Figures

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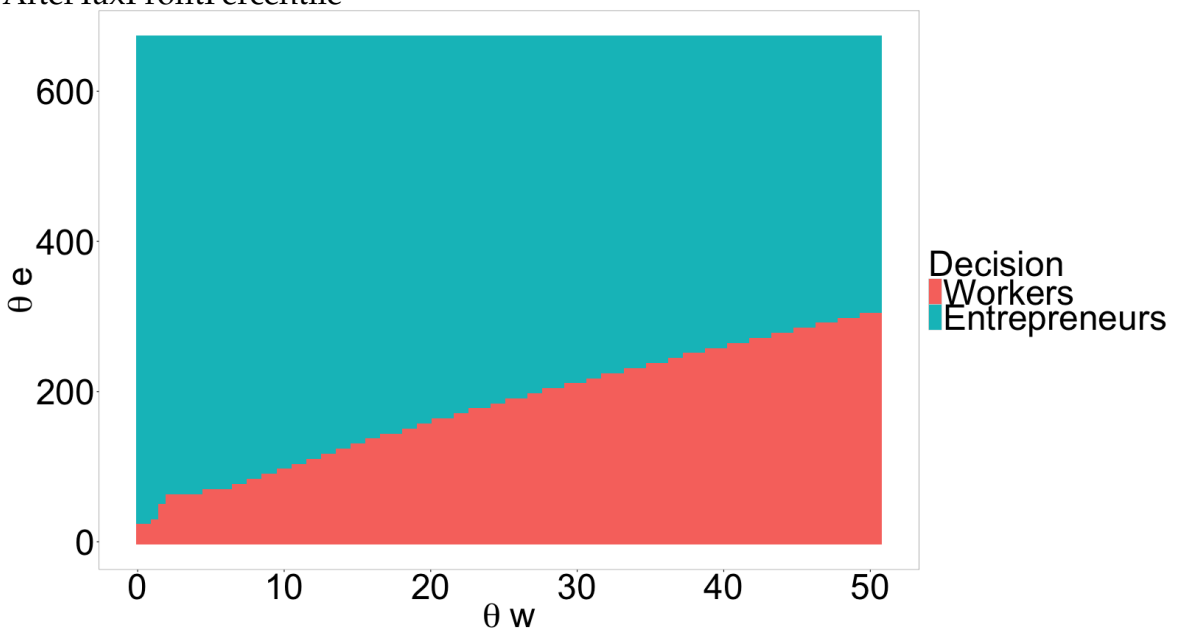
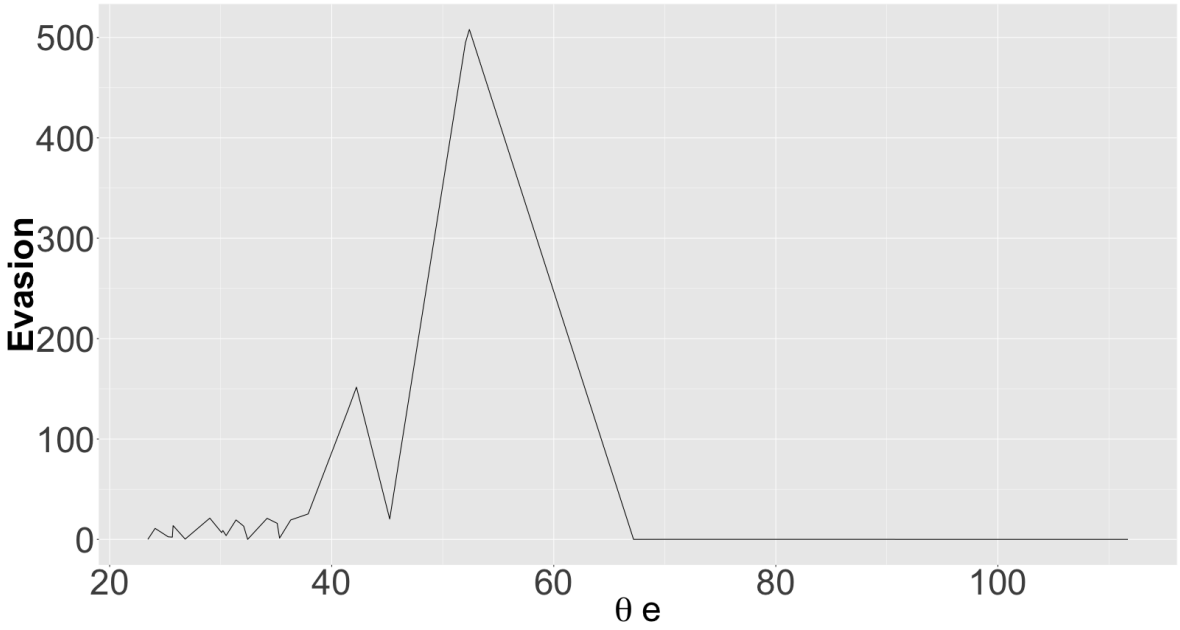
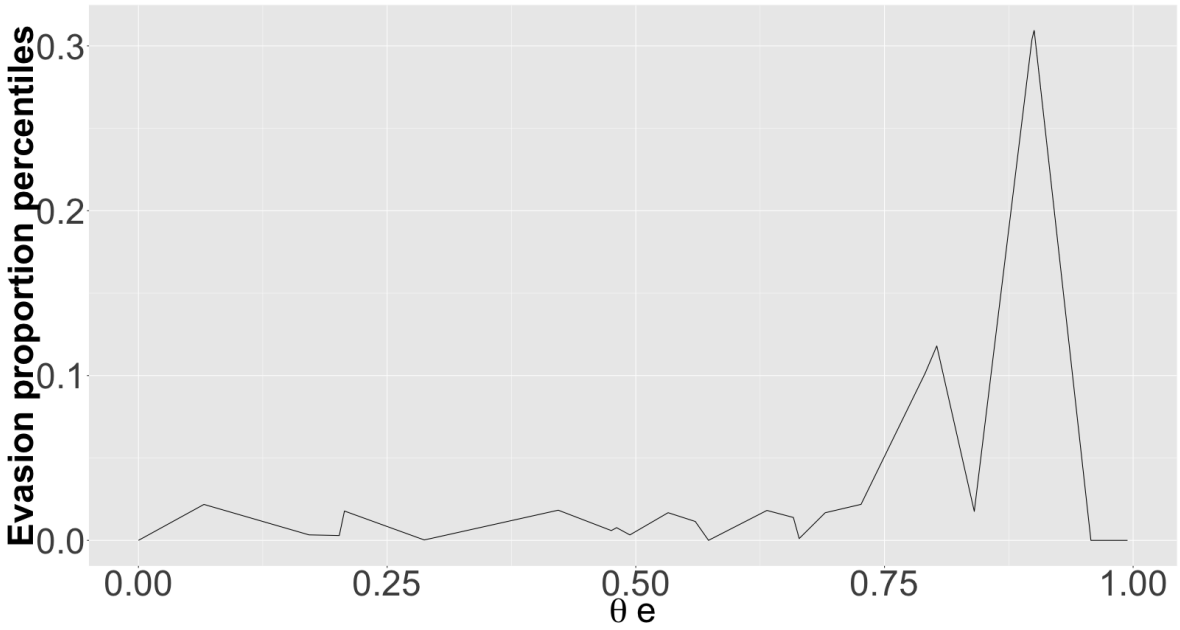
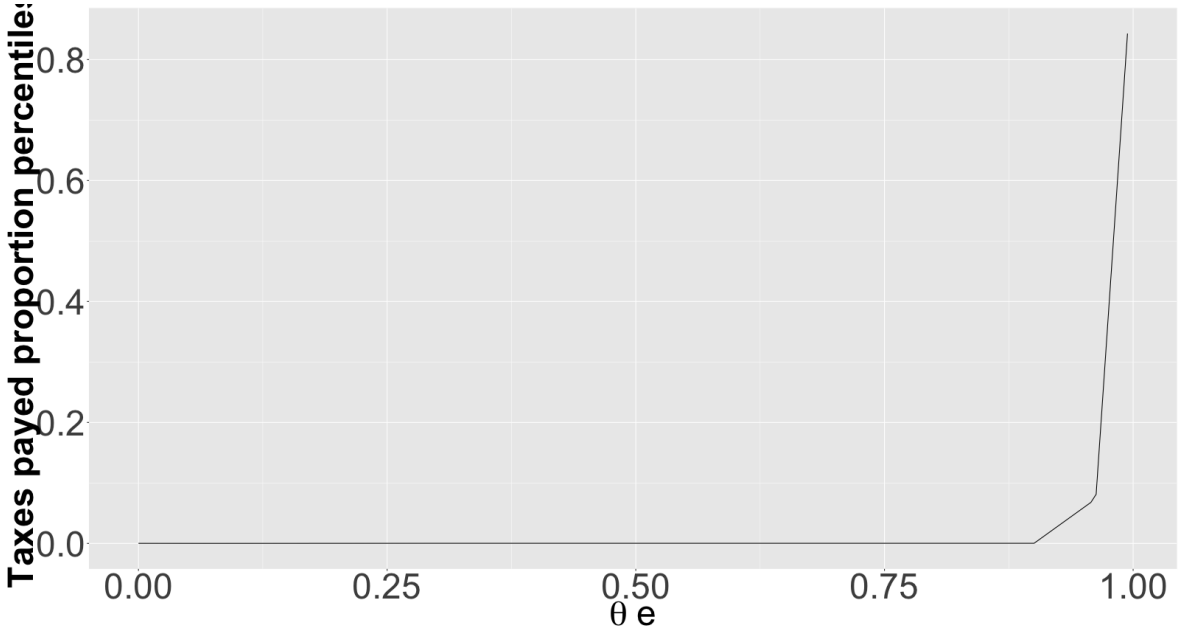
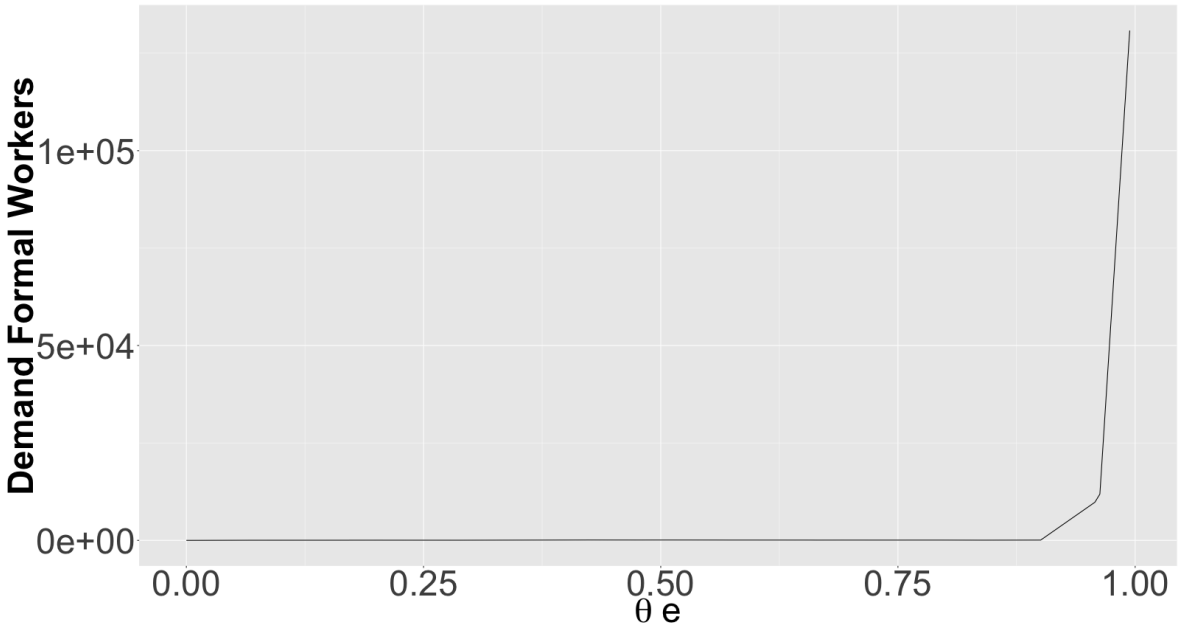
AfterTaxProfitPercentile

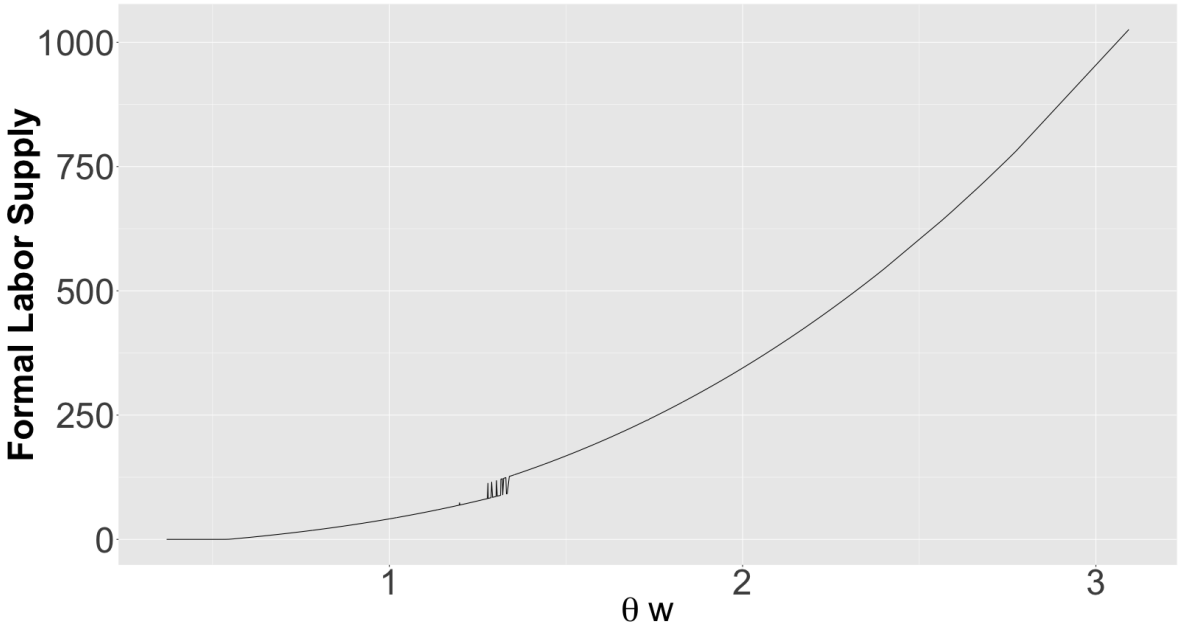


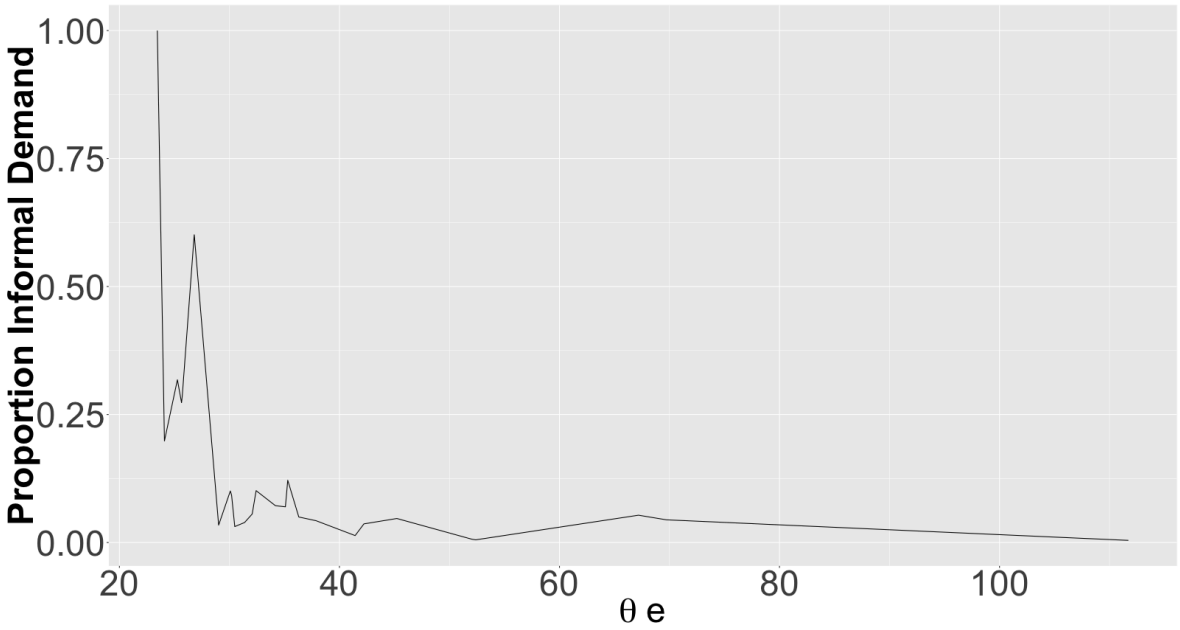


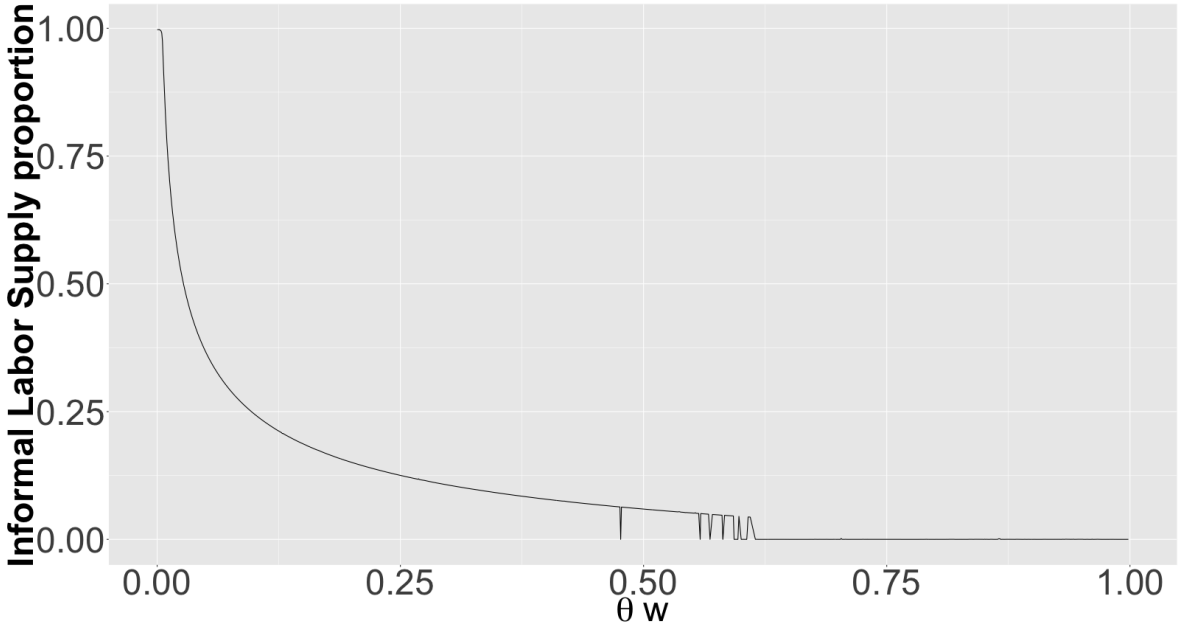

Evasion proportion percentiles
0.3
0.2
0.1
0.0
0.00
0.25
0.50
0.75
1.00
θ e

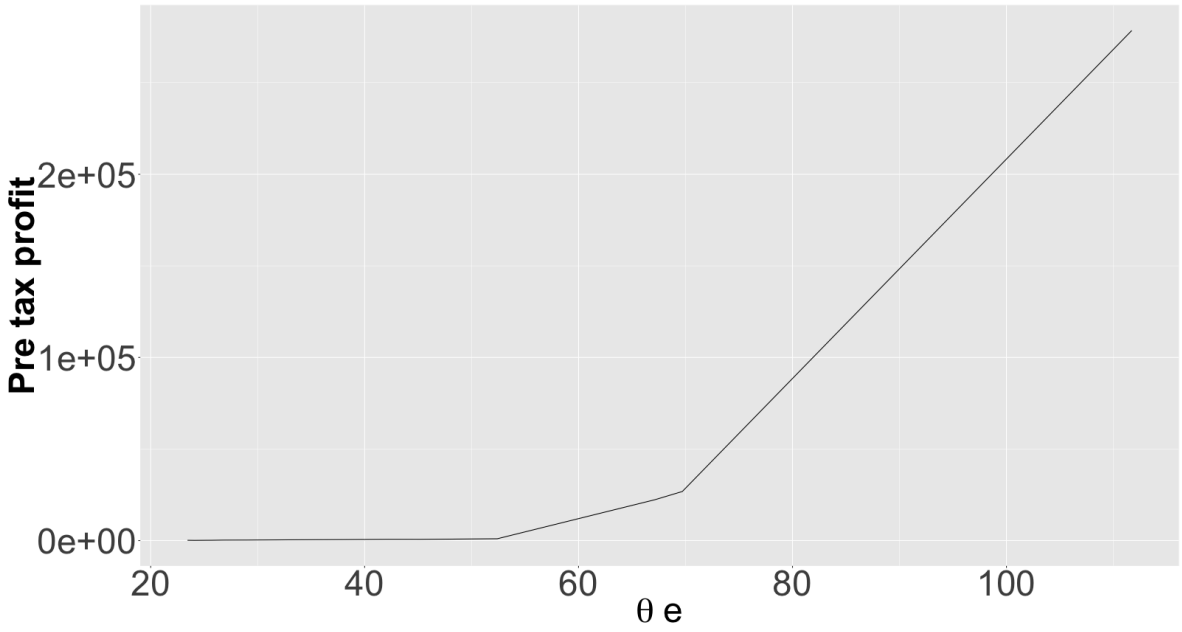

Taxes payed proportion percentile
0.8
0.6
0.4
0.2
0.0
0.00
0.25
0.50
0.75
1.00
θ e

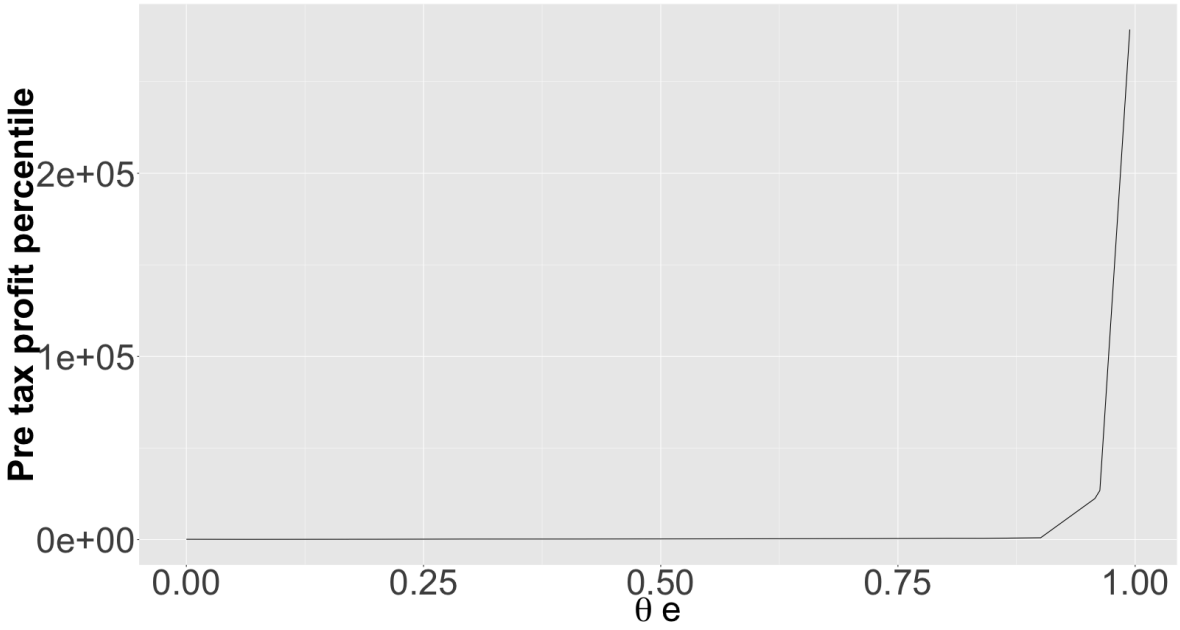

Demand Formal Workers
1e+05
5e+04
0e+00
0.00
0.25
0.50
0.75
1.00
θ e

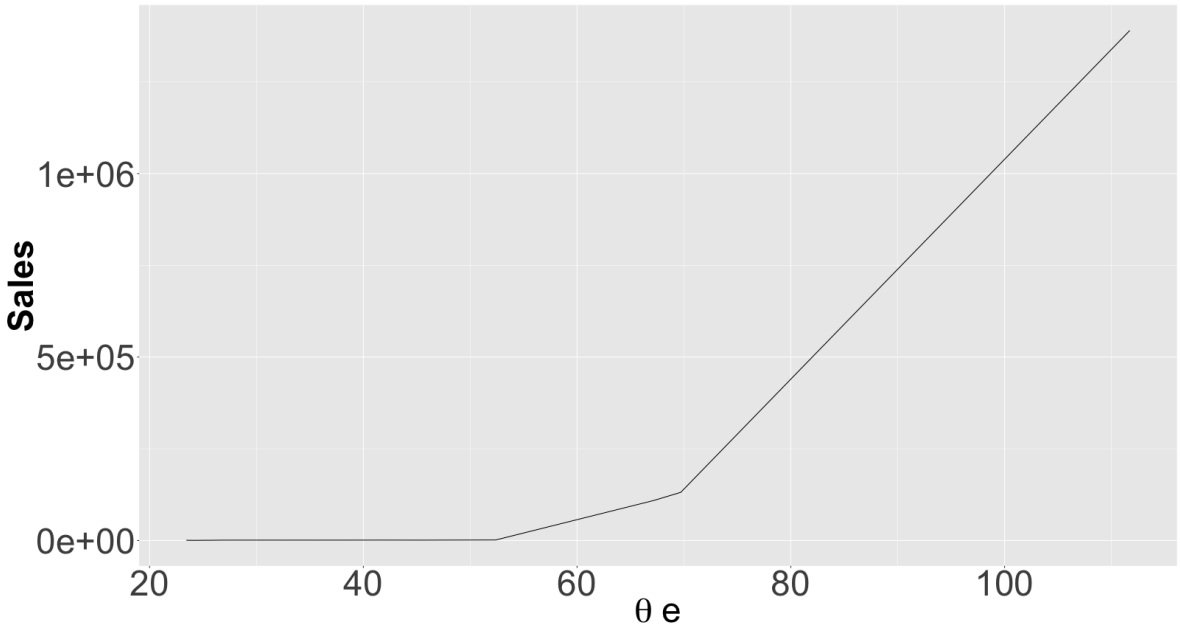

Formal Labor Supply
1000
750
500
250
0
1
2
3
θ w

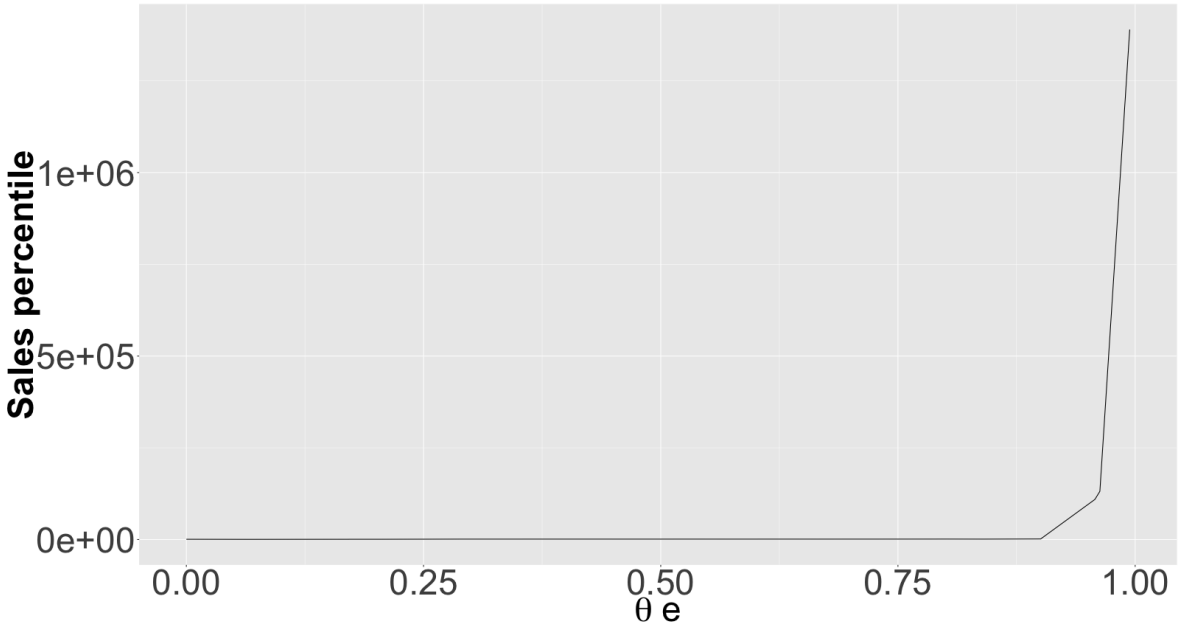

Proportion Informal Demand
1.00
0.75
0.50
0.25
0.00
20
40
60
80
100
θ e

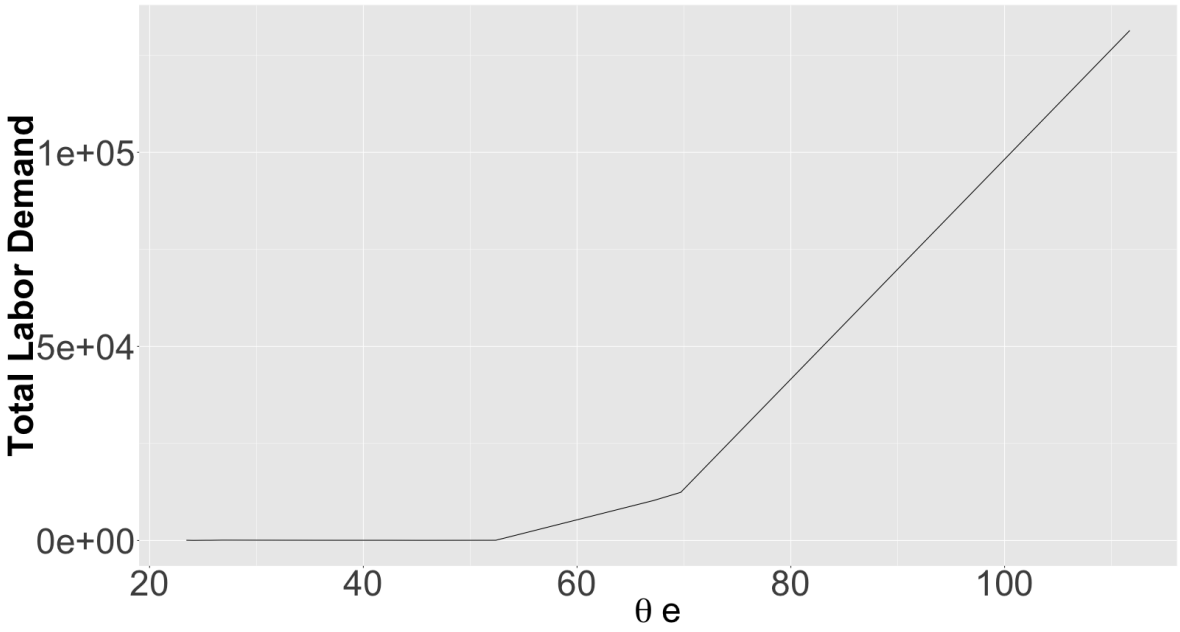

Informal Labor Supply proportion
1.00
0.75
0.50
0.25
0.00
0.00
0.25
0.50
0.75
1.00
θ w

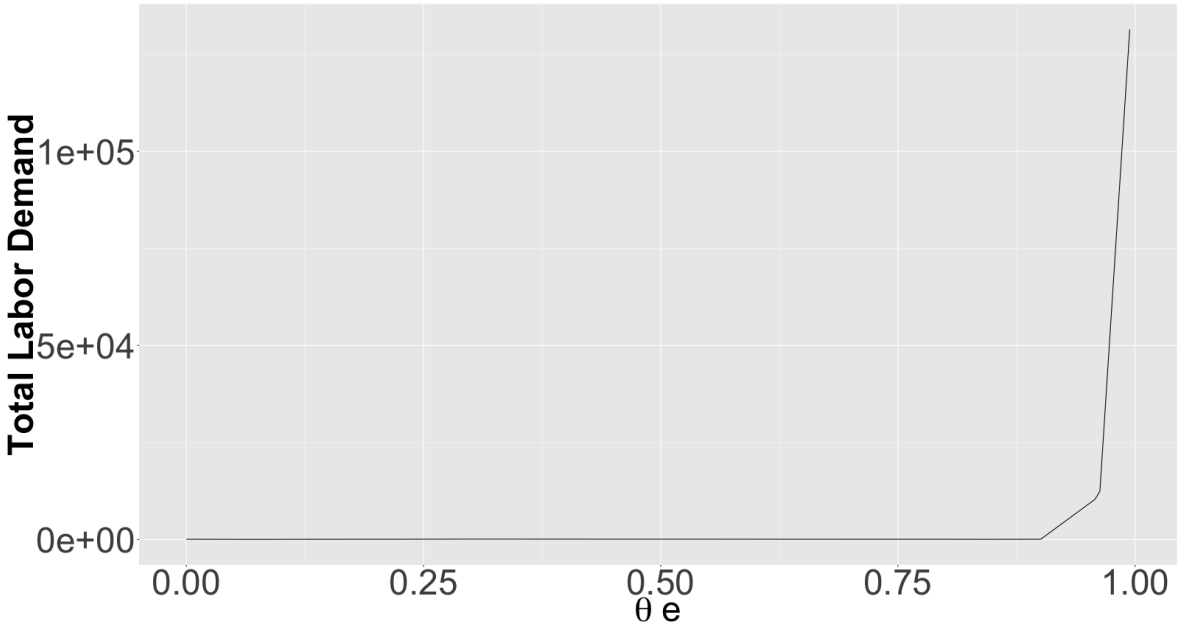

Pre tax profit
2e+05
1e+05
0e+00
20
40
60
80
100
θ e

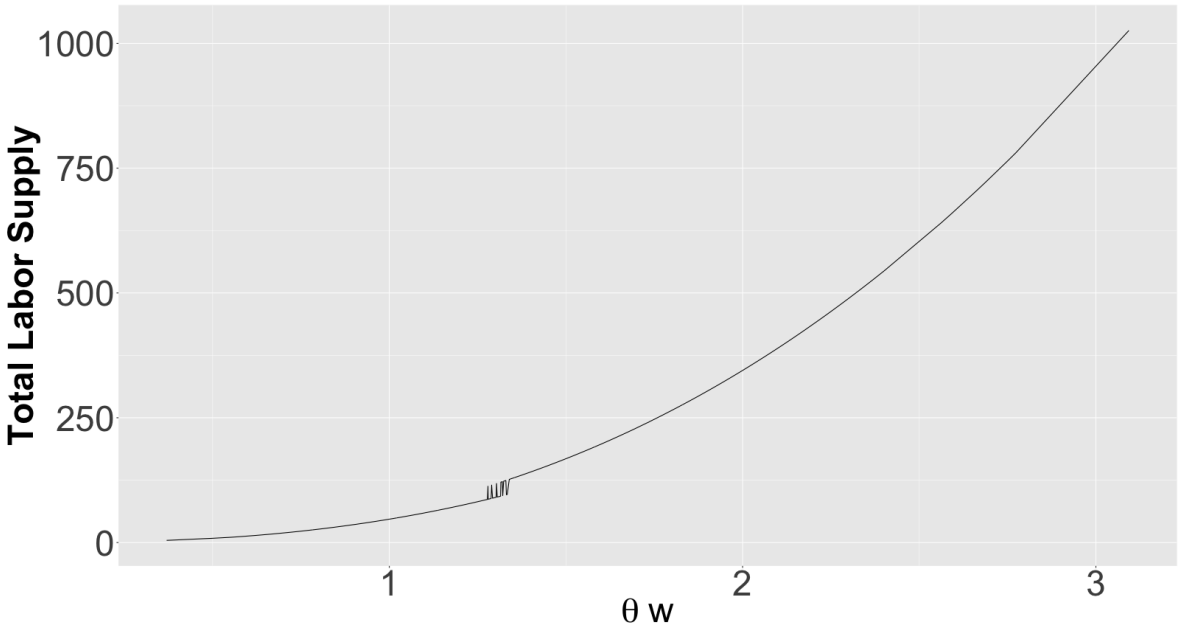

Pre tax profit percentile
2e+05
1e+05
0e+00
0.00
0.25
0.50
0.75
1.00
θ e

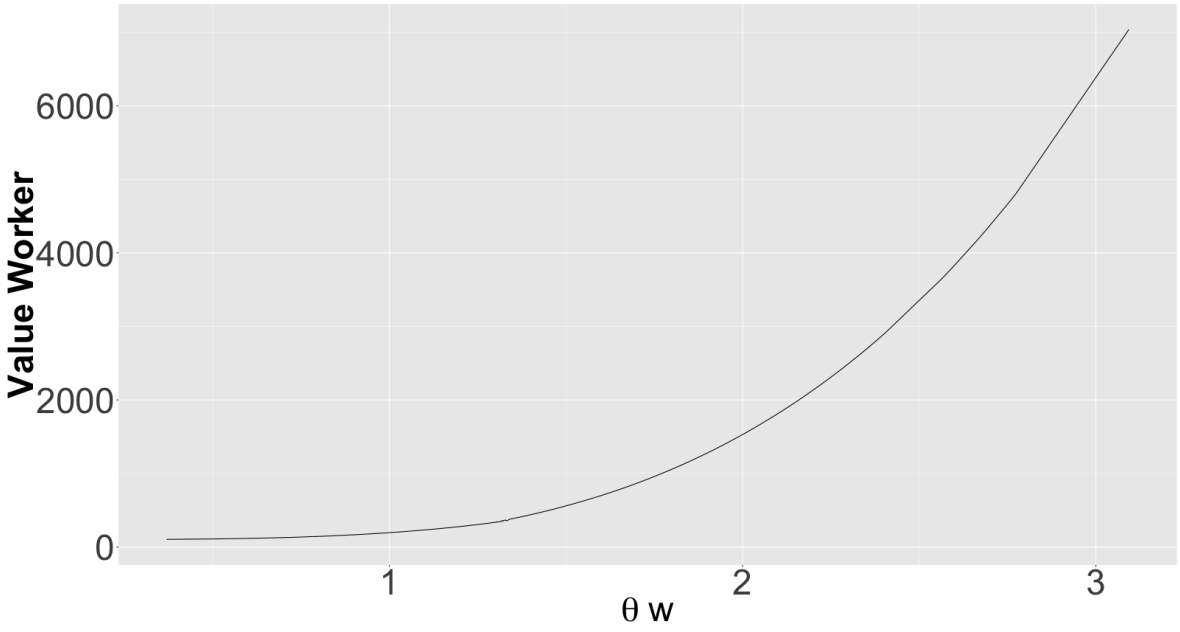

Sales
1e+06
5e+05
0e+00
20
40
60
80
100
θ e

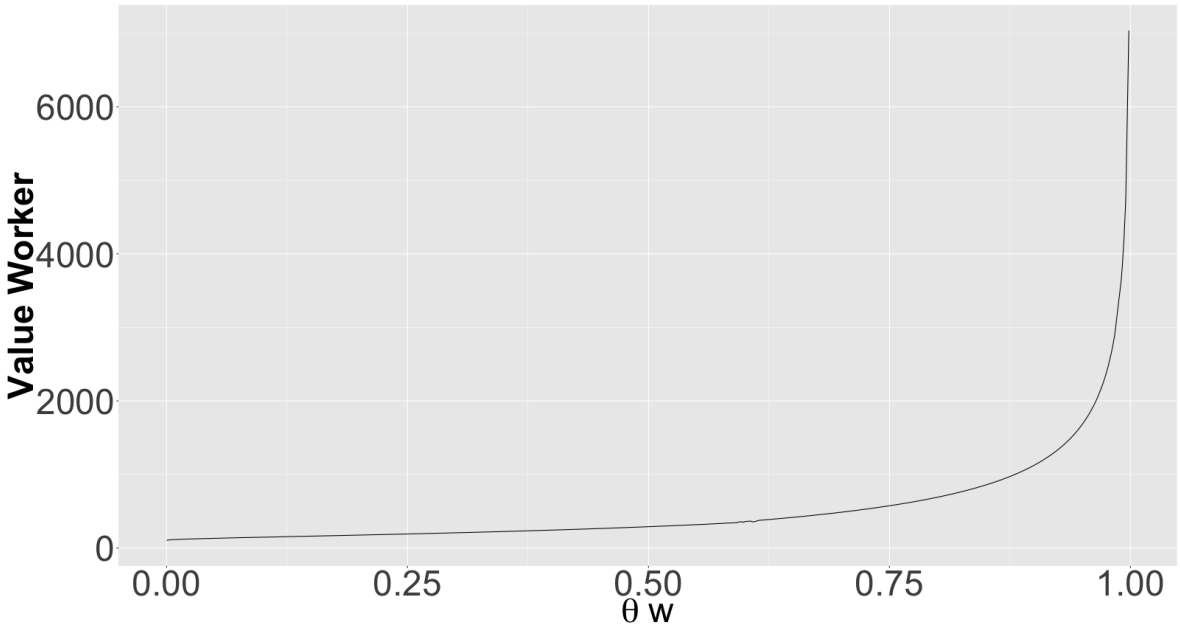

Sales percentile
1e+06
5e+05
0e+00
0.00
0.25
0.50
0.75
1.00
θ e

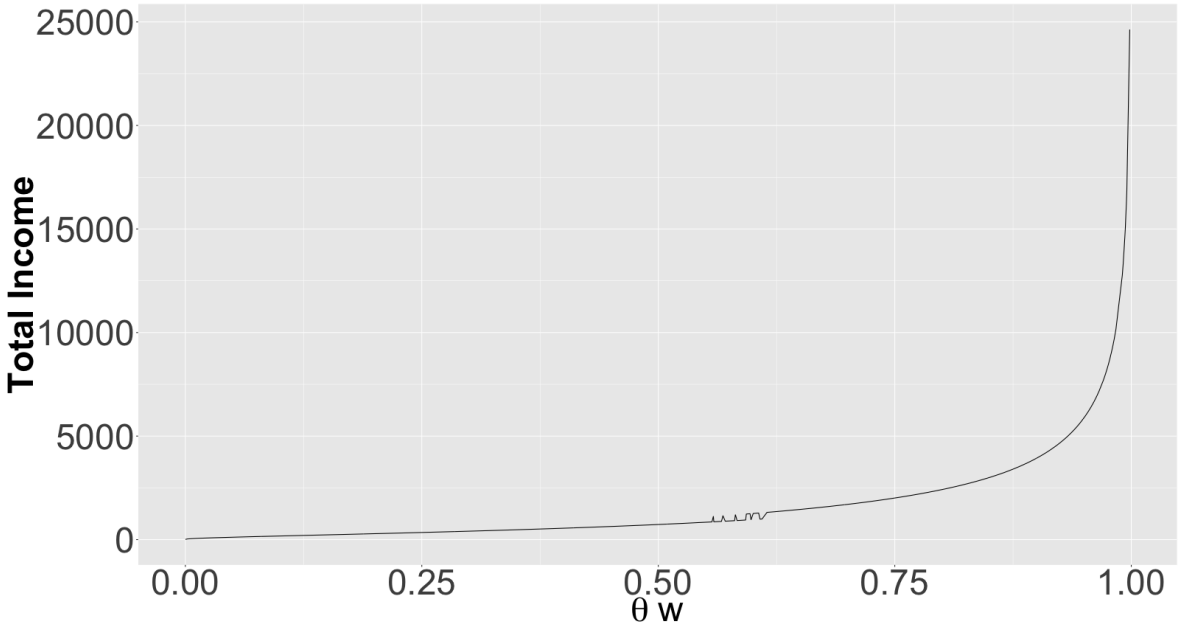

Total Labor Demand
1e+05
5e+04
0e+00
20
40
60
80
100
θ e


Total Labor Demand
1e+05
5e+04
0e+00
0.00
0.25
0.50
0.75
1.00
θ e


Total Labor Supply
1000
750
500
250
0
1
2
3
θ w


Value Worker
6000
4000
2000
0
1
2
3
θ w


Value Worker
6000
4000
2000
0
0.00
0.25
0.50
0.75
1.00
θ w


Total Income
25000
20000
15000
10000
5000
0
0.00
0.25
0.50
0.75
1.00
θ w

1 Tax functions

1.1 CIT

$$\text{CIT} = \begin{cases} 0 \text{ if } (p-z) \leq 0 \\ 0.756 \text{ if } 0 \leq (p-z) \leq 189 \\ 1.89 \text{ if } 189 \leq (p-z) \leq 302.1 \\ 7.56 \text{ if } 302.1 \leq (p-z) \leq 491.4 \\ 15.12 \text{ if } 491.4 \leq (p-z) \leq 756 \\ 22.68 \text{ if } 756 \leq (p-z) \leq 1,134 \\ 0.3 \times (\pi - z) \text{ if } (p-z) \geq 1,134 \end{cases} \tag{1}$$

$$\text{where } p = \theta_e (n_i + n_f)^{\alpha} \tag{2}$$

Caveat: There is another tax bracket for $756 \leq (p-z) \leq 1,134$. Chose the one with the lowest tax burden.

1.2 PIT

Government programs to households include a variety of programs (valuation of medical insurance, nutritional programs for kids, pensions for orphans, etc.). Decision was to include all transfers from government to households (from survey) + medical subsidy rather than estimating it from statutory rates. Results:

Table 1: Distribution of average monthly transfers per capita to households, and SIS membership, by labor income per capita

Decile	Labor Income	Direct Transfers	Households in SIS	Income from profit sharing
1.00	63.36	56.07	0.30	0.00
2.00	137.84	21.99	0.23	0.88
3.00	186.56	30.68	0.24	1.55
4.00	238.16	24.01	0.16	2.44
5.00	289.53	22.32	0.18	5.94
6.00	350.13	26.06	0.12	6.29
7.00	438.01	26.36	0.11	13.42
8.00	562.08	46.81	0.07	23.22
9.00	796.91	47.92	0.04	39.75
10.00	2034.87	55.72	0.02	132.84

Real tax rates of PIT are:

$$PIT^{\text{real}} \begin{cases} 0 \text{ if } x \leq 24,000 \\ 15\% \text{ if } 24,150 \leq x \leq 117,300 \\ 21\% \text{ if } 117,300 \leq x \leq 210,450 \\ 30\% \text{ if } 1x \geq 210,450 \end{cases} \tag{3}$$

Tax function used:

$$PIT^{\text{used}} = \begin{cases} 0.1x - 100 \text{ if } x \leq 1,000 \\ 0 \text{ if} 1,000 \leq x \leq 24,000 \\ \frac{x^2}{100,000} - \frac{9}{25}x \text{ if } 24,000 \leq x \leq 210,450 \\ 0.3 if x \geq 210,450 \end{cases} \tag{4}$$

1.3 Payroll tax

Used only 0.9% payed for health insurance. Assumption of complete wedge (9% of payroll taxes). Caveat: worker does not value health insurance, ignores holidays,

family subsidy, bonus, etc.

2 Parameters used at the moment

$$\alpha = 0.8 \tag{5}$$

$$\gamma = 0.28 \tag{6}$$

$$\delta = 0.12 \tag{7}$$

$$\beta = 0.15 \tag{8}$$

$$\sigma = 0.2 \tag{9}$$

$$\kappa = 0.1 \tag{10}$$

$$\psi = 0.4 \tag{11}$$

$$\chi = 1.5 \tag{12}$$

$$\rho = 0.9 \tag{13}$$

$$\mu w = 1.1 \tag{14}$$

$$\mu e = 2 \tag{15}$$

$$\sigma w = 0.5 \tag{16}$$

$$\sigma e = 1.1 \tag{17}$$

$$\rho_{e,w} = 0.3 \tag{18}$$

$$\tag{19}$$