

Present at Rutgers
Given
1979-80 academic year
at Livingston College

Intro to Microeconomics: 220-104

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Lectures: Tuesday 4th Pd.
Wed. 2nd Pd.

Recitations: Thursday 3:05 - 4:00 Section 01
Thursday 4:55 - 5:50 Section 02
Friday 10:05 - 11:00 Section 03
Friday 11:45 - 12:40 Section 04

INTRODUCTION TO MICROECONOMICS

Outline

- I. Introduction to Microeconomics: A Brief Preview of the Industrial Structure of an Economy
 - A. Problems to Be Considered
 - B. Economy as a Whole
 - C. Industry
 - D. Firm
- II. How Prices are Set by the Individual Manufacturing Firm: The Post-Keynesian Approach to Pricing
 - A. Nature and Form of the Manufacturing Firm
 - B. The Base of Pricing: How Firms Reckon their Income
 - C. Technical Costs of Production
 - D. Managerial Costs of Production
 - E. Gross Profit Margin
 - F. Costs Relevant for Pricing and Price Setting
 - G. Alternative Approach to Pricing: The Supply and Demand Approach
 - H. Problems and Readings
- III. Industry, Market Structure and Pricing: Post-Keynesian Approach to Market Pricing
 - A. Introduction
 - B. Industry - Defined and Discussed
 - C. Market - Defined and Discussed
 - D. Pricing Within a Market and Industry
 - E. General Input-Output Framework
 - F. Alternative to Market Pricing: The Supply and Demand Approach
 - G. Problems and Readings
- IV. Prices, Distribution and the General Input-Output Framework: The Post-Keynesian Approach
 - A. Introduction to a Simplified Form of the General Input-Output Framework

Introduction to Microeconomics
Outline cont'd

- B. From Market Prices to Cost of Production Prices
- C. Cost of Production Prices and Changes in the Components of the Pricing Equation
- D. Cost of Production Prices and Distribution
- E. Problems

I. Introduction to Microeconomics: A Brief Preview of the Industrial Structure of the Economy

A. Problem to be considered:

1. Let us consider the following problem: how increases in the price of oil affects the price of steel?

a. let us assume that to produce one ton of steel, we need to use iron ore, coal, oil, and labour:
 $IO + C + O + L \rightarrow S$

b. since each input has a price, the price of one ton of steel is:
 $IOp_{io} + Cp_c + Op_o + Lw + \text{Costing Margin} = p_s$

c. therefore, we can easily see that an increase in the price of oil will increase the price of steel.

2. Now we have to ask what will be the result of a rise in the price of steel for the rest of the economy? Thus let us consider an economy which has the following commodities—steel, paint, bulldozer, and coal:

a. iron ore + coal + oil + labour \rightarrow steel
steel + rubber + paint + labour \rightarrow one bulldozer
steel + oil + chemicals + labour \rightarrow one ton of paint
bulldozer + electrical equipment + chemicals + labour \rightarrow one ton of coal

these equations are called production equations since they show the amount of inputs needed to produce the output

b. $IOp_{io} + Cp_c + Op_o + Lw + CM = p_s$
 $Sp_s + Rp_r + Pp_p + Lw + CM = p_b$
 $Sp_s + Op_o + Chp_{ch} + Lw + CM = p_p$
 $Bp_b + EEp_e + Chp_{ch} + Lw + CM = p_c$

these equations are called price equations since they show that the price of the output is equal to the total cost of the inputs plus the costing margin.

c. now the increase in p_s will increase the costs of bulldozers and paint but not coal. Thus the price of bulldozer and paint increase but not coal. Now what are the consequences of the rise in the prices of paint and bulldozers?

p_p will increase p_b

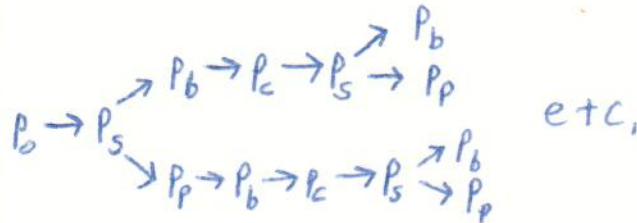
p_b will increase p_c

Now what the consequences of these price increases:

p_c will increase p_s

p_b will increase p_c

So what we have is prices reacting on each other:



to get a clearer understanding of these interactions, we must turn to a abstract model of the economy.

B. Economy as a whole: general input-output framework

1. history of the concept of the idea:

- a. The Tableau Economique by Francois Quesnay 1758
- b. Principles of Political Economy by David Ricardo 1818
- c. Capital esp. Vol II and Vol. III by Karl Marx 1868
- d. The Structure of American Economy by Wassily Leontief 1941
- e. Production of Commodities by Means of Commodities by Piero Sraffa 1959
this particular version provides the basis for the course.

2. general input-output framework: an abstract model

$$Sp_s + Rp_r + Chp_{ch} + Lw + CM = p_s$$

$$Sp_s + Rp_r + Chp_{ch} + Lw + CM = p_r$$

$$Sp_s + Rp_r + Chp_{ch} + Lw + CM = p_{ch}$$

- a. each row is a price quation for a particular industry which in the above model are steel, rubber, and chemicals.
- b. each price equation shows the amount of labour and materials used to produce one unit of steel, rubber and chemicals.
- c. each column shows how much each commodity is used in the production of all commodities.
- d. since steel is used in the production of steel, rubber, and chemicals, we have an economic system which is interrelated. This point is expressed in the phrase "The Production of Commodities by Means of Commodities". As a result, prices are also interrelated--which means that if one price in the economy changes, then all prices in the economy will change.
- e. each price equation has a costing margin which is added to costs so as to get profits.

3. an example of a general input-output model:

$$.2sp_s + .3rp_r + .1chp_{ch} + .4Lw + CM = p_s$$

$$.3sp_s + .2rp_r + .3chp_{ch} + .6Lw + CM = p_r$$

$$.1sp_s + .3rp_r + .4chp_{ch} + .2Lw + CM = p_{ch}$$

C. Industry

- Each price equation in the input-output model represents an industry. We know quite well that an industry can have more than one firm; consequently the industry can consist of many firms each with their own price equation:

$$\text{firm 1: } Sp_s + Rp_r + Chp_{ch} + Lw + CM = p_s$$

$$\text{firm 2: } Sp_s + Rp_r + Chp_{ch} + Lw + CM = p_s$$

.....

$$\text{firm n: } Sp_s + Rp_r + Chp_{ch} + Lw + CM = p_s$$

- each firm in the industry has the same output price of steel p_s
- since the amount of material and labour inputs can vary among the firms, and since p_s is the same for all firms then the costing margin must vary among the firms.

- Example:

$$\text{firm 1: } .2s(4) + .3r(3) + .1ch(2) + .4L(1) + 1.7 = p_s$$

$$.8 + .9 + .2 + .4 + 1.7 = 4.00$$

$$\text{firm 2: } .3s(4) + .4r(3) + .1ch(2) + .6L(1) + .8 = p_s$$

$$1.2 + 1.2 + .2 + .6 + .8 = 4.00$$

D. Firm

- Each firm has a price equation for each commodity it produces. The price equation shows how much material and labour the firm uses to produce the commodity. It also shows the costing margin each firm would like to get on each unit of output it is going to sell.

- Example:

$$.2sp_s + .3rp_r + .1chp_{ch} + .4Lw + CM = p_s$$

E. The outline of the course

- We will first consider how an individual manufacturing firm determines its costs, costing margin, and therefore its price. That is we will first consider how a firm sets its price.
- Next we will consider the manufacturing firm within an industry-- that is in relationship with other manufacturing firms. Therefore we want to find out how the industry price is set. This involves explaining how firms compete with each other within the industry and its effects on setting the industry price.

3. Once establishing an industry price, we can construct the general input-output model. Now we can consider distribution and its effects on industry prices. That is, we will consider the relationship between wage rates, costing margin, and industry prices. At this point we can consider some political problems involved in controlling inflation and stimulating the growth of the economy.