Credit Subsidy rel. Pareto weight 1

December 22, 2017

1 Tables with Results

	No cred sub	Optimal policy	Optimal SS cred sub	Optimal Flat cred sub
ς_0	0.00000	1.00000	0.25789	-0.07778
$\bar{\varsigma}$	0.00000	-0.76401	0.25789	-0.07778
Half life	-	16.00000	-	-
Welfare (weighted)	-10.29030	-9.74609	-10.51029	-10.28139
Welfare workers	-5.86691	-5.89540	-6.82162	-5.68462
Welfare entrepreneurs	-19.13708	-17.44748	-17.88763	-19.47493

	Constant ς_0	Constant $\bar{\varsigma}$
ς_0	1.00000	-0.76401
$\bar{\varsigma}$	1.00000	-0.76401
Half life	-	-
Welfare (weighted)	-29.36320	-10.69217
Welfare workers	-37.98524	-5.07960
Welfare entrepreneurs	-12.11912	-21.91733

Experiment	Total welfare	Worker welfare	Entrepreneur welfare
Optimal policy	0.01902	-0.00085	0.08815
Optimal flat cred sub	0.00031	0.00548	-0.01675
Constant ς_0	-0.50953	-0.65105	0.42034
Constant $\bar{\varsigma}$	-0.01381	0.02390	-0.12978

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: $y = F(z, k, n) = zA((k - f_k)^+)^{\alpha}((n - f_n)^+)^{\beta}$

- Credit subsidy schedule: $\varsigma_k(t) = \bar{\varsigma}_k + e^{-\gamma t}(\varsigma_{k,0} - \bar{\varsigma}_k)$

2.2 Parameter values

Pareto weight workers		0.667
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
Inverse Frisch elasticity	φ	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
Contraction of initial distribution	χ	0.100

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
Range of initial credit subsidy rate tested	ς_0	[0.900,1.000]
Range of final credit subsidy rate tested	$\bar{\varsigma}$	[-0.800,-0.700]

3 Figures

Optimal steady state credit subsidy rate = 0.258
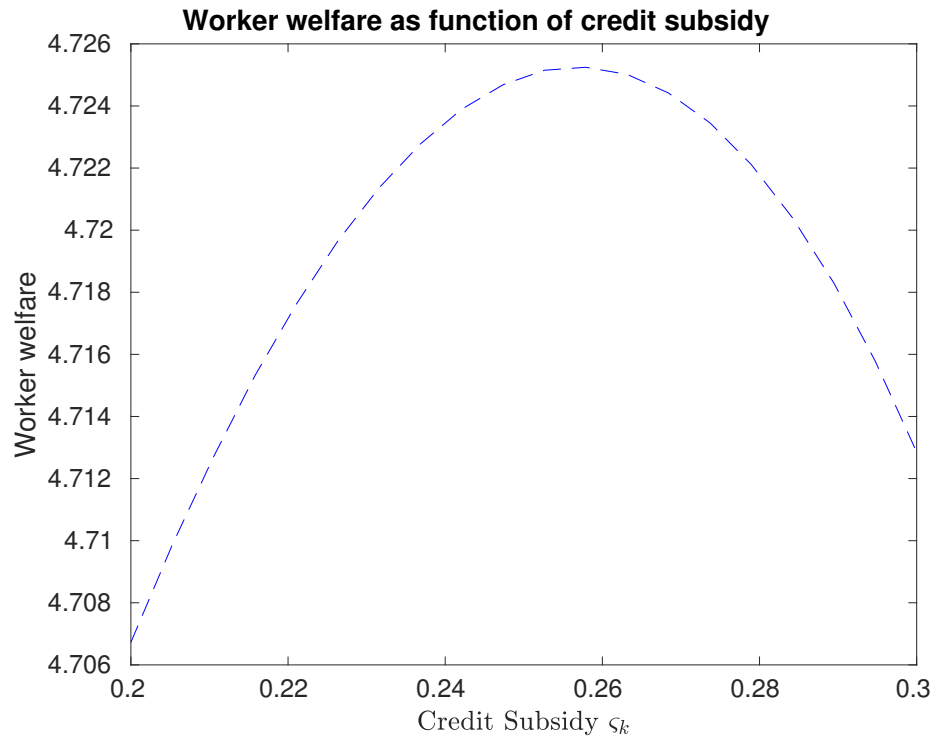
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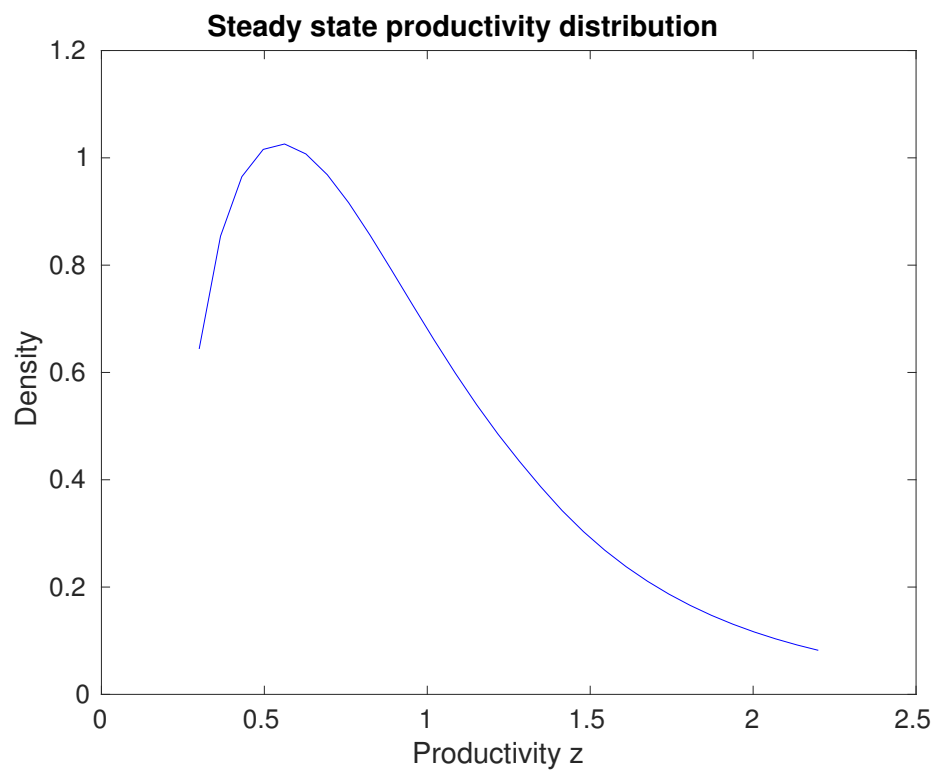
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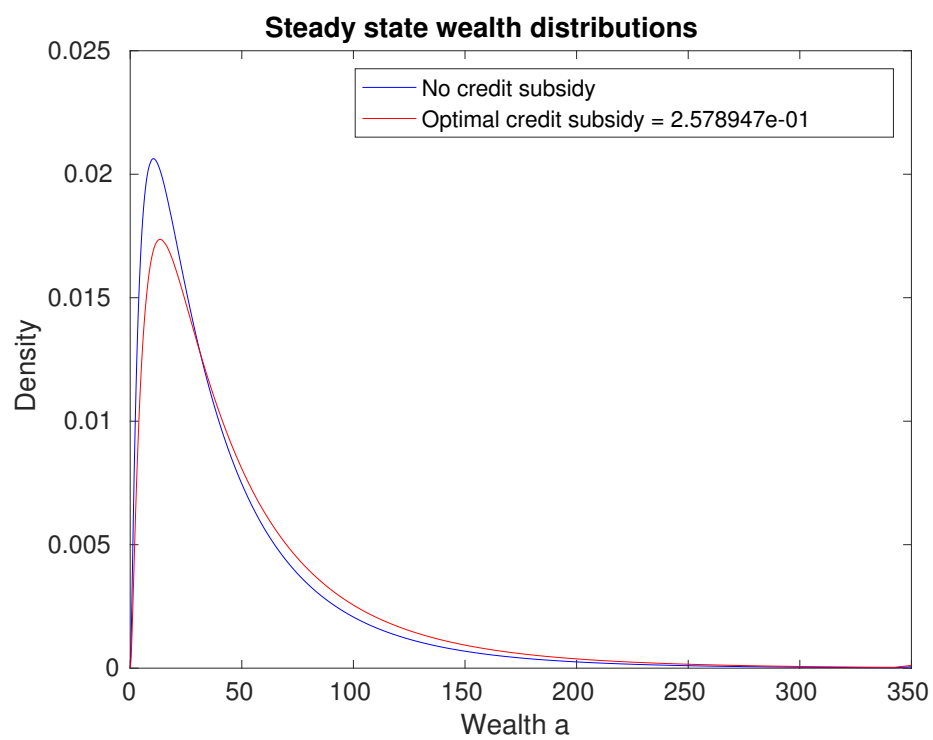
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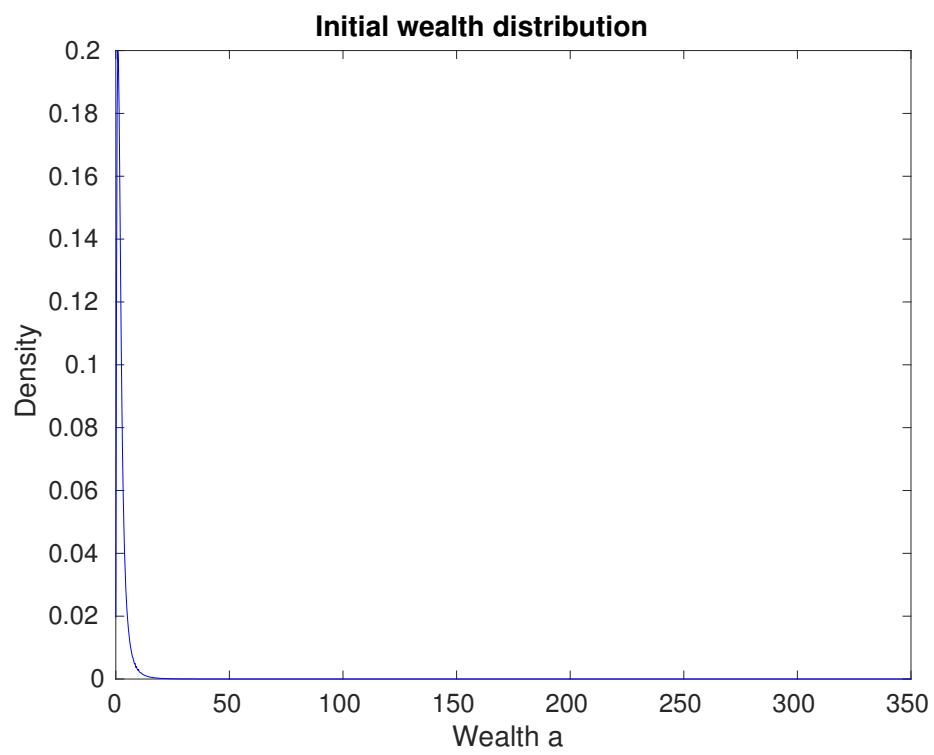
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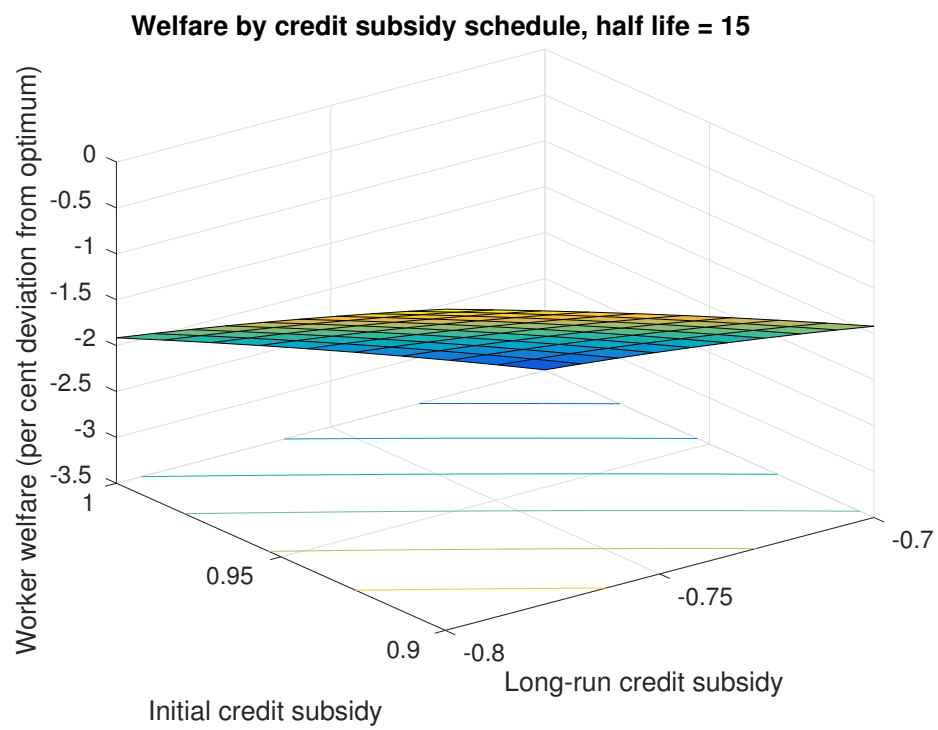
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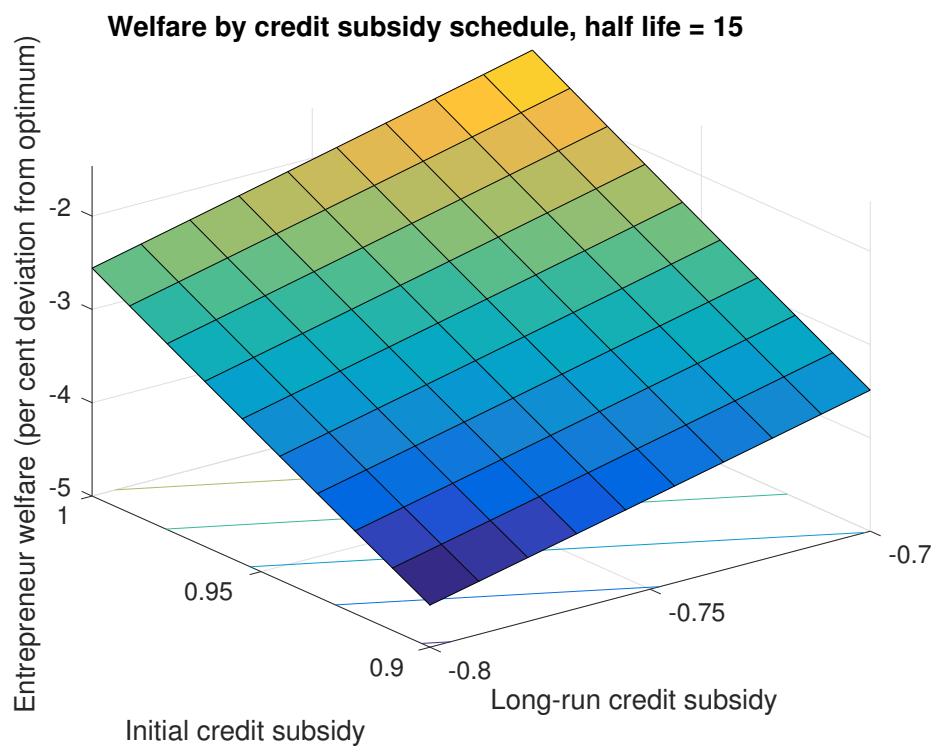
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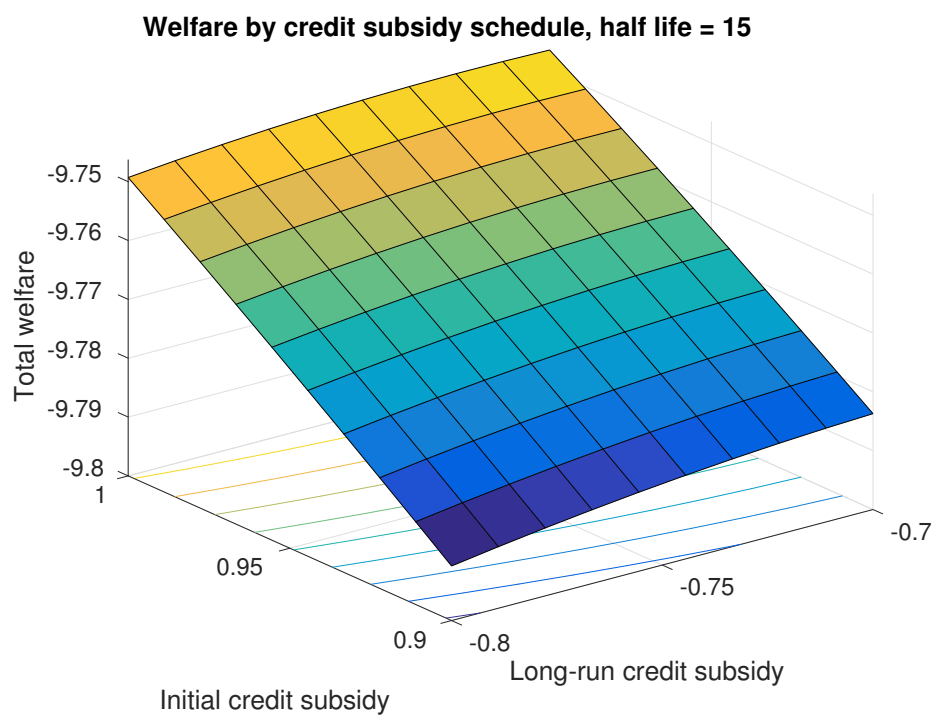
Figure 7

Figure 8

Figure 9

Welfare by credit subsidy schedule, half life = 16

Figure 10

Welfare by credit subsidy schedule, half life = 17
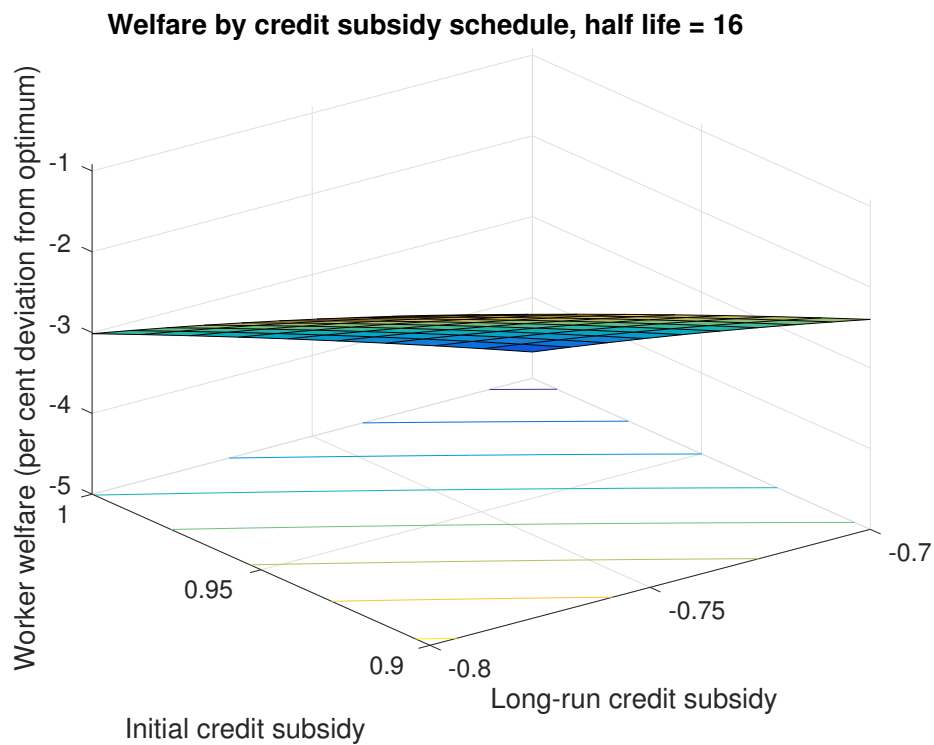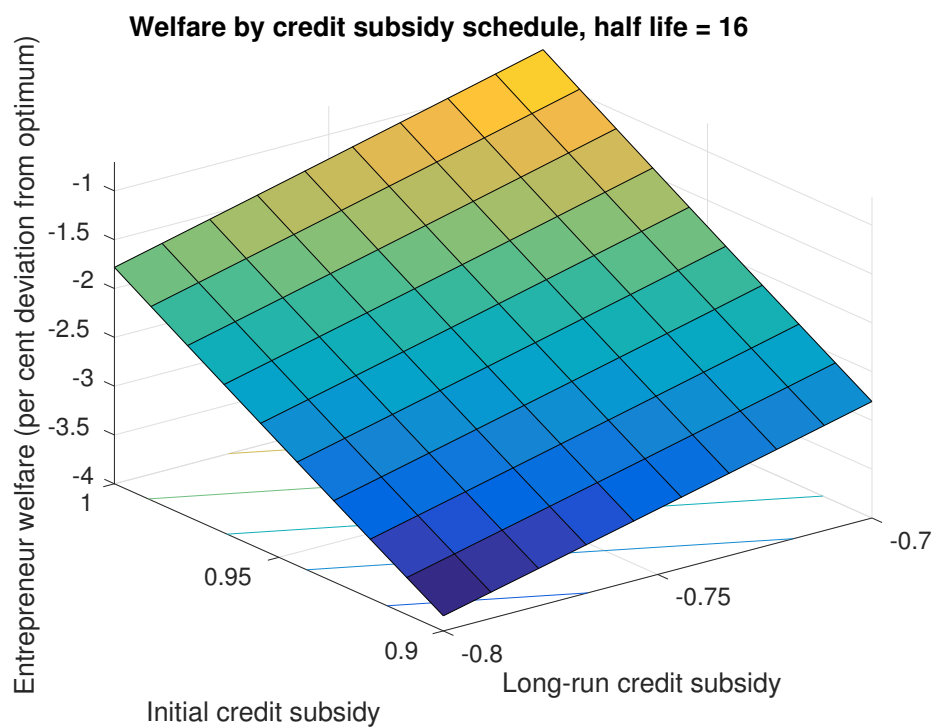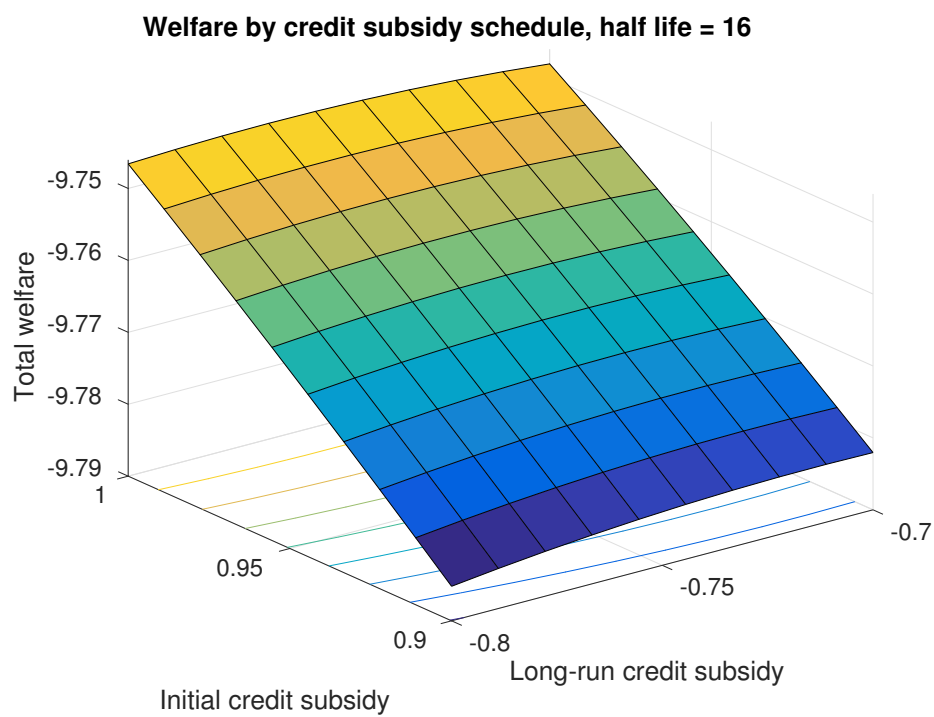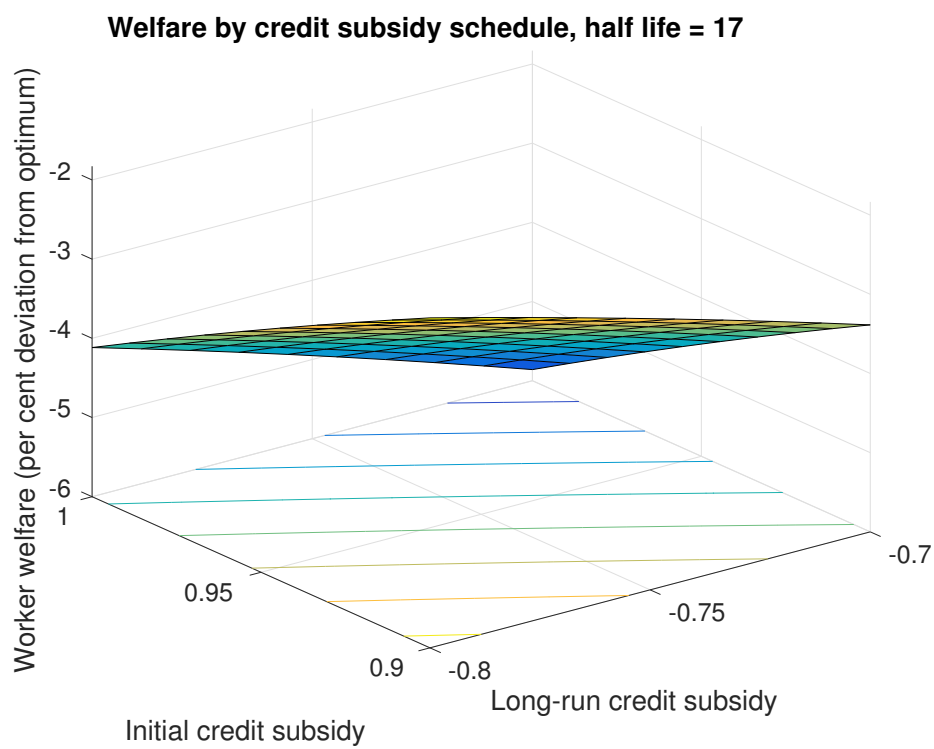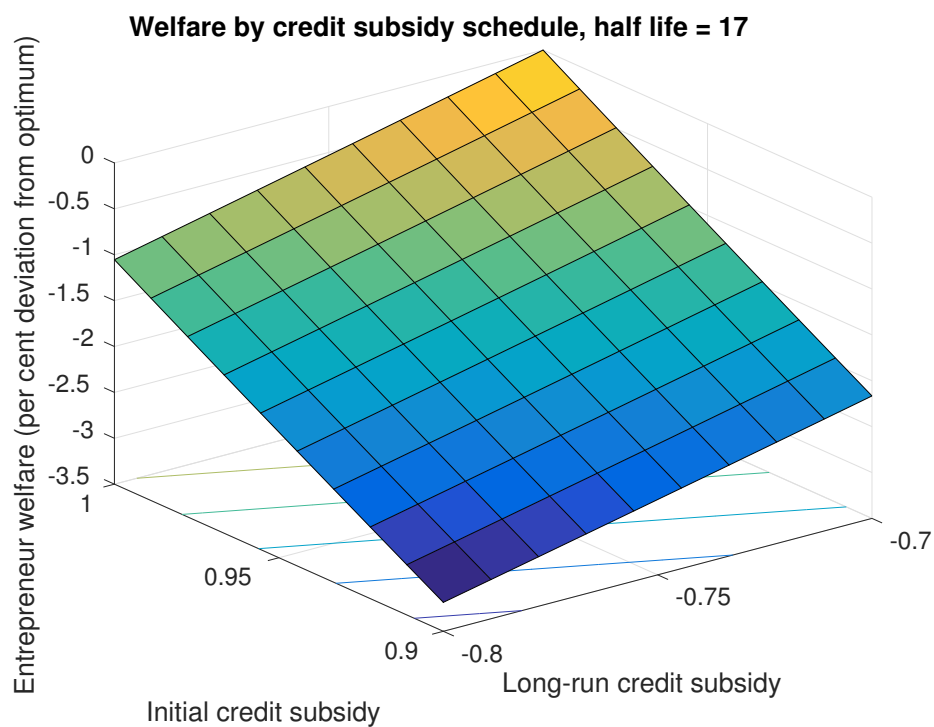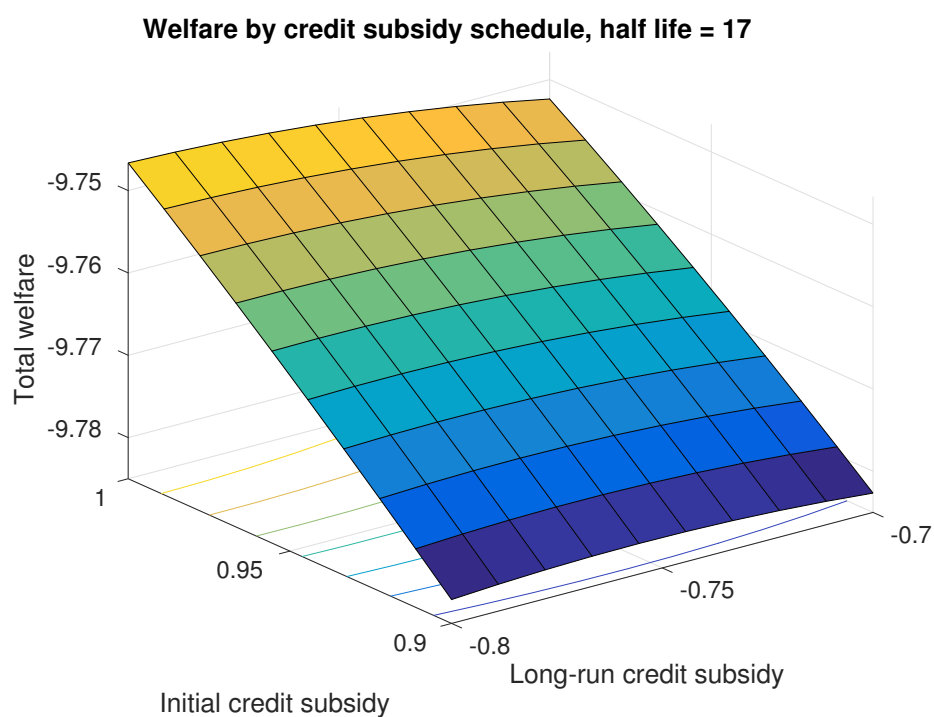
Figure 11

Figure 12

Figure 13
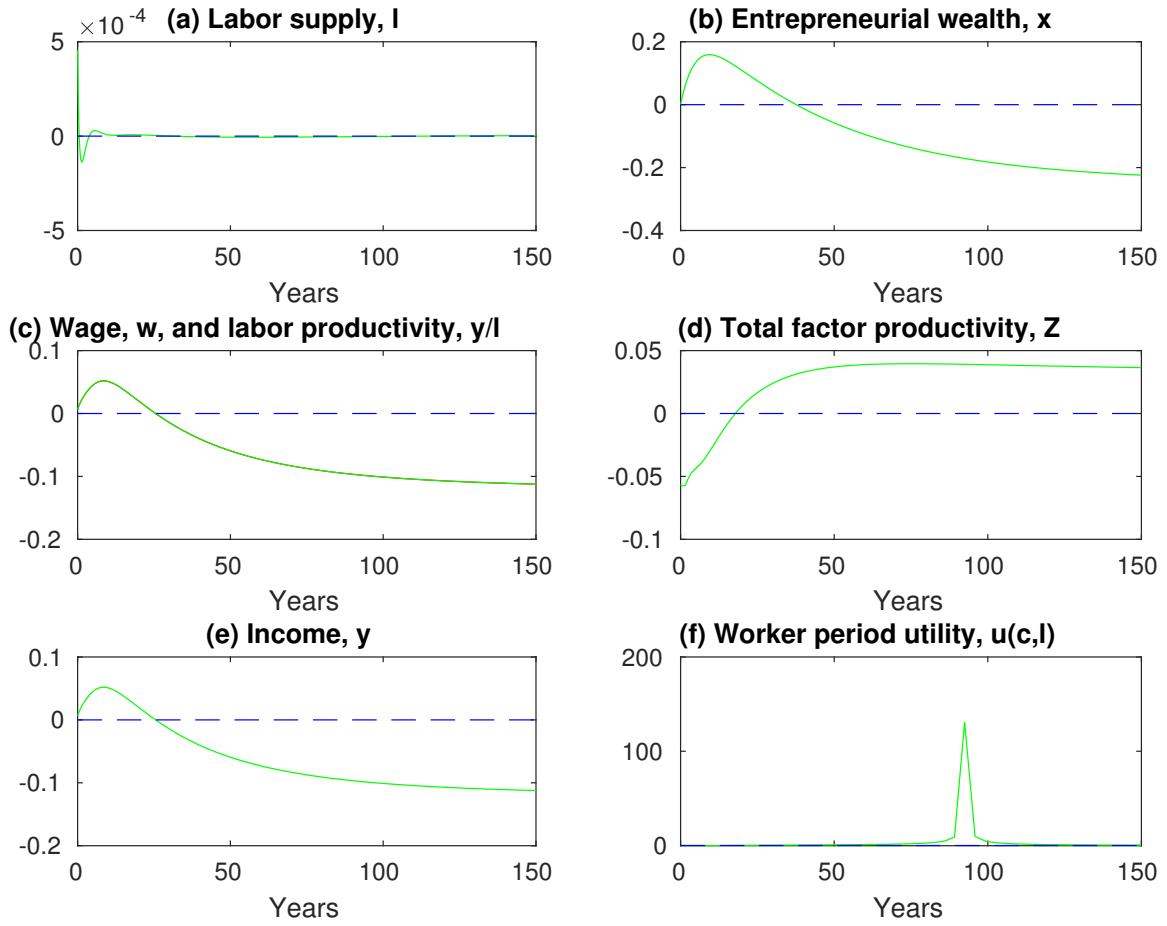
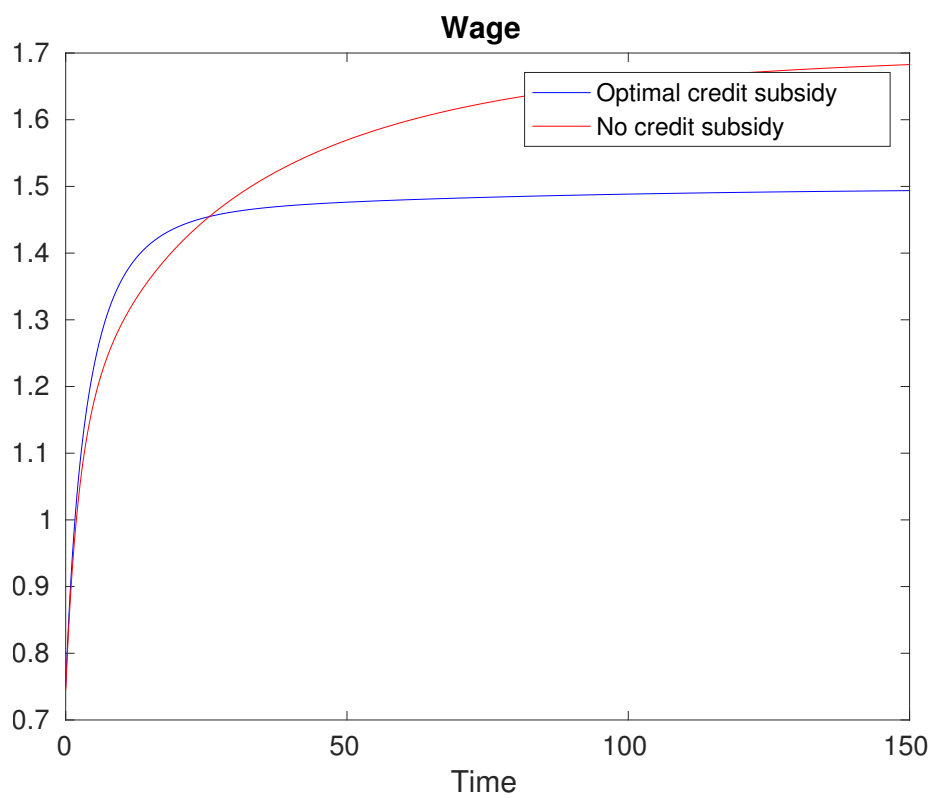**Figure 14** – Proportional deviations of optimal credit subsidy equilibrium from the laissez-faire equilibrium

Optimal credit subsidy schedule, half life = 16.000

Time

Figure 15

Wage

Optimal credit subsidy
No credit subsidy

Time
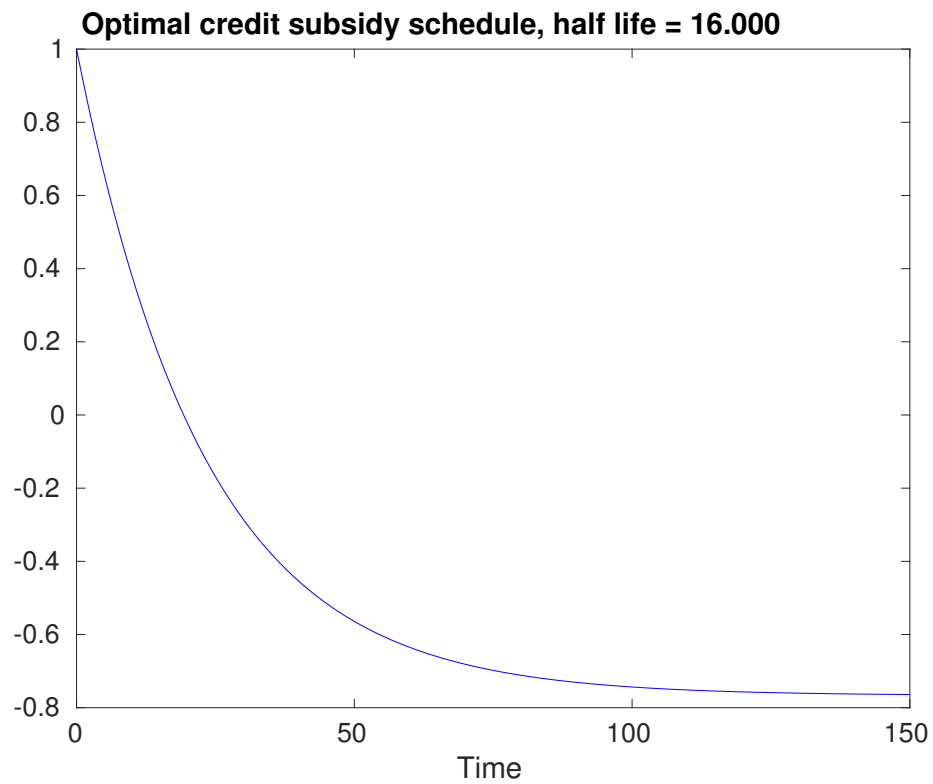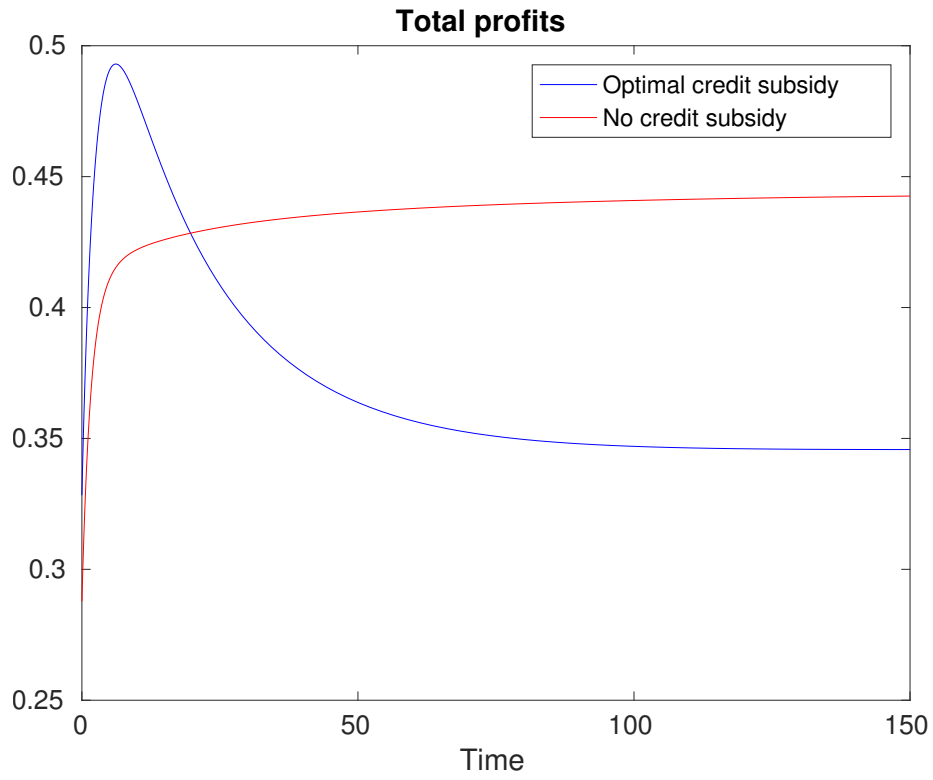
Figure 16

Figure 17

Figure 18

16
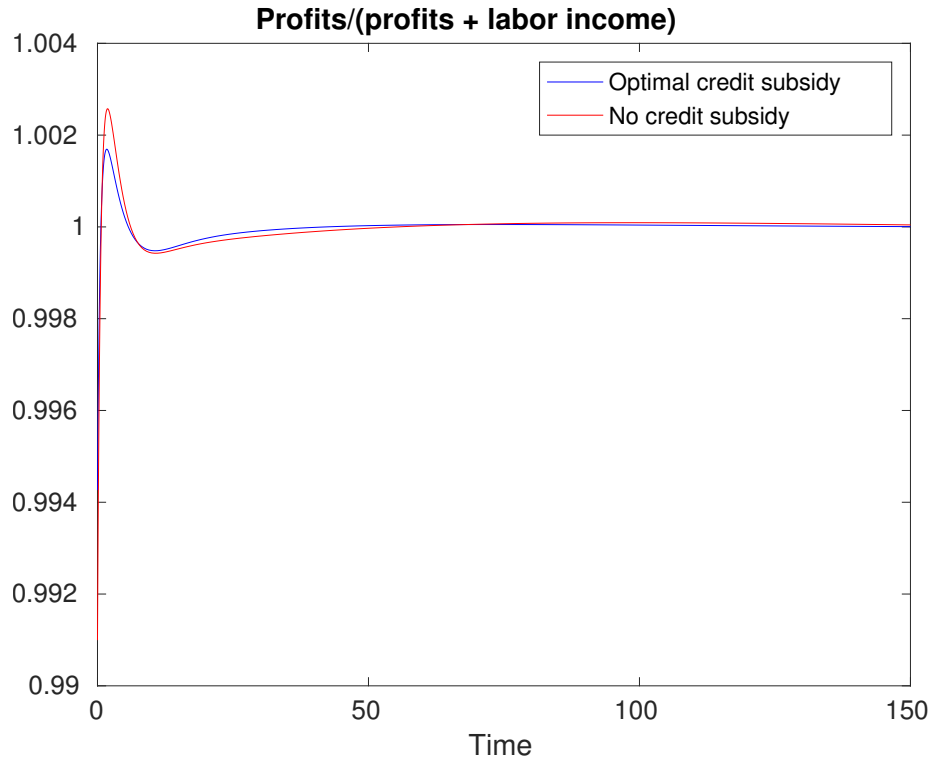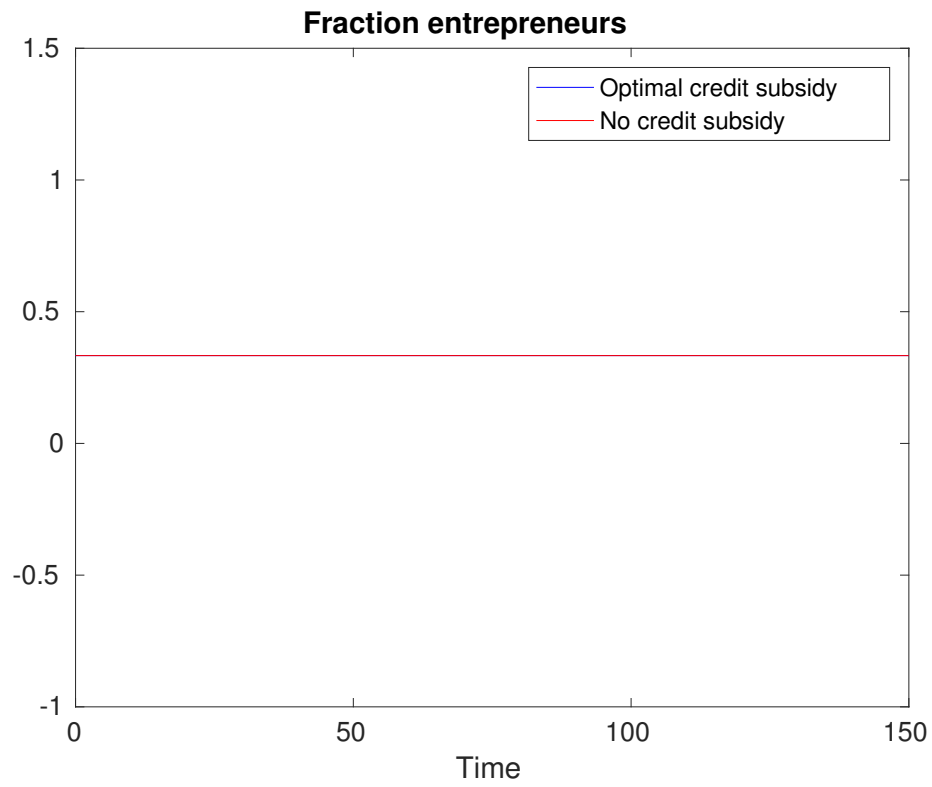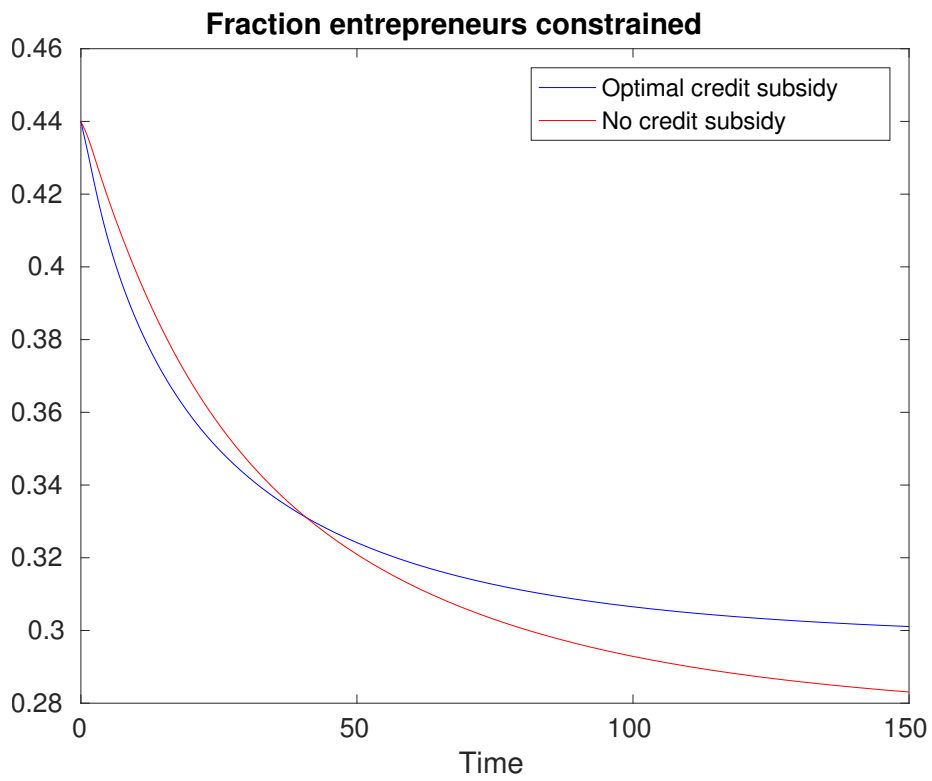
Figure 19

Figure 20
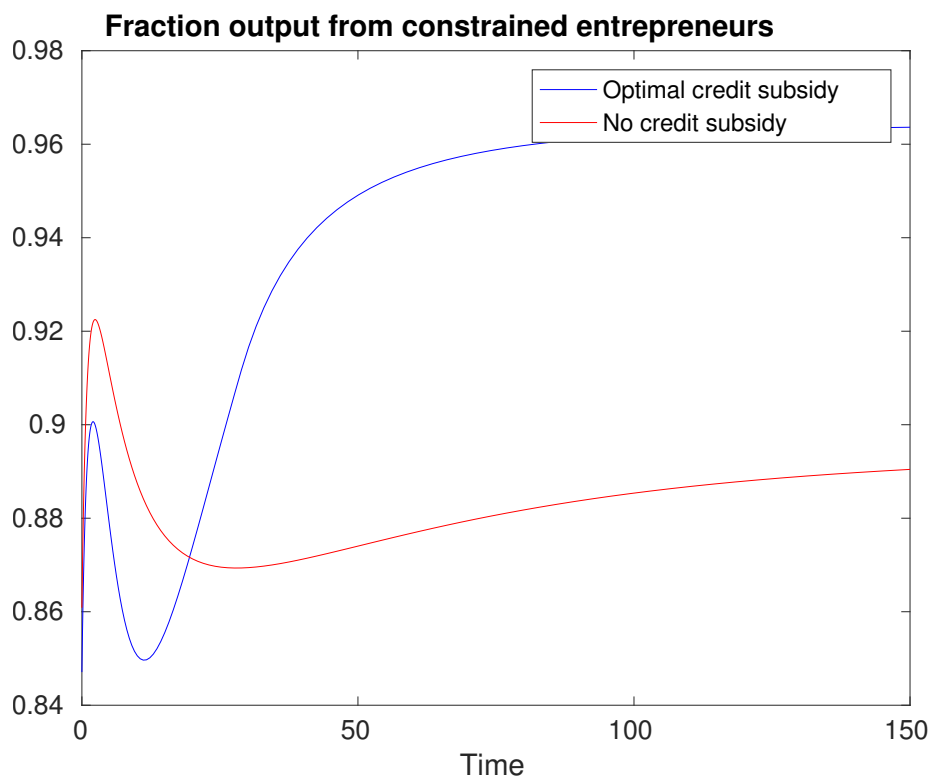
Figure 21

Figure 22

Figure 23

GDP

Figure 24

TFP

Figure 25

GDP/Potential GDP

Figure 26

Aggregate wealth
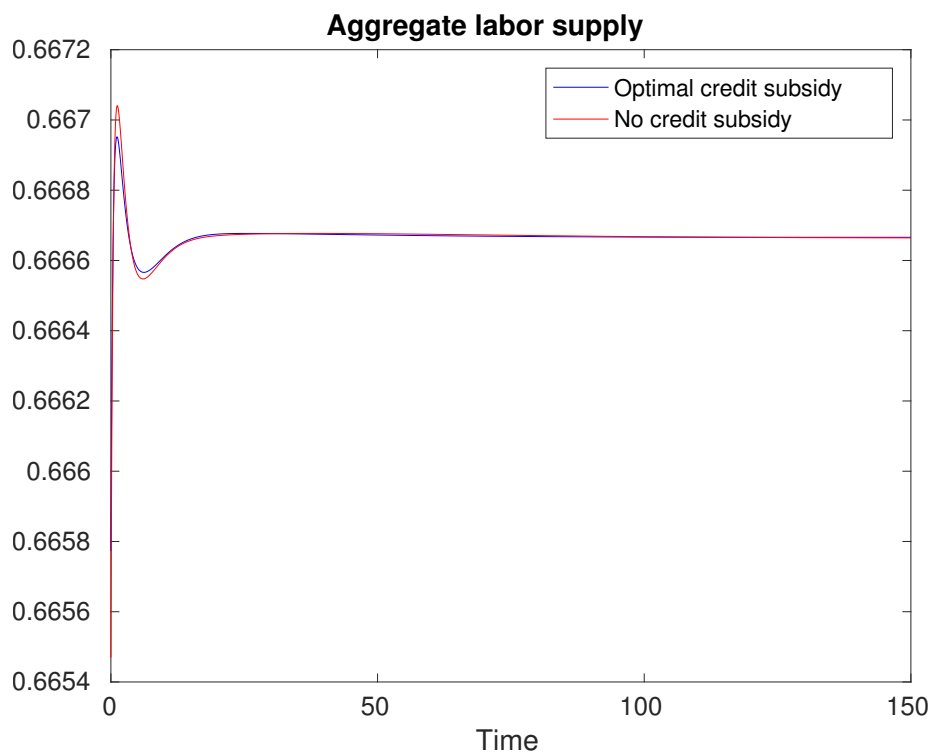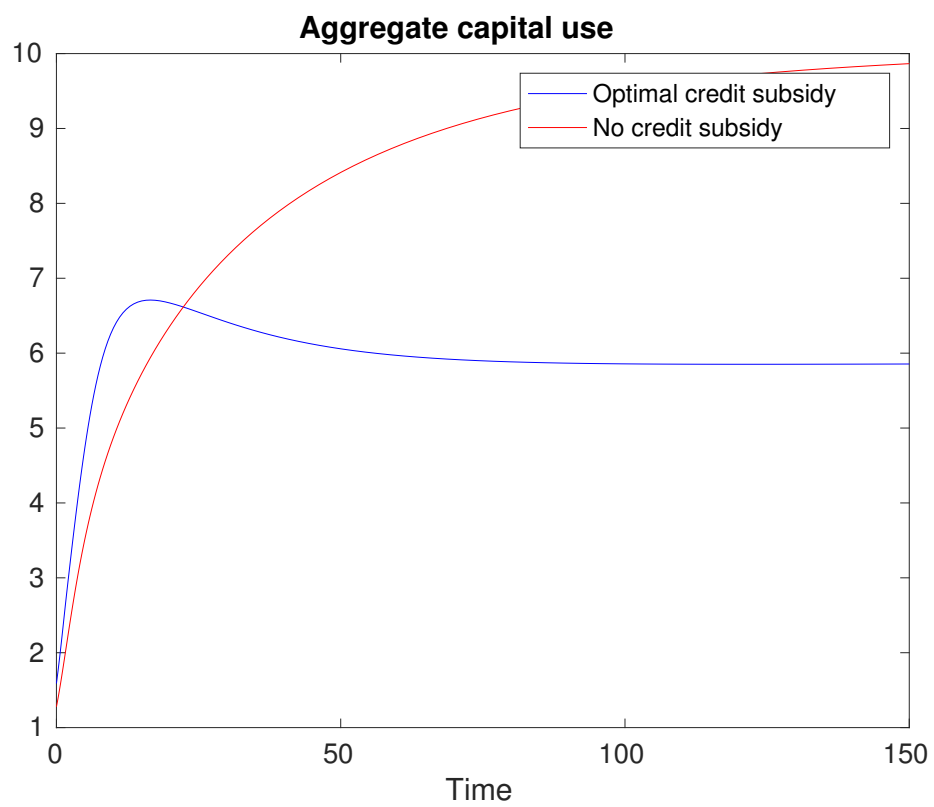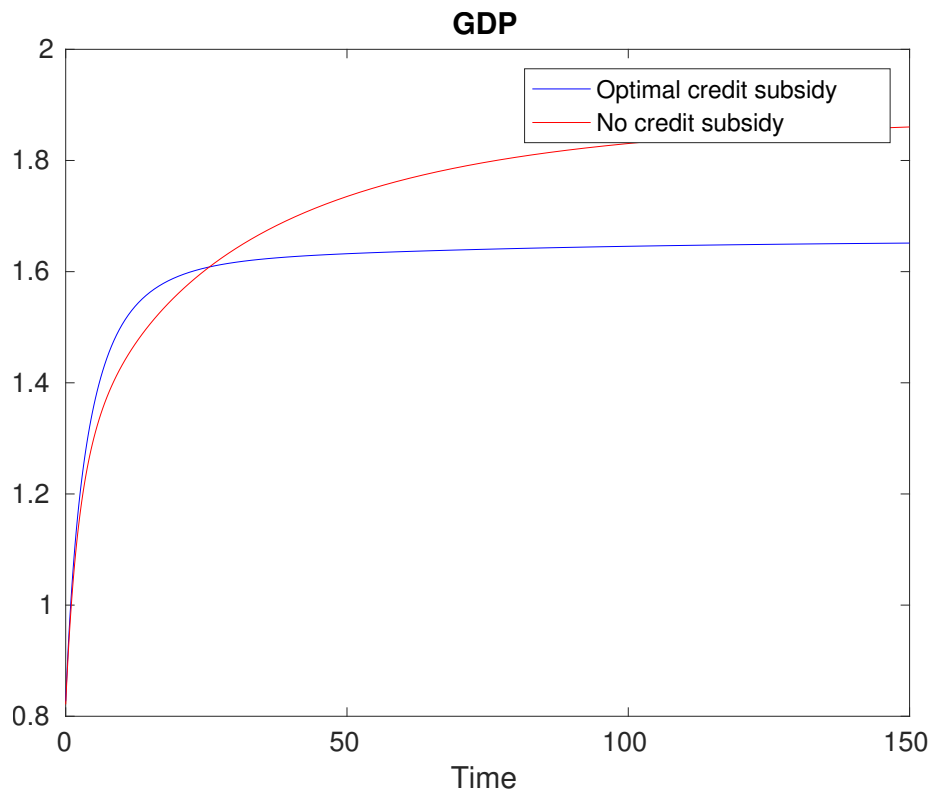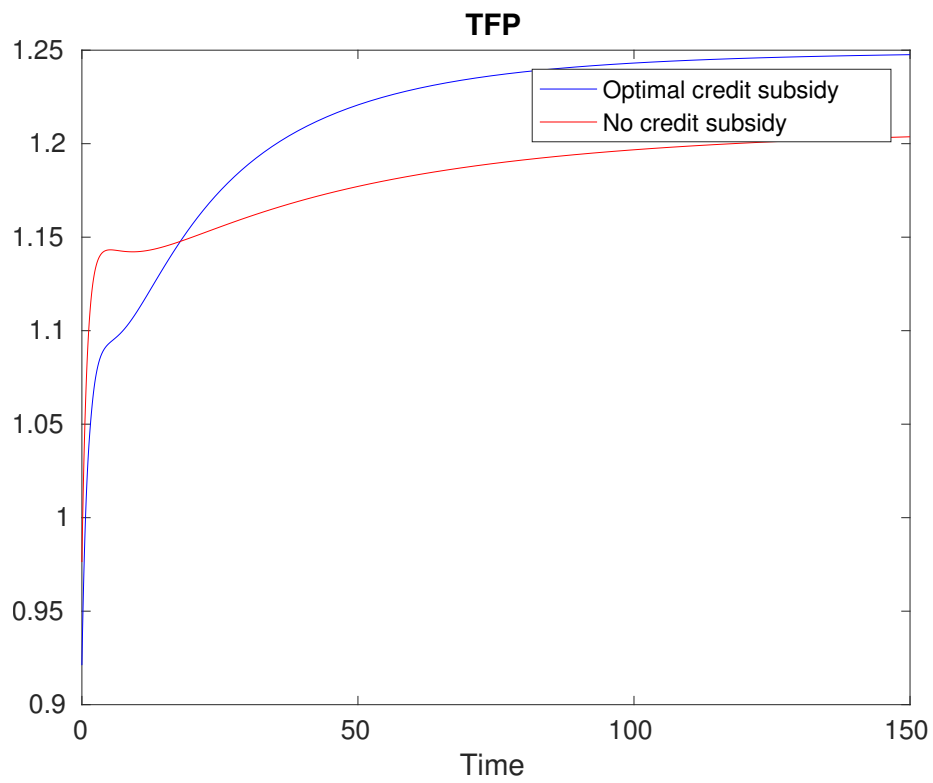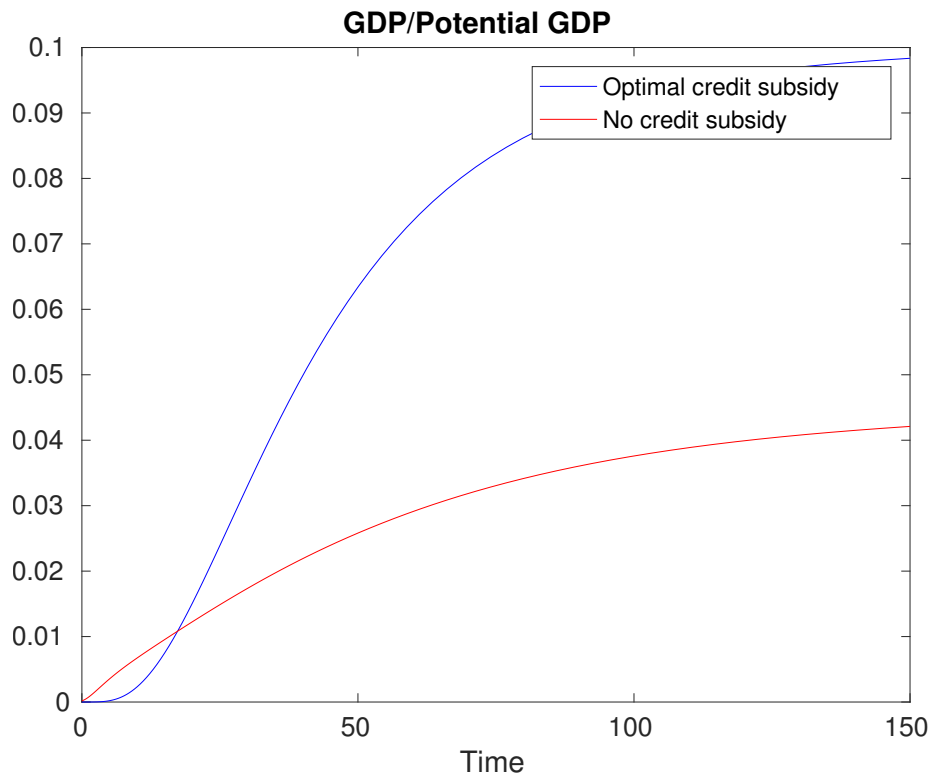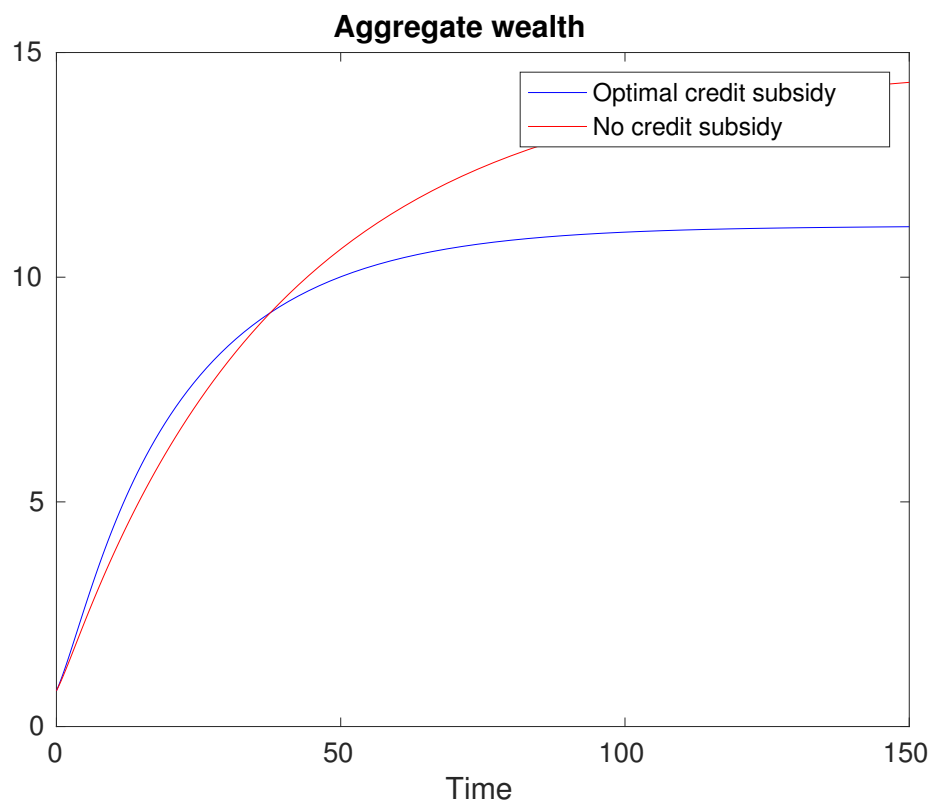
Figure 27

Figure 28

Figure 29