Part I. Foundations of the Analysis

1. Introduction

- I. The approach of the book
 - 1. Order and disorder
 - 2. Neoclassical response to the real duality
 - 3. Keynesian and Post Keynesians response to the real duality
 - 4. Different purpose of this book
- II. Outline of the book
 - 1. Part I: Foundations of the Analysis (Chapters 1-6)
 - 2. Part II: Real Competition (Chapters 7-11)
 - 3. Part III: Turbulent Macrodynamics (Chapters 12-17)

2. Turbulent trends and hidden structures

- I. Turbulent Growth
- II. Productivity, Real Wages, and Real Unit Labor Costs
- III. The Rate of Unemployment
- IV. Prices, Inflation, and the Golden Wave
- V. The General Rate of Profit
- VI. Turbulent Arbitrage
- VII. Relative Prices
- VIII. Convergence and Divergence on a World Scale
- IX. Summary and Conclusions

3. Microfoundations and macro patterns

- I. Introduction
- II. Micro-processes and macro-patterns
 - 1. Representing individual human behavior
 - 2. Representing aggregate behavior
 - 3. Aggregate relations, microfoundations, and the question of rigor
- III. Shaping structures, economic gradients and aggregate emergent properties
 - 1. Analytical framework for robust microeconomics
 - 2. Downward sloping demand curves
 - 3. Income elasticities and Engel's Law
 - 4. Aggregate Consumption and Savings Functions
 - 5. Simulations: insensitivity of aggregate relations to microfoundations
- IV. Methodology for economic analysis
- V. Turbulent gravitation
 - 1. Equilibration as a turbulent process vs. equilibrium as an achieved state
 - 2. Statics, dynamics, and growth-cycles
 - 3. Differences in the temporal dimensions of key economic variables
- VI. Summary and central implications

4. Production and costs

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- II. Production in economic theories

- 1. Circulating versus fixed investment
- 2. Classical and conventional national accounts
- 3. Production and non-production labor
- III. Production relations versus production functions
 - 1 Structural and temporal dimensions of production
 - 2. Social and historical determinants of the length and intensity of the working day
- 3. Empirical evidence on the relations between work conditions and the productivity of labor
- IV. Production at the level of a firm
 - 1. Work conditions and "reswitching" along the microeconomic production possibilities frontier
 - 2. Output and production coefficient under socially determined work conditions
- V. Cost, prices and profits
 - 1. Assumed shapes of cost curves in neoclassical, Neoricardian, and Post-Keynesian theories
 - 2. Cost curves under general conditions of the labor process
 - 3. Implications of general cost curves for various economic arguments
- VI. Empirical evidence on cost curves

5. Exchange, money and price

- I. Introduction
- II. The origins of modern money
 - 1. Money commodities
 - 2. Coins
 - 3. Money Tokens
 - 4. Inconvertible tokens, forced currency and fiat money
 - 5. Banks, Credit and Money
 - 6. Essential Functions of Money
 - i. Money as medium of pricing
 - ii. Money as medium of circulation
 - iii. Money as medium of safety
- III. Classical theories of money and the national price level
 - 1. Classical theories of money
 - 2. The basic structure of Marx's theory of money
 - 3. The key elements in Marx's theory money
 - 4. Empirical patterns with respect to Marx's theory of money
- IV. Towards a classical theory of the price level under modern money
 - 1. The determination of relative prices with convertible tokens
 - 2. The determination of relative prices with inconvertible tokens
 - 3. Further issues

6. Capital and profit

- I. Introduction
- II. The two sources of aggregate profits
- III. Production, labor time and profit

- 1. No aggregate profit without surplus labor
- 2. Positive profits require surplus labor
- 3. General rule for measuring real economic profits
- 4. The puzzle of the effects of relative prices on aggregate profit
- IV. Aggregate profits and transfers of value: a general solution to the universal "Transformation Problem"
 - 1. Transfers of value via changes in relative prices
 - 2. The influence of output proportions on transfers of value and aggregate profit
- V. Financial profits and profit-on-transfer
- VI. Theories of aggregate profit in various schools
- VII. Critical review of the literature on the effects of relative prices on aggregate profit
- VIII. Measurement of Profit and Capital

Part II. Real Competition

7. The theory of real competition

- I. Introduction
- II. Real competition within an industry
- III. Real competition between industries
- IV. Real competition and the notion of regulating capitals
- V. General phenomena of real competition
- VI. Evidence on real competition
 - 1 The behavior of the firm
 - i. Oxford Economists Research Group (OERG) and Hall and Hitch
 - ii. Andrews and Brunner
 - iii. Harrod's Revision of Imperfect Competition
 - iv. Price Cutting and Entry in the Business Literature
 - 2. Empirical evidence on operating costs of plants: Salter
 - 3. Choice of technique under price-taking vs. price-cutting
 - 4. Empirical evidence on firm-level costs, capital intensity and profits
 - 5. Empirical evidence on equalization of regulating rates of profit
 - i. Defining measures of average and regulating rates of profit
 - ii. Empirical evidence for OECD countries
 - iii. Econometric Tests of Profit Rate Equalization
- VII. Debate on competition, choice of technique and profit rate
 - i. The feasible range of competitive prices
 - ii. Economy-wide implications of the choice of technique
 - iii. Implications of the choice of technique for the time path of the general profit rate

8. Debates on perfect and imperfect competition

- I. Theoretical views
 - 1. Classical views
 - i. Smith
 - ii. Ricardo
 - 2. Marx
 - i. Regulating capital
 - ii. Choice of technique
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- 3. The theory of perfect competition
 - i. Rise of the visions of perfect competition and perfect capitalism
 - ii. Walras and general equilibrium
 - iii. Walras and Marshall
 - iv. Walras and modern neoclassical economics
 - v. Crucial role of price-taking behavior
 - vi. Critiques of Perfect Competition
 - vii. Externalities and the Coase Theorem
- 4. Perfect competition requires irrational expectations
 - i. Perfect knowledge contradicts perfect competition
 - ii. The failure of the Quantity Theory of Competition
 - iii. The need for competitive firms to consider demand
 - iv. Keynes and Kalecki on macro implications
 - v. Patinkin on macro implications
- 5. Schumpeter's views
- 6. Austrian views
 - i. Hayek
 - ii. Von Mises
 - iii. Kirzner
 - iv. Mueller
 - v. General assessment of Austrian economics
- 7. Marxian monopoly capitalism theory
- 8. Rise of theories of imperfect competition
- i. From Perfect to Imperfect Competition
- ii. Sraffa's early critique of the theory of the firm
- iii. Chamberlin and Robinson
- iv. The neoclassical counterattack
- 9. Kalecki and Post Keynesian (PK) Views
 - i. Kalecki's Price Theory
 - ii. Post Keynesian Price Theory
- 10. Modern classical views
 - i. Basic positions on the relation of market prices to prices of production
 - ii. Price taking vs price setting
 - iii. Firm size and the degree of competition
- II. Empirical evidence on competition and monopoly
 - 1. Introduction
 - 2. Traditional indicators of oligopoly and monopoly power
 - 3. Price rigidity and monopoly power
 - 4. Profitability and monopoly Power
 - 5. Empirical evidence on profit rates and monopoly power
 - 6. Empirical Evidence on profit margins and monopoly power
 - 7. Collusion and Profitability

9. Competition and interindustrial relative prices

- I. Introduction
- II. Simple Commodity Production
- III. The Fundamental Equation of Price: Adam Smith's Derivation
 - 1. Fundamental Equation applies to all prices
 - 2. The Fundamental Equation for Relative Price
 - 3. Damping effects of vertical integration
- IV. Measuring the Distance between Relative Prices and their Regulators
 - 1. Numerical example of effects of changes in units

- 2. Deficiencies of regression analysis for cross-sectional analysis
- 3. Defining the appropriate measure of deviations
- V. Evidence on Market Prices in Relation to Direct Prices
 - 1. Cross-sectional evidence
 - 2. Time-series evidence
 - 3. The Schwartz-Puty test of the Ricardian time-series hypothesis
- VI. Prices of Production, Direct Prices and Market Prices
 - 1. Theoretical issues
 - 2. Numerical example

VII. Evidence on Prices of Production as Functions of the Rate of Profit in Relation to Direct Prices and Market Prices

- 1. Circulating capital model
- 2. Implications of linear output-capital Ratios
- 3. Fixed capital model
- VIII. Empirical Distance Measures

IX. Empirical Evidence on Prices of Production at the Observed Rate of Profit in Relation to Direct and Market Prices

- 1. Cross sectional evidence
- 2. Resolving the puzzle of the distance of market prices from production and direct Prices
- 3. Time series evidence
- X. Wage-profit curves 1947-1998
- XI. Origins and Developments of the Classical Theory of Relative Price
 - 1. Classical origins
 - 2. Modern theoretical developments
 - i. Sraffa
 - ii. Sraffian branches
 - iii. Debate on the theory of relative prices
 - iv. The neoclassical theory of distribution and employment
 - 3. Modern empirical evidence
- XII. Summary and Implications of the Classical Theory of Relative Prices

10. Competition, finance, and interest rates

- I. Introduction
 - 1. Interest rates
 - 2. Net rate of profit
 - 3. Term structure
 - 4. Orthodox and heterodox theories of the interest rate
 - 5. Bond Prices
 - 6. Equity Prices
 - 7. Financial arbitrage
- II. Competition and interest rates
 - 1. Competition and the banking sector
 - 2. Profit rate of enterprise (r i)
 - 3. Relation of the interest rate to the price level and the profit rate
 - 4. Implications of the classical theory of the interest rate
 - 5. A structural theory of the yield curve
- III. Competition and the stock market
- IV. Competition and the bond market
- V. Summary of the classical theory of finance
- VI. Empirical evidence
 - 1. Equalization of bank regulating rate of profit
 - 2. Equalization of bank loan rate with corporate bond yield

- 3. Equalization of interest rates of similar financial assets
- 4. Interest rates do not reflect fixed markups on the base rate
- 5. Profit rate and the interest rate
- 6. Interest rates and prices
- VII. A Critical Survey of Interest Rate Theories
 - 1. Interest rate theories have two dimensions
 - 2. Smith, Ricardo and Mill
 - 3. Marx
 - 4. Neoclassical and Keynesian theories of the level of interest rates
 - i. Arbitrage equalizes rates of return
 - ii. Two further issues: Interest rate levels and term structure
 - iii. Neoclassical theory of the level of interest rates
 - iv. Keynesian and Hicksian theories of the level of interest rates
 - v. Post Keynesian theories of the level of the interest rate
 - 5. Neoclassical and Keynesian theories of the term structure of interest rates
 - i. Keynes and Hicks on the term structure
 - ii. Post Keynesian theories of the term structure
 - 6. Panico's Synthesis of the Classical and Keynesian Approaches
- VIII. Stock Market theories
 - i. Arbitrage and modern finance theory
 - ii. Arbitrage and equity valuation

11. International competition and the theory of exchange rates

- I. Introduction
 - 1. Theory of trade is a critical part of debates on costs and benefits of globalization
 - 2. Neoliberalism theory and practice
 - 3. Proponents of neoliberalism
 - 4. Critics of neoliberalism
 - 5. Debate appears to be about perfect versus imperfect competition
 - 6. Real competition does not imply comparative costs: Resituating the debate
- II. The theoretical foundations of conventional trade policy
 - 1. Conventional free trade theory
 - 2. Two crucial premises: comparative costs and full employment
 - 3. Comparative costs
 - 4. Full employment
 - 5. Summary of standard trade theory
 - 6. Problems with standard trade theory
- III. Reactions to the Problems of Standard Trade Theory
 - 1. Reaction 1: Assume slow adjustment
 - 2. Reaction 2: introduce imperfections into the theory
- IV. Ricardo's principle of comparative cost
 - 1. Real competition
 - 2. Ricardo also begins from profit-seeking firms
 - 3. Ricardo on macroeconomic consequences of unbalanced trade
 - 4. Fixed versus flexible exchange rates
 - 5. Transformation of rule of absolute costs to rule of comparative costs
 - 6. Ricardo's shift from trade undertaken by capitals to trade undertaken by nations
 - 7. Numerical example of the Ricardian adjustment
- V. Real competition implies absolute cost advantage
 - 1. Introduction
 - 2. The first difficulty: feedback from prices to cost
 - 3. The second difficulty: trade imbalances and payments balance.

- 4. The classical theory of free trade
- 5. Regulating capitals in an international context
 - i. Prices of production prior to trade
 - ii. Comparative costs
 - iii. Absolute costs
 - iv. Benchmark case of equal technical compositions but different efficiencies
 - v. Complete independence of comparative cost from relative prices
 - vi. General case
 - vii. The Smithian decomposition
 - viii. Integrated comparative costs
 - ix. Three possible outcomes in classical 2 x 2 case
 - x. The intermediate case is in the general one
 - xi. Tradable and nontradable goods
 - xii. Purchasing Power Parity and the Law of One Price
 - xiii. PPP and the compositional component of the real exchange rate
 - xiv. Actual costs as proxies for regulating costs
- 6. Trade balances, capital flows and the balance of payments
- 7. Summary of the classical approach to free trade
- VI. Empirical evidence
 - 1. The persistence of empirically weak theoretical models as a guide to policy
 - 2. Empirical evidence on the relation between real exchange rates and real costs
 - 3. Implications of the classical approach to long run exchange rates

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12. The rise and fall of modern macroeconomics

- I. Introduction
 - 1. Macroeconomics as the aggregate consequences of individual actions
 - 2. Central tendencies vs. idealized worlds
 - 3. Macroeconomics, emergent properties and turbulent laws
 - 4. Neoclassical macroeconomics and representative agents
 - 5. Ten critical issues in macroeconomic analysis
 - i. Microeconomic features need not carry over
 - ii. Macro has always grounded itself in micro behavior
 - iii. Many microfoundations consistent with some given macro pattern
 - iv. Notion of turbulent equalization requires corresponding tools
 - v. Temporal dimensions differ: Fast and slow processes
 - vi. Growth is the normal state
 - vii. Expectations, actuals and fundamentals are reflexively related
 - viii. Real competition implies downward sloping demand curves
 - ix. Real competition does not imply continuous market clearing
 - x. Say's Law and the split in the classical tradition on external demand and neutrality of money
 - 6. Accounting for aggregate demand, supply and capacity
 - i. Ex ante three balances
 - ii. Ex post balances
 - iii. Equilibrium balances
 - iv. Time dimensions
 - v. Basic savings-investment relation
 - vi. Output and capacity
 - vii. Normal capacity utilization does not imply Say's Law
- II. Pre-Keynesian macroeconomics
 - 1. The displacement of classical economics by neoclassical economics
 - 2. Walrasian roots of neoclassical economics

- 3. Pre-Keynesian neoclassical orthodoxy
 - i. Core orthodox propositions attacked by Keynes
 - ii. The neoclassical argument on full employment supply
 - iii. The neoclassical argument on aggregate demand and the interest rate
- III. Keynes' breakthrough
 - 1. Keynes' practical experience after World War I
 - 2. Keynes' new formulation
 - i. Production takes time so ruled by expected profit
 - ii. Aggregate demand has autonomous components
 - iii. Savings adjusts to investment
 - iv. Derivation of the investment-savings relation and the multiplier
 - v. Effects of profitability and interest rates on level of output
 - 3. The Hicksian IS/LM representation of Keynesian economics
 - 4. The rise and fall of Keynesian theory and policy
 - 5. The rise and fall of the IS/LM/Phillips-Curve model
- IV. The return of Neo-Walrasian economics
 - 1. Monetarism
 - i. The old QTM
 - ii. The new QTM
 - iii. Friedman on Great Depression
 - 2. The natural rate of unemployment and inflation in the context of adaptive expectations
 - i. Problem facing macro theories in the 1970s
 - ii. Frictional employment in Keynesian and neoclassical theories
 - iii. Natural rates of employment and unemployment
 - iv. Short run versus long run effects of changes in aggregate demand
 - v. The link to inflation
 - vi. Non-accelerating inflation rate of unemployment
 - 3. Rational Expectations and the New Classical Theory
 - i. Role of expectations in Friedman and Phelps
 - ii. The New Classicals build upon this framework
 - iii. Hyperrational expectations
 - iv. Lucas
 - 4. Real Business Cycle Theory
 - i. Analytical structure of the Real Business Cycle Theory model
 - ii. Policy Implications of the Real Business Cycle Theory
 - iii. Calibration for mimicking some real patterns versus econometric testing
 - iv. Further considerations on empirical relevance of RBCT
 - 5. New Keynesian Economics
 - 6. Conventional Behavioral Economics
- V. Kalecki
- VI. Post Keynesian Economics
 - 1. Introduction
 - 2. Davidson
 - 3. The Kaleckian-Structuralist wing of post-Keynesian theory
 - i. Godley
 - ii. Taylor
 - 4. General themes in post-Keynesian theory
 - i. Wage-led and profit-led growth: Alternate short run outcomes or successive long run phases?
 - ii. Long run growth limits
 - iii. Unemployment can be reduced through appropriate policy

13. Classical Macro Dynamics

- I. Introduction
- II. A reconsideration of the theory of effective demand
 - 1. The microfoundations of effective demand
 - 2. The temporal implications of the multiplier sequence
 - 3. Credit as the fuel and debt as the consequence of the multiplier
 - 4. The significance of a constant savings rate in Keynesian theory
 - 5. The relation between actual and normal capacity utilization
 - 6. The relation between expected and actual outcomes
 - 7. Adjustment processes in a dynamic context
 - 8. Exogenous demand in the Harrodian system and the so-called Sraffian Supermultiplier
 - 9. Deterministic versus stochastic trends
 - 10. Implications of the endogeneity of the money supply for interest rate theory
 - 11. Aggregate demand and the price level
 - 12. Underutilized resources as a normal phenomenon
- III. Modern classical economics: the centrality of profit
 - 1. Profit regulates both supply and demand
 - 2. Endogeneity of the business savings rate
 - 3. Profit, investment finance, and growth
 - i. Pure internal finance of investment by each firm
 - ii. Aggregate internal finance of investment by business as a whole
 - iii. Stability of aggregate internal finance
 - iv. Interest rate is not the key adjustment variable
 - v. Net rate of profit rises with the general rate of profit
 - vi. Modified interest rate adjustment process
 - vii. Household savings
 - viii. Interest rate sensitivity of household savings rate does not change the dynamic
 - ix. Private bank credit
 - x. Bank credit provides a foundation for cycles
 - xi. Government deficits and foreign demand
 - 4. Summary of the classical dynamic
 - i. Classical Equilibrium
 - ii. Properties of classical equilibrium
 - iii. Level of output
 - 5. Summary of the classical theory of growth

14. The theory of wages and unemployment

- I. Introduction
- II. Wages and unemployment in economic theories
 - 1. Neoclassical and post-Harrodian wage theory
 - 2. Kaleckian and Post Keynesian wage theories
 - 3. Goodwin and Post-Goodwin approaches
 - i. Post-Goodwin PK models
 - ii. Post-Goodwin Classical models
 - iii. Object of this chapter
- III. Dynamical interactions between the wage share, unemployment rate and the Harrodian "natural rate" of growth.
 - 1. Theory of the real wage: From stochastic micro to macro
 - 2. Responsiveness of labor strength to unemployment
 - 3. The Classical Curve
 - 4. Determinants of the unemployment rate
 - 5. Effects of productivity and labor force growth

- IV. Normal versus "natural" rates of unemployment
- V. The relation of the classical wage curve to the Phillips Curve
 - 1. The general Phillips curve
 - 2. Three answers to Phillips' original question
- VI. Empirical evidence on growth, unemployment and wages
- VII. Summary and implications of classical macrodynamics

15. Modern money and inflation

- I. Money, markets and the State
- II. Chartalist and Neo-Chartalist visions of money
 - 1. Money, banking and Babylonia
 - 2. Innes
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 - 4. Modern Chartalism
- III. Modern governmental finance
- IV. Growth, profitability and the price level
 - 1. Classical competition theory only establishes relative prices
 - 2. Pure fiat money in classical, Monetarist, Keynesian and post-Keynesian approaches
 - 3. Determinate versus path-dependent price levels
 - 4. Maximum rate of growth
 - 5. Labor is not the constraint
 - 6. Growth-utilization rate
 - 7. Determinants of the growth rate of real capital
- V. Demand-pull
 - 1. Excess demand and injections of purchasing power
 - 2. New purchasing power and the change in nominal output
- VI. Supply-response
- VII. The theory of inflation under fiat money
- VIII. Empirical Evidence
 - 1. United States
 - i. Growth in nominal GDP as a function of relative new purchasing power
 - ii. Real output growth, profitability, purchasing power and growth-utilization
 - iii. Inflation in the United States
 - 2. Inflation in ten countries (Handfas)
 - 3. Inflation on a World Scale
 - 4. Argentina
- IX. Summary and comparisons to the Non-Accelerating Inflation Rate

16. Growth, cycles, and crises

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 - 1. Depressions recur
 - 2. Depressions are denied
 - 3. Outline of the chapter
- II. Profitability in the postwar period
 - 1. Normal and actual profit rates
 - 2. Productivity and real wages
 - 3. Impact on profitability of the suppression of real wage growth
 - 4. Rate of return on average capital versus new investment
 - 5. The extraordinary postwar path of the interest rate
 - 6. The rate of profit-of-enterprise and the great boom after the 1980s
- III. The Global Effects of the Current Crisis
 - 1. United States

- 2. Other developed countries
- 3. Global scale
- III. Policy lessons and possibilities: Austerity Versus Stimulus
- IV. On the Role of Economic Theory

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 - 1. Perfection and imperfection
 - 2. Internal critiques
- II. Implications and Applications of Classical Competition
 - 1. Lawful patterns despite heterogeneous behaviors
 - 2. Equalization tendencies as a basis for stable distributions of wage and profit rates
 - 3. From wage and profit rate distributions to the overall income distribution
 - 4. Rising inequality and the class distribution of income
- III. Wages, taxes and the net social wage
- IV. Piketty
- V. Development and underdevelopment