```
/*******************************************************************************
   Project:        Pakistan Tax Perceptions Study
   Purpose:         Regressions
   Author:         Turkan Mukhtarova
*/


use "${f_data}\cleaned_data.dta", clear

*Creating globals to be used in the regressions

global dependent unfairness_index tax_morale_index preference_sales_index equity_index
global demographic male headh age_40andbelow college high_income selfemployed
global independent  prefer_selfemployed self_earnmore self_richer emp_taxmore
imranpaysless selfpaysless effort_self high_pit_more_evade high_pit_few_business
salestax_hurts salestax_hurts2 tax_reduce_ineq q_36_new_alot voted wasted  gov_capemp


****Base regression models without treatment effects**
est drop _all

// Run the regressions and store estimates
foreach dep in $dependent {
reg `dep'  $demographic $independent
est store `dep'
}

* Export the regression results to a tex document
esttab unfairness_index tax_morale_index preference_sales_index equity_index  ///
using"$f_outputs_table\mainregression.tex", replace cells(b(star fmt(3)) se(par fmt(2)) p) label
star(* 0.10 ** 0.05 *** 0.01)  ///
f nonumbers noobs nomtitles obslast

*******************************************************************************************************************
******************

/// TREATMENT REGRESSIONS


//Hypothesis 1: Respondents think that the difference in tax contributions between the self-
employed and employees is not fair.

*Fairness Index

est drop _all

*collect label levels etable_title  1 "Problem" 2 "Unfair" 3 "Unfair/Scenario" 4 "Unjustified" 5
"Policies" 6 " Fairness Index", modify

foreach dep in $unfairness {
reghdfe `dep' any_treat $demographic $independent , absorb(realStrataGroup)
est store `dep'
reghdfe `dep' any_treat , absorb(realStrataGroup)  // control
```

```
est store `dep'_cont
}

esttab q_40_agree q_41_unfair q_42_unfair q_43_agree  unfairness_index  ///
using "$f_outputs_table\unfairnessindex_PANELABC.tex", replace cells(b(star fmt(3)) se(par
fmt(2)) p) label star(* 0.10 ** 0.05 *** 0.01)  ///
keep(any_treat) varlabels(any_treat "Any treatment") f nonumbers noobs nomtitles obslast

esttab q_40_agree q_41_unfair q_42_unfair q_43_agree unfairness_index  ///
using "$f_outputs_table\unfairnessindex_PANELABC.tex", append cells(b(fmt(3)))  ///
keep(_cons) varlabels(_cons "Control mean") f nonumbers nomtitles obslast

//Hypothesis 2: Concern about differences in tax contributions between self-employed and
employees reduces tax morale

*Tax Morale Index

est drop _all

foreach dep in $tax_morale {
reghdfe `dep' any_treat $demographic $independent , absorb(realStrataGroup)
est store `dep'
reghdfe `dep' any_treat , absorb(realStrataGroup)  // control
est store `dep'_cont

}


esttab q_46_agree q_48_dummy tax_morale_index ///
using"$f_outputs_table\taxmoraleindex_PANELABC.tex", replace cells(b(star fmt(3)) se(par
fmt(2)) p) label star(* 0.10 ** 0.05 *** 0.01)  ///
keep(any_treat) varlabels(any_treat "Any treatment") f nonumbers noobs nomtitles obslast

esttab q_46_agree q_48_dummy tax_morale_index  ///
using "$f_outputs_table\taxmoraleindex_PANELABC.tex", append cells(b(fmt(3)))  ///
keep(_cons) varlabels(_cons "Control mean") f nonumbers nomtitles obslast



//Hypothesis 3: Concern about differences in tax contributions between self-employed and
employeesraises support for policies addressing horizontal equity.

*Equity Index

est drop _all

foreach dep in  $equity{
reghdfe `dep' any_treat $demographic $independent , absorb(realStrataGroup)
est store `dep'
reghdfe `dep' any_treat , absorb(realStrataGroup) // control
est store `dep'_cont

}
```

```
esttab q_50  q_new_44_b_1  q_new_44_b_2 equity_index ///
using"$f_outputs_table\equityindex_PANELABC.tex", replace cells(b(star fmt(3)) se(par fmt(2))
p) label star(* 0.10 ** 0.05 *** 0.01)  ///
keep(any_treat) varlabels(any_treat "Any treatment") f nonumbers noobs nomtitles obslast

esttab q_50  q_new_44_b_1  q_new_44_b_2 equity_index ///
using "$f_outputs_table\equityindex_PANELABC.tex", append cells(b(fmt(3)))  ///
keep(_cons) varlabels(_cons "Control mean") f nonumbers nomtitles obslast

// Hypothesis 4: Concern about differences in tax contributions between self-employed and
employees raises support for indirect taxes relative to direct taxes.

*Sales preference index

est drop _all

foreach dep in  $sales_preference {
reghdfe `dep' any_treat $demographic $independent , absorb(realStrataGroup)
est store `dep'
reghdfe `dep' any_treat , absorb(realStrataGroup) // control
est store `dep'_cont

}


esttab reversed_q_45_a q_51_agree more_sales preference_sales_index ///
using"$f_outputs_table\salespreferenceindex_PANELABC.tex",replace cells(b(star fmt(3))
se(par fmt(2)) p) label star(* 0.10 ** 0.05 *** 0.01)  ///
keep(any_treat) varlabels(any_treat "Any treatment") f nonumbers noobs nomtitles obslast

esttab reversed_q_45_a q_51_agree more_sales preference_sales_index ///
using "$f_outputs_table\salespreferenceindex_PANELABC.tex", append cells(b(fmt(3)))  ///
keep(_cons) varlabels(_cons "Control mean") f nonumbers nomtitles obslast


// Hypothesis 5: Support for the Theory of Change is more likely by salaried employees. This
hypothesis will be tested by examining how the treatment effect varies by by answers to
employment type

*self_employed*treatment vs employee*treatment

gen self_treat = selfemployed*any_treat
tab self_treat
label define self_treat 1 "self_employed*treatment" 0  "employee*notreatment"
label variable self_treat "Self-employed X Treated"
label values self_treat self_treat
label variable self_treat "Self-employed X Treated"

gen emp_treat = employee*any_treat
tab emp_treat
label define emp_treat 1 "employee*treatment" 0  "self_employee*notreatment"
label variable emp_treat " Employee X Treated"
label values emp_treat emp_treat
label variable emp_treat " Employee X Treated"
```

```
//unfairness index

est drop _all

foreach dep in $unfairness {
reghdfe `dep'  self_treat emp_treat  $demographic $independent , absorb(realStrataGroup)
test self_treat=emp_treat
estadd scalar p_diff = r(p)
est store `dep'
}

esttab  q_40_agree q_41_unfair q_42_unfair q_43_agree  unfairness_index ///
using"$f_outputs_table\unfairnessindex_PANELABC.tex", append cells(b(star fmt(3)) /// adding
B to A table
se(par fmt(2)) p) label star(* 0.10 ** 0.05 *** 0.01) stats(p_diff)  ///
keep(self_treat emp_treat selfemployed) ///
varlabels(self_treat "Self-employed X Treated" emp_treat "Employee X Treated") ///
f nonumbers nomtitles obslast


*tax morale index

est drop _all

foreach dep in $tax_morale {
reghdfe `dep'  self_treat emp_treat  $demographic $independent , absorb(realStrataGroup)
test self_treat=emp_treat
estadd scalar p_diff = r(p)
est store `dep'
}

esttab  q_46_agree q_48_dummy tax_morale_index ///
using"$f_outputs_table\taxmoraleindex_PANELABC.tex", append cells(b(star fmt(3)) ///
se(par fmt(2)) p) label star(* 0.10 ** 0.05 *** 0.01) stats(p_diff)  ///
keep(self_treat emp_treat selfemployed) ///
varlabels(self_treat "Self-employed X Treated" emp_treat "Employee X Treated") ///
f nonumbers nomtitles obslast

* Sales tax preference

est drop _all

foreach dep in $sales_preference {
reghdfe `dep'  self_treat emp_treat  $demographic $independent , absorb(realStrataGroup)
test self_treat=emp_treat
estadd scalar p_diff = r(p)
est store `dep'
}


esttab reversed_q_45_a q_51_agree more_sales preference_sales_index  ///
using"$f_outputs_table\salespreferenceindex_PANELABC.tex", append cells(b(star fmt(3)) ///
se(par fmt(2)) p) label star(* 0.10 ** 0.05 *** 0.01) stats(p_diff)  ///
```

```
keep(self_treat emp_treat selfemployed) ///
varlabels(self_treat "Self-employed X Treated" emp_treat "Employee X Treated") ///
f nonumbers nomtitles obslast


*Equity Index

est drop _all

foreach dep in $equity {
reghdfe `dep'  self_treat emp_treat  $demographic $independent , absorb(realStrataGroup)
test self_treat=emp_treat
estadd scalar p_diff = r(p)
est store `dep'
}


esttab  q_50  q_new_44_b_1  q_new_44_b_2 equity_index  ///
using"$f_outputs_table\equityindex_PANELABC.tex", append cells(b(star fmt(3)) ///
se(par fmt(2)) p) label star(* 0.10 ** 0.05 *** 0.01) stats(p_diff)  ///
keep(self_treat emp_treat selfemployed) ///
varlabels(self_treat "Self-employed X Treated" emp_treat "Employee X Treated") ///
f nonumbers nomtitles obslast

// Hypothesis 6: Support for the Theory of Change is more likely to be supported by people of high socio-economic status (i.e., University education and/or higher income levels)


*highsocial status*treatment vs lowsocialstatus*treatment

* Generate treatment interaction based on high socio-economic status
gen high_college_treat = high_college * any_treat
label define high_college_treat 1 "High SES * Treatment" 0 "Low SES * No Treatment"
label values high_college_treat high_college_treat
label variable high_college_treat "High SES X Treatment"

* Generate low socio-economic status
gen low_college = 1 - high_college
label define low_college 1 "Low SES" 0 "High SES"
label values low_college low_college

* Generate treatment interaction for low college socio-economic status
gen low_college_treat = low_college * any_treat
label define low_college_treat 1 "Low SES * Treatment" 0 "High SES * No Treatment"
label values low_college_treat low_college_treat
label variable low_college_treat "Low SES X Treatment"

est drop _all

* Fairness index

foreach dep in $unfairness {
reghdfe `dep'  high_college_treat low_college_treat high_college $demographic $independent ,
absorb(realStrataGroup)
```

```
test high_college_treat = low_college_treat
estadd scalar p_diff = r(p)
est store `dep'
}

esttab q_40_agree q_41_unfair q_42_unfair q_43_agree unfairness_index  ///
using "$f_outputs_table\unfairnessindex_PANELABC.tex", append cells(b(star fmt(3)) ///
se(par fmt(2)) p) label star(* 0.10 ** 0.05 *** 0.01) stats(p_diff)  ///
keep(high_college_treat low_college_treat) ///
varlabels(high_college_treat "High SES X Treated" low_college_treat "Low SES X Treated") ///
f nonumbers nomtitles obslast

* Tax morale index

est drop _all

foreach dep in $tax_morale {
reghdfe `dep'  high_college_treat low_college_treat high_college $demographic $independent ,
absorb(realStrataGroup)
test high_college_treat = low_college_treat
estadd scalar p_diff = r(p)
est store `dep'
}

esttab q_46_agree q_48_dummy tax_morale_index  ///
using "$f_outputs_table\taxmoraleindex_PANELABC.tex", append cells(b(star fmt(3)) ///
se(par fmt(2)) p) label star(* 0.10 ** 0.05 *** 0.01) stats(p_diff)  ///
keep(high_college_treat low_college_treat) ///
varlabels(high_college_treat "High SES X Treated" low_college_treat "Low  SES X Treated") ///
f nonumbers nomtitles obslast


* Sales Tax preference

est drop _all

foreach dep in $sales_preference {
reghdfe `dep'  high_college_treat low_college_treat high_college $demographic $independent ,
absorb(realStrataGroup)
test high_college_treat = low_college_treat
estadd scalar p_diff = r(p)
est store `dep'
}

esttab reversed_q_45_a q_51_agree more_sales preference_sales_index  ///
using"$f_outputs_table\salespreferenceindex_PANELABC.tex", append cells(b(star fmt(3)) ///
se(par fmt(2)) p) label star(* 0.10 ** 0.05 *** 0.01) stats(p_diff)  ///
keep(high_college_treat low_college_treat) ///
varlabels(high_college_treat "High SES X Treated" low_college_treat "Low SES X Treated") ///
f nonumbers nomtitles obslast


*Equity Index
```

```
est drop _all

foreach dep in $equity {
reghdfe `dep'  high_college_treat low_college_treat high_college $demographic $independent ,
absorb(realStrataGroup)
test high_college_treat = low_college_treat
estadd scalar p_diff = r(p)
est store `dep'
}


esttab  q_50  q_new_44_b_1  q_new_44_b_2 equity_index  ///
using"$f_outputs_table\equityindex_PANELABC.tex", append cells(b(star fmt(3)) ///
se(par fmt(2)) p) label star(* 0.10 ** 0.05 *** 0.01) stats(p_diff)  ///
keep(high_college_treat low_college_treat) ///
varlabels(high_college_treat "High SES X Treated" low_college_treat "Low SES X Treated") ///
f nonumbers nomtitles obslast
```