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. ***** OUTPUT FILE: CARD & KRUEGER (1994)*****
.
. * STATA 10.0 CODE
. * copyright C 2008 by Tito Boeri & Jan van Ours
. * "THE ECONOMICS OF IMPERFECT LABOR MARKETS"
. * by Tito Boeri & Jan van Ours (2008)
. * Princeton University Press
.
.
. *Chapter 2: Minimum Wages
. *BOX 2.2 Effects of Minimum Wage changes in the US fastfood industry, pages
40-43
.
.
. * Article:
. * Minimum Wages and Employment: A Case Study of the
. * Fast-Food Industry in New Jersey and Pennsylvania
. * by David Card and Alan B Krueger
. * The American Economic Review, Vol 84, No 4
. * (Sep, 1994), pp 772-793
.
.
.
. *VARIABLE DESCRIPTION
. *SHEET sheet number (unique store id)
. *CHAIN chain 1=Burger King; 2=KFC; 3=Roy Rogers; 4=Wendys
. *CO_OWNED 1 if company owned
. *STATE 1 if NJ; 0 if Pa
.
. *Dummies for location:
. *
. *SOUTHJ 1 if in southern NJ
. *CENTRALJ 1 if in central NJ
. *NORTHJ 1 if in northern NJ
. *PA1 1 if in PA, northeast suburbs of Philadelphia
. *PA2 1 if in PA, Easton etc
. *SHORE 1 if on NJ shore
. *
. *First Interview:
. *
. *NCALLS number of call-backs*
. *EMPFT # full-time employees
. *EMPPT # part-time employees
. *NMGRS # managers/ass't managers
. *WAGE_ST starting wage ($/hr)
. *INCTIME months to usual first raise
. *FIRSTINC usual amount of first raise ($/hr)
. *BONUS 1 if cash bounty for new workers
. *PCTAFF % employees affected by new minimum
. *MEALS free/reduced price code (See below)
. *OPEN hour of opening
. *HRSOPEN number hrs open per day
. *PSODA price of medium soda, including tax
. *PFRY price of small fries, including tax
. *PENTREE price of entree, including tax
. *NREGS number of cash registers in store
. *NREGS11 number of registers open at 11:00 am
. *
. *Second Interview:
. *
. *TYPE2 type 2nd interview 1=phone; 2=personal
. *STATUS2 status of second interview: see below

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. use "C:\card.dta", clear

.
. label var fte "Full-time-equivalent pre"
. label var fte2 "Full-time-equivalent post"
. label var wage_st "Starting Wage pre"
. label var wage_st2 "Starting Wage post"

.
. *balanced panel
.
. drop if sample==0
(59 observations deleted)

. *Table 2
. *some results
. ttest fte, by(state) unequal

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Two-sample t test with unequal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]	
0	66	20.11364	1.497484	12.16562	17.12295	23.10432
1	285	17.27544	.5255459	8.872235	16.24098	18.3099
combined	351	17.80912	.5136107	9.622494	16.79897	18.81927
diff		2.838198	1.587028		-.3190714	5.995467

diff = mean(0) - mean(1) t = 1.7884
Ho: diff = 0 Satterthwaite's degrees of freedom = 81.7142

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.9613 Pr(|T| > |t|) = 0.0774 Pr(T > t) = 0.0387

```

. ttest fte2, by (state) unequal

```

Two-sample t test with unequal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]	
0	66	18.09848	.9746477	7.918076	16.15198	20.04499
1	285	17.56228	.4978079	8.403964	16.58242	18.54214
combined	351	17.66311	.4433619	8.306383	16.79112	18.53509
diff		.5362041	1.094418		-1.634632	2.707041

diff = mean(0) - mean(1) t = 0.4899
Ho: diff = 0 Satterthwaite's degrees of freedom = 101.752

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.6874 Pr(|T| > |t|) = 0.6252 Pr(T > t) = 0.3126

```

. ttest wage_st, by(state) unequal

```

Two-sample t test with unequal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]	
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	0	1	combined	diff
Obs	66	285	351	
Mean	4.653636	4.612982	4.620627	.0406539
Std. Err.	.0443627	.0203765	.0185204	.0488186
Std. Dev.	.3604042	.3439956	.3469791	
[95% Conf. Interval]	4.565038	4.572874	4.584202	-.0562717
	4.742235	4.653091	4.657052	.1375795

diff = mean(0) - mean(1) t = 0.8328
Ho: diff = 0 Satterthwaite's degrees of freedom = 94.3583

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.7965 Pr(|T| > |t|) = 0.4071 Pr(T > t) = 0.2035

. ttest wage_st2, by(state) unequal

Two-sample t test with unequal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]
0	66	4.618788	.04422	.359245	4.530474 4.707101
1	285	5.082141	.0063175	.1066519	5.069705 5.094576
combined	351	4.995014	.0137198	.2570413	4.968031 5.021998
diff		-.4633526	.044669		-.552496 -.3742093

diff = mean(0) - mean(1) t = -10.3730
Ho: diff = 0 Satterthwaite's degrees of freedom = 67.674

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.0000 Pr(|T| > |t|) = 0.0000 Pr(T > t) = 1.0000

```
.
. gen wage_st_Pa=wage_st if state==0
(285 missing values generated)

. label var wage_st_Pa "Starting wage"

. gen wage_st_Nj=wage_st if state==1
(66 missing values generated)

. label var wage_st_Nj "Starting wage"

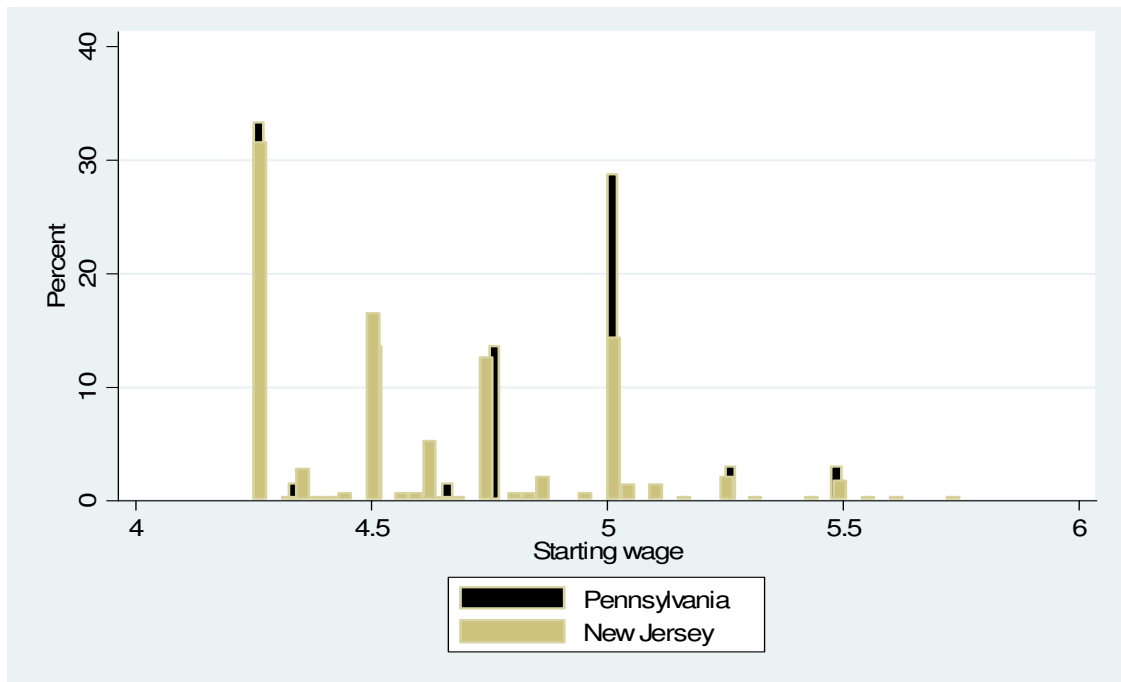
. gen wage_st2_Pa=wage_st2 if state==0
(285 missing values generated)

. label var wage_st2_Pa "Starting wage"

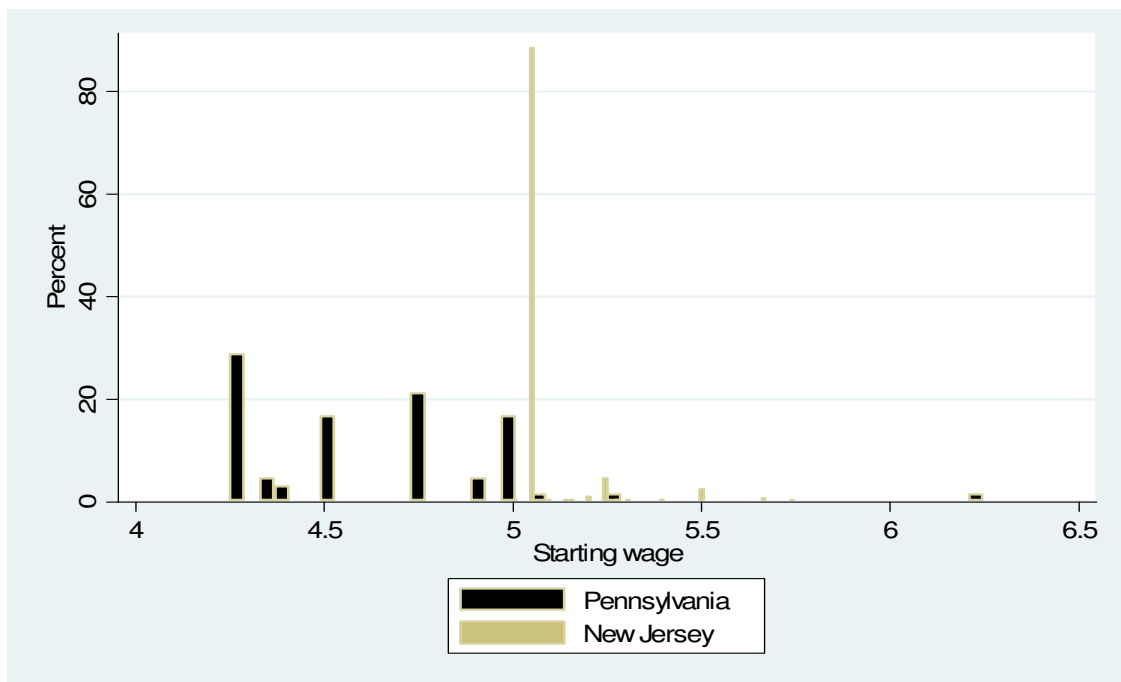
. gen wage_st2_Nj=wage_st2 if state==1
(66 missing values generated)

. label var wage_st2_Nj "Starting wage"

.
.
. histogram wage_st_Pa, bin(50) percent fcolor(black) legend(label (1
"Pennsylvania")) addplot(histogram wage_st_Nj, bin(50) percent legend(label (2
"New J
ersey"))
(bin=50, start=4.25, width=.025)
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.
  histogram wage_st2_Pa, bin(50) percent fcolor(black) legend(label (1
"Pennsylvania")) addplot(histogram wage_st2_Nj, bin(50) percent legend(label (2
"New
> Jersey")))
(bin=50, start=4.25, width=.04)
```



```
. *generate difference in differences for employment
.
. egen fteNJ=mean(fte) if state==1
(66 missing values generated)

(66 missing values generated)

. egen ftePA=mean(fte) if state==0
(285 missing values generated)
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. egen ftePA2=mean(fte2) if state==0
(285 missing values generated)

. gen dfteNJ=fteNJ2-fteNJ
(66 missing values generated)

. gen dftePA=ftePA2-ftePA
(285 missing values generated)

.
. *generate difference in differences for starting wages
.
. egen wage_stNJ=mean(wage_st) if state==1
(66 missing values generated)

. egen wage_stNJ2=mean(wage_st2) if state==1
(66 missing values generated)

. egen wage_stPA=mean(wage_st) if state==0
(285 missing values generated)

. egen wage_stPA2=mean(wage_st2) if state==0
(285 missing values generated)

. gen dwage_stNJ=wage_stNJ2-wage_stNJ
(66 missing values generated)

. gen dwage_stPA=wage_stPA2-wage_stPA
(285 missing values generated)

.
. *regression analog of difference in difference
. generate dwm=0.8 if state==1
(66 missing values generated)

. replace dwm=0 if state==0
(66 real changes made)

. reg dfte state

```

Source	SS	df	MS	Number of obs	=	351
Model	283.98141	1	283.98141	F(1, 349)	=	3.89
Residual	25491.473	349	73.0414699	Prob > F	=	0.0494
				R-squared	=	0.0110
				Adj R-squared	=	0.0082
Total	25775.4544	350	73.6441555	Root MSE	=	8.5464

dfte	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
state	2.301994	1.167465	1.97	0.049	.0058413 4.598146
_cons	-2.015152	1.051993	-1.92	0.056	-4.084195 .0538918

```

. reg dfte dwm

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Source	SS	df	MS	Number of obs	=	351
Model	283.98141	1	283.98141	F(1, 349)	=	3.89
Residual	25491.473	349	73.0414699	Prob > F	=	0.0494
				R-squared	=	0.0110
				Adj R-squared	=	0.0082
Total	25775.4544	350	73.6441555	Root MSE	=	8.5464

dfte	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
dwm	2.877492	1.459331	1.97	0.049	.0073016	5.747682
_cons	-2.015152	1.051993	-1.92	0.056	-4.084195	.0538918

.

. log close