



Theory Outline

I. Review of Production Theory

- A. Diminishing Marginal Utility
- B. Cost Curves and the Production Function
- C. Profit Maximization and the Cost Curve
- D. Values of Marginal Product
- E. Budget Constraints with Multiple Inputs
- F. Summary of this Review

II. Multi-dimensional Hyperbolae and Economic Science

- A. The Hyperbola Monograph
 - 1. Hyperbolic Descriptions of Technical Indifference
 - 2. The Polynomial Factoring Problem
 - 3. Budget Constraints and the Expansion Path
 - 4. The Total Cost Curve
 - 5. The Household Cost Curve
 - 6. Three Approaches to Optimality
 - 7. β , θ , and ζ
 - 8. Calibrating the Multi-dimensional Hyperbola

B. Measurable Utility

1. The Scientific Assessment of a System Boundary
2. An Empirical Study
 - a. Primitive Data and Transformations
 - b. Calculations and Results
3. Prospectus

C. Why the Hyperbola?

1. Nature's Use of Number
2. Spanning the Realm of Technical Potential

III. The Stability of Economic Systems - a Neoclassical View

A. A General Matrix Structure

1. Prospective Sector and Commodity Definitions
2. Prospective Definitions for Rival Economic Systems

B. General Equilibrium Prices

C. Equilibrium in a Dynamic Context

D. General Economic Optima

IV. A Dynamic for Economics

A. Numerical Methods

B. The Idea of Mathematical Delay

1. First Order Delays
2. Higher Order Delays

C. Physical Flows in the Economic System

1. A Dynamic Hypothesis
2. Discourse on the Turnover Fraction
 - a. The Variability of a Generic Good J
 - b. A Household Sector's V_L
 - c. V_0 : the Velocity of Value
3. The Circuit of Physical Flows
4. Commodity Markets
5. Control of Physical Adjustments
6. Global Supply and Demand

V. Price Determination

A. Supply and Demand Schedules

1. Marginal Costs and the Supply Schedule
2. Marginal Values and the Demand Schedule
3. Inference of the Equilibrium Price

B. Does Value Exist?

1. Value and the Reference Commodity
2. Value and Money
3. Value's Measure
4. Commodities' Marginal Valuations
5. Absolute Commodity Values

C. Monetary Flows and the Financial State

1. Interest Rates of the Economies K
2. Financial Intermediation and the Capital Account
3. Savings: A Circuit of Funds for Investment
4. Leverage and the Investment Term
5. Capitalism's Destructive Singularity

D. Currency Valuation

1. The Marginal Value Equations
2. Money's Marginal Value

VI. Control of Economics' Dynamics

A. Financial Intermediation

B. Household Sectors' Dynamics

1. Issues in Household Utility
2. Households' Variable Utility

VII. SFEcon at a Glance

A. Conceptual Recapitulation

B. Algorithmic Recapitulation