BRACED Niger Impact Evaluation: Technical Annex

Table of contents

Annex 1: Modified version of the HFIAS questionnaire used for the EA3 survey in Niger

Q8. Pourcentage de ménages avec une faim modérée ou sévère			
˙Question		Options de réponse	Code
Q8. D1	Au cours des [4 dernières semaines/30 jours], y a -il eu des jours il y n'y avait absolument rien à manger à la maison, de quelque nature que ce soit à cause du manque de ressources ?	0 = Non (passer à D2) 1 = Oui	|___|
Q8. D1a	Combien de fois est-ce arrivé au cours des [4 dernières semaines/30 jours] ?	1 = Rarement (1 à 2 fois) 2 = Parfois (3 à 10 fois) 3 = Souvent (plus que 10 fois)	|___|
Q8. D2	Au cours des [4 dernières semaines/30 jours], étiez-vous ou tout membre de votre ménage obligé de dormir affamé le soir parce qu'il n'y avait pas assez de nourriture ?	0 = Non (passer à D3) 1 = Oui	|___|
Q8. D2a	Combien de fois est-ce arrivé au cours des [4 dernières semaines/30 jours] ?	1 = Rarement (1 à 2 fois) 2 = Parfois (3 à 10 fois) 3 = Souvent (plus que 10 fois)	|___|
Q8. D3	Au cours des [4 dernières semaines/30 jours], est ce que vous ou un autre membre de votre ménage a du réduire le nombre de repas dans la journée parce qu'il n'y avait pas assez de nourriture ou pas assez d'argent pour acheter?	0 = Non 1 = Oui	|___|
Q8. D3a	Combien de fois est-ce arrivé au cours des [4 dernières semaines/30 jours] ?	1 = Rarement (1 à 2 fois) 2 = Parfois (3 à 10 fois) 3 = Souvent (plus que 10 fois)	|___|

Annex 2: Items in the 12 food groups used in the HDDS questionnaire

Q7. Le score moyen de diversité alimentaire des ménages **Au cours des dernières 24 heures, c'est-à-dire, la journée et la nuit d'hier, est-ce que votre ménage a consommé les aliments inscrits au tableau suivant :** **Pour le remplissage, inscrivez 1 si l'aliment est consommé ; 0 si l'aliment n'est pas consommé**		
N°	**Ingrédients**	**Consommation au cours des dernières 24 heures**
1.	**Céréales :**	
	▪ Mil	
	▪ Sorgho	
	▪ Maïs	
	▪ Riz	
	▪ Blé/Pâte alimentaire/Pain	
	▪ Fonio	
	▪ Couscous	
2.	**Racines et tubercules**	
	▪ Patate douce	
	▪ Manioc/ *Garin Roggo*	
	▪ Ignames	
	▪ Pommes de terre	
	▪ Tarot (*Mankani*)	
3.	**Légumineuses**	
	▪ Niébé/Haricot	
	▪ Voandzou	
	▪ Doliques (Dan wari)	
	▪ Néré/Soumbala	
	▪ Lentilles	
4.	**Oléagineux (huile, matières grasses)**	
	▪ Arachide/Tourteaux/huile	
	▪ Soja/huile	
	▪ Sésame	
	▪ Soumbala /Graines d'oseille	
	▪ Palmier/huile	
	▪ Graines de courges	
5.	**Légumes**	
	▪ Chou	
	▪ Salades	
	▪ Oignons	
	▪ Tomates	
	▪ Poivrons	
	▪ Courges	
	▪ Feuilles vertes (Baobab, Oseilles, Moringa, …)	
	▪ Gombo	
	▪ Carottes	
	▪ Aubergine (Yalo)	
	▪ Haricot vert	
	Fruits	
	▪ Mangues	
	▪ Goyaves	
	▪ Oranges	
	▪ Bananes	
	▪ Citrons	
	▪ Mouffa (Anona ignefusalis)	

Q7. Le score moyen de diversité alimentaire des ménages

Au cours des dernières 24 heures, c'est-à-dire, la journée et la nuit d'hier, est-ce que votre ménage a consommé les aliments inscrits au tableau suivant :

Pour le remplissage, inscrivez 1 si l'aliment est consommé ; 0 si l'aliment n'est pas consommé

N°	Ingrédients	Consommation au cours des dernières 24 heures
	▪ Pastèques, Melons	
	▪ Papayes	
	▪ Dattes	
	▪ ***Goribba (PalmierDoum)***	
7.	**Viandes, Volaille, abats**	
	▪ Viande d'animaux	
	▪ Viande de volaille	
	▪ Criquets et autres insectes	
	▪ Abats	
8	**Poisson et autres produits de mer, fleuve, mare**	
	▪ Poissons séchés	
	▪ Poissons frais	
	▪ Crevettes	
	▪ Poisson fumé	
	▪ Conserves de Sardine/Thon	
9	**Lait et produits laitiers**	
	▪ Lait	
	▪ Fromage	
	▪ Beurre	
10	**Œufs**	
	▪ Œufs	
	▪ Omelettes	
11	**Aliments sucrés**	
	▪ Sucre	
	▪ Miel	
	▪ Canne à sucre/Melasse	
12	**Autres**	
	▪ Cola	
	▪ Tabac	
	▪ Thé, Café, Lipton	

Annex 3: Village sampling

Table 3.1. List of communes

Commune	Number of surveyed households
Bibiyargou	57
Diagourou	96
Kokorou	255
Kourtheye	302
Ouallam	122
Sakoira	91
Simiri	164
Sinder	35
Tagazar	168
Tera	125
Tillaberi	83
Grand total	**1498**

Table 3.2. List of villages C = control households (in low intensity villages); T = treatment households (in high intensity villages)

Commune/Village	C	T	Number of surveyed HH	Commune/Village	C	T	Number of surveyed HH
BIBIYARGOU		**57**	**57**	**Sakoira**	**25**	**66**	**91**
AGOUMA		12	12	BANIZOUMBOU	1		1
BiBIYARGOU (Firguine)		22	22	BAYE GANGANO	8		8
TAMIJJIRT		23	23	FALABERI 1		3	3
DIAGOUROU	**96**		**96**	KOURMOU1		35	35
GOUNGO BOYE	19		19	TAGANTASOU		28	28
SEBEREY BOKI	28		28	TIGODARAT	16		16
TCHOUKOUGA	49		49	**Simiri**	**124**	**40**	**164**
KOKOROU	**191**	**64**	**255**	GATAWANE	39		39
BOLSSOU	32		32	KABE	18		18
BOUKOKI	33		33	KABEFO	6		6
BOUWEY GOROU	31		31	KANDA	45		45
DOUNGOURO		34	34	SABON GARI		40	40
MABEYE SONRAI	30		30	WAROU	16		16
NAMGA		30	30	**Sinder**		**35**	**35**
NANARE	36		36	DANGALA		35	35
VILLAGE X KOKOROU	29		29	**Tagazar**	**139**	**29**	**168**
Kourtheye	**159**	**143**	**302**	BANIZOUMBOU2	35		35
BAMDERI KOIRA		23	23	FIRGUINE	30		30
KABIA	39		39	MBAMA	40		40
KARAMABOU		31	31	SANDIRE		29	29
KORIA HAOUSSA		47	47	TIMBORAN HATTA	34		34
MELA HAOUSSA	52		52	**Tera**	**58**	**67**	**125**
SONA KADO	68		68	DOUMBA		33	33
SORBON HAOUSSA		42	42	TINGABA	15		15
Ouallam	**20**	**102**	**122**	TONDIA KANGUEY	43		43
BADOUGA	20		20	TOURIKOUKEY		34	34
BOLEZEIDO		40	40	**Tillaberi**		**83**	**83**
BOUGAR		30	30	MARI1		36	36
DABRE		32	32	TILLA KEINA MEBERI		47	47
				Grand total	**812**	**686**	**1498**

Annex 4: Result of logit model testing the effect of the SUR1M project on the probability that a household affected by seasonal drought (shock/stressor) responds by 'reducing food consumption' (negative coping strategy)

```
Mixed-effects logistic regression               Number of obs     =        709
Group variable:         Commune                 Number of groups  =         12
                                                Obs per group:
                                                              min =          4
                                                              avg =       59.1
                                                              max =        165
                                                Wald chi2(24)     =      78.48
Log likelihood = -380.39406                     Prob > chi2       =     0.0000
------------------------------------------------------------------------------
         Q17_R302 |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
------------------+-----------------------------------------------------------
  TreatmentControl |  -.5360281   .3068583    -1.75   0.081    -1.137459    .0654031
   Livelihood_Zone |   .5499053   .2785326     1.97   0.048     .0039915    1.095819
      Sexe du Chef |   .2025247   .1911714     1.06   0.289    -.1721643    .5772138
       Age du Chef |   .0125931     .04099     0.31   0.759    -.0677459    .0929321
    Age du Chef_sq |  -.0002132   .0004227    -0.50   0.614    -.0010417    .0006154
           HHSize |  -.0063367   .0180488    -0.35   0.726    -.0417117    .0290382
 PrincipaleActiv2  |  -.6367202   1.226176    -0.52   0.604    -3.039982    1.766542
 PrincipaleActiv4  |   1.012086   .5200084     1.95   0.052    -.0071121    2.031283
 PrincipaleActiv11 |  -.1445889   .7474298    -0.19   0.847    -1.609524    1.320346
     SourceEnerg6  |   1.003844    .562292     1.79   0.074    -.0982277    2.105916
     SourceEnerg7  |   .7525856    .674896     1.12   0.265    -.5701863    2.075357
     SourceEclar2  |   .3046433   .5273999     0.58   0.564    -.7290415    1.338328
     SourceEclar6  |   .5019947   .4746334     1.06   0.290    -.4282696    1.432259
        Log_Assets |  -.3446756   .0890831    -3.87   0.000    -.5192754   -.1700759
    DroitsProperty |  -.4474676     .28814    -1.55   0.120    -1.012212    .1172764
         LogIncome |   .0177523   .0214443     0.83   0.408    -.0242779    .0597824
  Accesstoservices |   .1408614   .0876801     1.61   0.108    -.0309883    .3127112
       AccesstoAid |  -.0018914   .0532382    -0.04   0.972    -.1062363    .1024535
 AccesstoAidSocial |   .0713097   .0483824     1.47   0.141    -.0235181    .1661375
      MemberSocNet |   .0574136   .1013315     0.57   0.571    -.1411926    .2560197
     ShockSeverity |  -.6303191   .1286073    -4.90   0.000    -.8823847   -.3782535
        LostAssets |   .3925908   .2251914     1.74   0.081    -.0487763    .8339579
        LostIncome |   .8419397   .2369802     3.55   0.000     .3774671    1.306412
    IntraHHTension |   1.156138   .4627016     2.50   0.012     .2492593    2.063016
             _cons |   1.626141   1.472808     1.10   0.270     -1.26051    4.512792
------------------+-----------------------------------------------------------
         var(_cons)|   .4669533    .278436                      .1451165    1.502554
------------------------------------------------------------------------------
LR test vs. logistic model: chibar2(01) = 22.44       Prob >= chibar2 = 0.0000

Average marginal effects                        Number of obs     =        709
------------------------------------------------------------------------------
                 |      dy/dx   Std. Err.      z    P>|z|     [95% Conf. Interval]
-----------------+------------------------------------------------------------
TreatmentControl |  -.0902571   .0507996    -1.78   0.076    -.1898224    .0093083
```

Stars indicate statistical significance at the .10 (*), .05 (**) and .01 (***) levels

Annex 5: Details of the 25 logit models estimated across the five major shocks/stressors and five main types of responses – detrimental coping strategies

Shock 1: Seasonal drought
Strategy 302: Reduce food consumption

```
Mixed-effects logistic regression               Number of obs     =        709
Group variable:         Commune                 Number of groups  =         12
                                                Obs per group:
                                                              min =          4
                                                              avg =       59.1
                                                              max =        165
Integration method: mvaghermite                 Integration pts.  =          7
                                                Wald chi2(24)     =      78.48
Log likelihood = -380.39406                     Prob > chi2       =     0.0000
------------------------------------------------------------------------------
          Q17_R302 |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------------+----------------------------------------------------------------
  TreatmentControl |  -.5360281   .3068583    -1.75   0.081    -1.137459    .0654031
   Livelihood_Zone |   .5499053   .2785326     1.97   0.048     .0039915    1.095819
   Q3_2_SexeDuChef |   .2025247   .1911714     1.06   0.289    -.1721643    .5772138
    Q3_3_AgeDuChef |   .0125931     .04099     0.31   0.759    -.0677459    .0929321
      AgeDuChef_sq |  -.0002132   .0004227    -0.50   0.614    -.0010417    .0006154
            HHSize |  -.0063367   .0180488    -0.35   0.726    -.0417117    .0290382
Q3_6_PrincipaleA~e |
                 2 |  -.6367202   1.226176    -0.52   0.604    -3.039982    1.766542
                 4 |   1.012086   .5200084     1.95   0.052    -.0071121    2.031283
                11 |  -.1445889   .7474298    -0.19   0.847    -1.609524    1.320346
Q3_7_SourceEnergie |
                 6 |   1.003844    .562292     1.79   0.074    -.0982277    2.105916
                 7 |   .7525856    .674896     1.12   0.265    -.5701863    2.075357
Q3_8_SourceEclar~e |
                 2 |   .3046433   .5273999     0.58   0.564    -.7290415    1.338328
                 6 |   .5019947   .4746334     1.06   0.290    -.4282696    1.432259
        Log_Assets |  -.3446756   .0890831    -3.87   0.000    -.5192754   -.1700759
Q12_1_DroitsProp~e |  -.4474676     .28814    -1.55   0.120    -1.012212    .1172764
         LogIncome |   .0177523   .0214443     0.83   0.408    -.0242779    .0597824
   Accestoservices |   .1408614   .0876801     1.61   0.108    -.0309883    .3127112
        AccestoAid |  -.0018914   .0532382    -0.04   0.972    -.1062363    .1024535
  AccestoAidSocial |   .0713097   .0483824     1.47   0.141    -.0235181    .1661375
      MemberSocNet |   .0574136   .1013315     0.57   0.571    -.1411926    .2560197
          Q16_R105 |  -.6303191   .1286073    -4.90   0.000    -.8823847   -.3782535
          Q16_R106 |   .3925908   .2251914     1.74   0.081    -.0487763    .8339579
          Q16_R108 |   .8419397   .2369802     3.55   0.000     .3774671    1.306412
          Q16_R109 |   1.156138   .4627016     2.50   0.012     .2492593    2.063016
             _cons |   1.626141   1.472808     1.10   0.270     -1.26051    4.512792
-------------------+----------------------------------------------------------------
Commune            |
         var(_cons)|   .4669533    .278436                      .1451165    1.502554
------------------------------------------------------------------------------
LR test vs. logistic model: chibar2(01) = 22.44       Prob >= chibar2 = 0.0000

. margins, dydx(TreatmentControl)
Average marginal effects                        Number of obs     =        709
Model VCE    : OIM
Expression   : Marginal predicted mean, predict()
dy/dx w.r.t. : TreatmentControl
------------------------------------------------------------------------------
                 |            Delta-method
                 |      dy/dx   Std. Err.      z    P>|z|     [95% Conf. Interval]
-----------------+------------------------------------------------------------------
TreatmentControl |  -.0902571   .0507996    -1.78   0.076    -.1898224    .0093083
------------------------------------------------------------------------------
```

Strategy 305: Change type of food

```
Mixed-effects logistic regression               Number of obs     =        707
Group variable:         Commune                 Number of groups  =         12

                                                Obs per group:
                                                              min =          4
                                                              avg =       58.9
                                                              max =        163

Integration method: mvaghermite                 Integration pts.  =          7

                                                Wald chi2(24)     =      75.28
Log likelihood = -321.12564                     Prob > chi2       =     0.0000
------------------------------------------------------------------------------
          Q17_R305 |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------------+----------------------------------------------------------------
  TreatmentControl |  -.6898751   .3365425    -2.05   0.040    -1.349486    -.030264
   Livelihood_Zone |   .5371875   .3389472     1.58   0.113    -.1271368    1.201512
   Q3_2_SexeDuChef |   .0897729   .2135294     0.42   0.674    -.3287369    .5082828
    Q3_3_AgeDuChef |   .0082787   .0454826     0.18   0.856    -.0808656     .097423
      AgeDuChef_sq |  -.0000494   .0004653    -0.11   0.916    -.0009613    .0008625
            HHSize |  -.0164095   .0223603    -0.73   0.463    -.0602349    .0274159
Q3_6_PrincipaleA~e |
                4  |  -1.797161   1.109954    -1.62   0.105     -3.97263     .378308
                5  |  -.1091921   1.333007    -0.08   0.935    -2.721839    2.503455
               11  |  -.1962606   .8631229    -0.23   0.820     -1.88795    1.495429
Q3_7_SourceEnergie |
                6  |   .4499043   .6146487     0.73   0.464    -.7547851    1.654594
                7  |  -.1351693   .7815653    -0.17   0.863    -1.667009     1.39667
Q3_8_SourceEclar~e |
                2  |  -.4546423   .5520988    -0.82   0.410    -1.536736    .6274514
                6  |  -.1025757   .4834693    -0.21   0.832    -1.050158    .8450067
       Log_Assets |  -.4592438   .1019084    -4.51   0.000    -.6589807   -.2595069
Q12_1_DroitsProp~e |   .2929519   .3398349     0.86   0.389    -.3731124    .9590161
         LogIncome |   .0528952   .0255617     2.07   0.039     .0027952    .1029951
   Accestoservices |   .1547977   .0978667     1.58   0.114    -.0370175    .3466128
        AccestoAid |  -.0071544   .0574072    -0.12   0.901    -.1196704    .1053616
  AccestoAidSocial |   .0570484   .0527776     1.08   0.280    -.0463938    .1604906
      MemberSocNet |   .1595246   .1108087     1.44   0.150    -.0576565    .3767056
          Q16_R105 |   -.463459   .1338116    -3.46   0.001     -.725725   -.2011931
          Q16_R106 |   .1176382   .2554319     0.46   0.645    -.3829991    .6182754
          Q16_R108 |   1.454697   .3007059     4.84   0.000     .8653241    2.044069
          Q16_R109 |   .4320343   .4719675     0.92   0.360    -.4930051    1.357074
             _cons |   1.560536   1.662135     0.94   0.348     -1.69719    4.818261
-------------------+----------------------------------------------------------------
Commune            |
         var(_cons)|   .9146047   .5975504                      .2541599    3.291242
------------------------------------------------------------------------------
LR test vs. logistic model: chibar2(01) = 18.22       Prob >= chibar2 = 0.0000

. margins, dydx(TreatmentControl)
Average marginal effects                        Number of obs     =        707
Model VCE    : OIM
Expression   : Marginal predicted mean, predict()
dy/dx w.r.t. : TreatmentControl

------------------------------------------------------------------------------
                 |            Delta-method
                 |      dy/dx   Std. Err.      z    P>|z|     [95% Conf. Interval]
-----------------+------------------------------------------------------------------
TreatmentControl |  -.0941415   .0469402    -2.01   0.045    -.1861427   -.0021404
------------------------------------------------------------------------------
```

Strategy 308: Reduce level of family expenditure

```
Mixed-effects logistic regression               Number of obs     =        697
Group variable:         Commune                 Number of groups  =         12

                                                Obs per group:
                                                              min =          5
                                                              avg =       58.1
                                                              max =        163

Integration method: mvaghermite                 Integration pts.  =          7

                                                Wald chi2(27)     =     102.69
Log likelihood = -360.07494                     Prob > chi2       =     0.0000
------------------------------------------------------------------------------
          Q17_R308 |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------------+----------------------------------------------------------------
  TreatmentControl |    -.05883   .3003818    -0.20   0.845    -.6475676    .5299075
   Livelihood_Zone |   .4372631   .3069454     1.42   0.154    -.1643388    1.038865
   Q3_2_SexeDuChef |   .3985579   .2023508     1.97   0.049     .0019576    .7951583
    Q3_3_AgeDuChef |  -.0311324   .0430783    -0.72   0.470    -.1155644    .0532995
      AgeDuChef_sq |   .0002893   .0004421     0.65   0.513    -.0005771    .0011558
            HHSize |  -.0208137   .0200238    -1.04   0.299    -.0600596    .0184322
Q3_6_PrincipaleA~e |
                2  |   .0310408   1.191903     0.03   0.979    -2.305047    2.367128
                4  |   .2442565   .5892871     0.41   0.679     -.910725    1.399238
                6  |  -.3621098   1.252947    -0.29   0.773    -2.817841    2.093622
               11  |   1.109052   .7920406     1.40   0.161    -.4433189    2.661423
               12  |  -.1076512   1.206791    -0.09   0.929    -2.472917    2.257615
Q3_7_SourceEnergie |
                6  |  -.8685639   .6353933    -1.37   0.172    -2.113912    .3767842
                7  |  -.6258246    .851849    -0.73   0.463    -2.295418    1.043769
Q3_8_SourceEclar~e |
                2  |  -1.156185   .5275909    -2.19   0.028    -2.190244   -.1221255
                6  |   .1886116   .4584604     0.41   0.681    -.7099543    1.087178
                7  |   1.250733   1.239266     1.01   0.313    -1.178184    3.679649
        Log_Assets |   -.285991   .0924698    -3.09   0.002    -.4672286   -.1047535
Q12_1_DroitsProp~e |  -.4947499    .301265    -1.64   0.101    -1.085218    .0957186
         LogIncome |   .0092714   .0226594     0.41   0.682    -.0351403     .053683
   Accestoservices |   .0497545   .0855979     0.58   0.561    -.1180144    .2175234
        AccestoAid |   .2241299   .0541716     4.14   0.000     .1179555    .3303043
  AccestoAidSocial |  -.0264756   .0503469    -0.53   0.599    -.1251537    .0722024
      MemberSocNet |   .0845103   .0980184     0.86   0.389    -.1076021    .2766228
           Q16_R105 |  -.3699429   .1200507    -3.08   0.002     -.605238   -.1346477
           Q16_R106 |   .9167071   .2437492     3.76   0.000     .4389676    1.394447
           Q16_R108 |   1.126969   .2525039     4.46   0.000     .6320702    1.621867
           Q16_R109 |  -.0030389   .4933719    -0.01   0.995      -.97003    .9639522
              _cons |   1.968345   1.538469     1.28   0.201    -1.046998    4.983689
-------------------+----------------------------------------------------------------
Commune            |
         var(_cons)|    .579141   .3489733                      .1777769    1.886659
------------------------------------------------------------------------------
LR test vs. logistic model: chibar2(01) = 19.13       Prob >= chibar2 = 0.0000
```

Strategy 311: Take loans

```
Mixed-effects logistic regression               Number of obs     =        719
Group variable:         Commune                 Number of groups  =         12
                                                Obs per group:
                                                              min =          4
                                                              avg =       59.9
                                                              max =        167
Integration method: mvaghermite                 Integration pts.  =          7
                                                Wald chi2(27)     =      74.45
Log likelihood = -410.66726                     Prob > chi2       =     0.0000
------------------------------------------------------------------------------
          Q18_R311 |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------------+----------------------------------------------------------------
  TreatmentControl |  -.4411317   .2639971    -1.67   0.095    -.9585565    .0762931
   Livelihood_Zone |  -.1087526   .2394956    -0.45   0.650    -.5781554    .3606502
   Q3_2_SexeDuChef |   .0634464   .1825643     0.35   0.728     -.294373    .4212658
    Q3_3_AgeDuChef |   .0007023   .0402218     0.02   0.986     -.078131    .0795356
      AgeDuChef_sq |  -.0000857   .0004174    -0.21   0.837    -.0009038    .0007324
            HHSize |   .0039664    .017784     0.22   0.824    -.0308895    .0388224
Q3_6_PrincipaleA~e |
                4  |  -.9282632   .6659501    -1.39   0.163    -2.233502    .3769751
                5  |  -.7239737   1.298705    -0.56   0.577    -3.269388    1.821441
                6  |   .3486757   1.028784     0.34   0.735    -1.667704    2.365055
               11  |  -2.204248   1.117452    -1.97   0.049    -4.394413   -.0140834
               12  |  -.8079721   1.152875    -0.70   0.483    -3.067565    1.451621
Q3_7_SourceEnergie |
                6  |  -.3796177   .5761504    -0.66   0.510    -1.508852    .7496164
                7  |   .3656365   .6464344     0.57   0.572    -.9013517    1.632625
Q3_8_SourceEclar~e |
                2  |    1.37276   .5384329     2.55   0.011     .3174509    2.428069
                6  |   1.123578   .5105765     2.20   0.028     .1228669     2.12429
                7  |   2.361755    1.16243     2.03   0.042      .083434    4.640076
        Log_Assets |  -.2208003   .0817631    -2.70   0.007    -.3810529   -.0605476
Q12_1_DroitsProp~e |  -.5741711   .2767728    -2.07   0.038    -1.116636   -.0317063
         LogIncome |  -.0032943   .0210652    -0.16   0.876    -.0445813    .0379927
   Accestoservices |   .0885327   .0732599     1.21   0.227    -.0550541    .2321194
        AccestoAid |   -.021782    .049555    -0.44   0.660     -.118908    .0753439
  AccestoAidSocial |   .0535517   .0447273     1.20   0.231    -.0341121    .1412155
      MemberSocNet |   .0890951   .0939638     0.95   0.343    -.0950707    .2732608
          Q16_R105 |  -.3653223   .1126285    -3.24   0.001    -.5860702   -.1445744
          Q16_R106 |   .4960423   .2203188     2.25   0.024     .0642254    .9278591
          Q16_R108 |   1.032972   .2270756     4.55   0.000     .5879119    1.478032
          Q16_R109 |   .4655991   .4459006     1.04   0.296    -.4083501    1.339548
             _cons |   .5388522   1.419431     0.38   0.704    -2.243181    3.320886
-------------------+----------------------------------------------------------------
Commune            |
         var(_cons)|   .1325201   .1120477                      .0252684    .6950006
------------------------------------------------------------------------------
LR test vs. logistic model: chibar2(01) = 4.48        Prob >= chibar2 = 0.0172

. margins, dydx(TreatmentControl)
Average marginal effects                        Number of obs     =        719
Model VCE    : OIM
Expression   : Marginal predicted mean, predict()
dy/dx w.r.t. : TreatmentControl
------------------------------------------------------------------------------
                 |            Delta-method
                 |      dy/dx   Std. Err.      z    P>|z|     [95% Conf. Interval]
-----------------+------------------------------------------------------------------
TreatmentControl |  -.0829233   .0491522    -1.69   0.092    -.1792599    .0134133
------------------------------------------------------------------------------
```

Strategy 316: Sell assets

```
Mixed-effects logistic regression               Number of obs     =        710
Group variable:         Commune                 Number of groups  =         12

                                                Obs per group:
                                                              min =          3
                                                              avg =       59.2
                                                              max =        167

Integration method: mvaghermite                 Integration pts.  =          7

                                                Wald chi2(28)     =     101.03
Log likelihood =   -341.079                     Prob > chi2       =     0.0000
------------------------------------------------------------------------------
          Q18_R316 |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------------+----------------------------------------------------------------
  TreatmentControl |   .0016435   .3124163     0.01   0.996    -.6106811    .6139681
   Livelihood_Zone |   .0605643   .3367848     0.18   0.857    -.5995218    .7206505
   Q3_2_SexeDuChef |  -.0757887   .2088689    -0.36   0.717    -.4851642    .3335867
    Q3_3_AgeDuChef |   .0053809   .0466986     0.12   0.908    -.0861467    .0969085
      AgeDuChef_sq |   .0000222   .0004642     0.05   0.962    -.0008877    .0009321
            HHSize |   .0111322   .0197617     0.56   0.573       -.0276    .0498644
Q3_6_PrincipaleA~e |
                2  |   1.453662   1.024271     1.42   0.156    -.5538726    3.461197
                4  |  -1.377685   .7438855    -1.85   0.064    -2.835674     .080304
                5  |   .5776629   1.455008     0.40   0.691      -2.2741    3.429426
                6  |   .5059274   1.097841     0.46   0.645    -1.645801    2.657656
                7  |          0  (empty)
               11  |   1.674008   .7876767     2.13   0.034       .13019    3.217826
               12  |   .2670273    1.33131     0.20   0.841    -2.342292    2.876347
Q3_7_SourceEnergie |
                6  |   -2.47062    1.17948    -2.09   0.036    -4.782359   -.1588808
                7  |   1.137622    .700195     1.62   0.104    -.2347345    2.509979
Q3_8_SourceEclar~e |
                2  |   1.028669   .4939386     2.08   0.037     .0605672    1.996771
                6  |   .4898694   .4678042     1.05   0.295    -.4270101    1.406749
                7  |   4.375037   1.589037     2.75   0.006     1.260582    7.489493
       Log_Assets |   .2913097    .099056     2.94   0.003     .0971635    .4854558
Q12_1_DroitsProp~e |  -.2367812   .3221714    -0.73   0.462    -.8682256    .3946633
         LogIncome |   .1395376   .0271602     5.14   0.000     .0863046    .1927707
   Accestoservices |   .0232374   .0931439     0.25   0.803    -.1593214    .2057961
        AccestoAid |   .0233154    .054052     0.43   0.666    -.0826246    .1292554
  AccestoAidSocial |   .0438362   .0520622     0.84   0.400    -.0582038    .1458763
      MemberSocNet |   .2374226   .1023396     2.32   0.020     .0368408    .4380045
          Q16_R105 |  -.0276313   .1244251    -0.22   0.824       -.2715    .2162374
          Q16_R106 |   .8265896   .2476333     3.34   0.001     .3412373    1.311942
          Q16_R108 |   .5131565   .2614501     1.96   0.050     .0007238    1.025589
          Q16_R109 |   .4596806    .551193     0.83   0.404    -.6206378    1.539999
             _cons |  -7.581336   1.721027    -4.41   0.000    -10.95449   -4.208186
-------------------+----------------------------------------------------------------
Commune            |
         var(_cons)|    .897329   .4743014                      .3184431     2.52855
------------------------------------------------------------------------------
LR test vs. logistic model: chibar2(01) = 39.15       Prob >= chibar2 = 0.0000
```

Shock 14: Serious Illness
Strategy 302: Reduce food consumption

```
Logistic regression                             Number of obs     =        488
                                                Wald chi2(10)     =          .
                                                Prob > chi2       =          .
Log pseudolikelihood = -161.64875               Pseudo R2         =     0.1114

                                      (Std. Err. adjusted for 12 clusters in Commune)
------------------------------------------------------------------------------------
                     |               Robust
           Q17_R302 |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
---------------------+--------------------------------------------------------------
     TreatmentControl |   .7296427   .6729631     1.08   0.278    -.5893407    2.048626
      Livelihood_Zone |   .3669549   .5572531     0.66   0.510    -.7252411    1.459151
      Q3_2_SexeDuChef |  -.0657571   .2234332    -0.29   0.769     -.503678    .3721639
              HHSize |   .0467617   .0225853     2.07   0.038     .0024954     .091028
        Ppal_Activity |  -.6476777   .3718146    -1.74   0.082    -1.376421    .0810655
          Source_Enrg |   .8417109   .4770688     1.76   0.078    -.0933268    1.776749
         Source_Light |   -.034559   .3687109    -0.09   0.925     -.757219     .688101
           Log_Assets |  -.2962249   .1556384    -1.90   0.057    -.6012706    .0088207
Q12_1_DroitsPropriete |    .622434   .6430801     0.97   0.333    -.6379798    1.882848
            LogIncome |    -.01623   .0549117    -0.30   0.768    -.1238549    .0913949
      Accestoservices |  -.2664602   .0946894    -2.81   0.005    -.4520481   -.0808723
           AccestoAid |   .0353846   .0780785     0.45   0.650    -.1176465    .1884156
     AccestoAidSocial |   .0280964   .0737351     0.38   0.703    -.1164217    .1726146
         MemberSocNet |  -.0067101   .2305928    -0.03   0.977    -.4586637    .4452436
             Q16_R105 |  -.0017836   .1693574    -0.01   0.992    -.3337179    .3301508
             Q16_R106 |   .6473076   .4378429     1.48   0.139    -.2108488    1.505464
             Q16_R108 |   .8516978   .3733085     2.28   0.023     .1200266    1.583369
             Q16_R109 |   .1589645   .4641844     0.34   0.732    -.7508203    1.068749
                _cons |   -.443655   2.147193    -0.21   0.836    -4.652076    3.764766
------------------------------------------------------------------------------------
```

```
. estat gof

Logistic model for Q17_R302, goodness-of-fit test

       number of observations =       488
 number of covariate patterns =       476
            Pearson chi2(457) =       487.12
                  Prob > chi2 =         0.1593

. estat gof, group(20)

Logistic model for Q17_R302, goodness-of-fit test

  (Table collapsed on quantiles of estimated probabilities)

       number of observations =       488
             number of groups =        20
     Hosmer-Lemeshow chi2(18) =        20.95
                  Prob > chi2 =         0.2818
```

Strategy 308: Reduce level of family expenditure

```
Logistic regression                             Number of obs     =        489
                                                Wald chi2(10)     =          .
                                                Prob > chi2       =          .
Log pseudolikelihood = -194.75963               Pseudo R2         =     0.1605

                                      (Std. Err. adjusted for 12 clusters in Commune)
------------------------------------------------------------------------------------
                     |               Robust
           Q17_R308 |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
---------------------+--------------------------------------------------------------
     TreatmentControl |   .4025261   .5130789     0.78   0.433      -.60309    1.408142
      Livelihood_Zone |   .1512362   .4668195     0.32   0.746    -.7637132    1.066186
      Q3_2_SexeDuChef |  -.1182479   .1936834    -0.61   0.542    -.4978605    .2613646
       Q3_3_AgeDuChef |  -.0171111   .0540626    -0.32   0.752    -.1230718    .0888497
         AgeDuChef_sq |   .0002088   .0005114     0.41   0.683    -.0007935    .0012112
                HHSize |   .0158727   .0294721     0.54   0.590    -.0418916     .073637
        Ppal_Activity |   .0016667   .3611581     0.00   0.996    -.7061902    .7095236
          Source_Enrg |  -.0260778   .6291484    -0.04   0.967    -1.259186    1.207031
Q3_8_SourceEclairage |
                   2  |  -.2196983   .8213713    -0.27   0.789    -1.829556     1.39016
                   6  |  -.1953377   .4001742    -0.49   0.625    -.9796647    .5889893
                   7  |   1.729865   1.470901     1.18   0.240    -1.153049    4.612779
           Log_Assets |  -.2850669   .1628338    -1.75   0.080    -.6042153    .0340814
Q12_1_DroitsPropriete |  -.3678844   .3055588    -1.20   0.229    -.9667686    .2309998
            LogIncome |   .0328284   .0423563     0.78   0.438    -.0501884    .1158451
      Accestoservices |    .132711   .1242397     1.07   0.285    -.1107945    .3762164
           AccestoAid |    .075798   .0454286     1.67   0.095    -.0132404    .1648365
     AccestoAidSocial |  -.1747851   .0391549    -4.46   0.000    -.2515273   -.0980429
         MemberSocNet |   .2007281   .1239379     1.62   0.105    -.0421858     .443642
             Q16_R105 |  -.1698825   .1357435    -1.25   0.211     -.435935    .0961699
             Q16_R106 |    .731823   .4625774     1.58   0.114    -.1748121    1.638458
             Q16_R108 |   .8912393   .1987309     4.48   0.000     .5017339    1.280745
             Q16_R109 |   1.031971   .4438668     2.32   0.020     .1620077    1.901934
                _cons |   1.152207   1.670807     0.69   0.490    -2.122515    4.426929
------------------------------------------------------------------------------------
```

```
. estat gof
Logistic model for Q17_R308, goodness-of-fit test

       number of observations =       489
 number of covariate patterns =       478
            Pearson chi2(455) =       505.12
                  Prob > chi2 =         0.0520

. estat gof, group(30)
Logistic model for Q17_R308, goodness-of-fit test

  (Table collapsed on quantiles of estimated probabilities)
       number of observations =       489
             number of groups =        30
    Hosmer-Lemeshow chi2(28) =        14.65
                  Prob > chi2 =         0.9819
```

Strategy 311: Take loans

```
Logistic regression                             Number of obs     =        492
                                                Wald chi2(10)     =          .
                                                Prob > chi2       =          .
Log pseudolikelihood = -278.89654               Pseudo R2         =     0.1727

                                    (Std. Err. adjusted for 12 clusters in Commune)
------------------------------------------------------------------------------
             |               Robust
    Q18_R311 |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
 TreatmentC~l |   .0418501   .4860932     0.09   0.931     -.910875    .9945752
 Livelihood~e |  -.4204711   .2210887    -1.90   0.057    -.8537969    .0128548
 Q3_2_SexeDu~f |  -.1143182   .2482518    -0.46   0.645    -.6008828    .3722465
 Q3_3_AgeDuC~f |  -.0065793   .0091353    -0.72   0.471    -.0244841    .0113255
       HHSize |    .003409   .0128273     0.27   0.790    -.0217321      .02855
 Ppal_Activity |   1.135149   .5055849     2.25   0.025     .1442205    2.126077
Q3_7_SourceE~e |
          6  |  -1.807799    .468305    -3.86   0.000     -2.72566   -.8899386
          7  |   .7155424   .4765192     1.50   0.133     -.218418    1.649503
Q3_8_SourceE~e |
          2  |  -.7161106   .4430878    -1.62   0.106    -1.584547    .1523255
          6  |  -.4640168   .3907268    -1.19   0.235    -1.229827    .3017937
          7  |   .7124964   1.279341     0.56   0.578    -1.794965    3.219958
 Log_Assets |  -.3377649   .1578624    -2.14   0.032    -.6471696   -.0283603
Q12_1_Droit~e |     .28221   .2316743     1.22   0.223    -.1718633    .7362834
  LogIncome |  -.0623542   .0254522    -2.45   0.014    -.1122396   -.0124688
 Accestoser~s |  -.0552033   .1075218    -0.51   0.608    -.2659421    .1555354
 AccestoAid |  -.0200593   .0617427    -0.32   0.745    -.1410727    .1009541
 AccestoAid~l |  -.0347098   .0494228    -0.70   0.482    -.1315768    .0621571
 MemberSocNet |   .0660002    .117275     0.56   0.574    -.1638545    .2958549
 Q16_R105 |  -.3501112   .1413259    -2.48   0.013    -.6271049   -.0731176
 Q16_R106 |   .3650068   .3417355     1.07   0.285    -.3047825    1.034796
 Q16_R108 |   .6782931   .2338253     2.90   0.004      .220004    1.136582
 Q16_R109 |   1.715871   .4697321     3.65   0.000     .7952128    2.636529
    _cons |   4.257524   1.805351     2.36   0.018     .7191008    7.795947
------------------------------------------------------------------------------

. estat gof
Logistic model for Q18_R311, goodness-of-fit test
       number of observations =       492
 number of covariate patterns =       481
           Pearson chi2(458) =       497.79
                 Prob > chi2 =         0.0967

. estat gof, group(30)
Logistic model for Q18_R311, goodness-of-fit test

  (Table collapsed on quantiles of estimated probabilities)
       number of observations =       492
             number of groups =        30
    Hosmer-Lemeshow chi2(28) =        25.83
                 Prob > chi2 =         0.5824
```

Strategy 316: Sell assets

```
Logistic regression                             Number of obs     =        476
                                                Wald chi2(10)     =          .
                                                Prob > chi2       =          .
Log pseudolikelihood = -229.42064               Pseudo R2         =     0.1918

                                          (Std. Err. adjusted for 12 clusters in Commune)
------------------------------------------------------------------------------------------
                         |               Robust
                Q18_R316 |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------------------+----------------------------------------------------------------
       TreatmentControl |   .2112176   .3870119     0.55   0.585    -.5473118     .969747
        Livelihood_Zone |  -.0058601   .2978855    -0.02   0.984    -.5897049    .5779847
        Q3_2_SexeDuChef |  -.3659392   .2934787    -1.25   0.212    -.9411469    .2092685
         Q3_3_AgeDuChef |   .0167263   .0619859     0.27   0.787    -.1047639    .1382164
           AgeDuChef_sq |  -.0000467   .0005619    -0.08   0.934    -.0011481    .0010547
                 HHSize |   .0003991   .0396025     0.01   0.992    -.0772204    .0780186
Q3_6_PrincipaleActivite |
                      4  |  -1.658223   1.130558    -1.47   0.142    -3.874076    .5576301
                      5  |  -.4634474   .5867474    -0.79   0.430    -1.613451    .6865564
                     11  |   .2725553   .9294142     0.29   0.769    -1.549063    2.094174
                     12  |   .4952262   .9550539     0.52   0.604    -1.376645    2.367097
    Q3_7_SourceEnergie |
                      6  |   .0137046    1.26633     0.01   0.991    -2.468257    2.495666
                      7  |  -.0570431   1.356616    -0.04   0.966    -2.715961    2.601875
  Q3_8_SourceEclarirage |
                      2  |   .2975359   .3981894     0.75   0.455    -.4829009    1.077973
                      6  |   -.046555   .3033108    -0.15   0.878    -.6410332    .5479232
             Log_Assets |   .0967255   .1499125     0.65   0.519    -.1970976    .3905486
  Q12_1_DroitsPropriete |   .0999685   .2891914     0.35   0.730    -.4668361    .6667732
              LogIncome |   .0150588   .0439976     0.34   0.732     -.071175    .1012925
       Accestoservices |   .1876784   .1385517     1.35   0.176    -.0838778    .4592347
             AccestoAid |   .0035097   .0831005     0.04   0.966    -.1593642    .1663837
      AccestoAidSocial |   .0113207   .0502767     0.23   0.822    -.0872199    .1098613
          MemberSocNet |  -.0991789   .1438472    -0.69   0.491    -.3811142    .1827565
               Q16_R105 |  -.0805781   .1413483    -0.57   0.569    -.3576157    .1964595
               Q16_R106 |   1.641494   .3972016     4.13   0.000     .8629933    2.419995
               Q16_R108 |   .9671904   .3918696     2.47   0.014     .1991402    1.735241
               Q16_R109 |  -.0339248   .4383247    -0.08   0.938    -.8930254    .8251757
                  _cons |  -4.391455   2.138521    -2.05   0.040    -8.582878   -.2000315
------------------------------------------------------------------------------------------

. estat gof
Logistic model for Q18_R316, goodness-of-fit test

       number of observations =       476
 number of covariate patterns =       466
            Pearson chi2(440) =       456.59
                  Prob > chi2 =         0.2828

. estat gof, group(25)
Logistic model for Q18_R316, goodness-of-fit test

  (Table collapsed on quantiles of estimated probabilities)

       number of observations =       476
             number of groups =        25
     Hosmer-Lemeshow chi2(23) =        29.08
                  Prob > chi2 =         0.1777
```

Shock 6: Army Worm attack
Strategy 302: Reduce food consumption

```
Logistic regression                             Number of obs     =        277
                                                Wald chi2(9)      =          .
                                                Prob > chi2       =          .
Log pseudolikelihood = -97.662457               Pseudo R2         =     0.2533

                                      (Std. Err. adjusted for 11 clusters in Commune)
------------------------------------------------------------------------------------
                    |               Robust
           Q17_R302 |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
--------------------+---------------------------------------------------------------
     TreatmentControl |   .6267731   .6067262     1.03   0.302    -.5623884    1.815935
      Livelihood_Zone |   1.405627    .326152     4.31   0.000     .7663807    2.044873
      Q3_2_SexeDuChef |   .6530936   .2250825     2.90   0.004     .2119401    1.094247
       Q3_3_AgeDuChef |  -.1430666   .0744335    -1.92   0.055    -.2889535    .0028204
         AgeDuChef_sq |    .001089   .0006981     1.56   0.119    -.0002792    .0024573
              HHSize |   .0533444   .0362697     1.47   0.141     -.017743    .1244318
        Ppal_Activity |   .3543515   .7676001     0.46   0.644    -1.150117     1.85882
          Source_Enrg |  -.0473006   .5756243    -0.08   0.935    -1.175503    1.080902
         Source_Light |  -.3526804   .5548035    -0.64   0.525    -1.440075    .7347145
           Log_Assets |  -.0158258   .1501401    -0.11   0.916    -.3100949    .2784433
Q12_1_DroitsPropriete |  -.5068552   .5811082    -0.87   0.383    -1.645806    .6320958
            LogIncome |   -.092321   .0378556    -2.44   0.015    -.1665165   -.0181254
      Accestoservices |  -.1906706   .1072834    -1.78   0.076    -.4009422    .0196009
           AccestoAid |  -.0736064   .1217832    -0.60   0.546    -.3122972    .1650844
     AccestoAidSocial |   .0374829   .0774038     0.48   0.628    -.1142258    .1891915
         MemberSocNet |   .0571903   .2053967     0.28   0.781    -.3453799    .4597605
             Q16_R105 |  -.2733291    .260591    -1.05   0.294    -.7840782    .2374199
             Q16_R106 |   1.272069   .3898327     3.26   0.001     .5080112    2.036127
             Q16_R108 |   .6915917   .4412826     1.57   0.117    -.1733064     1.55649
             Q16_R109 |   2.161229   .9277499     2.33   0.020     .3428727    3.979585
                _cons |   1.251771    3.17342     0.39   0.693    -4.968016    7.471559
------------------------------------------------------------------------------------

. estat gof

Logistic model for Q17_R302, goodness-of-fit test

       number of observations =       277
 number of covariate patterns =       274
            Pearson chi2(253) =       259.44
                  Prob > chi2 =         0.3770

. estat gof, group(30)

Logistic model for Q17_R302, goodness-of-fit test

  (Table collapsed on quantiles of estimated probabilities)

       number of observations =       277
             number of groups =        30
     Hosmer-Lemeshow chi2(28) =        32.89
                  Prob > chi2 =         0.2398
```

Strategy 305: Change type of food

```
Logistic regression                             Number of obs     =        273
                                                Wald chi2(9)      =          .
                                                Prob > chi2       =          .
Log pseudolikelihood = -74.029546               Pseudo R2         =     0.1990

                                      (Std. Err. adjusted for 11 clusters in Commune)
------------------------------------------------------------------------------------
                     |               Robust
           Q17_R305 |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
---------------------+--------------------------------------------------------------
     TreatmentControl |   .5469506   .8252648     0.66   0.507    -1.070539     2.16444
      Livelihood_Zone |   .6200743   .9432616     0.66   0.511    -1.228684    2.468833
      Q3_2_SexeDuChef |   .8004897   .5610372     1.43   0.154     -.299123    1.900102
       Q3_3_AgeDuChef |   -.018545   .0989426    -0.19   0.851    -.2124689     .175379
         AgeDuChef_sq |   .0003861   .0009378     0.41   0.681     -.001452    .0022242
               HHSize |  -.0293462   .0756194    -0.39   0.698    -.1775575    .1188652
        Ppal_Activity |  -.0453362   1.394402    -0.03   0.974    -2.778313    2.687641
          Source_Enrg |   .0803165   1.157094     0.07   0.945    -2.187547     2.34818
         Source_Light |  -.6574772     .76609    -0.86   0.391    -2.158986    .8440316
           Log_Assets |  -.1419717    .154348    -0.92   0.358    -.4444882    .1605449
Q12_1_DroitsPropriete |   .9582629   .8218734     1.17   0.244    -.6525794    2.569105
            LogIncome |  -.0399372   .0362055    -1.10   0.270    -.1108987    .0310243
      Accestoservices |  -.1825043    .099618    -1.83   0.067     -.377752    .0127435
           AccestoAid |  -.1896308   .1993531    -0.95   0.341    -.5803557    .2010941
     AccestoAidSocial |  -.1029764   .1457418    -0.71   0.480     -.388625    .1826722
         MemberSocNet |   .3491369   .2664676     1.31   0.190      -.17313    .8714038
             Q16_R105 |   .0226072   .2676341     0.08   0.933     -.501946    .5471605
             Q16_R106 |   .2522982   .4502106     0.56   0.575    -.6300985    1.134695
             Q16_R108 |   .9685468   .2884238     3.36   0.001     .4032466    1.533847
             Q16_R109 |   1.292549   .9498454     1.36   0.174    -.5691136    3.154212
                _cons |  -2.207793   3.234932    -0.68   0.495    -8.548143    4.132558
------------------------------------------------------------------------------------

. estat gof

Logistic model for Q17_R305, goodness-of-fit test

       number of observations =       273
 number of covariate patterns =       270
           Pearson chi2(249) =       229.60
                 Prob > chi2 =         0.8059

. estat gof, group(20)

Logistic model for Q17_R305, goodness-of-fit test

  (Table collapsed on quantiles of estimated probabilities)

       number of observations =       273
             number of groups =        20
     Hosmer-Lemeshow chi2(18) =        20.51
                 Prob > chi2 =         0.3051
```

Strategy 308: Reduce level of family expenditure

```
Logistic regression                             Number of obs     =        262
                                                Wald chi2(9)      =          .
                                                Prob > chi2       =          .
Log pseudolikelihood = -92.701459               Pseudo R2         =     0.1962

                                      (Std. Err. adjusted for 11 clusters in Commune)
------------------------------------------------------------------------------------
                     |               Robust
            Q17_R308 |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
---------------------+--------------------------------------------------------------
     TreatmentControl |   .8234912   .7221473     1.14   0.254    -.5918915    2.238874
      Livelihood_Zone |  -.1781399   .5885748    -0.30   0.762    -1.331725    .9754455
      Q3_2_SexeDuChef |  -.2601532   .3662979    -0.71   0.478    -.9780838    .4577774
       Q3_3_AgeDuChef |  -.0129543   .0729793    -0.18   0.859     -.155991    .1300824
         AgeDuChef_sq |   .0001048   .0006158     0.17   0.865    -.0011021    .0013118
               HHSize |   .0841147   .0372276     2.26   0.024       .01115    .1570794
        Ppal_Activity |  -.5561199   .8454819    -0.66   0.511    -2.213234    1.100994
          Source_Enrg |   .1761543   .9598772     0.18   0.854    -1.705171    2.057479
        Source_Light |  -1.087112   .5866277    -1.85   0.064    -2.236881    .0626569
          Log_Assets |  -.5796942   .1497864    -3.87   0.000    -.8732701   -.2861182
Q12_1_DroitsPropriete |   .9560837   .8737323     1.09   0.274       -.7564    2.668568
           LogIncome |   .0642995   .0284633     2.26   0.024     .0085126    .1200865
      Accestoservices |  -.0506667   .1701936    -0.30   0.766    -.3842401    .2829067
           AccestoAid |  -.2255113   .0521212    -4.33   0.000    -.3276669   -.1233556
     AccestoAidSocial |  -.0054923   .1425028    -0.04   0.969    -.2847926     .273808
         MemberSocNet |  -.1625712   .3582459    -0.45   0.650    -.8647202    .5395779
             Q16_R105 |  -.2267853   .2106389    -1.08   0.282      -.63963    .1860594
             Q16_R106 |   1.733472   .5064919     3.42   0.001     .7407665    2.726178
             Q16_R108 |   .0988405   .5044598     0.20   0.845    -.8898825    1.087564
             Q16_R109 |   .8728534   .6771742     1.29   0.197    -.4543836     2.20009
                _cons |   4.135277   1.471586     2.81   0.005     1.251022    7.019532
------------------------------------------------------------------------------------
```

```
. estat gof

Logistic model for Q17_R308, goodness-of-fit test

       number of observations =       262
 number of covariate patterns =       259
            Pearson chi2(238) =       217.03
                  Prob > chi2 =         0.8315

. estat gof, group(20)

Logistic model for Q17_R308, goodness-of-fit test

  (Table collapsed on quantiles of estimated probabilities)

       number of observations =       262
             number of groups =        20
     Hosmer-Lemeshow chi2(18) =        14.73
                  Prob > chi2 =         0.6802
```

Strategy 311: Take loans

```
Logistic regression                             Number of obs     =        272
                                                Wald chi2(8)      =          .
                                                Prob > chi2       =          .
Log pseudolikelihood = -64.728063               Pseudo R2         =     0.3430

                                      (Std. Err. adjusted for 10 clusters in Commune)
------------------------------------------------------------------------------
             |               Robust
    Q18_R311 |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
TreatmentCon~l |   -.243937   .9033097    -0.27   0.787    -2.014392    1.526518
Livelihood_Zone |   -2.01778   .2778533    -7.26   0.000    -2.562362   -1.473197
Q3_2_SexeDuChef |   .1076442   .3569403     0.30   0.763    -.5919458    .8072343
Q3_3_AgeDuChef |   .0170477    .085993     0.20   0.843    -.1514955     .185591
AgeDuChef_sq |    -.00057   .0008373    -0.68   0.496    -.0022112    .0010711
HHSize |   .1359199   .0427816     3.18   0.001     .0520695    .2197704
Source_Enrg |   .0491502   1.139193     0.04   0.966    -2.183628    2.281928
Source_Light |  -.7139062   .8876252    -0.80   0.421     -2.45362    1.025807
Log_Assets |  -.1914643   .2388331    -0.80   0.423    -.6595686    .2766401
Q12_1_DroitsPropriete |   2.658045   1.393284     1.91   0.056    -.0727408    5.388831
LogIncome |  -.0463237   .0515786    -0.90   0.369    -.1474159    .0547684
Accestoservices |   -.281787   .1941225    -1.45   0.147    -.6622601    .0986861
AccestoAid |  -.2218237   .1319417    -1.68   0.093    -.4804247    .0367774
AccestoAidSocial |   .1307127   .1283141     1.02   0.308    -.1207784    .3822037
MemberSocNet |  -.0356208   .1695733    -0.21   0.834    -.3679783    .2967366
Q16_R105 |  -.4406609   .2295306    -1.92   0.055    -.8905326    .0092109
Q16_R106 |   2.721199   .5823416     4.67   0.000      1.57983    3.862567
Q16_R108 |  -.3757364   .3605882    -1.04   0.297    -1.082476    .3310035
Q16_R109 |   2.163459   .6858368     3.15   0.002     .8192437    3.507674
_cons |  -1.522629   3.399496    -0.45   0.654    -8.185519     5.14026
------------------------------------------------------------------------------
```

```
. estat gof

Logistic model for Q18_R311, goodness-of-fit test

       number of observations =       272
 number of covariate patterns =       269
            Pearson chi2(249) =       264.13
                  Prob > chi2 =         0.2437

. estat gof, group(20)

Logistic model for Q18_R311, goodness-of-fit test

  (Table collapsed on quantiles of estimated probabilities)

       number of observations =       272
             number of groups =        20
     Hosmer-Lemeshow chi2(18) =        20.57
                  Prob > chi2 =         0.3014
```

Strategy 316: Sell assets

```
Logistic regression                             Number of obs     =        129
                                                Wald chi2(7)      =          .
                                                Prob > chi2       =          .
Log pseudolikelihood = -26.234434               Pseudo R2         =     0.5767

                                          (Std. Err. adjusted for 9 clusters in Commune)
------------------------------------------------------------------------------------------
                     |               Robust
          Q18_R316 |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
---------------------+--------------------------------------------------------------------
     TreatmentControl |  -2.623687   1.056698    -2.48   0.013    -4.694776   -.5525969
      Livelihood_Zone |  -3.000483   .8748438    -3.43   0.001    -4.715146   -1.285821
      Q3_2_SexeDuChef |   1.489453   .3789157     3.93   0.000     .7467921    2.232114
       Q3_3_AgeDuChef |  -.1395608   .3119042    -0.45   0.655    -.7508818    .4717602
         AgeDuChef_sq |   .0007714   .0030181     0.26   0.798     -.005144    .0066867
               HHSize |   .1285436   .0877564     1.46   0.143    -.0434558    .3005431
        Ppal_Activity |          0  (omitted)
          Source_Enrg |          0  (omitted)
         Source_Light |  -.8513045   1.543434    -0.55   0.581     -3.87638    2.173771
           Log_Assets |   .1869707    .395448     0.47   0.636    -.5880931    .9620345
Q12_1_DroitsPropriete |          0  (omitted)
            LogIncome |   .1839858   .0682127     2.70   0.007     .0502912    .3176803
      Accestoservices |  -.3233142   .4379021    -0.74   0.460    -1.181586    .5349581
           AccestoAid |          0  (omitted)
     AccestoAidSocial |  -.1002001   .3454527    -0.29   0.772     -.777275    .5768748
         MemberSocNet |   1.181702   .2580249     4.58   0.000     .6759823    1.687421
             Q16_R105 |   .5934628   .6986693     0.85   0.396    -.7759038    1.962829
             Q16_R106 |   5.971571   1.227971     4.86   0.000     3.564792     8.37835
             Q16_R108 |  -.1540703   1.892492    -0.08   0.935    -3.863287    3.555147
             Q16_R109 |   3.316447     .82045     4.04   0.000     1.708395      4.9245
                _cons |  -5.889067   7.096705    -0.83   0.407    -19.79835    8.020219
------------------------------------------------------------------------------------------

. margins, dydx(TreatmentControl)
Average marginal effects                        Number of obs     =        129
Model VCE    : Robust
Expression   : Pr(Q18_R316), predict()
dy/dx w.r.t. : TreatmentControl
------------------------------------------------------------------------------
                |            Delta-method
                |      dy/dx   Std. Err.      z    P>|z|     [95% Conf. Interval]
----------------+-------------------------------------------------------------
TreatmentControl |    -.16445   .0752483    -2.19   0.029    -.3119341    -.016966
------------------------------------------------------------------------------

. estat gof
Logistic model for Q18_R316, goodness-of-fit test
       number of observations =       129
 number of covariate patterns =       126
            Pearson chi2(109) =       110.88
                  Prob > chi2 =         0.4320

. estat gof, group(20)
Logistic model for Q18_R316, goodness-of-fit test

  (Table collapsed on quantiles of estimated probabilities)

       number of observations =       129
             number of groups =        20
    Hosmer-Lemeshow chi2(18) =         8.55
                  Prob > chi2 =         0.9692
```

Shock 10: Price peaks
Strategy 302: Reduce food consumption

```
Logistic regression                             Number of obs     =        126
                                                Wald chi2(8)      =          .
                                                Prob > chi2       =          .
Log pseudolikelihood = -55.576479               Pseudo R2         =     0.1336

                                      (Std. Err. adjusted for 10 clusters in Commune)
------------------------------------------------------------------------------------
                   |               Robust
          Q17_R302 |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------------+----------------------------------------------------------------
     TreatmentControl |   .5908546   .8673977     0.68   0.496    -1.109214    2.290923
      Livelihood_Zone |   .0656577   .5060016     0.13   0.897    -.9260873    1.057403
      Q3_2_SexeDuChef |   .1192425    .541259     0.22   0.826    -.9416057    1.180091
       Q3_3_AgeDuChef |  -.0041596   .1348545    -0.03   0.975    -.2684696    .2601504
         AgeDuChef_sq |   .0003786   .0012017     0.32   0.753    -.0019766    .0027338
               HHSize |   .0199338   .0741139     0.27   0.788    -.1253267    .1651943
        Ppal_Activity |   1.417803   1.402289     1.01   0.312    -1.330633    4.166238
          Source_Enrg |  -.4004635   .7643549    -0.52   0.600    -1.898572    1.097645
        Source_Light |  -.6123552   .9701871    -0.63   0.528    -2.513887    1.289176
          Log_Assets |  -.1442198   .3400159    -0.42   0.671    -.8106387    .5221992
Q12_1_DroitsPropriete |  -.2098812   .8137782    -0.26   0.796    -1.804857    1.385095
            LogIncome |   .0394757   .0810385     0.49   0.626    -.1193568    .1983083
      Accestoservices |  -.4060681   .3314475    -1.23   0.221    -1.055693    .2435571
           AccestoAid |   .1986544   .1049279     1.89   0.058    -.0070005    .4043093
     AccestoAidSocial |   .0542577   .0920321     0.59   0.555    -.1261219    .2346374
         MemberSocNet |  -.5032342   .3030127    -1.66   0.097    -1.097128    .0906598
             Q16_R105 |  -.3114289    .322816    -0.96   0.335    -.9441366    .3212788
             Q16_R109 |   1.610578   .8922179     1.81   0.071    -.1381373    3.359293
                _cons |  -.1050578   5.540539    -0.02   0.985    -10.96432     10.7542
------------------------------------------------------------------------------------

. *margins, dydx(TreatmentControl)
. estat gof

Logistic model for Q17_R302, goodness-of-fit test

       number of observations =       126
 number of covariate patterns =       125
            Pearson chi2(106) =       125.98
                  Prob > chi2 =         0.0902

. estat gof, group(20)

Logistic model for Q17_R302, goodness-of-fit test

  (Table collapsed on quantiles of estimated probabilities)

       number of observations =       126
             number of groups =        20
     Hosmer-Lemeshow chi2(18) =        16.97
                  Prob > chi2 =         0.5249
```

Strategy 305: Change type of food

```
Logistic regression                             Number of obs     =         96
                                                Wald chi2(7)      =          .
                                                Prob > chi2       =          .
Log pseudolikelihood = -16.516937               Pseudo R2         =     0.5858
                                      (Std. Err. adjusted for 9 clusters in Commune)
------------------------------------------------------------------------------
                     |               Robust
          Q17_R305 |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
---------------------+--------------------------------------------------------------
     TreatmentControl |  -7.343469   2.483582    -2.96   0.003     -12.2112   -2.475738
      Livelihood_Zone |  -3.286429   2.450678    -1.34   0.180    -8.089669    1.516811
      Q3_2_SexeDuChef |  -2.482463   1.639486    -1.51   0.130    -5.695797    .7308716
       Q3_3_AgeDuChef |    .060101   .2250602     0.27   0.789     -.381009     .501211
         AgeDuChef_sq |   .0012538   .0019086     0.66   0.511    -.0024869    .0049945
               HHSize |  -.4882415   .2608402    -1.87   0.061    -.9994789     .022996
        Ppal_Activity |  -2.720363   2.173476    -1.25   0.211    -6.980298    1.539573
          Source_Enrg |          0  (omitted)
         Source_Light |          0  (omitted)
           Log_Assets |   .3669066   .8444223     0.43   0.664    -1.288131    2.021944
Q12_1_DroitsPropriete |  -3.703271   1.070004    -3.46   0.001     -5.80044   -1.606101
            LogIncome |   .1164907   .1553282     0.75   0.453     -.187947    .4209285
      Accestoservices |   .3361023   .4862392     0.69   0.489    -.6169089    1.289114
           AccestoAid |   .9860416   .5360956     1.84   0.066    -.0646864     2.03677
     AccestoAidSocial |   .4944168   .2469141     2.00   0.045     .0104741    .9783595
         MemberSocNet |   .9402934   .5526485     1.70   0.089    -.1428777    2.023464
             Q16_R105 |  -.6239151    .835881    -0.75   0.455    -2.262212    1.014382
             Q16_R106 |   3.097607   1.423991     2.18   0.030      .306635    5.888578
             Q16_R108 |    5.51958   2.568787     2.15   0.032     .4848503    10.55431
             Q16_R109 |          0  (omitted)
                _cons |  -5.915364   9.510848    -0.62   0.534    -24.55628    12.72555
------------------------------------------------------------------------------
Note: 6 failures and 0 successes completely determined.

. margins, dydx(TreatmentControl)
Average marginal effects                        Number of obs     =         96
Model VCE    : Robust
Expression   : Pr(Q17_R305), predict()
dy/dx w.r.t. : TreatmentControl
------------------------------------------------------------------------------
                     |            Delta-method
                     |      dy/dx   Std. Err.      z    P>|z|     [95% Conf. Interval]
---------------------+--------------------------------------------------------------
TreatmentControl |  -.3907234   .0973884    -4.01   0.000    -.5816012   -.1998456
------------------------------------------------------------------------------

. estat gof
Logistic model for Q17_R305, goodness-of-fit test
       number of observations =        96
 number of covariate patterns =        95
             Pearson chi2(77) =        38.05
                  Prob > chi2 =         0.9999

. estat gof, group(20)
Logistic model for Q17_R305, goodness-of-fit test
  (Table collapsed on quantiles of estimated probabilities)

       number of observations =        96
             number of groups =        20
     Hosmer-Lemeshow chi2(18) =         8.90
                  Prob > chi2 =         0.9621
```

Strategy 308: Reduce level of family expenditure

```
Logistic regression                             Number of obs     =        112
                                                Wald chi2(8)      =          .
                                                Prob > chi2       =          .
Log pseudolikelihood = -42.818845               Pseudo R2         =     0.3844

                                          (Std. Err. adjusted for 10 clusters in Commune)
------------------------------------------------------------------------------------------
                         |               Robust
              Q17_R308 |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------------------+----------------------------------------------------------------
     TreatmentControl |   .7760563   .6639955     1.17   0.242    -.5253511    2.077464
      Livelihood_Zone |      1.374   .7042697     1.95   0.051    -.0063437    2.754343
      Q3_2_SexeDuChef |   .5982558   .3769696     1.59   0.113    -.1405911    1.337103
       Q3_3_AgeDuChef |    .089196   .1166379     0.76   0.444      -.13941    .3178021
         AgeDuChef_sq |  -.0010811   .0012488    -0.87   0.387    -.0035287    .0013665
                HHSize |  -.0529143   .0862487    -0.61   0.540    -.2219586      .11613
        Ppal_Activity |  -.9634359   .7318047    -1.32   0.188    -2.397747    .4708748
          Source_Enrg |   2.776939   2.086673     1.33   0.183    -1.312864    6.866742
         Source_Light |   1.849116   1.576061     1.17   0.241    -1.239907    4.938138
           Log_Assets |   .2144078   .3448509     0.62   0.534    -.4614875    .8903031
Q12_1_DroitsPropriete |  -2.684855   1.139194    -2.36   0.018    -4.917634   -.4520754
            LogIncome |   .1869624    .081769     2.29   0.022     .026698    .3472267
      Accestoservices |   .2168356   .3533358     0.61   0.539    -.4756898     .909361
           AccestoAid |    .377172    .176341     2.14   0.032      .03155    .722794
     AccestoAidSocial |  -.3213573   .2331948    -1.38   0.168    -.7784108    .1356961
         MemberSocNet |   .4078284   .2632105     1.55   0.121    -.1080547    .9237115
             Q16_R105 |  -.2952914   .2829246    -1.04   0.297    -.8498135    .2592306
             Q16_R106 |   .8961507   .3446787     2.60   0.009     .220593    1.571708
             Q16_R108 |   1.823025    1.06792     1.71   0.088    -.2700597    3.916109
             Q16_R109 |          0  (omitted)
                _cons |  -10.42452   6.292422    -1.66   0.098    -22.75744    1.908397
------------------------------------------------------------------------------------------


. estat gof
Logistic model for Q17_R308, goodness-of-fit test

       number of observations =       112
 number of covariate patterns =       111
             Pearson chi2(91) =        89.09
                  Prob > chi2 =         0.5370

. estat gof, group(20)
Logistic model for Q17_R308, goodness-of-fit test

  (Table collapsed on quantiles of estimated probabilities)

       number of observations =       112
             number of groups =        20
     Hosmer-Lemeshow chi2(18) =         8.96
                  Prob > chi2 =         0.9606
```

Strategy 311: Take loans

```
Logistic regression                             Number of obs     =        122
                                                Wald chi2(8)      =          .
                                                Prob > chi2       =          .
Log pseudolikelihood =  -62.09824               Pseudo R2         =     0.1705

                                  (Std. Err. adjusted for 10 clusters in Commune)
------------------------------------------------------------------------------
             |               Robust
    Q18_R311 |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
TreatmentCon~l |   .0438305   .5359196     0.08   0.935    -1.006553    1.094214
 Livelihood_Zone |  -.2801588   .4319216    -0.65   0.517     -1.12671     .566392
 Q3_2_SexeDuChef |   .1555328   .3870674     0.40   0.688    -.6031053    .9141708
  Q3_3_AgeDuChef |   .1582429   .0671372     2.36   0.018     .0266564    .2898295
    AgeDuChef_sq |   -.001631   .0008096    -2.01   0.044    -.0032178   -.0000442
          HHSize |  -.0528875   .0502173    -1.05   0.292    -.1513115    .0455366
   Ppal_Activity |    .497138   .8027467     0.62   0.536    -1.076217    2.070493
    Source_Light |  -1.221582   .6231867    -1.96   0.050    -2.443006   -.0001588
      Log_Assets |   .2004128   .1588382     1.26   0.207    -.1109043    .5117299
       LogIncome |  -.0541175    .058527    -0.92   0.355    -.1688284    .0605933
 Accestoservices |  -.0994612   .1928738    -0.52   0.606     -.477487    .2785645
      AccestoAid |  -.2965802   .1015129    -2.92   0.003    -.4955419   -.0976186
AccestoAidSocial |   .0266752    .082769     0.32   0.747     -.135549    .1888993
        Q16_R106 |   1.298027   .6380793     2.03   0.042     .0474144    2.548639
        Q16_R108 |   .2685078   .3977292     0.68   0.500    -.5110272    1.048043
        Q16_R109 |   1.730101   1.342041     1.29   0.197     -.900251    4.360453
           _cons |   -5.24521   3.044877    -1.72   0.085    -11.21306    .7226393
------------------------------------------------------------------------------
```

```
. estat gof
Logistic model for Q18_R311, goodness-of-fit test

       number of observations =       122
 number of covariate patterns =       121
           Pearson chi2(104) =       127.06
                 Prob > chi2 =         0.0619

. estat gof, group(20)
Logistic model for Q18_R311, goodness-of-fit test

  (Table collapsed on quantiles of estimated probabilities)

       number of observations =       122
             number of groups =        20
     Hosmer-Lemeshow chi2(18) =        10.47
                 Prob > chi2 =         0.9156
```

Strategy 316: Sell assets

```
Logistic regression                             Number of obs     =        102
                                                Wald chi2(8)      =          .
                                                Prob > chi2       =          .
Log pseudolikelihood = -37.985275               Pseudo R2         =     0.4209

                                    (Std. Err. adjusted for 10 clusters in Commune)
------------------------------------------------------------------------------
                     |               Robust
          Q18_R316 |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
---------------------+--------------------------------------------------------------
     TreatmentControl |  -.1467421   1.052814    -0.14   0.889    -2.210219    1.916735
      Livelihood_Zone |   .3108555   .6264001     0.50   0.620    -.9168661    1.538577
      Q3_2_SexeDuChef |    .243046   .7697803     0.32   0.752    -1.265696    1.751788
       Q3_3_AgeDuChef |  -.0006737   .1281258    -0.01   0.996    -.2517956    .2504482
         AgeDuChef_sq |  -.0002256   .0013397    -0.17   0.866    -.0028513    .0024001
               HHSize |   .0299874   .0838142     0.36   0.721    -.1342855    .1942603
        Ppal_Activity |          0  (omitted)
          Source_Enrg |  -.5128961   1.703269    -0.30   0.763    -3.851242     2.82545
        Source_Light |  -.5966772   .8635181    -0.69   0.490    -2.289142    1.095787
          Log_Assets |    .795864   .3806301     2.09   0.037     .0498427    1.541885
Q12_1_DroitsPropriete |   .1644807    .718299     0.23   0.819    -1.243359    1.572321
           LogIncome |   .2018529   .0886832     2.28   0.023      .028037    .3756687
      Accestoservices |  -.1682783   .2649017    -0.64   0.525     -.687476    .3509194
           AccestoAid |   .2400876   .1020442     2.35   0.019     .0400847    .4400905
     AccestoAidSocial |  -.3306352   .2068142    -1.60   0.110    -.7359837    .0747132
         MemberSocNet |  -.0864669   .6109495    -0.14   0.887    -1.283906    1.110972
             Q16_R105 |   .0379252   .4022364     0.09   0.925    -.7504436     .826294
             Q16_R106 |   2.527089     1.0091     2.50   0.012       .54929    4.504888
             Q16_R108 |   1.450768   1.073839     1.35   0.177    -.6539173    3.555454
             Q16_R109 |  -2.751852   1.754495    -1.57   0.117      -6.1906    .6868954
                _cons |  -11.32855   5.740776    -1.97   0.048    -22.58027   -.0768396
------------------------------------------------------------------------------


. estat gof
Logistic model for Q18_R316, goodness-of-fit test

       number of observations =       102
 number of covariate patterns =       102
             Pearson chi2(82) =        82.37
                  Prob > chi2 =         0.4676

. estat gof, group(20)
Logistic model for Q18_R316, goodness-of-fit test

  (Table collapsed on quantiles of estimated probabilities)

       number of observations =       102
             number of groups =        20
     Hosmer-Lemeshow chi2(18) =        18.36
                  Prob > chi2 =         0.4322
```

Shock 18: Seasonal food shortage (soudure)
Strategy 302: Reduce food consumption

```
Mixed-effects logistic regression               Number of obs     =        588
Group variable:         Commune                 Number of groups  =         12
                                                Obs per group:
                                                              min =          5
                                                              avg =       49.0
                                                              max =        109
Integration method: mvaghermite                 Integration pts.  =          7
                                                Wald chi2(26)     =      88.50
Log likelihood = -340.00331                     Prob > chi2       =     0.0000
------------------------------------------------------------------------------
        Q17_R302 |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-----------------+------------------------------------------------------------
 TreatmentControl |  -.1516294    .317665    -0.48   0.633    -.7742413    .4709825
  Livelihood_Zone |   1.050334   .3884275     2.70   0.007     .2890301    1.811638
  Q3_2_SexeDuChef |   .3993732    .205678     1.94   0.052    -.0037482    .8024947
   Q3_3_AgeDuChef |   .0220096   .0395648     0.56   0.578    -.0555359    .0995552
     AgeDuChef_sq |  -.0002166    .000402    -0.54   0.590    -.0010045    .0005713
           HHSize |   .0044099   .0243289     0.18   0.856    -.0432739    .0520938
Q3_6_Principale~e |
              2   |  -.7583638   1.227204    -0.62   0.537    -3.163639    1.646911
              4   |   1.148411   .8260153     1.39   0.164    -.4705491    2.767371
              5   |  -.1260493    .901302    -0.14   0.889    -1.892569     1.64047
             11   |   1.321349   .6820775     1.94   0.053    -.0154985    2.658196
             12   |   .7574845   .9266303     0.82   0.414    -1.058678    2.573646
Q3_7_SourceEner~e |
              6   |  -.3326771   .6580141    -0.51   0.613    -1.622361    .9570068
              7   |   .2302736   .5427128     0.42   0.671    -.8334239    1.293971
Q3_8_SourceEcla~e |
              2   |   .9457998   .6014807     1.57   0.116    -.2330806     2.12468
              6   |   .6115461   .4872194     1.26   0.209    -.3433863    1.566479
       Log_Assets |  -.2137483   .0902177    -2.37   0.018    -.3905718   -.0369248
Q12_1_DroitsPro~e |  -.2487196   .2732215    -0.91   0.363    -.7842238    .2867846
        LogIncome |   .0134971   .0241233     0.56   0.576    -.0337836    .0607778
  Accestoservices |   .1725627   .0842164     2.05   0.040     .0075015    .3376239
       AccestoAid |   .1378532   .0555373     2.48   0.013      .029002    .2467044
 AccestoAidSocial |  -.1313737    .046894    -2.80   0.005    -.2232843   -.0394631
     MemberSocNet |    .038212   .1205846     0.32   0.751    -.1981296    .2745536
         Q16_R105 |  -.3823981   .1258293    -3.04   0.002     -.629019   -.1357771
         Q16_R106 |   .5411228   .2439788     2.22   0.027     .0629332    1.019312
         Q16_R108 |   .6216177   .2371688     2.62   0.009     .1567753     1.08646
         Q16_R109 |   1.341358   .3430394     3.91   0.000     .6690129    2.013703
            _cons |  -.1933431   1.543589    -0.13   0.900    -3.218722    2.832036
-----------------+------------------------------------------------------------
Commune          |
        var(_cons)|   .6018358   .3920834                      .1678565    2.157834
------------------------------------------------------------------------------
LR test vs. logistic model: chibar2(01) = 14.89       Prob >= chibar2 = 0.0001
```

Strategy 305: Change type of food

```
Mixed-effects logistic regression               Number of obs     =        579
Group variable:         Commune                 Number of groups  =         12
                                                Obs per group:
                                                              min =          5
                                                              avg =       48.3
                                                              max =        111
Integration method: mvaghermite                 Integration pts.  =          7
                                                Wald chi2(25)     =      81.71
Log likelihood =  -294.1232                     Prob > chi2       =     0.0000
------------------------------------------------------------------------------
         Q17_R305 |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
------------------+-----------------------------------------------------------
 TreatmentControl |   -.383081   .3222487    -1.19   0.235    -1.014677    .2485149
  Livelihood_Zone |   .6139476   .3231753     1.90   0.057    -.0194643     1.24736
  Q3_2_SexeDuChef |   .0941432   .2175447     0.43   0.665    -.3322366     .520523
   Q3_3_AgeDuChef |    .025904   .0465436     0.56   0.578    -.0653197    .1171278
     AgeDuChef_sq |  -.0003415   .0004779    -0.71   0.475    -.0012782    .0005952
           HHSize |  -.0166724   .0283932    -0.59   0.557    -.0723221    .0389773
Q3_6_Principale~e |
               5  |   .0025293   .9625915     0.00   0.998    -1.884115    1.889174
              11  |   1.760471   .6707128     2.62   0.009     .4458986    3.075044
              12  |   .7943419   1.011306     0.79   0.432    -1.187781    2.776465
Q3_7_SourceEner~e |
               6  |   1.600312   .6014365     2.66   0.008     .4215186    2.779106
               7  |  -.1836678   .5686406    -0.32   0.747    -1.298183    .9308474
Q3_8_SourceEcla~e |
               2  |   .3428045   .7049543     0.49   0.627    -1.038881     1.72449
               6  |   .9200013   .5474117     1.68   0.093    -.1529059    1.992908
               7  |   .4899971   1.550214     0.32   0.752    -2.548367    3.528361
       Log_Assets |  -.1851286   .0957176    -1.93   0.053    -.3727316    .0024744
Q12_1_DroitsPro~e |   .5465333   .3022283     1.81   0.071    -.0458233     1.13889
        LogIncome |   .0873361   .0257495     3.39   0.001     .0368681    .1378041
  Accestoservices |   .1765538   .0874732     2.02   0.044     .0051095    .3479982
       AccestoAid |   .0776037   .0588275     1.32   0.187     -.037696    .1929034
 AccestoAidSocial |  -.1311391   .0497186    -2.64   0.008    -.2285858   -.0336924
     MemberSocNet |   .2108879   .1318378     1.60   0.110    -.0475095    .4692853
         Q16_R105 |  -.3866997   .1389039    -2.78   0.005    -.6589464    -.114453
         Q16_R106 |   .4128054   .2485216     1.66   0.097     -.074288    .8998987
         Q16_R108 |   .5898407   .2608324     2.26   0.024     .0786187    1.101063
         Q16_R109 |   .8489155   .3184953     2.67   0.008     .2246762    1.473155
            _cons |  -1.914842   1.689258    -1.13   0.257    -5.225726    1.396042
------------------+-----------------------------------------------------------
Commune           |
        var(_cons)|   .1480195   .1522759                      .0197079    1.111725
------------------------------------------------------------------------------
LR test vs. logistic model: chibar2(01) = 1.86        Prob >= chibar2 = 0.0861
```

Strategy 308: Reduce level of family expenditure

```
Mixed-effects logistic regression               Number of obs     =        576
Group variable:         Commune                 Number of groups  =         12
                                                Obs per group:
                                                              min =          5
                                                              avg =       48.0
                                                              max =        103
Integration method: mvaghermite                 Integration pts.  =          7
                                                Wald chi2(25)     =      89.37
Log likelihood = -315.74393                     Prob > chi2       =     0.0000
------------------------------------------------------------------------------
         Q17_R308 |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
------------------+-----------------------------------------------------------
 TreatmentControl |  -.2617581   .3354156    -0.78   0.435    -.9191606    .3956444
  Livelihood_Zone |   1.089876    .418619     2.60   0.009     .2693975    1.910354
  Q3_2_SexeDuChef |   .0034045   .2165461     0.02   0.987    -.4210181    .4278271
   Q3_3_AgeDuChef |   .0636671   .0452003     1.41   0.159    -.0249238    .1522579
     AgeDuChef_sq |  -.0008396   .0004728    -1.78   0.076    -.0017663    .0000871
           HHSize |  -.0150339    .026285    -0.57   0.567    -.0665515    .0364836
Q3_6_Principale~e |
               4  |  -1.058089   1.164922    -0.91   0.364    -3.341294    1.225115
               5  |   .1986953   .9040166     0.22   0.826    -1.573145    1.970535
              11  |   .6981823   .6643119     1.05   0.293    -.6038451     2.00021
              12  |   .6573985   1.095054     0.60   0.548    -1.488867    2.803664
Q3_7_SourceEner~e |
               6  |   .2314453   .6565595     0.35   0.724    -1.055388    1.518278
               7  |  -.8766682   .6937683    -1.26   0.206    -2.236429    .4830927
Q3_8_SourceEcla~e |
               2  |  -.1367316   .7071416    -0.19   0.847    -1.522704     1.24924
               6  |   .4885807   .5318595     0.92   0.358    -.5538448    1.531006
       Log_Assets |  -.1786392   .0917295    -1.95   0.051    -.3584257    .0011473
Q12_1_DroitsPro~e |  -.4070252   .2843815    -1.43   0.152    -.9644028    .1503523
        LogIncome |  -.0214936   .0252506    -0.85   0.395    -.0709839    .0279966
  Accestoservices |   .1072006   .0881848     1.22   0.224    -.0656386    .2800397
       AccestoAid |   .2291827   .0603411     3.80   0.000     .1109164     .347449
 AccestoAidSocial |  -.0936852   .0483779    -1.94   0.053    -.1885042    .0011338
     MemberSocNet |   .3207543   .1332533     2.41   0.016     .0595826    .5819261
         Q16_R105 |  -.5562153   .1412281    -3.94   0.000    -.8330172   -.2794134
         Q16_R106 |   .4887998   .2561696     1.91   0.056    -.0132833     .990883
         Q16_R108 |   .7192167   .2511755     2.86   0.004     .2269218    1.211512
         Q16_R109 |   .6078112    .329133     1.85   0.065    -.0372775      1.2529
            _cons |   .2421045   1.657617     0.15   0.884    -3.006765    3.490974
------------------+-----------------------------------------------------------
Commune           |
        var(_cons)|   .9420668   .5765721                      .2838715    3.126379
------------------------------------------------------------------------------
LR test vs. logistic model: chibar2(01) = 22.03       Prob >= chibar2 = 0.0000
```

Strategy 311: Take loans

```
Mixed-effects logistic regression               Number of obs     =        597
Group variable:         Commune                 Number of groups  =         12
                                                Obs per group:
                                                              min =          5
                                                              avg =       49.8
                                                              max =        112
Integration method: mvaghermite                 Integration pts.  =          7
                                                Wald chi2(27)     =      89.10
Log likelihood = -330.35655                     Prob > chi2       =     0.0000
------------------------------------------------------------------------------
             Q18_R311 |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
----------------------+-------------------------------------------------------
       TreatmentControl |   .3275774   .3063986     1.07   0.285    -.2729529    .9281076
        Livelihood_Zone |  -.0986867   .3295446    -0.30   0.765    -.7445823    .5472089
        Q3_2_SexeDuChef |  -.0769897   .2084421    -0.37   0.712    -.4855288    .3315493
         Q3_3_AgeDuChef |   -.015418   .0420858    -0.37   0.714    -.0979046    .0670685
           AgeDuChef_sq |   .0000428   .0004257     0.10   0.920    -.0007916    .0008773
                 HHSize |   .0423055   .0245801     1.72   0.085    -.0058705    .0904816
Q3_6_PrincipaleActivite |
                      2 |  -.6431338    1.03759    -0.62   0.535    -2.676774    1.390506
                      4 |  -1.952403   1.010817    -1.93   0.053    -3.933568    .0287625
                      5 |   .6363938   .9363609     0.68   0.497     -1.19884    2.471627
                     11 |  -.7849755   .6477725    -1.21   0.226    -2.054586    .4846352
                     12 |  -.5131779   .9522353    -0.54   0.590    -2.379525    1.353169
    Q3_7_SourceEnergie |
                      6 |   -.206075   .5977448    -0.34   0.730    -1.377633    .9654833
                      7 |   1.419468   .6389566     2.22   0.026     .1671363      2.6718
  Q3_8_SourceEclarirage |
                      2 |  -.8990022   .6192378    -1.45   0.147    -2.112686    .3146816
                      6 |  -.0581041   .4822894    -0.12   0.904    -1.003374    .8871657
                      7 |  -.6479969   1.534651    -0.42   0.673    -3.655858    2.359864
                        |
             Log_Assets |  -.3678512   .0895528    -4.11   0.000    -.5433715   -.1923309
  Q12_1_DroitsPropriete |  -.0909282   .2729723    -0.33   0.739    -.6259441    .4440878
              LogIncome |  -.0676035   .0235821    -2.87   0.004    -.1138235   -.0213835
       Accestoservices |   -.101649   .0851995    -1.19   0.233     -.268637     .065339
            AccestoAid |  -.0456473   .0566534    -0.81   0.420    -.1566859    .0653913
      AccestoAidSocial |   .0573213   .0440577     1.30   0.193    -.0290301    .1436727
          MemberSocNet |   .1035664   .1210758     0.86   0.392    -.1337379    .3408706
              Q16_R105 |  -.4342448   .1249635    -3.47   0.001    -.6791689   -.1893208
              Q16_R106 |   .7059644   .2458235     2.87   0.004     .2241592     1.18777
              Q16_R108 |   .4164603   .2447262     1.70   0.089    -.0631941    .8961148
              Q16_R109 |   1.119858    .352227     3.18   0.001     .4295053     1.81021
                 _cons |   5.320222   1.587148     3.35   0.001      2.20947    8.430975
----------------------+-------------------------------------------------------
Commune               |
            var(_cons)|   .2912368   .2405254                      .0577111    1.469714
------------------------------------------------------------------------------
LR test vs. logistic model: chibar2(01) = 4.68        Prob >= chibar2 = 0.0152
```

Strategy 316: Sell assets

```
Mixed-effects logistic regression               Number of obs     =        575
Group variable:         Commune                 Number of groups  =         12
                                                Obs per group:
                                                              min =          5
                                                              avg =       47.9
                                                              max =        105
Integration method: mvaghermite                 Integration pts.  =          7
                                                Wald chi2(25)     =      79.73
Log likelihood = -280.33302                     Prob > chi2       =     0.0000
------------------------------------------------------------------------------
         Q18_R316 |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
------------------+-----------------------------------------------------------
 TreatmentControl |  -.0895458   .3435367    -0.26   0.794    -.7628653    .5837737
  Livelihood_Zone |  -.0461531   .4109712    -0.11   0.911    -.8516418    .7593356
  Q3_2_SexeDuChef |   .0140866   .2345221     0.06   0.952    -.4455683    .4737414
   Q3_3_AgeDuChef |    .018554   .0492492     0.38   0.706    -.0779727    .1150806
     AgeDuChef_sq |  -.0003442    .000513    -0.67   0.502    -.0013496    .0006612
           HHSize |  -.0012209   .0273554    -0.04   0.964    -.0548365    .0523946
Q3_6_Principale~e |
               2  |   1.052863   1.117832     0.94   0.346    -1.138048    3.243774
               4  |    .271559   .9642032     0.28   0.778    -1.618245    2.161363
               5  |  -.8806678   1.202881    -0.73   0.464    -3.238272    1.476936
              11  |  -.0868959   .9109276    -0.10   0.924    -1.872281    1.698489
Q3_7_SourceEner~e |
               6  |   1.017099   .6304239     1.61   0.107    -.2185093    2.252707
               7  |   .9300992   .5677209     1.64   0.101    -.1826133    2.042812
Q3_8_SourceEcla~e |
               2  |    .097601   .6152973     0.16   0.874     -1.10836    1.303562
               6  |  -.6331217    .518282    -1.22   0.222    -1.648936    .3826924
      Log_Assets  |   .1201522   .1013321     1.19   0.236    -.0784551    .3187595
Q12_1_DroitsPro~e |  -.1342826   .3070027    -0.44   0.662    -.7359969    .4674318
        LogIncome |   .1102998   .0280344     3.93   0.000     .0553533    .1652462
  Accestoservices |   .0716161   .0903732     0.79   0.428    -.1055122    .2487444
       AccestoAid |   .0116468   .0594712     0.20   0.845    -.1049146    .1282081
 AccestoAidSocial |  -.0075938   .0495965    -0.15   0.878    -.1048013    .0896136
    MemberSocNet  |  -.0137674   .1365842    -0.10   0.920    -.2814675    .2539327
         Q16_R105 |   -.056753   .1355749    -0.42   0.676    -.3224749    .2089688
         Q16_R106 |    1.89274   .2821544     6.71   0.000     1.339727    2.445752
         Q16_R108 |  -.2103713   .2679866    -0.79   0.432    -.7356155    .3148728
         Q16_R109 |   .0936287   .3564277     0.26   0.793    -.6049568    .7922141
            _cons |  -3.546201    1.76143    -2.01   0.044    -6.998539   -.0938619
------------------+-----------------------------------------------------------
Commune           |
       var(_cons)|   .5251177    .330022                      .1532145    1.799755
------------------------------------------------------------------------------
LR test vs. logistic model: chibar2(01) = 15.77       Prob >= chibar2 = 0.0000
```

Appendix 6. Details of the 10 logit models estimated across the 5 major shocks/stressors and 2 main types of adaptive/transformative strategies

Shock 1: Seasonal drought

Strategy 324: Establish plan for agricolture

```
Logistic regression                             Number of obs     =        719
                                                Wald chi2(10)     =          .
                                                Prob > chi2       =          .
Log pseudolikelihood = -364.89588               Pseudo R2         =     0.1100

                                (Std. Err. adjusted for 12 clusters in Commune)
------------------------------------------------------------------------------
             |               Robust
     Q19_R324 |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
--------------+---------------------------------------------------------------
TreatmentCon~l |  -.1076222   .3903339    -0.28   0.783    -.8726626    .6574182
Livelihood_Z~e |   .0732341   .1595492     0.46   0.646    -.2394765    .3859448
Q3_2_SexeDuC~f |  -.7222586   .2179689    -3.31   0.001     -1.14947   -.2950474
Q3_3_AgeDuChef |   .0722828   .0521773     1.39   0.166    -.0299828    .1745485
  AgeDuChef_sq |  -.0008994   .0005711    -1.57   0.115    -.0020186    .0002199
       HHSize |    .006001   .0142496     0.42   0.674    -.0219277    .0339296
 Ppal_Activity |     .55246   .5689118     0.97   0.332    -.5625867    1.667507
   Source_Enrg |  -1.202337    .277192    -4.34   0.000    -1.745623   -.6590506
  Source_Light |  -.4914446   .2790186    -1.76   0.078    -1.038311    .0554219
    Log_Assets |   .2421582   .0956331     2.53   0.011     .0547208    .4295955
Q12_1_Droits~e |  -.1517437   .3610273    -0.42   0.674    -.8593443    .5558569
     LogIncome |  -.0203913    .066039    -0.31   0.757    -.1498254    .1090429
Accestoservi~s |   .2136734   .0875099     2.44   0.015     .0421572    .3851896
    AccestoAid |   .0684729   .0456187     1.50   0.133     -.020938    .1578839
AccestoAidSo~l |   .1088784    .026721     4.07   0.000     .0565062    .1612506
      Q16_R105 |   -.116164   .2303283    -0.50   0.614    -.5675991    .3352712
      Q16_R106 |   .1948006   .4874196     0.40   0.689    -.7605242    1.150125
      Q16_R108 |   .5462782   .3395447     1.61   0.108    -.1192172    1.211774
      Q16_R109 |  -.4546001   .6197503    -0.73   0.463    -1.669288    .7600882
         _cons |  -4.317101   1.317465    -3.28   0.001    -6.899285   -1.734917
------------------------------------------------------------------------------
```

```
. estat gof
Logistic model for Q19_R324, goodness-of-fit test

       number of observations =       719
 number of covariate patterns =       713
           Pearson chi2(693) =       720.69
                 Prob > chi2 =         0.2260

. estat gof, group(20)
Logistic model for Q19_R324, goodness-of-fit test

  (Table collapsed on quantiles of estimated probabilities)

       number of observations =       719
             number of groups =        20
    Hosmer-Lemeshow chi2(18) =        19.32
                 Prob > chi2 =         0.3725
```

Strategy 326: Establish plan for other activities

```
Logistic regression                             Number of obs     =        735
                                                Wald chi2(10)     =          .
                                                Prob > chi2       =          .
Log pseudolikelihood = -364.57958               Pseudo R2         =     0.1467

                                 (Std. Err. adjusted for 12 clusters in Commune)
------------------------------------------------------------------------------
             |               Robust
    Q19_R326 |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
TreatmentCon~l |   .5572413   .2646342     2.11   0.035     .0385678    1.075915
Livelihood_Z~e |  -.0111168   .4500822    -0.02   0.980    -.8932617     .871028
Q3_2_SexeDuC~f |  -.4494068   .2427674    -1.85   0.064    -.9252222    .0264086
Q3_3_AgeDuChef |   .0011687   .0488636     0.02   0.981    -.0946021    .0969395
  AgeDuChef_sq |   .0001659   .0004808     0.35   0.730    -.0007764    .0011083
       HHSize |  -.0262067   .0287161    -0.91   0.361    -.0824891    .0300758
 Ppal_Activity |   .5223607   .4512882     1.16   0.247    -.3621479    1.406869
   Source_Enrg |   .0044369   .8962093     0.00   0.996    -1.752101    1.760975
  Source_Light |  -.5535133   .4086131    -1.35   0.176     -1.35438    .2473536
    Log_Assets |  -.0865547   .1172453    -0.74   0.460    -.3163512    .1432419
Q12_1_Droits~e |    .104289   .3344659     0.31   0.755    -.5512522    .7598302
     LogIncome |   .0904626   .0540837     1.67   0.094    -.0155394    .1964647
    AccestoAid |   .2008081   .0570735     3.52   0.000     .0889461      .31267
      Q16_R105 |  -.3052871   .2183693    -1.40   0.162     -.733283    .1227088
      Q16_R106 |   .1292233   .5804553     0.22   0.824    -1.008448    1.266895
      Q16_R108 |    .443587   .3510459     1.26   0.206    -.2444503    1.131624
      Q16_R109 |   -2.36217   .8713591    -2.71   0.007    -4.070002   -.6543372
         _cons |  -1.079394   1.376162    -0.78   0.433    -3.776621    1.617833
------------------------------------------------------------------------------

. margins, dydx(TreatmentControl)
Average marginal effects                        Number of obs     =        735
Model VCE    : Robust

Expression   : Pr(Q19_R326), predict()
dy/dx w.r.t. : TreatmentControl
------------------------------------------------------------------------------
             |            Delta-method
             |      dy/dx   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
TreatmentCon~l |   .0908142   .0478848     1.90   0.058    -.0030383    .1846666
------------------------------------------------------------------------------

. estat gof
Logistic model for Q19_R326, goodness-of-fit test

       number of observations =       735
 number of covariate patterns =       725
           Pearson chi2(707) =       730.70
                 Prob > chi2 =         0.2608

. estat gof, group(20)
Logistic model for Q19_R326, goodness-of-fit test

  (Table collapsed on quantiles of estimated probabilities)

       number of observations =       735
             number of groups =        20
    Hosmer-Lemeshow chi2(18) =        15.45
                 Prob > chi2 =         0.6310
```

Shock 18: Seasonal food shortage
Strategy 324: Establish plan for agricolture

```
Logistic regression                             Number of obs     =        585
                                                Wald chi2(10)     =          .
                                                Prob > chi2       =          .
Log pseudolikelihood = -317.73419               Pseudo R2         =     0.1435

                                (Std. Err. adjusted for 12 clusters in Commune)
------------------------------------------------------------------------------
             |               Robust
    Q19_R324 |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
TreatmentCon~l |   .6664841   .1987572     3.35   0.001     .2769272    1.056041
Livelihood_Z~e |   .3790803    .561235     0.68   0.499    -.7209201    1.479081
Q3_2_SexeDuC~f |   -.612609   .2653673    -2.31   0.021    -1.132719   -.0924986
Q3_3_AgeDuChef |  -.0414959   .0368933    -1.12   0.261    -.1138056    .0308137
  AgeDuChef_sq |   .0002995   .0003646     0.82   0.411    -.0004151     .001014
        HHSize |   .0093605   .0221767     0.42   0.673    -.0341049     .052826
 Ppal_Activity |   .4895096   .6353867     0.77   0.441    -.7558255    1.734845
   Source_Enrg |   .4931749   .4753846     1.04   0.300    -.4385617    1.424912
  Source_Light |    -.52118   .4085429    -1.28   0.202    -1.321909    .2795493
    Log_Assets |   .0391425   .1129464     0.35   0.729    -.1822283    .2605133
Q12_1_Droits~e |  -.0673939   .4968329    -0.14   0.892    -1.041168    .9063806
     LogIncome |  -.0680172   .0424127    -1.60   0.109    -.1511446    .0151103
Accestoservi~s |  -.0421547   .0782769    -0.54   0.590    -.1955746    .1112653
    AccestoAid |   .1686616   .0739617     2.28   0.023     .0236993    .3136239
AccestoAidSo~l |   .0517766   .0639726     0.81   0.418    -.0736074    .1771606
      Q16_R105 |   .6137291   .0749575     8.19   0.000     .4668151    .7606431
      Q16_R106 |   .4006924   .2844297     1.41   0.159    -.1567796    .9581644
      Q16_R108 |    .713107   .2104098     3.39   0.001     .3007115    1.125503
      Q16_R109 |  -.4893615   .5844053    -0.84   0.402    -1.634775    .6560518
         _cons |  -1.502878    2.13916    -0.70   0.482    -5.695555    2.689799
------------------------------------------------------------------------------

. margins, dydx(TreatmentControl)
Average marginal effects                        Number of obs     =        585
Model VCE    : Robust

Expression   : Pr(Q19_R324), predict()
dy/dx w.r.t. : TreatmentControl
------------------------------------------------------------------------------
             |            Delta-method
             |      dy/dx   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
TreatmentCon~l |   .1215396   .0379318     3.20   0.001     .0471946    .1958846
------------------------------------------------------------------------------

. estat gof
Logistic model for Q19_R324, goodness-of-fit test

       number of observations =       585
 number of covariate patterns =       578
            Pearson chi2(558) =       572.88
                  Prob > chi2 =         0.3222

. estat gof, group(20)
Logistic model for Q19_R324, goodness-of-fit test

  (Table collapsed on quantiles of estimated probabilities)

       number of observations =       585
             number of groups =        20
     Hosmer-Lemeshow chi2(18) =        21.50
                  Prob > chi2 =         0.2550
```

Strategy 326: Establish plan for other activities

Logistic regression — Number of obs = 574; Wald chi2(10) = .; Prob > chi2 = .; Log pseudolikelihood = -276.21751; Pseudo R2 = 0.1822

(Std. Err. adjusted for 12 clusters in Commune)

Q19_R326	Coef.	Robust Std. Err.	z	P>|z|	[95% Conf.	Interval]
TreatmentCon~l	.0609932	.3364583	0.18	0.856	-.5984528	.7204393
Livelihood_Z~e	-.4867401	.3710164	-1.31	0.190	-1.213919	.2404386
Q3_2_SexeDuC~f	-.2094069	.3402622	-0.62	0.538	-.8763085	.4574947
Q3_3_AgeDuChef	-.0310416	.0304593	-1.02	0.308	-.0907408	.0286576
AgeDuChef_sq	.0001936	.0002663	0.73	0.467	-.0003283	.0007156
HHSize	.002306	.034316	0.07	0.946	-.064952	.0695641
Ppal_Activity	.7497414	.5496194	1.36	0.173	-.3274928	1.826976
Source_Enrg	-.4015857	.7226487	-0.56	0.578	-1.817951	1.01478
Source_Light	-.6010931	.3556271	-1.69	0.091	-1.298109	.0959231
Log_Assets	.0768067	.107043	0.72	0.473	-.1329938	.2866071
Q12_1_Droits~e	.5626025	.2921378	1.93	0.054	-.009977	1.135182
LogIncome	.0473532	.0688438	0.69	0.492	-.0875782	.1822845
Accestoservi~s	.2591133	.1341338	1.93	0.053	-.0037841	.5220107
AccestoAid	.0774634	.0830763	0.93	0.351	-.0853632	.2402901
AccestoAidSo~l	-.0025556	.0727884	-0.04	0.972	-.1452182	.1401071
MemberSocNet	.1349334	.1094869	1.23	0.218	-.079657	.3495238
Q16_R105	.2742491	.108369	2.53	0.011	.0618499	.4866484
Q16_R106	.7980293	.3588089	2.22	0.026	.0947768	1.501282
Q16_R108	.9943152	.3474549	2.86	0.004	.3133162	1.675314
Q16_R109	-1.164889	.6563605	-1.77	0.076	-2.451332	.1215538
_cons	-3.460267	1.946665	-1.78	0.075	-7.27566	.3551271

```
. estat gof
Logistic model for Q19_R326, goodness-of-fit test

       number of observations =       574
 number of covariate patterns =       568
            Pearson chi2(547) =       565.94
                  Prob > chi2 =         0.2788

. estat gof, group(25)
Logistic model for Q19_R326, goodness-of-fit test

  (Table collapsed on quantiles of estimated probabilities)

       number of observations =       574
             number of groups =        25
     Hosmer-Lemeshow chi2(23) =        23.42
                  Prob > chi2 =         0.4362
```

Shock 14: Serious illness,
Strategy 324: Establish plan for agricolture

```
Logistic regression                             Number of obs     =        440
                                                Wald chi2(10)     =          .
                                                Prob > chi2       =          .
Log pseudolikelihood =  -97.07261               Pseudo R2         =     0.1891

                                (Std. Err. adjusted for 12 clusters in Commune)
------------------------------------------------------------------------------
             |               Robust
      Q19_R324 |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
---------------+--------------------------------------------------------------
TreatmentCon~l |   .7336534   .3168686     2.32   0.021     .1126023    1.354705
Livelihood_Z~e |   .4783563   .2982112     1.60   0.109     -.106127     1.06284
Q3_2_SexeDuC~f |  -1.435287    .429206    -3.34   0.001    -2.276515   -.5940587
Q3_3_AgeDuChef |   .1181107   .0822483     1.44   0.151    -.0430931    .2793144
  AgeDuChef_sq |  -.0013101   .0009134    -1.43   0.152    -.0031004    .0004803
        HHSize |  -.0568788   .0351191    -1.62   0.105     -.125711    .0119533
 Ppal_Activity |  -.6013528   .6511318    -0.92   0.356    -1.877548    .6748422
   Source_Enrg |  -.2978345   .7973655    -0.37   0.709    -1.860642    1.264973
  Source_Light |   .3031535   .3205509     0.95   0.344    -.3251147    .9314218
    Log_Assets |    .009843   .1473503     0.07   0.947    -.2789582    .2986442
     LogIncome |  -.0474851   .0511446    -0.93   0.353    -.1477266    .0527564
    AccestoAid |   .2550459   .0999245     2.55   0.011     .0591974    .4508943
AccestoAidSo~l |  -.1466694   .1289763    -1.14   0.255    -.3994583    .1061195
      Q16_R105 |   .1617417   .2637105     0.61   0.540    -.3551214    .6786048
      Q16_R106 |   1.938816   .5276814     3.67   0.000       .90458    2.973053
      Q16_R108 |  -.0541605   .6530093    -0.08   0.934    -1.334035    1.225714
      Q16_R109 |    .044122   1.044475     0.04   0.966    -2.003011    2.091255
         _cons |  -3.473884   2.532518    -1.37   0.170    -8.437528     1.48976
------------------------------------------------------------------------------

. margins, dydx(TreatmentControl)
Average marginal effects                        Number of obs     =        440
Model VCE    : Robust

Expression   : Pr(Q19_R324), predict()
dy/dx w.r.t. : TreatmentControl
------------------------------------------------------------------------------
             |            Delta-method
             |      dy/dx   Std. Err.      z    P>|z|     [95% Conf. Interval]
---------------+--------------------------------------------------------------
TreatmentCon~l |   .0450291   .0184204     2.44   0.015     .0089257    .0811325
------------------------------------------------------------------------------

. estat gof
Logistic model for Q19_R324, goodness-of-fit test

       number of observations =       440
 number of covariate patterns =       430
            Pearson chi2(412) =       438.32
                  Prob > chi2 =         0.1785

. estat gof, group(25)
Logistic model for Q19_R324, goodness-of-fit test

  (Table collapsed on quantiles of estimated probabilities)

       number of observations =       440
             number of groups =        25
     Hosmer-Lemeshow chi2(23) =        15.91
                  Prob > chi2 =         0.8590
```

Strategy 326: Establish plan for other activities

```
Logistic regression                             Number of obs     =        429
                                                Wald chi2(10)     =          .
                                                Prob > chi2       =          .
Log pseudolikelihood = -86.468705               Pseudo R2         =     0.2231

                                 (Std. Err. adjusted for 12 clusters in Commune)
------------------------------------------------------------------------------
             |               Robust
    Q19_R326 |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
TreatmentCon~l |   1.353024   .3891547     3.48   0.001     .5902947    2.115753
Livelihood_Z~e |   .1201306   .4582709     0.26   0.793    -.7780637    1.018325
Q3_2_SexeDuC~f |  -.3874287   .7940037    -0.49   0.626    -1.943647     1.16879
Q3_3_AgeDuChef |  -.0071489   .0719784    -0.10   0.921    -.1482241    .1339262
  AgeDuChef_sq |   .0002149   .0006863     0.31   0.754    -.0011303      .00156
       HHSize |   .0076297   .0250181     0.30   0.760    -.0414049    .0566643
 Ppal_Activity |  -1.185391   .6043481    -1.96   0.050    -2.369892   -.0008906
   Source_Enrg |  -.2215335   .5758755    -0.38   0.700    -1.350229    .9071619
  Source_Light |   .0012543   .4487858     0.00   0.998    -.8783497    .8808583
    Log_Assets |    .207292   .1212079     1.71   0.087    -.0302712    .4448551
Q12_1_Droits~e |   1.743223   .3627664     4.81   0.000     1.032214    2.454232
     LogIncome |   .0336378   .0756299     0.44   0.656    -.1145941    .1818696
    AccestoAid |   .1878421    .060112     3.12   0.002     .0700247    .3056594
AccestoAidSo~l |  -.1044976   .0408165    -2.56   0.010    -.1844966   -.0244987
      Q16_R105 |   .3025757   .2478445     1.22   0.222    -.1831906    .7883421
      Q16_R106 |   .4525799   .5259619     0.86   0.390    -.5782864    1.483446
      Q16_R108 |   .5237668    .652462     0.80   0.422    -.7550352    1.802569
      Q16_R109 |   -.088809   .6454255    -0.14   0.891     -1.35382    1.176202
         _cons |  -7.244953   2.690588    -2.69   0.007    -12.51841   -1.971497
------------------------------------------------------------------------------

. margins, dydx(TreatmentControl)
Average marginal effects                        Number of obs     =        429
Model VCE    : Robust

Expression   : Pr(Q19_R326), predict()
dy/dx w.r.t. : TreatmentControl
------------------------------------------------------------------------------
             |            Delta-method
             |      dy/dx   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
TreatmentCon~l |   .0742328   .0209096     3.55   0.000     .0332508    .1152149
------------------------------------------------------------------------------

. estat gof
Logistic model for Q19_R326, goodness-of-fit test

       number of observations =       429
 number of covariate patterns =       418
            Pearson chi2(399) =       320.83
                  Prob > chi2 =         0.9984

. estat gof, group(25)
Logistic model for Q19_R326, goodness-of-fit test

  (Table collapsed on quantiles of estimated probabilities)

       number of observations =       429
             number of groups =        25
     Hosmer-Lemeshow chi2(23) =        18.01
                  Prob > chi2 =         0.7571
```

Shock 6: Armyworm Attack
Strategy 324: Establish plan for agricolture

```
Logistic regression                             Number of obs     =        263
                                                Wald chi2(10)     =          .
                                                Prob > chi2       =          .
Log pseudolikelihood = -74.870121               Pseudo R2         =     0.1397

                                (Std. Err. adjusted for 12 clusters in Commune)
------------------------------------------------------------------------------
             |               Robust
    Q19_R324 |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
TreatmentCon~l |   1.264806   .5353906     2.36   0.018     .2154594    2.314152
Livelihood_Z~e |   .1190136   .7032792     0.17   0.866    -1.259388    1.497415
Q3_3_AgeDuChef |     .06889   .1148211     0.60   0.549    -.1561552    .2939352
  AgeDuChef_sq |  -.0008232   .0012925    -0.64   0.524    -.0033564      .00171
       HHSize |   .0453827   .0620575     0.73   0.465    -.0762478    .1670132
 Ppal_Activity |  -.5855076   .5786799    -1.01   0.312    -1.719699    .5486842
  Source_Light |     .02086   .6131166     0.03   0.973    -1.180826    1.222546
    Log_Assets |   .1684549   .2693832     0.63   0.532    -.3595264    .6964363
Q12_1_Droits~e |   1.667171   1.330792     1.25   0.210    -.9411329    4.275476
     LogIncome |  -.0142084   .0207128    -0.69   0.493    -.0548047    .0263879
    AccestoAid |   .1521849   .0762357     2.00   0.046     .0027657    .3016042
AccestoAidSo~l |   .0305168   .1115537     0.27   0.784    -.1881244     .249158
      Q16_R105 |  -.0487315    .289645    -0.17   0.866    -.6164252    .5189623
      Q16_R106 |    .363894   .4085797     0.89   0.373    -.4369076    1.164696
      Q16_R108 |   -.495394   .4888374    -1.01   0.311    -1.453498    .4627097
         _cons |  -7.527782   4.626855    -1.63   0.104    -16.59625    1.540687
------------------------------------------------------------------------------

. margins, dydx(TreatmentControl)
Average marginal effects                        Number of obs     =        263
Model VCE    : Robust

Expression   : Pr(Q19_R324), predict()
dy/dx w.r.t. : TreatmentControl
------------------------------------------------------------------------------
             |            Delta-method
             |      dy/dx   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
TreatmentCon~l |   .1031077   .0313903     3.28   0.001     .0415838    .1646316
------------------------------------------------------------------------------

. estat gof
Logistic model for Q19_R324, goodness-of-fit test

       number of observations =       263
 number of covariate patterns =       262
           Pearson chi2(246) =       276.78
                 Prob > chi2 =         0.0864

. estat gof, group(20)
Logistic model for Q19_R324, goodness-of-fit test

  (Table collapsed on quantiles of estimated probabilities)

       number of observations =       263
             number of groups =        20
     Hosmer-Lemeshow chi2(18) =        16.82
                 Prob > chi2 =         0.5354
```

Strategy 326: Establish plan for other activities

Logistic regression — Number of obs = 224; Wald chi2(8) = .; Prob > chi2 = .; Log pseudolikelihood = -74.914771; Pseudo R2 = 0.1123

(Std. Err. adjusted for 10 clusters in Commune)

Q19_R326	Coef.	Robust Std. Err.	z	P>|z|	[95% Conf.	Interval]
TreatmentCon~l	-.3386055	.694696	-0.49	0.626	-1.700185	1.022974
Livelihood_Z~e	-.098287	.7818146	-0.13	0.900	-1.630615	1.434041
Q3_2_SexeDuC~f	-.1270897	.7067537	-0.18	0.857	-1.512301	1.258122
Q3_3_AgeDuChef	.0233812	.0835063	0.28	0.779	-.1402882	.1870506
AgeDuChef_sq	-.0004862	.0007785	-0.62	0.532	-.002012	.0010396
HHSize	-.0328126	.0586803	-0.56	0.576	-.1478238	.0821987
Ppal_Activity	.8878544	.888062	1.00	0.317	-.8527151	2.628424
Q3_7_SourceE~e						
6	1.579705	.5052059	3.13	0.002	.5895193	2.56989
7	.9192266	1.691597	0.54	0.587	-2.396243	4.234696
Q3_8_SourceE~e						
2	-1.565367	1.089615	-1.44	0.151	-3.700972	.5702382
3	0	(empty)				
6	-1.662485	1.008209	-1.65	0.099	-3.638538	.3135691
Log_Assets	.3581836	.1475995	2.43	0.015	.0688938	.6474734
Q12_1_Droits~e	0	(omitted)				
LogIncome	-.0019117	.0430053	-0.04	0.965	-.0862005	.0823771
Accestoservi~s	.2827524	.1302308	2.17	0.030	.0275047	.5380001
AccestoAid	.04338	.1625973	0.27	0.790	-.275305	.3620649
AccestoAidSo~l	-.0627294	.0934394	-0.67	0.502	-.2458672	.1204085
MemberSocNet	.1699118	.157226	1.08	0.280	-.1382456	.4780692
Q16_R105	-.122785	.3743582	-0.33	0.743	-.8565136	.6109436
Q16_R106	-.4528221	.4857261	-0.93	0.351	-1.404828	.4991834
Q16_R108	.4761789	.4050671	1.18	0.240	-.3177381	1.270096
Q16_R109	-.0480925	1.341104	-0.04	0.971	-2.676608	2.580423
_cons	-5.219303	2.839786	-1.84	0.066	-10.78518	.3465757

```
. estat gof
Logistic model for Q19_R326, goodness-of-fit test

       number of observations =       224
 number of covariate patterns =       221
           Pearson chi2(199) =       212.94
                 Prob > chi2 =         0.2369

. estat gof, group(20)
Logistic model for Q19_R326, goodness-of-fit test

  (Table collapsed on quantiles of estimated probabilities)

       number of observations =       224
             number of groups =        20
     Hosmer-Lemeshow chi2(18) =        15.42
                 Prob > chi2 =         0.6328
```

Shock 10: Forte poussée des prix
Strategy 324: Establish plan for agricolture

```
Logistic regression                             Number of obs     =        120
                                                Wald chi2(8)      =          .
                                                Prob > chi2       =          .
Log pseudolikelihood =  -17.17036               Pseudo R2         =     0.6914

                                (Std. Err. adjusted for 10 clusters in Commune)
------------------------------------------------------------------------------
             |               Robust
     Q19_R324 |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
--------------+---------------------------------------------------------------
TreatmentCon~l |   6.644869   1.894667     3.51   0.000     2.931391    10.35835
Livelihood_Z~e |   2.695458    .873749     3.08   0.002     .9829419    4.407975
Q3_2_SexeDuC~f |  -2.442253   1.446475    -1.69   0.091    -5.277291    .3927845
Q3_3_AgeDuChef |   .6158198   .2596765     2.37   0.018     .1068632    1.124776
  AgeDuChef_sq |  -.0085637   .0027849    -3.07   0.002    -.0140221   -.0031053
        HHSize |   .4619741   .1701853     2.71   0.007      .128417    .7955312
   Source_Enrg |  -10.85902   2.021325    -5.37   0.000    -14.82074   -6.897293
  Source_Light |   5.145107   1.618216     3.18   0.001     1.973461    8.316752
    Log_Assets |   2.439962   .4713308     5.18   0.000      1.51617    3.363753
Q12_1_Droits~e |     .15513   1.917582     0.08   0.936    -3.603262    3.913522
     LogIncome |   .9679516   .2749394     3.52   0.000     .4290803    1.506823
Accestoservi~s |  -.6784527   .6140775    -1.10   0.269    -1.882023    .5251171
    AccestoAid |   1.587031   .6413279     2.47   0.013      .330051     2.84401
AccestoAidSo~l |  -.2276809   .2133075    -1.07   0.286     -.645756    .1903942
  MemberSocNet |    1.40561   1.072871     1.31   0.190    -.6971783    3.508398
      Q16_R105 |  -.9012306   .2373118    -3.80   0.000    -1.366353   -.4361081
      Q16_R106 |   4.298809   1.344142     3.20   0.001      1.66434    6.933278
      Q16_R108 |  -2.112383   1.692743    -1.25   0.212    -5.430097    1.205332
      Q16_R109 |   7.148629   3.131735     2.28   0.022     1.010541    13.28672
         _cons |  -49.11202    8.85612    -5.55   0.000     -66.4697   -31.75435
------------------------------------------------------------------------------
Note: 17 failures and 0 successes completely determined.

. margins, dydx(TreatmentControl)
Average marginal effects                        Number of obs     =        120
Model VCE    : Robust

Expression   : Pr(Q19_R324), predict()
dy/dx w.r.t. : TreatmentControl
------------------------------------------------------------------------------
             |            Delta-method
             |      dy/dx   Std. Err.      z    P>|z|     [95% Conf. Interval]
--------------+---------------------------------------------------------------
TreatmentCon~l |   .2990693   .0782972     3.82   0.000     .1456096     .452529
------------------------------------------------------------------------------

. estat gof
Logistic model for Q19_R324, goodness-of-fit test

       number of observations =       120
 number of covariate patterns =       119
             Pearson chi2(99) =        64.02
                  Prob > chi2 =         0.9975

. estat gof, group(20)
Logistic model for Q19_R324, goodness-of-fit test

  (Table collapsed on quantiles of estimated probabilities)

       number of observations =       120
             number of groups =        20
     Hosmer-Lemeshow chi2(18) =        11.57
                  Prob > chi2 =         0.8686
```

Strategy 326: Establish plan for other activities

```
Logistic regression                             Number of obs     =        120
                                                Wald chi2(8)      =          .
                                                Prob > chi2       =          .
Log pseudolikelihood = -43.136547               Pseudo R2         =     0.3258

                                (Std. Err. adjusted for 10 clusters in Commune)
------------------------------------------------------------------------------
             |               Robust
    Q19_R326 |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
TreatmentCon~l |   1.059582   .7650353     1.39   0.166    -.4398592    2.559024
Livelihood_Z~e |  -.9416979   .7862144    -1.20   0.231     -2.48265    .5992539
Q3_2_SexeDuC~f |   .5052547   .5626692     0.90   0.369    -.5975567    1.608066
Q3_3_AgeDuChef |   -.115327   .0744537    -1.55   0.121    -.2612537    .0305996
  AgeDuChef_sq |   .0009565   .0008605     1.11   0.266      -.00073     .002643
        HHSize |   .1593056   .0527204     3.02   0.003     .0559755    .2626357
 Ppal_Activity |   1.820239   1.877075     0.97   0.332    -1.858761    5.499239
   Source_Enrg |  -.6965372    1.19313    -0.58   0.559    -3.035028    1.641954
  Source_Light |   1.069577   .7315922     1.46   0.144    -.3643172    2.503471
    Log_Assets |   .2618716   .4381583     0.60   0.550    -.5969029    1.120646
Q12_1_Droits~e |   1.009131   .7870908     1.28   0.200    -.5335388    2.551801
     LogIncome |   .1372431   .0636807     2.16   0.031     .0124313    .2620549
Accestoservi~s |   .1216718   .3394988     0.36   0.720    -.5437336    .7870772
    AccestoAid |   .3108056   .1956948     1.59   0.112    -.0727492    .6943605
AccestoAidSo~l |  -.1391525   .0749915    -1.86   0.064    -.2861332    .0078282
      Q16_R105 |   .0956126    .242868     0.39   0.694       -.3804    .5716251
      Q16_R106 |   -1.85416   .9219768    -2.01   0.044    -3.661201   -.0471185
      Q16_R108 |   1.667284   .6941203     2.40   0.016     .3068329    3.027734
      Q16_R109 |  -1.296501   1.687673    -0.77   0.442     -4.60428    2.011278
         _cons |  -8.612441   4.763449    -1.81   0.071    -17.94863    .7237474
------------------------------------------------------------------------------

. estat gof
Logistic model for Q19_R326, goodness-of-fit test

       number of observations =       120
 number of covariate patterns =       119
             Pearson chi2(99) =        77.69
                  Prob > chi2 =         0.9442

. estat gof, group(20)
Logistic model for Q19_R326, goodness-of-fit test

  (Table collapsed on quantiles of estimated probabilities)

       number of observations =       120
             number of groups =        20
     Hosmer-Lemeshow chi2(18) =        16.25
                  Prob > chi2 =         0.5754
```

Appendix 7. PSM intermediary calculations and models for Hypothesis 2.

PSM per Shock #1 = Seasonal Drought

```
    ************************************************
    Algorithm to estimate the propensity score
    ************************************************

    The treatment is TreatmentControl

    TreatmentCo |
          ntrol |      Freq.     Percent        Cum.
    ------------+-----------------------------------
              0 |        304       53.71       53.71
              1 |        262       46.29      100.00
    ------------+-----------------------------------
          Total |        566      100.00


    Estimation of the propensity score
    Probit regression                                 Number of obs   =        400
                                                      LR chi2(28)     =     309.02
                                                      Prob > chi2     =     0.0000
    Log likelihood = -120.74611                       Pseudo R2       =     0.5613
    ------------------------------------------------------------------------------
    TreatmentC~l |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
    -------------+----------------------------------------------------------------
              LZ |   .2231971   .2278862     0.98   0.327    -.2234517    .6698459
    Q3_2_SexeD~f |  -.2039263   .2094585    -0.97   0.330    -.6144574    .2066048
    Q3_3_AgeDu~f |   .0071913   .0071976     1.00   0.318    -.0069158    .0212984
           HHSize |   .0082113   .0197938     0.41   0.678    -.0305839    .0470065
    PR_Activi~_1 |   5.262105   164.3442     0.03   0.974    -316.8466    327.3708
    PR_Activi~_2 |   5.152821   164.3505     0.03   0.975    -316.9683    327.2739
    PR_Activit~4 |    4.89978   164.3453     0.03   0.976    -317.2111    327.0107
    PR_Activit~6 |   1.456138          .        .       .           .           .
    Source_Lig~2 |   -.169835   .4286392    -0.40   0.692    -1.009952    .6702824
    Source_Lig~6 |  -.2142244   .3342991    -0.64   0.522    -.8694387    .4409899
    ln_Value_A~s |  -.0400198   .0946577    -0.42   0.672    -.2255455    .1455059
    Q12_1_Droi~e |   .1040458   .2959695     0.35   0.725    -.4760438    .6841354
       ln_Income |   -.128079   .1092843    -1.17   0.241    -.3422723    .0861144
    Accestoser~s |    .286712    .073788     3.89   0.000     .1420902    .4313339
      AccestoAid |  -.0126445   .0497432    -0.25   0.799    -.1101394    .0848504
    AccestoAid~l |   .0390672    .049856     0.78   0.433    -.0586487    .1367832
    MemberSocNet |   2.043937   .2150082     9.51   0.000     1.622529    2.465345
        Q17_R302 |   .4063056   .2680693     1.52   0.130    -.1191005    .9317118
        Q17_R305 |  -.4212635   .2899523    -1.45   0.146    -.9895596    .1470326
        Q17_R308 |  -.0326907   .2566413    -0.13   0.899    -.5356984    .4703169
        Q18_R311 |   .1721368   .2257743     0.76   0.446    -.2703726    .6146462
        Q18_R316 |  -.3709323   .2376265    -1.56   0.119    -.8366717    .0948072
        Q19_R324 |   -.341293   .2440953    -1.40   0.162     -.819711     .137125
        Q19_R326 |   .1380732   .2359119     0.59   0.558    -.3243056     .600452
        Q16_R105 |   .0784066   .1123412     0.70   0.485    -.1417781    .2985914
        Q16_R106 |  -.1113039    .238851    -0.47   0.641    -.5794433    .3568355
        Q16_R108 |   -.163316   .2578479    -0.63   0.526    -.6686886    .3420566
        Q16_R109 |  -.2263643   .5381878    -0.42   0.674    -1.281193    .8284644
            _cons |  -5.836362   164.3565    -0.04   0.972    -327.9691    316.2964
    ------------------------------------------------------------------------------
    Note: 4 failures and 22 successes completely determined.

    Note: the common support option has been selected
    The region of common support is [.02144591, 1]


    Description of the estimated propensity score
    in region of common support

                    Estimated propensity score
    -------------------------------------------------------------
          Percentiles      Smallest
```

```
 1%     .0287834       .0214459
 5%     .0425889       .0243933
10%     .0522041       .0277922       Obs                 362
25%      .114684       .0287834       Sum of Wgt.         362

50%      .323943                      Mean            .497383
                        Largest       Std. Dev.       .385848
75%     .9130504              1
90%     .9999994              1       Variance        .1488787
95%            1              1       Skewness        .1655684
99%            1              1       Kurtosis        1.275691


*******************************************************
Step 1: Identification of the optimal number of blocks
Use option detail if you want more detailed output
*******************************************************

The final number of blocks is 6
This number of blocks ensures that the mean propensity score
is not different for treated and controls in each blocks

*************************************************************
Step 2: Test of balancing property of the propensity score
Use option detail if you want more detailed output
*************************************************************

The balancing property is satisfied

This table shows the inferior bound, the number of treated
and the number of controls for each block

  Inferior |
  of block |   TreatmentControl
of pscore  |         0          1 |     Total
-----------+----------------------+----------
  .0214459 |       119         13 |       132
        .2 |        39         17 |        56
        .4 |        10          6 |        16
        .6 |         9         15 |        24
        .8 |         5        129 |       134
-----------+----------------------+----------
     Total |       182        180 |       362

Note: the common support option has been selected


****************************************
End of the algorithm to estimate the pscore
****************************************

------------------------------------------------------------------------------------------
        Variable     Sample |    Treated     Controls   Difference         S.E.  T-stat
---------------------------+--------------------------------------------------------------
Self_assessed_~d  Unmatched |        9.7   9.48636364   .213636364   .582792155    0.37
                      ATT   |        9.5   8.17333333   1.32666667   1.15622937    1.15
                      ATU   | 9.24175824   6.89450549  -2.34725275            .       .
                      ATE   |                          -1.13161765            .       .
---------------------------+--------------------------------------------------------------
Note: S.E. does not take into account that the propensity score is estimated.
```

PSM per Shock #6 = Armyworm attack

```
*************************************************
Algorithm to estimate the propensity score
*************************************************

The treatment is TreatmentControl

TreatmentCo |
      ntrol |      Freq.     Percent        Cum.
------------+-----------------------------------
          0 |        139       65.88       65.88
          1 |         72       34.12      100.00
------------+-----------------------------------
      Total |        211      100.00


Probit regression                                 Number of obs   =        140
                                                  LR chi2(25)     =     138.12
                                                  Prob > chi2     =     0.0000
Log likelihood = -20.282213                       Pseudo R2       =     0.7730
------------------------------------------------------------------------------
TreatmentC~l |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
          LZ |    1.85218   .7871637     2.35   0.019      .309367    3.394992
Q3_2_SexeD~f |   1.593728   .7656458     2.08   0.037     .0930901    3.094367
Q3_3_AgeDu~f |   .0224887   .0225272     1.00   0.318    -.0216638    .0666412
      HHSize |   .0109017   .0958987     0.11   0.909    -.1770562    .1988596
PR_Activi~_1 |  -2.876514   3.117534    -0.92   0.356    -8.986768    3.233741
Source_Lig~2 |  -5.884986   15.24721    -0.39   0.700    -35.76896    23.99899
Source_Lig~6 |  -7.919768   15.36769    -0.52   0.606    -38.03989    22.20035
ln_Value_A~s |   .5168186   .3555791     1.45   0.146    -.1801037    1.213741
Q12_1_Droi~e |  -4.512356   1.590545    -2.84   0.005    -7.629767   -1.394944
   ln_Income |  -.7681165   .4964123    -1.55   0.122    -1.741067    .2048338
Accestoser~s |   1.992476   .5896038     3.38   0.001     .8368738    3.148078
  AccestoAid |  -.0084665   .1612017    -0.05   0.958    -.3244159    .3074829
AccestoAid~l |   .1627902   .1384113     1.18   0.240     -.108491    .4340714
MemberSocNet |   3.349686   .9609521     3.49   0.000     1.466254    5.233117
    Q17_R302 |  -2.633178   2.208737    -1.19   0.233    -6.962223    1.695867
    Q17_R305 |   .4459043   2.523549     0.18   0.860     -4.50016    5.391969
    Q17_R308 |   .3473553   1.323173     0.26   0.793    -2.246016    2.940726
    Q18_R311 |   1.356216   1.021452     1.33   0.184    -.6457925    3.358224
    Q18_R316 |   -.106241   10.22988    -0.01   0.992    -20.15643    19.94395
    Q19_R324 |   3.378313   1.421425     2.38   0.017     .5923707    6.164256
    Q19_R326 |  -2.575574   1.101099    -2.34   0.019    -4.733688   -.4174604
    Q16_R105 |  -.6429353   .3268044    -1.97   0.049     -1.28346   -.0024105
    Q16_R106 |  -1.553409   .8667662    -1.79   0.073    -3.252239    .1454218
    Q16_R108 |   1.310381   .8766679     1.49   0.135    -.4078569    3.028618
    Q16_R109 |   3.972464   2.553358     1.56   0.120    -1.032025    8.976953
       _cons |    2.89291    16.4451     0.18   0.860    -29.33888    35.12471
------------------------------------------------------------------------------
Note: 39 failures and 15 successes completely determined.

Note: the common support option has been selected
The region of common support is [.00917956, 1]

Description of the estimated propensity score
in region of common support

                 Estimated propensity score
-------------------------------------------------------------
      Percentiles      Smallest
 1%     .0091796       .0091796
 5%     .0265509       .0098946
10%     .0426887       .0104051       Obs                  81
25%     .1646211       .0126659       Sum of Wgt.          81

50%     .5774261                      Mean           .5865798
                       Largest       Std. Dev.      .4006247
75%     .9999861              1
90%            1              1       Variance       .1605002
95%            1              1       Skewness      -.2055605
99%            1              1       Kurtosis       1.347939



*************************************************
Step 1: Identification of the optimal number of blocks
```

```
Use option detail if you want more detailed output
***************************************************

The final number of blocks is 6
This number of blocks ensures that the mean propensity score
is not different for treated and controls in each blocks


***********************************************************
Step 2: Test of balancing property of the propensity score
Use option detail if you want more detailed output
***********************************************************

The balancing property is satisfied

This table shows the inferior bound, the number of treated
and the number of controls for each block

  Inferior |
  of block |   TreatmentControl
of pscore  |         0          1 |     Total
-----------+----------------------+----------
  .0091796 |        22          2 |        24
        .2 |         6          1 |         7
        .4 |         6          4 |        10
        .6 |         0          5 |         5
        .8 |         0         35 |        35
-----------+----------------------+----------
     Total |        34         47 |        81

Note: the common support option has been selected


****************************************
End of the algorithm to estimate the pscore
****************************************

------------------------------------------------------------------------------------------
        Variable     Sample |    Treated     Controls   Difference         S.E.   T-stat
---------------------------+--------------------------------------------------------------
Self_assessed_~d  Unmatched | 10.1276596   10.5376344  -.409974834    1.1024236    -0.37
                      ATT |       15.6         9.76         5.84   2.90508883     2.01
                      ATU | 9.44117647         15.6   6.15882353            .        .
                      ATE |                           6.11794872            .        .
---------------------------+--------------------------------------------------------------
Note: S.E. does not take into account that the propensity score is estimated.
```

PSM per Shock #14 = serious illness

```
    ************************************************
    Algorithm to estimate the propensity score
    ************************************************

    The treatment is TreatmentControl

    TreatmentCo |
          ntrol |      Freq.     Percent        Cum.
    ------------+-----------------------------------
              0 |        180       56.43       56.43
              1 |        139       43.57      100.00
    ------------+-----------------------------------
          Total |        319      100.00


    Probit regression                                 Number of obs   =        209
                                                      LR chi2(24)     =     107.66
                                                      Prob > chi2     =     0.0000
    Log likelihood = -87.377406                       Pseudo R2       =     0.3812
    ------------------------------------------------------------------------------
    TreatmentC~l |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
    -------------+----------------------------------------------------------------
              LZ |  -.4897551   .2823792    -1.73   0.083    -1.043208    .0636979
    Q3_2_SexeD~f |   .1788106   .2525177     0.71   0.479    -.3161151    .6737362
    Q3_3_AgeDu~f |   -.001399   .0091991    -0.15   0.879    -.0194289    .0166308
          HHSize |   .0179703   .0277196     0.65   0.517    -.0363592    .0722998
    PR_Activi~_1 |  -.8870817    .875466    -1.01   0.311    -2.602964    .8288001
    Source_Lig~2 |   .0005746   .6605857     0.00   0.999     -1.29415    1.295299
    Source_Lig~6 |    .301842   .5077127     0.59   0.552    -.6932566    1.296941
    ln_Value_A~s |   .1768186   .1208829     1.46   0.144    -.0601075    .4137447
    Q12_1_Droi~e |   -.056621   .3635399    -0.16   0.876    -.7691461     .655904
       ln_Income |   -.282537   .1340458    -2.11   0.035     -.545262    -.019812
    Accestoser~s |   .5714242   .1014848     5.63   0.000     .3725176    .7703307
      AccestoAid |   .1187411   .0697851     1.70   0.089    -.0180352    .2555175
    AccestoAid~l |   .0764251   .0606645     1.26   0.208     -.042475    .1953253
        Q17_R302 |    .899932   .5302918     1.70   0.090    -.1394208    1.939285
        Q17_R305 |   .7883353   .4947524     1.59   0.111    -.1813616    1.758032
        Q17_R308 |   .3990043   .4013134     0.99   0.320    -.3875556    1.185564
        Q18_R311 |  -.1170143    .256159    -0.46   0.648    -.6190767    .3850481
        Q18_R316 |   .2715659   .3241493     0.84   0.402     -.363755    .9068868
        Q19_R324 |   1.102973    .751713     1.47   0.142    -.3703578    2.576303
        Q19_R326 |   .7356213   .6958184     1.06   0.290    -.6281577      2.0994
        Q16_R105 |    .038745   .1058542     0.37   0.714    -.1687255    .2462155
        Q16_R106 |   .2404084   .3398116     0.71   0.479    -.4256101    .9064269
        Q16_R108 |  -.4388703   .2813178    -1.56   0.119     -.990243    .1125024
        Q16_R109 |   -.627493   .5310999    -1.18   0.237     -1.66843    .4134438
           _cons |  -.4754165   2.543548    -0.19   0.852     -5.46068    4.509847
    ------------------------------------------------------------------------------

    Note: the common support option has been selected
    The region of common support is [.04250887, .99992639]


    Description of the estimated propensity score
    in region of common support

                    Estimated propensity score
    -------------------------------------------------------------
          Percentiles      Smallest
     1%     .0435578       .0425089
     5%     .0671571       .0435578
    10%     .0820636       .0465006       Obs                 168
    25%     .2697154       .0472683       Sum of Wgt.         168

    50%     .5028701                      Mean           .5009717
                           Largest        Std. Dev.      .2882383
    75%     .7296277       .9994106
    90%      .904275       .9998711       Variance       .0830813
    95%     .9945161       .9999072       Skewness       .0670703
    99%     .9999072       .9999264       Kurtosis       1.912465



    ************************************************
    Step 1: Identification of the optimal number of blocks
    Use option detail if you want more detailed output
```

```
**************************************************

The final number of blocks is 5

This number of blocks ensures that the mean propensity score
is not different for treated and controls in each blocks


**********************************************************
Step 2: Test of balancing property of the propensity score
Use option detail if you want more detailed output
**********************************************************

The balancing property is satisfied


This table shows the inferior bound, the number of treated
and the number of controls for each block

  Inferior |
  of block |   TreatmentControl
of pscore  |         0          1 |     Total
-----------+----------------------+----------
  .0425089 |        29          3 |        32
        .2 |        23         11 |        34
        .4 |        19         18 |        37
        .6 |        10         25 |        35
        .8 |         2         28 |        30
-----------+----------------------+----------
     Total |        83         85 |       168

Note: the common support option has been selected


****************************************
End of the algorithm to estimate the pscore
****************************************

------------------------------------------------------------------------------------------
        Variable     Sample |    Treated     Controls   Difference         S.E.   T-stat
---------------------------+--------------------------------------------------------------
Self_assessed_~d  Unmatched | 11.0823529   11.9354839   -.85313093   .895850299    -0.95
                      ATT | 11.6507937   9.79365079   1.85714286   1.27600743     1.46
                      ATU |  12.060241   11.1831325  -.877108434            .        .
                      ATE |                            .302739726            .        .
---------------------------+--------------------------------------------------------------
Note: S.E. does not take into account that the propensity score is estimated.
```

PSM per Shock #18 = Seasonal food shortage

```
    ************************************************
    Algorithm to estimate the propensity score
    ************************************************

    The treatment is TreatmentControl

    TreatmentCo |
          ntrol |      Freq.     Percent        Cum.
    ------------+-----------------------------------
              0 |        330       62.98       62.98
              1 |        194       37.02      100.00
    ------------+-----------------------------------
          Total |        524      100.00


    Probit regression                                 Number of obs   =        355
                                                      LR chi2(28)     =     271.32
                                                      Prob > chi2     =     0.0000
    Log likelihood = -101.98947                       Pseudo R2       =     0.5708
    ------------------------------------------------------------------------------
    TreatmentC~l |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
    -------------+----------------------------------------------------------------
              LZ |  -.0320581    .268059    -0.12   0.905    -.5574441    .4933279
    Q3_2_SexeD~f |  -.3868543   .2295229    -1.69   0.092    -.8367108    .0630022
    Q3_3_AgeDu~f |   .0101626   .0073572     1.38   0.167    -.0042572    .0245825
          HHSize |   .0017564   .0263968     0.07   0.947    -.0499805    .0534932
    PR_Activi~_1 |  -.2925812   .9867861    -0.30   0.767    -2.226646    1.641484
    PR_Activi~_2 |  -1.425196   2.889857    -0.49   0.622    -7.089212    4.238821
    PR_Activit~5 |   1.099421   1.411816     0.78   0.436    -1.667688     3.86653
     Source_En_6 |  -.6259821   3.220901    -0.19   0.846    -6.938832    5.686867
    Source_Lig~1 |  -.7216913   .5249019    -1.37   0.169     -1.75048    .3070975
    Source_Lig~6 |  -.5567481   .4434741    -1.26   0.209    -1.425941    .3124452
    ln_Value_A~s |   .0173083   .0934881     0.19   0.853    -.1659249    .2005415
    Q12_1_Droi~e |   .3137284   .2917831     1.08   0.282     -.258156    .8856127
       ln_Income |   .2206031   .1274099     1.73   0.083    -.0291157    .4703219
    Accestoser~s |   .3415096   .0824079     4.14   0.000     .1799931    .5030262
      AccestoAid |  -.1390062   .0640482    -2.17   0.030    -.2645385    -.013474
    AccestoAid~l |   .0208159   .0471953     0.44   0.659    -.0716852    .1133169
    MemberSocNet |   2.245599   .2618542     8.58   0.000     1.732374    2.758823
        Q17_R302 |   .5359676   .2974335     1.80   0.072    -.0469914    1.118927
        Q17_R305 |   .0606743    .306743     0.20   0.843    -.5405309    .6618796
        Q17_R308 |  -.2681345   .3021128    -0.89   0.375    -.8602646    .3239957
        Q18_R311 |   .0128149   .2373013     0.05   0.957    -.4522871    .4779168
        Q18_R316 |  -.7572187   .2785751    -2.72   0.007    -1.303216   -.2112214
        Q19_R324 |   .2255017   .2606982     0.86   0.387    -.2854573    .7364608
        Q19_R326 |  -.0536157   .2544614    -0.21   0.833    -.5523509    .4451196
        Q16_R105 |  -.0398751   .1256923    -0.32   0.751    -.2862275    .2064772
        Q16_R106 |  -.3809311    .255754    -1.49   0.136    -.8821997    .1203376
        Q16_R108 |  -.1213834    .270375    -0.45   0.653    -.6513087    .4085419
        Q16_R109 |  -.6086627   .3981368    -1.53   0.126    -1.388997    .1716711
           _cons |   -4.12655   2.099754    -1.97   0.049    -8.241991   -.0111087
    ------------------------------------------------------------------------------
    Note: 0 failures and 14 successes completely determined.

    Note: the common support option has been selected
    The region of common support is [.01654053, 1]


    Description of the estimated propensity score
    in region of common support


                    Estimated propensity score
    -------------------------------------------------------------
          Percentiles      Smallest
     1%     .0172473       .0165405
     5%     .0217645       .0169767
    10%     .0279777       .0171899       Obs                 300
    25%     .1015874       .0173047       Sum of Wgt.         300

    50%     .3485781                      Mean             .46434
                           Largest        Std. Dev.      .3799238
    75%     .9183736             1
    90%     .9998497             1       Variance       .1443421
    95%            1             1       Skewness       .2894546
    99%            1             1       Kurtosis       1.427297
```

```
*****************************************************
Step 1: Identification of the optimal number of blocks
Use option detail if you want more detailed output
*****************************************************

The final number of blocks is 7

This number of blocks ensures that the mean propensity score
is not different for treated and controls in each blocks

***********************************************************
Step 2: Test of balancing property of the propensity score
Use option detail if you want more detailed output
***********************************************************

The balancing property is satisfied

This table shows the inferior bound, the number of treated
and the number of controls for each block

  Inferior |
  of block |   TreatmentControl
of pscore  |         0          1 |     Total
-----------+----------------------+----------
  .0165405 |       102         10 |       112
        .2 |        36         12 |        48
        .4 |        10         15 |        25
        .6 |        10         11 |        21
        .8 |         3         24 |        27
        .9 |         0         67 |        67
-----------+----------------------+----------
     Total |       161        139 |       300

Note: the common support option has been selected


*****************************************
End of the algorithm to estimate the pscore
*****************************************

------------------------------------------------------------------------------------------
        Variable     Sample |    Treated     Controls   Difference         S.E.   T-stat
---------------------------+--------------------------------------------------------------
Self_assessed_~d  Unmatched | 8.54676259        7.875    .67176259   .515319189     1.30
                      ATT | 8.27868852   6.94754098   1.33114754   .819806721     1.62
                      ATU | 7.59627329   7.80869565    .21242236            .        .
                      ATE |                            .51981982            .        .
---------------------------+--------------------------------------------------------------
Note: S.E. does not take into account that the propensity score is estimated.
```

Appendix 8. PSM intermediary calculations and models for Hypothesis 3.

PSM per Food Security Index (FSI)

```
**************************************************
Algorithm to estimate the propensity score
**************************************************
The treatment is TC

  RECODE of |
Q2_Intensit |
          e |
(Q2_Intensi |
        te) |      Freq.     Percent        Cum.
------------+-----------------------------------
          0 |        812       54.21       54.21
          1 |        686       45.79      100.00
------------+-----------------------------------
      Total |      1,498      100.00

Probit regression                                 Number of obs   =        769
                                                  LR chi2(31)     =     632.77
                                                  Prob > chi2     =     0.0000
Log likelihood = -215.44448                       Pseudo R2       =     0.5949
------------------------------------------------------------------------------
          TC |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
          LZ |   .3057571   .1672423     1.83   0.068    -.0220319     .633546
Q3_2_SexeD~f |  -.2094633   .1568851    -1.34   0.182    -.5169524    .0980258
Q3_3_AgeDu~f |   .0027569   .0052945     0.52   0.603      -.00762    .0131339
      HHSize |  -.0004024   .0147939    -0.03   0.978    -.0293979    .0285931
PR_Activi~_1 |  -.2917432   .5067803    -0.58   0.565    -1.285014     .701528
PR_Activi~_2 |  -1.127231   1.571262    -0.72   0.473    -4.206847    1.952385
PR_Activit~4 |   .0431552   .6237301     0.07   0.945    -1.179333    1.265644
PR_Activit~5 |   .3015774   .9068507     0.33   0.739    -1.475817    2.078972
PR_Activit~6 |  -.0776581   .9483762    -0.08   0.935    -1.936441    1.781125
PR_Activit~7 |  -.1222327    1.77869    -0.07   0.945    -3.608402    3.363936
PR_Activi~11 |    .469238   .8585732     0.55   0.585    -1.213535    2.152011
Source_Lig~1 |  -.8624934   .2964238    -2.91   0.004    -1.443473   -.2815134
Source_Lig~6 |  -.7053247   .2498368    -2.82   0.005    -1.194996   -.2156536
ln_Value_A~s |  -.0106092   .0644709    -0.16   0.869    -.1369698    .1157514
Q12_1_Droi~e |   .3253531   .1933139     1.68   0.092    -.0535353    .7042414
   ln_Income |  -.0569128   .0711287    -0.80   0.424    -.1963225    .0824968
Accestoser~s |   .2989605   .0494727     6.04   0.000     .2019957    .3959253
  AccestoAid |  -.0569284   .0318648    -1.79   0.074    -.1193822    .0055254
AccestoAid~l |   .0674495   .0341545     1.97   0.048      .000508    .1343911
MemberSocNet |    2.18607   .1765552    12.38   0.000     1.840028    2.532112
    Q17_R302 |   .1460315    .194952     0.75   0.454    -.2360673    .5281303
    Q17_R305 |  -.2657866    .215823    -1.23   0.218    -.6887919    .1572187
    Q17_R308 |   .0811089   .1774081     0.46   0.648    -.2666045    .4288224
    Q18_R311 |   .0881929   .1561375     0.56   0.572    -.2178311    .3942168
    Q18_R316 |  -.3824989   .1631497    -2.34   0.019    -.7022664   -.0627315
    Q19_R324 |   -.441608     .17474    -2.53   0.011    -.7840922   -.0991238
    Q19_R326 |   .4593911   .1708228     2.69   0.007     .1245845    .7941977
    Q16_R105 |   .2541367   .0693338     3.67   0.000     .1182449    .3900285
    Q16_R106 |  -.0932983   .1721668    -0.54   0.588     -.430739    .2441424
    Q16_R108 |  -.5108989   .1836934    -2.78   0.005    -.8709313   -.1508665
    Q16_R109 |  -.1786934   .2357175    -0.76   0.448    -.6406912    .2833043
       _cons |  -.8470324   1.236363    -0.69   0.493    -3.270259    1.576194
------------------------------------------------------------------------------
Note: 0 failures and 55 successes completely determined.

Note: the common support option has been selected
The region of common support is [.0098755, 1]
Description of the estimated propensity score
in region of common support

                 Estimated propensity score
-------------------------------------------------------------
      Percentiles      Smallest
```

```
 1%     .0120935       .0098755
 5%      .021665       .0099225
10%     .0334045       .0100263       Obs                 724
25%     .0990815       .0108144       Sum of Wgt.         724

50%     .4140744                      Mean           .5040077
                       Largest        Std. Dev.      .3970456
75%     .9759751              1
90%     .9999994              1       Variance       .1576452
95%            1              1       Skewness       .1122622
99%            1              1       Kurtosis       1.282199


*****************************************************
Step 1: Identification of the optimal number of blocks
Use option detail if you want more detailed output
*****************************************************

The final number of blocks is 7

This number of blocks ensures that the mean propensity score
is not different for treated and controls in each blocks

***********************************************************
Step 2: Test of balancing property of the propensity score
Use option detail if you want more detailed output
***********************************************************

The balancing property is satisfied

This table shows the inferior bound, the number of treated
and the number of controls for each block

           |       RECODE of
  Inferior |     Q2_Intensite
  of block |    (Q2_Intensite)
of pscore  |         0          1 |     Total
-----------+----------------------+----------
  .0098755 |       242         28 |       270
        .2 |        73         17 |        90
        .4 |        25         19 |        44
        .6 |        13         44 |        57
        .8 |         7         64 |        71
        .9 |         1        191 |       192
-----------+----------------------+----------
     Total |       361        363 |       724

Note: the common support option has been selected

*****************************************
End of the algorithm to estimate the pscore
*****************************************
------------------------------------------------------------------------------------------
        Variable     Sample |    Treated     Controls   Difference         S.E.   T-stat
---------------------------+--------------------------------------------------------------
             FSI  Unmatched |  8.4738292   8.52955665  -.055727449   .106000456    -0.53
                        ATT |  8.49358974  8.76923077  -.275641026   .253592403    -1.09
                        ATU | 8.52631579   7.79168975  -.734626039            .         .
                        ATE |                         -.596131528            .         .
---------------------------+--------------------------------------------------------------
Note: S.E. does not take into account that the propensity score is estimated.
```

PSM per Food Diversity Index (FDI)

```
**************************************************
Algorithm to estimate the propensity score
**************************************************
The treatment is TC

  RECODE of |
Q2_Intensit |
          e |
(Q2_Intensi |
        te) |      Freq.     Percent        Cum.
------------+-----------------------------------
          0 |        812       54.21       54.21
          1 |        686       45.79      100.00
------------+-----------------------------------
      Total |      1,498      100.00

Probit regression                                 Number of obs   =        769
                                                  LR chi2(31)     =     632.77
                                                  Prob > chi2     =     0.0000
Log likelihood = -215.44448                       Pseudo R2       =     0.5949
------------------------------------------------------------------------------
          TC |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
          LZ |   .3057571   .1672423     1.83   0.068    -.0220319     .633546
Q3_2_SexeD~f |  -.2094633   .1568851    -1.34   0.182    -.5169524    .0980258
Q3_3_AgeDu~f |   .0027569   .0052945     0.52   0.603      -.00762    .0131339
      HHSize |  -.0004024   .0147939    -0.03   0.978    -.0293979    .0285931
PR_Activi~_1 |  -.2917432   .5067803    -0.58   0.565    -1.285014     .701528
PR_Activi~_2 |  -1.127231   1.571262    -0.72   0.473    -4.206847    1.952385
PR_Activit~4 |   .0431552   .6237301     0.07   0.945    -1.179333    1.265644
PR_Activit~5 |   .3015774   .9068507     0.33   0.739    -1.475817    2.078972
PR_Activit~6 |  -.0776581   .9483762    -0.08   0.935    -1.936441    1.781125
PR_Activit~7 |  -.1222327    1.77869    -0.07   0.945    -3.608402    3.363936
PR_Activi~11 |    .469238   .8585732     0.55   0.585    -1.213535    2.152011
Source_Lig~2 |   .8624934   .2964238     2.91   0.004     .2815134    1.443473
Source_Lig~6 |   .1571687   .2274386     0.69   0.490    -.2886028    .6029402
ln_Value_A~s |  -.0106092   .0644709    -0.16   0.869    -.1369698    .1157514
Q12_1_Droi~e |   .3253531   .1933139     1.68   0.092    -.0535353    .7042414
   ln_Income |  -.0569128   .0711287    -0.80   0.424    -.1963225    .0824968
Accestoser~s |   .2989605   .0494727     6.04   0.000     .2019957    .3959253
  AccestoAid |  -.0569284   .0318648    -1.79   0.074    -.1193822    .0055254
AccestoAid~l |   .0674495   .0341545     1.97   0.048      .000508    .1343911
MemberSocNet |    2.18607   .1765552    12.38   0.000     1.840028    2.532112
    Q17_R302 |   .1460315    .194952     0.75   0.454    -.2360673    .5281303
    Q17_R305 |  -.2657866    .215823    -1.23   0.218    -.6887919    .1572187
    Q17_R308 |   .0811089   .1774081     0.46   0.648    -.2666045    .4288224
    Q18_R311 |   .0881929   .1561375     0.56   0.572    -.2178311    .3942168
    Q18_R316 |  -.3824989   .1631497    -2.34   0.019    -.7022664   -.0627315
    Q19_R324 |   -.441608     .17474    -2.53   0.011    -.7840922   -.0991238
    Q19_R326 |   .4593911   .1708228     2.69   0.007     .1245845    .7941977
    Q16_R105 |   .2541367   .0693338     3.67   0.000     .1182449    .3900285
    Q16_R106 |  -.0932983   .1721668    -0.54   0.588     -.430739    .2441424
    Q16_R108 |  -.5108989   .1836934    -2.78   0.005    -.8709313   -.1508665
    Q16_R109 |  -.1786934   .2357175    -0.76   0.448    -.6406912    .2833043
       _cons |  -1.709526   1.240323    -1.38   0.168    -4.140514    .7214626
------------------------------------------------------------------------------
Note: 0 failures and 55 successes completely determined.

Note: the common support option has been selected
The region of common support is [.0098755, 1]


Description of the estimated propensity score
in region of common support

                 Estimated propensity score
-------------------------------------------------------------
      Percentiles      Smallest
 1%     .0120935       .0098755
 5%      .021665       .0099225
10%     .0334045       .0100263       Obs                 724
25%     .0990815       .0108144       Sum of Wgt.         724

50%     .4140744                      Mean           .5040077
                       Largest       Std. Dev.      .3970456
75%     .9759751              1
90%     .9999994              1       Variance       .1576452
```

```
95%            1              1       Skewness       .1122622
99%            1              1       Kurtosis       1.282199

*****************************************************
Step 1: Identification of the optimal number of blocks
Use option detail if you want more detailed output
*****************************************************

The final number of blocks is 7

This number of blocks ensures that the mean propensity score
is not different for treated and controls in each blocks

***********************************************************
Step 2: Test of balancing property of the propensity score
Use option detail if you want more detailed output
***********************************************************

The balancing property is satisfied

This table shows the inferior bound, the number of treated
and the number of controls for each block

           |       RECODE of
  Inferior |     Q2_Intensite
  of block |    (Q2_Intensite)
of pscore  |         0          1 |     Total
-----------+----------------------+----------
  .0098755 |       242         28 |       270
        .2 |        73         17 |        90
        .4 |        25         19 |        44
        .6 |        13         44 |        57
        .8 |         7         64 |        71
        .9 |         1        191 |       192
-----------+----------------------+----------
     Total |       361        363 |       724

Note: the common support option has been selected

*****************************************
End of the algorithm to estimate the pscore
*****************************************

------------------------------------------------------------------------------------------
        Variable     Sample |    Treated     Controls   Difference         S.E.   T-stat
---------------------------+--------------------------------------------------------------
             FDI  Unmatched | 5.49311295   4.90640394   .586709007   .122592621     4.79
                       ATT | 5.51282051   5.26025641   .252564103   .280158742     0.90
                       ATU | 4.93905817     5.433241   .494182825            .        .
                       ATE |                           .421276596            .        .
---------------------------+--------------------------------------------------------------
Note: S.E. does not take into account that the propensity score is estimated.
```

This material has been funded by UK aid from the UK government; however the views expressed do not necessarily reflect the UK government's official policies.