Log file of replicating the results in the main text

Executing the Benchmark case
>
Equation solved. The sum of squared function values, r = 4.485807e-24, is less than
sqrt(options.FunctionTolerance) = 1.000000e-04. The relative norm of the gradient of
r,
9.471851e-12, is less than options.OptimalityTolerance = 1.000000e-08.

Optimization Metric   Options
relative norm(grad r) =   9.47e-12   OptimalityTolerance =   1e-08
(selected)
r =   4.49e-24   sqrt(FunctionTolerance) = 1.0e-04
(selected)

gamma = 0.93
Firm Size: Model vs Data
    0.5090   0.2287   0.1097   0.1263   0.0263
    0.4698   0.2797   0.1290   0.1020   0.0195

Employment Size: Model vs Data
    0.1070   0.1343   0.1447   0.4086   0.2055
    0.0864   0.1611   0.1655   0.3501   0.2369

Average Tax =
    0.1297

ke to yc
    0.0236

clean share
    0.5777

K/Y ratio
    1.6558

Executing the No-tax case
>
Equation solved. The sum of squared function values, r = 7.285860e-18, is less than
sqrt(options.FunctionTolerance) = 1.000000e-04. The relative norm of the gradient of
r,
7.626462e-09, is less than options.OptimalityTolerance = 1.000000e-08.

Optimization Metric   Options
relative norm(grad r) =   7.63e-09   OptimalityTolerance =   1e-08
(selected)
r =   7.29e-18   sqrt(FunctionTolerance) = 1.0e-04
(selected)

gamma = 0.93

```
Firm Size: Model vs Data
    0.3599    0.2094    0.1256    0.2426    0.0625
    0.4698    0.2797    0.1290    0.1020    0.0195

Employment Size: Model vs Data
    0.0322    0.0521    0.0696    0.4202    0.4259
    0.0864    0.1611    0.1655    0.3501    0.2369

Average Tax =
     0

ke to yc
    0.0200

clean share
    0.8561

K/Y ratio
    2.0598

Executing the Regulation case
>
Equation solved. The sum of squared function values, r = 6.849363e-24, is less than
sqrt(options.FunctionTolerance) = 1.000000e-04. The relative norm of the gradient of
r,
1.171334e-11, is less than options.OptimalityTolerance = 1.000000e-08.

Optimization Metric                                        Options
relative norm(grad r) =    1.17e-11            OptimalityTolerance =    1e-08
(selected)
r =    6.85e-24                                sqrt(FunctionTolerance) =  1.0e-04
(selected)

gamma = 0.93
Firm Size: Model vs Data
    0.4993    0.2331    0.1118    0.1290    0.0267
    0.4698    0.2797    0.1290    0.1020    0.0195

Employment Size: Model vs Data
    0.1041    0.1345    0.1449    0.4105    0.2061
    0.0864    0.1611    0.1655    0.3501    0.2369

Average Tax =
    0.1306

ke to yc
    0.0361

clean share
    0.8510
```

```
K/Y ratio
    1.6559

Executing the Flat-tax case
>
Equation solved. The sum of squared function values, r = 1.363218e-20, is less than
sqrt(options.FunctionTolerance) = 1.000000e-04. The relative norm of the gradient of
r,
4.852707e-10, is less than options.OptimalityTolerance = 1.000000e-08.

Optimization Metric                                         Options
relative norm(grad r) =   4.85e-10            OptimalityTolerance =   1e-08
(selected)
r =   1.36e-20                               sqrt(FunctionTolerance) =  1.0e-04
(selected)

gamma = 0.93
Firm Size: Model vs Data
    0.3599    0.2094    0.1256    0.2426    0.0625
    0.4698    0.2797    0.1290    0.1020    0.0195

Employment Size: Model vs Data
    0.0322    0.0521    0.0696    0.4202    0.4259
    0.0864    0.1611    0.1655    0.3501    0.2369

Average Tax =
    0.1755

ke to yc
    0.0171

clean share
    0.7334

K/Y ratio
    1.6985
```

```
========================================================================
Print the Tables
Execute: generate_tables_main.m
========================================================================
                    Table 4: Aggregate Impacts
========================================================================
                  Polluting                 Non-polluting
          ----------------------------   ----------------------------
Statistics  Benchmark    (i)     (ii)    Benchmark    (i)     (ii)
          ----------------------------   ----------------------------
Output        100.00   131.16   98.99      100.00   129.62  100.28
Capital       100.00   163.06   99.00      100.00   161.26  100.28
```

Consumption	100.00	123.63	100.02	100.00	123.63	100.02
Wage	100.00	160.00	99.95	100.00	160.00	99.95
Y/Worker	100.00	128.25	100.15	100.00	128.60	99.95
Y/Firm	100.00	297.62	110.17	100.00	311.85	100.28
Avg TFP	100.00	221.24	111.11	100.00	235.39	100.00
% in Output	19.73	19.91	19.52	80.27	80.09	80.48
#firms	100.00	44.07	89.85	100.00	41.56	100.00
Mean Size	59.98	139.19	65.98	52.18	126.53	52.35
Median Size	23.67	43.09	27.88	18.61	34.31	18.67
Pollution	100.00	76.67	85.83			
Intensity	100.00	58.45	86.70			
Clean Share	57.77	85.61	85.10			
Regulation	23.00	23.00	35.50			

===

===

Table 5: Distributional Impacts

===

	QU1	QU2	QU3	QU4	QU5
Polluting Sector					
Benchmark	2.79	4.26	7.45	16.81	68.70
Case (i)	1.53	2.89	6.46	18.25	70.87
Case (ii)	3.02	4.63	8.01	17.79	66.55
Non-polluting Sector					
Benchmark	2.43	3.78	6.65	15.39	71.75
Case (i)	1.30	2.49	5.68	16.97	73.57
Case (ii)	2.43	3.78	6.65	15.39	71.75

===

===

Table 6: Aggregate Impacts

===

	Polluting			Non-polluting		
Statistics	Benchmark	(ip)	(i)	Benchmark	(ip)	(i)
Output	100.00	108.15	131.16	100.00	106.87	129.62
Capital	100.00	110.91	163.06	100.00	109.63	161.26
Consumption	100.00	106.57	123.63	100.00	106.57	123.63
Wage	100.00	108.77	160.00	100.00	108.77	160.00
Y/Worker	100.00	105.74	128.25	100.00	106.03	128.60
#firms	100.00	44.07	44.07	100.00	41.56	41.56
Mean Size	59.98	139.19	139.19	52.18	126.53	126.53
Pollution	100.00	70.04	76.67			
Intensity	100.00	64.77	58.45			
Clean Share	57.77	73.34	85.61			

==