1 Summary

The results here are from a slight variation of the simulation used previously. In particular, the figures here all compute welfare in the same point in time, regardless of the duration of the subsidy. For example, if a subsidy lasted for 25 years, I would compute the welfare changes relative to the baseline economy 25 years after the starting year. On the other hand, if a subsidy only lasted for 5 years, the same computation would be done 5 years after the starting year. This is OK to compare different subsidy values, but not to compare different durations of the subsidy.

In this version, all welfare computations are made 10 years after the starting date (the year 2016), regardless of the duration of the subsidies. The subsidy values I tried were 2, 5, 10, 20, 30, 40, 50, 60, 70, 80 and 90% subsidies to new technologies or new combinations. The subsididy duration varies between 2, 5, 7 and 10 years.

2 Welfare Comparisons

To understand the figures, take figure 1 as an example. It computes the welfare gains 10 years in the future of a subsidy that was implemented in the 2016 and lasted for 2 years. Figures 2 through 4 do the same, but vary the duration of the subsidy.

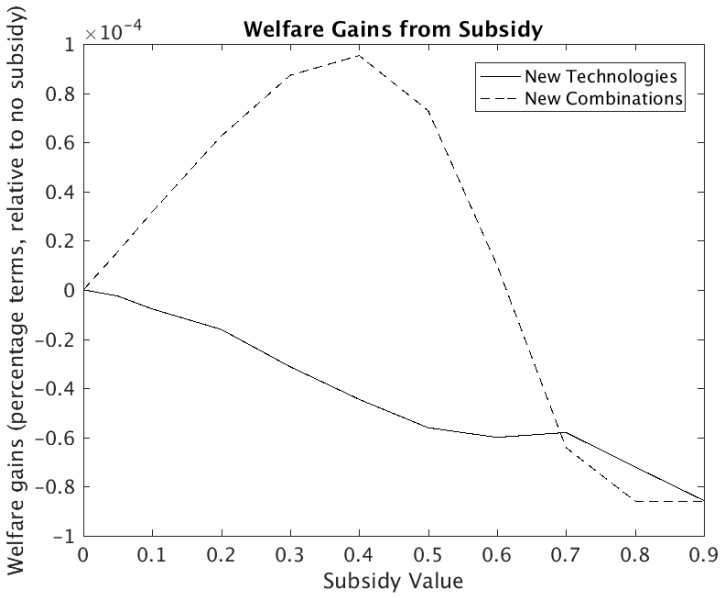


Figure 1: Welfare gains after a subsidy that lasts 2 years.

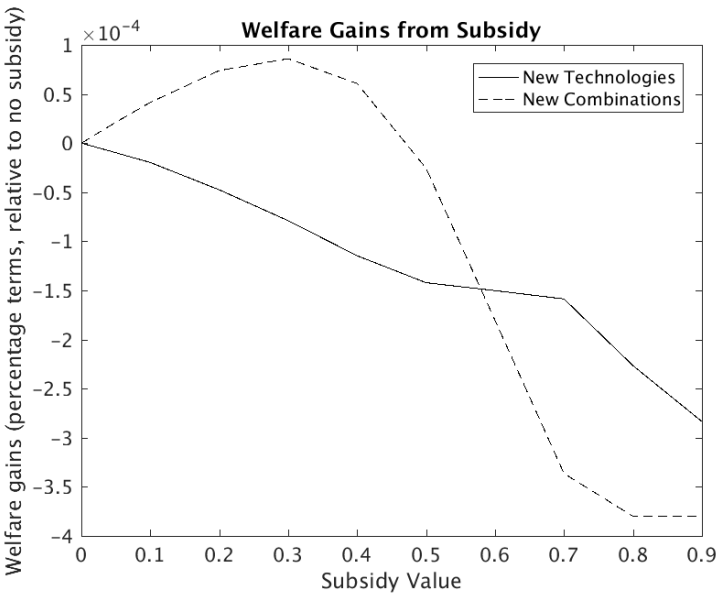


Figure 2: Welfare gains after a subsidy that lasts 5 years.

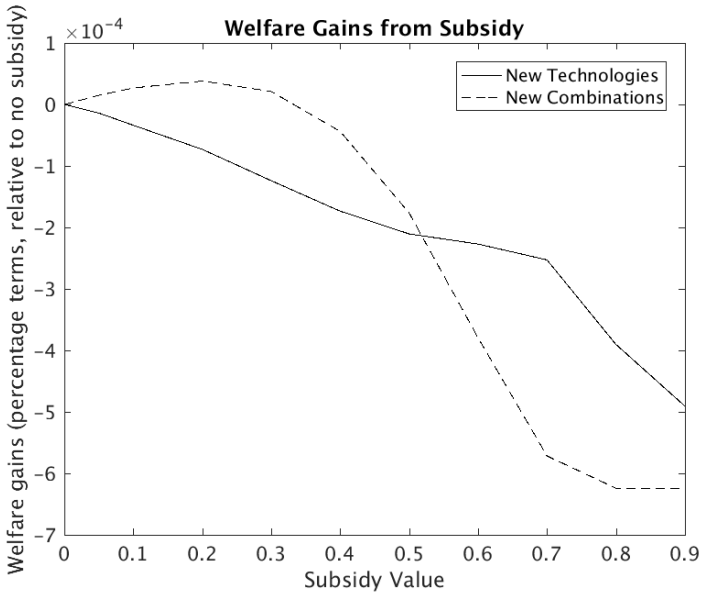


Figure 3: Welfare gains after a subsidy that lasts 7 years.

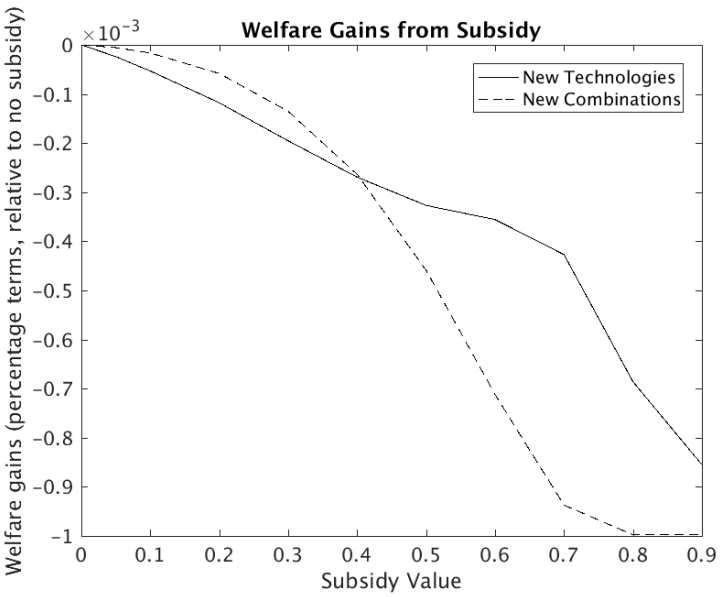
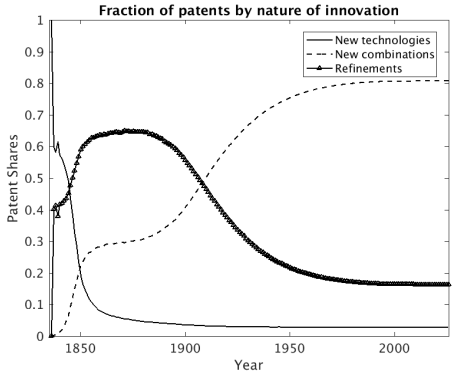


Figure 4: Welfare gains after a subsidy that lasts 10 years.

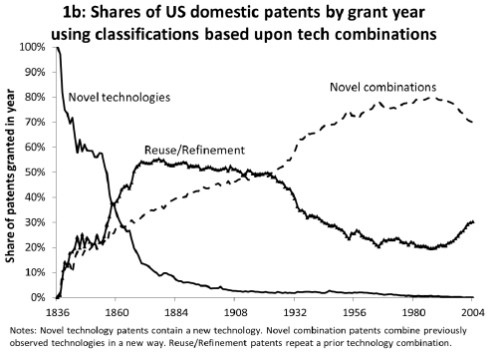
3 Summary of the Economy

In what follows, I present a brief description of the main variables in the economy. This includes both the evolution of the economy without subsidy (from 1836 to 2016) and the economy with subsidy (2017 to 2027). For the economy with subsidy, I chose to show what happens to those variables when a 50% subsidy is implemented for 5 years. Note, however, that all of the plots extend for 10 years after the initial date, even though the subsidy only lasts for 5.

3.1 Evolution of Economy without subsidy



(a) Model.



(b) Data.

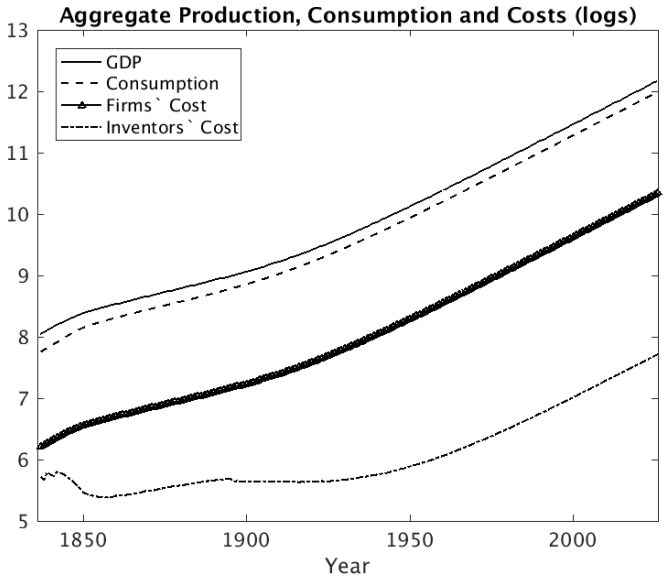


Figure 6: Value of aggregate variables in the economy.

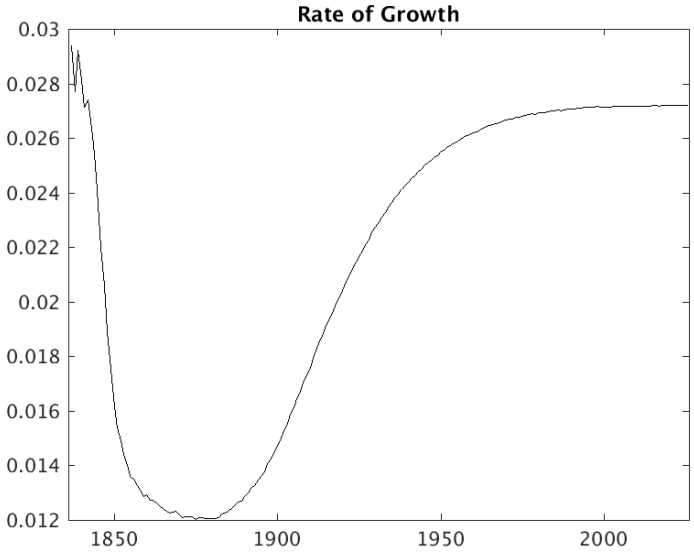


Figure 7: Evolution of the rate of growth.

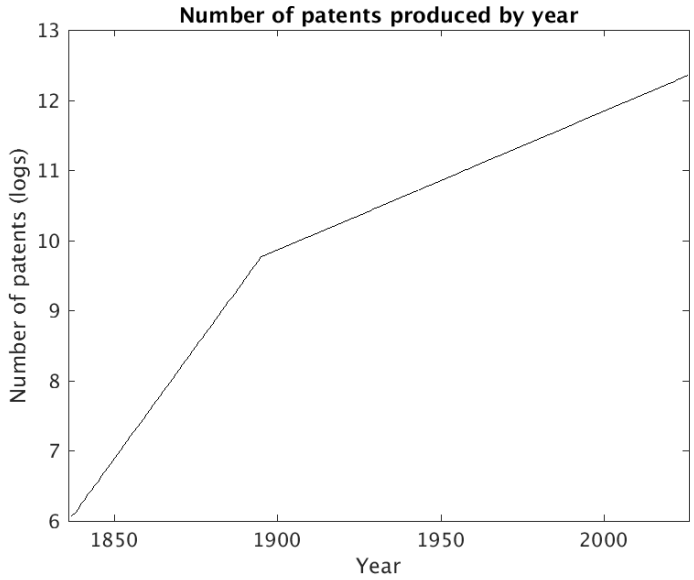


Figure 8: Number of patents produced each period.

Economy with Subsidy

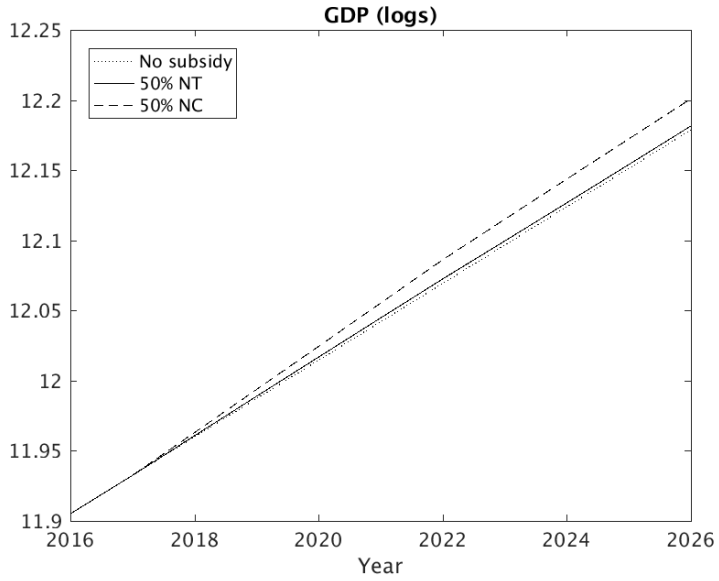


Figure 9: Change in GDP after subsidies.

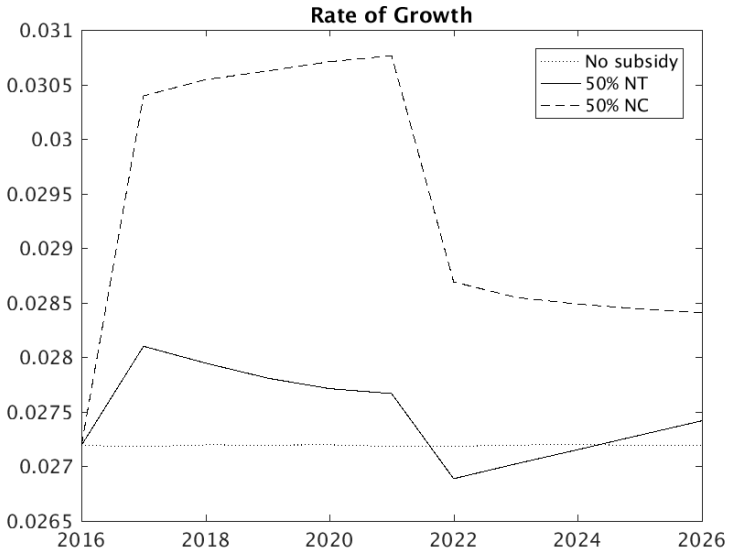


Figure 10: Change in growth rate after subsidies.

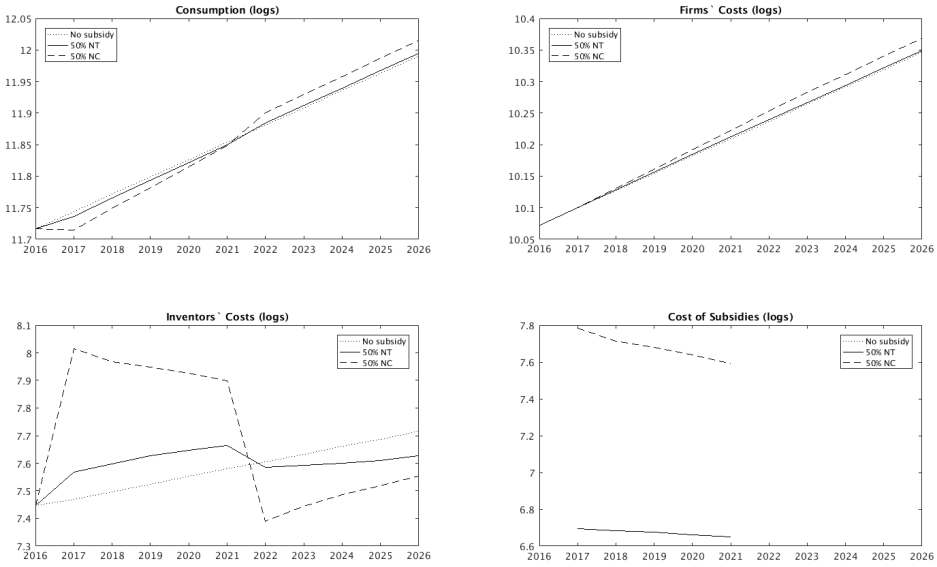


Figure 11: Change in aggregates after subsidies.

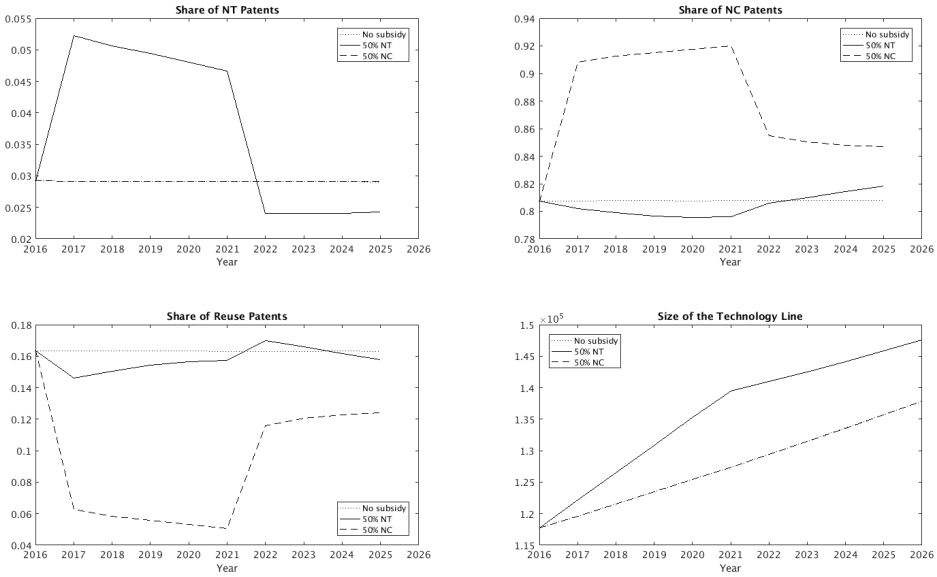


Figure 12: Change in patent shares after subsidies.