Economic theory

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Course description:

Economic theory is a three-module undergraduate course, which combines a brief introduction to the standard methodology of economics with a wide overview of the essentials of mainstream micro- and macroeconomics. It's intended to give students a good *understanding* of the features, advantages and limitations of the unique economic method compared to the methods used in other social sciences, and help them command a large toolkit of simple models that can be used to explain and predict economic phenomena of everyday life.

In the methodological part, we will present the concepts of rationality, equilibrium, and efficiency which are central to any economic analysis and learn to distinguish scientific knowledge from non-scientific, as well as discuss the nature and purpose of economic modeling. In the microeconomic part of the course, we will study the economic models that describe the behavior and interaction of individual consumers and firms, formation of prices in various market structures, and the real-life problems of economic efficiency caused by market power, externalities, public goods and imperfect information. In the macroeconomic part, we will consider the economic system as a whole, and study the problems of aggregate product and national income determination, unemployment, inflation, economic growth and the main instruments and consequences of fiscal and monetary policy.

Teaching objectives & course prerequisites

"Economic theory" is conceived as a course *of economics*, as opposed to a course *about economics*. Its primary goal is to familiarize the students with the essential toolkit of economic analysis instruments, and teach them to apply it for practical uses. In most cases this implies being able to select, manipulate and interpret the most appropriate economic model to answer a specific question.

By the end of the course, a successful student is expected to be able to read and understand <non-technically demanding> economic literature, interpret real and hypothetical scenarios in the context of appropriate economic models and make justified forecasts about the behavior of individual economic agents and the outcomes of their interaction using economic intuition, algebraic and graphical analysis. The course is taught in English, but since the students are also studying for a Russian degree, Russian terminology is used when necessary. We don't expect students to have a strong mathematical background (any mathematical methods required will be explained when necessary), but the students will regularly have to use and interpret simple algebra and graphs throughout the course.

Grading

The course spans over three modules (Module II in the Fall semester and Modules III and IV in the Spring semester). For each module, students' grade will be determined by their average score for the in-class quizzes (30%) and the end-of-module test (70%). Students' grade for the Fall semester is equal to their grade for Module II. Students' final grade for the course is equal to the weighted average of their grades for all three modules.

Main reading

1. Varian, H. Intermediate Microeconomics: A Modern Approach. 9th edition. W.W. Norton & Co., New York, 2014. The chapters from the book covered in the course are indicated in the Course Outline as V, Ch #.

2. Blanchard, O., Johnson, D. Macroeconomics. 6th edition. Pearson Education, 2013. The chapters from the book covered in the course are indicated in the Course Outline as B, Ch #.

Additional reading

1. Frank, R., Bernanke, B. Principles of Economics. 5th edition. McGraw-Hill, New York, 2013.

2. Вэриан Х.Р., Микроэкономика, продвинутый уровень. Современный подход. Москва, Юнити, пер. с англ.,1997.

3. Бланшар, О. Макроэкономика. Москва, издательство ВШЭ, 2010.

4. Bergstrom, T., Varian, H. Workouts in Intermediate Microeconomics: for Intermediate Microeconomics: A Modern Approach, 8th edition. W.W. Norton & Co., New York, 2010.

5. Lazear, E. Economic Imperialism. 1999. http://www.nber.org/papers/w7300

6. Heyne, P. Economics is a Way of Thinking. 2008. http://oll.libertyfund.org/pages/heyne-economics-asa-way-of-thinking

7. Hazlitt H. Economics in one lesson: The shortest and surest way to understand basic economics. – Crown Business, 2010.

8. Dixit, A. Microeconomics: A very short introduction. New York, OUP, 2014.

Course outline

Part I: Introducing economics

1. **Introduction to economics**. Definition of economics. Economic goods. Scarcity and choice. Opportunity costs and sunk costs. Economic models. Microeconomics and macroeconomics. Positive and normative economics. (Frank & Bernanke, Ch. 1)

2. **Comparative advantage and exchange**. Comparative advantage. Production possibility frontier. Factors shifting the production possibility frontier. Specialization and exchange of goods. Comparative advantage and international trade. Economic systems: market economy, command economy, mixed economy. (Frank & Bernanke, Ch. 2)

3. **Introducing the competitive market model**. Demand curve and its determinants. Supply curve and its determinants. Equilibrium and efficiency. Producer surplus and consumer surplus. Deficit and surplus. Price controls. Frank & Bernanke, Ch. 3, V, Ch 1.

Part II. Consumer theory

4. **Budget set**. Budget constraint. Reaction to changes in prices and income. Taxes, subsidies, and in-kind transfers. V, Ch. 2.

5. **Preferences and utility.** Assumptions about preferences. Indifference curves. Examples or preferences: perfect substitutes, perfect complements, neutrals and bads. Well-behaved preferences. Marginal rate of substitution and its interpretations. Utility function: concept and examples (perfect substitutes/complements, quasilinear, Cobb-Douglas). Marginal utility and MRS. V, Ch. 3, 4.

6. **Choice**. Solution to the utility maximization problem: perfect substitutes, perfect complements, well-behaved preferences. Adjustment to price and income changes: income effect and substitution effect. Normal and inferior goods. Cross-price effects: substitutes and complements. In-kind and money subsidies. V, Ch. 5, 6, 8, FB, Ch.5

7. **Comparative statics of demand.** Income offer curve, Engel curves. The generalized Engel equation. Homothetic preferences and quasilinear preferences. Ordinary and Giffen goods. Price offer curve. V, Ch. 6

8. **Buying and selling.** Gross demand and net demand. The budget constraint with income in kind. Reaction to endowment changes and price changes. Offer curves and demand curves. Applications: individual labor supply, intertemporal choice. V, Ch 9, 10.

9. **Market demand**. From individual to market demand. The extensive and the intensive margin. Own-price elasticity of demand. Elasticity of a linear demand curve. Elasticity and revenue. Constant elasticity demands. Income elasticity of demand. From consumer surplus to consumers' surplus: quasilinear preferences. V, Ch. 14, 15.

10. **Estimating demand**. The idea of econometrics. Estimating demand using experimental data. Estimating demand using observational data. Functional form. Statistical model. Estimation. The identification problem. V, Ch. 17.

Part III. Producer theory.

11. **Technology.** Inputs and outputs. Production functions. Examples: fixed proportions, perfect substitutes, Cobb-Douglas. Marginal product. The marginal technical rate of substitution. Diminishing marginal product and diminishing MRTS. The long run and the short run. Returns to scale. V, Ch. 19.

12. **Profit maximization**. Accounting profit and economic profit. Profits and stock market value. Short-run profit maximization. Comparative statics. Profit maximization in the long run. Inverse factor demand curves. Profit maximization and returns to scale. V, Ch. 20.

13. **Cost minimization**. Isoquants and isocosts. Long-run cost minimization for specific technologies. Long-run expansion path. Short-run cost minimization. Short-run expansion path. Fixed and quasi-fixed costs. Returns to scale and the cost function. V, Ch. 21.

14. **Cost curves**. Average, average variable and marginal costs. Interrelations between short-run marginal costs, average variable costs and labor productivity. Interrelations between short-run and long run cost curves. V, Ch. 22.

15. **Firm and industry supply**. The supply decision of a competitive firm in the short run and in the long run. Profits and producer's surplus. Short-run industry supply. Short-run competitive equilibrium. V, Ch. 23, 24.

Part IV. Market structures.

16. **Perfect competition.** Short-run and long-run competitive equilibrium. The long-run industry supply curve. Forms and welfare consequences of government regulation. Elasticity and tax incidence. Application: the labor market. Human capital and signalling theories. V, Ch. 24.

17. **Monopoly.** Profit maximization under monopoly. Comparison with perfect competition: output and price. Social cost of a monopoly. Natural monopolies. Regulation of natural monopolies. 1st, 2nd and 3rd degree price discrimination. Two-part tariffs. V, Ch. 25, 26.

18. **Monopolistic competition and oligopoly**. Features of monopolistic competition. Comparison with perfect competition: output and price. Advertising. Product differentiation: a location model. Features of oligopoly. Elements of game theory: players, actions, strategies. Nash equilibrium. Prisoner's dilemma. The Cournot and Bertrand models. Price wars and collusion. Cartels. Barriers to entry. FB, Ch. 9; V, Ch. 26, 28, 29.

Part V. Market failures.

19. **Elements of welfare economics**. Aggregating preferences: social welfare functions. Fair allocations. Envy and equity. Ideas of the 1st and 2nd Fundamental Theorems of welfare economics. The idea of Arrow's Impossibility Theorem. V, Ch 34.

20. **Externalities and public goods**. Externalities. Property rights and transaction costs: the Coase Theorem. Tragedy of the commons. Public goods. Private provision of the public good: the free-rider problem. Lindahl prices. V, Ch. 35, 37.

21. **Asymmetric information.** The market for lemons. Adverse selection. Moral hazard. Signalling. V, Ch. 38.

22. **Elements of behavioral economics**. Framing effects in consumer choice. Anchoring effects. Bracketing. Choice overload. Constructed preferences. Loss aversion. Time discounting. Self-control problems. Strategic interaction and social norms. Assessment of behavioral economics. V, Ch. 31.

Part VI. Macroeconomics: the short run

23. **Introducing macroeconomics.** Subject of macroeconomics. Aggregation: macroeconomic agents and macroeconomic markets. The key macroeconomic questions. The circular flow model. Measuring aggregate output – introducing GDP. A first look at inflation and unemployment: Okun's law and the Phillips curve. BJ, ch. 1, 2.

24. **Short-run: the goods market.** Components of aggregate demand. Short-run model of input determination. Equilibrium: planned expenditures and actual expenditures, investment and saving. The "Keynesian cross model". The multiplier effect. «Paradox of Thrift». BJ, ch. 3.

25. **Short run: the money market.** Kinds of money: monetary supply aggregates. Demand for money. Financial intermediaries: the banking system. Central bank and its functions. Banks as creators of money: deposit and loan multipliers. Monetary base, money multiplier and money supply. Money market equilibrium: interest rates and bond prices. BJ, Ch. 4.

26. **The IS-LM model.** Goods market and the IS relation. Money market and the LM relation. General macroeconomic equilibrium: IS-LM. Dynamics of adjustment. BJ, Ch. 5.

Part VII. Macroeconomics: the medium run

27. **The labour market.** Specific features of Russian labour market. Types and causes of unemployment. Modelling the aggregate labor market: unemployment and wage determination. The natural rate of unemployment. BJ, Ch. 6.

28. **Aggregate demand and aggregate supply.** Aggregate supply: the labor market equilibrium. Aggregate demand: equilibria in the goods and money markets. Short- and medium-run equilibria. Effects of discretionary fiscal and monetary policies. BJ, Ch. 7.

29. **Unemployment and inflation: NAIRU and the Phillips curve.** Deriving the Phillips curve from the AS relation. Trade-offs between inflation and unemployment: the short-run Phillips curve. Mutations of the Phillips curve. Natural rate hypothesis and the long-run Phillips curve. Phillips curve under high levels of inflation. BJ, Ch. 8.

30. **The story behind the 2008 crisis**. The origins of crisis: the US housing market and financial system. From financial crisis to macroeconomic crisis: confidence and interest rate. Fiscal and monetary policy during crisis. Limitations: liquidity trap and government debt. Recovery. BJ, Ch. 9.

Part VIII. Macroeconomics: the long run

31. **The facts of economic growth.** Measuring the standard of living. Aggregate production function. Sources of economic growth: labour productivity, capital accumulation and technological progress. Is there any convergence? BJ, Ch. 10.

32. **Saving, capital accumulation and output**. Capital and output dynamics. The steady state. Saving rate and consumption. The Golden Rule. Adding human capital to the picture. Endogenous growth. BJ, Ch. 11.

33. **Technological progress and growth**. Steady state and the rate of technological progress. Determinants of technological progress. Stylized facts of growth: a revision. BJ, Ch. 12.

34. **Short-, medium- and long-run technological progress**. Output, employment and productivity – the short run picture. Medium run: does technical progress imply higher unemployment? Long run: the distributional effects of technical progress. BJ, Ch. 13.

Part IX. The open economy.

35. **Introducing the open economy.** Choice between the domestic and foreign goods/assets – the nominal and real exchange rates. Balance of payments: current and capital account. BJ, Ch. 18.

36. **Goods market equilibrium in the open economy.** The IS relation in the open economy. Determinants of imports and exports. Equilibrium output and trade balance. Reaction to changes in domestic/foreign demand. BJ, Ch. 19.

37. **Output, interest rate and exchange rate**. Investing at home versus investing abroad. Fiscal and monetary policies in an open economy. The fixed exchange rate VS a flexible exchange rate regime. BJ, Ch. 20.

38. **Medium-run**: **exchange rate regimes**. The medium-run equivalence of fixed- and flexible exchange rate regimes. Exchange rate crises under fixed exchange rates. Consequences of exchange rate volatility under flexible regime. BJ, Ch. 21