Statistics/Data Analysis

```
      name:  <unnamed>
       log:  C:\Users\Emilie\Documents\Emilie\Master\Nottingham\2_Appl_Microeconometri
> cs\fdimatching_deleteEXP/log_fdi_matching.smcl
  log type:  smcl
 opened on:   9 May 2020, 10:42:41

1 .         clear all

2 .
3 . *------------------------------------------------------------------------------*
4 . *       PART 1.0: Download Packages
5 . *------------------------------------------------------------------------------*
6 .
7 . //      package gr0070 from http://www.stata-journal.com/software/sj17-3
8 .         cap ssc install gr0070

9 .
10. //      package outreg2
11.         cap ssc install outreg2

12.
13. //      package tabout
14.         cap ssc install tabout

15.
16. *------------------------------------------------------------------------------*
17. *       PART 1.1: Set globals for do-file routines
18. *------------------------------------------------------------------------------*
19.
20.         global input    "$root/01_input"

21.         global scripts  "$root/02_scripts"

22.         global log      "$root/03_log"

23.         global results  "$root/04_results"

24.
25.         use "$input/FDI_project"

26.
27.
28. *------------------------------------------------------------------------------*
29. *       PART 1.2: Adjust variable labels
30. *------------------------------------------------------------------------------*
31.
32.         label var OWN "Ownership"

33.         label var TECH "Technology intensity"

34.         label var PORT "Access to port"

35.         label var logwages2015 "Log wages"

36.         label var TFP2015 "TFP"

37.         label var logemp2015 "Log employment"

38.         label var DEBTS2015 "Log debts"
```

```
39.         label var EXP2015 "Export intensity"

40.         label var RD2015 "R&D dummy"

41.         label var logwages2017 "Log wages"

42.         label var TFP2017 "TFP"

43.
44. *-------------------------------------------------------------------------------*
45. *       PART 1.3: Transforming variables
46. *-------------------------------------------------------------------------------*
47.
48.         generate TFPS17=  (TFP2017-3.656046)/2.056464

49.         generate emp2015= exp(logemp2015)

50.         generate wages15 = exp(logwages2015)

51.         generate debts15 = exp(DEBTS2015)

52.
53.         save $input/fdi_matching_clean, replace
  (note: file C:\Users\Emilie\Documents\Emilie\Master\Nottingham\2_Appl_Microeconometric
  > s\fdimatching_deleteEXP/01_input/fdi_matching_clean.dta not found)
  file C:\Users\Emilie\Documents\Emilie\Master\Nottingham\2_Appl_Microeconometrics\fdima
  > tching_deleteEXP/01_input/fdi_matching_clean.dta saved

54.
55. *-------------------------------------------------------------------------------*
56. *       PART 1.4: Set globals for variables
57. *-------------------------------------------------------------------------------*
58.
59.         global F "OWN TECH RD2015"

60.         global C "logwages2015 TFP2015 emp2015 DEBTS2015"

61.
62. ********************************************************************************
63. *                       PART 2: Descriptive Analysis
64. ********************************************************************************
65.
66.                 do $scripts/02_Descriptive_Analysis

67. /*******************************************************************************
  >                                                  DESCRIPTIVE ANALYSIS DO-FILE
  > ********************************************************************************
  >
  >                       Applied Microeconometrics
  >
  >                                       Empirical Project
  >
  >                                                       Do-File 02
  >
  >                 PURPOSE:        Analysis of Data Set
  >
  >                 OUTLINE:        PART 1: Overview
  >                                         PART 2: Summary Statistics
  >                                         PART 3: Balance Tables
  >
  > ********************************************************************************
  >                                         PART 1: Overview
  > ********************************************************************************/
```

```
68.
69.         describe

  Contains data from C:\Users\Emilie\Documents\Emilie\Master\Nottingham\2_Appl_Microecon
  > ometrics\fdimatching_deleteEXP/01_input/fdi_matching_clean.dta
    obs:        11,323
   vars:            21                          9 May 2020 10:42
   size:       713,349
  ------------------------------------------------------------------------------------
                storage   display    value
  variable name   type    format     label      variable label
  ------------------------------------------------------------------------------------
  firm            float   %9.0g                 firm identifier
  FDI2016         byte    %9.0g                 FDI/TREATMENT dummy in 2016
  FDITYPE2016     byte    %28.0g     FDITYPE     FDI type
  OWN             byte    %17.0g     OWN        Ownership
  TECH            byte    %27.0g     TECH       Technology intensity
  PORT            byte    %21.0g     PORT       Access to port
  logwages2015    float   %9.0g                 Log wages
  TFP2015         float   %9.0g                 TFP
  logemp2015      float   %9.0g                 Log employment
  DEBTS2015       float   %9.0g                 Log debts
  EXP2015         float   %9.0g                 Export intensity
  RD2015          byte    %9.0g                 R&D dummy
  logwages2017    float   %9.0g                 Log wages
  TFP2017         float   %9.0g                 TFP
  logemp2017      float   %9.0g                 log employment in 2017
  EXP2017         float   %9.0g                  EXPORT INTENSITY in 2017
  RD2017          byte    %9.0g                  R&D dummy in 2017
  TFPS17          float   %9.0g
  emp2015         float   %9.0g
  wages15         float   %9.0g
  debts15         float   %9.0g
  ------------------------------------------------------------------------------------
  Sorted by: FDI2016

70.
71. //      Frequencies of FDI types
72.         tab FDITYPE2016

                    FDI type |      Freq.     Percent        Cum.
-----------------------------+-----------------------------------
                       No FDI |      6,863       60.61       60.61
          Exports-oriented FDI |        940        8.30       68.91
      Technology intensive FDI |      1,555       13.73       82.65
   Domestic market seeking FDI |      1,965       17.35      100.00
-----------------------------+-----------------------------------
                         Total |     11,323      100.00

73.
74. *-------------------------------------------------------------------------------*
75. *       PART 1.1: Correlations matrix
76. *-------------------------------------------------------------------------------*
77.
78.         corr    FDI2016 ///
  >                       OWN TECH PORT ///
  >                       logwages2015 TFP2015 emp2015 DEBTS2015 EXP2015 RD2015
  (obs=11,323)

             |  FDI2016      OWN     TECH     PORT logwag~5  TFP2015
-------------+------------------------------------------------------
     FDI2016 |   1.0000
         OWN |   0.1026   1.0000
        TECH |  -0.3144  -0.1797   1.0000
        PORT |   0.1984   0.0564  -0.4172   1.0000
logwages2015 |  -0.0633  -0.0566   0.1843  -0.0694   1.0000
     TFP2015 |  -0.0868  -0.0457   0.1080   0.0620   0.0351   1.0000
     emp2015 |   0.0249  -0.0025  -0.0353   0.0319  -0.0062  -0.0035
   DEBTS2015 |  -0.0259   0.2636  -0.0064   0.0019  -0.0327  -0.0423
     EXP2015 |   0.4480  -0.1249   0.3125   0.2780   0.0453   0.0409
      RD2015 |   0.0175   0.0070   0.0093  -0.0088   0.0100   0.0419
```

	emp2015	DEB~2015	EXP2015	RD2015
emp2015	1.0000			
DEBTS2015	-0.0026	1.0000		
EXP2015	0.0220	0.0668	1.0000	
RD2015	-0.0088	-0.0044	-0.0009	1.0000

```
79.
80.
81. ********************************************************************************
82. *                                    PART 2: Summary Statistics
83. ********************************************************************************
84.
85. //      Continuous variables
86.         outreg2 using "$results/02_Descriptive_Analysis/summarystats.tex", ///
  >         sum(detail) replace ///
  >         keep(wages15 TFP2015 debts15 EXP2015 emp2015) ///
  >         label eqkeep(mean p50 sd min max)
```

firm identifier

Percentiles		Smallest		
1%	124	1		
5%	623	2		
10%	1245	4	Obs	11,323
25%	3101	6	Sum of Wgt.	11,323
50%	6186		Mean	6181.449
		Largest	Std. Dev.	3558.895
75%	9252	12330		
90%	11111	12331	Variance	1.27e+07
95%	11735	12332	Skewness	-.0042869
99%	12212	12333	Kurtosis	1.80306

FDI/TREATMENT dummy in 2016

Percentiles		Smallest		
1%	0	0		
5%	0	0		
10%	0	0	Obs	11,323
25%	0	0	Sum of Wgt.	11,323
50%	0		Mean	.3938885
		Largest	Std. Dev.	.4886322
75%	1	1		
90%	1	1	Variance	.2387614
95%	1	1	Skewness	.4343395
99%	1	1	Kurtosis	1.188651

FDI type

Percentiles		Smallest		
1%	0	0		
5%	0	0		
10%	0	0	Obs	11,323
25%	0	0	Sum of Wgt.	11,323
50%	0		Mean	.8783008
		Largest	Std. Dev.	1.192862
75%	2	3		
90%	3	3	Variance	1.42292
95%	3	3	Skewness	.8489698
99%	3	3	Kurtosis	2.022788

Ownership

	Percentiles	Smallest		
1%	1	1		
5%	1	1		
10%	2	1	Obs	11,323
25%	2	1	Sum of Wgt.	11,323
50%	3		Mean	2.888987
		Largest	Std. Dev.	.9071667
75%	4	4		
90%	4	4	Variance	.8229515
95%	4	4	Skewness	-.4250337
99%	4	4	Kurtosis	2.357997

Technology intensity

	Percentiles	Smallest		
1%	1	1		
5%	1	1		
10%	1	1	Obs	11,323
25%	1	1	Sum of Wgt.	11,323
50%	2		Mean	2.278636
		Largest	Std. Dev.	1.130658
75%	3	4		
90%	4	4	Variance	1.278387
95%	4	4	Skewness	.1369556
99%	4	4	Kurtosis	1.562267

Access to port

	Percentiles	Smallest		
1%	0	0		
5%	0	0		
10%	0	0	Obs	11,323
25%	0	0	Sum of Wgt.	11,323
50%	0		Mean	.3494657
		Largest	Std. Dev.	.4768223
75%	1	1		
90%	1	1	Variance	.2273595
95%	1	1	Skewness	.6314342
99%	1	1	Kurtosis	1.398709

Log wages

	Percentiles	Smallest		
1%	-1.638978	-7.331795		
5%	1.059369	-7.103724		
10%	2.408368	-5.701573	Obs	11,323
25%	4.74146	-5.625238	Sum of Wgt.	11,323
50%	7.338148		Mean	7.332918
		Largest	Std. Dev.	3.838861
75%	9.902966	20.87844		
90%	12.20624	20.99824	Variance	14.73685
95%	13.65446	21.31597	Skewness	.0050248
99%	16.26827	22.43151	Kurtosis	3.044124

TFP

	Percentiles	Smallest		
1%	-1.760341	-5.359266		
5%	-.3396301	-4.564884		
10%	.4065464	-3.947462	Obs	11,323
25%	1.69375	-3.887785	Sum of Wgt.	11,323

50%	3.032239		Mean	3.041338
		Largest	Std. Dev.	2.046604
75%	4.417369	10.39066		
90%	5.679015	10.79894	Variance	4.188589
95%	6.381904	10.82878	Skewness	-.0117873
99%	7.791977	11.35702	Kurtosis	3.028324

Log employment

	Percentiles	Smallest		
1%	-2.634289	-6.228763		
5%	-.5589151	-6.20012		
10%	.5075461	-6.185894	Obs	11,323
25%	2.341855	-6.092359	Sum of Wgt.	11,323
50%	4.399255		Mean	4.411473
		Largest	Std. Dev.	3.040198
75%	6.524904	14.9902		
90%	8.279512	15.08997	Variance	9.242801
95%	9.413677	15.28719	Skewness	-.0080799
99%	11.393	15.99303	Kurtosis	2.960453

Log debts

	Percentiles	Smallest		
1%	-.1750222	-.1998464		
5%	-.0806167	-.1997392		
10%	.029059	-.199408	Obs	11,323
25%	.2368089	-.1993328	Sum of Wgt.	11,323
50%	.5004624		Mean	.5040355
		Largest	Std. Dev.	.3525262
75%	.7537385	1.2992		
90%	.9722362	1.29932	Variance	.1242747
95%	1.122765	1.299587	Skewness	.0806031
99%	1.254863	1.299778	Kurtosis	2.316729

Export intensity

	Percentiles	Smallest		
1%	.0190834	.0103205		
5%	.0384401	.0104334		
10%	.0575267	.0104726	Obs	11,323
25%	.0990072	.0105073	Sum of Wgt.	11,323
50%	.1543709		Mean	.1593435
		Largest	Std. Dev.	.0798147
75%	.2130122	.4667603		
90%	.2652063	.4720742	Variance	.0063704
95%	.2949337	.4777972	Skewness	.4171633
99%	.3648675	.4831533	Kurtosis	2.827241

R&D dummy

	Percentiles	Smallest		
1%	0	0		
5%	0	0		
10%	0	0	Obs	11,323
25%	0	0	Sum of Wgt.	11,323
50%	0		Mean	.1211693
		Largest	Std. Dev.	.3263383
75%	0	1		
90%	1	1	Variance	.1064967
95%	1	1	Skewness	2.321808
99%	1	1	Kurtosis	6.390791

Log wages

	Percentiles	Smallest		
1%	-2.120156	-6.185148		
5%	-.0123446	-6.022474		
10%	1.035314	-5.493109	Obs	11,323
25%	2.910137	-5.369166	Sum of Wgt.	11,323
50%	4.989117		Mean	5.010195
		Largest	Std. Dev.	3.082818
75%	7.136983	15.41822		
90%	8.938831	15.76589	Variance	9.503766
95%	10.04671	16.21945	Skewness	-.0073109
99%	12.01537	17.04211	Kurtosis	2.956235

TFP

	Percentiles	Smallest		
1%	-1.170003	-4.700881		
5%	.2511905	-3.951226		
10%	1.018264	-3.692741	Obs	11,323
25%	2.283582	-3.331597	Sum of Wgt.	11,323
50%	3.664006		Mean	3.656046
		Largest	Std. Dev.	2.056464
75%	5.041636	11.30793		
90%	6.310671	11.34453	Variance	4.229043
95%	7.028272	11.62984	Skewness	-.016582
99%	8.400249	11.8114	Kurtosis	3.017121

log employment in 2017

	Percentiles	Smallest		
1%	-2.170581	-6.217651		
5%	-.018102	-6.184767		
10%	1.038013	-5.748356	Obs	11,323
25%	2.929524	-5.622331	Sum of Wgt.	11,323
50%	5.0262		Mean	5.030484
		Largest	Std. Dev.	3.094736
75%	7.173199	15.48663		
90%	8.980158	15.49919	Variance	9.57739
95%	10.10212	15.74725	Skewness	-.024026
99%	12.07887	16.38825	Kurtosis	2.950697

EXPORT INTENSITY in 2017

	Percentiles	Smallest		
1%	.0581937	.0187976		
5%	.1113043	.0211925		
10%	.1423226	.0216743	Obs	11,323
25%	.19367	.0221602	Sum of Wgt.	11,323
50%	.2606816		Mean	.2696827
		Largest	Std. Dev.	.1083555
75%	.3300854	.7790653		
90%	.4089049	.7935594	Variance	.0117409
95%	.4650209	.8165495	Skewness	.6997986
99%	.5815625	.9501169	Kurtosis	4.15865

R&D dummy in 2017

	Percentiles	Smallest		
1%	0	0		
5%	0	0		
10%	0	0	Obs	11,323
25%	0	0	Sum of Wgt.	11,323

50%	0		Mean	.4074009
		Largest	Std. Dev.	.4913723
75%	1	1		
90%	1	1	Variance	.2414467
95%	1	1	Skewness	.3769168
99%	1	1	Kurtosis	1.142066

TFPS17

	Percentiles	Smallest		
1%	-2.34677	-4.063736		
5%	-1.655684	-3.6992		
10%	-1.282678	-3.573506	Obs	11,323
25%	-.66739	-3.397892	Sum of Wgt.	11,323
50%	.0038706		Mean	1.64e-07
		Largest	Std. Dev.	.9999998
75%	.6737731	3.720892		
90%	1.290869	3.738692	Variance	.9999996
95%	1.639817	3.87743	Skewness	-.016582
99%	2.306971	3.965719	Kurtosis	3.017121

emp2015

	Percentiles	Smallest		
1%	.07177	.0019719		
5%	.5718291	.0020292		
10%	1.66121	.0020583	Obs	11,323
25%	10.40051	.0022601	Sum of Wgt.	11,323
50%	81.39024		Mean	7111.033
		Largest	Std. Dev.	117154.6
75%	681.9145	3237150		
90%	3942.272	3576776	Variance	1.37e+10
95%	12254.85	4356531	Skewness	49.56077
99%	88698.71	8824411	Kurtosis	3179.901

wages15

	Percentiles	Smallest		
1%	.1941784	.0006544		
5%	2.884551	.000822		
10%	11.1158	.0033407	Obs	11,323
25%	114.6014	.0036057	Sum of Wgt.	11,323
50%	1537.861		Mean	1966556
		Largest	Std. Dev.	5.99e+07
75%	19989.56	1.17e+09		
90%	200032.7	1.32e+09	Variance	3.59e+15
95%	851244.9	1.81e+09	Skewness	73.88568
99%	1.16e+07	5.52e+09	Kurtosis	6472.332

debts15

	Percentiles	Smallest		
1%	.8394383	.8188565		
5%	.9225472	.8189443		
10%	1.029485	.8192155	Obs	11,323
25%	1.267199	.8192772	Sum of Wgt.	11,323
50%	1.649484		Mean	1.76176
		Largest	Std. Dev.	.6339302
75%	2.124929	3.666363		
90%	2.64385	3.666803	Variance	.4018675
95%	3.073339	3.667783	Skewness	.7983175
99%	3.507359	3.668482	Kurtosis	3.165366

C:\Users\Emilie\Documents\Emilie\Master\Nottingham\2_Appl_Microeconometrics\fdimatching_deleteEXP/04_results/02_Descriptive_Analysis/summarystats.tex
dir : seeout

```
87.
88. //      Categorical variables
89.         tab PORT
```

Access to port	Freq.	Percent	Cum.
No ports within 500km	**7,366**	**65.05**	**65.05**
Ports within 500km	**3,957**	**34.95**	**100.00**
Total	**11,323**	**100.00**	

```
90.         tab OWN
```

Ownership	Freq.	Percent	Cum.
Listed companies	**909**	**8.03**	**8.03**
Subsidiaries	**2,630**	**23.23**	**31.25**
Independent	**4,593**	**40.56**	**71.82**
State	**3,191**	**28.18**	**100.00**
Total	**11,323**	**100.00**	

```
91.         tab TECH
```

Technology intensity	Freq.	Percent	Cum.
Low-tech industries	**4,194**	**37.04**	**37.04**
Medium low-tech industries	**1,685**	**14.88**	**51.92**
Medium high-tech industries	**3,539**	**31.25**	**83.18**
High-tech industries	**1,905**	**16.82**	**100.00**
Total	**11,323**	**100.00**	

```
92.         tab RD2015
```

R&D dummy	Freq.	Percent	Cum.
0	**9,951**	**87.88**	**87.88**
1	**1,372**	**12.12**	**100.00**
Total	**11,323**	**100.00**	

```
93.
94. *-------------------------------------------------------------------------------*
95. *       PART 2.1: Checking for Outliers
96. *-------------------------------------------------------------------------------*
97.
98. //      Employment
99.         set scheme plotplainblind

100         scatter TFP2017 emp2015, ytitle("TFP in 2017")

101         graph save $results/02_Descriptive_Analysis/emp2015_outliers.gph, ///
  >         replace
  (note: file C:\Users\Emilie\Documents\Emilie\Master\Nottingham\2_Appl_Microeconometric
  > s\fdimatching_deleteEXP/04_results/02_Descriptive_Analysis/emp2015_outliers.gph not
  > found)
  (file C:\Users\Emilie\Documents\Emilie\Master\Nottingham\2_Appl_Microeconometrics\fdim
  > atching_deleteEXP/04_results/02_Descriptive_Analysis/emp2015_outliers.gph saved)
```

```
102
103         graph export $results/02_Descriptive_Analysis/emp2015_outliers.png, ///
  >         as(png) replace
  (note: file C:\Users\Emilie\Documents\Emilie\Master\Nottingham\2_Appl_Microeconometric
  > s\fdimatching_deleteEXP/04_results/02_Descriptive_Analysis/emp2015_outliers.png not
  > found)
  (file C:\Users\Emilie\Documents\Emilie\Master\Nottingham\2_Appl_Microeconometrics\fdim
  > atching_deleteEXP/04_results/02_Descriptive_Analysis/emp2015_outliers.png written in
  >  PNG format)

104
105
106 ********************************************************************************
107 *                                       PART 3: Balance Tables
108 ********************************************************************************
109
110 //                      By treatment variable
111 iebaltab        TECH PORT ///
  >                       logwages2015 TFP2015 logemp2015 DEBTS2015 EXP2015 RD2015, //
  > /
  >                       grpvar(FDI2016) ///
  >                       savetex("$results/02_Descriptive_Analysis/baltest_byfdi_pre.
  > tex") ///
  >                       rowvarlabels texdoc replace
      Balance table saved to:
          C:\Users\Emilie\Documents\Emilie\Master\Nottingham\2_Appl_Microeconometrics\
          > fdimatching_deleteEXP/04_results/02_Descriptive_Analysis/baltest_byfdi_pre
          > .tex

112
113 //      -> Significant differnces betw. treatment and control group in all respects
  >
114
115 //                      By FDI type (treatment arms)
116 iebaltab        TECH PORT ///
  >                       logwages2015 TFP2015 logemp2015 DEBTS2015 EXP2015 RD2015, //
  > /
  >                       grpvar(FDITYPE2016) ///
  >                       savetex("$results/02_Descriptive_Analysis/baltest_fditype_pr
  > e.tex") ///
  >                       rowvarlabels texdoc replace
      Balance table saved to:
          C:\Users\Emilie\Documents\Emilie\Master\Nottingham\2_Appl_Microeconometrics\
          > fdimatching_deleteEXP/04_results/02_Descriptive_Analysis/baltest_fditype_p
          > re.tex

117
  end of do-file

118
119
120 ********************************************************************************
121 *                       PART 3: Results
122 ********************************************************************************
123
124 *-------------------------------------------------------------------------------*
125 *       PART 3.1: Effect of FDI on TFP
126 *-------------------------------------------------------------------------------*
127
128                 do $scripts/03a_Main_Results
```

```
129 /*******************************************************************************
  >                                                          MAIN RESULTS DO-FILE
  > *******************************************************************************
  >
  >                        Applied Microeconometrics
  >
  >                                      Empirical Project
  >
  >                                                Do-File 03a
  >
  >                 PURPOSE:        Estimation of the effect of FDI on TFP.
  >
  >                 OUTLINE:        PART 1: Several ATE estimations for     main model
  >                                         PART 1.1: NN1
  >                                         Part 1.2: NN5 with caliper 0.05
  >                                         Part 1.3: IPW
  >                                         Part 1.4: AIPW
  >
  > *******************************************************************************
  >                          PART 1: Several ATE estimations for     main model
  > *******************************************************************************/
130
131 *-------------------------------------------------------------------------------*
132 *       PART 1.1: NN1
133 *-------------------------------------------------------------------------------*
134
135         //ATE
136         cap drop osa1

137         cap drop p1*

138         cap teffects psmatch (TFPS17) ///
  >                                      (FDI2016 i.($F) c.($C), logit),        ///
  >                                       osample(osa1) generate(p1)

139
140         outreg2 using $results/05_Tables/Table2_TFP.tex, replace dec(3) ///
  >         drop(i.OWN i.PORT logwages2015 TFP2015 emp2015 DEBTS2015 i.TECH RD2015) ///
  >         nocon eqdrop(TME1)
  C:\Users\Emilie\Documents\Emilie\Master\Nottingham\2_Appl_Microeconometrics\fdimatchin
  > g_deleteEXP/04_results/05_Tables/Table2_TFP.tex
  dir : seeout

141
142         tebalance summarize
```

Covariate balance summary

	Raw	Matched
Number of obs =	**11,323**	**22,646**
Treated obs =	**4,460**	**11,323**
Control obs =	**6,863**	**11,323**

	Standardized differences		Variance ratio	
	Raw	Matched	Raw	Matched
OWN				
Subsidiaries	**-.018354**	**-.0175033**	**.9769702**	**.9774223**
Independent	**.0616272**	**-.0068445**	**1.02321**	**.9972679**
State	**.1016402**	**.0130378**	**1.100951**	**1.01213**
TECH				
Medium low-t~s	**.1206088**	**-.0400593**	**1.263082**	**.9244732**
Medium high-~s	**-.2329159**	**.0104791**	**.8156583**	**1.008514**
High-tech in~s	**-.5425507**	**.0051861**	**.2855456**	**1.009211**
RD2015				
1	**.0356507**	**.016501**	**1.085768**	**1.039031**
logwages2015	**-.1300321**	**.0174603**	**.9769191**	**1.009556**

TFP2015	-.178877	-.013165	.9473458	.9917016
emp2015	.0470091	.0271819	5.49725	1.696765
DEBTS2015	-.0529435	-.0040148	1.051101	1.017773

```
143
144 *-------------------------------------------------------------------------------*
145 *       PART 1.2: NN5 with caliper 0.05
146 *-------------------------------------------------------------------------------*
  >
147                 // ATE
148         cap drop osa1

149         cap drop p1*

150         cap teffects psmatch (TFPS17) ///
  >                                                (FDI2016 i.($F) c.($C), logit), ///
  >                                               nneighbor(5) caliper(.05) osample(os
  > a1) generate(p1)

151                                                 // 5 observations violate caliper
152
153         // Reestimate
154         cap teffects psmatch (TFPS17) ///
  >                                                 (FDI2016 i.($F) c.($C), logit) if o
  > sa1==0,     ///
  >                                                 nneighbor(5) caliper(.05)  generate
  > (p1)

155
156         outreg2 using $results/05_Tables/Table2_TFP.tex, append dec(3) ///
  >         drop(i.OWN i.PORT logwages2015 TFP2015 emp2015 DEBTS2015 i.TECH RD2015) ///
  >         nocon eqdrop(TME1)
  C:\Users\Emilie\Documents\Emilie\Master\Nottingham\2_Appl_Microeconometrics\fdimatchin
  > g_deleteEXP/04_results/05_Tables/Table2_TFP.tex
  dir : seeout

157
158         tebalance summarize
```

Covariate balance summary

	Raw	Matched
Number of obs =	11,318	22,636
Treated obs =	4,456	11,318
Control obs =	6,862	11,318

	Standardized differences		Variance ratio	
	Raw	Matched	Raw	Matched
OWN				
Subsidiaries	-.0190182	-.0205252	.976131	.9738583
Independent	.0618259	-.0100251	1.023258	.9959379
State	.1020001	.0045727	1.101344	1.004328
TECH				
Medium low-t~s	.1209652	-.0328628	1.263818	.9372059
Medium high-~s	-.2325048	.0081591	.816095	1.006628
High-tech in~s	-.5424366	.0045745	.2857586	1.008117
RD2015				
1	.0359419	.0166292	1.086462	1.03894
logwages2015	-.1300519	.0082815	.977301	1.00904
TFP2015	-.1787364	-.0294567	.9475049	.9850587
emp2015	.0436824	.0385463	.5304931	.4724067
DEBTS2015	-.0525752	-.0086042	1.051687	1.01474

```
159
160 *------------------------------------------------------------------------------*
161 *       PART 1.3: IPW
162 *------------------------------------------------------------------------------*
163         // ATE
164         cap drop osa1

165
166         teffects ipw (TFPS17) (FDI2016 i.($F) c.($C), logit),   osample(osa1)
```

```
Iteration 0:   EE criterion =  4.223e-23
Iteration 1:   EE criterion =  1.805e-33

Treatment-effects estimation                    Number of obs     =     11,323
Estimator      : inverse-probability weights
Outcome model  : weighted mean
Treatment model: logit
```

TFPS17	Coef.	Robust Std. Err.	z	P>|z|	[95% Conf.	Interval]
ATE						
FDI2016 (1 vs 0)	**.1221664**	**.0068002**	**17.97**	**0.000**	**.1088383**	**.1354945**
POmean						
FDI2016 0	**-.0682823**	**.0096669**	**-7.06**	**0.000**	**-.0872292**	**-.0493354**

```
167         outreg2 using $results/05_Tables/Table2_TFP.tex, append dec(3) ///
  >         drop(i.OWN i.PORT logwages2015 TFP2015 emp2015 DEBTS2015 i.TECH RD2015) ///
  >         nocon eqdrop(TME1)
C:\Users\Emilie\Documents\Emilie\Master\Nottingham\2_Appl_Microeconometrics\fdimatchin
> g_deleteEXP/04_results/05_Tables/Table2_TFP.tex
dir : seeout

168
169         tebalance summarize
```

Covariate balance summary

	Raw	Weighted
Number of obs =	**11,323**	**11,323.0**
Treated obs =	**4,460**	**5,630.2**
Control obs =	**6,863**	**5,692.8**

	Standardized differences Raw	Weighted	Variance ratio Raw	Weighted
OWN				
Subsidiaries	**-.018354**	**-.0075057**	**.9769702**	**.990309**
Independent	**.0616272**	**-.0006473**	**1.02321**	**.9997498**
State	**.1016402**	**.0120719**	**1.100951**	**1.011322**
TECH				
Medium low-t~s	**.1206088**	**.0037312**	**1.263082**	**1.007386**
Medium high-~s	**-.2329159**	**-.0001227**	**.8156583**	**.9999017**
High-tech in~s	**-.5425507**	**-.0102215**	**.2855456**	**.9817943**
RD2015				
1	**.0356507**	**.0088614**	**1.085768**	**1.020464**
logwages2015	**-.1300321**	**-.0016836**	**.9769191**	**1.003246**
TFP2015	**-.178877**	**-.0199601**	**.9473458**	**.9420373**
emp2015	**.0470091**	**.0126666**	**5.49725**	**1.243208**
DEBTS2015	**-.0529435**	**-.0129979**	**1.051101**	**1.016256**

```
170
171 *-------------------------------------------------------------------------------*
172 *       PART 1.4: AIWP
173 *-------------------------------------------------------------------------------*
  >
174         // ATE
175         cap drop osa1

176
177         teffects aipw (TFP2017 ($F)($C) )(FDI2016 i.($F) c.($C) )
```

```
Iteration 0:   EE criterion =  4.223e-23
Iteration 1:   EE criterion =  3.941e-32

Treatment-effects estimation                    Number of obs     =     11,323
Estimator      : augmented IPW
Outcome model  : linear by ML
Treatment model: logit
```

TFP2017	Coef.	Robust Std. Err.	z	P>|z|	[95% Conf.	Interval]
ATE						
FDI2016 (1 vs 0)	**.2918229**	**.0061911**	**47.14**	**0.000**	**.2796885**	**.3039572**
POmean						
FDI2016 0	**3.539684**	**.0195128**	**181.40**	**0.000**	**3.501439**	**3.577928**

```
178
179         outreg2 using $results/05_Tables/Table2_TFP.tex, append dec(3) ///
  >         drop(i.OWN i.PORT logwages2015 TFP2015 emp2015 DEBTS2015 i.TECH RD2015) ///
  >         nocon  eqdrop(OME0 OME1 TME1)
  C:\Users\Emilie\Documents\Emilie\Master\Nottingham\2_Appl_Microeconometrics\fdimatchin
  > g_deleteEXP/04_results/05_Tables/Table2_TFP.tex
  dir : seeout

180
181         tebalance summarize
```

Covariate balance summary

	Raw	Weighted
Number of obs =	**11,323**	**11,323.0**
Treated obs =	**4,460**	**5,630.2**
Control obs =	**6,863**	**5,692.8**

	Standardized differences Raw	Weighted	Variance ratio Raw	Weighted
OWN				
Subsidiaries	**-.018354**	**-.0075057**	**.9769702**	**.990309**
Independent	**.0616272**	**-.0006473**	**1.02321**	**.9997498**
State	**.1016402**	**.0120719**	**1.100951**	**1.011322**
TECH				
Medium low-t~s	**.1206088**	**.0037312**	**1.263082**	**1.007386**
Medium high-~s	**-.2329159**	**-.0001227**	**.8156583**	**.9999017**
High-tech in~s	**-.5425507**	**-.0102215**	**.2855456**	**.9817943**
RD2015				
1	**.0356507**	**.0088614**	**1.085768**	**1.020464**
logwages2015	**-.1300321**	**-.0016836**	**.9769191**	**1.003246**
TFP2015	**-.178877**	**-.0199601**	**.9473458**	**.9420373**
emp2015	**.0470091**	**.0126666**	**5.49725**	**1.243208**
DEBTS2015	**-.0529435**	**-.0129979**	**1.051101**	**1.016256**

```
182
183
184
  end of do-file

185
186 *-------------------------------------------------------------------------------*
187 *       PART 3.2: Robustness Checks
188 *-------------------------------------------------------------------------------*
189
190                 do $scripts/03b_Robustness_Checks

191 /*******************************************************************************
  >                                                          ROBUSTNESS DO-FILE
  > *******************************************************************************
  >
  >                         Applied Microeconometrics
  >
  >                                       Empirical Project
  >
  >                                                   Do-File 03b
  >
  >                 PURPOSE:        Robustness Checks.
  >
  >                 OUTLINE:        PART 1: Including Interactions
  >                                         PART 2: Excluding Outliers
  >                                         PART 3: Including PORT
  >                                         PART 4: ATT
  >                                         PART 5: Analysis by TECH
  >                                         PART 6: Appendix: Frequency of FDI by TECH
  >
  > *******************************************************************************
  >                          PART 1: Including Interactions
  > *******************************************************************************/
192
193         cap drop osa1

194         cap drop p1*

195         teffects psmatch (TFPS17) ///
  >                                       (FDI2016 i.($F)##c.($C), logit),       ///
  >                                        osample(osa1) generate(p1)

Treatment-effects estimation                    Number of obs      =     11,323
Estimator      : propensity-score matching      Matches: requested =          1
Outcome model  : matching                                       min =          1
Treatment model: logit                                          max =          1
------------------------------------------------------------------------------
             |               AI Robust
      TFPS17 |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
ATE          |
     FDI2016 |
   (1 vs 0)  |   .1520598   .0157615     9.65   0.000     .1211679    .1829518
------------------------------------------------------------------------------

196
197         tebalance summarize

    Covariate balance summary

                                              Raw              Matched
                      ----------------------------------------------------
                      Number of obs =       11,323               22,646
                      Treated obs   =        4,460               11,323
                      Control obs   =        6,863               11,323
                      ----------------------------------------------------
```

	Standardized differences		Variance ratio	
	Raw	Matched	Raw	Matched
OWN				
Subsidiaries	-.018354	-.0301379	.9769702	.9615233
Independent	.0616272	-.0196548	1.02321	.9919582
State	.1016402	.0280783	1.100951	1.026604
TECH				
Medium low-t~s	.1206088	-.016179	1.263082	.9683774
Medium high-~s	-.2329159	-.0260248	.8156583	.9785426
High-tech in~s	-.5425507	.0375841	.2855456	1.067129
RD2015				
1	.0356507	.0341887	1.085768	1.080693
logwages2015	-.1300321	.0235087	.9769191	1.036729
TFP2015	-.178877	.0069241	.9473458	.980012
emp2015	.0470091	.0220187	5.49725	3.424582
DEBTS2015	-.0529435	.0128246	1.051101	.9874191
OWN#				
logwages2015				
Subsidiaries	-.0501523	-.0264313	.8787442	.957907
Independent	.0095374	-.0051365	.9615021	1.062062
State	.0578536	.0245939	1.020548	1.011841
OWN#				
TFP2015				
Subsidiaries	-.064156	-.0361761	.8276227	.9193172
Independent	-.0408866	-.0118797	.8831729	1.000839
State	.0558077	.0348481	1.040186	1.056287
OWN#				
emp2015				
Subsidiaries	.0333955	.0270158	17.59077	16.69265
Independent	.0268385	-.0058267	3.91432	.9369739
State	.0189749	.00586	.5735634	.6417643
OWN#				
DEBTS2015				
Subsidiaries	-.0444712	-.0346152	.8861299	.9220981
Independent	-.0148901	-.0132875	.9654587	.9511524
State	.0840856	.0313432	1.078225	1.038717
TECH#				
logwages2015				
Medium low-t~s	.0985765	-.0130018	1.221177	.95976
Medium high-~s	-.1947846	-.0207019	.7998561	.9750318
High-tech in~s	-.4878963	.0551011	.2637228	1.200365
TECH#				
TFP2015				
Medium low-t~s	.0592069	-.0168126	1.09476	.9223716
Medium high-~s	-.2626395	-.030936	.6142341	.9223356
High-tech in~s	-.4825334	.0340785	.2214855	1.141804
TECH#				
emp2015				
Medium low-t~s	.0099385	-.0232465	.1033668	.0229633
Medium high-~s	.0215945	.0060306	.4923478	.1691328
High-tech in~s	.023925	.0399947	2.37245	1.036049
TECH#				
DEBTS2015				
Medium low-t~s	.0875624	-.0089829	1.216558	.9383764
Medium high-~s	-.1987245	-.0020756	.7404538	1.01959
High-tech in~s	-.4597713	.0262805	.2304414	1.072064
RD2015#				
logwages2015				

1	.0055913	.0333829	.9912599	1.099438
RD2015# TFP2015				
1	.0080044	.0475566	.9791256	1.254495
RD2015# emp2015				
1	.0639848	.0382383	31.03198	8.471608
RD2015# DEBTS2015				
1	.0328123	.0266122	1.167688	1.085422

```
        outreg2 using $results/05_Tables/Table6_Robustness.tex, replace dec(3) ///
>       drop(i.OWN i.TECH logwages2015 TFP2015 emp2015 DEBTS2015 RD2015) ///
>       nocon eqdrop(TME1)
C:\Users\Emilie\Documents\Emilie\Master\Nottingham\2_Appl_Microeconometrics\fdimatchin
> g_deleteEXP/04_results/05_Tables/Table6_Robustness.tex
dir : seeout

******************************************************************************
*                      PART 2: Excluding Outliers
******************************************************************************

        cap drop osa1

        cap drop p1*

        cap teffects psmatch (TFPS17) ///
>                                                  (FDI2016 i.($F) c.($C), logit) if e
> mp2015<4000000,             ///
>                                                  osample(osa1) generate(p1)

        tebalance summarize
```

Covariate balance summary

	Raw	Matched
Number of obs =	11,321	22,642
Treated obs =	4,458	11,321
Control obs =	6,863	11,321

	Standardized differences Raw	Matched	Variance ratio Raw	Matched
OWN				
Subsidiaries	-.0186455	-.0214674	.9766001	.9725788
Independent	.0615581	-.0041437	1.023189	.9983425
State	.1019412	.0054729	1.101223	1.005197
TECH				
Medium low-t~s	.1208152	-.0380474	1.263528	.9282785
Medium high-~s	-.2326559	.0078187	.8159034	1.006379
High-tech in~s	-.5424529	.0047152	.2856663	1.00837
RD2015				
1	.0358227	.0032695	1.086184	1.007708
logwages2015	-.1301697	.0098616	.9772428	.9891245
TFP2015	-.1790158	-.01456	.9477123	.9622371
emp2015	.0415358	.0517651	1.120857	1.126963
DEBTS2015	-.0528498	-.0106762	1.051515	.9991066

```
210
211         outreg2 using $results/05_Tables/Table6_Robustness.tex, append dec(3) ///
  >         drop(i.OWN i.TECH logwages2015 TFP2015 emp2015 DEBTS2015  RD2015) ///
  >         nocon eqdrop(TME1)
  C:\Users\Emilie\Documents\Emilie\Master\Nottingham\2_Appl_Microeconometrics\fdimatchin
  > g_deleteEXP/04_results/05_Tables/Table6_Robustness.tex
  dir : seeout

212
213 ********************************************************************************
214 *                        PART 3: Including PORT
215 ********************************************************************************
216
217 global P "OWN TECH RD2015 PORT"

218
219         cap drop osa1

220         cap drop p1*

221         cap teffects psmatch (TFPS17) ///
  >                                      (FDI2016 i.($P) c.($C), logit),        ///
  >                                       osample(osa1) generate(p1)

222
223         tebalance summarize
```

Covariate balance summary

	Raw	Matched
Number of obs =	**11,323**	**22,646**
Treated obs =	**4,460**	**11,323**
Control obs =	**6,863**	**11,323**

	Standardized differences		Variance ratio	
	Raw	Matched	Raw	Matched
OWN				
Subsidiaries	**-.018354**	**-.0200286**	**.9769702**	**.97423**
Independent	**.0616272**	**.0032353**	**1.02321**	**1.001221**
State	**.1016402**	**-.0052983**	**1.100951**	**.9948827**
TECH				
Medium low-t~s	**.1206088**	**-.0586116**	**1.263082**	**.8913964**
Medium high-~s	**-.2329159**	**-.002487**	**.8156583**	**.9979324**
High-tech in~s	**-.5425507**	**.0329806**	**.2855456**	**1.058948**
RD2015				
1	**.0356507**	**.0246992**	**1.085768**	**1.058193**
PORT				
Ports within~m	**.4092869**	**.0661913**	**1.253595**	**1.041592**
logwages2015	**-.1300321**	**.0176969**	**.9769191**	**1.037866**
TFP2015	**-.178877**	**-.0131356**	**.9473458**	**.9480748**
emp2015	**.0470091**	**.0419073**	**5.49725**	**3.052481**
DEBTS2015	**-.0529435**	**-.019821**	**1.051101**	**1.007143**

```
224
225         outreg2 using $results/05_Tables/Table6_Robustness.tex, append dec(3) ///
  >         drop(i.OWN i.TECH i.PORT logwages2015 TFP2015 emp2015 DEBTS2015  RD2015) ///
  >         nocon eqdrop(TME1)
  C:\Users\Emilie\Documents\Emilie\Master\Nottingham\2_Appl_Microeconometrics\fdimatchin
  > g_deleteEXP/04_results/05_Tables/Table6_Robustness.tex
  dir : seeout

226
227 ********************************************************************************
228 *                        PART 4: ATT
229 ********************************************************************************
230
231         cap drop osa1

232         cap drop p1*

233         cap teffects psmatch (TFPS17) ///
  >                                                (FDI2016 i.($F) c.($C), logit), atet
  >     ///
  >                                                osample(osa1) generate(p1)

234
235         tebalance summarize

    Covariate balance summary
                                                          Raw      Matched
                          ------------------------------------------------
                          Number of obs =           11,323        8,920
                          Treated obs   =            4,460        4,460
                          Control obs   =            6,863        4,460
                          ------------------------------------------------

    ------------------------------------------------------------------------------
                         |Standardized differences          Variance ratio
                         |        Raw     Matched           Raw    Matched
    -------------------------------------------------------------------------------
                     OWN |
      Subsidiaries       |    -.018354     .010732      .9769702   1.014212
       Independent       |    .0616272    .0099883       1.02321    1.00318
             State       |    .1016402   -.0294066      1.100951   .9770547
                         |
                    TECH |
    Medium low-t~s       |    .1206088   -.0553476      1.263082   .9143962
    Medium high-~s       |   -.2329159    .0145945      .8156583   1.017453
    High-tech in~s       |   -.5425507    .0039358      .2855456   1.015497
                         |
                 RD2015  |
                     1   |    .0356507    .0196597      1.085768   1.045608
                         |
           logwages2015  |   -.1300321    .0080137      .9769191   .9922576
                TFP2015  |    -.178877   -.0156447      .9473458   1.002034
                emp2015  |    .0470091    .0210317       5.49725   2.356114
              DEBTS2015  |   -.0529435   -.0152205      1.051101   1.029529
    -------------------------------------------------------------------------------

236
237         outreg2 using $results/05_Tables/Table6_Robustness.tex, append dec(3) ///
  >         drop(i.OWN i.TECH logwages2015 TFP2015 emp2015 DEBTS2015  RD2015) ///
  >         nocon eqdrop(TME1)
  C:\Users\Emilie\Documents\Emilie\Master\Nottingham\2_Appl_Microeconometrics\fdimatchin
  > g_deleteEXP/04_results/05_Tables/Table6_Robustness.tex
  dir : seeout
```

```
238
239 ********************************************************************************
240 *                        PART 5: Analysis by TECH
241 ********************************************************************************
242
243 *====================*
244 * (1) NN1 TECH=1
245 *====================*
246
247         cap drop osa1

248         cap drop p1

249         teffects psmatch (TFPS17) ///
  >                                        (FDI2016  i.($F) c.($C), logit) if TECH==1,
  >     ///
  >                                         osample(osa1) generate(p1)
  note: 1.TECH omitted because of collinearity
```

Treatment-effects estimation — Number of obs = **4,194**
Estimator : **propensity-score matching** — Matches: requested = **1**
Outcome model : **matching** — min = **1**
Treatment model: **logit** — max = **1**

TFPS17	Coef.	AI Robust Std. Err.	z	P>|z|	[95% Conf.	Interval]
ATE						
FDI2016 (1 vs 0)	**.1600066**	**.0195613**	**8.18**	**0.000**	**.1216672**	**.1983461**

```
250
251         tebalance summarize
```

Covariate balance summary

	Raw	Matched
Number of obs =	**4,194**	**8,388**
Treated obs =	**2,325**	**4,194**
Control obs =	**1,869**	**4,194**

	Standardized differences		Variance ratio	
	Raw	Matched	Raw	Matched
OWN				
Subsidiaries	**.0299781**	**.0150625**	**1.036398**	**1.018467**
Independent	**.0057604**	**-.0071951**	**1.001373**	**.9984236**
State	**-.0250578**	**-.0015653**	**.9786308**	**.9986098**
RD2015				
1	**.0165825**	**-.0014964**	**1.041031**	**.9963872**
logwages2015	**-.0219915**	**.0051526**	**1.012966**	**1.058301**
TFP2015	**.0072539**	**.0099917**	**.9676072**	**1.008227**
emp2015	**.0253438**	**-.0031803**	**4.356693**	**1.864609**
DEBTS2015	**-.0474876**	**.0088166**	**1.031416**	**.9736994**

```
252
253         outreg2 using $results/05_Tables/Table7_Robustness.tex, replace dec(3) ///
  >         drop(i.OWN i.TECH i.PORT logwages2015 TFP2015 emp2015 DEBTS2015  RD2015) ///
  >         nocon eqdrop(TME1)
  C:\Users\Emilie\Documents\Emilie\Master\Nottingham\2_Appl_Microeconometrics\fdimatchin
  > g_deleteEXP/04_results/05_Tables/Table7_Robustness.tex
  dir : seeout

254
255 *====================*
256 * (2) NN1 TECH=2
257 *====================*
258
259         cap drop osa1

260         cap drop p1

261         teffects psmatch (TFPS17) ///
  >                                         (FDI2016  i.($F) c.($C), logit) if TECH==2,
  >     ///
  >                                          osample(osa1) generate(p1)
  note: 2.TECH omitted because of collinearity

  Treatment-effects estimation                   Number of obs      =      1,685
  Estimator      : propensity-score matching     Matches: requested =          1
  Outcome model  : matching                                   min =          1
  Treatment model: logit                                      max =          1
```

TFPS17	Coef.	AI Robust Std. Err.	z	P>|z|	[95% Conf.	Interval]
ATE						
FDI2016 (1 vs 0)	**.0864057**	**.02799**	**3.09**	**0.002**	**.0315463**	**.1412652**

```
262
263         tebalance summarize

    Covariate balance summary
```

	Raw	Matched
Number of obs =	**1,685**	**3,370**
Treated obs =	**781**	**1,685**
Control obs =	**904**	**1,685**

	Standardized differences Raw	Matched	Variance ratio Raw	Matched
OWN				
Subsidiaries	**-.0789459**	**-.0222737**	**.9057037**	**.9730349**
Independent	**.0356487**	**.0449057**	**1.015483**	**1.019382**
State	**.094977**	**-.0685426**	**1.082362**	**.9424559**
RD2015				
1	**.0196745**	**.010822**	**1.04555**	**1.025096**
logwages2015	**-.0321255**	**.0186688**	**.9187912**	**.9609082**
TFP2015	**-.1550946**	**-.0443829**	**.9364425**	**.971122**
emp2015	**.0032877**	**.0284799**	**.0754936**	**.1191435**
DEBTS2015	**-.0426368**	**-.0683897**	**.9498591**	**.9548114**

```
264
265         outreg2 using $results/05_Tables/Table7_Robustness.tex, append dec(3) ///
  >         drop(i.OWN i.TECH i.PORT logwages2015 TFP2015 emp2015 DEBTS2015  RD2015) ///
  >         nocon eqdrop(TME1)
  C:\Users\Emilie\Documents\Emilie\Master\Nottingham\2_Appl_Microeconometrics\fdimatchin
  > g_deleteEXP/04_results/05_Tables/Table7_Robustness.tex
  dir : seeout

266
267 *====================*
268 * (3) NN1 TECH=3
269 *====================*
270
271         cap drop osa1

272         cap drop p1

273         teffects psmatch (TFPS17) ///
  >                                        (FDI2016  i.($F) c.($C), logit) if TECH==3,
  >     ///
  >                                         osample(osa1) generate(p1)
  note: 3.TECH omitted because of collinearity

  Treatment-effects estimation                   Number of obs      =      3,539
  Estimator      : propensity-score matching     Matches: requested =          1
  Outcome model  : matching                                      min =          1
  Treatment model: logit                                         max =          1
```

TFPS17	Coef.	AI Robust Std. Err.	z	P>|z|	[95% Conf.	Interval]
ATE						
FDI2016 (1 vs 0)	**.1721028**	**.018644**	**9.23**	**0.000**	**.1355612**	**.2086444**

```
274
275         tebalance summarize

    Covariate balance summary
```

	Raw	Matched
Number of obs =	**3,539**	**7,078**
Treated obs =	**1,107**	**3,539**
Control obs =	**2,432**	**3,539**

	Standardized differences Raw	Matched	Variance ratio Raw	Matched
OWN				
Subsidiaries	**-.1276748**	**.0379035**	**.8473309**	**1.04502**
Independent	**.0120872**	**-.0217603**	**1.004115**	**.9928833**
State	**.1432813**	**-.0069098**	**1.136897**	**.9933102**
RD2015				
1	**.0824806**	**.0169456**	**1.193028**	**1.038603**
logwages2015	**.0255104**	**-.0187561**	**.9997901**	**1.053611**
TFP2015	**-.2410387**	**.0237954**	**.9260925**	**.983687**
emp2015	**.074703**	**.0528976**	**.6929332**	**.4838172**
DEBTS2015	**-.0640427**	**-.0229667**	**1.051649**	**1.008139**

```
276
277         outreg2 using $results/05_Tables/Table7_Robustness.tex, append dec(3) ///
  >         drop(i.OWN i.TECH i.PORT logwages2015 TFP2015 emp2015 DEBTS2015  RD2015) ///
  >         nocon eqdrop(TME1)
  C:\Users\Emilie\Documents\Emilie\Master\Nottingham\2_Appl_Microeconometrics\fdimatchin
  > g_deleteEXP/04_results/05_Tables/Table7_Robustness.tex
  dir : seeout

278
279 *====================*
280 * (4) NN1 TECH=4
281 *====================*
282
283         cap drop osa1

284         cap drop p1

285         teffects psmatch (TFPS17) ///
  >                                         (FDI2016  i.($F) c.($C), logit) if TECH==4,
  >     ///
  >                                          osample(osa1) generate(p1)
  note: 4.TECH omitted because of collinearity

  Treatment-effects estimation                   Number of obs      =      1,905
  Estimator      : propensity-score matching     Matches: requested =          1
  Outcome model  : matching                                   min =          1
  Treatment model: logit                                      max =          1
```

TFPS17	Coef.	AI Robust Std. Err.	z	P>|z|	[95% Conf.	Interval]
ATE						
FDI2016 (1 vs 0)	**.1802721**	**.0541962**	**3.33**	**0.001**	**.0740494**	**.2864947**

```
286         tebalance summarize
  >

  Covariate balance summary
```

	Raw	Matched
Number of obs =	**1,905**	**3,810**
Treated obs =	**247**	**1,905**
Control obs =	**1,658**	**1,905**

	Standardized differences Raw	Matched	Variance ratio Raw	Matched
OWN				
Subsidiaries	**-.0779614**	**.0826873**	**.8814802**	**1.126006**
Independent	**.0522384**	**-.047133**	**1.044866**	**.9587982**
State	**.1691889**	**-.0427479**	**1.241433**	**.9400229**
RD2015				
1	**.0789006**	**.0224257**	**1.201598**	**1.053092**
logwages2015	**-.0580162**	**.1881349**	**1.050215**	**1.12134**
TFP2015	**-.2259366**	**.0580305**	**1.027535**	**1.144253**
emp2015	**.2584443**	**.152738**	**9.989972**	**1.226081**
DEBTS2015	**-.1862477**	**.0230111**	**1.1001**	**1.019314**

```
287
288         outreg2 using $results/05_Tables/Table7_Robustness.tex, append dec(3) ///
  >         drop(i.OWN i.TECH i.PORT logwages2015 TFP2015 emp2015 DEBTS2015  RD2015) ///
  >         nocon eqdrop(TME1)
  C:\Users\Emilie\Documents\Emilie\Master\Nottingham\2_Appl_Microeconometrics\fdimatchin
  > g_deleteEXP/04_results/05_Tables/Table7_Robustness.tex
  dir : seeout

289
290         // Calculating ATE weighted by each sample size:
291         display ///
  >         (0.1600066*4194+0.0864057*1685+0.1721028*3539+0.1802721*1905)/11232
  .15750992

292         /*= 0.15750992*/
293
294
295 ********************************************************************************
296 *                        PART 6: Appendix: Frequency of FDI by TECH
297 ********************************************************************************
298
299         tab2 TECH FDI2016, row

  -> tabulation of TECH by FDI2016
```

Key
frequency *row percentage*

Technology intensity	FDI/TREATMENT dummy in 2016 0	 1	 Total
Low-tech industries	**1,869** **44.56**	**2,325** **55.44**	**4,194** **100.00**
Medium low-tech indus	**904** **53.65**	**781** **46.35**	**1,685** **100.00**
Medium high-tech indu	**2,432** **68.72**	**1,107** **31.28**	**3,539** **100.00**
High-tech industries	**1,658** **87.03**	**247** **12.97**	**1,905** **100.00**
Total	**6,863** **60.61**	**4,460** **39.39**	**11,323** **100.00**

```
300
301         tabout TECH FDI2016 using $results/05_Tables/Table7a_Robustness.tex, ///
  >         cells(freq row cum) format(0 1) style(tex) clab(No. Col_% Cum_%) replace

  Table output written to: C:\Users\Emilie\Documents\Emilie\Master\Nottingham\2_Appl_Mic
  > roeconometrics\fdimatching_deleteEXP/04_results/05_Tables/Table7a_Robustness.tex

   & \multicolumn{9}{c}{FDI/TREATMENT dummy in 2016} \\
  Technology intensity & \multicolumn{3}{c}{0} & \multicolumn{3}{c}{1} & \multicolumn{3}
  > {c}{Total} \\
  &No.&Col \%&Cum \%&No.&Col \%&Cum \%&No.&Col \%&Cum \% \\
  \hline
  Low-tech industries&1869&44.6&27.2&2325&55.4&52.1&4194&100.0&37.0 \\
  Medium low-tech industries&904&53.6&40.4&781&46.4&69.6&1685&100.0&51.9 \\
  Medium high-tech industries&2432&68.7&75.8&1107&31.3&94.5&3539&100.0&83.2 \\
  High-tech industries&1658&87.0&100.0&247&13.0&100.0&1905&100.0&100.0 \\
  Total&6863&60.6&&4460&39.4&&11323&100.0& \\
```

```
302
  end of do-file

303
304 *------------------------------------------------------------------------------*
305 *       PART 3.3: Analysis by  Type of FDI
306 *------------------------------------------------------------------------------*
307
308                 do $scripts/03c_by_FDITYPE

309 /*******************************************************************************
  >                                                          BY FDI TYPE DO-FILE
  > *******************************************************************************
  >
  >                       Applied Microeconometrics
  >
  >                                       Empirical Project
  >
  >                                                  Do-File 03c
  >
  >                 PURPOSE:        Estimation of the effect of different types of FDI o
  > n TFP.
  >
  >                 OUTLINE:        PART 1: Multinnominal Logit Models
  >                                                 1.1: AIPW
  >                                                 1.2: IPW
  >                                         PART 2: Seperate Models
  >                                                 2.1 AIPW
  >
  > *******************************************************************************
  >                           PART 1: Mulitnominal Logit Models
  > *******************************************************************************/
310
311 *------------------------------------------------------------------------------*
312 *       PART 1.1:       AIPW
313 *------------------------------------------------------------------------------*
314
315         teffects aipw (TFPS17  i.($F) c.($C) )(FDITYPE2016  i.($F) c.($C) )

  Iteration 0:   EE criterion =  5.541e-20
  Iteration 1:   EE criterion =  2.373e-33

  Treatment-effects estimation                    Number of obs     =     11,323
  Estimator      : augmented IPW
  Outcome model  : linear by ML
  Treatment model: (multinomial) logit
```

TFPS17	Coef.	Robust Std. Err.	z	P>|z|	[95% Conf.	Interval]
ATE						
FDITYPE2016 (Exports-.. vs No FDI)	**.1435197**	**.0058746**	**24.43**	**0.000**	**.1320058**	**.1550337**
(Technolo.. vs No FDI)	**.1394529**	**.0045442**	**30.69**	**0.000**	**.1305465**	**.1483593**
(Domesti.. vs No FDI)	**.1432132**	**.0040598**	**35.28**	**0.000**	**.1352561**	**.1511702**
POmean						
FDITYPE2016 No FDI	**-.0565761**	**.0094884**	**-5.96**	**0.000**	**-.0751731**	**-.0379792**

```
316
317         teffects overlap, ptlevel(1) ///
  >                 saving($results\04_bytype\bytype_overlap_l1.gph, replace)
  (note: file C:\Users\Emilie\Documents\Emilie\Master\Nottingham\2_Appl_Microeconometric
  > s\fdimatching_deleteEXP/04_results\04_bytype\bytype_overlap_l1.gph not found)
  (file C:\Users\Emilie\Documents\Emilie\Master\Nottingham\2_Appl_Microeconometrics\fdim
  > atching_deleteEXP/04_results\04_bytype\bytype_overlap_l1.gph saved)

318
319         teffects overlap, ptlevel(2) ///
  >                 saving($results\04_bytype\bytype_overlap_l2.gph, replace)
  (note: file C:\Users\Emilie\Documents\Emilie\Master\Nottingham\2_Appl_Microeconometric
  > s\fdimatching_deleteEXP/04_results\04_bytype\bytype_overlap_l2.gph not found)
  (file C:\Users\Emilie\Documents\Emilie\Master\Nottingham\2_Appl_Microeconometrics\fdim
  > atching_deleteEXP/04_results\04_bytype\bytype_overlap_l2.gph saved)

320
321         teffects overlap, ptlevel(3) ///
  >                 saving($results\04_bytype\bytype_overlap_l3.gph, replace)
  (note: file C:\Users\Emilie\Documents\Emilie\Master\Nottingham\2_Appl_Microeconometric
  > s\fdimatching_deleteEXP/04_results\04_bytype\bytype_overlap_l3.gph not found)
  (file C:\Users\Emilie\Documents\Emilie\Master\Nottingham\2_Appl_Microeconometrics\fdim
  > atching_deleteEXP/04_results\04_bytype\bytype_overlap_l3.gph saved)

322
323         outreg2 using $results\04_bytype\bytype_table_1.tex, replace dec(3) ///
  >                 drop(OWN TECH RD2015 logwages2015 TFP2015 emp2015 DEBTS2015) ///
  >                 nocon eqdrop(OME0 OME1 OME2 OME3 TME1 TME2 TME3) lab()
  C:\Users\Emilie\Documents\Emilie\Master\Nottingham\2_Appl_Microeconometrics\fdimatchin
  > g_deleteEXP/04_results\04_bytype\bytype_table_1.tex
  dir : seeout

324
325         tebalance summarize

    Covariate balance summary
```

Treatment		Observations Raw	Weighted
No FDI	=	**6,863**	**2,845.1**
Exports-ori~I	=	**940**	**2,863.3**
Technology ~I	=	**1,555**	**2,800.4**
Domestic ma~I	=	**1,965**	**2,814.2**
Total	=	**11,323**	**11,323.0**

	Standardized differences Raw	Weighted	Variance ratio Raw	Weighted
Exports-orien~I				
OWN				
Subsidiaries	**.029319**	**-.0159056**	**1.037004**	**.9793819**
Independent	**.0711904**	**-.0519146**	**1.026993**	**.977249**
State	**.0619914**	**.0177173**	**1.064555**	**1.016531**
TECH				
Medium low-t~s	**.0789971**	**-.0130459**	**1.173675**	**.974177**
Medium high-~s	**-.2663044**	**-.0193414**	**.7842619**	**.9838819**
High-tech in~s	**-.5946766**	**.0430247**	**.222571**	**1.076075**
RD2015				
1	**-.1977282**	**.0562092**	**.5536423**	**1.130642**
logwages2015	**-.1833482**	**-.0587338**	**.9447749**	**.9103155**
TFP2015	**-.2141912**	**.0133092**	**.9704629**	**1.001579**
emp2015	**.0249499**	**.0555541**	**.3077821**	**.5456246**
DEBTS2015	**-.0665162**	**.0400558**	**1.024821**	**.9617875**
Technology in~I				
OWN				
Subsidiaries	**-.0227822**	**.0149411**	**.9717411**	**1.019102**

Independent	.0312067	-.0110143	1.013148	.9956038
State	.1341894	.0156322	1.12989	1.01462
TECH				
Medium low-t~s	.1501373	.0016789	1.327181	1.003328
Medium high-~s	-.2403611	-.0011011	.8089302	.9991046
High-tech in~s	-.5607553	-.0181223	.2633246	.9676973
RD2015				
1	-.0894951	-.0019277	.7908312	.9955541
logwages2015	-.1365085	-.0151862	.9818968	1.023026
TFP2015	-.2091214	-.0276276	.9481316	.9447849
emp2015	.0498435	.0196187	10.65892	1.505357
DEBTS2015	-.0186904	-.0394986	1.105096	1.080391
Domestic mark~I				
OWN				
Subsidiaries	-.0381328	-.0094519	.9519123	.9877872
Independent	.0810348	.0179192	1.02923	1.006665
State	.0945175	.0001241	1.094776	1.000121
TECH				
Medium low-t~s	.1164522	.001678	1.254467	1.003325
Medium high-~s	-.211331	.0001045	.8359902	1.000089
High-tech in~s	-.5049792	-.011019	.3324869	.9803731
RD2015				
1	.2082867	.0056421	1.503124	1.013047
logwages2015	-.0997247	.0102345	.9871457	1.013854
TFP2015	-.1378965	-.0090628	.9336303	.938248
emp2015	.0558724	.0075184	3.896824	.902008
DEBTS2015	-.0741218	-.0206654	1.020553	.979131

```
326
327 *-------------------------------------------------------------------------------*
328 *       PART 1.2:       IPW
329 *-------------------------------------------------------------------------------*
330
331         teffects ipw (TFPS17 )(FDITYPE2016  i.($F) c.($C))
```

Iteration 0: EE criterion = **5.541e-20**
Iteration 1: EE criterion = **4.471e-33**

Treatment-effects estimation Number of obs = **11,323**
Estimator : **inverse-probability weights**
Outcome model : **weighted mean**
Treatment model: **(multinomial) logit**

TFPS17	Coef.	Robust Std. Err.	z	P>|z|	[95% Conf.	Interval]
ATE						
FDITYPE2016 (Exports-.. vs No FDI)	.1570882	.0316177	4.97	0.000	.0951187	.2190577
(Technolo.. vs No FDI)	.1123436	.0177869	6.32	0.000	.077482	.1472052
(Domesti.. vs No FDI)	.1342705	.0106457	12.61	0.000	.1134052	.1551357
POmean						
FDITYPE2016 No FDI	-.0684059	.0096686	-7.08	0.000	-.0873559	-.0494558

```
332
333         outreg2  using $results\04_bytype\bytype_table_1.tex, append dec(3) ///
  >                 drop(OWN TECH RD2015 logwages2015 TFP2015 emp2015 DEBTS2015) ///
  >                 nocon eqdrop(OME 0 OME1 OME2 OME3 TME1 TME2 TME3)
  C:\Users\Emilie\Documents\Emilie\Master\Nottingham\2_Appl_Microeconometrics\fdimatchin
  > g_deleteEXP/04_results\04_bytype\bytype_table_1.tex
  dir : seeout

334
335         tebalance summarize

    Covariate balance summary
```

Treatment	Observations Raw	Weighted
No FDI =	**6,863**	**2,845.1**
Exports-ori~I =	**940**	**2,863.3**
Technology ~I =	**1,555**	**2,800.4**
Domestic ma~I =	**1,965**	**2,814.2**
Total =	**11,323**	**11,323.0**

	Standardized differences Raw	Weighted	Variance ratio Raw	Weighted
Exports-orien~I				
OWN				
Subsidiaries	**.029319**	**-.0159056**	**1.037004**	**.9793819**
Independent	**.0711904**	**-.0519146**	**1.026993**	**.977249**
State	**.0619914**	**.0177173**	**1.064555**	**1.016531**
TECH				
Medium low-t~s	**.0789971**	**-.0130459**	**1.173675**	**.974177**
Medium high-~s	**-.2663044**	**-.0193414**	**.7842619**	**.9838819**
High-tech in~s	**-.5946766**	**.0430247**	**.222571**	**1.076075**
RD2015				
1	**-.1977282**	**.0562092**	**.5536423**	**1.130642**
logwages2015	**-.1833482**	**-.0587338**	**.9447749**	**.9103155**
TFP2015	**-.2141912**	**.0133092**	**.9704629**	**1.001579**
emp2015	**.0249499**	**.0555541**	**.3077821**	**.5456246**
DEBTS2015	**-.0665162**	**.0400558**	**1.024821**	**.9617875**
Technology in~I				
OWN				
Subsidiaries	**-.0227822**	**.0149411**	**.9717411**	**1.019102**
Independent	**.0312067**	**-.0110143**	**1.013148**	**.9956038**
State	**.1341894**	**.0156322**	**1.12989**	**1.01462**
TECH				
Medium low-t~s	**.1501373**	**.0016789**	**1.327181**	**1.003328**
Medium high-~s	**-.2403611**	**-.0011011**	**.8089302**	**.9991046**
High-tech in~s	**-.5607553**	**-.0181223**	**.2633246**	**.9676973**
RD2015				
1	**-.0894951**	**-.0019277**	**.7908312**	**.9955541**
logwages2015	**-.1365085**	**-.0151862**	**.9818968**	**1.023026**
TFP2015	**-.2091214**	**-.0276276**	**.9481316**	**.9447849**
emp2015	**.0498435**	**.0196187**	**10.65892**	**1.505357**
DEBTS2015	**-.0186904**	**-.0394986**	**1.105096**	**1.080391**
Domestic mark~I				
OWN				
Subsidiaries	**-.0381328**	**-.0094519**	**.9519123**	**.9877872**
Independent	**.0810348**	**.0179192**	**1.02923**	**1.006665**
State	**.0945175**	**.0001241**	**1.094776**	**1.000121**
TECH				
Medium low-t~s	**.1164522**	**.001678**	**1.254467**	**1.003325**

Medium high-~s	-.211331	.0001045	.8359902	1.000089
High-tech in~s	-.5049792	-.011019	.3324869	.9803731
RD2015				
1	.2082867	.0056421	1.503124	1.013047
logwages2015	-.0997247	.0102345	.9871457	1.013854
TFP2015	-.1378965	-.0090628	.9336303	.938248
emp2015	.0558724	.0075184	3.896824	.902008
DEBTS2015	-.0741218	-.0206654	1.020553	.979131

```
336
337
338 ********************************************************************************
339 *                        PART 2: Seperate Logit Models
340 ********************************************************************************
341
342 *-------------------------------------------------------------------------------*
343 *       PART 2.1:       AIPW
344 *-------------------------------------------------------------------------------*
345
346 *AIPW Logit type1
347
348         teffects aipw (TFPS17   i.($F) c.($C) )(FDI2016 c.($C) i.($F)  ) ///
  >                 if FDITYPE2016==1 | FDITYPE2016==0

  Iteration 0:   EE criterion =  9.258e-22
  Iteration 1:   EE criterion =  2.861e-33

  Treatment-effects estimation                    Number of obs     =      7,803
  Estimator      : augmented IPW
  Outcome model  : linear by ML
  Treatment model: logit
```

TFPS17	Coef.	Robust Std. Err.	z	P>|z|	[95% Conf.	Interval]
ATE						
FDI2016 (1 vs 0)	.1404936	.0065984	21.29	0.000	.1275609	.1534263
POmean						
FDI2016 0	-.0124852	.0114371	-1.09	0.275	-.0349014	.009931

```
349
350         outreg2 using $results\04_bytype\bytype_table_1.tex, append dec(3) ///
  >                 drop(OWN TECH RD2015 logwages2015 TFP2015 emp2015 DEBTS2015) ///
  >                 nocon eqdrop(OME0 OME1 TME1)
  C:\Users\Emilie\Documents\Emilie\Master\Nottingham\2_Appl_Microeconometrics\fdimatchin
  > g_deleteEXP/04_results\04_bytype\bytype_table_1.tex
  dir : seeout

351
352
353 *AIPW Logit type2
354
355         teffects aipw (TFPS17   i.($F) c.($C) )(FDI2016 c.($C) i.($F)  ) ///
  >                 if FDITYPE2016==2 | FDITYPE2016==0

  Iteration 0:   EE criterion =  6.471e-24
  Iteration 1:   EE criterion =  2.692e-33
```

```
Treatment-effects estimation                    Number of obs     =      8,418
Estimator      : augmented IPW
Outcome model  : linear by ML
Treatment model: logit
```

TFPS17	Coef.	Robust Std. Err.	z	P>|z|	[95% Conf.	Interval]
ATE						
FDI2016 (1 vs 0)	**.1393538**	**.0048889**	**28.50**	**0.000**	**.1297718**	**.1489358**
POmean						
FDI2016 0	**-.0249796**	**.011**	**-2.27**	**0.023**	**-.0465391**	**-.00342**

```
356
357         outreg2 using $results\04_bytype\bytype_table_1.tex, append dec(3) ///
  >                 drop(OWN TECH RD2015 logwages2015 TFP2015 emp2015 DEBTS2015) ///
  >                 nocon eqdrop(OME0 OME1 TME1)
  C:\Users\Emilie\Documents\Emilie\Master\Nottingham\2_Appl_Microeconometrics\fdimatchin
  > g_deleteEXP/04_results\04_bytype\bytype_table_1.tex
  dir : seeout

358
359
360 *AIPW Logit type3
361
362         teffects aipw (TFPS17   i.($F) c.($C) )(FDI2016 c.($C) i.($F)  ) ///
  >                 if FDITYPE2016==3 | FDITYPE2016==0

  Iteration 0:   EE criterion =  7.443e-19
  Iteration 1:   EE criterion =  2.227e-33

  Treatment-effects estimation                    Number of obs     =      8,828
  Estimator      : augmented IPW
  Outcome model  : linear by ML
  Treatment model: logit
```

TFPS17	Coef.	Robust Std. Err.	z	P>|z|	[95% Conf.	Interval]
ATE						
FDI2016 (1 vs 0)	**.1428096**	**.0042927**	**33.27**	**0.000**	**.1343961**	**.1512231**
POmean						
FDI2016 0	**-.0173178**	**.0107047**	**-1.62**	**0.106**	**-.0382987**	**.0036632**

```
363
364         outreg2 using $results\04_bytype\bytype_table_1.tex, append dec(3) ///
  >                 drop(OWN TECH RD2015 logwages2015 TFP2015 emp2015 DEBTS2015) ///
  >                 nocon eqdrop(OME0 OME1 TME1)
  C:\Users\Emilie\Documents\Emilie\Master\Nottingham\2_Appl_Microeconometrics\fdimatchin
  > g_deleteEXP/04_results\04_bytype\bytype_table_1.tex
  dir : seeout
```

```
365
366
  end of do-file

367
368
369
370         log close
        name:  <unnamed>
         log:  C:\Users\Emilie\Documents\Emilie\Master\Nottingham\2_Appl_Microeconometri
  > cs\fdimatching_deleteEXP/log_fdi_matching.smcl
    log type:  smcl
   closed on:   9 May 2020, 10:47:13
  ------------------------------------------------------------------------------
```