Output from Matlab

January 12, 2018

1 Tables with Results

	No tax	Union tax
τ_0	0.00000	0.38401
$\bar{\tau}$	0.00000	0.33451
Welfare (weighted)	-5.86690	-5.99304
Welfare workers	-5.86690	-5.99304
Welfare entrepreneurs	-19.13699	-21.52730

Experiment	Total welfare	Worker welfare	Entrepreneur welfare
Optimal policy	-0.00436	-0.00378	-0.11265

2 Parameters and functional forms

2.1 Functional forms etc.

- Occupational choice: No
- Workers save: No
- Decreasing returns to scale: Yes
- Productivity process: Ornstein-Uhlenbeck, $d\log(z) = -\nu \log(z)dt + \sigma dW$
- Period utility function:

$$u(c,l) = (1-\gamma)^{-1}c^{1-\gamma} - \nu(l), \quad \nu(l) = (1+1/\chi)^{-1}l^{1+1/\chi}$$

- Production function: $y = F(z,k,n) = zA((k-f_k)^+)^\alpha((n-f_n)^+)^\beta$
- Tax schedule: $\tau_l(t) = \bar{\tau}_l + e^{-\gamma t}(\tau_{l,0} - \bar{\tau}_l)$

2.2 Parameter values

Pareto weight workers		1.000
Population share of workers	$popshare$	0.667
Total population	$popmass$	1.000
Discount rate entrepreneurs	ρ_e	0.050
Discount rate workers	ρ_w	0.030
Relative risk aversion	γ	1.000
Labor disutility parameter	χ	1.000
Depreciation rate	δ	0.000
Death rate	θ	0.000
Fixed cost capital	f_k	0.000
Fixed cost labor	f_n	0.000
Financial constraint parameter	λ	2.000
Common TFP parameter	A	1.000
Capital share	α	0.297
Labor share	β	0.603
Returns to scale	$\alpha + \beta$	0.900
Interest rate	r^*	0.030
Effect of productivity on effective labor supply	η	0.000
Productivity drift parameter	ν	0.163
Productivity yearly autocorrelation	$e^{-\nu}$	0.850
Productivity standard deviation parameter	σ	0.300
Productivity mean	$\bar{z}$	1.148
Poisson arrival rate		0.100
Parameter of Pareto distribution of Poisson shocks		1.100

2.3 Iteration parameters

Number of grid points assets	I	200.000
Number of grid points productivity	J	30.000
Number of grid points time	N	150.000
Number of time periods	T	150.000
Max assets	a_{max}	350.000
Mean wealth relative to steady state		0.100
Contraction of initial distribution	$factor$	0.100

3 Figures

Union steady state tax rate = 0.333

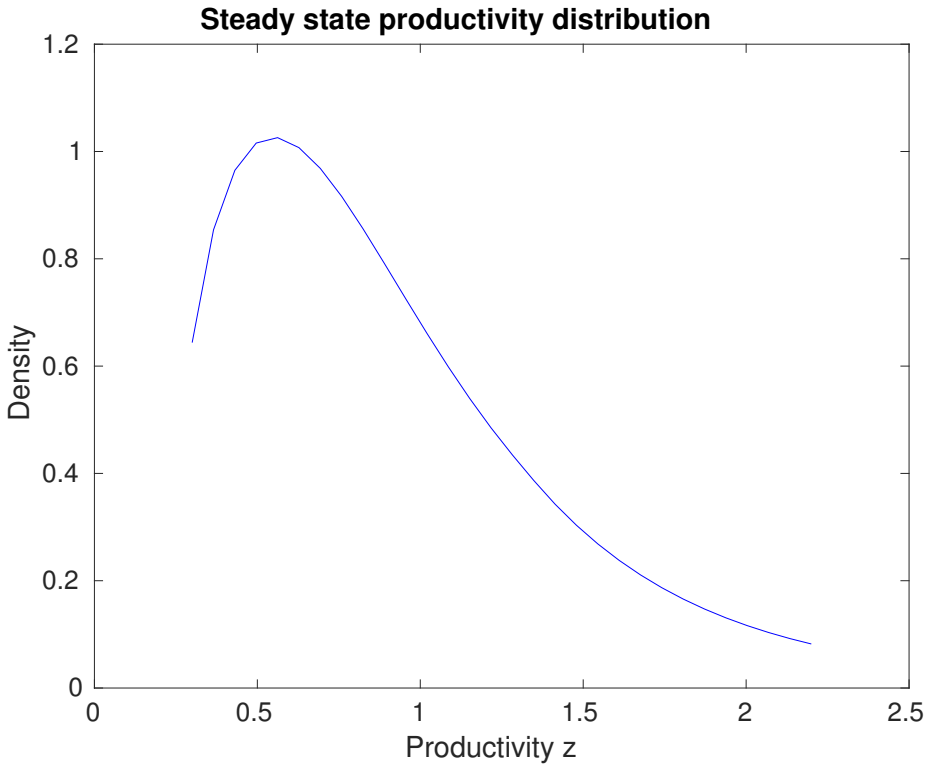


Figure 1

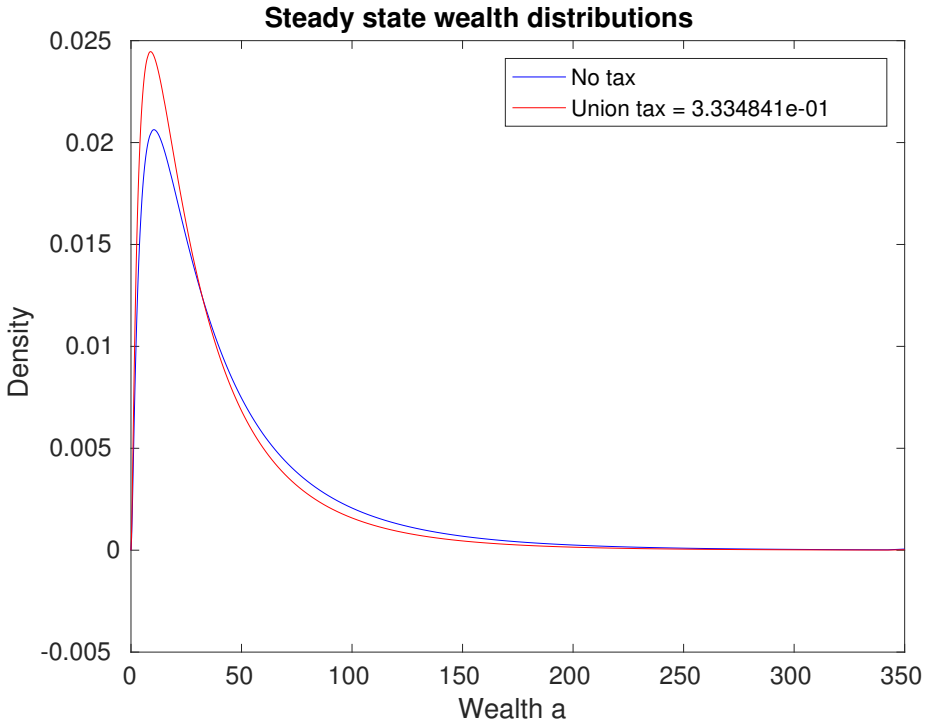


Figure 2

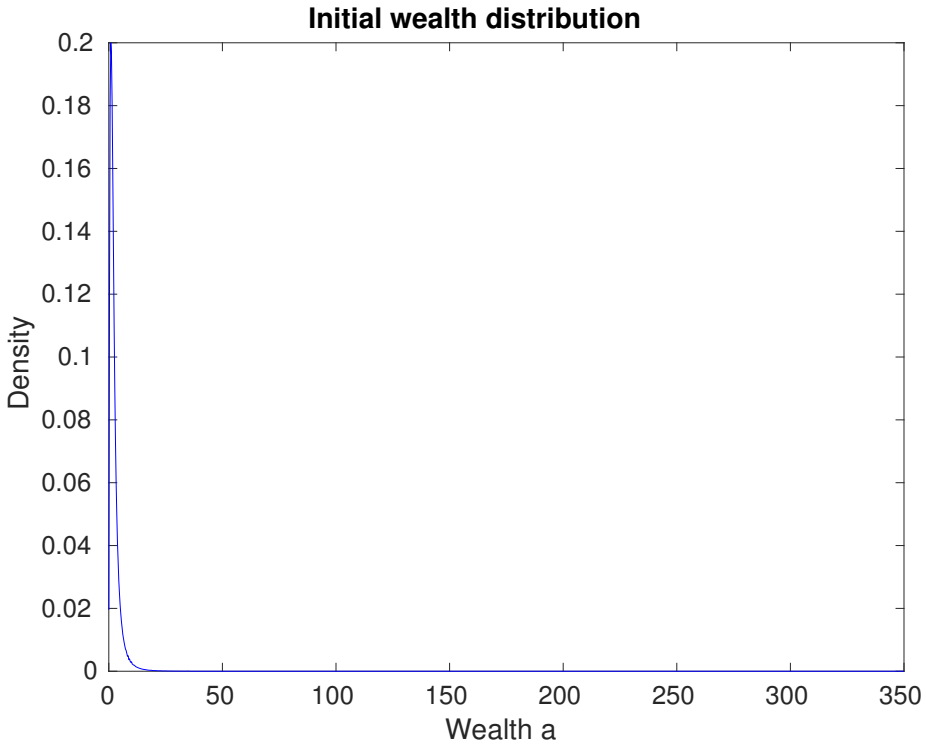


Figure 3

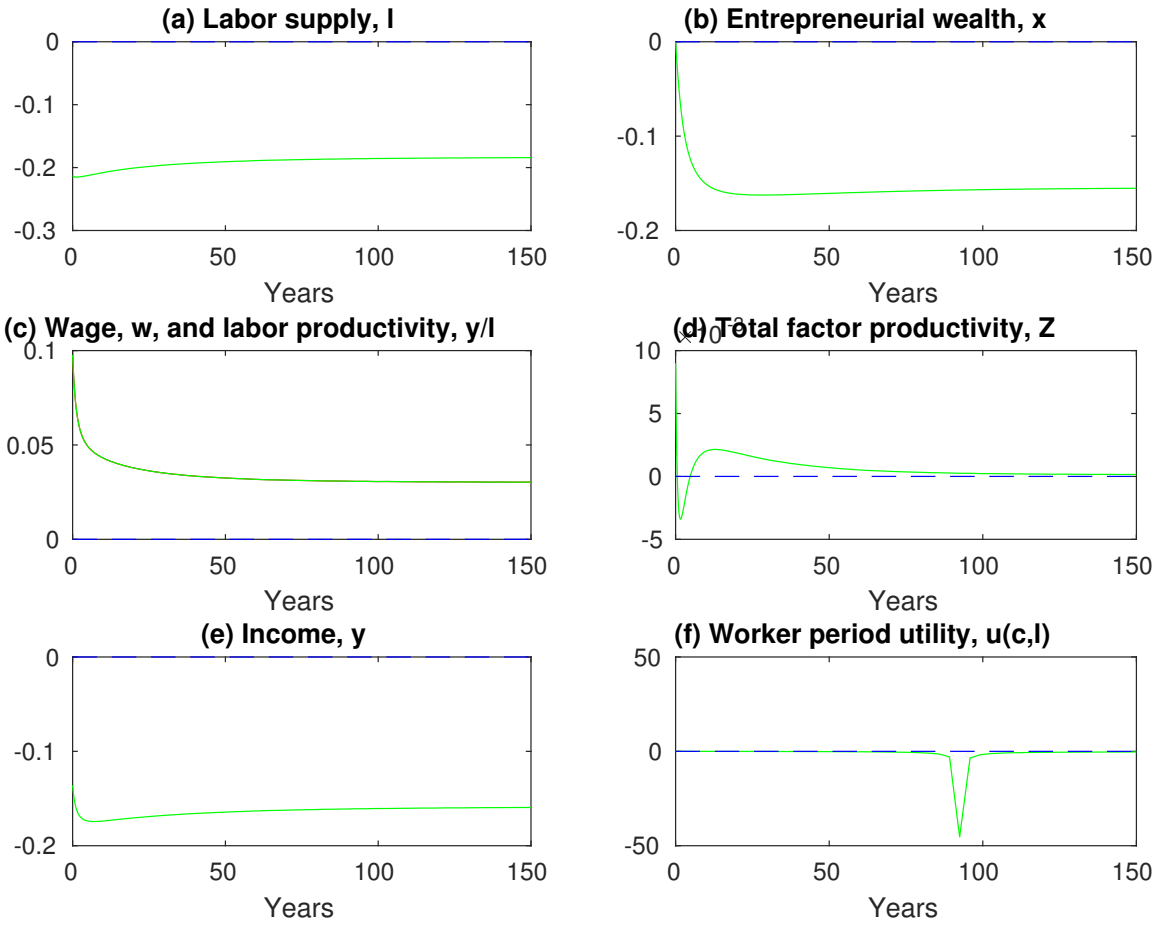


Figure 4 – Proportional deviations of optimal tax equilibrium from the laissez-faire equilibrium

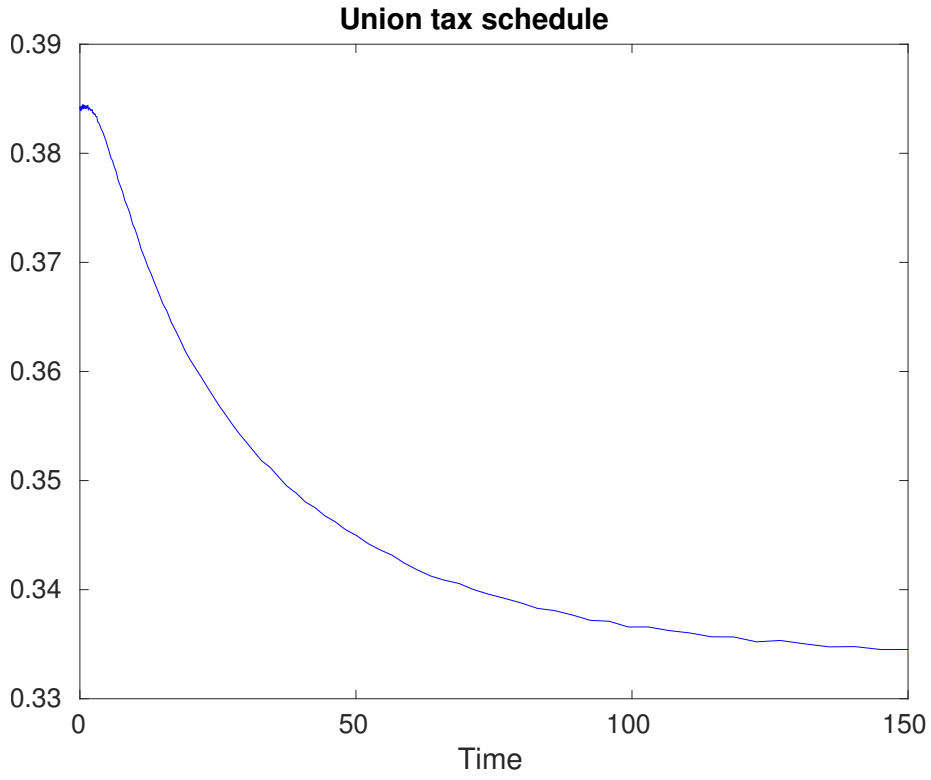


Figure 5

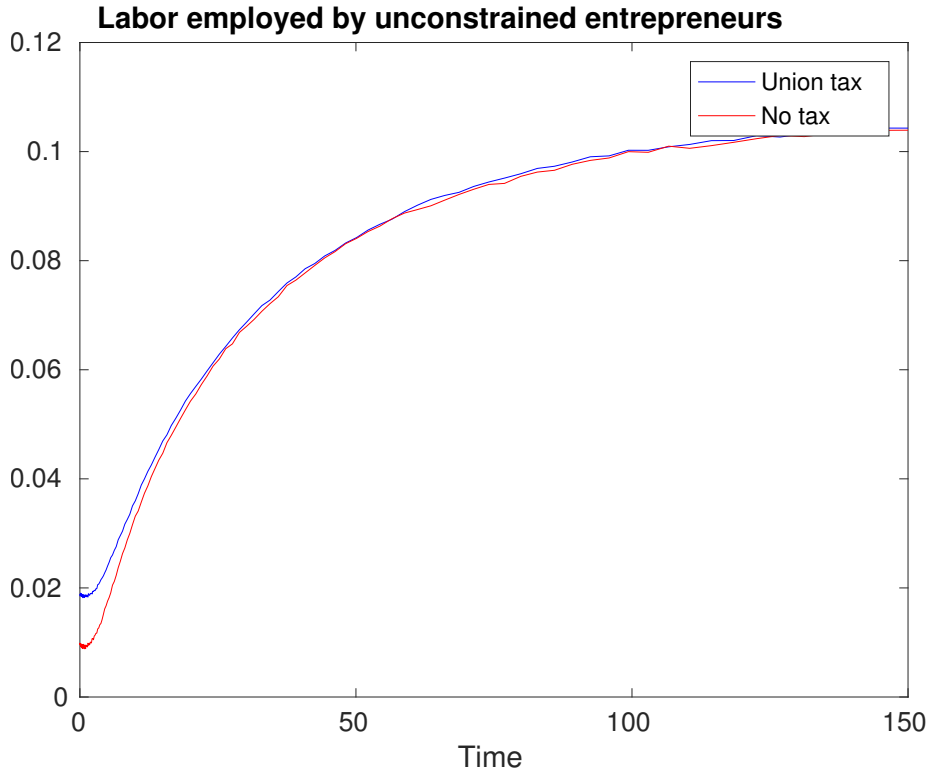


Figure 6

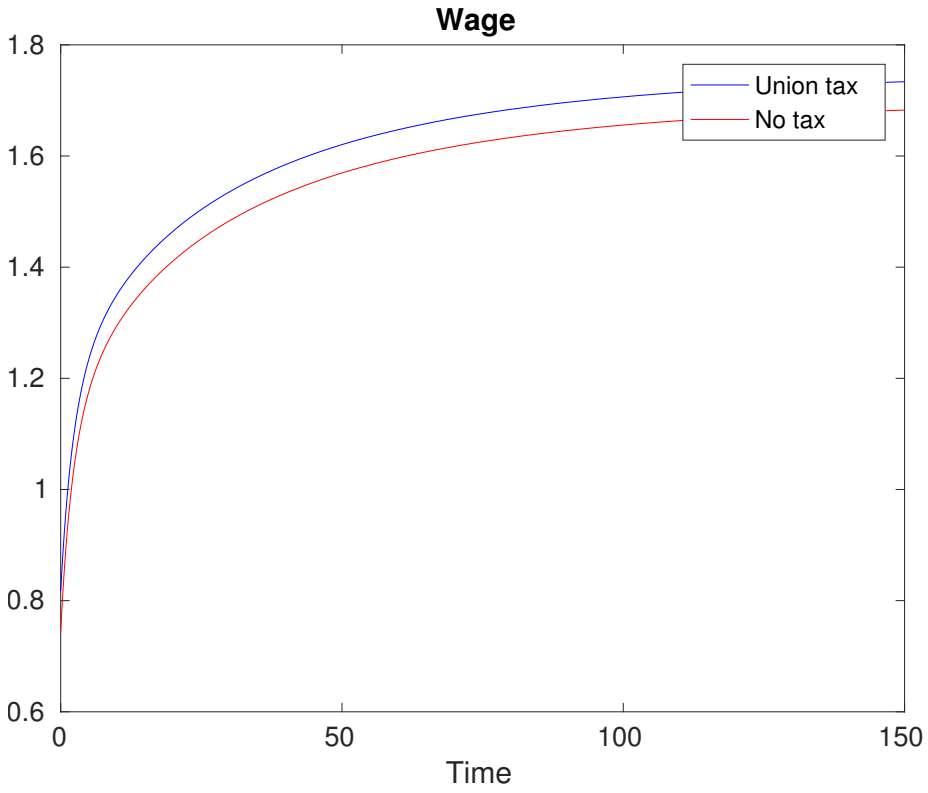


Figure 7

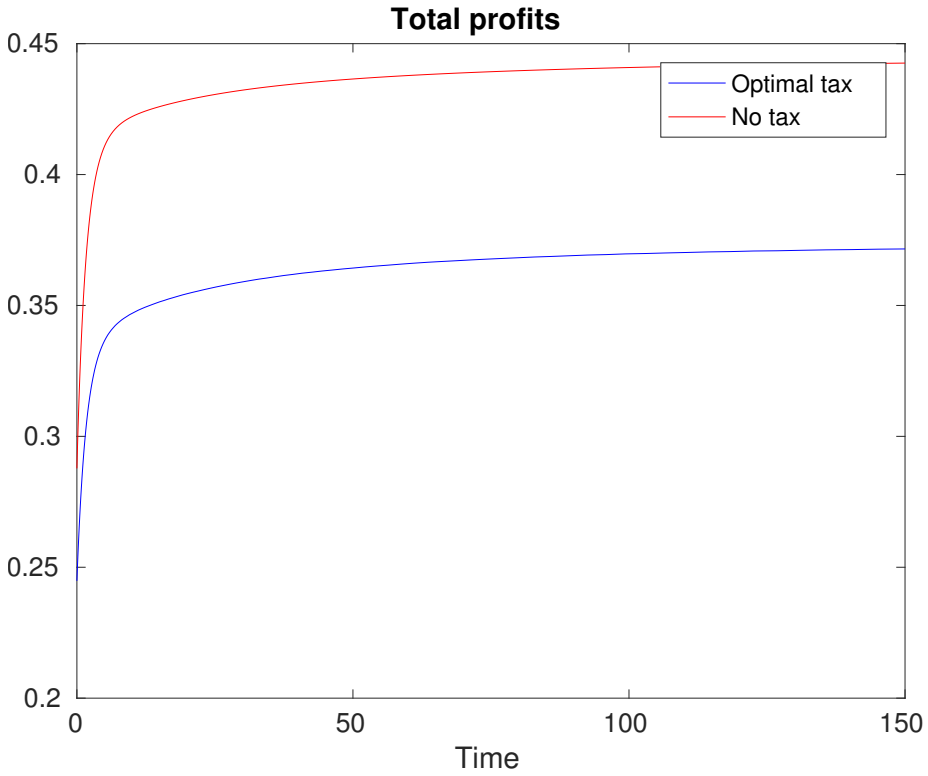


Figure 8

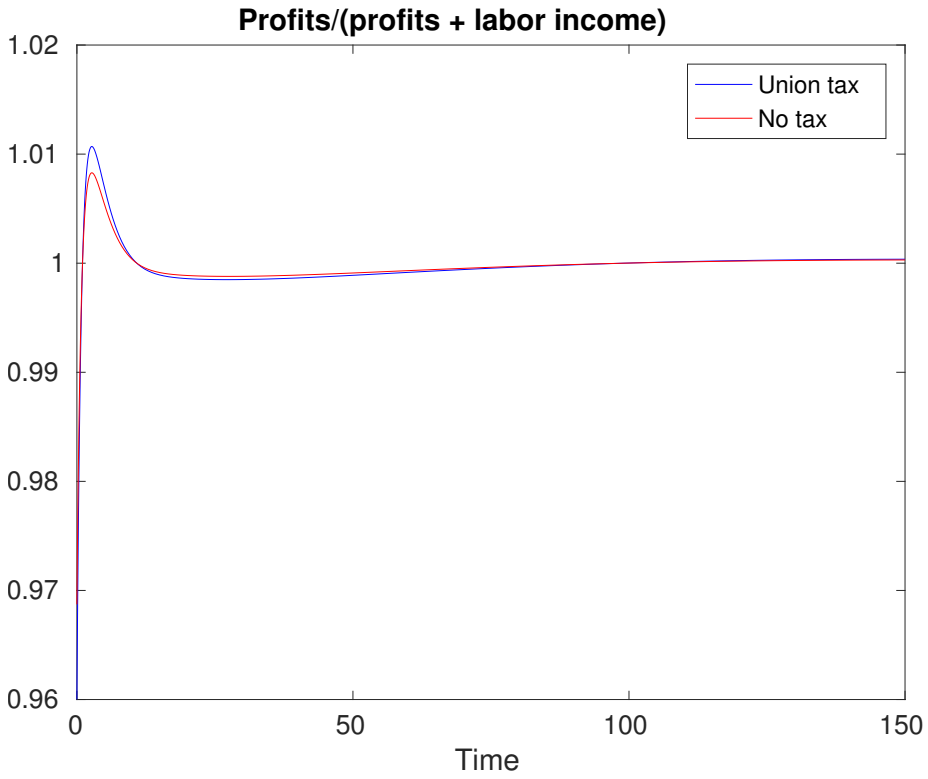


Figure 9

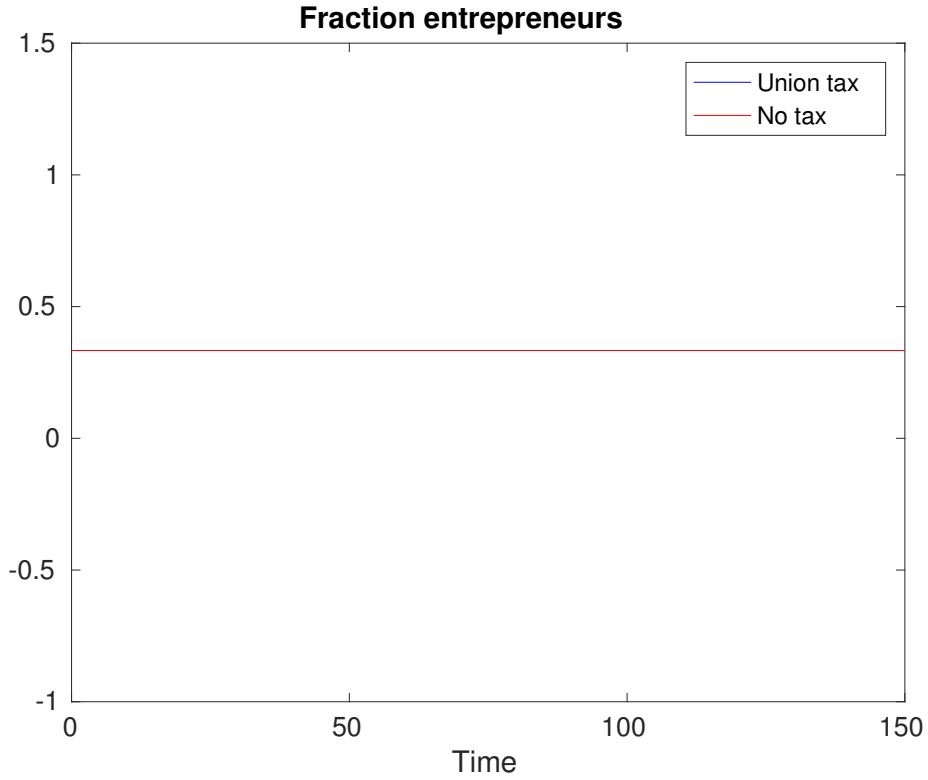


Figure 10

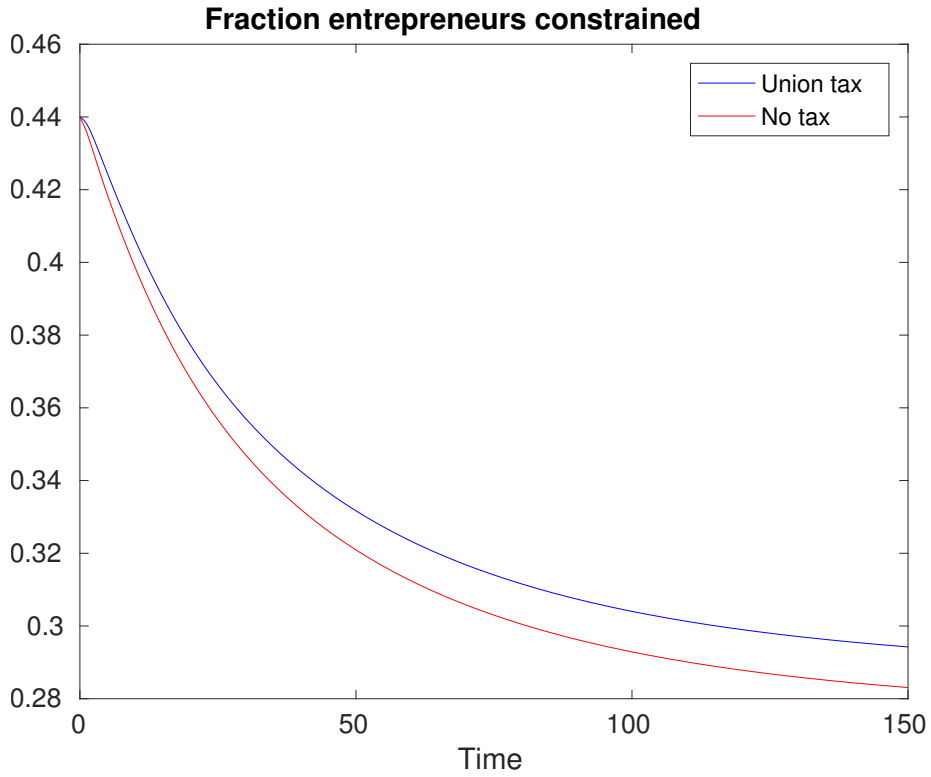
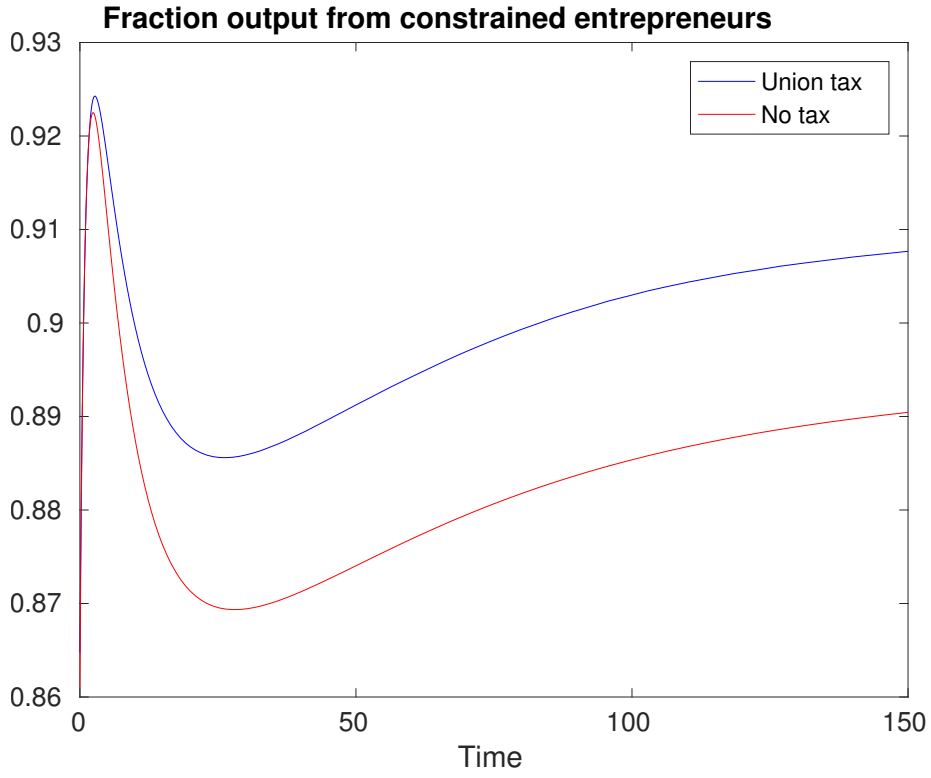


Figure 11



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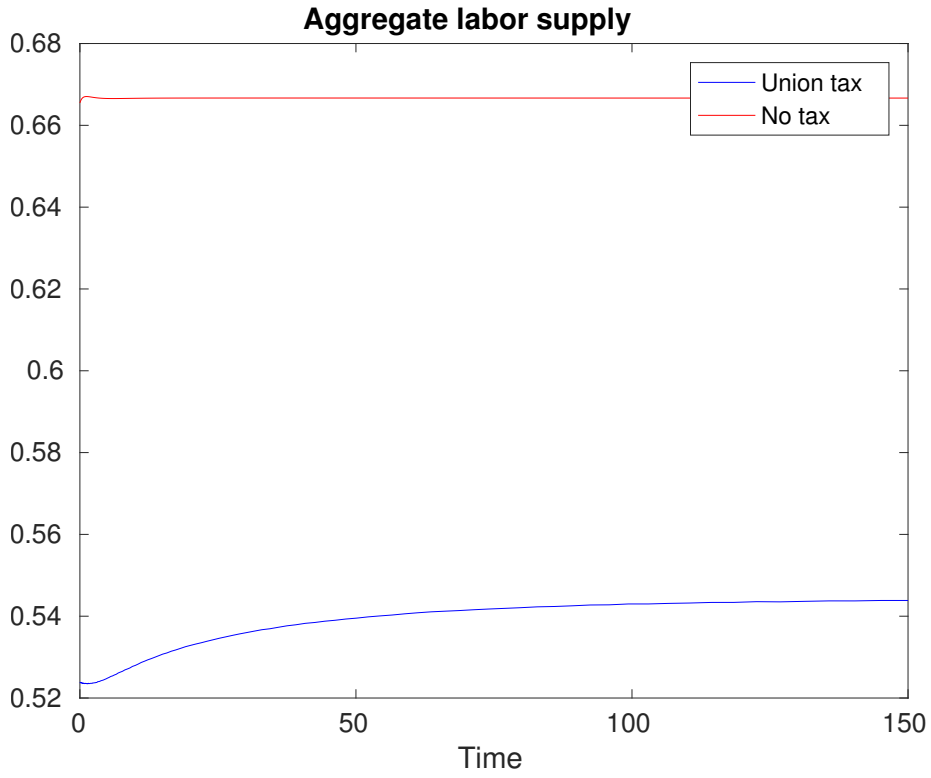


Figure 13

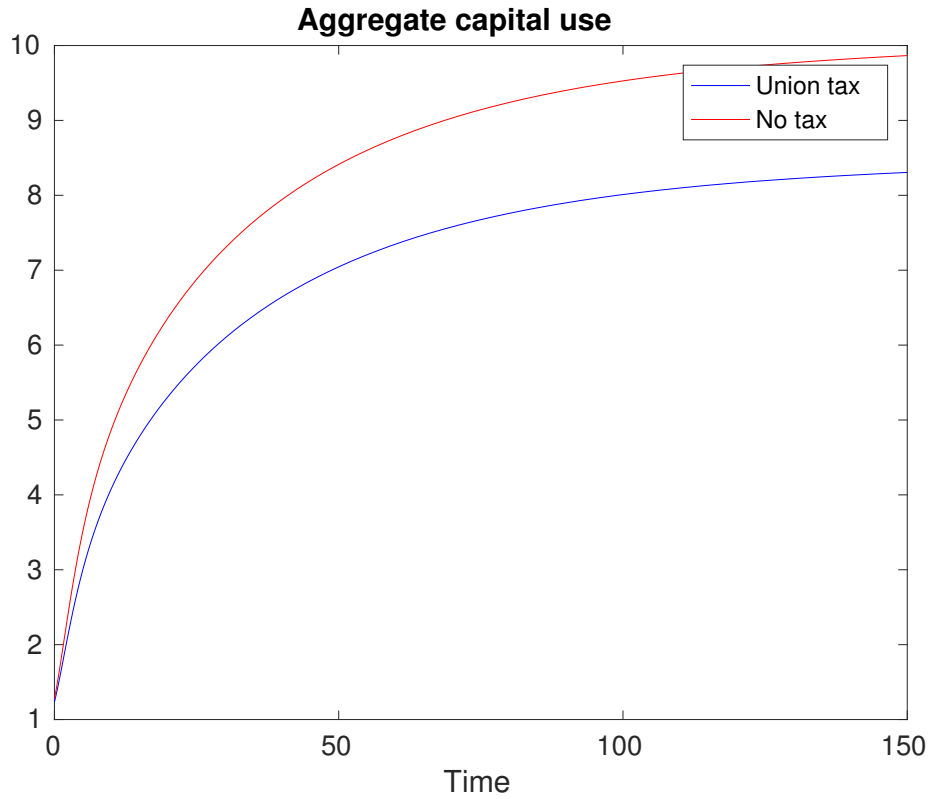
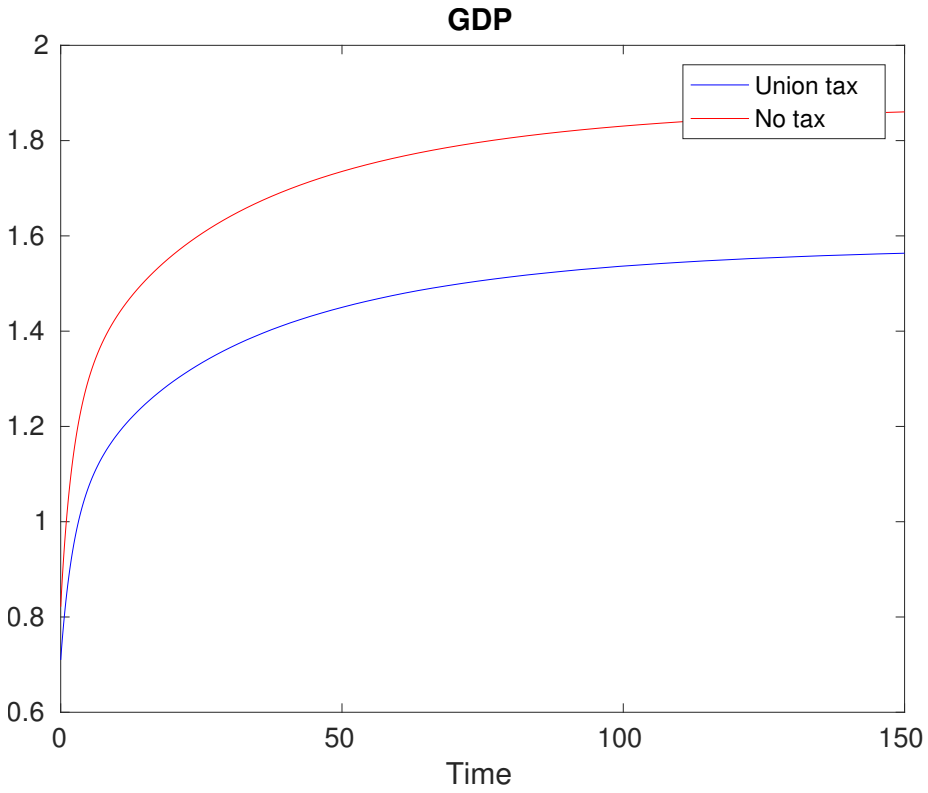


Figure 14



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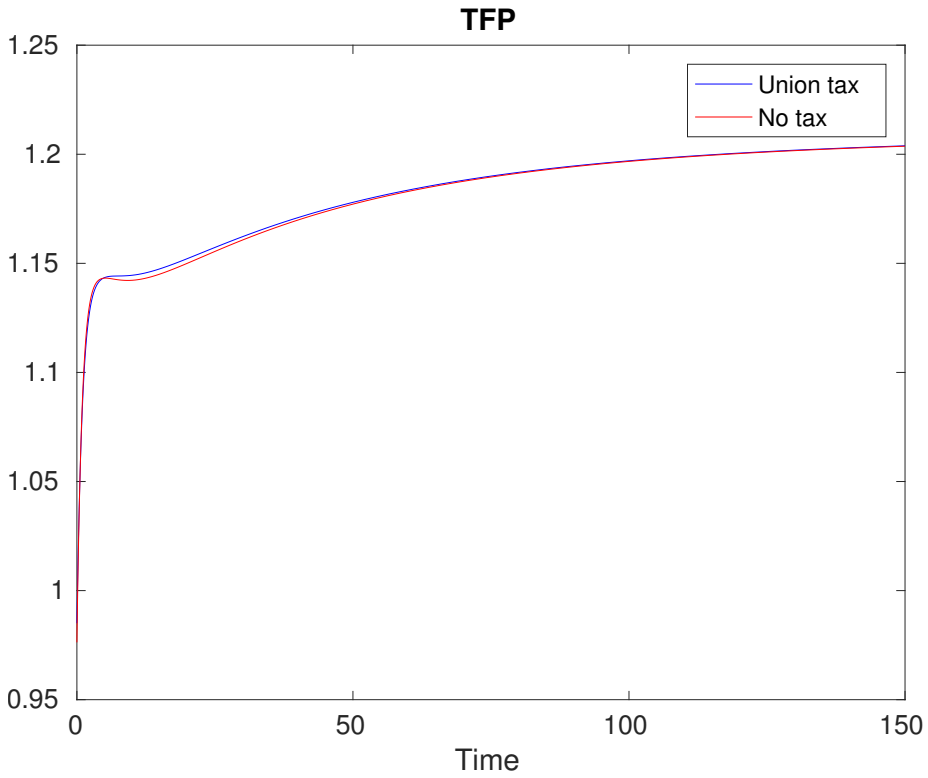
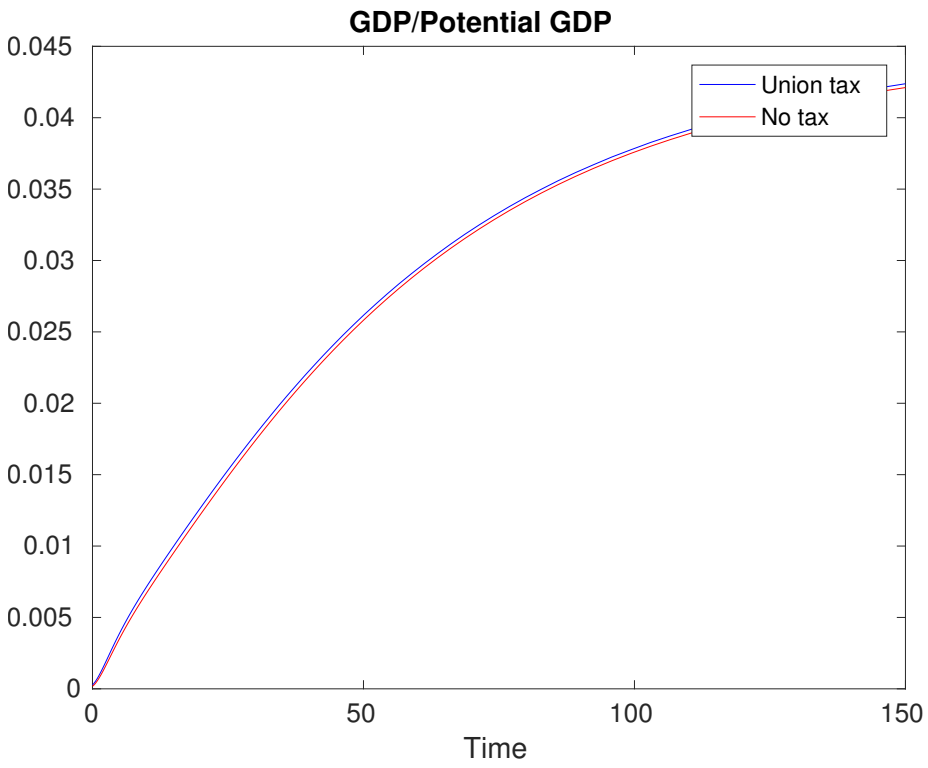


Figure 16



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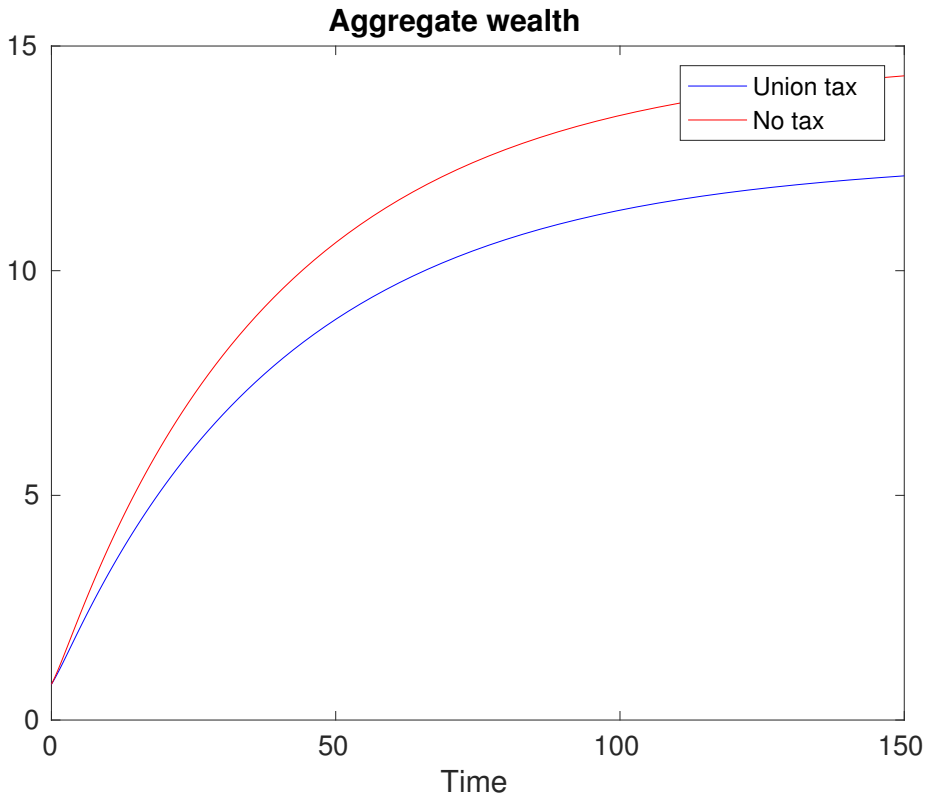

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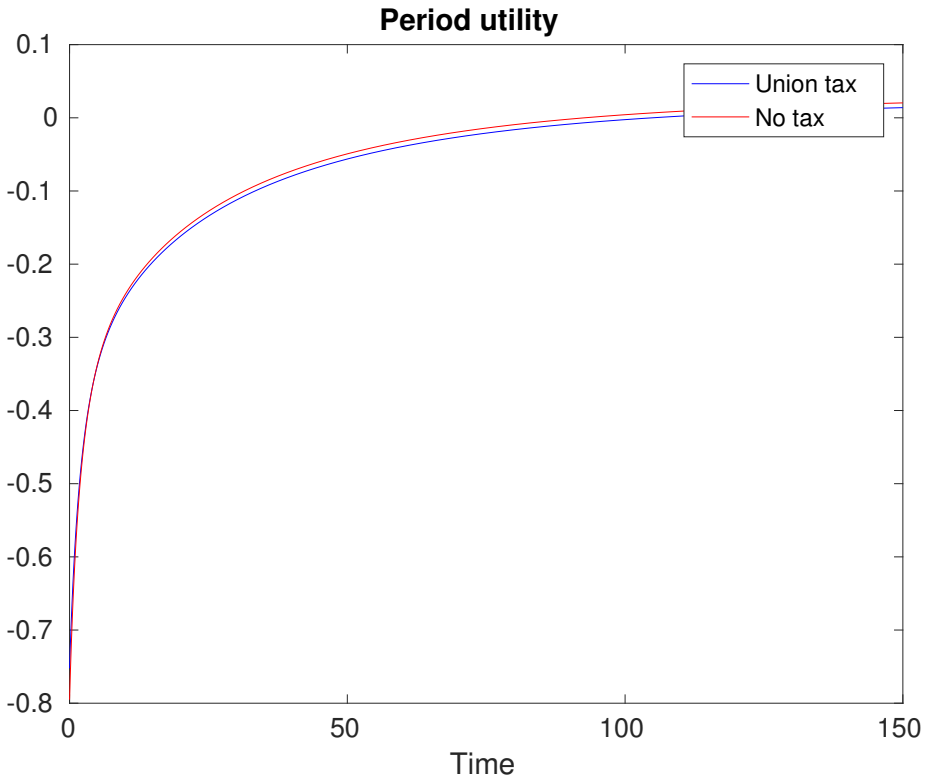

Figure 19

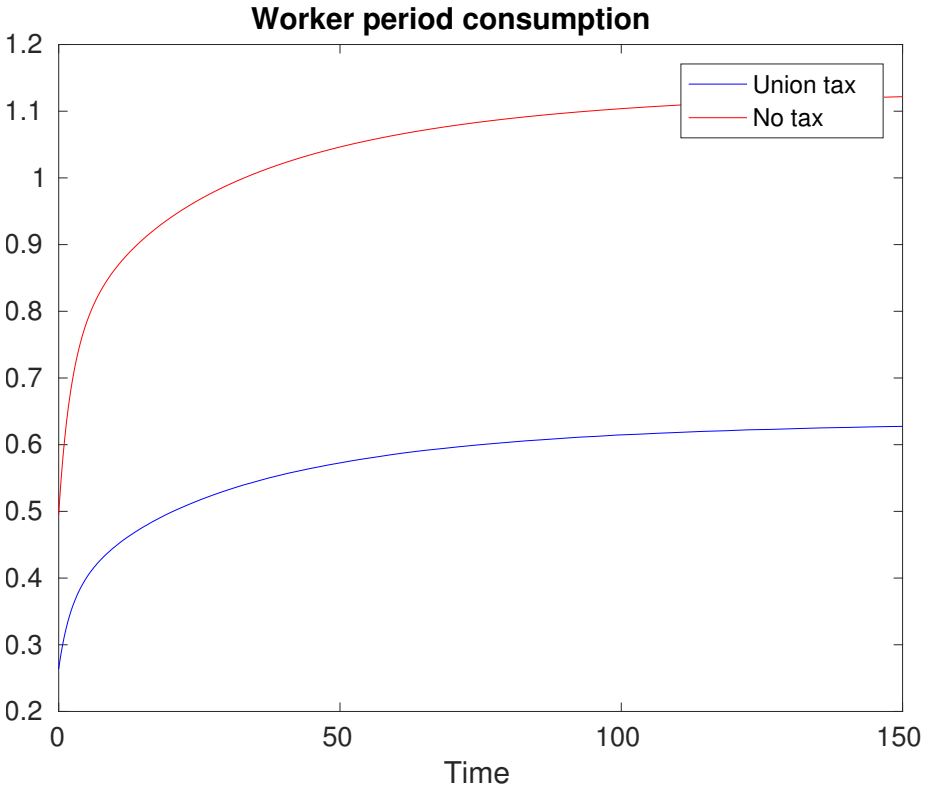

Figure 20