

```

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> -----
      name: <unnamed>
      log: C:\Users\mwronsk\OneDrive - Szkoła Główna Handlowa w Warszawie\Bank Świat
> owy Rumunia\Replication Minimu
> m Wage - Simulation\3.Simulation_Scenario_Two.log
      log type: text
      opened on: 10 May 2024, 21:45:36
r; t=0.00 21:45:36

.
. use Data\Tax_data_11_2021_base_for_the_simulation
r; t=5.62 21:45:42

. *Generate auxiliary variables used in the simulation*
.
. gen age=2021-an
(722 missing values generated)
r; t=0.39 21:45:42

.
. gen age_group=1 if age<30
(3,395,631 missing values generated)
r; t=0.40 21:45:43

. replace age_group=2 if age>29 & age<40
(912,642 real changes made)
r; t=0.46 21:45:43

. replace age_group=3 if age>39 & age<50
(1,209,936 real changes made)
r; t=0.48 21:45:44

. replace age_group=4 if age>49 & age<60
(1,047,537 real changes made)
r; t=0.47 21:45:44

. replace age_group=5 if age>59
(225,516 real changes made)
r; t=0.37 21:45:44

.
. gen construction=cond1
r; t=0.35 21:45:45

.
. gen skilled=1 if caen>5800 & caen<6400
(3,757,538 missing values generated)
r; t=0.44 21:45:45

. replace skilled=1 if caen>6400 & caen<6631
(80,366 real changes made)
r; t=0.44 21:45:46

. replace skilled=1 if caen>5900 & caen<7501
(184,255 real changes made)
r; t=0.47 21:45:46

. replace skilled=1 if caen>8400 & caen<8431
(310,793 real changes made)
r; t=0.46 21:45:47

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. replace skilled=1 if caen>8500 & caen<8561
(296,134 real changes made)
r; t=0.45 21:45:47

. replace skilled=1 if caen>8600 & caen<8900
(308,443 real changes made)
r; t=0.45 21:45:48

. replace skilled=1 if caen>9000 & caen<9330
(52,144 real changes made)
r; t=0.42 21:45:48

. replace skilled=1 if caen==9900
(888 real changes made)
r; t=0.37 21:45:48

.
. replace skilled=0 if skilled==.
(2,524,515 real changes made)
r; t=0.47 21:45:49

. **SIMULATION 2. Convergence to living wage estimate**
. gen wage=vbrut
r; t=0.36 21:45:49

.
.
. gen minwage=2300 if construction==0
(282,258 missing values generated)
r; t=0.43 21:45:50

. replace minwage=3000 if construction==1
(282,258 real changes made)
r; t=0.38 21:45:50

. gen new_MW_1=2826 if construction==0
(282,258 missing values generated)
r; t=0.43 21:45:50

. replace new_MW_1=2826 if construction==1
(282,258 real changes made)
r; t=0.38 21:45:51

.
. gen wagelowold=wage<minwage
r; t=0.42 21:45:51

. replace wagelowold=. if wage==. | minwage==.
(0 real changes made)
r; t=0.42 21:45:52

. sum wagelowold, detail

-----+-----
               wagelowold
-----+-----
Percentiles      Smallest
1%                0                0
5%                0                0
10%               0                0      Obs          3,942,640
25%               0                0      Sum of Wgt.   3,942,640

50%               0
75%               0      Largest
90%               0                0      Mean          0
95%               0                0      Std. Dev.       0
99%               0                0      Variance
Kurtosis          .
r; t=0.44 21:45:52

```

```
.
. gen wageminnew=wage>=minwage & wage<new_MW_1
r; t=0.46 21:45:52
```

```
. replace wageminnew=. if wage==. | minwage==.
(0 real changes made)
r; t=0.42 21:45:53
```

```
. sum wageminnew, detail
```

wageminnew				
Percentiles		Smallest		
1%	0	0		
5%	0	0		
10%	0	0	Obs	3,942,640
25%	0	0	Sum of Wgt.	3,942,640
50%	0		Mean	.1640941
		Largest	Std. Dev.	.370361
75%	0	1		
90%	1	1	Variance	.1371673
95%	1	1	Skewness	1.813938
99%	1	1	Kurtosis	4.290371

```
r; t=2.49 21:45:55
```

```
.
. gen wagehigh=wage>=minwage
r; t=0.41 21:45:56
```

```
. replace wagehigh=. if wage==. | minwage==.
(0 real changes made)
r; t=0.43 21:45:56
```

```
.
. gen expwage=new_MW_1 if wageminnew==1
(3,295,676 missing values generated)
r; t=0.41 21:45:57
```

```
. replace expwage=wage if wageminnew!=1
(3,295,676 real changes made)
r; t=0.51 21:45:57
```

```
. replace expwage=. if wage==.
(0 real changes made)
r; t=0.37 21:45:58
```

```
. sum expwage, detail
```

expwage				
Percentiles		Smallest		
1%	2826	2826		
5%	2826	2826		
10%	2826	2826	Obs	3,942,640
25%	3253	2826	Sum of Wgt.	3,942,640
50%	4762		Mean	6337.03
		Largest	Std. Dev.	6552.839
75%	7281	1411767		
90%	10896	1560913	Variance	4.29e+07
95%	14804	1898160	Skewness	40.96967
99%	28185	1908709	Kurtosis	7009.095

```
r; t=6.97 21:46:05
```

```

.
. gen wagechange=expwage-wage
r; t=0.42 21:46:05

.
. lab var wageminwageold "Wage<minimum wage"
r; t=0.00 21:46:05

. lab var wageminwage "new minwage>wage>=minwage"
r; t=0.00 21:46:05

. lab var wage "Wage, EUR"
r; t=0.00 21:46:05

. lab var expwage "Expected wage, all emp., EUR"
r; t=0.00 21:46:05

. lab var wagechange "Expected increase in wage, EUR"
r; t=0.00 21:46:05

. //Elasticities at short- and long- run
. local sigma=5
r; t=0.00 21:46:05

. g sigma=-0.`sigma'
r; t=0.12 21:46:05

. g sigma_us=sigma-0.2
r; t=0.40 21:46:05

. g sigma_lr=sigma-0.3
r; t=0.39 21:46:06

. g sigma_uslr=sigma_us-0.3
r; t=0.39 21:46:06

.
. g sigma_sr=sigma*skilled+sigma_us*(1-skilled)
r; t=0.47 21:46:07

. g sigma_lr=sigma_lr*skilled+sigma_uslr*(1-skilled)
r; t=0.47 21:46:07

.
.
.
. *Microsimulations*****
. *****
. // Assuming that only those who have minimum wage will loose
. //By age, skills, occupation, type of firm and employment compute expected change in
> wage
. //Compute change in wages (New minimum wage respect to group average wage)
.
. keep if wage>minwage
(0 observations deleted)
r; t=0.43 21:46:08

. egen Mwage=mean(wage) if wageminwage==1 , by(gender skilled age_group)
(3295676 missing values generated)
r; t=16.25 21:46:24

```

```

. egen Mexpwage=mean(expwage) if wagemlownew==1 , by(gender skilled age_group)
(3295676 missing values generated)
r; t=18.30 21:46:42

.
. gen deltawage=(Mexpwage-Mwage)/Mexpwage
(3,295,676 missing values generated)
r; t=0.45 21:46:43

. replace deltawage=0 if wagemlownew==0
(3,295,676 real changes made)
r; t=0.49 21:46:43

.
.
. *Expected Change in Employment (elasticity * wage change)
. gen deltaemp_sr=deltawage*sigma_sr
r; t=0.40 21:46:43

. gen deltaemp_lr=deltawage*sigma_lr
r; t=0.40 21:46:44

.
. local n=200
r; t=0.00 21:46:44

. forval i=1/\`n' {
2. qui{
3. set seed `i'
4. gen rann=uniform() if deltaemp_sr!=.
5.
.   foreach r in sr lr {
6.     gen loosejob_`r'=(rann<-deltaemp_`r') if deltaemp_sr!=.
7.     gen wage_`r'`i'=expwage
8.     replace wage_`r'`i'=0 if loosejob_`r'==1
9.     replace wage_`r'`i'=. if wage==.
10.
.   g employed_`r'`i'=1
11.   replace employed_`r'`i'=0 if wage_`r'`i'==0
12.   g unemployed_`r'`i'=1 if wage_`r'`i'==0
13.   replace unemployed_`r'`i'=0 if wage_`r'`i'>0
14.
.   }
15.
. drop rann loosejob_sr loosejob_lr
16. }
17. }
r; t=1408.23 22:10:12

.
.
. foreach r in sr lr {
2. egen Mwage_`r'=rowmean(wage_`r'*)
3. egen SDwage_`r'=rowstd(wage_`r'*)
4. egen MEDwage_`r'=rowmedian(wage_`r'*)
5. egen Munemployed_`r'=rowmean(unemployed_`r'*)
6. egen Memployed_`r'=rowmean(employed_`r'*)
7.
.
. }
r; t=2616.68 22:53:49

```

```

. save Data_ready\11_2021_only_sample_full_time_scenario_2.dta, replace
(note: file Data_ready\11_2021_only_sample_full_time_scenario_2.dta not found)
file Data_ready\11_2021_only_sample_full_time_scenario_2.dta saved
r; t=86.35 22:55:15

. *****
. *Labeling*****
. lab var wage "Actual wage. EUR"
r; t=0.00 22:55:15

. lab var expwage "Expected wage assuming no loose of employment. EUR"
r; t=0.00 22:55:15

. lab var M wage_sr "Simulated wage. Short-run. EUR"
r; t=0.00 22:55:15

. lab var Mememployed_sr "Simulated employment rate. Short-run. %"
r; t=0.00 22:55:15

. lab var Munemployed_sr "Simulated unemployment rate. Short-run %"
r; t=0.00 22:55:15

. lab var M wage_lr "Simulated wage. Long-run. EUR"
r; t=0.00 22:55:15

. lab var Mememployed_lr "Simulated employment rate. Long-run. %"
r; t=0.00 22:55:15

. lab var Munemployed_lr "Simulated unemployment rate. Long-run %"
r; t=0.00 22:55:15

.
. //Summary by age
. global outcome wage expwage M wage_sr Mememployed_sr Munemployed_sr M wage_lr Mempl
> oyed_lr Munemployed_lr ///
>
r; t=0.00 22:55:15

.
. foreach var in All age_group {
2.
. preserve
3. collapse $outcome, by(`var')
4.
. lab var wage "Actual wage. EUR"
5. lab var expwage "Expected wage assuming no loose of employment. EUR"
6. lab var M wage_sr "Simulated wage. Short-run. EUR"
7. lab var Mememployed_sr "Simulated employment rate. Short-run. %"
8. lab var Munemployed_sr "Simulated unemployment rate. Short-run %"
9. lab var M wage_lr "Simulated wage. Long-run. EUR"
10. lab var Mememployed_lr "Simulated employment rate. Long-run. %"
11. lab var Munemployed_lr "Simulated unemployment rate. Long-run %"
12.

.
. export excel using $Output\Romania_MW_sim_tax_2.xlsx, sheet("`var'") firstrow(varla
> bels) cell(A2) sheetreplace
13. restore
14. }
I/O error writing .dta file
Usually such I/O errors are caused by the disk or file system being full.
r(693); t=341.20 23:00:56

end of do-file

r(693); t=4572.51 23:01:49
*****

```

```

. *Labeling*****
. lab var wage "Actual wage. EUR"
r; t=0.02 14:23:05

. lab var expwage "Expected wage assuming no loose of employment. EUR"
r; t=0.00 14:23:05

. lab var M wage_sr "Simulated wage. Short-run. EUR"
r; t=0.00 14:23:05

. lab var Memployed_sr "Simulated employment rate. Short-run. %"
r; t=0.00 14:23:05

. lab var Munemployed_sr "Simulated unemployment rate. Short-run %"
r; t=0.00 14:23:05

. lab var M wage_lr "Simulated wage. Long-run. EUR"
r; t=0.00 14:23:05

. lab var Memployed_lr "Simulated employment rate. Long-run. %"
r; t=0.00 14:23:05

. lab var Munemployed_lr "Simulated unemployment rate. Long-run %"
r; t=0.00 14:23:05

.
. **//Summary by age**
. global outcome wage expwage M wage_sr Memployed_sr Munemployed_sr M wage_lr Mempl
> oyed_lr Munemployed_lr ///
>
r; t=0.00 14:23:05

.
. foreach var in All age_group {
2.
. preserve
3. collapse $outcome, by(`var')
4.
. lab var wage "Actual wage. EUR"
5. lab var expwage "Expected wage assuming no loose of employment. EUR"
6. lab var M wage_sr "Simulated wage. Short-run. EUR"
7. lab var Memployed_sr "Simulated employment rate. Short-run. %"
8. lab var Munemployed_sr "Simulated unemployment rate. Short-run %"
9. lab var M wage_lr "Simulated wage. Long-run. EUR"
10. lab var Memployed_lr "Simulated employment rate. Long-run. %"
11. lab var Munemployed_lr "Simulated unemployment rate. Long-run %"
12.

.
. export excel using $Output\Romania_MW_sim_tax_2.xlsx, sheet("`var'") firstrow(varla
> bels) cell(A2) sheetreplace
13. restore
14. }
file Output\Romania_MW_sim_tax_2.xlsx saved
file Output\Romania_MW_sim_tax_2.xlsx saved
r; t=896.37 14:38:01

.
. foreach var in All age_group {
2.
. preserve
3. collapse $outcome if wagemlownew==1, by(`var')
4.

```

```

. lab var wage "Actual wage. EUR"
5. lab var expwage "Expected wage assuming no loose of employment. EUR"
6. lab var M wage_sr "Simulated wage. Short-run. EUR"
7. lab var Memployed_sr "Simulated employment rate. Short-run. %"
8. lab var Munemployed_sr "Simulated unemployment rate. Short-run %"
9. lab var M wage_lr "Simulated wage. Long-run. EUR"
10. lab var Memployed_lr "Simulated employment rate. Long-run. %"
11. lab var Munemployed_lr "Simulated unemployment rate. Long-run %"
12.

.
. export excel using $Output\Romania_MW_sim_tax_2.xlsx, sheet("Only affected `var'")
> firstrow(varlabels) cell(A2) s
> heetreplace
13.
. restore
14. }
file Output\Romania_MW_sim_tax_2.xlsx saved
file Output\Romania_MW_sim_tax_2.xlsx saved
r; t=906.02 14:53:07

. log close
name: <unnamed>
log: C:\Users\mwronsk\OneDrive - Szkoła Główna Handlowa w Warszawie\Bank Świat
> owy Rumunia\Replication Minimu
> m Wage - Simulation\3.Simulation_Scenario_Two_11.log
log type: text
closed on: 11 May 2024, 14:53:07
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> -----

```