

EC4004 Tutorial 2

Markets and the Macroeconomy

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Summary of the Barro Model

The Barro micro-founded macro model builds macroeconomic aggregates from the behavioural equations arising from the assumed interactions of four coupled markets. These markets are the product market, the money market, the labour market, and the bond market. We only need to determine equilibrium in three of these markets to sort the fourth automatically, by Walras' law. The most important of these markets is the labour market. In this simplified textbook version, we imagine households rent capital and labour to firms, who produce a product using the production function $Y = F(L, K)$. The firms want to maximise their real profits, the households want to maximise their total income subject to a budget constraint which forces them to choose between consumption and saving in each period of the model. In equilibrium, the real rental price of capital equals the marginal product of that capital, and the real wage rate equals the marginal product of labour, and the real rental price of money determines the interest rate.

Question 1

How is profit calculated in the Micro-founded macro model?

Question 2

What is the household real budget constraint and what does it tell us?

Question 3

In the model why does the return on bonds, i , equal the return on capital, $(R/P) - \delta$?

Question 4

What causes the labour and capital markets to clear in the Barro model?

Question 5

Draw the household budget constraint, $(w/p) \times L + i \times (B/P + K)$. Show the effects of an increase in real saving on the household budget constraint, and give the economic intuition behind this effect.