Chapter 4
The DHSS model
Study questions

1. Set up a standard DHSS model where R is 'land', and solve for the b.g.p. What happens to the price of land over time?

2. Compare to the case where R is the flow of an abundant resource with extraction function $R = \phi X$.

3. What difference does it make if we have $R = A_R L_R$, where L_R is extraction labour?

4. What is a reasonable value for β? Implications?

5. Explain the Hotelling rule. What does it imply about the rate of resource consumption in a DHSS economy with a limited resource, free to extract. How does this fit with historical data?

6. Consider the complex model of limited, costly resources.

   (a) Compare the primitive economy to the economy with abundant resources, costly to extract. Explain.

   (b) Compare the balanced growth path to the economy with land. Explain.

   (c) Compare the Hotelling economy to the economy with a limited resource, free to extract. Explain.

7. What are Solow's three mechanisms? Can they be investigated using a DHSS framework with a Cobb–Douglas production function?