PPE Year 1
SEH TT 2007

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INTRODUCTORY MACROECONOMICS

READING LIST:

i. Basic level text - (Useful for an overview but not detailed or rigorous enough.)

Economics, *Begg, D., Fischer, S. & Dornbusch, R.*
8th ed. ch.19-29, 31-32
7th ed: ch.19-32, 34-35
(5th or 6th ed: ch. 20-32, 34-35)

ii. Recommended texts

Macroeconomics - A European Text, *Burda, M. & Wyplosz,* C.
4th, 3rd or 2nd edition

This is a good modern text, and is the most challenging of the three. For some weeks it will be required reading. However, the latest edition (4th) does not cover the closed economy IS-LM-model separately, but rather introduces the open economy directly, which can be tricky at this level as many relevant questions can be addressed in a closed economy context.

Macroeconomics, *Dornbusch, R., Fischer, S., & Startz,* R. (US)
9th, 8th or 7th edition

An excellent textbook for many topics, and so will be used as required reading for a number of weeks. Particularly good for the Keynesian Multiplier and IS-LM material (weeks 2,3,5).

Macroeconomics, *Mankiw, N.G.,* (US)
6th, 5th, 4th or 3rd edition

The relevant University lecture course given in Hilary term is based mainly on this new edition of *Mankiw*. This is generally a very good textbook, although it is a little basic in some parts, and the section on the open economy in both *Dornbusch, Fischer and Startz* and *Burda and Wyplosz* is better. Therefore a section from *Mankiw* will form part of the required reading for each week. (Earlier editions of *Mankiw* are also suitable, as indicated.) For some topics, sections from other textbooks will also be required reading. If possible, you should take a look at all three recommended texts for each week, as they each have their own strengths and weaknesses. The lecture notes and university course syllabus are available on the Department of Economics website:

http://www.economics.ox.ac.uk/index.php/undergraduate/details/introduction_to_macroeconomics/

Week 1 - National Income Accounting and the Classical Model

Required reading:

(*)Macroeconomics, *N. Gregory Mankiw*

6th or 5th edition:	Chapters 1, 2, 3, 4, 9
4th edition:	Chapters 1, 2, 3, 7, 9
3rd edition:	Chapters 1, 2, 3, 6, 8

Recommended reading:

Macroeconomics - A European Text, *Burda, M. & Wyplosz*

4th, 3rd or 2nd edition:	Chapters 1, 2

Macroeconomics, *Dornbusch, R., Fischer, S, & Startz*

9th, 8th, 7th edition:	Chapters 1, 2, 5

Questions:

1. Assume a simplified economy where the quantity theory of money holds, with a constant velocity of money circulation *V*, and where all inflation is fully anticipated. Also, this economy does not trade with the rest of the world, and experiences the annual production function $Y=K^{\alpha}L^{1-\alpha}$, where *L* is the total number of worker-hours and *K* is the accumulated capital stock. Assume that all product markets are perfectly competitive and clear instantaneously, that the population is fixed at size *N*, that all individuals work an equal number of hours per year *H*, and that all workers are equally productive. Assume also that the capital stock is fixed for each year, and that there is no depreciation. Finally, assume there is no indirect taxation. (This is a simplified classical model of the economy.)

(a) What will the relationship be between gross domestic product (GDP), gross national product (GNP) and national income (NI) for this economy?

(b) By dividing national income *Y* into private consumption spending *C*, government consumption spending *G* and private investment spending *I*, explain how the following macroeconomic variables will be determined in this model. (Assume a constant private savings rate, *s*, and tax burden, *T*, and let the nominal money supply be *M*):

(i) Real GDP (annual)
(ii) Real GDP per capita (annual)
(iii) Real hourly and annual wages.
(iv) Nominal GDP (annual)
(v) Nominal GDP per capita (annual)
(vi) Nominal hourly and annual wages
(vii) Private saving (annual in real terms)
(viii) Private consumption (annual in real terms)
(ix) Private investment (annual in real terms)
(x) The real interest rate
(xi) The nominal interest rate
(xii) The government budget deficit (annual in real terms)

(c) Assuming that the population and the annual number of hours worked remains fixed, what would cause real GDP to grow over time in this model? [*Hint: What would the relationship over time be between investment I and the capital stock K?*]

(d) Suppose that the government increases *G* whilst leaving *T* unchanged. With a fixed private savings rate *s*, what will happen to (i) the government budget deficit, (ii) investment, (iii) the real interest rate.

(e) Suppose that *s* increases with *G* and *T* remaining unchanged. What will happen to (i) the government budget deficit, (ii) investment, (iii) the real interest rate.

(f) What would you argue are the main theoretical inadequacies of this model?

2. (a) Illustrate the AD-AS equilibrium in the classical model, taking care to explain the derivation of the AD curve (use the quantity theory of money) and the AS curve.

(b) Analyse the effect of a reduction in the nominal money supply.

(c) Compare the outcome in part (b) to a short run model where the price level is fixed.

3. Under what conditions will GDP be an acceptable measure of economic performance? [*Hint: What bearing might income inequality and market failure have on its suitability?*] Which measure would be preferable, total GDP or GDP per capita, nominal GDP or real GDP?

4. In what three different ways can real GDP be defined and measured? Explain with reference to the circular flow model.

Week 2 - Consumption and the Keynesian Multiplier Model

Required reading:

(*)Macroeconomics, *N. Gregory Mankiw*

6th, 5th or 4th edition:	Chapters 9, 10, 16, 17
3rd edition:	Chapters 8, 9, 15, 17

(*)Macroeconomics, *Dornbusch, R., Fischer, S, & Startz*

9th, 8th or 7th edition:	Chapters 9, 13, 14

Recommended reading:

Macroeconomics - A European Text, *Burda, M. & Wyplosz*

4th or 3rd edition:	Chapters 5, 6
2nd edition:	Chapters 3, 4

Questions:

1. Build a two-period inter-temporal consumption model for a consumer for whom consumption in periods 1 and 2 are perfect complements, so that their utility function is $U=min\{C_1,C_2\}$. Assume that the consumer receives income M_1 in period 1 and M_2 in period 2, can freely borrow or save at the real market interest rate r, and begins in period 1 with initial accumulated wealth W.

(a) Assume initially that income is the same in each period so that $M_1=M_2=M$. By forming the consumer's budget constraint and characterizing the utility maximizing consumption bundle, show what happens to C_1 and C_2 when:

(i) Income in period 1 increases by ΔM with M_2 staying constant.
(ii) Income in period 2 increases by ΔM with M_1 staying constant.
(iii) Income in both periods increases by ΔM.
(iv) Wealth increases by ΔW with M_1 and M_2 staying constant at M.

(b) Extending the above model to one with N periods, if the behaviour of the private consumption sector of the economy were to follow it, what would the implication be for the response of consumption behaviour to: [*Hint: If you find this difficult, assume that the interest rate r=0 to simplify the problem.*]:

(i) temporary increases and decreases in income (i.e. assume that the income increase is expected only to last X years, where $X<N$)
(ii) permanent increases and decreases in income (i.e. assume that income will be higher in all future periods)

(c) Explain how the above analysis could be related to the life-cycle hypothesis, the permanent income hypothesis and the Keynesian model of consumption.

(d) What would the implication be of dropping the assumption that consumption in the different periods are perfect complements and making them imperfect complements (i.e. so that indifference curves are standard well-behaved ones)? [*Hint: Assume that consumption in each period remains a normal good.*]

2. Build a Keynesian multiplier model for the short run level of aggregate demand in the closed economy which includes a proportional income tax rate t, a private saving rate s, exogenous government spending G_0, autonomous consumption C_0 and autonomous investment I_0. With reference to the role of the Keynesian multiplier and the circular flow model, explain the effect on (i) the equilibrium level of demand, (ii) equilibrium consumption, (iii) the equilibrium government budget deficit and (iv) equilibrium net private savings (i.e. private saving minus investment), of the following:

(a) An increase in G_0.

(b) An increase in C_0.

(c) An increase in I_0.

(d) An increase in s.

(e) An increase in t.

(f) An increase in government spending, where tax intake is raised simultaneously, so as to maintain a balanced budget.

3. Explain what "automatic stabilisers" are, and how they work as opposed to discretionary fiscal policy changes when an economy is hit by a negative aggregate demand shock. Use the multiplier model to make your point precisely. Why might a policy maker prefer to rely on the former rather than the latter?

4. Explain the role of the investment component of aggregate demand in the Keynesian multiplier model (we will look in more detail at its role in the IS curve next week) paying particular attention to different types of investment and the similarities and differences between the predictions of the various theories of determination of investment expenditure.

Week 3 - Money market, IS-LM AD-AS closed economy policy analysis

Required reading:

(*)Macroeconomics, *N. Gregory Mankiw*

6th or 5th edition:	Chapters 4, 9, 10, 11, 18
4th edition:	Chapters 7, 9, 10, 11, 18
3rd edition:	Chapters 6, 8, 9, 10, 18

(*)Macroeconomics, *Dornbusch, R., Fischer, S, & Startz*

9th, 8th, 7th edition:	Chapters 9, 10, 11, 15

(*)Macroeconomics - A European Text, *Burda, M. & Wyplosz*

2nd or 3rd edition:	Chapters 8, 9, 10

Questions:

1. (a) Derive the downward sloping AD curve for a closed economy using the IS-LM framework.

(b) Explain, using an IS-LM AD-AS model, how the prediction of the Keynesian multiplier model from Week 2 question 2.(d) regarding an increase in the saving rate can be reconciled with the predictions of the classical model from Week 1 question 1.(d).

2. What is money? What are the incentives for holding it?

3. Using the Baumol-Tobin theory of money management, explain the impact of the following on an individual's demand for nominal money balances:

(a) An increase in the nominal interest rate offered on corporate and government bonds.

(b) An increase in the riskiness of bonds.

(c) An increase in real income.

(d) An increase in the price level.

(e) A rise in the expected rate of inflation (with nominal interest rates on bonds remaining unchanged.)

(f) Introduction of charges for withdrawals at cash machines.

4. Use the closed economy IS-LM framework to analyse the impact of each of the following policies on (i) Income/output, (ii) The real interest rate, (iii) Investment, (iv) The government budget deficit. (Assume that the price level is fixed throughout your analysis.) Pay particular attention to the role of the slope of the IS and LM curves:

(a) An increase in government expenditure.

(b) An increase in the proportional income tax rate.

(c) An increase in the saving rate.

(d) An increase in the nominal money supply.

Week 4 - The Supply Side and the Labour market - Unemployment

Required reading:

(*)Macroeconomics, *N. Gregory Mankiw*

6th 5th or 4th edition:	Chapters 6, 9, 13, 19
3rd edition:	Chapters 5, 8, 12, 14

(*)Macroeconomics, *Dornbusch, R., Fischer, S, & Startz*

9th, 8th, 7th edition:	Chapters 5, 6, 7, 18, 20

(*)Macroeconomics - A European Text, *Burda, M. & Wyplosz*

3rd edition:	Chapters 4, 10, 12, 16
2nd edition:	Chapters 6, 9-10, 12, 16

***Note**: The later editions of Mankiw do not look at the Friedman model in as much detail as the 3rd and 4th editions. Please see also my notes on the web at the address http://users.ox.ac.uk/~sedm1375. The relevant notes are entitled "AD-AS model in an open economy with worker price misperception" and there is also an example of sticky wages entitled "AD-AS model in a closed economy with sticky wages".*

Questions:

1. Assuming nominal wages are sticky in the short run, but adjust in the long run to clear the labour market, use the IS-LM AD-AS framework to analyse the effect of the following events, showing clearly the short run outcome, as well as explaining the adjustment of the economy in the long run:

(a) A sudden loss of consumer confidence, leading to an increase in the saving rate (a negative demand side shock)

(b) A long lasting rise in the price of oil (a negative supply side shock)

(c) What would be the appropriate demand management policy response to these events?

2. (a) Compare and contrast the assumptions and predictions of the sticky-wage model, Friedman's worker price misperception model and the sticky-price model.

(b) What are the strengths and weaknesses of these models in explaining the upward-sloping short run AS curve?

(c) Briefly summarize how developments in economic theory in the past 30 years have given these ideas a more robust rationale.

3. Explain the relationship between the following concepts:

(a) Involuntary unemployment.

(b) The natural rate of unemployment.

(c) Structural unemployment.

(d) Frictional unemployment.

(e) Efficiency wages.

(f) Insider and outsider groups.

4. "Reducing inflation is costless provided the monetary policy authority conducts predictable and credible policy." "Optimal policy to control inflation must strike a balance between achieving a given inflation target in the long run and minimising the short run costs of achieving this."

Explain the assumptions made by those who support these two different views, and what it implies about their beliefs on the Phillips curve relationship. Which do you think is more realistic?

Week 5 - The Open Economy and the Mundell-Fleming Model

Required reading:

(*)Macroeconomics, *N. Gregory Mankiw*

6th or 5th edition:	Chapter 5, 12†
4th edition:	Chapter 8, 12†
3rd edition:	Chapter 7, 11†

***Warning**: The presentation of the Mundell-Fleming model is a lot clearer in the following two textbooks. I strongly advise you to stick to their presentation of the model, using the diagram with output on the horizontal axis and the real interest rate on the vertical axis, rather than Mankiw's in chapters marked † (still read this chapter in Mankiw, though, as there is other useful material in it).*

(*)Macroeconomics, *Dornbusch, R., Fischer, S, & Startz*

9th or 8th edition:	Chapters 12, 19
7th edition:	Chapters 12, 21

(*)Macroeconomics - A European Text, *Burda, M. & Wyplosz*

4th edition:	Chapters 2, 7, 10-11
2nd or 3rd edition:	Chapters 2, 7, 11, 13

Questions:

1. Show how the downward sloping aggregate demand (AD) curve can be derived for a small open economy with:

(a) Fixed exchange rates

(b) Floating exchange rates

Be clear about the differences in the adjustment mechanism to a change in the price level between these two cases.

2. Using the Mundell-Fleming IS-LM model of a small open economy with perfect capital mobility, analyse, for an economy with a fixed exchange rate regime, (I) the very short run responses (where the price level is fixed, so that the AS curve is horizontal) and (II) the long run response (where the price level can vary freely, and the AS curve is vertical) to the following events of (i) Output/income, (ii) the domestic real interest rate, (iii) the nominal exchange rate, (iv) the real exchange rate, (v) the government budget deficit, (vi) the trade balance with the rest of the world (Assume that the foreign price level is fixed throughout the analysis.):

(a) An increase in government spending.

(b) An increase in the proportional tax rate.

(c) An increase in the saving rate.

(d) An increase in the nominal money supply.

3. Repeat question 2. but for a floating exchange rate regime.

Week 6 - Policy Debates

Reading:

(*)Macroeconomics, *N. Gregory Mankiw*

4th, 5th and 6th edition:	Chapters 12-15, Epilogue
3rd edition:	Chapters 11-13, 16, Epilogue

(*)Macroeconomics, *Dornbusch, R., Fischer, S, & Startz*

9th or 8th edition:	Chapters 8, 13, 16, 18, 19
7th edition:	Chapters 8, 13, 16, 18, 19, 20, 21

Recommended reading:

Macroeconomics - A European Text, *Burda, M. & Wyplosz*

2nd, 3rd or 4th edition:	Chapters 13, 15, 16, 20, 21

Questions:

[*Hint: You should be trying to apply the rigorous models from previous weeks to help in answering these questions.*]

1. Should governments always balance their budgets? [*Hint: For discussion of Ricardian Equivalence in this context you could make use of and adapt the model we analysed in week 2 question 1.*]

2. What are the strengths and weaknesses of fixed and floating exchange rate regimes?

3. What are the advantages and disadvantages of the following methods of aggregate demand management for macroeconomic stabilization policy?

(a) Monetary growth rules/money supply targeting.
(b) Nominal GDP growth targeting.
(c) Interest rate targeting.
(d) Active fiscal policy.
(e) Inflation targeting.

4. Explain what is meant by the monetary policy transmission mechanism (see *Dornbusch, Fischer and Startz*). What role do the following institutions play in the transmission mechanism in contemporary open economies with floating exchange rates and developed financial markets:

(a) The Central Bank.

(b) Commercial banks.

(c) The government in its role as debtor to the private sector.

(d) The exchange rate and its impact upon net exports.