0.329	0.329
LivestockValue	3544	1714	0.170	0.203	0.236
NumCows	0.177	0.086	0.170	0.204	0.238
NetValue	4979	3161	0.211	0.211	0.211
n	89	71	(rate: 0.444)		

Source: Estimated with GUK administrative and survey data.

- Notes: 1. R's package coin is used for baseline mean covariates to conduct approximate permutation tests. Number of repetition is set to 100000.
2. See footnotes of TABLE 18.

TABLE 21: PERMUTATION TEST RESULTS OF GROUP REJECTION

variables	NonGRejected	GRejected	p-value.lower	p-value.mid	p-value.upper
HeadLiteracy	0.123	0.057	0.077	0.098	0.119
HeadAge	38.188	36.841	0.287	0.288	0.290
HHsize	4.201	4.071	0.464	0.478	0.492
Arm	0.807	0.429	0.000	0.000	0.000
FloodInRd1	0.490	0.571	0.168	0.190	0.212
HAssetAmount	766	705	0.608	0.609	0.609
PAssetAmount	1259	994	0.627	0.627	0.627
LivestockValue	5377	2000	0.040	0.044	0.049
NumCows	0.269	0.100	0.040	0.045	0.050
NetValue	7141	3509	0.052	0.052	0.052
n	706	70	(rate: 0.090)		

Source: Estimated with GUK administrative and survey data.

Notes: 1. R's package coin is used for baseline mean covariates to conduct approximate permutation tests. Number of repetition is set to 100000.

2. See footnotes of TABLE 17.

TABLE 22: PERMUTATION TEST RESULTS OF GROUP REJECTION AMONG TRADITIONAL ARM

variables	NonGRejected	GRejected	p-value.lower	p-value.mid	p-value.upper
HeadLiteracy	0.110	0.050	0.222	0.293	0.365
HeadAge	38.257	39.026	0.674	0.677	0.680
HHsize	4.059	4.200	0.577	0.599	0.620
FloodInRd1	0.519	0.275	0.003	0.005	0.007
HAssetAmount	677	892	0.218	0.219	0.220
PAssetAmount	964	1054	0.779	0.779	0.779
LivestockValue	5481	500	0.010	0.011	0.012
NumCows	0.274	0.025	0.009	0.011	0.012
NetValue	7029	1984	0.019	0.019	0.019
n	136	40	(rate: 0.227)		

Source: Estimated with GUK administrative and survey data.

Notes: 1. R's package coin is used for baseline mean covariates to conduct approximate permutation tests. Number of repetition is set to 100000.

2. See footnotes of TABLE 18.

TABLE 23: PERMUTATION TEST RESULTS OF GROUP REJECTION AMONG NON-TRADITIONAL ARM

variables	NonGRejected	GRejected	p-value.lower	p-value.mid	p-value.upper
HeadLiteracy	0.126	0.067	0.247	0.330	0.413
HeadAge	38.171	34.000	0.028	0.028	0.028
HHsize	4.235	3.900	0.196	0.208	0.221
FloodInRd1	0.483	0.967	0.000	0.000	0.000
HAssetAmount	786	455	0.055	0.055	0.056
PAssetAmount	1329	914	0.541	0.541	0.542
LivestockValue	5352	5000	0.859	0.929	1.000
NumCows	0.268	0.250	0.857	0.929	1.000
NetValue	7167	6557	0.854	0.854	0.854
n	570	30	(rate: 0.050)		

Source: Estimated with GUK administrative and survey data.

Notes: 1. R's package coin is used for baseline mean covariates to conduct approximate permutation tests. Number of repetition is set to 100000.

2. See footnotes of TABLE 18.

TABLE 24: PERMUTATION TEST RESULTS OF GROUP REJECTERS, TRADITIONAL VS. NON-TRADITIONAL ARM

variables	NonTradArm	TradArm	p-value.lower	p-value.mid	p-value.upper
HeadLiteracy	0.067	0.050	0.627	0.814	1.000
HeadAge	34.000	39.026	0.027	0.027	0.028
HHsize	3.900	4.200	0.342	0.366	0.390
FloodInRd1	0.967	0.275	0.000	0.000	0.000
HAssetAmount	455	892	0.024	0.025	0.025
PAssetAmount	914	1054	0.596	0.596	0.596
LivestockValue	5000	500	0.001	0.007	0.013
NumCows	0.250	0.025	0.001	0.007	0.013
NetValue	6557	1984	0.010	0.010	0.010
n	30	40	(rate: 0.571)		

Source: Estimated with GUK administrative and survey data.

Notes: 1. R's package coin is used for baseline mean covariates to conduct approximate permutation tests. Number of repetition is set to 100000.

2. See footnotes of TABLE 18.

TABLE 25: PERMUTATION TEST RESULTS OF INDIVIDUAL REJECTION

variables	NonIRejected	IRejected	p-value.lower	p-value.mid	p-value.upper
HeadLiteracy	0.127	0.100	0.387	0.443	0.499
HeadAge	38.145	38.494	0.762	0.764	0.767
HHsize	4.255	3.833	0.009	0.010	0.011
Arm	0.830	0.656	0.000	0.000	0.000
FloodInRd1	0.475	0.596	0.030	0.035	0.040
HAssetAmount	780	664	0.280	0.281	0.281
PAssetAmount	1324	807	0.194	0.194	0.194
LivestockValue	5700	3146	0.077	0.085	0.092
NumCows	0.285	0.157	0.076	0.084	0.091
NetValue	7518	4540	0.068	0.068	0.068
n	616	90	(rate: 0.127)		

Source: Estimated with GUK administrative and survey data.

Notes: 1. R's package coin is used for baseline mean covariates to conduct approximate permutation tests. Number of repetition is set to 100000.

2. See footnotes of TABLE 17.

TABLE 26: PERMUTATION TEST RESULTS OF INDIVIDUAL REJECTION AMONG TRADITIONAL ARM

variables	NonIRejected	IRejected	p-value.lower	p-value.mid	p-value.upper
HeadLiteracy	0.095	0.161	0.190	0.261	0.331
HeadAge	38.848	36.258	0.212	0.213	0.215
HHsize	4.181	3.645	0.061	0.066	0.072
FloodInRd1	0.514	0.533	0.839	0.919	1.000
HAssetAmount	714	547	0.430	0.433	0.435
PAssetAmount	996	851	0.719	0.720	0.720
LivestockValue	6095	3333	0.239	0.282	0.324
NumCows	0.305	0.167	0.239	0.281	0.324
NetValue	7685	4731	0.297	0.297	0.297
n	105	31	(rate: 0.228)		

Source: Estimated with GUK administrative and survey data.

Notes: 1. R's package coin is used for baseline mean covariates to conduct approximate permutation tests. Number of repetition is set to 100000.

2. See footnotes of TABLE 18.

TABLE 27: PERMUTATION TEST RESULTS OF INDIVIDUAL REJECTION AMONG NON-TRADITIONAL ARM

variables	NonIRejected	IRejected	p-value.lower	p-value.mid	p-value.upper
HeadLiteracy	0.133	0.068	0.149	0.181	0.212
HeadAge	38.000	39.732	0.223	0.224	0.225
HHsize	4.270	3.932	0.092	0.096	0.101
FloodInRd1	0.467	0.627	0.021	0.024	0.028
HAssetAmount	794	724	0.587	0.589	0.591
PAssetAmount	1392	784	0.181	0.181	0.181
LivestockValue	5619	3051	0.135	0.151	0.168
NumCows	0.281	0.153	0.134	0.151	0.167
NetValue	7483	4443	0.129	0.129	0.129
n	511	59	(rate: 0.104)		

Source: Estimated with GUK administrative and survey data.

Notes: 1. R's package coin is used for baseline mean covariates to conduct approximate permutation tests. Number of repetition is set to 100000.

2. See footnotes of TABLE 18.

TABLE 28: PERMUTATION TEST RESULTS OF INDIVIDUAL REJECTERS, TRADITIONAL VS. NON-TRADITIONAL ARM

variables	NonTradArm	TradArm	p-value.lower	p-value.mid	p-value.upper
HeadLiteracy	0.068	0.161	0.157	0.211	0.265
HeadAge	39.732	36.258	0.219	0.220	0.222
HHsize	3.932	3.645	0.445	0.465	0.484
FloodInRd1	0.627	0.533	0.369	0.432	0.495
HAssetAmount	724	547	0.328	0.332	0.335
PAssetAmount	784	851	0.679	0.680	0.680
LivestockValue	3051	3333	0.820	0.910	1.000
NumCows	0.153	0.167	0.823	0.912	1.000
NetValue	4443	4731	0.904	0.904	0.904
n	59	31	(rate: 0.344)		

Source: Estimated with GUK administrative and survey data.

Notes: 1. R's package coin is used for baseline mean covariates to conduct approximate permutation tests. Number of repetition is set to 100000.

2. See footnotes of TABLE 18.

TABLE 29: PERMUTATION TEST RESULTS OF GROUP REJECTION IN TRADITIONAL ARM VS. PARTICIPANTS IN NON-TRADITIONAL ARM

variables	NonTradArm	TradArm	p-value.lower	p-value.mid	p-value.upper
HeadLiteracy	0.124	0.050	0.121	0.163	0.206
HeadAge	38.073	39.026	0.558	0.560	0.563
HHsize	4.236	4.200	0.858	0.881	0.905
FloodInRd1	0.465	0.275	0.013	0.017	0.021
HAssetAmount	789	892	0.494	0.496	0.498
PAssetAmount	1159	1054	0.817	0.817	0.817
LivestockValue	5235	500	0.020	0.021	0.022
NumCows	0.262	0.025	0.020	0.021	0.022
NetValue	6933	1984	0.022	0.022	0.022
n	491	40	(rate: 0.075)		

Source: Estimated with GUK administrative and survey data.

Notes: 1. R's package coin is used for baseline mean covariates to conduct approximate permutation tests. Number of repetition is set to 100000.

2. See footnotes of TABLE 18.

TABLE 30: PERMUTATION TEST RESULTS OF REJECTERS, CATTLE VS. NON-CATTLE ARMS

variables	NonCowArm	CowArm	p-value.lower	p-value.mid	p-value.upper
HeadLiteracy	0.081	0.081	0.735	0.867	1.000
HeadAge	37.183	39.694	0.243	0.244	0.246
HHsize	3.951	3.892	0.814	0.837	0.860
FloodInRd1	0.566	0.649	0.345	0.396	0.448
HAssetAmount	650	786	0.369	0.371	0.374
PAssetAmount	923	777	0.383	0.384	0.384
LivestockValue	2679	2703	0.823	0.912	1.000
NumCows	0.134	0.135	0.825	0.912	1.000
NetValue	4083	4253	0.916	0.917	0.917
n	123	37	(rate: 0.231)		

Source: Estimated with GUK administrative and survey data.

Notes: 1. R's package coin is used for baseline mean covariates to conduct approximate permutation tests. Number of repetition is set to 100000.

2. See footnotes of TABLE 18.

TABLE 31: PERMUTATION TEST RESULTS OF REJECTERS, CATTLE VS. LARGE GRACE ARMS

variables	NonCowArm	CowArm	p-value.lower	p-value.mid	p-value.upper
HeadLiteracy	0.043	0.081	0.290	0.473	0.655
HeadAge	36.810	39.694	0.391	0.395	0.398
HHsize	4.261	3.892	0.428	0.449	0.471
FloodInRd1	0.739	0.649	0.396	0.485	0.574
HAssetAmount	604	786	0.458	0.463	0.468
PAssetAmount	708	777	0.723	0.723	0.723
LivestockValue	6154	2703	0.185	0.252	0.318
NumCows	0.308	0.135	0.189	0.256	0.323
NetValue	7383	4253	0.365	0.365	0.365
n	23	37	(rate: 0.617)		

Source: Estimated with GUK administrative and survey data.

Notes: 1. R's package coin is used for baseline mean covariates to conduct approximate permutation tests. Number of repetition is set to 100000.

2. See footnotes of TABLE 18.

TABLE 32: PERMUTATION TEST RESULTS OF BORROWERS, CATTLE VS. NON-CATTLE ARMS

variables	NonCowArm	CowArm	p-value.lower	p-value.mid	p-value.upper
HeadLiteracy	0.110	0.172	0.039	0.047	0.054
HeadAge	38.325	37.642	0.444	0.446	0.447
HHsize	4.287	4.166	0.333	0.341	0.350
FloodInRd1	0.479	0.463	0.717	0.751	0.785
HAssetAmount	781	779	0.979	0.980	0.980
PAssetAmount	1526	765	0.119	0.119	0.119
LivestockValue	6150	4444	0.148	0.159	0.170
NumCows	0.308	0.222	0.145	0.156	0.167
NetValue	8204	5603	0.058	0.058	0.058
n	453	163	(rate: 0.265)		

Source: Estimated with GUK administrative and survey data.

Notes: 1. R's package coin is used for baseline mean covariates to conduct approximate permutation tests. Number of repetition is set to 100000.

2. See footnotes of TABLE 18.

TABLE 33: PERMUTATION TEST RESULTS OF BOROWERS, CATTLE VS. LARGE GRACE ARMS

variables	NonCowArm	CowArm	p-value.lower	p-value.mid	p-value.upper
HeadLiteracy	0.113	0.172	0.122	0.141	0.160
HeadAge	38.599	37.642	0.361	0.363	0.364
HHsize	4.243	4.166	0.577	0.591	0.605
FloodInRd1	0.364	0.463	0.061	0.069	0.077
HAssetAmount	781	779	0.979	0.980	0.981
PAssetAmount	2110	765	0.004	0.004	0.004
LivestockValue	5341	4444	0.474	0.503	0.532
NumCows	0.267	0.222	0.474	0.503	0.531
NetValue	7864	5603	0.162	0.162	0.162
n	177	163	(rate: 0.479)		

Source: Estimated with GUK administrative and survey data.

Notes: 1. R's package coin is used for baseline mean covariates to conduct approximate permutation tests. Number of repetition is set to 100000.

2. See footnotes of TABLE 18.

TABLE 34: PERMUTATION TEST RESULTS OF ARM ASSIGNMENT, TRADITIONAL VS. NON-TRADITIONAL ARMS

variables	NonTradArm	TradArm	p-value.lower	p-value.mid	p-value.upper
HeadLiteracy	0.123	0.097	0.285	0.319	0.354
HeadAge	37.961	38.429	0.586	0.588	0.589
HHsize	4.218	4.091	0.299	0.306	0.313
FloodInRd1	0.508	0.463	0.264	0.284	0.303
HAssetAmount	770	726	0.594	0.595	0.595
PAssetAmount	1308	985	0.475	0.475	0.475
LivestockValue	5340	4343	0.332	0.351	0.370
NumCows	0.267	0.217	0.335	0.354	0.372
NetValue	7147	5876	0.297	0.297	0.297
n	600	176	(rate: 0.227)		

Source: Estimated with GUK administrative and survey data.

Notes: 1. R's package coin is used for baseline mean covariates to conduct approximate permutation tests. Number of repetition is set to 100000.

2. See footnotes of TABLE 18.

.2 Full sample

TABLE 35: PERMUTATION TEST RESULTS OF ATTRITION

variables	NonAttrited	Attrited	p-value.lower	p-value.mid	p-value.upper
HeadLiteracy	0.113	0.130	0.612	0.670	0.727
HeadAge	38.098	38.598	0.654	0.656	0.658
HHsize	4.181	4.272	0.569	0.582	0.595
Arm	0.763	0.652	0.000	0.001	0.001
FloodInRd1	0.489	0.527	0.433	0.469	0.504
HAssetAmount	760	741	0.851	0.852	0.853
PAssetAmount	1103	2181	0.100	0.100	0.100
LivestockValue	5064	5000	0.925	0.963	1.000
NumCows	0.253	0.250	0.924	0.962	1.000
NetValue	6609	7446	0.613	0.613	0.613
n	708	92	(rate: 0.115)		

Source: Estimated with GUK administrative and survey data.

Notes: 1. R's package coin is used for baseline mean covariates to conduct approximate permutation tests. Number of repetition is set to 100000.

2. See footnotes of TABLE 17.

TABLE 36: PERMUTATION TEST RESULTS OF ATTRITION AMONG TRADITIONAL ARM

variables	NonAttrited	Attrited	p-value.lower	p-value.mid	p-value.upper
HeadLiteracy	0.107	0.000	0.046	0.065	0.084
HeadAge	38.856	38.125	0.707	0.711	0.714
HHsize	4.179	3.750	0.119	0.128	0.137
FloodInRd1	0.464	0.387	0.327	0.385	0.443
HAssetAmount	700	842	0.438	0.440	0.442
PAssetAmount	988	926	0.814	0.815	0.815
LivestockValue	4524	2581	0.282	0.338	0.394
NumCows	0.226	0.129	0.286	0.341	0.397
NetValue	5545	4343	0.601	0.601	0.601
n	168	32	(rate: 0.160)		

Source: Estimated with GUK administrative and survey data.

Notes: 1. R's package coin is used for baseline mean covariates to conduct approximate permutation tests. Number of repetition is set to 100000.

2. See footnotes of TABLE 18.

TABLE 37: PERMUTATION TEST RESULTS OF ATTRITION AMONG NON-TRADITIONAL ARM

variables	NonAttrited	Attrited	p-value.lower	p-value.mid	p-value.upper
HeadLiteracy	0.115	0.200	0.036	0.051	0.065
HeadAge	37.862	38.850	0.470	0.472	0.474
HHsize	4.181	4.550	0.061	0.064	0.067
FloodInRd1	0.497	0.600	0.102	0.120	0.138
HAssetAmount	779	688	0.473	0.475	0.477
PAssetAmount	1139	2829	0.093	0.093	0.093
LivestockValue	5232	6531	0.498	0.530	0.563
NumCows	0.262	0.327	0.499	0.531	0.564
NetValue	6941	9409	0.255	0.255	0.255
n	540	60	(rate: 0.100)		

Source: Estimated with GUK administrative and survey data.

Notes: 1. R's package coin is used for baseline mean covariates to conduct approximate permutation tests. Number of repetition is set to 100000.

2. See footnotes of TABLE 18.

TABLE 38: PERMUTATION TEST RESULTS OF ATTRITERS OF TRADITIONAL AND NON-TRADITIONAL ARMS

variables	NonTradArm	TradArm	p-value.lower	p-value.mid	p-value.upper
HeadLiteracy	0.200	0.000	0.003	0.005	0.007
HeadAge	38.850	38.125	0.768	0.772	0.776
HHsize	4.550	3.750	0.021	0.023	0.026
FloodInRd1	0.600	0.387	0.048	0.062	0.075
HAssetAmount	688	842	0.522	0.525	0.528
PAssetAmount	2829	926	0.834	0.834	0.834
LivestockValue	6531	2581	0.170	0.203	0.237
NumCows	0.327	0.129	0.171	0.204	0.237
NetValue	9409	4343	0.309	0.309	0.309
n	60	32	(rate: 0.348)		

Source: Estimated with GUK administrative and survey data.

Notes: 1. R's package coin is used for baseline mean covariates to conduct approximate permutation tests. Number of repetition is set to 100000.

2. See footnotes of TABLE 18.

TABLE 39: PERMUTATION TEST RESULTS OF NON-FLOOD ATTRITION

variables	NonAttrited	Attrited	p-value.lower	p-value.mid	p-value.upper
HeadLiteracy	0.113	0.096	0.649	0.737	0.825
HeadAge	38.098	38.769	0.644	0.646	0.649
HHsize	4.181	4.077	0.583	0.601	0.619
Arm	0.763	0.769	0.131	0.159	0.187
FloodInRd1	0.489	0.608	0.081	0.097	0.112
HAssetAmount	760	678	0.548	0.550	0.552
PAssetAmount	1103	720	0.186	0.186	0.186
LivestockValue	5064	1500	0.055	0.064	0.073
NumCows	0.253	0.075	0.055	0.064	0.073
NetValue	6609	2570	0.048	0.048	0.048
n	708	52	(rate: 0.068)		

Source: Estimated with GUK administrative and survey data.

Notes: 1. R's package coin is used for baseline mean covariates to conduct approximate permutation tests. Number of repetition is set to 100000.

2. See footnotes of TABLE 17.

TABLE 40: PERMUTATION TEST RESULTS OF NON-FLOOD ATTRITION AMONG TRADITIONAL ARM

variables	NonAttrited	Attrited	p-value.lower	p-value.mid	p-value.upper
HeadLiteracy	0.107	0.000	0.105	0.239	0.374
HeadAge	38.856	34.083	0.113	0.115	0.116
HHsize	4.179	3.417	0.062	0.071	0.080
FloodInRd1	0.464	0.455	0.755	0.877	1.000
HAssetAmount	700	1027	0.255	0.258	0.260
PAssetAmount	988	819	0.594	0.595	0.595
LivestockValue	4524	3636	0.778	0.889	1.000
NumCows	0.226	0.182	0.777	0.888	1.000
NetValue	5545	5483	0.989	0.989	0.989
n	168	12	(rate: 0.067)		

Source: Estimated with GUK administrative and survey data.

Notes: 1. R's package coin is used for baseline mean covariates to conduct approximate permutation tests. Number of repetition is set to 100000.

2. See footnotes of TABLE 18.

TABLE 41: PERMUTATION TEST RESULTS OF NON-FLOOD ATTRITION AMONG NON-TRADITIONAL ARM

variables	NonAttrited	Attrited	p-value.lower	p-value.mid	p-value.upper
HeadLiteracy	0.115	0.125	0.810	0.905	1.000
HeadAge	37.862	40.175	0.160	0.161	0.163
HHsize	4.181	4.275	0.695	0.715	0.736
FloodInRd1	0.497	0.650	0.048	0.060	0.071
HAssetAmount	779	582	0.195	0.196	0.197
PAssetAmount	1139	693	0.191	0.191	0.191
LivestockValue	5232	690	0.043	0.049	0.055
NumCows	0.262	0.034	0.041	0.047	0.053
NetValue	6941	1466	0.029	0.029	0.029
n	540	40	(rate: 0.069)		

Source: Estimated with GUK administrative and survey data.

Notes: 1. R's package coin is used for baseline mean covariates to conduct approximate permutation tests. Number of repetition is set to 100000.

2. See footnotes of TABLE 18.

TABLE 42: PERMUTATION TEST RESULTS OF NON-FLOOD ATTRITERS OF TRADITIONAL AND NON-TRADITIONAL ARMS

variables	NonTradArm	TradArm	p-value.lower	p-value.mid	p-value.upper
HeadLiteracy	0.125	0.000	0.076	0.202	0.328
HeadAge	40.175	34.083	0.127	0.128	0.130
HHsize	4.275	3.417	0.076	0.085	0.095
Arm	1.000	0.000	0.000	0.000	0.000
FloodInRd1	0.650	0.455	0.166	0.235	0.305
HAssetAmount	582	1027	0.278	0.281	0.284
PAssetAmount	693	819	0.673	0.675	0.676
LivestockValue	690	3636	0.016	0.098	0.180
NumCows	0.034	0.182	0.017	0.097	0.178
NetValue	1466	5483	0.051	0.051	0.051
n	40	12	(rate: 0.231)		

Source: Estimated with GUK administrative and survey data.

Notes: 1. R's package coin is used for baseline mean covariates to conduct approximate permutation tests. Number of repetition is set to 100000.

2. See footnotes of TABLE 18.

TABLE 43: PERMUTATION TEST RESULTS OF NON-FLOOD ATTRITERS OF CATTLE AND ALL OTHER ARMS

variables	NonCowArm	CowArm	p-value.lower	p-value.mid	p-value.upper
HeadLiteracy	0.026	0.308	0.000	0.006	0.011
HeadAge	37.487	42.615	0.185	0.189	0.193
HHsize	4.000	4.308	0.454	0.524	0.594
FloodInRd1	0.632	0.538	0.529	0.636	0.744
HAssetAmount	613	869	0.549	0.552	0.556
PAssetAmount	670	867	0.485	0.487	0.488
LivestockValue	2222	0	0.242	0.390	0.537
NumCows	0.111	0.000	0.243	0.391	0.539
NetValue	3657	313	0.103	0.103	0.103
n	39	13	(rate: 0.250)		

Source: Estimated with GUK administrative and survey data.

Notes: 1. R's package coin is used for baseline mean covariates to conduct approximate permutation tests. Number of repetition is set to 100000.

2. See footnotes of TABLE 18.

TABLE 44: PERMUTATION TEST RESULTS OF NON-FLOOD ATTRITERS OF CATTLE AND LARGE GRACE

variables	NonCowArm	CowArm	p-value.lower	p-value.mid	p-value.upper
HeadLiteracy	0.000	0.308	0.000	0.010	0.020
HeadAge	41.263	42.615	0.783	0.788	0.793
HHsize	4.368	4.308	0.913	0.956	1.000
FloodInRd1	0.684	0.538	0.267	0.371	0.475
HAssetAmount	426	869	0.265	0.270	0.275
PAssetAmount	595	867	0.417	0.417	0.418
LivestockValue	0	0	NA	NA	NA
NumCows	0.000	0.000	NA	NA	NA
NetValue	1175	313	0.522	0.523	0.523
n	19	13	(rate: 0.406)		

Source: Estimated with GUK administrative and survey data.

Notes: 1. R's package coin is used for baseline mean covariates to conduct approximate permutation tests. Number of repetition is set to 100000.

2. See footnotes of TABLE 18.

TABLE 45: PERMUTATION TEST RESULTS OF SURVIVAL

variables	NonSurvived	Survived	p-value.lower	p-value.mid	p-value.upper
HeadLiteracy	0.104	0.119	0.456	0.498	0.539
HeadAge	37.835	38.277	0.581	0.582	0.583
HHsize	4.072	4.237	0.152	0.155	0.159
Arm	0.581	0.815	0.000	0.000	0.000
FloodInRd1	0.548	0.473	0.058	0.063	0.069
HAssetAmount	707	777	0.340	0.340	0.340
PAssetAmount	1440	1144	0.517	0.517	0.517
LivestockValue	3714	5546	0.060	0.064	0.069
NumCows	0.186	0.277	0.059	0.063	0.068
NetValue	5521	7121	0.155	0.155	0.155
n	222	578	(rate: 0.723)		

Source: Estimated with GUK administrative and survey data.

Notes: 1. R's package coin is used for baseline mean covariates to conduct approximate permutation tests. Number of repetition is set to 100000.

2. See footnotes of TABLE 17.

TABLE 46: PERMUTATION TEST RESULTS OF SURVIVAL AMONG TRADITIONAL ARM

variables	NonSurvived	Survived	p-value.lower	p-value.mid	p-value.upper
HeadLiteracy	0.075	0.103	0.466	0.544	0.622
HeadAge	38.370	39.056	0.638	0.640	0.643
HHsize	3.957	4.243	0.168	0.175	0.183
FloodInRd1	0.370	0.523	0.022	0.028	0.033
HAssetAmount	803	652	0.256	0.257	0.257
PAssetAmount	967	988	0.969	0.969	0.969
LivestockValue	2174	5981	0.012	0.015	0.017
NumCows	0.109	0.299	0.013	0.016	0.018
NetValue	3741	6747	0.064	0.064	0.064
n	93	107	(rate: 0.535)		

Source: Estimated with GUK administrative and survey data.

Notes: 1. R's package coin is used for baseline mean covariates to conduct approximate permutation tests. Number of repetition is set to 100000.

2. See footnotes of TABLE 18.

TABLE 47: PERMUTATION TEST RESULTS OF SURVIVAL AMONG NON-TRADITIONAL ARMS

variables	NonSurvived	Survived	p-value.lower	p-value.mid	p-value.upper
HeadLiteracy	0.124	0.123	0.880	0.940	1.000
HeadAge	37.444	38.100	0.516	0.518	0.520
HHsize	4.155	4.236	0.564	0.575	0.587
FloodInRd1	0.674	0.462	0.000	0.000	0.000
HAssetAmount	638	806	0.070	0.070	0.070
PAssetAmount	1777	1180	0.239	0.239	0.239
LivestockValue	4915	5447	0.633	0.663	0.693
NumCows	0.246	0.272	0.633	0.664	0.695
NetValue	6909	7206	0.845	0.845	0.845
n	129	471	(rate: 0.785)		

Source: Estimated with GUK administrative and survey data.

Notes: 1. R's package coin is used for baseline mean covariates to conduct approximate permutation tests. Number of repetition is set to 100000.

2. See footnotes of TABLE 18.

TABLE 48: PERMUTATION TEST RESULTS OF SURVIVING MEMBERS OF TRADITIONAL AND NON-TRADITIONAL ARMS

variables	NonTradArm	TradArm	p-value.lower	p-value.mid	p-value.upper
HeadLiteracy	0.123	0.103	0.508	0.567	0.626
HeadAge	38.100	39.056	0.359	0.360	0.362
HHsize	4.236	4.243	0.941	0.955	0.970
FloodInRd1	0.462	0.523	0.238	0.260	0.283
HAssetAmount	806	652	0.132	0.132	0.132
PAssetAmount	1180	988	0.542	0.542	0.542
LivestockValue	5447	5981	0.683	0.712	0.741
NumCows	0.272	0.299	0.684	0.713	0.743
NetValue	7206	6747	0.758	0.758	0.758
n	471	107	(rate: 0.185)		

Source: Estimated with GUK administrative and survey data.

Notes: 1. R's package coin is used for baseline mean covariates to conduct approximate permutation tests. Number of repetition is set to 100000.

2. See footnotes of TABLE 18.

TABLE 49: PERMUTATION TEST RESULTS OF SURVIVING MEMBERS OF CATTLE AND ALL OTHER ARMS

variables	NonCowArm	CowArm	p-value.lower	p-value.mid	p-value.upper
HeadLiteracy	0.109	0.150	0.188	0.213	0.238
HeadAge	38.381	37.973	0.665	0.667	0.669
HHsize	4.283	4.102	0.176	0.181	0.186
FloodInRd1	0.478	0.459	0.630	0.665	0.700
HAssetAmount	775	785	0.910	0.911	0.911
PAssetAmount	1278	753	0.030	0.030	0.030
LivestockValue	6265	3425	0.022	0.024	0.025
NumCows	0.313	0.171	0.022	0.023	0.025
NetValue	7940	4702	0.014	0.014	0.014
n	431	147	(rate: 0.254)		

Source: Estimated with GUK administrative and survey data.

Notes: 1. R's package coin is used for baseline mean covariates to conduct approximate permutation tests. Number of repetition is set to 100000.

2. See footnotes of TABLE 18.

TABLE 50: PERMUTATION TEST RESULTS OF SURVIVING MEMBERS OF CATTLE AND LARGE GRACE ARMS

variables	NonCowArm	CowArm	p-value.lower	p-value.mid	p-value.upper
HeadLiteracy	0.106	0.150	0.236	0.271	0.306
HeadAge	38.481	37.973	0.644	0.647	0.649
HHsize	4.181	4.102	0.573	0.589	0.604
FloodInRd1	0.352	0.459	0.046	0.055	0.063
HAssetAmount	798	785	0.905	0.906	0.907
PAssetAmount	1480	753	0.003	0.003	0.003
LivestockValue	5375	3425	0.126	0.139	0.152
NumCows	0.269	0.171	0.124	0.137	0.150
NetValue	7448	4702	0.046	0.046	0.046
n	160	147	(rate: 0.479)		

Source: Estimated with GUK administrative and survey data.

Notes: 1. R's package coin is used for baseline mean covariates to conduct approximate permutation tests. Number of repetition is set to 100000.

2. See footnotes of TABLE 18.

TABLE 51: PERMUTATION TEST RESULTS OF REJECTION

variables	NonRejected	Rejected	p-value.lower	p-value.mid	p-value.upper
HeadLiteracy	0.123	0.081	0.127	0.146	0.164
HeadAge	38.252	37.763	0.589	0.590	0.592
HHsize	4.255	3.938	0.013	0.013	0.014
Arm	0.798	0.556	0.000	0.000	0.000
FloodInRd1	0.471	0.585	0.010	0.012	0.013
HAssetAmount	777	682	0.251	0.251	0.251
PAssetAmount	1310	889	0.294	0.294	0.294
LivestockValue	5611	2685	0.009	0.009	0.010
NumCows	0.281	0.134	0.008	0.009	0.010
NetValue	7294	4125	0.012	0.012	0.012
n	640	160	(rate: 0.200)		

Source: Estimated with GUK administrative and survey data.

Notes: 1. R's package coin is used for baseline mean covariates to conduct approximate permutation tests. Number of repetition is set to 100000. Step-down method is used to adjust for multiple testing of a multi-factor grouping variable. The second and third columns show means of each group. For Arm, proportions of non-traditional arm between two groups are tested.

2. Standard errors are clustered at group (village) level. p-value.lower, p-value.mid, p-value.upper indicate lower-bound, mid p value, and upper-bound of the observed test statistic and the null distribution.

3. See the footnote of TABLE ?? for description of variables.

TABLE 52: PERMUTATION TEST RESULTS OF REJECTION AMONG TRADITIONAL ARM

variables	NonRejected	Rejected	p-value.lower	p-value.mid	p-value.upper
HeadLiteracy	0.085	0.099	0.607	0.703	0.799
HeadAge	39.248	37.800	0.338	0.340	0.341
HHsize	4.194	3.958	0.275	0.286	0.297
FloodInRd1	0.488	0.386	0.135	0.158	0.180
HAssetAmount	709	744	0.804	0.806	0.808
PAssetAmount	984	967	0.966	0.966	0.966
LivestockValue	5581	1714	0.014	0.016	0.019
NumCows	0.279	0.086	0.013	0.016	0.018
NetValue	6549	3161	0.045	0.045	0.045
n	129	71	(rate: 0.355)		

Source: Estimated with GUK administrative and survey data.

Notes: 1. R's package coin is used for baseline mean covariates to conduct approximate permutation tests. Number of repetition is set to 100000. Step-down method is used to adjust for multiple testing of a multi-factor grouping variable. The second and third columns show means of each group.

2. Standard errors are clustered at group (village) level. p-value.lower, p-value.mid, p-value.upper indicate lower-bound, mid p value, and upper-bound of the observed test statistic and the null distribution.

3. See the footnote of TABLE ?? for description of variables.

TABLE 53: PERMUTATION TEST RESULTS OF REJECTION AMONG NON-TRADITIONAL ARM

variables	NonRejected	Rejected	p-value.lower	p-value.mid	p-value.upper
HeadLiteracy	0.133	0.067	0.083	0.099	0.115
HeadAge	38.000	37.733	0.819	0.821	0.823
HHsize	4.270	3.921	0.036	0.038	0.039
FloodInRd1	0.467	0.742	0.000	0.000	0.000
HAssetAmount	794	633	0.131	0.131	0.131
PAssetAmount	1392	828	0.215	0.215	0.215
LivestockValue	5619	3544	0.156	0.173	0.190
NumCows	0.281	0.177	0.156	0.173	0.190
NetValue	7483	4979	0.156	0.156	0.156
n	511	89	(rate: 0.148)		

Source: Estimated with GUK administrative and survey data.

Notes: 1. R's package coin is used for baseline mean covariates to conduct approximate permutation tests. Number of repetition is set to 100000.

2. See footnotes of TABLE 18.

TABLE 54: PERMUTATION TEST RESULTS OF REJECTERS, TRADITIONAL VS. NON-TRADITIONAL ARM

variables	NonTradArm	TradArm	p-value.lower	p-value.mid	p-value.upper
HeadLiteracy	0.067	0.099	0.386	0.474	0.562
HeadAge	37.733	37.800	0.967	0.969	0.972
HHsize	3.921	3.958	0.881	0.901	0.920
FloodInRd1	0.742	0.386	0.000	0.000	0.000
HAssetAmount	633	744	0.389	0.391	0.392
PAssetAmount	828	967	0.329	0.329	0.329
LivestockValue	3544	1714	0.170	0.203	0.236
NumCows	0.177	0.086	0.170	0.204	0.238
NetValue	4979	3161	0.211	0.211	0.211
n	89	71	(rate: 0.444)		

Source: Estimated with GUK administrative and survey data.

Notes: 1. R's package coin is used for baseline mean covariates to conduct approximate permutation tests. Number of repetition is set to 100000.

2. See footnotes of TABLE 18.

TABLE 55: PERMUTATION TEST RESULTS OF GROUP REJECTION

variables	NonGRejected	GRejected	p-value.lower	p-value.mid	p-value.upper
HeadLiteracy	0.121	0.057	0.074	0.096	0.119
HeadAge	38.281	36.841	0.256	0.257	0.258
HHsize	4.203	4.071	0.469	0.481	0.494
Arm	0.781	0.429	0.000	0.000	0.000
FloodInRd1	0.486	0.571	0.171	0.191	0.211
HAssetAmount	763	705	0.616	0.616	0.616
PAssetAmount	1248	994	0.638	0.638	0.638
LivestockValue	5309	2000	0.037	0.042	0.047
NumCows	0.265	0.100	0.038	0.043	0.048
NetValue	6957	3509	0.062	0.062	0.062
n	730	70	(rate: 0.087)		

Source: Estimated with GUK administrative and survey data.

Notes: 1. R's package coin is used for baseline mean covariates to conduct approximate permutation tests. Number of repetition is set to 100000.

2. See footnotes of TABLE 17.

TABLE 56: PERMUTATION TEST RESULTS OF GROUP REJECTION AMONG TRADITIONAL ARM

variables	NonGRejected	GRejected	p-value.lower	p-value.mid	p-value.upper
HeadLiteracy	0.100	0.050	0.209	0.294	0.380
HeadAge	38.669	39.026	0.841	0.845	0.848
HHsize	4.088	4.200	0.638	0.659	0.680
FloodInRd1	0.497	0.275	0.008	0.011	0.014
HAssetAmount	679	892	0.198	0.199	0.200
PAssetAmount	959	1054	0.727	0.727	0.727
LivestockValue	5157	500	0.017	0.018	0.020
NumCows	0.258	0.025	0.017	0.018	0.020
NetValue	6206	1984	0.033	0.033	0.033
n	160	40	(rate: 0.200)		

Source: Estimated with GUK administrative and survey data.

Notes: 1. R's package coin is used for baseline mean covariates to conduct approximate permutation tests. Number of repetition is set to 100000.

2. See footnotes of TABLE 18.

TABLE 57: PERMUTATION TEST RESULTS OF GROUP REJECTION AMONG NON-TRADITIONAL ARM

variables	NonGRejected	GRejected	p-value.lower	p-value.mid	p-value.upper
HeadLiteracy	0.126	0.067	0.247	0.330	0.413
HeadAge	38.171	34.000	0.028	0.028	0.028
HHsize	4.235	3.900	0.196	0.208	0.221
FloodInRd1	0.483	0.967	0.000	0.000	0.000
HAssetAmount	786	455	0.055	0.055	0.056
PAssetAmount	1329	914	0.541	0.541	0.542
LivestockValue	5352	5000	0.859	0.929	1.000
NumCows	0.268	0.250	0.857	0.929	1.000
NetValue	7167	6557	0.854	0.854	0.854
n	570	30	(rate: 0.050)		

Source: Estimated with GUK administrative and survey data.

Notes: 1. R's package coin is used for baseline mean covariates to conduct approximate permutation tests. Number of repetition is set to 100000.

2. See footnotes of TABLE 18.

TABLE 58: PERMUTATION TEST RESULTS OF GROUP REJECTERS, TRADITIONAL VS. NON-TRADITIONAL ARM

variables	NonTradArm	TradArm	p-value.lower	p-value.mid	p-value.upper
HeadLiteracy	0.067	0.050	0.627	0.814	1.000
HeadAge	34.000	39.026	0.027	0.027	0.028
HHsize	3.900	4.200	0.342	0.366	0.390
FloodInRd1	0.967	0.275	0.000	0.000	0.000
HAssetAmount	455	892	0.024	0.025	0.025
PAssetAmount	914	1054	0.596	0.596	0.596
LivestockValue	5000	500	0.001	0.007	0.013
NumCows	0.250	0.025	0.001	0.007	0.013
NetValue	6557	1984	0.010	0.010	0.010
n	30	40	(rate: 0.571)		

Source: Estimated with GUK administrative and survey data.

Notes: 1. R's package coin is used for baseline mean covariates to conduct approximate permutation tests. Number of repetition is set to 100000.

2. See footnotes of TABLE 18.

TABLE 59: PERMUTATION TEST RESULTS OF INDIVIDUAL REJECTION

variables	NonIRejected	IRejected	p-value.lower	p-value.mid	p-value.upper
HeadLiteracy	0.123	0.100	0.489	0.548	0.607
HeadAge	38.252	38.494	0.831	0.833	0.835
HHsize	4.255	3.833	0.010	0.011	0.011
Arm	0.798	0.656	0.002	0.002	0.002
FloodInRd1	0.471	0.596	0.024	0.027	0.031
HAssetAmount	777	664	0.289	0.290	0.291
PAssetAmount	1310	807	0.193	0.193	0.193
LivestockValue	5611	3146	0.074	0.082	0.091
NumCows	0.281	0.157	0.073	0.082	0.090
NetValue	7294	4540	0.087	0.087	0.087
n	640	90	(rate: 0.123)		

Source: Estimated with GUK administrative and survey data.

Notes: 1. R's package coin is used for baseline mean covariates to conduct approximate permutation tests. Number of repetition is set to 100000.

2. See footnotes of TABLE 17.

TABLE 60: PERMUTATION TEST RESULTS OF INDIVIDUAL REJECTION AMONG TRADITIONAL ARM

variables	NonIRejected	IRejected	p-value.lower	p-value.mid	p-value.upper
HeadLiteracy	0.085	0.161	0.201	0.257	0.312
HeadAge	39.248	36.258	0.145	0.146	0.148
HHsize	4.194	3.645	0.058	0.063	0.068
FloodInRd1	0.488	0.533	0.544	0.617	0.691
HAssetAmount	709	547	0.407	0.410	0.413
PAssetAmount	984	851	0.671	0.672	0.672
LivestockValue	5581	3333	0.308	0.359	0.409
NumCows	0.279	0.167	0.309	0.359	0.409
NetValue	6549	4731	0.486	0.486	0.486
n	129	31	(rate: 0.194)		

Source: Estimated with GUK administrative and survey data.

Notes: 1. R's package coin is used for baseline mean covariates to conduct approximate permutation tests. Number of repetition is set to 100000.

2. See footnotes of TABLE 18.

TABLE 61: PERMUTATION TEST RESULTS OF INDIVIDUAL REJECTION AMONG NON-TRADITIONAL ARM

variables	NonRejected	IRejected	p-value.lower	p-value.mid	p-value.upper
HeadLiteracy	0.133	0.068	0.149	0.181	0.212
HeadAge	38.000	39.732	0.223	0.224	0.225
HHsize	4.270	3.932	0.092	0.096	0.101
FloodInRd1	0.467	0.627	0.021	0.024	0.028
HAssetAmount	794	724	0.587	0.589	0.591
PAssetAmount	1392	784	0.181	0.181	0.181
LivestockValue	5619	3051	0.135	0.151	0.168
NumCows	0.281	0.153	0.134	0.151	0.167
NetValue	7483	4443	0.129	0.129	0.129
n	511	59	(rate: 0.104)		

Source: Estimated with GUK administrative and survey data.

Notes: 1. R's package coin is used for baseline mean covariates to conduct approximate permutation tests. Number of repetition is set to 100000.

2. See footnotes of TABLE 18.

TABLE 62: PERMUTATION TEST RESULTS OF INDIVIDUAL REJECTERS, TRADITIONAL VS. NON-TRADITIONAL ARM

variables	NonTradArm	TradArm	p-value.lower	p-value.mid	p-value.upper
HeadLiteracy	0.068	0.161	0.157	0.211	0.265
HeadAge	39.732	36.258	0.219	0.220	0.222
HHsize	3.932	3.645	0.445	0.465	0.484
FloodInRd1	0.627	0.533	0.369	0.432	0.495
HAssetAmount	724	547	0.328	0.332	0.335
PAssetAmount	784	851	0.679	0.680	0.680
LivestockValue	3051	3333	0.820	0.910	1.000
NumCows	0.153	0.167	0.823	0.912	1.000
NetValue	4443	4731	0.904	0.904	0.904
n	59	31	(rate: 0.344)		

Source: Estimated with GUK administrative and survey data.

Notes: 1. R's package coin is used for baseline mean covariates to conduct approximate permutation tests. Number of repetition is set to 100000.

2. See footnotes of TABLE 18.

TABLE 63: PERMUTATION TEST RESULTS OF GROUP REJECTION IN TRADITIONAL ARM VS. PARTICIPANTS IN NON-TRADITIONAL ARM

variables	NonTradArm	TradArm	p-value.lower	p-value.mid	p-value.upper
HeadLiteracy	0.124	0.050	0.121	0.163	0.206
HeadAge	38.073	39.026	0.558	0.560	0.563
HHsize	4.236	4.200	0.858	0.881	0.905
FloodInRd1	0.465	0.275	0.013	0.017	0.021
HAssetAmount	789	892	0.494	0.496	0.498
PAssetAmount	1159	1054	0.817	0.817	0.817
LivestockValue	5235	500	0.020	0.021	0.022
NumCows	0.262	0.025	0.020	0.021	0.022
NetValue	6933	1984	0.022	0.022	0.022
n	491	40	(rate: 0.075)		

Source: Estimated with GUK administrative and survey data.

Notes: 1. R's package coin is used for baseline mean covariates to conduct approximate permutation tests. Number of repetition is set to 100000.

2. See footnotes of TABLE 18.

TABLE 64: PERMUTATION TEST RESULTS OF REJECTERS, CATTLE VS. NON-CATTLE ARMS

variables	NonCowArm	CowArm	p-value.lower	p-value.mid	p-value.upper
HeadLiteracy	0.081	0.081	0.735	0.867	1.000
HeadAge	37.183	39.694	0.243	0.244	0.246
HHsize	3.951	3.892	0.814	0.837	0.860
FloodInRd1	0.566	0.649	0.345	0.396	0.448
HAssetAmount	650	786	0.369	0.371	0.374
PAssetAmount	923	777	0.383	0.384	0.384
LivestockValue	2679	2703	0.823	0.912	1.000
NumCows	0.134	0.135	0.825	0.912	1.000
NetValue	4083	4253	0.916	0.917	0.917
n	123	37	(rate: 0.231)		

Source: Estimated with GUK administrative and survey data.

Notes: 1. R's package coin is used for baseline mean covariates to conduct approximate permutation tests. Number of repetition is set to 100000.

2. See footnotes of TABLE 18.

TABLE 65: PERMUTATION TEST RESULTS OF REJECTERS, CATTLE VS. LARGE GRACE ARMS

variables	NonCowArm	CowArm	p-value.lower	p-value.mid	p-value.upper
HeadLiteracy	0.043	0.081	0.290	0.473	0.655
HeadAge	36.810	39.694	0.391	0.395	0.398
HHsize	4.261	3.892	0.428	0.449	0.471
FloodInRd1	0.739	0.649	0.396	0.485	0.574
HAssetAmount	604	786	0.458	0.463	0.468
PAssetAmount	708	777	0.723	0.723	0.723
LivestockValue	6154	2703	0.185	0.252	0.318
NumCows	0.308	0.135	0.189	0.256	0.323
NetValue	7383	4253	0.365	0.365	0.365
n	23	37	(rate: 0.617)		

Source: Estimated with GUK administrative and survey data.

Notes: 1. R's package coin is used for baseline mean covariates to conduct approximate permutation tests. Number of repetition is set to 100000.

2. See footnotes of TABLE 18.

TABLE 66: PERMUTATION TEST RESULTS OF BORROWERS, CATTLE VS. NON-CATTLE ARMS

variables	NonCowArm	CowArm	p-value.lower	p-value.mid	p-value.upper
HeadLiteracy	0.107	0.172	0.027	0.033	0.038
HeadAge	38.459	37.642	0.357	0.359	0.360
HHsize	4.285	4.166	0.341	0.350	0.358
FloodInRd1	0.474	0.463	0.785	0.820	0.856
HAssetAmount	776	779	0.977	0.977	0.978
PAssetAmount	1496	765	0.128	0.128	0.128
LivestockValue	6008	4444	0.187	0.200	0.212
NumCows	0.300	0.222	0.187	0.199	0.211
NetValue	7870	5603	0.091	0.091	0.091
n	477	163	(rate: 0.255)		

Source: Estimated with GUK administrative and survey data.

Notes: 1. R's package coin is used for baseline mean covariates to conduct approximate permutation tests. Number of repetition is set to 100000.

2. See footnotes of TABLE 18.

TABLE 67: PERMUTATION TEST RESULTS OF BORROWERS, CATTLE VS. LARGE GRACE ARMS

variables	NonCowArm	CowArm	p-value.lower	p-value.mid	p-value.upper
HeadLiteracy	0.113	0.172	0.122	0.141	0.160
HeadAge	38.599	37.642	0.361	0.363	0.364
HHsize	4.243	4.166	0.577	0.591	0.605
FloodInRd1	0.364	0.463	0.061	0.069	0.077
HAssetAmount	781	779	0.979	0.980	0.981
PAssetAmount	2110	765	0.004	0.004	0.004
LivestockValue	5341	4444	0.474	0.503	0.532
NumCows	0.267	0.222	0.474	0.503	0.531
NetValue	7864	5603	0.162	0.162	0.162
n	177	163	(rate: 0.479)		

Source: Estimated with GUK administrative and survey data.

Notes: 1. R's package coin is used for baseline mean covariates to conduct approximate permutation tests. Number of repetition is set to 100000.

2. See footnotes of TABLE 18.

TABLE 68: PERMUTATION TEST RESULTS OF ARM ASSIGNMENT, TRADITIONAL VS. NON-TRADITIONAL ARMS

variables	NonTradArm	TradArm	p-value.lower	p-value.mid	p-value.upper
HeadLiteracy	0.123	0.090	0.159	0.204	0.249
HeadAge	37.961	38.739	0.347	0.349	0.350
HHsize	4.218	4.110	0.360	0.367	0.374
FloodInRd1	0.508	0.452	0.165	0.179	0.192
HAssetAmount	770	722	0.527	0.527	0.528
PAssetAmount	1308	978	0.457	0.457	0.457
LivestockValue	5340	4221	0.261	0.276	0.291
NumCows	0.267	0.211	0.260	0.275	0.290
NetValue	7147	5357	0.117	0.117	0.117
n	600	200	(rate: 0.250)		

Source: Estimated with GUK administrative and survey data.

Notes: 1. R's package coin is used for baseline mean covariates to conduct approximate permutation tests. Number of repetition is set to 100000.

2. See footnotes of TABLE 18.

.3 Without group rejection sample

TABLE 69: PERMUTATION TEST RESULTS OF ATTRITION

variables	NonAttrited	Attrited	p-value.lower	p-value.mid	p-value.upper
HeadLiteracy	0.116	0.156	0.271	0.313	0.355
HeadAge	38.106	39.753	0.179	0.180	0.181
HHsize	4.181	4.390	0.236	0.244	0.252
Arm	0.798	0.636	0.003	0.003	0.003
FloodInRd1	0.489	0.461	0.628	0.672	0.716
HAssetAmount	755	828	0.525	0.527	0.528
PAssetAmount	1099	2532	0.067	0.067	0.068
LivestockValue	5337	5067	0.847	0.886	0.925
NumCows	0.267	0.253	0.848	0.886	0.924
NetValue	6875	7668	0.653	0.653	0.653
n	653	77	(rate: 0.105)		

Source: Estimated with GUK administrative and survey data.

Notes: 1. R's package coin is used for baseline mean covariates to conduct approximate permutation tests. Number of repetition is set to 100000.

2. See footnotes of TABLE 17.

TABLE 70: PERMUTATION TEST RESULTS OF ATTRITION AMONG TRADITIONAL ARM

variables	NonAttrited	Attrited	p-value.lower	p-value.mid	p-value.upper
HeadLiteracy	0.121	0.000	0.038	0.058	0.078
HeadAge	38.424	39.821	0.511	0.515	0.518
HHsize	4.106	4.000	0.728	0.755	0.781
FloodInRd1	0.523	0.370	0.145	0.175	0.205
HAssetAmount	620	967	0.085	0.086	0.086
PAssetAmount	938	1061	0.688	0.688	0.688
LivestockValue	5606	2963	0.284	0.331	0.379
NumCows	0.280	0.148	0.287	0.334	0.380
NetValue	6456	4983	0.586	0.586	0.586
n	132	28	(rate: 0.175)		

Source: Estimated with GUK administrative and survey data.

Notes: 1. R's package coin is used for baseline mean covariates to conduct approximate permutation tests. Number of repetition is set to 100000.

2. See footnotes of TABLE 18.

TABLE 71: PERMUTATION TEST RESULTS OF ATTRITION AMONG NON-TRADITIONAL ARM

variables	NonAttrited	Attrited	p-value.lower	p-value.mid	p-value.upper
HeadLiteracy	0.115	0.245	0.005	0.009	0.014
HeadAge	38.025	39.714	0.263	0.265	0.267
HHsize	4.200	4.612	0.060	0.063	0.067
FloodInRd1	0.481	0.510	0.654	0.709	0.764
HAssetAmount	790	751	0.780	0.783	0.785
PAssetAmount	1140	3343	0.070	0.070	0.070
LivestockValue	5269	6250	0.570	0.607	0.643
NumCows	0.263	0.312	0.568	0.606	0.643
NetValue	6982	9178	0.324	0.324	0.324
n	521	49	(rate: 0.086)		

Source: Estimated with GUK administrative and survey data.

Notes: 1. R's package coin is used for baseline mean covariates to conduct approximate permutation tests. Number of repetition is set to 100000.

2. See footnotes of TABLE 18.

TABLE 72: PERMUTATION TEST RESULTS OF ATTRITERS OF TRADITIONAL AND NON-TRADITIONAL ARMS

variables	NonTradArm	TradArm	p-value.lower	p-value.mid	p-value.upper
HeadLiteracy	0.245	0.000	0.004	0.006	0.007
HeadAge	39.714	39.821	0.966	0.971	0.975
HHsize	4.612	4.000	0.110	0.119	0.127
FloodInRd1	0.510	0.370	0.240	0.289	0.339
HAssetAmount	751	967	0.413	0.416	0.419
PAssetAmount	3343	1061	0.893	0.893	0.894
LivestockValue	6250	2963	0.299	0.346	0.393
NumCows	0.312	0.148	0.293	0.340	0.387
NetValue	9178	4983	0.459	0.459	0.459
n	49	28	(rate: 0.364)		

Source: Estimated with GUK administrative and survey data.

Notes: 1. R's package coin is used for baseline mean covariates to conduct approximate permutation tests. Number of repetition is set to 100000.

2. See footnotes of TABLE 18.

TABLE 73: PERMUTATION TEST RESULTS OF NON-FLOOD ATTRITION

variables	NonAttrited	Attrited	p-value.lower	p-value.mid	p-value.upper
HeadLiteracy	0.116	0.135	0.608	0.699	0.790
HeadAge	38.106	41.243	0.067	0.067	0.068
HHsize	4.181	4.243	0.771	0.794	0.816
Arm	0.798	0.784	0.595	0.617	0.638
FloodInRd1	0.489	0.500	0.865	0.932	1.000
HAssetAmount	755	836	0.614	0.616	0.619
PAssetAmount	1099	853	0.485	0.485	0.485
LivestockValue	5337	1143	0.050	0.055	0.061
NumCows	0.267	0.057	0.052	0.058	0.064
NetValue	6875	2349	0.044	0.044	0.044
n	653	37	(rate: 0.054)		

Source: Estimated with GUK administrative and survey data.

Notes: 1. R's package coin is used for baseline mean covariates to conduct approximate permutation tests. Number of repetition is set to 100000.

2. See footnotes of TABLE 17.

TABLE 74: PERMUTATION TEST RESULTS OF NON-FLOOD ATTRITION AMONG TRADITIONAL ARM

variables	NonAttrited	Attrited	p-value.lower	p-value.mid	p-value.upper
HeadLiteracy	0.121	0.000	0.227	0.411	0.595
HeadAge	38.424	38.000	0.901	0.907	0.913
HHsize	4.106	4.125	0.900	0.950	1.000
FloodInRd1	0.523	0.429	0.444	0.578	0.712
HAssetAmount	620	1614	0.017	0.018	0.018
PAssetAmount	938	1277	0.349	0.350	0.350
LivestockValue	5606	5714	0.773	0.886	1.000
NumCows	0.280	0.286	0.774	0.887	1.000
NetValue	6456	8606	0.708	0.708	0.708
n	132	8	(rate: 0.057)		

Source: Estimated with GUK administrative and survey data.

Notes: 1. R's package coin is used for baseline mean covariates to conduct approximate permutation tests. Number of repetition is set to 100000.

2. See footnotes of TABLE 18.

TABLE 75: PERMUTATION TEST RESULTS OF NON-FLOOD ATTRITION AMONG NON-TRADITIONAL ARM

variables	NonAttrited	Attrited	p-value.lower	p-value.mid	p-value.upper
HeadLiteracy	0.115	0.172	0.236	0.304	0.372
HeadAge	38.025	42.138	0.033	0.034	0.034
HHsize	4.200	4.276	0.744	0.770	0.795
FloodInRd1	0.481	0.517	0.567	0.638	0.710
HAssetAmount	790	648	0.420	0.423	0.427
PAssetAmount	1140	751	0.266	0.266	0.266
LivestockValue	5269	0	0.020	0.029	0.038
NumCows	0.263	0.000	0.021	0.029	0.038
NetValue	6982	785	0.018	0.018	0.018
n	521	29	(rate: 0.053)		

Source: Estimated with GUK administrative and survey data.

Notes: 1. R's package coin is used for baseline mean covariates to conduct approximate permutation tests. Number of repetition is set to 100000.

2. See footnotes of TABLE 18.

TABLE 1 to TABLE 34: Trimmed sample.

TABLE 35 to TABLE 68: Full sample.

TABLE 69 to TABLE 75: Without group rejecter sample.

TABLE 1 shows results from tests of independence between attriters and non-attriters. We see the moderate rate of attrition is not correlated with household level characteristics at the conventional p value level. Productive asset amounts seem to differ between attriters and non-attriters, with the former being larger than the latter. This positive attrition selection can cause underestimation of impacts, if the asset values are positively correlated with entrepreneurial capacity. TABLE ?? shows attrition in the traditional arm. Household heads of attriters are relatively less literate than non-attriters. TABLE ?? compares attriters and non-attriters in the non-traditional arm. Unlike traditional arm attriters, non-traditional arm attriters have more literate household heads, have a larger household size, are more exposed to floods, and have larger productive assets. The traditional arm attriters may be less entrepreneurial, if anything, so their attrition may upwardly bias the positive gains of

the arm, hence understate the impacts of non-traditional arm. These are explicitly shown in TABLE ?? where we compare attriters of traditional and non-traditional arms. Overall, attrition may have attenuated the impacts but is not likely to have inflated them.[†]

TABLE 17 shows test results of independence between loan receivers and nonreceivers (group, individual rejecters) on the analysis sample of 776 members. It shows that lower head literacy, smaller household size, being affected by flood at the baseline, smaller livestock holding, and smaller net assets are correlated with opting out the offered type of lending. TABLE 18 indicates that lower asset and livestock holding is more pronounced among traditional rejecters relative to loan receivers. It also shows that flood exposure is less frequent, contrary to TABLE 17, among the rejecters. TABLE 19 indicates that lower head literacy, smaller household size, higher flood exposure, are more pronounced among non-traditional rejecters relative to loan receivers. It also shows that asset and livestock holding is no different relative to the receivers. Comparing rejecters of traditional arm, lower flood exposure may be the only stark difference against non-traditional arm members, and smaller asset and livestock holding is merely suggestive (TABLE ??).

Group rejecters and non-group rejecters are compared in TABLE 21. Marked differences are found in arm (traditional vs. non-traditional) and net asset values and head literacy are noted. TABLE 22 compares group rejecters in traditional arm and finds smaller flood exposure and lower livestock and net asset holding are associated with group rejection. Group rejecters in non-traditional arm are examined in TABLE 23 and younger head age, flood at baseline, and smaller household asset holding are correlated with rejection. Comparing group rejecters between traditional and non-traditional arms in TABLE 24, younger head age, higher flood exposure, larger net asset values and livestock holding are noted among the non-traditional group rejecters. These hint that for non-traditional arm group rejecters, it is the smaller household size and the baseline flood that may have constrained them from participation, and for traditional group rejecters, it is the low asset levels.

Acknowledging the reasons for rejection can be different, we tested the independence of each characteristics for individual rejecters (vs. non-individual rejecters) in TABLE 25. Smaller HHsize, being affected with FloodInRd1, and smaller LivestockValue, NumCows, and NetValue are associated with individual rejecters. Individual decisions not to participate may be more straightforward: Smaller household size may indicate difficulty in securing the cattle production labour in a household, being hit with a flood may have resulted in lower livestock levels that would prompt them to reconsider partaking in another livestock project.

TABLE 26 and TABLE 27 compare individual rejecters and nonrejecters in traditional arm and non-traditional arms, respectively. For traditional rejecters, livestock and other asset values are not correlated with rejection, but the values are similar to non-traditional and higher p values may be due to smaller sample size. For non-traditional arm rejecters, household size and flood exposure are correlated. Comparison of individual rejecters between traditional and non-traditional arms show no detectable difference (TABLE 28). This suggests that individual rejecters in all arms were constrained with small household size and small asset holding.

TABLE 11 picks up only program surviving members (nonattrited and loan recipients) have greater asset values than non-survivors. Comparing the surviving members, characteristics are similar except that the traditional members are more exposed to the flood than the non-traditional members. Comparing against the large grace arm, survivors in the cattle arm are more exposed to the flood, have fewer productive assets, and have less livestock with p value at .124 (TABLE ??). This shows that the smaller livestock holders are encouraged to participate and continue to operate in the cattle arm that has a managerial support program with all other features being equal. This underscores our interpretation that the current impact estimates may be downward biased, if any, as people who would otherwise attrit or reject in cattle arm stayed on.

[†] So one can employ the Lee bounds for stronger results, but doing so will give us less precision and require more assumptions. We will not use the Lee bounds [we can show them if necessary].

TABLE 76: INDIVIDUAL REJECTERS

	Traditional arm			non-Traditional arms			All arms		
variables	Not rejected	Rejected	<i>p</i> value	Not rejected	Rejected	<i>p</i> value	Not rejected	Rejected	<i>p</i> value
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
HeadLiteracy	0.095	0.161	0.261	0.133	0.068	0.181	0.127	0.100	0.443
HeadAge	38.848	36.258	0.213	38.000	39.732	0.224	38.145	38.494	0.764
HHsize	4.181	3.645	0.066	4.270	3.932	0.096	4.255	3.833	0.010
Arm							0.830	0.656	0.000
FloodInRd1	0.514	0.533	0.919	0.467	0.627	0.024	0.475	0.596	0.035
HAssetAmount	714	547	0.433	794	724	0.589	780	664	0.281
PAssetAmount	996	851	0.720	1392	784	0.181	1324	807	0.194
LivestockValue	6095	3333	0.282	5619	3051	0.151	5700	3146	0.085
NumCows	0.305	0.167	0.281	0.281	0.153	0.151	0.285	0.157	0.084
NetValue	7685	4731	0.297	7483	4443	0.129	7518	4540	0.068
n	105	31	(rate 0.228)	511	59	(rate 0.104)	616	90	(rate 0.127)

Note:

TABLE 77: CONTRASTING CATTLE ARM AND OTHER ARMS, BORROWERS AND NON-ATTRITING BORROWERS

	Borrowers			Non-attributing borrowers		
variables	Cattle arm	Other arms	<i>p</i> value	Cattle arm	Other arms	<i>p</i> value
	(1)	(2)	(3)	(4)	(5)	(6)
HeadLiteracy	0.172	0.110	0.047	0.150	0.113	0.275
HeadAge	37.642	38.325	0.446	37.973	38.226	0.788
HHsize	4.166	4.287	0.341	4.102	4.285	0.171
FloodInRd1	0.463	0.479	0.751	0.459	0.484	0.595
HAssetAmount	779	781	0.980	785	780	0.956
PAssetAmount	765	1526	0.119	753	1298	0.028
LivestockValue	4444	6150	0.159	3425	6437	0.016
NumCows	0.222	0.308	0.156	0.171	0.322	0.016
NetValue	5603	8204	0.058	4702	8315	0.007
n	163	453	(rate 0.265)	147	407	(rate 0.265)

Note: