PS 2

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1. State Dynamic Programming Problem

$$v(k, z) = \max_{k \in \Gamma(k', z')} u(zf(k) + (1 - \delta)k - k + \beta \sum_{p=1}^{2} \pi_{lp} v(k')$$

State Variables: k, z
- Today's capital and state.
Control variable: k'
-Tomorrows capital

2. Value Function

Here we can see the Value function for both high and low states, which I determined to be A=1.008 and 0.976 respectively. They are both increasing and concave.

3. Policy Function

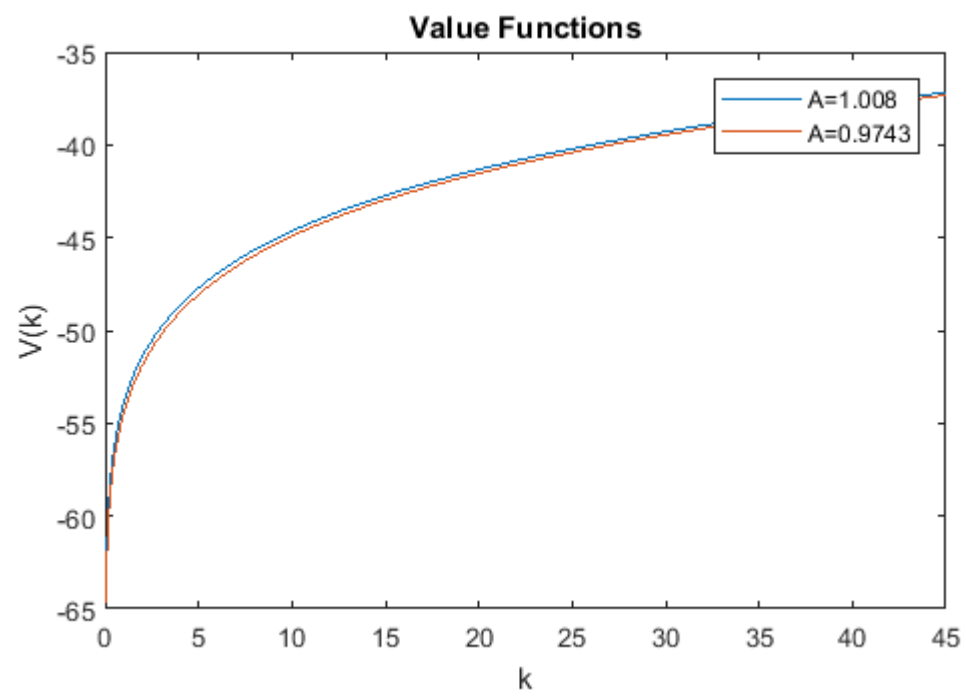The policy Functions are also concave and increasing.

4. Output

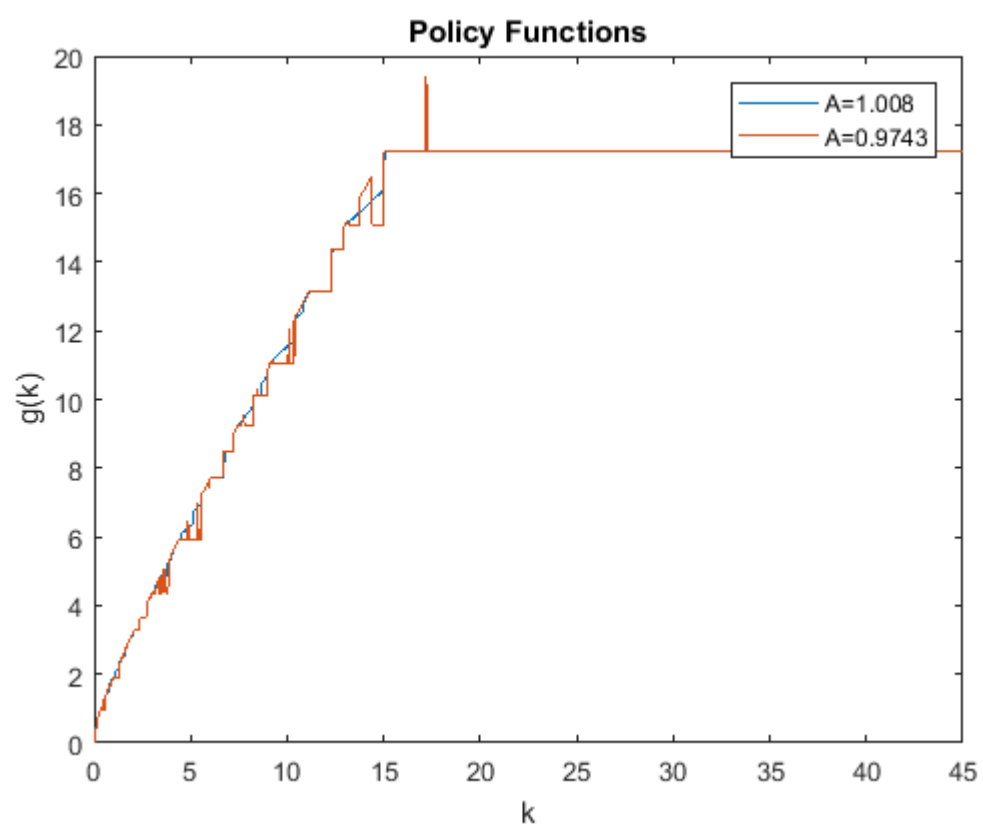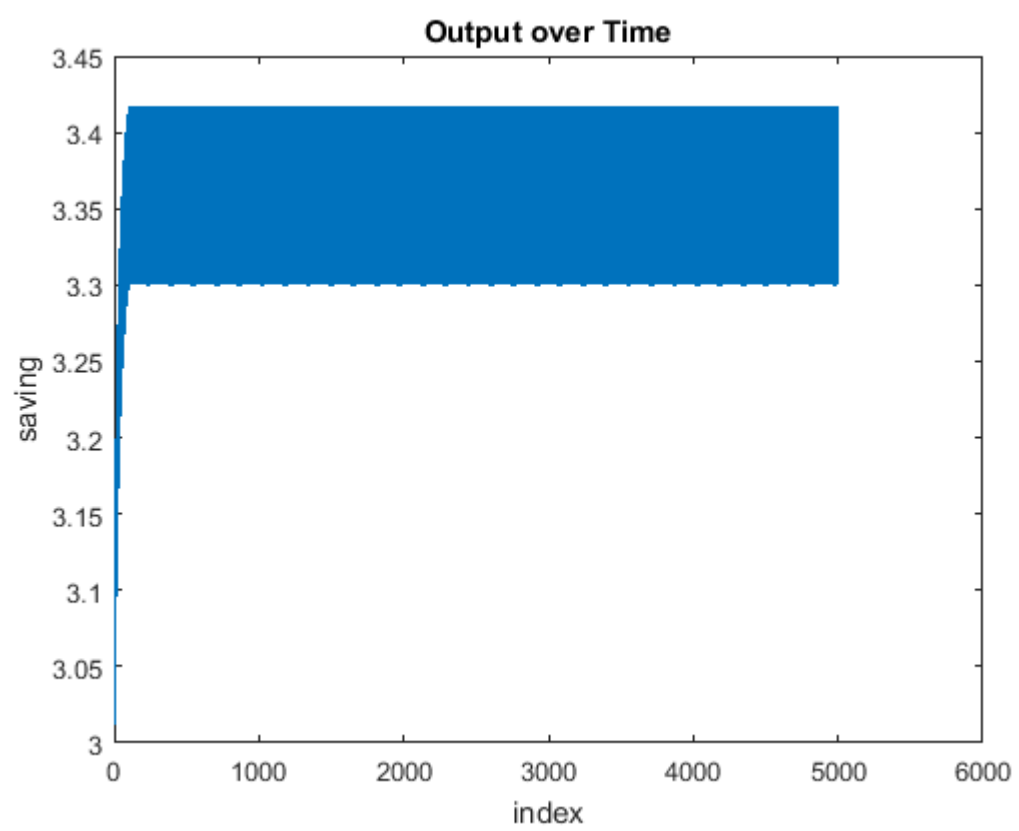Here is output with the optimal saving.

Figure 1:

Figure 2:

Figure 3: