Summing up 4310

ECON4310 Lecture

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Agenda

- Solow, Ramsey and Diamond
- Real Business Cycle Models
- Saving and risk
- Asset pricing
- Investment in fixed capital
- Unemployment

Exam

- Questions from at least two areas
- No essay question
- From areas covered in lectures or seminars
- Dynamic programming Bellman style not expected (except search)

Dynamic analysis

- Choice between present and future
- Flows add to stocks that change next period's flows
- Ramsey, Diamond, RBC Powerful concepts

The conundrum of interest rates

- Income without work

Bøhm Bawerk (Austrian 1884) Reasons for interest

- Impatience
- Falling marginal utility plus growth
- Positive marginal productivity of capital

Assumptions

Similarities

- Motive for saving is future consumption
- Discounting
- Consumption smoothing

Differences

- Time horizon
- Attitude to descendants

Similar results

- Economies starting with a low capital intensity will grow faster than the natural rate until they reach a steady state
- During the approach to steady state, real wages will increase fast while the real return on capital will decline
- Productivity growth prevents the return on capital to go down to zero
- Rapid population growth may reduce the standard of living
- Government consumption crowds out private consumption

Results differ

- Dynamic inefficiency
- Ricardian equivalence, timing of taxes
- Government debt
- Pension systems
- Whether government consumption crowds out investment

Some further issues

- Closed versus open economies
- Uncertainty, borrowing constraints
- Saving in spite of high pensions, low interest rates, high growth
- What would Adam Smith, Max Weber and Karl Marx have said?

Rational Bubbles

Worthless objects can be valuable Conditions:

- Endless chain of people
- (Expected) price must grow faster than interest rate
- Price must not grow faster than economy
- Interest rate must be below growth rate
- Bubbles can reduce dynamic inefficiency

Good and bad times

- Deviations from trend
- Wave theories: Sum of sinus curves
- Slutsky, Yule: False cycles: Detrended random noise
- Frisch (1933) Impulse and propagation
- Monetary theories: Wicksell(1898), Friedman (1963)

Keynesian Revolution 1930-50

- Deviations of output from full capacity level.
- Market failures
- Wage rigidity
- Fundamental uncertainty,not risk
- Prices may be unable to clear markets even if flexible
- Disagreement between savers and investor
- Impulses come from anywhere

John Maynard Keynes 1934

RBC - Basic ideas

Kydland and Prescott 1982

- Cycle = deviation from trend
- Ramsey (neoclassical) with endogenous labor supply
- Impulse from technology shocks
- Fully flexible prices clear markets always
- Money does not matter
- All expectations are consistent with RBC model
- No involuntary unemployment

Empirical challenges

- How to match variance of employment?
- Intertemporal substitution of leisure
- How to match duration of cycle?
- Times to build - Q-Theory
- Reverse causation
- Neglect

Technicalities

- Uncertainty; Maximizing expected utility
- Save more?
- Numerical methods necessary
- Except in two cases (linear-quadratic and log-Cobb-Douglas)
- Bluff and verify
- Interpreting simulations (graphs)
- Linearizing around deterministic steady state

Lessons

- Deviations from trend may be desirable
- impulses may come from inside production function

Saving

- Income and expenditure risk (uninsurable)
- Precautionary saving
- Third derivative positive
- Better to have an upside risk to look forward to?

Consumption CAPM

- One consumption Euler equation for each asset
- Marginal utility of consumption today should equal expected return in utility terms of making a marginal investment in the asset and consuming the proceeds next period
- In utility terms all assets should yield the same expected returns
- Quadratic utility means first and second moments of return distribution sufficient information
- If there is a safe asset with exogenous returns, this and Euler equations determine all asset prices.

Investment

- Time to build
- House prices up, new construction up
- Technical lags
- Lag because of increasing cost
- Two-sector models versus one-sector
- Tobin: Deduce price of capital from share prices
- Increasing adjustment costs inside firm

Unemployment

- Wages set by unions or politicians
- Efficiency wages item[▷] Wages set for prolonged periods
- Search takes time
- Insufficient demand for labor