

**Topic 2****Neoclassical Theories of Capital: Utility****What is capital?**

- Form and contents
- The utility theory of value
- The labour theory of value
- The power theory of value

**The hallmarks of neoclassical theory**

- Closed system
- Rational utility maximization
- Initial endowments
- Production function
- Independence of supply and demand
- Equilibrium: price, quantity, distribution

**Utility**

- Philosophical Radicals
- Universal “emotion metrics”
- “The Greatest Happiness for the Greatest Numbers”
- The neoclassical dilution: measuring the immeasurable

**Equilibrium and disequilibrium**

- Can we ever know what they are?

**Supply and demand**

- Independence
- Whose “wants” are these?
- Consumer theory and the rise of big business
- Oligopolistic interdependence
- Piero Sraffa and the Law of Return

**Demand**

- Is it downward sloping?
- Horizontal summation
- Sonnenschein-Mantel-Debru and the fictitious consumer

**Supply**

- Samuelson’s two sovereigns: consumers and technology
- Rockefeller and the production function
- Senior’s “abstinence” and Marshall’s “waiting”
- Clark’s production function: impossible?

**Capital**

- Measuring capital
- Present value
- The Cambridge Controversy
- Sraffa’s Re-switching
- Parables and faiths
- Thinking in terms “they cannot define” and answering “unaskable questions”

### **Greatest happiness of the greatest number**

“Nature has placed mankind under the governance of two sovereign masters, *pain*, and *pleasure*.... They govern us in all we do, in all we say, in all we think.”

“Prejudice apart, the game of push-pin is of equal value with the arts and sciences of music and poetry.”

“The greatest happiness of the greatest number is the foundation of morals and legislation.”

(Jeremy Bentham, ‘An Introduction to the Principles of Morals and Legislation,’ in A. I. Melden, ed. *Ethical Theories*, Englewood Cliffs., N.J.: Prentice-Hall, 1955, p. 341; Jeremy Bentham, *The Rationale of Reward*, London: John and H. L. Hunt.)

### **Dilution**

“A unit of pleasure or pain is difficult even to conceive; but it is the amount of these feelings which is continually promoting us to buying and selling, borrowing and lending, laboring and resting, producing and consuming; and it is from the quantitative effects of the feelings that we must estimate their comparative amounts.”

(William Stanley Jevons, *The Theory of Political Economy*, 1<sup>st</sup> ed, London: Macmillan, 1871, p. 11.)

### **Measurability: forever impossible**

“Utility is taken to be correlative to Desire or Want. It has been already argued that desires cannot be measured directly, but only indirectly, by the outward phenomena to which they give rise: and that in those cases with which economics is chiefly concerned the measure is found in the price which a person is willing to pay for the fulfillment or satisfaction of his desire. . . .”

“It cannot be too much insisted that to measure directly, or *per se*, either desires or the satisfaction which results from their fulfillment is impossible, if not inconceivable. If we could, we should have two accounts to make up, one for desires, and the other of realized satisfactions.... The two direct measurements then might differ. But as neither of them is possible, we fall back on the measurement which economics supplies, of the motive or moving force to action: and we make it serve, with all its faults, both for the desires which prompt the activities and for the satisfactions that result from them.”

(Alfred Marshall, 1920. *Principles of Economics. An Introductory Volume*. 8th ed. London: Macmillan, p. 78).

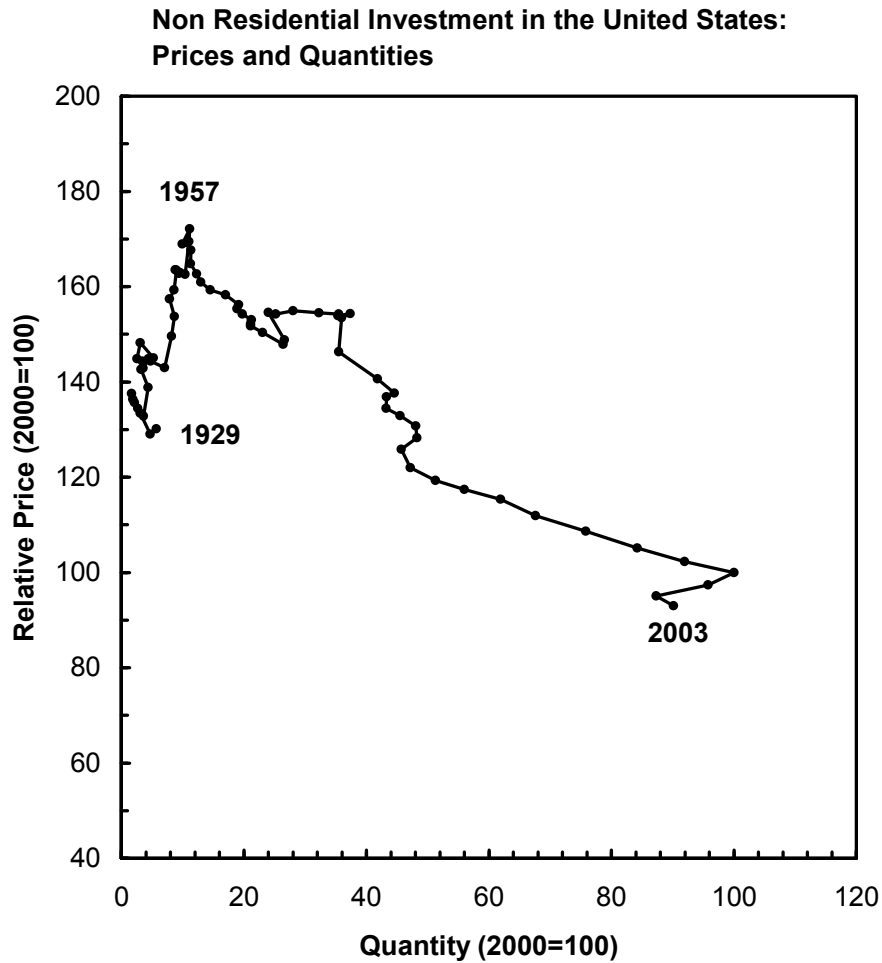
### **Circularity: cause or effect?**

“*Utility* is a metaphysical concept of impregnable circularity; *utility* is the quality in commodities that makes individuals want to buy them, and the fact that individuals want to buy commodities shows that they have *utility*.”

(Joan Robinson, 1962. *Economic Philosophy*. Chicago: Aldine Pub. Co., p. 48)

## **“Because” and “Despite” in the Oil Market**

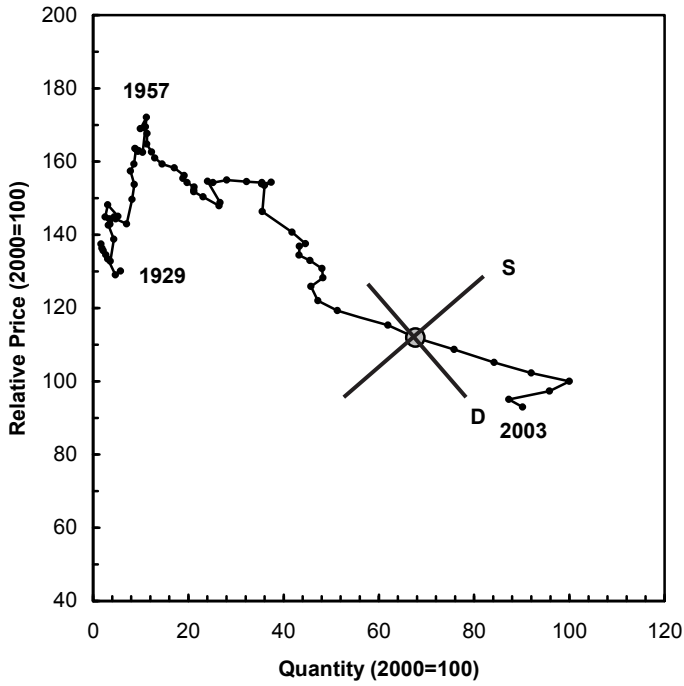
- **“Oil prices rise as OPEC output cut nears”**  
Robert DiNardo, John Kingston, Anita Nugraha, Margaret McQuaile. *Platt's Oilgram News*. New York: Mar 5, 2004. Vol. 82, Iss. 43; p. 1
  
- **“World: Commodities - Oil prices fall despite OPEC output cut”**  
*EIU Viewswire* New York: Mar 31, 2004. p. n/a  
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- **“Oil prices slide in anticipation of rise in output”**  
By Marie C. Sanchez. *Wall Street Journal* New York, N.Y.: Oct 30, 2000. p. 1
  
- **“Oil prices soar despite rise in output”**  
*Toronto Star* Toronto, Ont.: Sep 12, 2000. p. D3  
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- **“Oil prices fall on rising US stockpile”**  
Roberts, Adrienne. *Financial Times*: Jun 28, 2001. p. 15
  
- **“Crude markets unphased by OPEC; oil prices rise despite stock build”**  
*Octane Week Potomac*: Jun 26, 2000. Vol. 15, Iss. 26, p. 1  
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- **“OPEC agreement means oil prices likely to increase”**  
*The Gazette* Montreal, Que.: Jun 29, 1987. p. B5
  
- **“Oil prices fall despite OPEC agreement”**  
Mead, Gary. *Financial Times* London (UK): Jun 25, 1998. p. 32  
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- **“Oil prices soar on OPEC pact to cut output”**  
By Michael Siconolfi. *Wall Street Journal* New York, N.Y.: Aug 6, 1986. p. 1
  
- **“Oil price falls despite cut in output”**  
Solman, Paul. *Financial Times* London (UK): Jun 13, 1998. p. 12  
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- **“Oil prices fall again in response to Bush’s hope for Mideast accord and signs of ample supplies”**  
Tanner, James. *Wall Street Journal*. New York, N.Y.: Oct 3, 1990. p. C14
  
- **“Oil price rises despite ample supply”**  
*Calgary Herald* Calgary, Alta.: Dec 8, 1995. p. C13  
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- **“Oil prices rise amid reports Iraq jets attacked operations at Iran terminal”**  
By Michael Siconolfi. *Wall Street Journal* New York, N.Y.: Aug 13, 1986. p. 1
  
- **“World oil prices fall despite Iran-Iraq war”**  
*Chronicle - Herald Halifax*, N.S.: Jul 7, 1984. p. 13



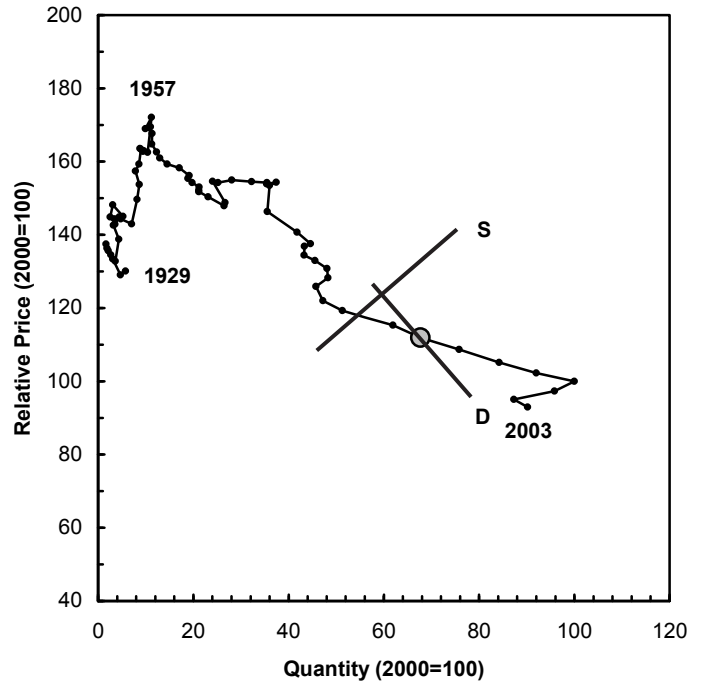
\* 'Relative Price' is computed by dividing the price index for non-residential investment by the price index for GDP.

SOURCE: U.S. Bureau of Economic Analysis, NIPA table 1.5.3 and 1.5.4.

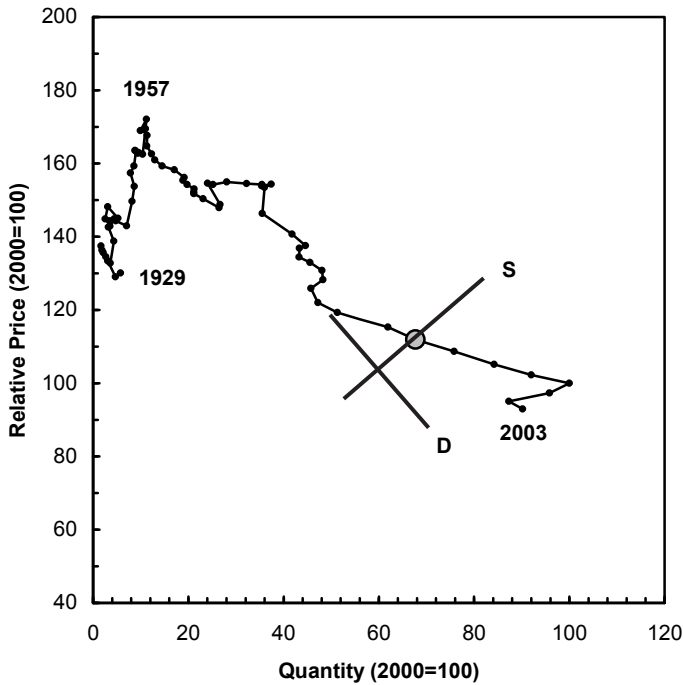
Non Residential Investment in the United States:  
Prices and Quantities



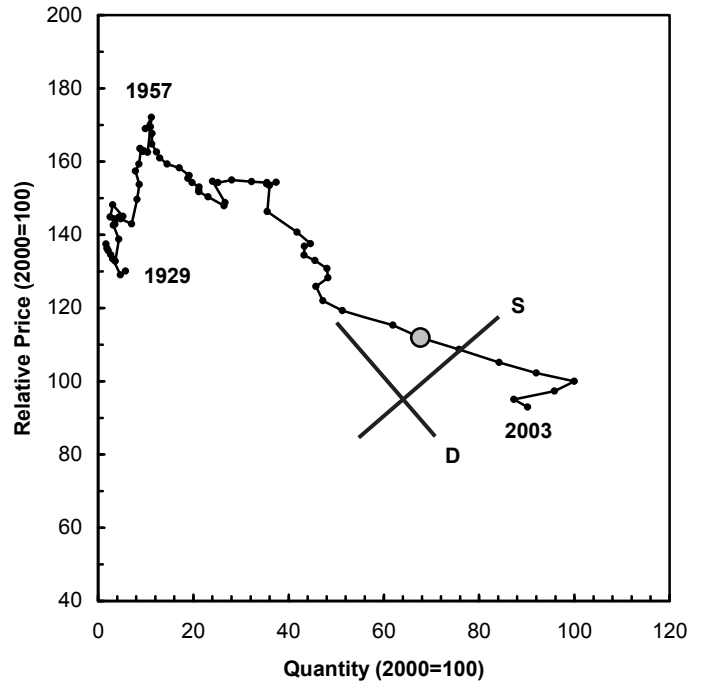
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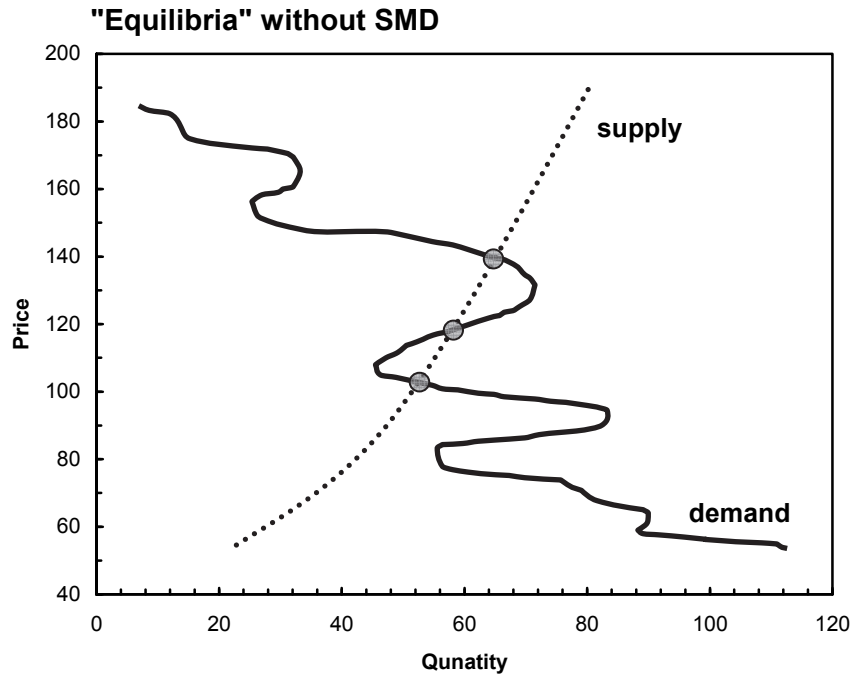


Non Residential Investment in the United States:  
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Non Residential Investment in the United States:  
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## The Production Function

$$Q = F(\text{Labour, Land, Capital})$$

1. Labour, land and capital are separate factors of production; they are observable and measurable, so we can say, for instance, that we have 20 units of labour, 30 of land and 50 of capital.
2. These factors enter a “production function,” which is essentially a technical blueprint specifying how these factors interact and how much they end up producing.
3. Each of these factors has its own intrinsic productivity – in other words, each is responsible for a definite proportion of the output.
4. And finally, under conditions of competition, the incomes of these factors – the wages, rent and profit – are equal to their marginal contributions.

## Discounting

$$K = \Pi / r$$

$$\$10 \text{ mn} \leftarrow \$1 \text{ mn} / 0.1$$

$$\$20 \text{ mn} \leftarrow \$2 \text{ mn} / 0.1$$

$$\$5 \text{ mn} \leftarrow \$1 \text{ mn} / 0.2$$

## Causality?

$$\text{Income } (\Pi) \leftarrow \text{output} \leftarrow \text{production} \leftarrow \text{factor inputs } (K)$$

## **Food for thought**

### Paul Samuelson:

“If all this causes headaches for those nostalgic for the old time parables of neoclassical writings, we must remind ourselves that scholars are not born to live an easy existence. We must respect and appraise the facts of life.”

### C.E. Ferguson:

“Placing reliance upon neoclassical economic theory is a matter of faith. I personally have the faith; but at present the best I can do to convince others is to invoke the weight of Samuelson’s authority.”

### Geoffrey Harcourt:

“As a betting man, I know on whom I’d put my money; but then as a God-man, I have never expected virtue to triumph this side of the grave.”

### Joan Robinson:

“No doubt Professor Ferguson’s restatement of “capital” theory will be used to train new generations of students to erect elegant-seeming arguments in terms which they cannot define and will confirm econometricians in the search for answers to unaskable questions. Criticism can have no effect. As he himself says, it is a matter of faith”