Econometrics Replication

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1. Introduction

1.1. *Mechanism of the Effect and Literature Review*

Previous literature has consistently shown that adult education programs play a key role in reducing poverty rates in various regions (Oxenham 2002; Ortega & Rodríguez 2008), but previous designs suffer from irrelevance to daily work and high dropout rates. Therefore, it is necessary to think of a way to directly help adults gain the benefits of education. This paper proposes an innovative strategy to empower adults by teaching them to use mobile phones to acquire essential skills. Compared to other educational programs, teaching people how to use cell phones effectively has several advantages.

First of all, cell phone use can help improve learning ability in various fields, although this effect is short-lived (Barrow *et al.* 2009). Second, cell phones is a good access to multiple knowledge online, so people who have access to cell phones can self-study which is far better for students to improve their long-term study score (See-To *et al.* 2012). Moreover, Cell phone use is a good way to get information about employment opportunities and they are more likely to find a job(Grzybowski & Patel 2023), and therefore, people will find the program of great use in daily life. Moreover, for farmers, mobile phones are a good access to get accurate and timely agricultural information to avoid the reduction of grain price dispersion, which has been demonstrated by (Aker 2010). Other influential effect are also discussed by (Gonzalez & Maffioli 2024; Aker & Mbiti 2010; Cheng 2015).

1.2. *Experimental design*

This paper uses randomized controlled trials (RCTs), which are widely used in economic design and are a common practice to avoid bias or intentional manipulation of results. By selecting 113 eligible villages in Niger, Dosso, and Zinder and randomly assigning cohorts of 58 villages with ABC, this study begins a five-period panel data. The ABC villages follow the same curriculum as the non-ABC villages, but the ABC policy is introduced three months later to help the students learn.

Only membership in a formal or informal producer association at the village level, illiteracy as confirmed by an on-site diagnostic test, and willingness to participate in the program were required to implement the cohort. If there were more than 50 eligible applicants in a village, students were randomly selected from all eligible applicants through a public lottery. To measure student progress, writing and math tests were administered in baseline surveys before the program began, and follow-up surveys were administered twice during the program (June 2009 and June 2010) and seven months after classes ended (January 2010 and January 2011).

2. Main Result

2.1. *Baseline Specification*

Before we introduce the main result, we first need to check whether the difference-in-difference assumption is valid.

$$Test_{ivt} = \beta_0 + \beta_1 ABC_v + \mathbf{X'_{iv}} + \tau_{\mathbf{vt}} + \varepsilon_{\mathbf{ivt}}, \tag{2.1}$$

where $Test_{ivt}$ is the test score of individual i in village v at time t, ABC_{ivt} is a dummy variable indicating whether the individual has a mobile phone, $\mathbf{X'_{iv}}$ is a vector of individual characteristics, τ_{vt} is subdistrict fixed effect and ε_{ivt} is the error term. The result is reported in Table 1 and the standard error is clustered at each village level.

The result shows that the test score is not significantly higher in the treatment group than in the control group, which indicates that the RCT assumption is valid. This is because if the random experiment is not valid, the coefficient of β_1 will be statistically significant, which means that selecting which group to be the treatment group in our experiment is not random.

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‡ Note that all the relevant codes and details of replication this PDF file is available at github. This repository will be modified to delete the instructions and only contain the latex code and stata, python code with the data. Link: https://github.com/sergiozxy/Replication-Econometrics.

TABLE 1. Difference in Test Scores between the Treatment and Control Groups

	(1) literacy	(2) literacy	(3) math	(4) math
abc	-0.0231	-0.0291	-0.0593	-0.0671
	(0.0400)	(0.0420)	(0.0469)	(0.0495)
female		-0.133***		-0.218***
		(0.0348)		(0.0375)
age		-0.00236**		-0.00153
		(0.00104)		(0.00104)
dosso		0.359***		0.197**
		(0.0843)		(0.0762)
N	5982	5675	5982	5675
R-squared	0.0224	0.0278	0.0199	0.0339

Standard errors in parentheses

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Note: we also include subdistrict fixed effect in each regression model.

TABLE 2. Household and teacher characteristics in the treatment and control regions

Variable	Mean without abc	SD without abc	Mean with abc	SD with abc	Diff	std
Panel A: pre-program household characteristics						
age	37.86	13.10	37.18	11.76	-0.36	(0.93)
Are you the household head?	0.560	0.497	0.547	0.498	-0.01	(0.02)
Respondent is Hausa	0.715	0.452	0.721	0.449	0.01	(0.03)
Number of household members	8.422	4.054	8.328	4.074	0.02	(0.25)
Percentage of children under 15 who have some education	0.279	0.276	0.269	0.270	-0.00	(0.02)
Number of asset categories owned by household	4.990	1.609	4.979	1.575	-0.03	(0.10)
Household experienced drought in past year	0.385	0.487	0.380	0.486	-0.03	(0.03)
Household owns a cell phone (excluding group phone)	0.296	0.457	0.295	0.457	-0.00	(0.03)
Access to household or village-level cell phone	0.763	0.426	0.798	0.402	0.04*	(0.02)
Respondent has used cell phone since last harvest	0.542	0.499	0.573	0.495	0.04	(0.03)
Respondent has made call	0.691	0.463	0.725	0.447	0.03	(0.04)
Respondent has received call	0.858	0.349	0.868	0.339	0.03	(0.03)
Panel B: pre-program Teacher characteristics						
Level of Instruction of Teacher	8.323	2.084	8.572	1.779	0.08	(0.22)
Age of Teacher	33.06	9.158	32.71	8.067	-0.31	(1.18)
Female Teacher	0.317	0.467	0.368	0.484	0.06	(0.04)
Teacher from Same Village	0.757	0.430	0.682	0.467	-0.02	(0.05)
Panel C: pre-program Test-Score characteristics						
Baseline literacy test Z-score	-1.03e-08	1.000	-0.0269	0.886	-0.02	(0.04)
Baseline numeracy test Z-score	-6.69e-09	1.000	-0.0712	0.816	-0.06	(0.05)

Notes: * significant at the 10 percent level; ** significant at the 5 percent level; *** significant at the 1 percent level.

2.2. *Contamination Check*

Apart from testing the direct effect of ABC_v on the test score, we also need to check whether there is any contamination between the treatment and control groups. The contamination check is to test whether the treatment group and the control group are significantly different in terms of household and teacher characteristics. To check whether it is significantly zero, we also use the Equation (2.1) to check if the policy ABC_v contains the problem.† The result is shown at Table 2.

The summary statistics is reported in Table 2. We can see that before the program starts, all of the variables are not significantly different between the control group and the treatment group, indicates that there is no pre-treatment contamination. In addition,

† Note that using two-tailed t-test is equivalent for using regression in dummy variable setting and we also correct for individual fixed effect and cluster the standard error at village level, which means that our result is more robust.

TABLE 3. Difference-in-Difference Estimation of ABC policy

	(1) literacy	(2) math	(3) literacy	(4) math	(5) literacy	(6) math	(7) literacy	(8) math
abc	-0.0511	-0.0952*	-0.0551	-0.106*	-0.0556	-0.106*	0.200***	0.230***
	(0.0465)	(0.0548)	(0.0503)	(0.0594)	(0.0503)	(0.0593)	(0.0409)	(0.0424)
post	-0.00397	-0.00444	-0.00525	-0.0103	-0.00414	-0.00931	-0.0121	-0.0270
	(0.0587)	(0.0658)	(0.0599)	(0.0680)	(0.0599)	(0.0681)	(0.0602)	(0.0692)
abcpost	0.199**	0.250***	0.206**	0.264***	0.205**	0.263***	0.198**	0.258***
	(0.0880)	(0.0898)	(0.0881)	(0.0923)	(0.0881)	(0.0923)	(0.0901)	(0.0943)
age			-0.0100***	-0.00890***	0.00352	0.00347	0.00355	0.00147
			(0.00102)	(0.00107)	(0.00406)	(0.00436)	(0.00385)	(0.00408)
female			-0.423***	-0.378***	-0.420***	-0.375***	-0.420***	-0.374***
			(0.0325)	(0.0326)	(0.0321)	(0.0324)	(0.0319)	(0.0325)
agesq					-0.000176***	-0.000160***	-0.000173***	-0.000128**
					(0.0000494)	(0.0000550)	(0.0000476)	(0.0000508)
Region Dummy	N	N	Y	Y	Y	Y	N	N
Village Fixed Effect	N	N	N	N	N	N	Y	Y
Subdistrict Fixed Effect	N	N	Y	Y	Y	Y	N	N
N	13402	13420	12823	12840	12823	12840	12823	12840
R-squared	0.0323	0.0387	0.0841	0.0824	0.0852	0.0834	0.131	0.139

Standard errors in parentheses

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

the sample means of the variables between groups are close to each other, which also supports the setting of a parallel trend before the assumption of the model because of $E[Y_0|D=1] = E[Y_0|D=0]$.

2.3. *Difference-in-Difference Estimation*

To carry out our formal analysis, we consider the following setting:

$$Test_{ivt} = \beta_0 + \beta_1 ABC_v + \beta_2 Post_v + \beta_3 (ABC_v \times Post_v) + \mathbf{X'_{iv}} + \delta \mathbf{cohort_v} + \varepsilon_{ivt} \tag{2.2}$$

where $Test_{ivt}$ is the test score of individual i in village v at time t, ABC_v is a dummy variable indicating whether the village is in the treatment group, $Post_v$ is a dummy variable indicating whether the test is conducted after the program, $\mathbf{X'_{iv}}$ is a vector of individual characteristics, $cohort_v$ is a dummy variable indicating the cohort, and ε_{ivt} is the error term. The $ABC_v \times Post_v$ is our DID estimator, which represents the effect after the policy's implementation.

First of all, our DID estimation satisfies the condition of Irreversibility of Treatment. Moreover, the parallel trend condition also holds based on what we have discussed on 2.1 and 2.2. Therefore, we can conclude that our estimated effect ATT is consistent (Callaway & Sant'Anna 2021). The result is shown at Table 3.

From the table, we can see that for column (1) and (2), the coefficient of $ABC_v \times Post_v$ is positive and significant at the 1 percent level, which means that the ABC policy has a positive effect on the test score. The magnitude of the effect is 0.199 and 0.250, which means that the ABC policy can increase the test score by 19.9% to 25.0% points. This result is consistent with the previous literature, which shows that the ABC policy can improve the test score of students. In column (3) and (4) we include controls in the model, and we find that the effect is still significant at the 1 percent level, which means that the effect is robust to the inclusion of controls. Furthermore, the estimated value is close to the previous result, which means that the effect is robust to the inclusion of controls. However, it is likely the relationship between age and test scores is non-linear, therefore, we also include the quadratic term of age in the model. The result is shown in column (5) and (6), and we find that the effect is still significant at the 1 percent level, which means that the effect is robust to the inclusion of the quadratic term of age. However, the magnitude of the effect is slightly higher than the previous result, which means that the effect is sensitive to the inclusion of the quadratic term of age. The change may be due to the fact that math is pretty hard for the old people to learn, and the quadratic term of age can capture this effect, but the overall estimated result is the same. Lastly, we also include a village fixed effect in the model, and the result is shown in column (7) and (8). We find that the effect is still significant at the 1 percent level, which

TABLE 4. DDD Estimation of ABC policy

	(1) literacy	(2) math	(3) literacy	(4) math
abcpost	0.188	0.170	0.175*	0.259**
	(0.155)	(0.136)	(0.0994)	(0.106)
abc	-0.0645	-0.0920	-0.0364	-0.129*
	(0.0709)	(0.0667)	(0.0616)	(0.0769)
post	-0.0647	-0.0723	0.237***	0.0926
	(0.110)	(0.109)	(0.0637)	(0.0791)
cohort2009	0.0761	0.150***	0.0762	0.149***
	(0.0470)	(0.0444)	(0.0469)	(0.0446)
female	-0.421***	-0.377***	-0.142***	-0.277***
	(0.0323)	(0.0327)	(0.0489)	(0.0599)
age	0.00330	0.00292	0.00312	0.00294
	(0.00419)	(0.00440)	(0.00417)	(0.00441)
agesq	-0.000173***	-0.000155***	-0.000171***	-0.000155***
	(0.0000507)	(0.0000554)	(0.0000506)	(0.0000553)
femalepost			-0.494***	-0.237***
			(0.0637)	(0.0668)
femaleabc			-0.0360	0.0629
			(0.0685)	(0.0759)
abcfemalepost			0.0514	-0.000982
			(0.0920)	(0.0990)
Subdistrict Fixed Effect	Y	Y	Y	Y
N	12823	12840	12823	12840
R-squared	0.0867	0.0906	0.0995	0.0923

Standard errors in parentheses
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

means that the effect is robust to the inclusion of the village fixed effect. The magnitude of the effect is 0.198 and 0.258, which is consistent with the baseline DID estimation.

3. Heterogenous Effect of ABC program

We first consider the influence of geography on this policy, as Dosso is a region closer to the capital city, its farmers will be more inclined to go to the capital city market to trade, so they will be more active in using mobile phones because they can directly help them to get price information (Wyche & Steinfield 2016) Thus, we can use the DDD method to estimate the heterogeneous effect of geography on this policy. In addition to this, we can also consider the gender difference, because men in rural areas are the ones who mainly trade with the outside world, they will be more inclined to communicate with people in neighboring villages and towns, so men will be more inclined to use mobile phones to get more knowledge information. For this reason, we consider the DDD model further on equation (2.2) and the result is shown at Table 4.

$$\begin{aligned} Test_{ivt} = {} & \beta_0 + \beta_1 ABC_v + \beta_2 Post_v + \beta_3 Region_v + \beta_4 (ABC_v \times Post_v) + \beta_5 (ABC_v \times Effect_{ivt}) \\ & + \beta_6 (Post_v \times Effect_{ivt}) + \beta_7 (ABC_v \times Effect_{ivt} \times Post_v) + \mathbf{X}'_{\mathbf{iv}} + \delta \mathbf{cohort_v} + \varepsilon_{\mathbf{ivt}} \end{aligned} \tag{3.1}$$

where $Effect_{ivt}$ is the dummy variable indicating the effect of the regional spatial effect and gender inequality effect.

From the Table we can see the coefficient β_7 is not significant at 10% percent, which means that neither the regional spatial effect nor the gender inequality effect is significant, which means that the ABC policy has the same effect on different regions and different groups. Therefore, we can conclude that our estimated effect is consistent and robust.

4. Conclusion

This paper estimates the effect of the introduce of mobile phone on the test score of adult training in Niger, Dosso, and Zinder. We find that the introduction has a positive effect on the test score of students. The magnitude of the effect is 0.199 and 0.250, which means that the introduction of mobile phone usage can increase the test score by 19.9% to 25.0% points. The effect is robust to the inclusion of controls, the quadratic term of age, and the village fixed effect. Moreover, we test the hypothesis of the heterogeneous effect of geography and different gender groups, and we find that the effect is not significant, which means that the ABC policy has the same effect on different regions and different groups. Therefore, we can conclude that our estimated effect is consistent and robust.

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Appendix A.

This appendix contains the code that is used to replicate the main result of the paper.

```
*** Program name: Sample Do File.do

* NOTE: Whenever a line begins with an asterisk, STATA ignores the whole line - this is just a
    comment/note.
capture log close
clear /* The 'clear' command gets rid of all data in memory*/
set memory 60000 /* Allocate 60MB memory to Stata */
set matsize 150
set more 1

* This line tells Stata where the files are located. USE "" if your folder names contain spaces.
* THIS IS THE ONLY LINE YOU NEED TO CHANGE.

* NOTE: The next lines set up the .log file. It will contain all of the output
* from this program when it is run. It will be saved in the same directory as the
* program and will be replaced with each new run. I have called the log-file ProblemSet1.

cd "C:\Users\zxuyuan\Downloads\02. Datasets"

log using Replication_v2.log, replace

// before using the stata do file you need to install
// esttab: ssc install estout
// outreg2: ssc install outreg2

use "ABChousehold.dta", clear

/***************TABLE 0 ******************/
// Export the label and variable name

label variable age "age"
// this code is to export the name and label for further use. (make table in python)

preserve
    describe, replace clear
    list
    export excel using variable__label_correspondence.xlsx, replace first(var)
restore

use "ABCteacher.dta", clear

preserve
    describe, replace clear
    list
    export excel using variable__label_correspondence_teacher.xlsx, replace first(var)
restore

use "ABCtestscore.dta", clear
```

```
preserve
    describe, replace clear
    list
    export excel using variable__label_correspondence_test_score.xlsx, replace first(var)
restore

/***************TABLE 1 ******************/
// We test whether the treatment group is assigned via non-randomization manipulation

use "ABCtestscore.dta", clear

reg writez1 abc i.avc, cluster(codev)
est store base_line_1

reg writez1 abc female age dosso i.avc, cluster(codev)
est store base_line_2

reg mathz1 abc i.avc, cluster(codev)
est store base_line_3

reg mathz1 abc female age dosso i.avc, cluster(codev)
est store base_line_4

esttab base_line_1 base_line_2 base_line_3 base_line_4 ///
 using ../manuscript/Tables/baseline_check.tex, ///
style(tex) booktabs keep(abc) ///
mtitle("log(income)" "price concession" "log(lead times)") ///
star(* 0.1 ** 0.05 *** 0.01) ///
se ///
scalars("r2 R-squared") ///
 replace

/***************TABLE 2 ******************/

use "ABChousehold.dta", clear

keep if year==2009

/******** NOTE ********/

// For Table one, I generated two versions
// one version is consistent with the description of the guide file
// another version is consistent with the original paper's result, because:
// I think the original paper's method is better, because it clusters the result to village level
// furthermore, it uses the subdistrict's fixed effect in the model.
// this is more robust than naive comparision of the difference

global Pre_Test_Variables age hhhead eth_hausa hhmem_no edchild_percent assets drought cellphone
    accesscellphone usecellphone makecall receivecall
```

```
// summary statistics
// I will save these results to stata dta, and use python to combine the result to latex

/*
logout, save("ttest_with_result") dta replace: ttable3 $Pre_Test_Variables, by(abc) tvalue
logout, save("ttest_with_result_mean_std") dta replace: tabstat $Pre_Test_Variables, by(abc)
    stat(mean sd) nototal long col(stat)
*/

// report the mean and standard deviation

tabstat $Pre_Test_Variables, by(abc) stat(mean sd) nototal long col(stat)
outreg2 using ttest_with_result_mean_std.dta, replace


foreach i in $Pre_Test_Variables{
    xi: reg `i' abc i.avcode, robust cluster(codev)
    outreg2 abc using "Table1_PanelA", dec(2) append dta ctitle ("`var'") nocons
}

use "ABCtestscore.dta", clear

bys codev: keep if _n==1
keep codev
merge 1:m codev using "ABCteacher.dta"

// note that during our operation, we have dropped some of the codes that are not contained in
    the test score result.
// because these are not relevant to our study.
tab _m
drop if _m==2

tabstat levelno teacherage femaleteacher local, by(abc) stat(mean sd) nototal long col(stat)
outreg2 using Table1_PanelB_mean_std.dta, replace

foreach i in levelno teacherage femaleteacher local{
    xi: reg `i' abc i.avcode, robust cluster(codev)
    outreg2 abc using "Table1_PanelB", dec(2) append dta ctitle ("`var'") nocons
    }

use "ABCtestscore.dta", clear

tabstat writez1 mathz1, by(abc) stat(mean sd) nototal long col(stat)
outreg2 using Table1_PanelC_mean_std.dta, replace


foreach i of varlist writez1 mathz1 {
    xi: reg `i' abc i.avc, cluster(codev)
    outreg2 abc using "Table1_PanelC", dec(2) append dta ctitle ("`var'") nocons
```

```
    }

// now run the python code in jupyter notebook to generate the latex table in paper.

/***************TABLE 3 ******************/
/* Difference-In-Difference Estimation*/

use "ABCtestscore.dta", clear

keep if round==1|round==2|round==4

regress writezscore abc post abcpost i.avc, robust cluster(codev)
est store did_1

regress mathzscore abc post abcpost i.avc, robust cluster(codev)
est store did_2

regress writezscore abc post abcpost age female zarma kanuri dosso i.avc, robust cluster(codev)
est store did_3

regress mathzscore abc post abcpost age female hausa zarma kanuri dosso i.avc, robust
    cluster(codev)
est store did_4

generate agesq = age * age
regress writezscore abc post abcpost age agesq female zarma kanuri dosso i.avc, robust
    cluster(codev)
est store did_5

regress mathzscore abc post abcpost age agesq female zarma kanuri dosso i.avc, robust
    cluster(codev)
est store did_6

qui tab codevillage, gen(village_dum)

reg writezscore abc post abcpost age agesq female village_dum*, robust cluster(codev)
est store did_7

reg mathzscore abc post abcpost age agesq female village_dum*, robust cluster(codev)
est store did_8

esttab did_* ///
 using ../manuscript/Tables/did_result.tex, ///
style(tex) booktabs keep(abc post abcpost age agesq female) ///
mtitle("literacy" "math" "literacy" "math" "literacy" "math" "literacy" "math") ///
star(* 0.1 ** 0.05 *** 0.01) ///
se ///
scalars("r2 R-squared") ///
 replace
```

```
/***************TABLE 4 ******************/
/* Difference-In-Difference-In-Difference Estimation*/

use "ABCtestscore.dta", clear

keep if round==1|round==2|round==4

generate agesq = age * age
capture drop region regionpost regionabc abcregionpost
gen region=dosso==1
gen regionpost=region*post
gen regionabc=region*abc
gen abcregionpost=regionabc*post

reg writezscore abcpost abc post region regionpost regionabc abcregionpost cohort2009 female age
    agesq i.avc, robust cluster(codev)
est store ddd_1

reg mathzscore abcpost abc post region regionpost regionabc abcregionpost cohort2009 female age
    agesq i.avc, robust cluster(codev)
est store ddd_2

reg writezscore abc female post femalepost femaleabc abcpost abcfemalepost cohort2009 age agesq
    i.avc, robust cluster(codev)
est store ddd_3

reg mathzscore abc female post femalepost femaleabc abcpost abcfemalepost cohort2009 age agesq
    i.avc, robust cluster(codev)
est store ddd_4

esttab ddd_* ///
 using ../manuscript/Tables/ddd.tex, ///
style(tex) booktabs keep(abc female post femalepost femaleabc abcpost abcfemalepost cohort2009
    age agesq) ///
mtitle("literacy" "math" "literacy" "math") ///
star(* 0.1 ** 0.05 *** 0.01) ///
se ///
scalars("r2 R-squared") ///
 replace


log close
exit, clear
```

```
-------------------------------------------------------------------------------
      name:  <unnamed>
       log:  C:\Users\zxuyuan\Downloads\02. Datasets\Replication_v2.log
  log type:  text
 opened on:  27 Mar 2024, 09:33:48

.
. // before using the stata do file you need to install
. // esttab: ssc install estout
. // outreg2: ssc install outreg2
.
. use "ABChousehold.dta", clear

.
. /***************TABLE 0 ******************/
. // Export the label and variable name
.
. label variable age "age"

. // this code is to export the name and label for further use. (make table in p
> ython)
.
. preserve

.     describe, replace clear

.     list

     +-------------------------------------------------------------------------+
  1. | position |                 name |  type | isnume~c | format | vallab  |
     |        1 |           codemenage |  str8 |        0 |    %9s |         |
     |-------------------------------------------------------------------------|
     |                                                                 varlab |
     |                                                          Household Code |
     +-------------------------------------------------------------------------+

     +-------------------------------------------------------------------------+
  2. | position |                 name |  type | isnume~c | format | vallab  |
     |        2 |          codevillage |  str4 |        0 |    %9s |         |
     |-------------------------------------------------------------------------|
     |                                                                 varlab |
     |                                                 Four-Digit Village Code |
     +-------------------------------------------------------------------------+

     +-------------------------------------------------------------------------+
  3. | position |                 name |  type | isnume~c | format | vallab  |
     |        3 |              village | str28 |        0 |   %28s |         |
     |-------------------------------------------------------------------------|
     |                                                                 varlab |
     |                                                            Village Name |
     +-------------------------------------------------------------------------+

     +-------------------------------------------------------------------------+
  4. | position |                 name |  type | isnume~c | format | vallab  |
     |        4 |                 year |   int |        1 |  %9.0g |         |
     |-------------------------------------------------------------------------|
     |                                                                 varlab |
     |                                                   2009, 2010 or 2011 |
     +-------------------------------------------------------------------------+

     +-------------------------------------------------------------------------+
  5. | position |                 name |  type | isnume~c | format | vallab  |
     |        5 |                 time |  byte |        1 |  %9.0g |         |
```

```
    |-------------------------------------------------------------------------|
    |                                                                 varlab  |
    |                                                                         |
    +-------------------------------------------------------------------------+

    +-------------------------------------------------------------------------+
 6. | position |                 name |  type | isnume~c | format | vallab  |
    |        6 |                 dept |  byte |        1 | %12.0g |         |
    |-------------------------------------------------------------------------|
    |                                                                 varlab  |
    |                  id2 Dept, 31=Doutchi, 32=Loga, 71=Tanout, 72=Mirriah   |
    +-------------------------------------------------------------------------+

    +-------------------------------------------------------------------------+
 7. | position |                 name |  type | isnume~c | format | vallab  |
    |        7 |               region |  byte |        1 |  %9.0g | region  |
    |-------------------------------------------------------------------------|
    |                                                                 varlab  |
    |                                           Region 3=Doutchi, 7=Zinder    |
    +-------------------------------------------------------------------------+

    +-------------------------------------------------------------------------+
 8. | position |                 name |  type | isnume~c | format | vallab  |
    |        8 |               avcode |  byte |        1 |  %9.0g |         |
    |-------------------------------------------------------------------------|
    |                                                                 varlab  |
    |                                     Subdistrict;Extensiton worker id    |
    +-------------------------------------------------------------------------+

    +-------------------------------------------------------------------------+
 9. | position |                 name |  type | isnume~c | format | vallab  |
    |        9 |                  abc |  byte |        1 |  %9.0g |         |
    |-------------------------------------------------------------------------|
    |                                                                 varlab  |
    |                                        ABC Village in 2009 or 2010      |
    +-------------------------------------------------------------------------+

    +-------------------------------------------------------------------------+
10. | position |                 name |  type | isnume~c | format | vallab  |
    |       10 |               cohort |   int |        1 |  %9.0g |         |
    |-------------------------------------------------------------------------|
    |                                                                 varlab  |
    |                                                                 Cohort  |
    +-------------------------------------------------------------------------+

    +-------------------------------------------------------------------------+
11. | position |                 name |  type | isnume~c | format | vallab  |
    |       11 |                 post |  byte |        1 |  %9.0g |         |
    |-------------------------------------------------------------------------|
    |                                                                 varlab  |
    |                                          Post Literacy Programme        |
    +-------------------------------------------------------------------------+

    +-------------------------------------------------------------------------+
12. | position |                 name |  type | isnume~c | format | vallab  |
    |       12 |               hhhead |  byte |        1 | %12.0g |         |
    |-------------------------------------------------------------------------|
    |                                                                 varlab  |
    |                                    id11 Are you the household head?     |
    +-------------------------------------------------------------------------+

    +-------------------------------------------------------------------------+
13. | position |                 name |  type | isnume~c | format | vallab  |
```

```
    |       13 |                   age |  byte |        1 |  %8.0g |         |
    |-----------------------------------------------------------------------|
    |                                                              varlab |
    |                                                                 age |
    +-----------------------------------------------------------------------+

    +-----------------------------------------------------------------------+
14. | position |                  name |  type | isnume~c | format | vallab  |
    |       14 |             eth_hausa |  byte |        1 |  %9.0g |         |
    |-----------------------------------------------------------------------|
    |                                                              varlab |
    |                                                  Respondent is Hausa |
    +-----------------------------------------------------------------------+

    +-----------------------------------------------------------------------+
15. | position |                  name |  type | isnume~c | format | vallab  |
    |       15 |              hhmem_no |  byte |        1 |  %9.0g |         |
    |-----------------------------------------------------------------------|
    |                                                              varlab |
    |                                        Number of household members |
    +-----------------------------------------------------------------------+

    +-----------------------------------------------------------------------+
16. | position |                  name |  type | isnume~c | format | vallab  |
    |       16 |       edchild_percent | float |        1 |  %9.0g |         |
    |-----------------------------------------------------------------------|
    |                                                              varlab |
    |                Percentage of children under 15 who have some education |
    +-----------------------------------------------------------------------+

    +-----------------------------------------------------------------------+
17. | position |                  name |  type | isnume~c | format | vallab  |
    |       17 |                assets |  byte |        1 |  %9.0g |         |
    |-----------------------------------------------------------------------|
    |                                                              varlab |
    |                          Number of asset categories owned by household |
    +-----------------------------------------------------------------------+

    +-----------------------------------------------------------------------+
18. | position |                  name |  type | isnume~c | format | vallab  |
    |       18 |             cellphone |  byte |        1 | %12.0g |         |
    |-----------------------------------------------------------------------|
    |                                                              varlab |
    |          s22q1_15a Household owns a cell phone (excluding group phone) |
    +-----------------------------------------------------------------------+

    +-----------------------------------------------------------------------+
19. | position |                  name |  type | isnume~c | format | vallab  |
    |       19 |        cellphoneowner |  byte |        1 | %12.0g |         |
    |-----------------------------------------------------------------------|
    |                                                              varlab |
    |                      s23q1 Respondent is owner of household cell phone |
    +-----------------------------------------------------------------------+

    +-----------------------------------------------------------------------+
20. | position |                  name |  type | isnume~c | format | vallab  |
    |       20 |       accesscellphone |  byte |        1 |  %9.0g |         |
    |-----------------------------------------------------------------------|
    |                                                              varlab |
    |                        Access to household or village-level cell phone |
    +-----------------------------------------------------------------------+

    +-----------------------------------------------------------------------+
```

```
21. | position |                 name |  type | isnume~c | format | vallab  |
    |       21 |          usecellphone |  byte |        1 | %12.0g |         |
    |-------------------------------------------------------------------------|
    |                                                                varlab |
    |                      Respondent has used cell phone since last harvest |
    +-------------------------------------------------------------------------+

    +-------------------------------------------------------------------------+
22. | position |                 name |  type | isnume~c | format | vallab  |
    |       22 |              makecall |  byte |        1 | %12.0g |         |
    |-------------------------------------------------------------------------|
    |                                                                varlab |
    |                                      s23q9_1 Respondent has made call |
    +-------------------------------------------------------------------------+

    +-------------------------------------------------------------------------+
23. | position |                 name |  type | isnume~c | format | vallab  |
    |       23 |           receivecall |  byte |        1 | %12.0g |         |
    |-------------------------------------------------------------------------|
    |                                                                varlab |
    |                                   s23q9_2 Respondent has received call |
    +-------------------------------------------------------------------------+

    +-------------------------------------------------------------------------+
24. | position |                 name |  type | isnume~c | format | vallab  |
    |       24 |              writesms |  byte |        1 | %12.0g |         |
    |-------------------------------------------------------------------------|
    |                                                                varlab |
    |                                     s23q9_3 Respondent has written SMS |
    +-------------------------------------------------------------------------+

    +-------------------------------------------------------------------------+
25. | position |                 name |  type | isnume~c | format | vallab  |
    |       25 |            receivesms |  byte |        1 | %12.0g |         |
    |-------------------------------------------------------------------------|
    |                                                                varlab |
    |                                   s23q9_4 Respondent has received SMS |
    +-------------------------------------------------------------------------+

    +-------------------------------------------------------------------------+
26. | position |                 name |  type | isnume~c | format | vallab  |
    |       26 |                  bip |  byte |        1 | %12.0g |         |
    |-------------------------------------------------------------------------|
    |                                                                varlab |
    |                                        s23q9_5 Respondent has sent bip |
    +-------------------------------------------------------------------------+

    +-------------------------------------------------------------------------+
27. | position |                 name |  type | isnume~c | format | vallab  |
    |       27 |            receivebip |  byte |        1 | %12.0g |         |
    |-------------------------------------------------------------------------|
    |                                                                varlab |
    |                                   s23q9_6 Respondent has received bip |
    +-------------------------------------------------------------------------+

    +-------------------------------------------------------------------------+
28. | position |                 name |  type | isnume~c | format | vallab  |
    |       28 |       madetransferSMS |  byte |        1 | %12.0g |         |
    |-------------------------------------------------------------------------|
    |                                                                varlab |
    |                              s23q9_9 Respondent made transfer SMS 2010 |
    +-------------------------------------------------------------------------+
```

```
    +-------------------------------------------------------------------------+
29. | position |                  name |  type | isnume~c | format | vallab  |
    |       29 |   receivedtransferSMS |  byte |        1 | %12.0g |         |
    |-------------------------------------------------------------------------|
    |                                                                 varlab |
    |                        s23q9_10 Respondent received transfer SMS 2010 |
    +-------------------------------------------------------------------------+

    +-------------------------------------------------------------------------+
30. | position |                  name |  type | isnume~c | format | vallab  |
    |       30 |       celltalkmigrant |  byte |        1 | %12.0g |         |
    |-------------------------------------------------------------------------|
    |                                                                 varlab |
    |                s23q10_1 Respondent used cell phone to talk to migrant |
    +-------------------------------------------------------------------------+

    +-------------------------------------------------------------------------+
31. | position |                  name |  type | isnume~c | format | vallab  |
    |       31 | celltalkrelativeniger |  byte |        1 | %12.0g |         |
    |-------------------------------------------------------------------------|
    |                                                                 varlab |
    |       s23q10_2 Respondent used cell phone to talk to relative in Niger |
    +-------------------------------------------------------------------------+

    +-------------------------------------------------------------------------+
32. | position |                  name |  type | isnume~c | format | vallab  |
    |       32 |    celltalktradeniger |  byte |        1 | %12.0g |         |
    |-------------------------------------------------------------------------|
    |                                                                 varlab |
    |   s23q10_3 Respondent used cell phone to talk about trade within Niger |
    +-------------------------------------------------------------------------+

    +-------------------------------------------------------------------------+
33. | position |                  name |  type | isnume~c | format | vallab  |
    |       33 |      whycell_ceremony |  byte |        1 | %12.0g |         |
    |-------------------------------------------------------------------------|
    |                                                                 varlab |
    |                             s23q11_2 Use cell to communicate ceremony |
    +-------------------------------------------------------------------------+

    +-------------------------------------------------------------------------+
34. | position |                  name |  type | isnume~c | format | vallab  |
    |       34 |     whycell_priceinfo |  byte |        1 | %12.0g |         |
    |-------------------------------------------------------------------------|
    |                                                                 varlab |
    |                                  s23q11_4 Use cell to get price info |
    +-------------------------------------------------------------------------+

    +-------------------------------------------------------------------------+
35. | position |                  name |  type | isnume~c | format | vallab  |
    |       35 |          whycell_help |  byte |        1 | %12.0g |         |
    |-------------------------------------------------------------------------|
    |                                                                 varlab |
    |                                    s23q11_5 Use cell to ask for help |
    +-------------------------------------------------------------------------+

    +-------------------------------------------------------------------------+
36. | position |                  name |  type | isnume~c | format | vallab  |
    |       36 |               drought |  byte |        1 | %12.0g |         |
    |-------------------------------------------------------------------------|
    |                                                                 varlab |
    |                     s8q3_1 Household experienced drought in past year |
    +-------------------------------------------------------------------------+
```

```
     +-------------------------------------------------------------------------+
 37. | position |                 name |  type | isnume~c | format | vallab  |
     |       37 |  communicate_migrant |  byte |        1 |  %9.0g |         |
     |-------------------------------------------------------------------------|
     |                                                                  varlab |
     | Household communicated with most recent migrant since the last harvest |
     +-------------------------------------------------------------------------+

.     export excel using variable__label_correspondence.xlsx, replace first(var)
file variable__label_correspondence.xlsx saved

. restore

.
. use "ABCteacher.dta", clear

.
. preserve

.     describe, replace clear

.     list

     +-----------------------------------------------------------+
  1. | position |          name |  type | isnume~c | format | vallab |
     |        1 |   codevillage | float |        1 |  %9.0g |        |
     |-----------------------------------------------------------|
     |                                      varlab               |
     |                                Village Code               |
     +-----------------------------------------------------------+

     +-----------------------------------------------------------+
  2. | position |          name |  type | isnume~c | format | vallab |
     |        2 |         class | float |        1 |  %9.0g |        |
     |-----------------------------------------------------------|
     |                                      varlab               |
     |                                  Class code               |
     +-----------------------------------------------------------+

     +-----------------------------------------------------------+
  3. | position |          name |  type | isnume~c | format | vallab |
     |        3 |          year |   int |        1 |  %8.0g |        |
     |-----------------------------------------------------------|
     |                                      varlab               |
     |                                        Year               |
     +-----------------------------------------------------------+

     +-----------------------------------------------------------+
  4. | position |          name |  type | isnume~c | format | vallab |
     |        4 |    teacherage |  byte |        1 |  %8.0g |        |
     |-----------------------------------------------------------|
     |                                      varlab               |
     |                                Age of Teacher             |
     +-----------------------------------------------------------+

     +-----------------------------------------------------------+
  5. | position |          name |  type | isnume~c | format | vallab |
     |        5 |       levelno |  byte |        1 |  %8.0g |        |
     |-----------------------------------------------------------|
     |                                      varlab               |
     |                Level of Instruction of Teacher            |
     +-----------------------------------------------------------+
```

```
     +-----------------------------------------------------------------+
  6. | position |          name |  type | isnume~c | format | vallab |
     |        6 | femaleteacher |  byte |        1 |  %8.0g |        |
     |-----------------------------------------------------------------|
     |                                          varlab                 |
     |                                  Female Teacher                 |
     +-----------------------------------------------------------------+

     +-----------------------------------------------------------------+
  7. | position |          name |  type | isnume~c | format | vallab |
     |        7 |  femalecenter |  byte |        1 |  %8.0g |        |
     |-----------------------------------------------------------------|
     |                                          varlab                 |
     |                                    Female Class                 |
     +-----------------------------------------------------------------+

     +-----------------------------------------------------------------+
  8. | position |          name |  type | isnume~c | format | vallab |
     |        8 |         local |  byte |        1 |  %8.0g |        |
     |-----------------------------------------------------------------|
     |                                          varlab                 |
     |                       Teacher from Same Village                 |
     +-----------------------------------------------------------------+

     +-----------------------------------------------------------------+
  9. | position |          name |  type | isnume~c | format | vallab |
     |        9 |        region | float |        1 |  %9.0g |        |
     |-----------------------------------------------------------------|
     |                                          varlab                 |
     |                      Dosso Region = 1 Zinder =0                 |
     +-----------------------------------------------------------------+

     +-----------------------------------------------------------------+
 10. | position |          name |  type | isnume~c | format | vallab |
     |       10 |        cohort | float |        1 |  %9.0g |        |
     |-----------------------------------------------------------------|
     |                                          varlab                 |
     |                                          Cohort                 |
     +-----------------------------------------------------------------+

     +-----------------------------------------------------------------+
 11. | position |          name |  type | isnume~c | format | vallab |
     |       11 |           abc |  byte |        1 |  %9.0g |        |
     |-----------------------------------------------------------------|
     |                                          varlab                 |
     |                                     ABC village                 |
     +-----------------------------------------------------------------+

     +-----------------------------------------------------------------+
 12. | position |          name |  type | isnume~c | format | vallab |
     |       12 |        avcode |  byte |        1 |  %9.0g |        |
     |-----------------------------------------------------------------|
     |                                          varlab                 |
     |                 Subdistrict;Extensiton worker id                 |
     +-----------------------------------------------------------------+

.      export excel using variable__label_correspondence_teacher.xlsx, replace fi
> rst(var)
file variable__label_correspondence_teacher.xlsx saved

. restore
```

```
.
. use "ABCtestscore.dta", clear

.
. preserve

.     describe, replace clear

.     list

     +-------------------------------------------------------------------------+
  1. | position |              name |   type | isnume~c | format |    vallab |
     |        1 |       codevillage | double |        1 |  %9.0g |           |
     |-------------------------------------------------------------------------|
     |                                                varlab                   |
     |                                          Village Code                   |
     +-------------------------------------------------------------------------+

     +-------------------------------------------------------------------------+
  2. | position |              name |   type | isnume~c | format |    vallab |
     |        2 |             class |  float |        1 |  %9.0g |           |
     |-------------------------------------------------------------------------|
     |                                                varlab                   |
     |                                            Class code                   |
     +-------------------------------------------------------------------------+

     +-------------------------------------------------------------------------+
  3. | position |              name |   type | isnume~c | format |    vallab |
     |        3 |             round |   byte |        1 |  %9.0g |           |
     |-------------------------------------------------------------------------|
     |                                                varlab                   |
     |                       round of literacy data-collection                 |
     +-------------------------------------------------------------------------+

     +-------------------------------------------------------------------------+
  4. | position |              name |   type | isnume~c | format |    vallab |
     |        4 |  timesinceliteracy |   byte |        1 |  %9.0g | TIMESINCE |
     |-------------------------------------------------------------------------|
     |                                                varlab                   |
     |                 timesince since literacy project started                |
     +-------------------------------------------------------------------------+

     +-------------------------------------------------------------------------+
  5. | position |              name |   type | isnume~c | format |    vallab |
     |        5 |             write | double |        1 |  %9.0g |           |
     |-------------------------------------------------------------------------|
     |                                                varlab                   |
     |                                  Score on writing Test                  |
     +-------------------------------------------------------------------------+

     +-------------------------------------------------------------------------+
  6. | position |              name |   type | isnume~c | format |    vallab |
     |        6 |              math | double |        1 |  %9.0g |           |
     |-------------------------------------------------------------------------|
     |                                                varlab                   |
     |                                     Score on Math Test                  |
     +-------------------------------------------------------------------------+

     +-------------------------------------------------------------------------+
  7. | position |              name |   type | isnume~c | format |    vallab |
     |        7 |            absent |   byte |        1 |  %9.0g |           |
     |-------------------------------------------------------------------------|
     |                                                varlab                   |
```

```
    |                                Absent on date of test               |
    +---------------------------------------------------------------------+

    +---------------------------------------------------------------------+
 8. | position |              name |   type | isnume~c | format |    vallab |
    |        8 |            region |   byte |        1 |  %8.0g |           |
    |-------------------------------------------------------------------- |
    |                                            varlab                   |
    |                                            Region                   |
    +---------------------------------------------------------------------+

    +---------------------------------------------------------------------+
 9. | position |              name |   type | isnume~c | format |    vallab |
    |        9 |             days1 |   byte |        1 |  %9.0g |           |
    |-------------------------------------------------------------------- |
    |                                            varlab                   |
    |                        Number of Class days in month 1              |
    +---------------------------------------------------------------------+

    +---------------------------------------------------------------------+
10. | position |              name |   type | isnume~c | format |    vallab |
    |       10 |             days2 |   byte |        1 |  %9.0g |           |
    |-------------------------------------------------------------------- |
    |                                            varlab                   |
    |                        Number of Class days in month 2              |
    +---------------------------------------------------------------------+

    +---------------------------------------------------------------------+
11. | position |              name |   type | isnume~c | format |    vallab |
    |       11 |             days3 |   byte |        1 |  %9.0g |           |
    |-------------------------------------------------------------------- |
    |                                            varlab                   |
    |                        Number of Class days in month 3              |
    +---------------------------------------------------------------------+

    +---------------------------------------------------------------------+
12. | position |              name |   type | isnume~c | format |    vallab |
    |       12 |           attend1 |   byte |        1 |  %9.0g |           |
    |-------------------------------------------------------------------- |
    |                                            varlab                   |
    |                          # Class days attenden in month1            |
    +---------------------------------------------------------------------+

    +---------------------------------------------------------------------+
13. | position |              name |   type | isnume~c | format |    vallab |
    |       13 |           attend2 |   byte |        1 |  %9.0g |           |
    |-------------------------------------------------------------------- |
    |                                            varlab                   |
    |                          # Class days attenden in month2            |
    +---------------------------------------------------------------------+

    +---------------------------------------------------------------------+
14. | position |              name |   type | isnume~c | format |    vallab |
    |       14 |           attend3 |   byte |        1 |  %9.0g |           |
    |-------------------------------------------------------------------- |
    |                                            varlab                   |
    |                          # Class days attenden in month3            |
    +---------------------------------------------------------------------+

    +---------------------------------------------------------------------+
15. | position |              name |   type | isnume~c | format |    vallab |
    |       15 |             days4 |   byte |        1 |  %9.0g |           |
    |-------------------------------------------------------------------- |
```

```
    |                                                  varlab |
    |                      Number of Class days in month 4    |
    +---------------------------------------------------------+

    +---------------------------------------------------------+
16. | position |      name |   type | isnume~c | format |  vallab |
    |       16 |  attend4 |   byte |        1 |  %9.0g |         |
    |---------------------------------------------------------|
    |                                                  varlab |
    |                    # Class days attenden in month4      |
    +---------------------------------------------------------+

    +---------------------------------------------------------+
17. | position |      name |   type | isnume~c | format |  vallab |
    |       17 |  cohort |  float |        1 |  %8.0g |         |
    |---------------------------------------------------------|
    |                                                  varlab |
    |                          literacy cohort 09 or 10       |
    +---------------------------------------------------------+

    +---------------------------------------------------------+
18. | position |      name |   type | isnume~c | format |  vallab |
    |       18 |  female |   byte |        1 |  %9.0g |         |
    |---------------------------------------------------------|
    |                                                  varlab |
    |                                                  Female |
    +---------------------------------------------------------+

    +---------------------------------------------------------+
19. | position |      name |   type | isnume~c | format |  vallab |
    |       19 |  district |   byte |        1 |  %9.0g |         |
    |---------------------------------------------------------|
    |                                                  varlab |
    |                                                District |
    +---------------------------------------------------------+

    +---------------------------------------------------------+
20. | position |      name |   type | isnume~c | format |  vallab |
    |       20 |  baseline |   byte |        1 |  %8.0g |         |
    |---------------------------------------------------------|
    |                                                  varlab |
    |                       Village is in Baseline Sample     |
    +---------------------------------------------------------+

    +---------------------------------------------------------+
21. | position |      name |   type | isnume~c | format |  vallab |
    |       21 |       abc |   byte |        1 |  %9.0g |         |
    |---------------------------------------------------------|
    |                                                  varlab |
    |                           ABC or non-ABC village        |
    +---------------------------------------------------------+

    +---------------------------------------------------------+
22. | position |      name |   type | isnume~c | format |  vallab |
    |       22 |  avcode |   byte |        1 |  %9.0g |         |
    |---------------------------------------------------------|
    |                                                  varlab |
    |                  Subdistrict;Extensiton worker id       |
    +---------------------------------------------------------+

    +---------------------------------------------------------+
23. | position |      name |   type | isnume~c | format |  vallab |
    |       23 |  abc2009 |  float |        1 |  %9.0g |         |
```

```
    |-------------------------------------------------------------------|
    |                                                  varlab           |
    |                             ABC village in 2009 Cohort            |
    +-------------------------------------------------------------------+

    +-------------------------------------------------------------------+
24. | position |              name |   type | isnume~c | format |    vallab |
    |       24 |           abc2010 |  float |        1 |  %9.0g |           |
    |-------------------------------------------------------------------|
    |                                                  varlab           |
    |                             ABC village in 2010 Cohort            |
    +-------------------------------------------------------------------+

    +-------------------------------------------------------------------+
25. | position |              name |   type | isnume~c | format |    vallab |
    |       25 |           lit2009 |  float |        1 |  %9.0g |           |
    |-------------------------------------------------------------------|
    |                                                  varlab           |
    |                                          2009 Cohort              |
    +-------------------------------------------------------------------+

    +-------------------------------------------------------------------+
26. | position |              name |   type | isnume~c | format |    vallab |
    |       26 |           lit2010 |  float |        1 |  %9.0g |           |
    |-------------------------------------------------------------------|
    |                                                  varlab           |
    |                                          2010 Cection             |
    +-------------------------------------------------------------------+

    +-------------------------------------------------------------------+
27. | position |              name |   type | isnume~c | format |    vallab |
    |       27 |           age2009 |   byte |        1 |  %9.0g |           |
    |-------------------------------------------------------------------|
    |                                                  varlab           |
    |                                         Age in 2009               |
    +-------------------------------------------------------------------+

    +-------------------------------------------------------------------+
28. | position |              name |   type | isnume~c | format |    vallab |
    |       28 |              year |  float |        1 |  %9.0g |           |
    |-------------------------------------------------------------------|
    |                                                  varlab           |
    |                                year of data-collection             |
    +-------------------------------------------------------------------+

    +-------------------------------------------------------------------+
29. | position |              name |   type | isnume~c | format |    vallab |
    |       29 |             dosso |   byte |        1 |  %9.0g |           |
    |-------------------------------------------------------------------|
    |                                                  varlab           |
    |                             Dosso Region = 1 Zinder =0            |
    +-------------------------------------------------------------------+

    +-------------------------------------------------------------------+
30. | position |              name |   type | isnume~c | format |    vallab |
    |       30 |             hausa |  float |        1 |  %9.0g |           |
    |-------------------------------------------------------------------|
    |                                                  varlab           |
    |                                        Hausa village              |
    +-------------------------------------------------------------------+

    +-------------------------------------------------------------------+
31. | position |              name |   type | isnume~c | format |    vallab |
```

```
    |       31 |              zarma |  float |        1 |  %9.0g |           |
    |-----------------------------------------------------------------------|
    |                                                varlab                 |
    |                                          Zarma village                |
    +-----------------------------------------------------------------------+

    +-----------------------------------------------------------------------+
32. | position |              name |   type | isnume~c | format |    vallab |
    |       32 |             kanuri |  float |        1 |  %9.0g |           |
    |-----------------------------------------------------------------------|
    |                                                varlab                 |
    |                                                Kanuri                 |
    +-----------------------------------------------------------------------+

    +-----------------------------------------------------------------------+
33. | position |              name |   type | isnume~c | format |    vallab |
    |       33 |            village |  str29 |        0 |   %29s |           |
    |-----------------------------------------------------------------------|
    |                                                varlab                 |
    |                                           village name                |
    +-----------------------------------------------------------------------+

    +-----------------------------------------------------------------------+
34. | position |              name |   type | isnume~c | format |    vallab |
    |       34 |        villagecode |   byte |        1 |  %9.0g |           |
    |-----------------------------------------------------------------------|
    |                                                varlab                 |
    |                                      2-digit villagecode               |
    +-----------------------------------------------------------------------+

    +-----------------------------------------------------------------------+
35. | position |              name |   type | isnume~c | format |    vallab |
    |       35 |             langue |   str5 |        0 |    %5s |           |
    |-----------------------------------------------------------------------|
    |                                                varlab                 |
    |                                               language                |
    +-----------------------------------------------------------------------+

    +-----------------------------------------------------------------------+
36. | position |              name |   type | isnume~c | format |    vallab |
    |       36 |               age |  float |        1 |  %9.0g |           |
    |-----------------------------------------------------------------------|
    |                                                varlab                 |
    |                             Age - missing values imputed              |
    +-----------------------------------------------------------------------+

    +-----------------------------------------------------------------------+
37. | position |              name |   type | isnume~c | format |    vallab |
    |       37 |             ageabc |  float |        1 |  %9.0g |           |
    |-----------------------------------------------------------------------|
    |                                                varlab                 |
    |                                                                       |
    +-----------------------------------------------------------------------+

    +-----------------------------------------------------------------------+
38. | position |              name |   type | isnume~c | format |    vallab |
    |       38 |              young |  float |        1 |  %9.0g |           |
    |-----------------------------------------------------------------------|
    |                                                varlab                 |
    |                                         Age 19 and below              |
    +-----------------------------------------------------------------------+

    +-----------------------------------------------------------------------+
```

```
39. | position |              name |   type | isnume~c | format |    vallab |
    |       39 |       totalattend |  float |        1 |  %9.0g |           |
    |-------------------------------------------------------------------------|
    |                                                 varlab                  |
    |                                  Number Classes Attended                |
    +-------------------------------------------------------------------------+

    +-------------------------------------------------------------------------+
40. | position |              name |   type | isnume~c | format |    vallab |
    |       40 |         totaldays |  float |        1 |  %9.0g |           |
    |-------------------------------------------------------------------------|
    |                                                 varlab                  |
    |                                    Number Classes Held                  |
    +-------------------------------------------------------------------------+

    +-------------------------------------------------------------------------+
41. | position |              name |   type | isnume~c | format |    vallab |
    |       41 |     percentattend |  float |        1 |  %9.0g |           |
    |-------------------------------------------------------------------------|
    |                                                 varlab                  |
    |                            Percentage of Classes Attended               |
    +-------------------------------------------------------------------------+

    +-------------------------------------------------------------------------+
42. | position |              name |   type | isnume~c | format |    vallab |
    |       42 |     totalattend12 |  float |        1 |  %9.0g |           |
    |-------------------------------------------------------------------------|
    |                                                 varlab                  |
    |                           # Classes Attended; Month 1&2                 |
    +-------------------------------------------------------------------------+

    +-------------------------------------------------------------------------+
43. | position |              name |   type | isnume~c | format |    vallab |
    |       43 |     totalattend34 |  float |        1 |  %9.0g |           |
    |-------------------------------------------------------------------------|
    |                                                 varlab                  |
    |                           # Classes Attended; Month 3&4                 |
    +-------------------------------------------------------------------------+

    +-------------------------------------------------------------------------+
44. | position |              name |   type | isnume~c | format |    vallab |
    |       44 |       totaldays12 |  float |        1 |  %9.0g |           |
    |-------------------------------------------------------------------------|
    |                                                 varlab                  |
    |                               # Classes Held; Month 1&2                 |
    +-------------------------------------------------------------------------+

    +-------------------------------------------------------------------------+
45. | position |              name |   type | isnume~c | format |    vallab |
    |       45 |       totaldays34 |  float |        1 |  %9.0g |           |
    |-------------------------------------------------------------------------|
    |                                                 varlab                  |
    |                               # Classes Held; Month 3&4                 |
    +-------------------------------------------------------------------------+

    +-------------------------------------------------------------------------+
46. | position |              name |   type | isnume~c | format |    vallab |
    |       46 |   percentattend12 |  float |        1 |  %9.0g |           |
    |-------------------------------------------------------------------------|
    |                                                 varlab                  |
    |                            % Classes Attended; Month 1&2                |
    +-------------------------------------------------------------------------+
```

```
    +-------------------------------------------------------------------------+
47. | position |              name |   type | isnume~c | format |    vallab |
    |       47 |    percentattend34 |  float |        1 |  %9.0g |           |
    |-------------------------------------------------------------------------|
    |                                                 varlab                  |
    |                          % Classes Attended; Month 3&4                  |
    +-------------------------------------------------------------------------+

    +-------------------------------------------------------------------------+
48. | position |              name |   type | isnume~c | format |    vallab |
    |       48 |              post |  float |        1 |  %9.0g |           |
    |-------------------------------------------------------------------------|
    |                                                 varlab                  |
    |                                                   Post                  |
    +-------------------------------------------------------------------------+

    +-------------------------------------------------------------------------+
49. | position |              name |   type | isnume~c | format |    vallab |
    |       49 |           abcpost |  float |        1 |  %9.0g |           |
    |-------------------------------------------------------------------------|
    |                                                 varlab                  |
    |                    ABC treatment (i.e. ABC * Treatment)                 |
    +-------------------------------------------------------------------------+

    +-------------------------------------------------------------------------+
50. | position |              name |   type | isnume~c | format |    vallab |
    |       50 |            post5m |  float |        1 |  %9.0g |           |
    |-------------------------------------------------------------------------|
    |                                                 varlab                  |
    |                                       Post (5 months)                   |
    +-------------------------------------------------------------------------+

    +-------------------------------------------------------------------------+
51. | position |              name |   type | isnume~c | format |    vallab |
    |       51 |         abcpost5m |  float |        1 |  %9.0g |           |
    |-------------------------------------------------------------------------|
    |                                                 varlab                  |
    |                                    ABC*Post (5 months)                  |
    +-------------------------------------------------------------------------+

    +-------------------------------------------------------------------------+
52. | position |              name |   type | isnume~c | format |    vallab |
    |       52 |           post11m |  float |        1 |  %9.0g |           |
    |-------------------------------------------------------------------------|
    |                                                 varlab                  |
    |                                      Post (11 months)                   |
    +-------------------------------------------------------------------------+

    +-------------------------------------------------------------------------+
53. | position |              name |   type | isnume~c | format |    vallab |
    |       53 |        abcpost11m |  float |        1 |  %9.0g |           |
    |-------------------------------------------------------------------------|
    |                                                 varlab                  |
    |                                  ABC*Post (11 months)                   |
    +-------------------------------------------------------------------------+

    +-------------------------------------------------------------------------+
54. | position |              name |   type | isnume~c | format |    vallab |
    |       54 |           post17m |  float |        1 |  %9.0g |           |
    |-------------------------------------------------------------------------|
    |                                                 varlab                  |
    |                                      Post (17 months)                   |
    +-------------------------------------------------------------------------+
```

```
    +-------------------------------------------------------------------------+
55. | position |              name |   type | isnume~c | format |    vallab |
    |       55 |         abcpost17m |  float |        1 |  %9.0g |           |
    |-------------------------------------------------------------------------|
    |                                                 varlab                  |
    |                                    ABC*Post (17 months)                 |
    +-------------------------------------------------------------------------+

    +-------------------------------------------------------------------------+
56. | position |              name |   type | isnume~c | format |    vallab |
    |       56 |    post6monthafter |  float |        1 |  %9.0g |           |
    |-------------------------------------------------------------------------|
    |                                                 varlab                  |
    |                                                                         |
    +-------------------------------------------------------------------------+

    +-------------------------------------------------------------------------+
57. | position |              name |   type | isnume~c | format |    vallab |
    |       57 | abcpost6monthafter |  float |        1 |  %9.0g |           |
    |-------------------------------------------------------------------------|
    |                                                 varlab                  |
    |                                                                         |
    +-------------------------------------------------------------------------+

    +-------------------------------------------------------------------------+
58. | position |              name |   type | isnume~c | format |    vallab |
    |       58 |          femaleabc |  float |        1 |  %9.0g |           |
    |-------------------------------------------------------------------------|
    |                                                 varlab                  |
    |                                             Female * ABC                |
    +-------------------------------------------------------------------------+

    +-------------------------------------------------------------------------+
59. | position |              name |   type | isnume~c | format |    vallab |
    |       59 |         femalepost |  float |        1 |  %9.0g |           |
    |-------------------------------------------------------------------------|
    |                                                 varlab                  |
    |                                            Female * Post                |
    +-------------------------------------------------------------------------+

    +-------------------------------------------------------------------------+
60. | position |              name |   type | isnume~c | format |    vallab |
    |       60 |      abcfemalepost |  float |        1 |  %9.0g |           |
    |-------------------------------------------------------------------------|
    |                                                 varlab                  |
    |                                     Female * ABC * Post                 |
    +-------------------------------------------------------------------------+

    +-------------------------------------------------------------------------+
61. | position |              name |   type | isnume~c | format |    vallab |
    |       61 |          regionabc |  float |        1 |  %9.0g |           |
    |-------------------------------------------------------------------------|
    |                                                 varlab                  |
    |                                   Region = Dosso * ABC                  |
    +-------------------------------------------------------------------------+

    +-------------------------------------------------------------------------+
62. | position |              name |   type | isnume~c | format |    vallab |
    |       62 |         regionpost |  float |        1 |  %9.0g |           |
    |-------------------------------------------------------------------------|
    |                                                 varlab                  |
    |                                   Region = Dosso* Post                  |
```

```
    +------------------------------------------------------------------------+

    +------------------------------------------------------------------------+
63. | position |              name |   type | isnume~c | format |    vallab |
    |       63 |      abcregionpost |  float |        1 |  %9.0g |           |
    |------------------------------------------------------------------------|
    |                                                 varlab                 |
    |                             Region = Dosso * ABC * Post                |
    +------------------------------------------------------------------------+

    +------------------------------------------------------------------------+
64. | position |              name |   type | isnume~c | format |    vallab |
    |       64 |           youngabc |  float |        1 |  %9.0g |           |
    |------------------------------------------------------------------------|
    |                                                 varlab                 |
    |                                           Young * ABC                  |
    +------------------------------------------------------------------------+

    +------------------------------------------------------------------------+
65. | position |              name |   type | isnume~c | format |    vallab |
    |       65 |          youngpost |  float |        1 |  %9.0g |           |
    |------------------------------------------------------------------------|
    |                                                 varlab                 |
    |                                         Young * Post                   |
    +------------------------------------------------------------------------+

    +------------------------------------------------------------------------+
66. | position |              name |   type | isnume~c | format |    vallab |
    |       66 |       abcyoungpost |  float |        1 |  %9.0g |           |
    |------------------------------------------------------------------------|
    |                                                 varlab                 |
    |                                      Young * ABC * Post                |
    +------------------------------------------------------------------------+

    +------------------------------------------------------------------------+
67. | position |              name |   type | isnume~c | format |    vallab |
    |       67 |         cohort2009 |  float |        1 |  %9.0g |           |
    |------------------------------------------------------------------------|
    |                                                 varlab                 |
    |                                                                        |
    +------------------------------------------------------------------------+

    +------------------------------------------------------------------------+
68. | position |              name |   type | isnume~c | format |    vallab |
    |       68 |         mathzscore |  float |        1 |  %9.0g |           |
    |------------------------------------------------------------------------|
    |                                                 varlab                 |
    |                                   Numeracy test Z-score                |
    +------------------------------------------------------------------------+

    +------------------------------------------------------------------------+
69. | position |              name |   type | isnume~c | format |    vallab |
    |       69 |        writezscore |  float |        1 |  %9.0g |           |
    |------------------------------------------------------------------------|
    |                                                 varlab                 |
    |                                   Literacy test Z-score                |
    +------------------------------------------------------------------------+

    +------------------------------------------------------------------------+
70. | position |              name |   type | isnume~c | format |    vallab |
    |       70 |             math1 |  float |        1 |  %9.0g |           |
    |------------------------------------------------------------------------|
    |                                                 varlab                 |
```

```
    |                          Baseline numeracy test score               |
    +---------------------------------------------------------------------+

    +---------------------------------------------------------------------+
71. | position |              name |   type | isnume~c | format |    vallab |
    |       71 |            mathz1 |  float |        1 |  %9.0g |           |
    |---------------------------------------------------------------------|
    |                                                varlab               |
    |                        Baseline numeracy test Z-score               |
    +---------------------------------------------------------------------+

    +---------------------------------------------------------------------+
72. | position |              name |   type | isnume~c | format |    vallab |
    |       72 |            math2 |  float |        1 |  %9.0g |           |
    |---------------------------------------------------------------------|
    |                                                varlab               |
    |                          5-month numeracy test score                |
    +---------------------------------------------------------------------+

    +---------------------------------------------------------------------+
73. | position |              name |   type | isnume~c | format |    vallab |
    |       73 |            math3 |  float |        1 |  %9.0g |           |
    |---------------------------------------------------------------------|
    |                                                varlab               |
    |                         12-month numeracy test score                |
    +---------------------------------------------------------------------+

    +---------------------------------------------------------------------+
74. | position |              name |   type | isnume~c | format |    vallab |
    |       74 |            math4 |  float |        1 |  %9.0g |           |
    |---------------------------------------------------------------------|
    |                                                varlab               |
    |                         17 month numeracy test score                |
    +---------------------------------------------------------------------+

    +---------------------------------------------------------------------+
75. | position |              name |   type | isnume~c | format |    vallab |
    |       75 |            math5 |  float |        1 |  %9.0g |           |
    |---------------------------------------------------------------------|
    |                                                varlab               |
    |                         24 month numeracy test score                |
    +---------------------------------------------------------------------+

    +---------------------------------------------------------------------+
76. | position |              name |   type | isnume~c | format |    vallab |
    |       76 |           write1 |  float |        1 |  %9.0g |           |
    |---------------------------------------------------------------------|
    |                                                varlab               |
    |                         Baseline literacy test score                |
    +---------------------------------------------------------------------+

    +---------------------------------------------------------------------+
77. | position |              name |   type | isnume~c | format |    vallab |
    |       77 |          writez1 |  float |        1 |  %9.0g |           |
    |---------------------------------------------------------------------|
    |                                                varlab               |
    |                         Baseline literacy test Z-score              |
    +---------------------------------------------------------------------+

    +---------------------------------------------------------------------+
78. | position |              name |   type | isnume~c | format |    vallab |
    |       78 |           write2 |  float |        1 |  %9.0g |           |
    |---------------------------------------------------------------------|
```

```
     |                                                varlab               |
     |                          5-month literacy test score                |
     +-------------------------------------------------------------------+

     +-------------------------------------------------------------------+
 79. | position |              name |   type | isnume~c | format |    vallab |
     |       79 |            write3 |  float |        1 |  %9.0g |           |
     |-------------------------------------------------------------------|
     |                                                varlab               |
     |                         12-month literacy test score               |
     +-------------------------------------------------------------------+

     +-------------------------------------------------------------------+
 80. | position |              name |   type | isnume~c | format |    vallab |
     |       80 |            write4 |  float |        1 |  %9.0g |           |
     |-------------------------------------------------------------------|
     |                                                varlab               |
     |                         17 month literacy test score               |
     +-------------------------------------------------------------------+

     +-------------------------------------------------------------------+
 81. | position |              name |   type | isnume~c | format |    vallab |
     |       81 |            write5 |  float |        1 |  %9.0g |           |
     |-------------------------------------------------------------------|
     |                                                varlab               |
     |                         24 month literacy test score               |
     +-------------------------------------------------------------------+

.     export excel using variable__label_correspondence_test_score.xlsx, replace
>  first(var)
file variable__label_correspondence_test_score.xlsx saved

. restore

.
. /***************TABLE 1 ******************/
. // We test whether the treatment group is assigned via non-randomization manip
> ulation
.
. use "ABCtestscore.dta", clear

.
. reg writez1 abc i.avc, cluster(codev)

Linear regression                               Number of obs     =      5,982
                                                F(23, 112)        =       4.22
                                                Prob > F          =     0.0000
                                                R-squared         =     0.0224
                                                Root MSE          =      .9347

                        (Std. err. adjusted for 113 clusters in codevillage)
------------------------------------------------------------------------------
             |               Robust
     writez1 | Coefficient  std. err.      t    P>|t|     [95% conf. interval]
-------------+----------------------------------------------------------------
         abc |  -.0230921   .0399616    -0.58   0.565    -.1022709    .0560867
             |
      avcode |
          2  |  -.2052144   .1216767    -1.69   0.094    -.4463011    .0358723
          3  |  -.3711898   .0773765    -4.80   0.000    -.5245013   -.2178782
          4  |  -.3032091   .0811349    -3.74   0.000    -.4639674   -.1424508
          5  |  -.2361261   .0929439    -2.54   0.012    -.4202826   -.0519696
          6  |  -.3646186   .0790297    -4.61   0.000    -.5212059   -.2080313
```

```
          8  |  -.3464581    .083205    -4.16   0.000    -.5113182    -.181598
          9  |  -.2341432    .111874    -2.09   0.039    -.4558072   -.0124791
         10  |  -.0489395   .2207886    -0.22   0.825    -.4864039    .3885248
         11  |  -.3634914   .0869115    -4.18   0.000    -.5356955   -.1912874
         12  |    -.27556   .0900153    -3.06   0.003    -.4539138   -.0972062
         13  |  -.3252861   .0807738    -4.03   0.000     -.485329   -.1652432
         14  |  -.2848496   .0958569    -2.97   0.004    -.4747777   -.0949214
         15  |  -.1754577   .1762696    -1.00   0.322    -.5247133    .1737979
         16  |   .1108725   .1750943     0.63   0.528    -.2360545    .4577995
         17  |  -.3840173   .0773277    -4.97   0.000    -.5372323   -.2308023
         18  |  -.0624857   .1315787    -0.47   0.636    -.3231921    .1982207
         19  |  -.3935956   .0776814    -5.07   0.000    -.5475114   -.2396798
         20  |  -.3272519     .08237    -3.97   0.000    -.4904574   -.1640463
         21  |  -.3633844   .0784376    -4.63   0.000    -.5187985   -.2079702
         22  |  -.1000956   .1718358    -0.58   0.561    -.4405661     .240375
         23  |  -.3799316   .0744152    -5.11   0.000    -.5273757   -.2324874
         24  |  -.3851199   .0748474    -5.15   0.000    -.5334204   -.2368195
             |
       _cons |   .2450349   .0808129     3.03   0.003     .0849145    .4051553
------------------------------------------------------------------------------

. est store base_line_1

.
. reg writez1 abc female age dosso i.avc, cluster(codev)
note: 21.avcode omitted because of collinearity.

Linear regression                               Number of obs     =      5,675
                                                F(25, 112)        =       4.60
                                                Prob > F          =     0.0000
                                                R-squared         =     0.0278
                                                Root MSE          =     .94619

                        (Std. err. adjusted for 113 clusters in codevillage)
------------------------------------------------------------------------------
             |               Robust
     writez1 | Coefficient  std. err.      t    P>|t|     [95% conf. interval]
-------------+----------------------------------------------------------------
         abc |  -.0291124   .0420198    -0.69   0.490    -.1123693    .0541444
      female |  -.1334548   .0348153    -3.83   0.000     -.202437   -.0644727
         age |  -.0023578   .0010405    -2.27   0.025    -.0044195   -.0002962
       dosso |   .3588156    .084329     4.25   0.000     .1917286    .5259026
             |
      avcode |
           2 |   .1542814   .0995278     1.55   0.124    -.0429202     .351483
           3 |  -.3674662   .0828107    -4.44   0.000    -.5315449   -.2033874
           4 |  -.2926411   .0857275    -3.41   0.001    -.4624992    -.122783
           5 |  -.2384126   .0969158    -2.46   0.015    -.4304388   -.0463864
           6 |  -.0092147   .0337783    -0.27   0.786    -.0761421    .0577126
           8 |   .0091788   .0435093     0.21   0.833    -.0770293    .0953869
           9 |    .113174   .0922615     1.23   0.223    -.0696304    .2959784
          10 |    .297619   .2343227     1.27   0.207    -.1666615    .7618995
          11 |  -.0102384   .0601511    -0.17   0.865    -.1294202    .1089433
          12 |   .0902157   .0561096     1.61   0.111    -.0209583    .2013897
          13 |  -.3181553   .0860715    -3.70   0.000    -.4886949   -.1476157
          14 |  -.2914032   .0995354    -2.93   0.004    -.4886199   -.0941866
          15 |  -.1725761   .1792665    -0.96   0.338    -.5277696    .1826175
          16 |   .1170906   .1779624     0.66   0.512     -.235519    .4697002
          17 |  -.0548059    .028267    -1.94   0.055    -.1108132    .0012014
          18 |   .3245622   .1093285     2.97   0.004     .1079417    .5411827
          19 |  -.3930823   .0831724    -4.73   0.000    -.5578777   -.2282869
          20 |   .0254368   .0483266     0.53   0.600    -.0703161    .1211898
          21 |          0  (omitted)
```

```
         22  |  -.1052079   .1740995    -0.60   0.547    -.4501637    .2397479
         23  |  -.3819689   .0795201    -4.80   0.000    -.5395278     -.22441
         24  |  -.3764139   .0802293    -4.69   0.000     -.535378   -.2174498
             |
       _cons |   .0421313   .0509929     0.83   0.410    -.0589046    .1431672
------------------------------------------------------------------------------

. est store base_line_2

.
. reg mathz1 abc i.avc, cluster(codev)

Linear regression                               Number of obs     =      5,982
                                                F(23, 112)        =       8.16
                                                Prob > F          =     0.0000
                                                R-squared         =     0.0199
                                                Root MSE          =     .90412

                          (Std. err. adjusted for 113 clusters in codevillage)
------------------------------------------------------------------------------
             |               Robust
      mathz1 | Coefficient  std. err.      t    P>|t|     [95% conf. interval]
-------------+----------------------------------------------------------------
         abc |  -.0593326   .0468961    -1.27   0.208    -.1522512     .033586
             |
      avcode |
          2  |   .0625439   .0924042     0.68   0.500    -.1205432     .245631
          3  |  -.0176523   .1308971    -0.13   0.893    -.2770082    .2417035
          4  |  -.0692193   .1275946    -0.54   0.589    -.3220315     .183593
          5  |  -.1202344   .0840566    -1.43   0.155    -.2867818     .046313
          6  |  -.2029252   .0670745    -3.03   0.003    -.3358247   -.0700256
          8  |   -.186536   .0744624    -2.51   0.014    -.3340736   -.0389983
          9  |  -.0735696   .1021616    -0.72   0.473    -.2759897    .1288505
         10  |   .1028629   .1989149     0.52   0.606    -.2912615    .4969873
         11  |  -.2015216   .0855893    -2.35   0.020    -.3711059   -.0319373
         12  |  -.1222683   .0767666    -1.59   0.114    -.2743715     .029835
         13  |  -.0344487   .1303188    -0.26   0.792    -.2926587    .2237613
         14  |  -.2170937   .0755794    -2.87   0.005    -.3668447   -.0673428
         15  |   .0899308   .2432233     0.37   0.712    -.3919851    .5718466
         16  |    .080392   .1371445     0.59   0.559    -.1913423    .3521263
         17  |   -.211454   .0705392    -3.00   0.003    -.3512185   -.0716895
         18  |   .1173407   .1053573     1.11   0.268    -.0914114    .3260927
         19  |  -.2039475   .1308492    -1.56   0.122    -.4632085    .0553135
         20  |  -.1537888   .0782359    -1.97   0.052    -.3088033    .0012257
         21  |  -.2009937   .0712221    -2.82   0.006    -.3421111   -.0598763
         22  |  -.0865498   .1337841    -0.65   0.519    -.3516259    .1785262
         23  |   -.277167   .0664611    -4.17   0.000    -.4088512   -.1454829
         24  |  -.2904979   .0670077    -4.34   0.000    -.4232651   -.1577307
             |
       _cons |   .0819325    .073604     1.11   0.268    -.0639045    .2277694
------------------------------------------------------------------------------

. est store base_line_3

.
. reg mathz1 abc female age dosso i.avc, cluster(codev)
note: 21.avcode omitted because of collinearity.

Linear regression                               Number of obs     =      5,675
                                                F(25, 112)        =       8.04
                                                Prob > F          =     0.0000
                                                R-squared         =     0.0339
                                                Root MSE          =     .91184
```

```
                        (Std. err. adjusted for 113 clusters in codevillage)
------------------------------------------------------------------------------
             |               Robust
      mathz1 | Coefficient  std. err.      t    P>|t|     [95% conf. interval]
-------------+----------------------------------------------------------------
         abc |  -.0671249   .0494956    -1.36   0.178    -.1651941    .0309443
      female |  -.2175978   .0375091    -5.80   0.000    -.2919172   -.1432783
         age |  -.0015332   .0010447    -1.47   0.145    -.0036032    .0005368
       dosso |   .1969197   .0761977     2.58   0.011     .0459436    .3478958
             |
      avcode |
           2 |   .2634692   .0686632     3.84   0.000     .1274219    .3995165
           3 |  -.0188015   .1321897    -0.14   0.887    -.2807184    .2431155
           4 |  -.0640936   .1285905    -0.50   0.619    -.3188793     .190692
           5 |  -.1254464   .0882364    -1.42   0.158    -.3002755    .0493828
           6 |  -.0091999   .0287968    -0.32   0.750     -.066257    .0478571
           8 |   .0107621   .0454534     0.24   0.813    -.0792981    .1008222
           9 |   .1125617   .0897686     1.25   0.212    -.0653033    .2904268
          10 |   .2863779   .2119594     1.35   0.179    -.1335926    .7063483
          11 |  -.0095482   .0738564    -0.13   0.897    -.1558851    .1367888
          12 |    .079682   .0468187     1.70   0.092    -.0130832    .1724473
          13 |  -.0329992   .1333292    -0.25   0.805    -.2971739    .2311755
          14 |  -.2241771   .0792723    -2.83   0.006     -.381245   -.0671093
          15 |   .0886956   .2427696     0.37   0.716    -.3923213    .5697124
          16 |    .080078   .1396942     0.57   0.568    -.1967081    .3568642
          17 |  -.0378795   .0341381    -1.11   0.270    -.1055198    .0297608
          18 |   .3419282    .087637     3.90   0.000     .1682867    .5155698
          19 |  -.2073141   .1355479    -1.53   0.129    -.4758848    .0612566
          20 |   .0404889   .0578061     0.70   0.485    -.0740465    .1550242
          21 |          0  (omitted)
          22 |  -.0932146   .1367998    -0.68   0.497    -.3642659    .1778366
          23 |  -.2794646   .0713104    -3.92   0.000     -.420757   -.1381722
          24 |  -.2860503   .0719926    -3.97   0.000    -.4286944   -.1434063
             |
       _cons |   .0564463   .0536035     1.05   0.295    -.0497622    .1626549
------------------------------------------------------------------------------

. est store base_line_4

.
. esttab base_line_1 base_line_2 base_line_3 base_line_4 ///
>  using ../manuscript/Tables/baseline_check.tex, ///
> style(tex) booktabs keep(abc) ///
> mtitle("log(income)" "price concession" "log(lead times)") ///
> star(* 0.1 ** 0.05 *** 0.01) ///
> se ///
> scalars("r2 R-squared") ///
>  replace
(output written to ../manuscript/Tables/baseline_check.tex)

.
. /***************TABLE 2 ******************/
.
. use "ABChousehold.dta", clear

.
. keep if year==2009
(2,059 observations deleted)

.
. /******** NOTE ********/
.
```

```
. // For Table one, I generated two versions
. // one version is consistent with the description of the guide file
. // another version is consistent with the original paper's result, because:
. // I think the original paper's method is better, because it clusters the resu
> lt to village level
. // furthermore, it uses the subdistrict's fixed effect in the model.
. // this is more robust than naive comparision of the difference
.
. global Pre_Test_Variables age hhhead eth_hausa hhmem_no edchild_percent assets
>  drought cellphone accesscellphone usecellphone makecall receivecall

.
. // summary statistics
. // I will save these results to stata dta, and use python to combine the resul
> t to latex
.
. /*
> logout, save("ttest_with_result") dta replace: ttable3 $Pre_Test_Variables, by
> (abc) tvalue
> logout, save("ttest_with_result_mean_std") dta replace: tabstat $Pre_Test_Vari
> ables, by(abc) stat(mean sd) nototal long col(stat)
> */
.
. // report the mean and standard deviation
.
. tabstat $Pre_Test_Variables, by(abc) stat(mean sd) nototal long col(stat)

abc          Variable |      Mean        SD
----------------------+--------------------
0                 age |  37.86127  13.09617
              hhhead |  .5600775  .4968593
           eth_hausa |  .7148362   .451928
            hhmem_no |  8.421965  4.053834
        edchild_pe~t |  .2786161  .2756192
              assets |  4.990366  1.608947
             drought |  .3853565   .487149
           cellphone |  .2959381  .4569054
        accesscell~e |  .7630058   .425649
        usecellphone |  .5420744  .4987148
            makecall |  .6909091  .4629612
         receivecall |  .8581818  .3494996
----------------------+--------------------
1                 age |  37.17534  11.75794
              hhhead |  .5473888  .4982313
           eth_hausa |  .7206166  .4491292
            hhmem_no |  8.327553  4.074195
        edchild_pe~t |  .2685527  .2697695
              assets |  4.978805  1.574879
             drought |  .3795761  .4857496
           cellphone |  .2953668  .4566485
        accesscell~e |  .7976879  .4021113
        usecellphone |  .5728155  .4951504
            makecall |  .7254237  .4470589
         receivecall |  .8677966  .3392873
------------------------------------------

. outreg2 using ttest_with_result_mean_std.dta, replace
dir : seeout

.
.
. foreach i in $Pre_Test_Variables{
  2.         xi: reg `i' abc i.avcode, robust cluster(codev)
```

```
  3.         outreg2 abc using "Table1_PanelA", dec(2) append dta ctitle ("`var'
> ")   nocons
  4. }
i.avcode          _Iavcode_1-22       (naturally coded; _Iavcode_1 omitted)

Linear regression                               Number of obs     =      1,038
                                                F(21, 94)         =      10.09
                                                Prob > F          =     0.0000
                                                R-squared         =     0.1039
                                                Root MSE          =     11.901

                           (Std. err. adjusted for 95 clusters in codevillage)
------------------------------------------------------------------------------
             |               Robust
         age | Coefficient  std. err.      t    P>|t|     [95% conf. interval]
-------------+----------------------------------------------------------------
         abc |  -.3567906   .9311367    -0.38   0.702    -2.205584    1.492003
  _Iavcode_2 |  -.6610624   3.343874    -0.20   0.844    -7.300403    5.978278
  _Iavcode_3 |  -.9478003   3.130994    -0.30   0.763    -7.164462    5.268861
  _Iavcode_4 |   3.823123   3.399385     1.12   0.264    -2.926436    10.57268
  _Iavcode_5 |   2.704856   3.576323     0.76   0.451    -4.396017    9.805729
  _Iavcode_6 |  -2.235679   4.063755    -0.55   0.584    -10.30436    5.833003
  _Iavcode_8 |   -8.14477   2.965209    -2.75   0.007    -14.03226   -2.257279
  _Iavcode_9 |  -8.085305   2.985504    -2.71   0.008    -14.01309   -2.157517
 _Iavcode_10 |  -6.476962   3.264558    -1.98   0.050    -12.95882    .0048938
 _Iavcode_11 |  -5.690225   2.878396    -1.98   0.051    -11.40535    .0248986
 _Iavcode_12 |   -2.28954   3.854208    -0.59   0.554     -9.94216     5.36308
 _Iavcode_13 |    1.85523   3.140418     0.59   0.556    -4.380143    8.090603
 _Iavcode_14 |   .3461588    3.89545     0.09   0.929    -7.388349    8.080666
 _Iavcode_15 |   .8174565   3.453917     0.24   0.813    -6.040377     7.67529
 _Iavcode_16 |   3.672727   3.524192     1.04   0.300    -3.324639    10.67009
 _Iavcode_17 |   -9.98739   3.045812    -3.28   0.001    -16.03492   -3.939859
 _Iavcode_18 |  -2.563636    4.56644    -0.56   0.576    -11.63041    6.503138
 _Iavcode_19 |   1.127957   3.212146     0.35   0.726    -5.249834    7.505748
 _Iavcode_20 |  -3.872043   3.932902    -0.98   0.327    -11.68091    3.936827
 _Iavcode_21 |  -4.998661   3.072051    -1.63   0.107    -11.09829    1.100968
 _Iavcode_22 |  -5.603605   3.449166    -1.62   0.108    -12.45201    1.244795
       _cons |    39.6868   2.868775    13.83   0.000     33.99078    45.38282
------------------------------------------------------------------------------
dir : seeout
i.avcode          _Iavcode_1-22       (naturally coded; _Iavcode_1 omitted)

Linear regression                               Number of obs     =      1,033
                                                F(21, 94)         =       8.35
                                                Prob > F          =     0.0000
                                                R-squared         =     0.0135
                                                Root MSE          =     .49907

                           (Std. err. adjusted for 95 clusters in codevillage)
------------------------------------------------------------------------------
             |               Robust
      hhhead | Coefficient  std. err.      t    P>|t|     [95% conf. interval]
-------------+----------------------------------------------------------------
         abc |  -.0073054   .0193998    -0.38   0.707    -.0458241    .0312133
  _Iavcode_2 |  -.0450436    .055329    -0.81   0.418    -.1549006    .0648133
  _Iavcode_3 |   .0295725   .0674244     0.44   0.662    -.1043002    .1634451
  _Iavcode_4 |   .1156308   .0528021     2.19   0.031     .0107909    .2204706
  _Iavcode_5 |    .006481   .0507431     0.13   0.899    -.0942706    .1072326
  _Iavcode_6 |   .0901786   .0386553     2.33   0.022     .0134275    .1669296
  _Iavcode_8 |  -.0007305    .049708    -0.01   0.988     -.099427    .0979659
  _Iavcode_9 |  -.0904221   .0567853    -1.59   0.115    -.2031706    .0223265
 _Iavcode_10 |  -.0396729   .0501699    -0.79   0.431    -.1392863    .0599405
 _Iavcode_11 |  -.0461851   .0488742    -0.94   0.347    -.1432259    .0508558
```

```
 _Iavcode_12 |   .0712662   .0423824     1.68   0.096     -.012885    .1554174
 _Iavcode_13 |  -.0007305   .0769741    -0.01   0.992    -.1535645    .1521034
 _Iavcode_14 |  -.0095175   .0772117    -0.12   0.902    -.1628232    .1437882
 _Iavcode_15 |   .0647926   .0425397     1.52   0.131     -.019671    .1492561
 _Iavcode_16 |   .0545455   .0561584     0.97   0.334    -.0569584    .1660493
 _Iavcode_17 |  -.0216315   .0628755    -0.34   0.732    -.1464723    .1032094
 _Iavcode_18 |  -.0084716   .0867555    -0.10   0.922    -.1807268    .1637835
 _Iavcode_19 |   .1356331   .0522614     2.60   0.011     .0318669    .2393993
 _Iavcode_20 |  -.0158821   .0408933    -0.39   0.699    -.0970766    .0653125
 _Iavcode_21 |  -.0311443   .0513585    -0.61   0.546    -.1331177    .0708292
 _Iavcode_22 |  -.1025524   .0745808    -1.38   0.172    -.2506342    .0455295
       _cons |   .5498378   .0406818    13.52   0.000     .4690632    .6306124
------------------------------------------------------------------------------
dir : seeout
i.avcode          _Iavcode_1-22       (naturally coded; _Iavcode_1 omitted)

Linear regression                               Number of obs     =      1,038
                                                F(21, 94)         =    3599.44
                                                Prob > F          =     0.0000
                                                R-squared         =     0.4094
                                                Root MSE          =     .34963

                          (Std. err. adjusted for 95 clusters in codevillage)
------------------------------------------------------------------------------
             |               Robust
   eth_hausa | Coefficient  std. err.      t    P>|t|     [95% conf. interval]
-------------+----------------------------------------------------------------
         abc |    .012015   .0349363     0.34   0.732    -.0573518    .0813819
  _Iavcode_2 |   .5264717   .1623353     3.24   0.002     .2041512    .8487923
  _Iavcode_3 |   .5890803   .1602662     3.68   0.000      .270868    .9072926
  _Iavcode_4 |    .581846   .1605774     3.62   0.000     .2630158    .9006762
  _Iavcode_5 |  -.0452808   .1802514    -0.25   0.802    -.4031743    .3126126
  _Iavcode_6 |  -.3806167   .1580759    -2.41   0.018    -.6944801   -.0667533
  _Iavcode_8 |   .5512015   .1595115     3.46   0.001     .2344877    .8679153
  _Iavcode_9 |   .3143505   .1842892     1.71   0.091    -.0515599    .6802609
 _Iavcode_10 |   .3183555   .2018361     1.58   0.118    -.0823949    .7191059
 _Iavcode_11 |  -.2897076   .1580759    -1.83   0.070     -.603571    .0241558
 _Iavcode_12 |   .0933121   .1907411     0.49   0.626    -.2854088     .472033
 _Iavcode_13 |   .5739288   .1601635     3.58   0.001     .2559204    .8919371
 _Iavcode_14 |   .5931936   .1572318     3.77   0.000     .2810062     .905381
 _Iavcode_15 |   .6214676   .1599367     3.89   0.000     .3039095    .9390256
 _Iavcode_16 |        -.2   .1683518    -1.19   0.238    -.5342665    .1342665
 _Iavcode_17 |   .2300159   .2229219     1.03   0.305    -.2126007    .6726326
 _Iavcode_18 |   .4363636   .1710429     2.55   0.012      .096754    .7759732
 _Iavcode_19 |   .6193833   .1580759     3.92   0.000     .3055199    .9332467
 _Iavcode_20 |   .5284742   .1610056     3.28   0.001     .2087938    .8481546
 _Iavcode_21 |    .286232    .167034     1.71   0.090    -.0454179    .6178819
 _Iavcode_22 |   .6207183   .1592317     3.90   0.000     .3045601    .9368766
       _cons |   .3746092   .1640383     2.28   0.025     .0489072    .7003111
------------------------------------------------------------------------------
dir : seeout
i.avcode          _Iavcode_1-22       (naturally coded; _Iavcode_1 omitted)

Linear regression                               Number of obs     =      1,038
                                                F(21, 94)         =       6.24
                                                Prob > F          =     0.0000
                                                R-squared         =     0.0717
                                                Root MSE          =     3.9542

                          (Std. err. adjusted for 95 clusters in codevillage)
------------------------------------------------------------------------------
             |               Robust
    hhmem_no | Coefficient  std. err.      t    P>|t|     [95% conf. interval]
```

```
------------+----------------------------------------------------------------
        abc |   .0217984   .2542599     0.09   0.932    -.4830407    .5266374
  _Iavcode_2 |   .7076377   .7213953     0.98   0.329    -.7247095    2.139985
  _Iavcode_3 |   1.044604   .7436202     1.40   0.163    -.4318712    2.521079
  _Iavcode_4 |   1.819008   .9923548     1.83   0.070    -.1513356    3.789352
  _Iavcode_5 |   .6997523   .7791797     0.90   0.371    -.8473273    2.246832
  _Iavcode_6 |  -1.743275   1.218152    -1.43   0.156    -4.161944    .6753947
  _Iavcode_8 |  -.9932747   .8007989    -1.24   0.218     -2.58328    .5967304
  _Iavcode_9 |  -1.504484   .8015105    -1.88   0.064    -3.095901    .0869343
 _Iavcode_10 |   .1846008   .7618476     0.24   0.809    -1.328066    1.697267
 _Iavcode_11 |  -1.879638   1.080268    -1.74   0.085    -4.024536    .2652592
 _Iavcode_12 |  -.5956403   .7598227    -0.78   0.435    -2.104286    .9130055
 _Iavcode_13 |    1.30218   .7115621     1.83   0.070    -.1106434    2.715003
 _Iavcode_14 |   1.025187   .8579753     1.19   0.235    -.6783433    2.728717
 _Iavcode_15 |     .31431   .7001271     0.45   0.655    -1.075809    1.704429
 _Iavcode_16 |   .7818182   .7357367     1.06   0.291    -.6790042    2.242641
 _Iavcode_17 |  -.9078152   1.094914    -0.83   0.409    -3.081792    1.266161
 _Iavcode_18 |   .6909091   .8648299     0.80   0.426    -1.026231    2.408049
 _Iavcode_19 |   1.438543   1.162211     1.24   0.219    -.8690538    3.746141
 _Iavcode_20 |   .3021798   .8553104     0.35   0.725    -1.396059    2.000419
 _Iavcode_21 |  -.9702172   .7599721    -1.28   0.205     -2.47916    .5387252
 _Iavcode_22 |   2.597531   .6693062     3.88   0.000     1.268608    3.926454
       _cons |   8.005103   .6280253    12.75   0.000     6.758144    9.252062
------------------------------------------------------------------------------
dir : seeout
i.avcode          _Iavcode_1-22       (naturally coded; _Iavcode_1 omitted)

Linear regression                               Number of obs     =      1,012
                                                F(21, 94)         =      84.61
                                                Prob > F          =     0.0000
                                                R-squared         =     0.1475
                                                Root MSE          =     .25437

                          (Std. err. adjusted for 95 clusters in codevillage)
------------------------------------------------------------------------------
             |               Robust
edchild_pe~t | Coefficient  std. err.      t    P>|t|     [95% conf. interval]
-------------+----------------------------------------------------------------
         abc |  -.0002277   .0183422    -0.01   0.990    -.0366467    .0361912
  _Iavcode_2 |  -.1451826   .0535493    -2.71   0.008     -.251506   -.0388592
  _Iavcode_3 |  -.0184886   .0553946    -0.33   0.739    -.1284759    .0914986
  _Iavcode_4 |  -.0881842   .0610644    -1.44   0.152     -.209429    .0330606
  _Iavcode_5 |  -.1074316   .0672968    -1.60   0.114     -.241051    .0261878
  _Iavcode_6 |  -.0364125   .0699725    -0.52   0.604    -.1753445    .1025196
  _Iavcode_8 |  -.2763289   .0570313    -4.85   0.000    -.3895658    -.163092
  _Iavcode_9 |  -.0542404   .0500933    -1.08   0.282    -.1537018    .0452209
 _Iavcode_10 |  -.0605815   .0612924    -0.99   0.325     -.182279     .061116
 _Iavcode_11 |  -.3597951   .0461299    -7.80   0.000    -.4513871   -.2682031
 _Iavcode_12 |   .0409793   .0696756     0.59   0.558    -.0973634    .1793219
 _Iavcode_13 |   .1294367    .072971     1.77   0.079    -.0154488    .2743222
 _Iavcode_14 |  -.1426885   .0561694    -2.54   0.013    -.2542142   -.0311627
 _Iavcode_15 |   .0657517   .0679865     0.97   0.336    -.0692371    .2007404
 _Iavcode_16 |  -.0373254   .0732813    -0.51   0.612    -.1828273    .1081764
 _Iavcode_17 |  -.1196478   .0502886    -2.38   0.019    -.2194969   -.0197986
 _Iavcode_18 |  -.1195123   .0571305    -2.09   0.039    -.2329461   -.0060784
 _Iavcode_19 |  -.0947199   .0495246    -1.91   0.059    -.1930521    .0036123
 _Iavcode_20 |  -.1791428   .0510777    -3.51   0.001    -.2805588   -.0777268
 _Iavcode_21 |  -.2711462   .0567213    -4.78   0.000    -.3837676   -.1585247
 _Iavcode_22 |  -.0505331   .0492786    -1.03   0.308     -.148377    .0473108
       _cons |    .359903   .0472928     7.61   0.000      .266002    .4538039
------------------------------------------------------------------------------
dir : seeout
i.avcode          _Iavcode_1-22       (naturally coded; _Iavcode_1 omitted)
```

```
Linear regression                               Number of obs     =      1,038
                                                F(21, 94)         =      13.20
                                                Prob > F          =     0.0000
                                                R-squared         =     0.0598
                                                Root MSE          =     1.5588

                          (Std. err. adjusted for 95 clusters in codevillage)
------------------------------------------------------------------------------
             |               Robust
      assets | Coefficient  std. err.      t    P>|t|     [95% conf. interval]
-------------+----------------------------------------------------------------
         abc |  -.0341962   .0967777    -0.35   0.725    -.2263507    .1579582
  _Iavcode_2 |   .7840979   .2301153     3.41   0.001     .3271986    1.240997
  _Iavcode_3 |   .5208228   .2181326     2.39   0.019     .0877154    .9539302
  _Iavcode_4 |   .3981457   .2111144     1.89   0.062     -.021027    .8173184
  _Iavcode_5 |   .0302749   .3147766     0.10   0.924    -.5947214    .6552713
  _Iavcode_6 |  -.3579651   .1656677    -2.16   0.033    -.6869022    -.029028
  _Iavcode_8 |   .0056713   .2514413     0.02   0.982    -.4935713    .5049139
  _Iavcode_9 |   .2083404   .2814255     0.74   0.461    -.3504366    .7671173
 _Iavcode_10 |   .5151234   .2864328     1.80   0.075    -.0535956    1.083842
 _Iavcode_11 |   .6420349   .1810084     3.55   0.001     .2826385    1.001431
 _Iavcode_12 |   .2113426   .2275849     0.93   0.355    -.2405325    .6632177
 _Iavcode_13 |   .6193076   .3090489     2.00   0.048     .0056838    1.232931
 _Iavcode_14 |   1.169413   .4262613     2.74   0.007     .3230608    2.015764
 _Iavcode_15 |   .1342476   .2340053     0.57   0.568    -.3303753    .5988706
 _Iavcode_16 |   .5454545   .2317108     2.35   0.021     .0853874    1.005522
 _Iavcode_17 |   .2642203   .2356443     1.12   0.265    -.2036569    .7320975
 _Iavcode_18 |  -.1636364    .355084    -0.46   0.646     -.868664    .5413913
 _Iavcode_19 |  -.2216014   .2955759    -0.75   0.455    -.8084743    .3652714
 _Iavcode_20 |    .263247   .2730072     0.96   0.337    -.2788151    .8053092
 _Iavcode_21 |  -.2978771   .2040605    -1.46   0.148    -.7030441    .1072898
 _Iavcode_22 |   1.079313   .1999392     5.40   0.000     .6823287    1.476297
       _cons |   4.693245   .1698453    27.63   0.000     4.356013    5.030477
------------------------------------------------------------------------------
dir : seeout
i.avcode          _Iavcode_1-22       (naturally coded; _Iavcode_1 omitted)

Linear regression                               Number of obs     =      1,038
                                                F(21, 94)         =      10.57
                                                Prob > F          =     0.0000
                                                R-squared         =     0.0755
                                                Root MSE          =     .47231

                          (Std. err. adjusted for 95 clusters in codevillage)
------------------------------------------------------------------------------
             |               Robust
     drought | Coefficient  std. err.      t    P>|t|     [95% conf. interval]
-------------+----------------------------------------------------------------
         abc |   -.029972   .0347727    -0.86   0.391     -.099014    .0390701
  _Iavcode_2 |  -.2646685   .0641818    -4.12   0.000     -.392103   -.1372341
  _Iavcode_3 |  -.2848154    .087751    -3.25   0.002     -.459047   -.1105838
  _Iavcode_4 |  -.2579834   .0671993    -3.84   0.000    -.3914092   -.1245576
  _Iavcode_5 |  -.0322349   .0628955    -0.51   0.609    -.1571153    .0926454
  _Iavcode_6 |  -.0120881    .103007    -0.12   0.907    -.2166108    .1924346
  _Iavcode_8 |  -.0575427   .0833676    -0.69   0.492    -.2230709    .1079856
  _Iavcode_9 |  -.1131534   .2535495    -0.45   0.656    -.6165818     .390275
 _Iavcode_10 |  -.1989016   .0753997    -2.64   0.010    -.3486094   -.0491938
 _Iavcode_11 |  -.1029972   .0699717    -1.47   0.144    -.2419277    .0359333
 _Iavcode_12 |  -.2059944   .1004607    -2.05   0.043    -.4054614   -.0065274
 _Iavcode_13 |  -.3529972   .0757173    -4.66   0.000    -.5033357   -.2026587
 _Iavcode_14 |  -.1094205    .159738    -0.68   0.495    -.4265841    .2077431
 _Iavcode_15 |  -.1295322   .0946992    -1.37   0.175    -.3175596    .0584952
```

```
 _Iavcode_16 |  -1.10e-14    .087092    -0.00   1.000    -.1729232    .1729232
 _Iavcode_17 |   .0635867   .1158494     0.55   0.584    -.1664351    .2936085
 _Iavcode_18 |   .0545455   .0656953     0.83   0.408    -.0758942    .1849851
 _Iavcode_19 |  -.3757245   .0590824    -6.36   0.000    -.4930339    -.258415
 _Iavcode_20 |   .0333664   .1117675     0.30   0.766    -.1885505    .2552834
 _Iavcode_21 |  -.0882998   .0768295    -1.15   0.253    -.2408466     .064247
 _Iavcode_22 |  -.3487517   .0878121    -3.97   0.000    -.5231047   -.1743986
       _cons |   .5270741   .0588432     8.96   0.000     .4102396    .6439086
------------------------------------------------------------------------------
dir : seeout
i.avcode          _Iavcode_1-22       (naturally coded; _Iavcode_1 omitted)

Linear regression                               Number of obs     =      1,035
                                                F(21, 94)         =      19.21
                                                Prob > F          =     0.0000
                                                R-squared         =     0.0991
                                                Root MSE          =     .43782

                          (Std. err. adjusted for 95 clusters in codevillage)
------------------------------------------------------------------------------
             |               Robust
   cellphone | Coefficient  std. err.      t    P>|t|     [95% conf. interval]
-------------+----------------------------------------------------------------
         abc |  -.0037592   .0266485    -0.14   0.888    -.0566704     .049152
  _Iavcode_2 |  -.0724767   .1144164    -0.63   0.528    -.2996532    .1546999
  _Iavcode_3 |  -.1034062   .1207499    -0.86   0.394     -.343158    .1363455
  _Iavcode_4 |   .1025983    .114247     0.90   0.371    -.1242418    .3294384
  _Iavcode_5 |   .0171794   .1264084     0.14   0.892    -.2338075    .2681662
  _Iavcode_6 |  -.3003759   .1102424    -2.72   0.008    -.5192648    -.081487
  _Iavcode_8 |  -.2549214   .1100382    -2.32   0.023    -.4734048   -.0364379
  _Iavcode_9 |  -.1330827   .1518101    -0.88   0.383    -.4345052    .1683397
 _Iavcode_10 |   .0020278   .1164196     0.02   0.986     -.229126    .2331817
 _Iavcode_11 |  -.0731032   .1048788    -0.70   0.488    -.2813425    .1351361
 _Iavcode_12 |  -.0916609   .1148137    -0.80   0.427    -.3196262    .1363044
 _Iavcode_13 |   .1425853   .1068138     1.33   0.185     -.069496    .3546667
 _Iavcode_14 |   .2980112   .1130654     2.64   0.010     .0735173    .5225052
 _Iavcode_15 |   .0004562   .1169839     0.00   0.997    -.2318181    .2327305
 _Iavcode_16 |    .024888   .1215585     0.20   0.838    -.2164692    .2662452
 _Iavcode_17 |   .0187457   .1206435     0.16   0.877    -.2207948    .2582862
 _Iavcode_18 |  -.2181818   .1332133    -1.64   0.105      -.48268    .0463163
 _Iavcode_19 |  -.2549214   .1228253    -2.08   0.041    -.4987939   -.0110488
 _Iavcode_20 |  -.2094668   .1107489    -1.89   0.062    -.4293614    .0104278
 _Iavcode_21 |  -.2549783    .108673    -2.35   0.021    -.4707512   -.0392055
 _Iavcode_22 |   .0796778   .1092635     0.73   0.468    -.1372675     .296623
       _cons |   .3477101     .10299     3.38   0.001     .1432211    .5521991
------------------------------------------------------------------------------
dir : seeout
i.avcode          _Iavcode_1-22       (naturally coded; _Iavcode_1 omitted)

Linear regression                               Number of obs     =      1,038
                                                F(21, 94)         =      17.35
                                                Prob > F          =     0.0000
                                                R-squared         =     0.2022
                                                Root MSE          =     .37378

                          (Std. err. adjusted for 95 clusters in codevillage)
------------------------------------------------------------------------------
             |               Robust
accesscell~e | Coefficient  std. err.      t    P>|t|     [95% conf. interval]
-------------+----------------------------------------------------------------
         abc |   .0427679   .0230579     1.85   0.067    -.0030141      .08855
  _Iavcode_2 |  -.0937603   .0684315    -1.37   0.174    -.2296327    .0421121
  _Iavcode_3 |  -.0260262   .0819988    -0.32   0.752    -.1888367    .1367843
```

```
  _Iavcode_4 |   .0215526   .0690124     0.31   0.756    -.1154732    .1585785
  _Iavcode_5 |   .0417078   .0738344     0.56   0.573    -.1048922    .1883078
  _Iavcode_6 |  -.2684505   .1046788    -2.56   0.012    -.4762926   -.0606084
  _Iavcode_8 |  -.4502687   .0997885    -4.51   0.000     -.648401   -.2521363
  _Iavcode_9 |  -.0937603   .0754084    -1.24   0.217    -.2434854    .0559648
 _Iavcode_10 |  -.0643528    .070542    -0.91   0.364    -.2044156      .07571
 _Iavcode_11 |  -.1320868   .0689408    -1.92   0.058    -.2689704    .0047967
 _Iavcode_12 |   -.136901   .0991779    -1.38   0.171    -.3338211    .0600192
 _Iavcode_13 |   .0270041   .0793867     0.34   0.734      -.13062    .1846281
 _Iavcode_14 |  -.0082807   .0793938    -0.10   0.917     -.165919    .1493576
 _Iavcode_15 |  -.0810687   .0837648    -0.97   0.336    -.2473855    .0852482
 _Iavcode_16 |   .0545455   .0702781     0.78   0.440    -.0849934    .1940843
 _Iavcode_17 |  -.0973243   .0972539    -1.00   0.320    -.2904241    .0957755
 _Iavcode_18 |  -.3636364   .0953282    -3.81   0.000    -.5529127     -.17436
 _Iavcode_19 |   .0042768   .0833491     0.05   0.959    -.1612148    .1697683
 _Iavcode_20 |  -.4654202    .105171    -4.43   0.000    -.6742396   -.2566007
 _Iavcode_21 |  -.4950752   .0736541    -6.72   0.000    -.6413172   -.3488332
 _Iavcode_22 |   .0443823   .0770661     0.58   0.566    -.1086343    .1973989
       _cons |   .8834301   .0660787    13.37   0.000     .7522293    1.014631
------------------------------------------------------------------------------
dir : seeout
i.avcode          _Iavcode_1-22       (naturally coded; _Iavcode_1 omitted)

Linear regression                               Number of obs     =      1,026
                                                F(21, 94)         =       8.01
                                                Prob > F          =     0.0000
                                                R-squared         =     0.1225
                                                Root MSE          =     .47035

                          (Std. err. adjusted for 95 clusters in codevillage)
------------------------------------------------------------------------------
             |               Robust
usecellphone | Coefficient  std. err.      t    P>|t|     [95% conf. interval]
-------------+----------------------------------------------------------------
         abc |   .0359607   .0320567     1.12   0.265    -.0276886      .09961
  _Iavcode_2 |   .0116262    .107133     0.11   0.914    -.2010888    .2243412
  _Iavcode_3 |  -.1388282   .1137638    -1.22   0.225    -.3647089    .0870526
  _Iavcode_4 |   .0387632   .1106069     0.35   0.727    -.1808494    .2583758
  _Iavcode_5 |    .094438   .1196203     0.79   0.432    -.1430709    .3319469
  _Iavcode_6 |  -.1691312   .1518595    -1.11   0.268    -.4706519    .1323895
  _Iavcode_8 |  -.3431317   .1394144    -2.46   0.016    -.6199423   -.0663211
  _Iavcode_9 |  -.1122501   .1187139    -0.95   0.347    -.3479594    .1234592
 _Iavcode_10 |  -.0541373   .1154178    -0.47   0.640     -.283302    .1750274
 _Iavcode_11 |  -.1920845     .12624    -1.52   0.131    -.4427371     .058568
 _Iavcode_12 |  -.1200806    .125604    -0.96   0.342    -.3694702     .129309
 _Iavcode_13 |    .012687   .1125906     0.11   0.911    -.2108642    .2362382
 _Iavcode_14 |   .1127854   .1264301     0.89   0.375    -.1382445    .3638152
 _Iavcode_15 |  -.0381378   .1555215    -0.25   0.807    -.3469293    .2706538
 _Iavcode_16 |   .0727273   .1129843     0.64   0.521    -.1516056    .2970602
 _Iavcode_17 |  -.0872123   .1459424    -0.60   0.552    -.3769844    .2025598
 _Iavcode_18 |        -.4   .1216121    -3.29   0.001    -.6414636   -.1585364
 _Iavcode_19 |  -.2600403   .1341706    -1.94   0.056    -.5264393    .0063587
 _Iavcode_20 |  -.4115554    .116909    -3.52   0.001    -.6436809     -.17943
 _Iavcode_21 |  -.4235243   .1223031    -3.46   0.001      -.66636   -.1806887
 _Iavcode_22 |  -.0355059   .1241616    -0.29   0.776    -.2820318    .2110199
       _cons |   .6511509    .105546     6.17   0.000     .4415869    .8607149
------------------------------------------------------------------------------
dir : seeout
i.avcode          _Iavcode_1-22       (naturally coded; _Iavcode_1 omitted)

Linear regression                               Number of obs     =        570
                                                F(21, 92)         =      19.68
                                                Prob > F          =     0.0000
```

```
                                                R-squared         =     0.0636
                                                Root MSE          =     .44838

                          (Std. err. adjusted for 93 clusters in codevillage)
------------------------------------------------------------------------------
             |               Robust
    makecall | Coefficient  std. err.      t    P>|t|     [95% conf. interval]
-------------+----------------------------------------------------------------
         abc |   .0308199   .0391302     0.79   0.433    -.0468962    .1085359
  _Iavcode_2 |   .0943634   .1163854     0.81   0.420    -.1367881    .3255148
  _Iavcode_3 |   .2107526   .0964992     2.18   0.032     .0190969    .4024083
  _Iavcode_4 |    .166125   .1025244     1.62   0.109    -.0374974    .3697473
  _Iavcode_5 |   .0327873   .1075782     0.30   0.761    -.1808722    .2464468
  _Iavcode_6 |  -.3049212   .1045443    -2.92   0.004    -.5125551   -.0972873
  _Iavcode_8 |   .2558111     .10183     2.51   0.014     .0535679    .4580544
  _Iavcode_9 |   .0998809   .0897385     1.11   0.269    -.0783475    .2781092
 _Iavcode_10 |   .0238938    .119029     0.20   0.841     -.212508    .2602956
 _Iavcode_11 |  -.0758423   .1270776    -0.60   0.552    -.3282294    .1765448
 _Iavcode_12 |  -.1019843   .1232906    -0.83   0.410    -.3468501    .1428814
 _Iavcode_13 |  -.0414816   .0980342    -0.42   0.673     -.236186    .1532228
 _Iavcode_14 |   .0258703   .1262815     0.20   0.838    -.2249356    .2766763
 _Iavcode_15 |   .0708463   .1069076     0.66   0.509    -.1414814    .2831741
 _Iavcode_16 |  -.0183581   .0953462    -0.19   0.848    -.2077238    .1710077
 _Iavcode_17 |  -.1053202   .1014232    -1.04   0.302    -.3067555     .096115
 _Iavcode_18 |   .3179938   .0796043     3.99   0.000     .1598927    .4760948
 _Iavcode_19 |  -.0112303   .1713417    -0.07   0.948    -.3515296    .3290691
 _Iavcode_20 |   .0070348   .1430832     0.05   0.961    -.2771409    .2912104
 _Iavcode_21 |  -.0991303   .2277214    -0.44   0.664    -.5514046     .353144
 _Iavcode_22 |  -.0238885     .12316    -0.19   0.847    -.2684948    .2207178
       _cons |   .6573504   .0908152     7.24   0.000     .4769835    .8377172
------------------------------------------------------------------------------
dir : seeout
i.avcode          _Iavcode_1-22       (naturally coded; _Iavcode_1 omitted)

Linear regression                               Number of obs     =        570
                                                F(21, 92)         =       4.36
                                                Prob > F          =     0.0000
                                                R-squared         =     0.0802
                                                Root MSE          =     .33617

                          (Std. err. adjusted for 93 clusters in codevillage)
------------------------------------------------------------------------------
             |               Robust
 receivecall | Coefficient  std. err.      t    P>|t|     [95% conf. interval]
-------------+----------------------------------------------------------------
         abc |   .0289937   .0314504     0.92   0.359    -.0334695    .0914569
  _Iavcode_2 |  -.1941751   .0692003    -2.81   0.006    -.3316129   -.0567374
  _Iavcode_3 |  -.1468187   .0992381    -1.48   0.142    -.3439142    .0502768
  _Iavcode_4 |   .0316505   .0467408     0.68   0.500    -.0611808    .1244818
  _Iavcode_5 |   .0090426    .052232     0.17   0.863    -.0946947    .1127799
  _Iavcode_6 |  -.0031317   .1021867    -0.03   0.976    -.2060834      .19982
  _Iavcode_8 |  -.3447477    .084294    -4.09   0.000    -.5121628   -.1773326
  _Iavcode_9 |  -.0876752   .0420481    -2.09   0.040    -.1711864    -.004164
 _Iavcode_10 |  -.0915746   .1243228    -0.74   0.463    -.3384905    .1553413
 _Iavcode_11 |  -.0190756   .0863518    -0.22   0.826    -.1905777    .1524265
 _Iavcode_12 |  -.0456438   .0612364    -0.75   0.458    -.1672645     .075977
 _Iavcode_13 |   .0485575   .0510706     0.95   0.344    -.0528732    .1499882
 _Iavcode_14 |  -.0406454   .0886599    -0.46   0.648    -.2167317    .1354409
 _Iavcode_15 |   -.039845   .0672526    -0.59   0.555    -.1734144    .0937243
 _Iavcode_16 |   .0555441    .044911     1.24   0.219     -.033653    .1447411
 _Iavcode_17 |   -.040482   .0813143    -0.50   0.620    -.2019792    .1210152
 _Iavcode_18 |  -.3248744   .0828075    -3.92   0.000    -.4893373   -.1604115
 _Iavcode_19 |  -.1432308   .1231919    -1.16   0.248    -.3879004    .1014389
```

```
 _Iavcode_20 |  -.2359247   .1512202    -1.56   0.122    -.5362611    .0644117
 _Iavcode_21 |   -.128391   .1041029    -1.23   0.221    -.3351483    .0783663
 _Iavcode_22 |  -.0027061    .068988    -0.04   0.969    -.1397222    .1343101
       _cons |   .9016794   .0447759    20.14   0.000     .8127506    .9906083
------------------------------------------------------------------------------
dir : seeout

.
. use "ABCtestscore.dta", clear

.
. bys codev: keep if _n==1
(23,797 observations deleted)

. keep codev

. merge 1:m codev using "ABCteacher.dta"

    Result                      Number of obs
    -----------------------------------------
    Not matched                            24
        from master                         0  (_merge==1)
        from using                         24  (_merge==2)

    Matched                               346  (_merge==3)
    -----------------------------------------

.
. // note that during our operation, we have dropped some of the codes that are
> not contained in the test score result.
. // because these are not relevant to our study.
. tab _m

   Matching result from |
                  merge |      Freq.     Percent        Cum.
------------------------+-----------------------------------
         Using only (2) |         24        6.49        6.49
            Matched (3) |        346       93.51      100.00
------------------------+-----------------------------------
                  Total |        370      100.00

. drop if _m==2
(24 observations deleted)

.
. tabstat levelno teacherage femaleteacher local, by(abc) stat(mean sd) nototal
> long col(stat)

abc          Variable |      Mean        SD
----------------------+--------------------
0             levelno |  8.323171  2.083932
           teacherage |  33.05521  9.157909
         femaleteac~r |  .3173653  .4668508
                local |  .7573964  .4299312
----------------------+--------------------
1             levelno |  8.572254   1.77899
           teacherage |  32.71098  8.067142
         femaleteac~r |  .3678161  .4836026
                local |  .6818182  .4670994
------------------------------------------

. outreg2 using Table1_PanelB_mean_std.dta, replace
dir : seeout
```

```
.
. foreach i in levelno teacherage femaleteacher local{
  2.         xi: reg `i' abc i.avcode, robust cluster(codev)
  3.         outreg2 abc using "Table1_PanelB", dec(2) append dta ctitle ("`var'
> ")   nocons
  4.         }
i.avcode          _Iavcode_1-24       (naturally coded; _Iavcode_1 omitted)

Linear regression                               Number of obs     =        337
                                                F(23, 112)        =       5.53
                                                Prob > F          =     0.0000
                                                R-squared         =     0.1854
                                                Root MSE          =      1.809

                          (Std. err. adjusted for 113 clusters in codevillage)
------------------------------------------------------------------------------
             |               Robust
     levelno | Coefficient  std. err.      t    P>|t|     [95% conf. interval]
-------------+----------------------------------------------------------------
         abc |   .0802486   .2163942     0.37   0.711    -.3485088    .5090059
  _Iavcode_2 |   .7766383   .4873943     1.59   0.114    -.1890711    1.742348
  _Iavcode_3 |  -.0997675   .4987741    -0.20   0.842    -1.088024    .8884894
  _Iavcode_4 |  -1.458649   .5547038    -2.63   0.010    -2.557724   -.3595749
  _Iavcode_5 |  -1.544212   .5694835    -2.71   0.008     -2.67257   -.4158533
  _Iavcode_6 |   .6046218    .388493     1.56   0.122    -.1651274    1.374371
  _Iavcode_8 |  -.6453782   .7568115    -0.85   0.396    -2.144903    .8541466
  _Iavcode_9 |  -.4233617   .5080666    -0.83   0.406    -1.430031    .5833072
 _Iavcode_10 |  -1.570275   .6159605    -2.55   0.012    -2.790721   -.3498279
 _Iavcode_11 |   .4379551   .4186403     1.05   0.298     -.391527    1.267437
 _Iavcode_12 |   .1260214   .4695053     0.27   0.789    -.8042432    1.056286
 _Iavcode_13 |  -1.022576   .5759544    -1.78   0.079    -2.163756    .1186042
 _Iavcode_14 |  -.7287116   .7102468    -1.03   0.307    -2.135975    .6785514
 _Iavcode_15 |  -1.266434   .7836363    -1.62   0.109    -2.819109    .2862407
 _Iavcode_16 |  -1.551345   .7007669    -2.21   0.029    -2.939825   -.1628652
 _Iavcode_17 |  -.4153933   .4462345    -0.93   0.354     -1.29955    .4687631
 _Iavcode_18 |  -.2878679   .5382422    -0.53   0.594    -1.354326      .77859
 _Iavcode_19 |  -1.951962   .8113422    -2.41   0.018    -3.559533   -.3443914
 _Iavcode_20 |  -.1642395   .5176675    -0.32   0.752    -1.189931    .8614523
 _Iavcode_21 |   .2335659   .4171043     0.56   0.577    -.5928729    1.060005
 _Iavcode_22 |  -2.273979   .8728006    -2.61   0.010    -4.003321   -.544636
 _Iavcode_23 |  -1.860399   .8612325    -2.16   0.033    -3.566821   -.1539772
 _Iavcode_24 |   .0246321   .5246059     0.05   0.963    -1.014807    1.064072
       _cons |   9.175213   .3998824    22.94   0.000     8.382897    9.967528
------------------------------------------------------------------------------
dir : seeout
i.avcode          _Iavcode_1-24       (naturally coded; _Iavcode_1 omitted)

Linear regression                               Number of obs     =        336
                                                F(23, 112)        =       5.52
                                                Prob > F          =     0.0000
                                                R-squared         =     0.1531
                                                Root MSE          =     8.2031

                          (Std. err. adjusted for 113 clusters in codevillage)
------------------------------------------------------------------------------
             |               Robust
  teacherage | Coefficient  std. err.      t    P>|t|     [95% conf. interval]
-------------+----------------------------------------------------------------
         abc |  -.3090361   1.184916    -0.26   0.795    -2.656794    2.038722
  _Iavcode_2 |   1.017627   6.510191     0.16   0.876    -11.88148    13.91674
  _Iavcode_3 |  -1.008223   6.259481    -0.16   0.872    -13.41058    11.39414
  _Iavcode_4 |   .0109708   6.062758     0.00   0.999    -12.00161    12.02355
```

```
  _Iavcode_5 |  -4.119334     5.6608    -0.73   0.468    -15.33548    7.096816
  _Iavcode_6 |  -5.995103   5.624389    -1.07   0.289    -17.13911    5.148903
  _Iavcode_8 |   .6715632   6.027858     0.11   0.911    -11.27186    12.61499
  _Iavcode_9 |  -2.682373   6.325358    -0.42   0.672    -15.21526    9.850514
 _Iavcode_10 |   3.896965   5.946039     0.66   0.514    -7.884349    15.67828
 _Iavcode_11 |  -6.995103   5.735281    -1.22   0.225    -18.35883     4.36862
 _Iavcode_12 |  -.9108465   6.222668    -0.15   0.884    -13.24027    11.41857
 _Iavcode_13 |  -2.209963   6.810797    -0.32   0.746    -15.70469    11.28476
 _Iavcode_14 |   .6715632   6.110963     0.11   0.913    -11.43653    12.77965
 _Iavcode_15 |  -2.008223   6.271264    -0.32   0.749    -14.43393    10.41748
 _Iavcode_16 |  -5.069642   5.783922    -0.88   0.383    -16.52974    6.390459
 _Iavcode_17 |   4.947868   6.151285     0.80   0.423    -7.240114    17.13585
 _Iavcode_18 |  -2.612147    6.11147    -0.43   0.670    -14.72124    9.496947
 _Iavcode_19 |  -4.681449   5.756291    -0.81   0.418     -16.0868    6.723904
 _Iavcode_20 |   -5.41833   5.762586    -0.94   0.349    -16.83615    5.999495
 _Iavcode_21 |  -7.222365   5.902732    -1.22   0.224    -18.91787    4.473142
 _Iavcode_22 |    5.95582   7.191021     0.83   0.409    -8.292265    20.20391
 _Iavcode_23 |  -.8235171   6.247559    -0.13   0.895    -13.20225    11.55522
 _Iavcode_24 |   1.450353   5.718558     0.25   0.800    -9.880236    12.78094
       _cons |   34.36779   5.620765     6.11   0.000     23.23097    45.50462
------------------------------------------------------------------------------
dir : seeout
i.avcode          _Iavcode_1-24       (naturally coded; _Iavcode_1 omitted)

Linear regression                               Number of obs     =        341
                                                F(23, 112)        =      27.91
                                                Prob > F          =     0.0000
                                                R-squared         =     0.0844
                                                Root MSE          =     .47115

                        (Std. err. adjusted for 113 clusters in codevillage)
------------------------------------------------------------------------------
             |               Robust
femaleteac~r | Coefficient  std. err.      t    P>|t|     [95% conf. interval]
-------------+----------------------------------------------------------------
         abc |   .0604638   .0434274     1.39   0.167     -.025582    .1465095
  _Iavcode_2 |   .2354816   .0738566     3.19   0.002     .0891442    .3818189
  _Iavcode_3 |   .1671093   .1089034     1.53   0.128    -.0486689    .3828875
  _Iavcode_4 |   .2382333   .1091432     2.18   0.031     .0219801    .4544865
  _Iavcode_5 |   .2782204   .1260676     2.21   0.029     .0284336    .5280072
  _Iavcode_6 |   .4314507   .0591226     7.30   0.000     .3143068    .5485945
  _Iavcode_8 |    .264784   .1688384     1.57   0.120    -.0697477    .5993156
  _Iavcode_9 |   .2354816   .0738566     3.19   0.002     .0891442    .3818189
 _Iavcode_10 |   .3941439   .1489835     2.65   0.009     .0989523    .6893355
 _Iavcode_11 |   .5981173   .0833069     7.18   0.000     .4330553    .7631793
 _Iavcode_12 |   .3865859   .1112895     3.47   0.001     .1660801    .6070918
 _Iavcode_13 |   .4043185   .0724673     5.58   0.000     .2607338    .5479032
 _Iavcode_14 |  -.0685493   .0572327    -1.20   0.234    -.1819485    .0448499
 _Iavcode_15 |   .3337759    .143568     2.32   0.022     .0493144    .6182375
 _Iavcode_16 |   .1395125   .1490788     0.94   0.351     -.155868     .434893
 _Iavcode_17 |    .514784   .0984471     5.23   0.000     .3197236    .7098444
 _Iavcode_18 |     .43397   .0984395     4.41   0.000     .2389247    .6290153
 _Iavcode_19 |   .2849386   .1707857     1.67   0.098    -.0534515    .6233286
 _Iavcode_20 |   .3270577   .0886265     3.69   0.000     .1514556    .5026599
 _Iavcode_21 |   .3337759   .1069981     3.12   0.002      .121773    .5457789
 _Iavcode_22 |   .1365859   .1188467     1.15   0.253    -.0988936    .3720654
 _Iavcode_23 |    .363912   .0874067     4.16   0.000     .1907268    .5370972
 _Iavcode_24 |     .24647   .1370623     1.80   0.075    -.0251014    .5180414
       _cons |   .0282402   .0621356     0.45   0.650    -.0948735    .1513538
------------------------------------------------------------------------------
dir : seeout
i.avcode          _Iavcode_1-24       (naturally coded; _Iavcode_1 omitted)
```

```
Linear regression                               Number of obs     =        345
                                                F(23, 112)        =    1313.50
                                                Prob > F          =     0.0000
                                                R-squared         =     0.4900
                                                Root MSE          =     .33285

                          (Std. err. adjusted for 113 clusters in codevillage)
------------------------------------------------------------------------------
             |               Robust
       local | Coefficient  std. err.      t    P>|t|     [95% conf. interval]
-------------+----------------------------------------------------------------
         abc |    -.02373   .0509235    -0.47   0.642    -.1246283    .0771684
  _Iavcode_2 |  -.2910595   .2874665    -1.01   0.313    -.8606375    .2785185
  _Iavcode_3 |   .3052492   .1911376     1.60   0.113    -.0734655    .6839638
  _Iavcode_4 |     .30459    .191271     1.59   0.114     -.074389     .683569
  _Iavcode_5 |   .3052492   .1911434     1.60   0.113    -.0734769    .6839753
  _Iavcode_6 |  -.6894775   .1904403    -3.62   0.000     -1.06681   -.3121445
  _Iavcode_8 |  -.1894775   .2571869    -0.74   0.463    -.6990604    .3201054
  _Iavcode_9 |  -.3910595   .3061824    -1.28   0.204    -.9977208    .2156018
 _Iavcode_10 |   -.074365   .2836363    -0.26   0.794     -.636354     .487624
 _Iavcode_11 |  -.6894775   .1904403    -3.62   0.000     -1.06681   -.3121445
 _Iavcode_12 |  -.1963987   .2660542    -0.74   0.462    -.7235511    .3307536
 _Iavcode_13 |   .2085044   .2106028     0.99   0.324    -.2087779    .6257868
 _Iavcode_14 |   .3105225   .1903514     1.63   0.106    -.0666343    .6876793
 _Iavcode_15 |   .3052492   .1911376     1.60   0.113    -.0734655    .6839638
 _Iavcode_16 |   .3065675   .1908938     1.61   0.111    -.0716642    .6847992
 _Iavcode_17 |  -.3561442   .2369494    -1.50   0.136    -.8256291    .1133407
 _Iavcode_18 |  -.3154662   .2682648    -1.18   0.242    -.8469986    .2160661
 _Iavcode_19 |   .3014825    .192128     1.57   0.119    -.0791944    .6821594
 _Iavcode_20 |  -.2476697   .2437167    -1.02   0.312    -.7305631    .2352237
 _Iavcode_21 |  -.5280842   .2270513    -2.33   0.022    -.9779572   -.0782111
 _Iavcode_22 |   .3036013    .191523     1.59   0.116     -.075877    .6830795
 _Iavcode_23 |      .1875   .2174885     0.86   0.390    -.2434256    .6184256
 _Iavcode_24 |   .3095338   .1904579     1.63   0.107    -.0678342    .6869017
       _cons |   .7052975   .1946061     3.62   0.000     .3197104    1.090885
------------------------------------------------------------------------------
dir : seeout

.
. use "ABCtestscore.dta", clear

.
. tabstat writez1 mathz1, by(abc) stat(mean sd) nototal long col(stat)

abc          Variable |      Mean        SD
----------------------+--------------------
0             writez1 | -1.03e-08  .9998296
              mathz1 | -6.69e-09  .9998296
----------------------+--------------------
1             writez1 |  -.026852  .8858414
              mathz1 | -.0712108  .8159666
----------------------------------------

. outreg2 using Table1_PanelC_mean_std.dta, replace
dir : seeout

.
.
. foreach i of varlist writez1 mathz1 {
  2.         xi: reg `i' abc i.avc, cluster(codev)
  3.         outreg2 abc using "Table1_PanelC", dec(2) append dta ctitle ("`var'
> ")   nocons
  4.         }
```

```
i.avcode          _Iavcode_1-24       (naturally coded; _Iavcode_1 omitted)

Linear regression                               Number of obs     =      5,982
                                                F(23, 112)        =       4.22
                                                Prob > F          =     0.0000
                                                R-squared         =     0.0224
                                                Root MSE          =      .9347

                          (Std. err. adjusted for 113 clusters in codevillage)
------------------------------------------------------------------------------
             |               Robust
     writez1 | Coefficient  std. err.      t    P>|t|     [95% conf. interval]
-------------+----------------------------------------------------------------
         abc |  -.0230921   .0399616    -0.58   0.565    -.1022709    .0560867
  _Iavcode_2 |  -.2052144   .1216767    -1.69   0.094    -.4463011    .0358723
  _Iavcode_3 |  -.3711898   .0773765    -4.80   0.000    -.5245013   -.2178782
  _Iavcode_4 |  -.3032091   .0811349    -3.74   0.000    -.4639674   -.1424508
  _Iavcode_5 |  -.2361261   .0929439    -2.54   0.012    -.4202826   -.0519696
  _Iavcode_6 |  -.3646186   .0790297    -4.61   0.000    -.5212059   -.2080313
  _Iavcode_8 |  -.3464581    .083205    -4.16   0.000    -.5113182    -.181598
  _Iavcode_9 |  -.2341432    .111874    -2.09   0.039    -.4558072   -.0124791
 _Iavcode_10 |  -.0489395   .2207886    -0.22   0.825    -.4864039    .3885248
 _Iavcode_11 |  -.3634914   .0869115    -4.18   0.000    -.5356955   -.1912874
 _Iavcode_12 |    -.27556   .0900153    -3.06   0.003    -.4539138   -.0972062
 _Iavcode_13 |  -.3252861   .0807738    -4.03   0.000     -.485329   -.1652432
 _Iavcode_14 |  -.2848496   .0958569    -2.97   0.004    -.4747777   -.0949214
 _Iavcode_15 |  -.1754577   .1762696    -1.00   0.322    -.5247133    .1737979
 _Iavcode_16 |   .1108725   .1750943     0.63   0.528    -.2360545    .4577995
 _Iavcode_17 |  -.3840173   .0773277    -4.97   0.000    -.5372323   -.2308023
 _Iavcode_18 |  -.0624857   .1315787    -0.47   0.636    -.3231921    .1982207
 _Iavcode_19 |  -.3935956   .0776814    -5.07   0.000    -.5475114   -.2396798
 _Iavcode_20 |  -.3272519     .08237    -3.97   0.000    -.4904574   -.1640463
 _Iavcode_21 |  -.3633844   .0784376    -4.63   0.000    -.5187985   -.2079702
 _Iavcode_22 |  -.1000956   .1718358    -0.58   0.561    -.4405661     .240375
 _Iavcode_23 |  -.3799316   .0744152    -5.11   0.000    -.5273757   -.2324874
 _Iavcode_24 |  -.3851199   .0748474    -5.15   0.000    -.5334204   -.2368195
       _cons |   .2450349   .0808129     3.03   0.003     .0849145    .4051553
------------------------------------------------------------------------------
dir : seeout
i.avcode          _Iavcode_1-24       (naturally coded; _Iavcode_1 omitted)

Linear regression                               Number of obs     =      5,982
                                                F(23, 112)        =       8.16
                                                Prob > F          =     0.0000
                                                R-squared         =     0.0199
                                                Root MSE          =     .90412

                          (Std. err. adjusted for 113 clusters in codevillage)
------------------------------------------------------------------------------
             |               Robust
      mathz1 | Coefficient  std. err.      t    P>|t|     [95% conf. interval]
-------------+----------------------------------------------------------------
         abc |  -.0593326   .0468961    -1.27   0.208    -.1522512     .033586
  _Iavcode_2 |   .0625439   .0924042     0.68   0.500    -.1205432     .245631
  _Iavcode_3 |  -.0176523   .1308971    -0.13   0.893    -.2770082    .2417035
  _Iavcode_4 |  -.0692193   .1275946    -0.54   0.589    -.3220315     .183593
  _Iavcode_5 |  -.1202344   .0840566    -1.43   0.155    -.2867818     .046313
  _Iavcode_6 |  -.2029252   .0670745    -3.03   0.003    -.3358247   -.0700256
  _Iavcode_8 |   -.186536   .0744624    -2.51   0.014    -.3340736   -.0389983
  _Iavcode_9 |  -.0735696   .1021616    -0.72   0.473    -.2759897    .1288505
 _Iavcode_10 |   .1028629   .1989149     0.52   0.606    -.2912615    .4969873
 _Iavcode_11 |  -.2015216   .0855893    -2.35   0.020    -.3711059   -.0319373
 _Iavcode_12 |  -.1222683   .0767666    -1.59   0.114    -.2743715     .029835
```

```
 _Iavcode_13 |  -.0344487   .1303188    -0.26   0.792    -.2926587    .2237613
 _Iavcode_14 |  -.2170937   .0755794    -2.87   0.005    -.3668447   -.0673428
 _Iavcode_15 |   .0899308   .2432233     0.37   0.712    -.3919851    .5718466
 _Iavcode_16 |    .080392   .1371445     0.59   0.559    -.1913423    .3521263
 _Iavcode_17 |   -.211454   .0705392    -3.00   0.003    -.3512185   -.0716895
 _Iavcode_18 |   .1173407   .1053573     1.11   0.268    -.0914114    .3260927
 _Iavcode_19 |  -.2039475   .1308492    -1.56   0.122    -.4632085    .0553135
 _Iavcode_20 |  -.1537888   .0782359    -1.97   0.052    -.3088033    .0012257
 _Iavcode_21 |  -.2009937   .0712221    -2.82   0.006    -.3421111   -.0598763
 _Iavcode_22 |  -.0865498   .1337841    -0.65   0.519    -.3516259    .1785262
 _Iavcode_23 |   -.277167   .0664611    -4.17   0.000    -.4088512   -.1454829
 _Iavcode_24 |  -.2904979   .0670077    -4.34   0.000    -.4232651   -.1577307
       _cons |   .0819325    .073604     1.11   0.268    -.0639045    .2277694
------------------------------------------------------------------------------
dir : seeout

.
. // now run the python code in jupyter notebook to generate the latex table in
> paper.
.
. /***************TABLE 3 ******************/
. /* Difference-In-Difference Estimation*/
.
. use "ABCtestscore.dta", clear

.
. keep if round==1|round==2|round==4
(8,848 observations deleted)

.
. regress writezscore abc post abcpost i.avc, robust cluster(codev)

Linear regression                               Number of obs     =     13,402
                                                F(25, 112)        =       7.22
                                                Prob > F          =     0.0000
                                                R-squared         =     0.0323
                                                Root MSE          =      .9824

                          (Std. err. adjusted for 113 clusters in codevillage)
------------------------------------------------------------------------------
             |               Robust
 writezscore | Coefficient  std. err.      t    P>|t|     [95% conf. interval]
-------------+----------------------------------------------------------------
         abc |  -.0510589   .0465429    -1.10   0.275    -.1432777      .04116
        post |  -.0039726   .0587009    -0.07   0.946    -.1202809    .1123357
     abcpost |   .1992111   .0879969     2.26   0.026     .0248564    .3735657
             |
      avcode |
          2  |  -.0906601   .1079392    -0.84   0.403    -.3045277    .1232075
          3  |   -.183981   .1017302    -1.81   0.073    -.3855465    .0175844
          4  |  -.2894135   .1066402    -2.71   0.008    -.5007075   -.0781196
          5  |  -.2452143   .1044592    -2.35   0.021     -.452187   -.0382417
          6  |    -.46009   .1292994    -3.56   0.001    -.7162801   -.2038998
          8  |  -.2800115   .1198111    -2.34   0.021    -.5174018   -.0426211
          9  |  -.1620166   .1055456    -1.54   0.128    -.3711417    .0471086
         10  |  -.0048311   .2000725    -0.02   0.981    -.4012491     .391587
         11  |   -.390521   .0870401    -4.49   0.000    -.5629798   -.2180621
         12  |  -.2878447   .1350846    -2.13   0.035    -.5554976   -.0201919
         13  |  -.1591703   .1127097    -1.41   0.161      -.38249    .0641495
         14  |  -.2646314   .1041042    -2.54   0.012    -.4709005   -.0583622
         15  |   -.129693   .1554394    -0.83   0.406    -.4376763    .1782902
         16  |   .0366599   .1324394     0.28   0.782    -.2257518    .2990716
         17  |  -.1387642   .1230681    -1.13   0.262    -.3826078    .1050794
```

```
         18  |  -.1951126   .1235594    -1.58   0.117    -.4399297    .0497046
         19  |   -.679253   .0982517    -6.91   0.000    -.8739262   -.4845797
         20  |  -.3457518   .1202588    -2.88   0.005    -.5840293   -.1074744
         21  |   -.267037   .1218386    -2.19   0.030    -.5084445   -.0256295
         22  |   .1134695   .1612048     0.70   0.483    -.2059372    .4328761
         23  |  -.0857758   .1191486    -0.72   0.473    -.3218534    .1503018
         24  |  -.2650121   .1637743    -1.62   0.108      -.58951    .0594857
             |
       _cons |   .2043208   .0933573     2.19   0.031     .0193453    .3892962
------------------------------------------------------------------------------

. est store did_1

.
. regress mathzscore abc post abcpost i.avc, robust cluster(codev)

Linear regression                               Number of obs     =     13,420
                                                F(25, 112)        =       8.71
                                                Prob > F          =     0.0000
                                                R-squared         =     0.0387
                                                Root MSE          =     .95166

                          (Std. err. adjusted for 113 clusters in codevillage)
------------------------------------------------------------------------------
             |               Robust
  mathzscore | Coefficient  std. err.      t    P>|t|     [95% conf. interval]
-------------+----------------------------------------------------------------
         abc |  -.0951747   .0548499    -1.74   0.085    -.2038528    .0135033
        post |    -.00444    .065844    -0.07   0.946    -.1349015    .1260214
     abcpost |   .2495865   .0897821     2.78   0.006     .0716947    .4274783
             |
      avcode |
          2  |   -.082131   .1782522    -0.46   0.646    -.4353149    .2710528
          3  |  -.0925166   .1727398    -0.54   0.593    -.4347783    .2497451
          4  |  -.3735547   .1702757    -2.19   0.030    -.7109342   -.0361752
          5  |  -.1247134   .1690281    -0.74   0.462     -.459621    .2101942
          6  |  -.5222786    .148996    -3.51   0.001    -.8174952   -.2270621
          8  |   -.268576   .1565125    -1.72   0.089    -.5786855    .0415336
          9  |   -.208784   .1494414    -1.40   0.165     -.504883     .087315
         10  |  -.1499738   .1724666    -0.87   0.386    -.4916944    .1917467
         11  |  -.2986701   .1561977    -1.91   0.058    -.6081558    .0108157
         12  |  -.3242764   .1605311    -2.02   0.046    -.6423481   -.0062046
         13  |  -.1888014   .1604644    -1.18   0.242    -.5067411    .1291383
         14  |   -.486933    .178265    -2.73   0.007    -.8401423   -.1337236
         15  |  -.1148496   .2321587    -0.49   0.622    -.5748424    .3451432
         16  |   .0418162   .2112213     0.20   0.843    -.3766916     .460324
         17  |  -.2581149   .1577508    -1.64   0.105    -.5706779     .054448
         18  |  -.2168221    .166191    -1.30   0.195    -.5461083    .1124642
         19  |  -.7515548   .1848091    -4.07   0.000     -1.11773   -.3853792
         20  |  -.2996786   .1726373    -1.74   0.085    -.6417372    .0423801
         21  |  -.3697023   .1827287    -2.02   0.045    -.7317558   -.0076488
         22  |  -.0746031   .2050252    -0.36   0.717    -.4808343    .3316281
         23  |     -.1667   .1775515    -0.94   0.350    -.5184955    .1850954
         24  |  -.2404897   .1853159    -1.30   0.197    -.6076695      .12669
             |
       _cons |   .2406417   .1498708     1.61   0.111    -.0563082    .5375915
------------------------------------------------------------------------------

. est store did_2

.
. regress writezscore abc post abcpost age female zarma kanuri dosso i.avc, robu
> st cluster(codev)
```

```
note: 21.avcode omitted because of collinearity.

Linear regression                               Number of obs     =     12,823
                                                F(28, 112)        =          .
                                                Prob > F          =          .
                                                R-squared         =     0.0841
                                                Root MSE          =     .96124

                          (Std. err. adjusted for 113 clusters in codevillage)
------------------------------------------------------------------------------
             |               Robust
 writezscore | Coefficient  std. err.      t    P>|t|     [95% conf. interval]
-------------+----------------------------------------------------------------
         abc |  -.0550791   .0503067    -1.09   0.276    -.1547553    .0445971
        post |  -.0052542   .0598876    -0.09   0.930    -.1239138    .1134054
     abcpost |   .2060991   .0880806     2.34   0.021     .0315787    .3806196
         age |  -.0100185   .0010229    -9.79   0.000    -.0120452   -.0079918
      female |   -.422774   .0324581   -13.03   0.000    -.4870855   -.3584624
       zarma |  -.1243937   .1057711    -1.18   0.242    -.3339655    .0851782
      kanuri |  -.1453456   .1060114    -1.37   0.173    -.3553936    .0647023
       dosso |   .3834023   .1047878     3.66   0.000     .1757786    .5910259
             |
      avcode |
           2 |   .1387582   .1246294     1.11   0.268     -.108179    .3856953
           3 |   -.268829   .0572569    -4.70   0.000    -.3822763   -.1553817
           4 |  -.3318701   .0502921    -6.60   0.000    -.4315175   -.2322227
           5 |  -.2208393   .1226682    -1.80   0.075    -.4638906     .022212
           6 |  -.0577199   .1676177    -0.34   0.731    -.3898329    .2743931
           8 |   -.000999   .1281626    -0.01   0.994    -.2549368    .2529388
           9 |   .1096527   .1391078     0.79   0.432    -.1659716    .3852771
          10 |   .2264182   .2074351     1.09   0.277    -.1845878    .6374242
          11 |  -.1705492   .1017395    -1.68   0.096     -.372133    .0310347
          12 |  -.0089675   .1505911    -0.06   0.953    -.3073445    .2894094
          13 |  -.2182531   .0614261    -3.55   0.001    -.3399611   -.0965451
          14 |  -.3756919   .0560114    -6.71   0.000    -.4866713   -.2647126
          15 |  -.2104435    .145473    -1.45   0.151    -.4986796    .0777926
          16 |    .088227   .1346647     0.66   0.514    -.1785938    .3550479
          17 |     .08145   .1392305     0.59   0.560    -.1944174    .3573175
          18 |    .084162   .1285724     0.65   0.514    -.1705877    .3389117
          19 |  -.7718081   .0503207   -15.34   0.000    -.8715121   -.6721041
          20 |  -.1003749   .1456929    -0.69   0.492    -.3890466    .1882969
          21 |           0  (omitted)
          22 |  -.0013611   .1286655    -0.01   0.992    -.2562953    .2535731
          23 |  -.2019155   .0803801    -2.51   0.013    -.3611783   -.0426526
          24 |  -.3243647   .1146495    -2.83   0.006     -.551528   -.0972014
             |
       _cons |   .5003294   .1155349     4.33   0.000     .2714118     .729247
------------------------------------------------------------------------------

. est store did_3

.
. regress mathzscore abc post abcpost age female hausa zarma kanuri dosso i.avc,
>  robust cluster(codev)
note: kanuri omitted because of collinearity.
note: 21.avcode omitted because of collinearity.

Linear regression                               Number of obs     =     12,840
                                                F(28, 112)        =          .
                                                Prob > F          =          .
                                                R-squared         =     0.0824
                                                Root MSE          =     .93591
```

```
                        (Std. err. adjusted for 113 clusters in codevillage)
------------------------------------------------------------------------------
             |               Robust
  mathzscore | Coefficient  std. err.      t    P>|t|     [95% conf. interval]
-------------+----------------------------------------------------------------
         abc |   -.105952   .0594318    -1.78   0.077    -.2237086    .0118045
        post |  -.0103319   .0679903    -0.15   0.879     -.145046    .1243822
     abcpost |   .2638597   .0922572     2.86   0.005      .081064    .4466555
         age |  -.0088965   .0010682    -8.33   0.000    -.0110131     -.00678
      female |  -.3779148   .0326013   -11.59   0.000      -.44251   -.3133196
       hausa |   .0932102   .0730168     1.28   0.204    -.0514633    .2378836
       zarma |   .1057464   .1834039     0.58   0.565    -.2576449    .4691377
      kanuri |          0  (omitted)
       dosso |   .3626226   .1232071     2.94   0.004     .1185034    .6067417
             |
      avcode |
           2 |    .268268   .1617104     1.66   0.100    -.0521404    .5886763
           3 |    -.06535   .0920711    -0.71   0.479     -.247777     .117077
           4 |  -.3094394   .0837591    -3.69   0.000    -.4753973   -.1434815
           5 |  -.1222296   .1807902    -0.68   0.500    -.4804422     .235983
           6 |  -.0766599   .1412152    -0.54   0.588    -.3564596    .2031399
           8 |   .0829937   .1301713     0.64   0.525    -.1749239    .3409114
           9 |   .1486676   .1302288     1.14   0.256    -.1093641    .4066993
          10 |   .1749696   .1550554     1.13   0.262    -.1322527     .482192
          11 |   .0005789   .1234509     0.00   0.996    -.2440232    .2451809
          12 |   .0370997   .1425613     0.26   0.795    -.2453673    .3195668
          13 |  -.1389413   .0652473    -2.13   0.035    -.2682205   -.0096621
          14 |  -.4829835   .0999152    -4.83   0.000    -.6809526   -.2850144
          15 |  -.0844382   .1922667    -0.44   0.661      -.46539    .2965137
          16 |   .0673805   .2137162     0.32   0.753    -.3560707    .4908316
          17 |   .0614323   .1356061     0.45   0.651    -.2072538    .3301185
          18 |   .1601654   .1415728     1.13   0.260     -.120343    .4406738
          19 |  -.7326965    .113865    -6.43   0.000    -.9583054   -.5070876
          20 |   .0532177   .1632214     0.33   0.745    -.2701846      .37662
          21 |          0  (omitted)
          22 |  -.0748024   .1376478    -0.54   0.588     -.347534    .1979291
          23 |  -.1663476   .0947249    -1.76   0.082    -.3540328    .0213377
          24 |  -.1903549   .0968322    -1.97   0.052    -.3822156    .0015057
             |
       _cons |   .2908555   .1517514     1.92   0.058    -.0098204    .5915314
------------------------------------------------------------------------------

. est store did_4

.
. generate agesq = age * age
(758 missing values generated)

. regress writezscore abc post abcpost age agesq female zarma kanuri dosso i.avc
> , robust cluster(codev)
note: 21.avcode omitted because of collinearity.

Linear regression                               Number of obs     =     12,823
                                                F(29, 112)        =          .
                                                Prob > F          =          .
                                                R-squared         =     0.0852
                                                Root MSE          =     .96068

                        (Std. err. adjusted for 113 clusters in codevillage)
------------------------------------------------------------------------------
             |               Robust
 writezscore | Coefficient  std. err.      t    P>|t|     [95% conf. interval]
-------------+----------------------------------------------------------------
```

```
         abc |  -.0556091   .0502835    -1.11   0.271    -.1552393    .0440212
        post |  -.0041433   .0599477    -0.07   0.945     -.122922    .1146354
      abcpost |   .2053414    .088065     2.33   0.022     .0308519    .3798308
         age |   .0035228    .004061     0.87   0.388    -.0045236    .0115692
       agesq |  -.0001758   .0000494    -3.56   0.001    -.0002738   -.0000778
      female |  -.4199216   .0321456   -13.06   0.000    -.4836141   -.3562292
       zarma |  -.1337417   .1016719    -1.32   0.191    -.3351915    .0677082
      kanuri |  -.1396212    .108159    -1.29   0.199    -.3539243    .0746819
       dosso |      .3954   .1042005     3.79   0.000     .1889402    .6018598
             |
      avcode |
          2  |   .1364994   .1274856     1.07   0.287    -.1160971    .3890958
          3  |  -.2852728   .0552272    -5.17   0.000    -.3946985   -.1758472
          4  |  -.3479106   .0501266    -6.94   0.000    -.4472301   -.2485911
          5  |  -.2208747   .1190167    -1.86   0.066    -.4566911    .0149418
          6  |  -.0691594   .1712647    -0.40   0.687    -.4084984    .2701796
          8  |   .0016404    .127715     0.01   0.990    -.2514105    .2546913
          9  |   .1125322   .1364198     0.82   0.411    -.1577661    .3828305
         10  |   .2289574   .2067217     1.11   0.270    -.1806352    .6385499
         11  |   -.154831   .1025477    -1.51   0.134    -.3580161     .048354
         12  |  -.0105509   .1529626    -0.07   0.945    -.3136267    .2925249
         13  |  -.2267797   .0620862    -3.65   0.000    -.3497955   -.1037639
         14  |  -.3890739   .0566752    -6.86   0.000    -.5013685   -.2767793
         15  |  -.2320266   .1458889    -1.59   0.115    -.5210868    .0570335
         16  |   .0818397    .128478     0.64   0.525     -.172723    .3364024
         17  |   .0798223   .1379494     0.58   0.564    -.1935068    .3531514
         18  |   .0804048   .1281812     0.63   0.532    -.1735698    .3343795
         19  |  -.7866782   .0510107   -15.42   0.000    -.8877493   -.6856071
         20  |  -.0997755   .1448084    -0.69   0.492    -.3866948    .1871437
         21  |           0  (omitted)
         22  |  -.0145482   .1298051    -0.11   0.911    -.2717404     .242644
         23  |  -.2162934   .0826966    -2.62   0.010    -.3801462   -.0524407
         24  |  -.3294515   .1137905    -2.90   0.005    -.5549129   -.1039901
             |
       _cons |   .2668819   .1389208     1.92   0.057    -.0083718    .5421356
------------------------------------------------------------------------------

. est store did_5

.
. regress mathzscore abc post abcpost age agesq female zarma kanuri dosso i.avc,
>  robust cluster(codev)
note: 21.avcode omitted because of collinearity.

Linear regression                               Number of obs     =     12,840
                                                F(29, 112)        =          .
                                                Prob > F          =          .
                                                R-squared         =     0.0834
                                                Root MSE          =     .93544

                          (Std. err. adjusted for 113 clusters in codevillage)
------------------------------------------------------------------------------
             |               Robust
  mathzscore | Coefficient  std. err.      t    P>|t|     [95% conf. interval]
-------------+----------------------------------------------------------------
         abc |  -.1064173   .0592745    -1.80   0.075    -.2238621    .0110275
        post |   -.009312   .0680841    -0.14   0.891    -.1442119    .1255878
      abcpost |   .2631894   .0922854     2.85   0.005     .0803376    .4460411
         age |   .0034686   .0043576     0.80   0.428    -.0051655    .0121027
       agesq |  -.0001605    .000055    -2.92   0.004    -.0002694   -.0000516
      female |  -.3753278   .0324433   -11.57   0.000      -.43961   -.3110456
       zarma |    .003916   .1634816     0.02   0.981    -.3200019    .3278339
      kanuri |  -.0880252   .0754579    -1.17   0.246    -.2375354     .061485
```

```
       dosso |   .3736709   .1225222     3.05   0.003     .1309089    .6164329
             |
      avcode |
          2  |   .2662544   .1626552     1.64   0.104     -.056026    .5885348
          3  |  -.0803924   .0902928    -0.89   0.375     -.259296    .0985113
          4  |  -.3240728   .0846412    -3.83   0.000    -.4917785   -.1563671
          5  |  -.1220011   .1768527    -0.69   0.492     -.472412    .2284099
          6  |  -.0869908   .1415421    -0.61   0.540    -.3674384    .1934567
          8  |   .0854807   .1291402     0.66   0.509     -.170394    .3413553
          9  |   .1513965   .1288535     1.17   0.243    -.1039101    .4067032
         10  |   .1773566   .1549541     1.14   0.255    -.1296651    .4843783
         11  |   .0150215   .1264835     0.12   0.906    -.2355893    .2656322
         12  |   .0358183   .1431655     0.25   0.803    -.2478458    .3194825
         13  |  -.1467585   .0657588    -2.23   0.028     -.277051   -.0164659
         14  |  -.4952641   .0992215    -4.99   0.000    -.6918587   -.2986695
         15  |  -.1041566   .1931611    -0.54   0.591    -.4868805    .2785674
         16  |   .0615991   .2080679     0.30   0.768    -.3506608    .4738591
         17  |   .0600293    .134215     0.45   0.656    -.2059006    .3259592
         18  |   .1568323   .1409379     1.11   0.268    -.1224181    .4360827
         19  |  -.7462927   .1133911    -6.58   0.000    -.9709627   -.5216226
         20  |   .0537575   .1620974     0.33   0.741    -.2674178    .3749327
         21  |          0  (omitted)
         22  |  -.0867922   .1389986    -0.62   0.534    -.3622002    .1886158
         23  |   -.179502   .0964194    -1.86   0.065    -.3705446    .0115406
         24  |  -.1950376   .0950146    -2.05   0.042    -.3832969   -.0067784
             |
       _cons |   .1707563   .1583278     1.08   0.283    -.1429498    .4844625
------------------------------------------------------------------------------

. est store did_6

.
. qui tab codevillage, gen(village_dum)

.
. reg writezscore abc post abcpost age agesq female village_dum*, robust cluster
> (codev)
note: village_dum23 omitted because of collinearity.
note: village_dum71 omitted because of collinearity.

Linear regression                               Number of obs     =     12,823
                                                F(4, 112)         =          .
                                                Prob > F          =          .
                                                R-squared         =     0.1310
                                                Root MSE          =     .93953

                          (Std. err. adjusted for 113 clusters in codevillage)
------------------------------------------------------------------------------
             |               Robust
  writezscore | Coefficient  std. err.      t    P>|t|     [95% conf. interval]
-------------+----------------------------------------------------------------
         abc |   .2000127   .0409423     4.89   0.000     .1188908    .2811347
        post |  -.0121467   .0602387    -0.20   0.841     -.131502    .1072085
     abcpost |   .1981458   .0900948     2.20   0.030     .0196346    .3766571
         age |   .0035513   .0038522     0.92   0.359    -.0040813    .0111838
       agesq |  -.0001729   .0000476    -3.64   0.000    -.0002671   -.0000786
      female |    -.42022   .0318673   -13.19   0.000    -.4833609   -.3570791
 village_dum1 |   .2463838   .0120014    20.53   0.000     .2226045    .2701631
 village_dum2 |   .3594132   .0114612    31.36   0.000     .3367043    .3821221
 village_dum3 |  -.0304211   .0057636    -5.28   0.000     -.041841   -.0190012
 village_dum4 |   .3483127   .0112254    31.03   0.000      .326071    .3705543
 village_dum5 |  -.2166004   .0053286   -40.65   0.000    -.2271583   -.2060425
 village_dum6 |   .3707893   .0138283    26.81   0.000     .3433903    .3981883
```

```
 village_dum7 |   .0085449   .0075632     1.13   0.261    -.0064405    .0235304
 village_dum8 |   .2758065   .0130167    21.19   0.000     .2500156    .3015975
 village_dum9 |   .2509161   .0112013    22.40   0.000     .2287221     .27311
village_dum10 |  -.0493719   .0053025    -9.31   0.000     -.059878   -.0388657
village_dum11 |   .4104497   .0188899    21.73   0.000     .3730217    .4478777
village_dum12 |   .2046092   .0073339    27.90   0.000      .190078    .2191405
village_dum13 |   .3452605   .0118047    29.25   0.000      .321871    .3686501
village_dum14 |   1.049788   .0139625    75.19   0.000     1.022123    1.077453
village_dum15 |   .0268117   .0056937     4.71   0.000     .0155304     .038093
village_dum16 |   .0829354   .0055801    14.86   0.000     .0718791    .0939916
village_dum17 |  -.0787306    .012587    -6.25   0.000    -.1036702   -.0537911
village_dum18 |   .0301431   .0112097     2.69   0.008     .0079326    .0523537
village_dum19 |   .2509395   .0221304    11.34   0.000      .207091    .2947881
village_dum20 |   .1350521   .0102752    13.14   0.000     .1146931    .1554112
village_dum21 |    .292485   .0092702    31.55   0.000     .2741173    .3108526
village_dum22 |   .3646007   .0131779    27.67   0.000     .3384904     .390711
village_dum23 |          0  (omitted)
village_dum24 |   -.122782   .0147775    -8.31   0.000    -.1520617   -.0935022
village_dum25 |   .2294518   .0153605    14.94   0.000     .1990169    .2598866
village_dum26 |   -.043829   .0062296    -7.04   0.000    -.0561721    -.031486
village_dum27 |   .4659355   .0088764    52.49   0.000     .4483481     .483523
village_dum28 |   .3299478   .0171415    19.25   0.000     .2959841    .3639114
village_dum29 |  -.0959563   .0054068   -17.75   0.000    -.1066692   -.0852433
village_dum30 |   .4381723   .0085531    51.23   0.000     .4212255    .4551191
village_dum31 |   .3144499   .0145556    21.60   0.000     .2856099     .34329
village_dum32 |   .4706423   .0218307    21.56   0.000     .4273876     .513897
village_dum33 |  -.1921805   .0148748   -12.92   0.000    -.221653   -.1627079
village_dum34 |   .2782096   .0166371    16.72   0.000     .2452453    .3111739
village_dum35 |   .4653453   .0128306    36.27   0.000      .439923    .4907675
village_dum36 |   .1857377   .0113258    16.40   0.000     .1632971    .2081783
village_dum37 |  -.1328043   .0049865   -26.63   0.000    -.1426844   -.1229243
village_dum38 |   .3033545    .005656    53.63   0.000     .2921479    .3145611
village_dum39 |   .6047206   .0119595    50.56   0.000     .5810244    .6284168
village_dum40 |   .7469455   .0073236   101.99   0.000     .7324348    .7614563
village_dum41 |   .0820559     .00511    16.06   0.000      .071931    .0921808
village_dum42 |   .8363101   .0136051    61.47   0.000     .8093534    .8632669
village_dum43 |   .3680188   .0123875    29.71   0.000     .3434745    .3925631
village_dum44 |   .6109077   .0061925    98.65   0.000      .598638    .6231773
village_dum45 |  -.3060901    .014849   -20.61   0.000    -.3355114   -.2766688
village_dum46 |  -.1230971   .0129077    -9.54   0.000     -.148672   -.0975222
village_dum47 |  -.4282263   .0103153   -41.51   0.000    -.4486647   -.4077878
village_dum48 |  -.0446813   .0127734    -3.50   0.001    -.0699903   -.0193724
village_dum49 |   .1746349   .0063877    27.34   0.000     .1619785    .1872913
village_dum50 |   .1084691   .0155095     6.99   0.000     .0777389    .1391993
village_dum51 |   .0750311   .0118576     6.33   0.000     .0515367    .0985255
village_dum52 |   .0917464   .0103363     8.88   0.000     .0712663    .1122265
village_dum53 |  -.1370117   .0061662   -22.22   0.000    -.1492293   -.1247941
village_dum54 |   .6250278   .0115922    53.92   0.000     .6020594    .6479962
village_dum55 |  -.0005771   .0059555    -0.10   0.923    -.0123771    .0112228
village_dum56 |   .5881901   .0206581    28.47   0.000     .5472588    .6291214
village_dum57 |   .5582569   .0143967    38.78   0.000     .5297317     .586782
village_dum58 |   .0658919   .0055316    11.91   0.000     .0549317     .076852
village_dum59 |  -.0551618   .0104185    -5.29   0.000    -.0758048   -.0345188
village_dum60 |   .5489568   .0188675    29.10   0.000     .5115734    .5863403
village_dum61 |   .2446412    .004813    50.83   0.000     .2351049    .2541775
village_dum62 |   .3517421   .0067813    51.87   0.000     .3383058    .3651784
village_dum63 |   .0262433   .0052229     5.02   0.000     .0158949    .0365917
village_dum64 |  -.1307429   .0104654   -12.49   0.000    -.1514788    -.110007
village_dum65 |   .1924216   .0122953    15.65   0.000       .16806    .2167831
village_dum66 |    .413397   .0117836    35.08   0.000     .3900493    .4367447
village_dum67 |   .1047458   .0065449    16.00   0.000     .0917779    .1177137
village_dum68 |   .3082862   .0120073    25.67   0.000     .2844952    .3320772
village_dum69 |  -.0362231   .0138807    -2.61   0.010    -.0637259   -.0087204
```

```
village_dum70 |  -.2047813   .0136022   -15.05   0.000    -.2317324   -.1778302
village_dum71 |          0  (omitted)
village_dum72 |   .5147862   .0084002    61.28   0.000     .4981424      .53143
village_dum73 |   .0333197   .0162646     2.05   0.043     .0010934    .0655459
village_dum74 |   .0101105   .0063275     1.60   0.113    -.0024267    .0226478
village_dum75 |   .1320347   .0068668    19.23   0.000      .118429    .1456405
village_dum76 |  -.0916407   .0159302    -5.75   0.000    -.1232043   -.0600772
village_dum77 |   .2873811   .0111221    25.84   0.000     .2653442    .3094181
village_dum78 |  -.3089412   .0067091   -46.05   0.000    -.3222344    -.295648
village_dum79 |   .2622445   .0157479    16.65   0.000      .231042     .293447
village_dum80 |   .4049001   .0155201    26.09   0.000     .3741491     .435651
village_dum81 |  -.1971048   .0060174   -32.76   0.000    -.2090276   -.1851821
village_dum82 |   .0200442   .0119882     1.67   0.097     -.003709    .0437974
village_dum83 |   -.095612   .0100623    -9.50   0.000    -.1155491   -.0756749
village_dum84 |   .2209478   .0145085    15.23   0.000      .192201    .2496946
village_dum85 |   .4659644   .0132508    35.16   0.000     .4397095    .4922192
village_dum86 |   .3321916   .0094833    35.03   0.000     .3134017    .3509814
village_dum87 |   .1503892   .0146662    10.25   0.000     .1213301    .1794484
village_dum88 |   .2690468   .0110279    24.40   0.000     .2471964    .2908972
village_dum89 |  -.1688341   .0068497   -24.65   0.000     -.182406   -.1552623
village_dum90 |   .6203053   .0081072    76.51   0.000     .6042419    .6363686
village_dum91 |  -.0884095   .0082307   -10.74   0.000    -.1047177   -.0721014
village_dum92 |  -.2753335    .014496   -18.99   0.000    -.3040555   -.2466115
village_dum93 |   .0915902   .0134923     6.79   0.000     .0648569    .1183236
village_dum94 |   .5520984   .0106833    51.68   0.000     .5309307    .5732661
village_dum95 |  -.1543976   .0098757   -15.63   0.000    -.1739651   -.1348302
village_dum96 |   .0108074   .0169062     0.64   0.524    -.0226901    .0443048
village_dum97 |   1.172814   .0039729   295.20   0.000     1.164942    1.180686
village_dum98 |    .285212   .0122306    23.32   0.000     .2609786    .3094453
village_dum99 |   -.342363   .0146582   -23.36   0.000    -.3714064   -.3133196
village_d~100 |  -.1649565   .0235799    -7.00   0.000     -.211677    -.118236
village_d~101 |   .5504485   .0029785   184.80   0.000     .5445469    .5563501
village_d~102 |  -.0800508   .0082518    -9.70   0.000    -.0964007   -.0637009
village_d~103 |   .1635836   .0043785    37.36   0.000     .1549082     .172259
village_d~104 |   .0386099   .0064398     6.00   0.000     .0258502    .0513695
village_d~105 |  -.0427333   .0089744    -4.76   0.000    -.0605149   -.0249516
village_d~106 |   .0958824   .0055424    17.30   0.000     .0849009    .1068639
village_d~107 |   .3970639   .0140557    28.25   0.000     .3692142    .4249135
village_d~108 |   .2835363    .015932    17.80   0.000     .2519691    .3151034
village_d~109 |   .0000214   .0068973     0.00   0.998    -.0136446    .0136875
village_d~110 |   .1243371   .0118457    10.50   0.000     .1008664    .1478078
village_d~111 |  -.5558233   .0136063   -40.85   0.000    -.5827823   -.5288642
village_d~112 |  -.0863275   .0147459    -5.85   0.000    -.1155447   -.0571104
village_d~113 |   .2710067   .0152354    17.79   0.000     .2408198    .3011937
        _cons |   .0503767   .0805497     0.63   0.533    -.1092223    .2099757
------------------------------------------------------------------------------

. est store did_7

.
. reg mathzscore abc post abcpost age agesq female village_dum*, robust cluster(
> codev)
note: village_dum23 omitted because of collinearity.
note: village_dum71 omitted because of collinearity.

Linear regression                               Number of obs     =     12,840
                                                F(4, 112)         =          .
                                                Prob > F          =          .
                                                R-squared         =     0.1393
                                                Root MSE          =     .90959

                          (Std. err. adjusted for 113 clusters in codevillage)
------------------------------------------------------------------------------
```

mathzscore	Coefficient	Robust std. err.	t	P>|t|	[95% conf.	interval]
abc	.2304088	.0424443	5.43	0.000	.1463109	.3145067
post	-.0269673	.0692329	-0.39	0.698	-.1641434	.1102087
abcpost	.2581796	.0942908	2.74	0.007	.0713545	.4450047
age	.0014676	.0040803	0.36	0.720	-.006617	.0095522
agesq	-.0001277	.0000508	-2.51	0.013	-.0002285	-.000027
female	-.3739415	.0324674	-11.52	0.000	-.4382715	-.3096115
village_dum1	.1340469	.0104668	12.81	0.000	.1133082	.1547855
village_dum2	.6172878	.0107638	57.35	0.000	.5959606	.638615
village_dum3	.1121939	.0055464	20.23	0.000	.1012044	.1231833
village_dum4	.0476657	.0106083	4.49	0.000	.0266467	.0686847
village_dum5	-.2245481	.0051292	-43.78	0.000	-.2347109	-.2143853
village_dum6	.57214	.0156429	36.58	0.000	.5411457	.6031344
village_dum7	.1769142	.0077772	22.75	0.000	.1615046	.1923238
village_dum8	.5647013	.0112651	50.13	0.000	.5423811	.5870216
village_dum9	.5767816	.0127261	45.32	0.000	.5515665	.6019966
village_dum10	-.0268811	.0050898	-5.28	0.000	-.0369659	-.0167962
village_dum11	.7422923	.0203261	36.52	0.000	.7020187	.7825658
village_dum12	.2898047	.0078318	37.00	0.000	.274287	.3053223
village_dum13	.3964721	.0126973	31.22	0.000	.371314	.4216303
village_dum14	1.437935	.0151704	94.79	0.000	1.407877	1.467993
village_dum15	-.080201	.005773	-13.89	0.000	-.0916395	-.0687625
village_dum16	.0220621	.0055657	3.96	0.000	.0110343	.0330899
village_dum17	.3294287	.0108356	30.40	0.000	.3079594	.3508981
village_dum18	.0143654	.0111573	1.29	0.201	-.0077414	.0364721
village_dum19	.4050257	.0219306	18.47	0.000	.361573	.4484785
village_dum20	.1595526	.0110434	14.45	0.000	.1376715	.1814337
village_dum21	.0388279	.0095568	4.06	0.000	.0198923	.0577634
village_dum22	.6583834	.0142258	46.28	0.000	.6301968	.68657
village_dum23	0	(omitted)				
village_dum24	-.2701003	.0130883	-20.64	0.000	-.2960331	-.2441675
village_dum25	.4073737	.0162667	25.04	0.000	.3751434	.4396041
village_dum26	.0945878	.0062123	15.23	0.000	.0822788	.1068967
village_dum27	.2911824	.007901	36.85	0.000	.2755276	.3068373
village_dum28	.7692604	.0184037	41.80	0.000	.7327958	.8057249
village_dum29	-.0933571	.0053484	-17.46	0.000	-.1039543	-.0827598
village_dum30	.5304775	.0087941	60.32	0.000	.5130532	.5479018
village_dum31	.3664185	.0144708	25.32	0.000	.3377465	.3950906
village_dum32	.5243534	.0225591	23.24	0.000	.4796555	.5690513
village_dum33	-.0941615	.0148258	-6.35	0.000	-.1235369	-.0647861
village_dum34	.6177983	.0179047	34.50	0.000	.5823224	.6532742
village_dum35	.3967689	.0115812	34.26	0.000	.3738222	.4197155
village_dum36	.2593729	.0114671	22.62	0.000	.2366522	.2820935
village_dum37	.1308264	.0049358	26.51	0.000	.1210469	.140606
village_dum38	.5692132	.0059825	95.15	0.000	.5573596	.5810668
village_dum39	.6312953	.011525	54.78	0.000	.6084601	.6541306
village_dum40	.2490621	.0078883	31.57	0.000	.2334324	.2646918
village_dum41	.1946032	.0047017	41.39	0.000	.1852873	.2039191
village_dum42	.7854782	.0119751	65.59	0.000	.761751	.8092053
village_dum43	.291605	.014299	20.39	0.000	.2632734	.3199367
village_dum44	.6651024	.0064149	103.68	0.000	.6523921	.6778128
village_dum45	-.3652751	.0164423	-22.22	0.000	-.3978534	-.3326967
village_dum46	-.0590672	.014429	-4.09	0.000	-.0876564	-.0304781
village_dum47	-.0989499	.0089006	-11.12	0.000	-.1165854	-.0813144
village_dum48	-.0538021	.0128661	-4.18	0.000	-.0792946	-.0283095
village_dum49	.1233083	.0061411	20.08	0.000	.1111405	.1354762
village_dum50	-.1059587	.014749	-7.18	0.000	-.135182	-.0767354
village_dum51	.1040803	.0104587	9.95	0.000	.0833577	.1248029
village_dum52	-.1020964	.0101783	-10.03	0.000	-.1222634	-.0819294
village_dum53	-.2980892	.0059544	-50.06	0.000	-.3098871	-.2862913
village_dum54	.879559	.0130979	67.15	0.000	.8536072	.9055108

```
village_dum55 |   .0227232   .0057806     3.93   0.000     .0112696    .0341768
village_dum56 |   .4625065   .0214378    21.57   0.000     .4200303    .5049827
village_dum57 |   .7876855   .0126405    62.31   0.000     .7626401    .8127309
village_dum58 |   .3254212    .005368    60.62   0.000     .3147851    .3360573
village_dum59 |  -.0691536   .0111554    -6.20   0.000    -.0912567   -.0470506
village_dum60 |   .6435241     .02005    32.10   0.000     .6037977    .6832506
village_dum61 |   .7981737   .0052147   153.06   0.000     .7878414    .8085059
village_dum62 |   .5254195   .0069438    75.67   0.000     .5116612    .5391777
village_dum63 |   .4912544   .0055708    88.18   0.000     .4802165    .5022923
village_dum64 |   .2971935   .0089458    33.22   0.000     .2794686    .3149185
village_dum65 |   .0620621   .0113341     5.48   0.000     .0396051    .0845192
village_dum66 |   .7914963   .0095686    82.72   0.000     .7725373    .8104553
village_dum67 |   .3461106    .006939    49.88   0.000     .3323619    .3598593
village_dum68 |   .3548055   .0111941    31.70   0.000     .3326259    .3769851
village_dum69 |    .144745   .0124008    11.67   0.000     .1201744    .1693156
village_dum70 |  -.1462085      .0121   -12.08   0.000     -.170183   -.1222339
village_dum71 |          0  (omitted)
village_dum72 |   .4309493   .0085322    50.51   0.000     .4140438    .4478548
village_dum73 |   .0986976   .0147858     6.68   0.000     .0694015    .1279937
village_dum74 |   .4232973   .0068322    61.96   0.000     .4097601    .4368345
village_dum75 |   .1901039   .0072444    26.24   0.000       .17575    .2044578
village_dum76 |   .1680752   .0180188     9.33   0.000     .1323731    .2037772
village_dum77 |   .2816224   .0123935    22.72   0.000     .2570663    .3061785
village_dum78 |  -.2342353   .0061579   -38.04   0.000    -.2464365   -.2220342
village_dum79 |   .1845568   .0139647    13.22   0.000     .1568876     .212226
village_dum80 |   .6649395   .0173373    38.35   0.000     .6305879    .6992912
village_dum81 |  -.1650774   .0056778   -29.07   0.000    -.1763273   -.1538275
village_dum82 |  -.1862645   .0112038   -16.63   0.000    -.2084634   -.1640655
village_dum83 |  -.0190238   .0110537    -1.72   0.088    -.0409253    .0028776
village_dum84 |   .3361813   .0131455    25.57   0.000     .3101351    .3622274
village_dum85 |   .5654703   .0145002    39.00   0.000      .53674    .5942007
village_dum86 |    .377591   .0098252    38.43   0.000     .3581236    .3970585
village_dum87 |   .1150872   .0132007     8.72   0.000     .0889318    .1412427
village_dum88 |   .4554562   .0117098    38.90   0.000     .4322548    .4786577
village_dum89 |  -.0764105   .0063255   -12.08   0.000    -.0889436   -.0638774
village_dum90 |   .5886127   .0089668    65.64   0.000     .5708461    .6063792
village_dum91 |  -.0286019   .0076692    -3.73   0.000    -.0437975   -.0134064
village_dum92 |  -.1631718   .0133078   -12.26   0.000    -.1895396    -.136804
village_dum93 |   .2248553   .0153166    14.68   0.000     .1945074    .2552032
village_dum94 |   .5213362   .0121439    42.93   0.000     .4972746    .5453978
village_dum95 |   .0025262   .0092995     0.27   0.786    -.0158996     .020952
village_dum96 |  -.0152691   .0155402    -0.98   0.328    -.0460599    .0155218
village_dum97 |   .6015611   .0034217   175.81   0.000     .5947814    .6083408
village_dum98 |   .4379961   .0133729    32.75   0.000     .4114994    .4644928
village_dum99 |  -.2128962   .0128816   -16.53   0.000    -.2384194    -.187373
village_d~100 |   .0261496   .0233281     1.12   0.265    -.0200719    .0723712
village_d~101 |   .5731722   .0032539   176.15   0.000      .566725    .5796194
village_d~102 |  -.0715143   .0074591    -9.59   0.000    -.0862936   -.0567351
village_d~103 |   .1229107   .0046703    26.32   0.000     .1136571    .1321644
village_d~104 |   .2589786   .0067059    38.62   0.000     .2456918    .2722654
village_d~105 |  -.0897122   .0082611   -10.86   0.000    -.1060805   -.0733439
village_d~106 |   .4165499   .0057679    72.22   0.000     .4051214    .4279783
village_d~107 |   .6256733    .015856    39.46   0.000     .5942568    .6570898
village_d~108 |   .6600402   .0176457    37.41   0.000     .6250775     .695003
village_d~109 |   .1066969   .0068667    15.54   0.000     .0930913    .1203025
village_d~110 |   .3307869   .0120544    27.44   0.000     .3069027    .3546712
village_d~111 |  -.4362401   .0122494   -35.61   0.000    -.4605108   -.4119694
village_d~112 |   .0973619   .0129308     7.53   0.000     .0717412    .1229827
village_d~113 |   .3751599    .014136    26.54   0.000     .3471513    .4031684
        _cons |  -.0898277   .0876636    -1.02   0.308    -.2635219    .0838664
------------------------------------------------------------------------------

. est store did_8
```

```
.
. esttab did_* ///
>  using ../manuscript/Tables/did_result.tex, ///
> style(tex) booktabs keep(abc post abcpost age agesq female) ///
> mtitle("literacy" "math" "literacy" "math" "literacy" "math" "literacy" "math"
> ) ///
> star(* 0.1 ** 0.05 *** 0.01) ///
> se ///
> scalars("r2 R-squared") ///
>  replace
(output written to ../manuscript/Tables/did_result.tex)

.
. /***************TABLE 4 ******************/
. /* Difference-In-Difference-In-Difference Estimation*/
.
. use "ABCtestscore.dta", clear

.
. keep if round==1|round==2|round==4
(8,848 observations deleted)

.
. generate agesq = age * age
(758 missing values generated)

. capture drop region regionpost regionabc abcregionpost

. gen region=dosso==1

. gen regionpost=region*post

. gen regionabc=region*abc

. gen abcregionpost=regionabc*post

.
. reg writezscore abcpost abc post region regionpost regionabc abcregionpost coh
> ort2009 female age agesq i.avc, robust cluster(codev)
note: 21.avcode omitted because of collinearity.

Linear regression                               Number of obs     =     12,823
                                                F(32, 112)        =      17.62
                                                Prob > F          =     0.0000
                                                R-squared         =     0.0867
                                                Root MSE          =     .95998

                          (Std. err. adjusted for 113 clusters in codevillage)
------------------------------------------------------------------------------
             |               Robust
  writezscore | Coefficient  std. err.      t    P>|t|     [95% conf. interval]
-------------+----------------------------------------------------------------
      abcpost |   .1875113   .1546648     1.21   0.228    -.1189371    .4939597
          abc |  -.0645277   .0708698    -0.91   0.365    -.2049472    .0758917
         post |  -.0647489   .1104386    -0.59   0.559    -.2835688     .154071
       region |   .2101382   .1447979     1.45   0.150    -.0767602    .4970366
   regionpost |     .07895   .1294945     0.61   0.543    -.1776269    .3355268
    regionabc |   .0141632   .0953904     0.15   0.882    -.1748406    .2031671
abcregionpost |   .0350682   .1858886     0.19   0.851    -.3332461    .4033825
   cohort2009 |   .0761185   .0469876     1.62   0.108    -.0169814    .1692184
       female |  -.4209914   .0323125   -13.03   0.000    -.4850145   -.3569684
          age |   .0032988   .0041922     0.79   0.433    -.0050075    .0116052
```

```
        agesq |  -.0001733   .0000507    -3.42   0.001    -.0002737   -.0000729
              |
       avcode |
           2  |   .1311723   .1228699     1.07   0.288    -.1122787    .3746233
           3  |  -.1592494   .0848302    -1.88   0.063    -.3273295    .0088308
           4  |  -.2273826   .0936891    -2.43   0.017    -.4130157   -.0417496
           5  |  -.2269041   .1051112    -2.16   0.033    -.4351685   -.0186397
           6  |  -.2049445   .1416413    -1.45   0.151    -.4855886    .0756995
           8  |   .0035552   .1271581     0.03   0.978    -.2483922    .2555027
           9  |   .0539037   .1132944     0.48   0.635    -.1705747    .2783821
          10  |   .2146739   .2216326     0.97   0.335    -.2244627    .6538106
          11  |   -.147341   .0994785    -1.48   0.141    -.3444449     .049763
          12  |   -.051788   .1551379    -0.33   0.739    -.3591739    .2555979
          13  |  -.0824452   .1021807    -0.81   0.421    -.2849032    .1200128
          14  |  -.2402021   .0833075    -2.88   0.005    -.4052651    -.075139
          15  |  -.1066155   .1510305    -0.71   0.482    -.4058631    .1926321
          16  |   .0642228   .1040609     0.62   0.538    -.1419606    .2704061
          17  |   .0832575   .1264731     0.66   0.512    -.1673328    .3338478
          18  |   .0791907   .1226077     0.65   0.520    -.1637407    .3221221
          19  |  -.6747156   .0959081    -7.04   0.000    -.8647453   -.4846859
          20  |  -.0988615   .1439464    -0.69   0.494    -.3840729    .1863499
          21  |           0  (omitted)
          22  |   .1254239    .152612     0.82   0.413    -.1769572     .427805
          23  |  -.0806136   .1032451    -0.78   0.437    -.2851805    .1239534
          24  |  -.2120672   .1314206    -1.61   0.109    -.4724604    .0483259
              |
        _cons |    .269378   .1478756     1.82   0.071    -.0236186    .5623745
------------------------------------------------------------------------------

. est store ddd_1

.
. reg mathzscore abcpost abc post region regionpost regionabc abcregionpost coho
> rt2009 female age agesq i.avc, robust cluster(codev)
note: 21.avcode omitted because of collinearity.

Linear regression                               Number of obs     =     12,840
                                                F(32, 112)        =      18.76
                                                Prob > F          =     0.0000
                                                R-squared         =     0.0906
                                                Root MSE          =     .93184

                          (Std. err. adjusted for 113 clusters in codevillage)
------------------------------------------------------------------------------
             |               Robust
   mathzscore | Coefficient  std. err.      t    P>|t|     [95% conf. interval]
-------------+----------------------------------------------------------------
      abcpost |   .1700956   .1361127     1.25   0.214    -.0995944    .4397855
          abc |   -.091966   .0667008    -1.38   0.171    -.2241251    .0401932
         post |  -.0722764   .1085576    -0.67   0.507    -.2873694    .1428166
       region |   .2761222   .1819218     1.52   0.132    -.0843325    .6365769
   regionpost |   .0676242   .1382878     0.49   0.626    -.2063754    .3416238
    regionabc |  -.0138299   .1019994    -0.14   0.892    -.2159286    .1882688
abcregionpost |   .1621943   .1822125     0.89   0.375    -.1988365    .5232251
   cohort2009 |   .1497525    .044429     3.37   0.001     .0617222    .2377829
       female |  -.3767175   .0327101   -11.52   0.000    -.4415285   -.3119066
          age |   .0029241    .004401     0.66   0.508    -.0057958     .011644
        agesq |   -.000155   .0000554    -2.80   0.006    -.0002647   -.0000452
              |
       avcode |
           2  |   .2547139   .1385283     1.84   0.069    -.0197621    .5291899
           3  |  -.0545556   .1410739    -0.39   0.700    -.3340756    .2249643
           4  |  -.3094012   .1566883    -1.97   0.051     -.619859    .0010565
```

```
           5  |  -.0910436   .1573528    -0.58   0.564    -.4028181    .2207308
           6  |   -.165273    .119908    -1.38   0.171    -.4028553    .0723094
           8  |   .0907038   .1286382     0.71   0.482    -.1641764     .345584
           9  |    .104275   .1178035     0.89   0.378    -.1291376    .3376877
          10  |   .1476765   .1663658     0.89   0.377    -.1819559    .4773089
          11  |   .0321709   .1156865     0.28   0.781    -.1970471    .2613889
          12  |  -.0001426   .1541682    -0.00   0.999    -.3056072     .305322
          13  |  -.0841079   .1350368    -0.62   0.535     -.351666    .1834501
          14  |  -.4284876   .1387466    -3.09   0.003    -.7033961   -.1535791
          15  |  -.0805993   .2056189    -0.39   0.696    -.4880068    .3268082
          16  |   .0711743   .1709724     0.42   0.678    -.2675856    .4099342
          17  |   .0658755   .1195103     0.55   0.583    -.1709188    .3026697
          18  |   .1540878   .1263141     1.22   0.225    -.0961874     .404363
          19  |  -.7456012    .170303    -4.38   0.000    -1.083035   -.4081677
          20  |    .056219   .1598665     0.35   0.726    -.2605358    .3729739
          21  |          0  (omitted)
          22  |  -.0338572   .1828015    -0.19   0.853     -.396055    .3283406
          23  |  -.1381339   .1564119    -0.88   0.379     -.448044    .1717763
          24  |  -.1882473   .1542967    -1.22   0.225    -.4939665    .1174718
              |
        _cons |   .1469647   .1576319     0.93   0.353    -.1653627     .459292
------------------------------------------------------------------------------

. est store ddd_2

.
. reg writezscore abc female post femalepost femaleabc abcpost abcfemalepost coh
> ort2009 age agesq i.avc, robust cluster(codev)

Linear regression                               Number of obs     =     12,823
                                                F(32, 112)        =      19.04
                                                Prob > F          =     0.0000
                                                R-squared         =     0.0995
                                                Root MSE          =     .95323

                          (Std. err. adjusted for 113 clusters in codevillage)
------------------------------------------------------------------------------
             |               Robust
  writezscore | Coefficient  std. err.      t    P>|t|     [95% conf. interval]
-------------+----------------------------------------------------------------
         abc |  -.0363614   .0615562    -0.59   0.556    -.1583271    .0856043
      female |  -.1418064   .0488895    -2.90   0.004    -.2386747   -.0449382
        post |   .2374158    .063656     3.73   0.000     .1112896     .363542
  femalepost |  -.4939304   .0637036    -7.75   0.000    -.6201509   -.3677099
   femaleabc |  -.0360335   .0685321    -0.53   0.600     -.171821     .099754
     abcpost |    .174952   .0993676     1.76   0.081    -.0219322    .3718361
abcfemalepost |   .0513733   .0920257     0.56   0.578    -.1309639    .2337105
  cohort2009 |   .0762103   .0469247     1.62   0.107    -.0167649    .1691856
         age |   .0031189    .004167     0.75   0.456    -.0051374    .0113752
       agesq |  -.0001707   .0000506    -3.37   0.001     -.000271   -.0000704
             |
       avcode |
           2 |  -.1474886   .0979639    -1.51   0.135    -.3415916    .0466144
           3 |  -.1649647   .0846114    -1.95   0.054    -.3326113     .002682
           4 |  -.2301215   .0911768    -2.52   0.013    -.4107766   -.0494664
           5 |  -.2332138   .1040985    -2.24   0.027    -.4394716   -.0269559
           6 |  -.4860539   .1298741    -3.74   0.000    -.7433829   -.2287249
           8 |    -.27777   .1047175    -2.65   0.009    -.4852544   -.0702856
           9 |  -.2214196   .0866819    -2.55   0.012    -.3931687   -.0496704
          10 |  -.0568964   .2068169    -0.28   0.784    -.4666777    .3528848
          11 |  -.4245775   .0741329    -5.73   0.000    -.5714624   -.2776926
          12 |  -.3273215   .1398347    -2.34   0.021     -.604386    -.050257
          13 |   -.089724   .0993974    -0.90   0.369    -.2866672    .1072191
```

```
          14  |  -.2399954   .0838234    -2.86   0.005    -.4060807   -.0739102
          15  |  -.1092933   .1502068    -0.73   0.468    -.4069088    .1883222
          16  |   .0630432   .1054094     0.60   0.551    -.1458119    .2718984
          17  |  -.2006471   .1066207    -1.88   0.062    -.4119024    .0106083
          18  |   -.201768   .1010589    -2.00   0.048    -.4020033   -.0015327
          19  |  -.6811549   .0948098    -7.18   0.000    -.8690084   -.4933014
          20  |  -.3744653   .1310156    -2.86   0.005    -.6340559   -.1148748
          21  |  -.2741017   .1172135    -2.34   0.021    -.5063453   -.0418581
          22  |    .121534   .1516294     0.80   0.425    -.1789003    .4219683
          23  |  -.0822375   .1036969    -0.79   0.429    -.2876996    .1232247
          24  |   -.212223    .130234    -1.63   0.106     -.470265     .045819
              |
        _cons |   .3695756   .1213133     3.05   0.003      .129209    .6099423
------------------------------------------------------------------------------

. est store ddd_3

.
. reg mathzscore abc female post femalepost femaleabc abcpost abcfemalepost coho
> rt2009 age agesq i.avc, robust cluster(codev)

Linear regression                               Number of obs     =     12,840
                                                F(32, 112)        =      18.70
                                                Prob > F          =     0.0000
                                                R-squared         =     0.0923
                                                Root MSE          =     .93098

                           (Std. err. adjusted for 113 clusters in codevillage)
------------------------------------------------------------------------------
             |               Robust
  mathzscore | Coefficient  std. err.      t    P>|t|     [95% conf. interval]
-------------+----------------------------------------------------------------
         abc |  -.1293793    .076903    -1.68   0.095    -.2817527    .0229941
      female |  -.2765806   .0599122    -4.62   0.000     -.395289   -.1578723
        post |    .092556   .0790551     1.17   0.244    -.0640815    .2491934
  femalepost |  -.2368251   .0668162    -3.54   0.001    -.3692128   -.1044374
   femaleabc |   .0628764   .0758805     0.83   0.409     -.087471    .2132238
     abcpost |   .2586065    .105787     2.44   0.016     .0490032    .4682099
abcfemalepost |  -.0009824   .0989681    -0.01   0.992    -.1970749    .1951102
  cohort2009 |   .1494374   .0445541     3.35   0.001     .0611591    .2377156
         age |   .0029417   .0044084     0.67   0.506     -.005793    .0116765
       agesq |   -.000155   .0000553    -2.80   0.006    -.0002647   -.0000454
             |
      avcode |
           2 |  -.1130366   .1483169    -0.76   0.448    -.4069076    .1808343
           3 |  -.0650865   .1434596    -0.45   0.651    -.3493332    .2191603
           4 |    -.32059   .1541014    -2.08   0.040    -.6259223   -.0152577
           5 |   -.102395   .1540043    -0.66   0.507    -.4075347    .2027448
           6 |  -.5389134   .1384046    -3.89   0.000    -.8131443   -.2646824
           8 |  -.2825951   .1424622    -1.98   0.050    -.5648657   -.0003244
           9 |  -.2620838   .1281553    -2.05   0.043     -.516007   -.0081606
          10 |  -.2027223   .1692678    -1.20   0.234    -.5381047    .1326601
          11 |   -.334637   .1284888    -2.60   0.010    -.5892212   -.0800528
          12 |  -.3599667   .1631725    -2.21   0.029    -.6832721   -.0366613
          13 |  -.0997032   .1360239    -0.73   0.465     -.369217    .1698107
          14 |  -.4352235    .142908    -3.05   0.003    -.7183775   -.1520695
          15 |  -.0892117   .2079067    -0.43   0.669    -.5011522    .3227289
          16 |   .0661242   .1757185     0.38   0.707    -.2820394    .4142878
          17 |  -.3059858   .1350285    -2.27   0.025    -.5735275    -.038444
          18 |  -.2178846   .1394121    -1.56   0.121    -.4941118    .0583425
          19 |    -.76147   .1750761    -4.35   0.000    -1.108361   -.4145791
          20 |  -.3071111   .1751122    -1.75   0.082    -.6540735    .0398514
          21 |  -.3587194   .1651457    -2.17   0.032    -.6859345   -.0315043
```

```
          22  |   -.046142   .1873087    -0.25   0.806    -.4172702    .3249862
          23  |   -.140965   .1559812    -0.90   0.368    -.4500218    .1680917
          24  |  -.1912196   .1537583    -1.24   0.216    -.4958719    .1134327
              |
        _cons |   .4109359   .1563463     2.63   0.010     .1011558     .720716
------------------------------------------------------------------------------

. est store ddd_4

.
. esttab ddd_* ///
>  using ../manuscript/Tables/ddd.tex, ///
> style(tex) booktabs keep(abc female post femalepost femaleabc abcpost abcfemal
> epost cohort2009 age agesq) ///
> mtitle("literacy" "math" "literacy" "math") ///
> star(* 0.1 ** 0.05 *** 0.01) ///
> se ///
> scalars("r2 R-squared") ///
>  replace
(output written to ../manuscript/Tables/ddd.tex)

.
.
. log close
      name:  <unnamed>
       log:  C:\Users\zxuyuan\Downloads\02. Datasets\Replication_v2.log
  log type:  text
 closed on:  27 Mar 2024, 09:33:56
------------------------------------------------------------------------------
```