



UNIVERSITÄT  
LEIPZIG

---

# History of Economic Thought

## IX. The Austrian School

And

## Neoclassical Economics

Leipzig University | May 31, 2023

Dr. Kristoffer J. M. Hansen | Institute for Economic Policy



## The Austrian School

1. Eugen von Böhm-Bawerk
2. Friedrich von Wieser
3. Joseph Schumpeter

## Neoclassical Economics

4. Alfred Marshall
5. A. C. Pigou



# 1. Eugen von Böhm-Bawerk

## The Man

- Born 1851 in Brünn, died 1914 in Tirol
- Studied in Vienna, semesters abroad with Knies, Roscher, Hildebrand. Habilitation 1880

## The Work

- 1884-1889 taught at Innsbruck, finance minister for periods 1890s-1904. 1904-14 professor at Vienna
- *Capital and Interest* 2 vols., 1884-89 (plus third vol. 1921)
- Minor works developing marginal utility theory
- Critiques of Marx and socialism



## What explains interest, or return on capital?

- “It is generally possible for any one who owns capital to obtain from it a permanent net income, called Interest.”
- “Whence and why does the capitalist, without personally exerting himself, obtain this endless flow of wealth?”

## Critique of Previous Interest Theories

- In his 1884 *Capital and Interest* – none of them worked
  - Productivity theories don't work
    - You already pay for the capital good based on its productivity
    - Interest is an “extra” income
  - Exploitation theories don't work
    - They break down on closer look
    - The labour theory of value is untenable
-



## 1889 *Positive Theory of Capital*

- Böhm-Bawerk develops his own conception of capital
- Capital can be understood as
  - An element of production (social capital)
  - A source of income or interest (private capital) – Böhm explores both

## Capitalistic Production

- By using roundabout methods of production, we harness natural powers, increase productivity. Roundabout production is capitalistic production
  - Definition of capital: “Capital is nothing but the complex of intermediate products which appear on the several stages of the roundabout journey”
  - The longer the production time, the more capitalistic production will be.  
Disadvantage: sacrifice of time
  - Production can be direct, using labour and land, or indirect, using intermediate, i.e., capital goods
-



Is capital an independent productive factor? Böhm-Bawerk answers – no!

- All the productivity of capital is really derivative
  - From the factors of production that went into producing it
  - And ultimately only from labour and land

A man throws a stone at another man and kills him. Has the stone killed the man ? If the question is put without laying any special emphasis it may be answered without hesitation in the affirmative. But how if the murderer, on his trial, were to defend himself by saying that it was not he but the stone that had killed the man ? Taking the words in this sense should we still say that the stone had killed the man, and acquit the Murderer ?

From beginning to end they alone [land and labour] perform every function which gives rise to consumption goods.

- Capital is the medium through which the originary productive forces are made effective – but it does not add productive force of its own



## Explaining Interest

- Roundabout methods of production are clearly advantageous – but they do not yet explain interest
  - If land and labour fully explains productivity, why do they not get the full product?
  - In other words, why is there net profits and not just gross profits?

## The problem of interest a problem of value

- The socialists are correct in calling it surplus value
- The key to a solution: the element of time
- The value of future goods is discounted – they are worth less than present goods precisely because they are not present
  - Each individual has his own time preference
  - Market exchange then establishes a uniform rate of interest
  - I.e., the rate or *agio* between today and next year will be the same as between one year and two years from now

Time ushers it [the good] into that fullness of value which marks the present good. *And that increase in value is originary interest.*

---



## The present prices of durable goods are also fully explained by interest

- The value of temporally remote services of a durable good is subject to the same fate as the value of future goods
  - Future services diminish in value in direct proportion to their remoteness
  - The value of a durable good “presents itself as the *sum of the amounts constituting a descending progression or series.*”

## Example

- A durable good has yearly services, the present value of each is €100
  - It's going to last five years and the value is discounted to the present at 5 percent
- Present value is therefore  $100+95.23+90.70+86.38+82.27+78.35=€532.93$
- The loss in value is equal to the value of the remotest use
  - Therefore the net gain from a good is its current yield-loss in value/devaluation quota
- $(100-78.35)/432.93 = 5$  percent
- After one year, the remaining value is  $532.93-78.35=454.58$
- In later years, the *amount* of net interest decreases – but the rate stays the same





## Net Interest and Land

- Is due to the growth in value of previously discounted future uses
- This is also true for land: a factor that provides services for an infinite number of years

A piece of land may return \$100 a year throughout an infinite series of years, but its value is not \$100 multiplied by infinity. Indeed, it is not even \$100 multiplied by a thousand, nor yet by a hundred, but rather by about twenty and hence actually about \$2000. And the exhaustion quota falls absolutely to zero. A price of land of which the current rendition of service is worth \$100 returns that whole \$100 net. The land always continues to be the same land it was before.

- Net return to landowners results solely from the lower value of future goods – absent discounting, land would trade at 1,000 times its present value

And so the theoretical explanation of land rent in its concluding stages coincides with the explanation of interest on durable material capital. Land rent is nothing in the world but a specialized manifestation of interest derived from durable goods.



- To explain interest formation, Böhm-Bawerk first developed Mengerian price theory
- Going from isolated exchange, over one-sided to two-sided competition, Böhm developed his proposition that the price of a good is set by the *marginal pairs*

## Marginal Pairs

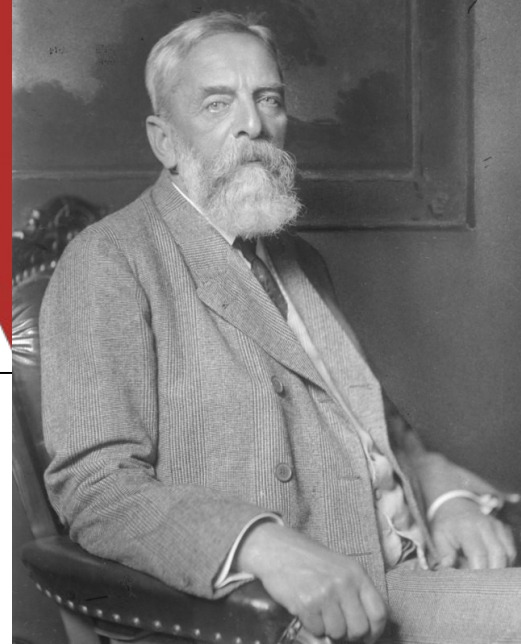
- In two-sided competition, price is determined in a range between the marginal pairs – the sellers and buyers either just included or just excluded
  - The lower limit is set by the valuation of *either* the last included seller or the first excluded buyer (whichever is larger)
  - The upper limit is set by the valuation of *either* the last included buyer or the first excluded seller (whichever is smaller)
- From beginning to end, price is the product of subjective valuations
- Only the marginal pairs determine price



| BUYERS.  |                                   |   |     | SELLERS. |                                   |   |          |
|----------|-----------------------------------|---|-----|----------|-----------------------------------|---|----------|
| $A_1$    | values a horse at                 | . | £30 | $B_1$    | values a horse at                 | . | £10      |
|          | (and will buy at any price under) |   |     |          | (and will sell at any price over) |   |          |
| $A_2$    | ”                                 | ” | £28 | $B_2$    | ”                                 | ” | £11      |
| $A_3$    | ”                                 | ” | £26 | $B_3$    | ”                                 | ” | £15      |
| $A_4$    | ”                                 | ” | £24 | $B_4$    | ”                                 | ” | £17      |
| $A_5$    | ”                                 | ” | £22 | $B_5$    | ”                                 | ” | £20      |
| $A_6$    | ”                                 | ” | £21 | $B_6$    | ”                                 | ” | £21:10s. |
| $A_7$    | ”                                 | ” | £20 | $B_7$    | ”                                 | ” | £25      |
| $A_8$    | ”                                 | ” | £18 | $B_8$    | ”                                 | ” | £26      |
| $A_9$    | ”                                 | ” | £17 |          |                                   |   |          |
| $A_{10}$ | ”                                 | ” | £15 |          |                                   |   |          |



UNIVERSITÄT  
LEIPZIG



## 2. Friedrich von Wieser

### The Man

- Born 1851 in Vienna, died 1926 same place
- Studied in Vienna, went to Heidelberg with Böhm

### His Work

- 1884 habilitation, professor at Charles University in Prague, 1903 succeeded to Menger's chair in Vienna
- Key works: *Natural Value* 1889, *Social Economics* 1914



## Imputation

- Factors of production are valuable due to the utility they add to the final product
- The utility of consumer goods is imputed backwards onto the means of production

## Cost and Subjective Value

- Advanced the subjective notion of cost in debates with Marshallians
  - The cost of something is the utility of the final product that you could have had instead
- Subjective development of the law of costs
- Wieser the first to use the terms marginal utility and opportunity cost



## The Problem of Money

- How do we apply marginal utility to the field of money?
- Consider: money is valued (has utility, use-value) due to its purchasing power (objective exchange value)
- Money only has any objective exchange value because people want to hold it or exchange other goods for it. In other words, because people value it
- So the (subjective) value of money depends on its (objective) exchange value – which in turn depends on the subjective value of money

## A Vicious Circle (?)

- One possible way out: the value of money today depends on its objective exchange value yesterday, which in turn depends on the (subjective) value of money yesterday
- This breaks the circle, but simply substitutes an infinite regress in its place



### 3. Joseph A. Schumpeter, the Austrian Walrassian

- Born 1883, died 1950
- Educated in Vienna, took his doctorate under Böhm-Bawerk
- Taught at various German and Austrian universities, moved to the US 1932
- Wrote widely on economics, but never created his own school



## The Non-Austrian Austrian

- Not a member of the Austrian school
- Despite Böhm-Bawerk considering him one of his star students
- Rather, Walrassian – this explains the problems Schumpeter tried to overcome with his theories

## Main Books

- *The Theory of Economic Development* (1911)
- *Business Cycles* (1939)
- *Capitalism, Socialism and Democracy* (1942)
- *History of Economic Analysis* (1954)





## Two Central Problems

- Why are there business cycles?
- Why is there a positive interest rate?
- In the Walrassian final equilibrium, the interest rate is zero – so why don't we get there?

## Schumpeter's Answer

- Entrepreneurs disrupt the system. They introduce new technologies, organisational techniques
- This mean they can expand their share of income, earning profits, but other firms, those who do not adapt quickly enough, decline, go bankrupt
- Eventually, a crisis occurs as new industries have expanded too quickly, prices collapse

## Note an assumption Schumpeter makes

- The entrepreneur is always supported by the banker
- The latter expands credit to fund the former, the way out of the Walrassian impasse
- Schumpeter is on this point close to the Austrian, monetary theory of business cycles



## The End of Capitalism

- Capitalist countries were becoming increasingly bureaucratic in their organisation – simply the nature of big business
- Managers are not the same as owners
- Industry increasingly depended more on share and finance capital – not individual ownership

## The Evaporation of the Substance of Property

- The role of owners of business on the decline
- Personal property also on the decline: large villas becoming a thing of the past
- Managers, salaried employees and people generally no longer understand or have an interest in the functioning of the private-property social order
- Intellectuals therefore lead people down the road to a bureaucratic, but ~~completely safe future, where everything is *de facto* socialized~~



## 4. Marshall and the Cambridge School

### The fountainhead of neoclassical economics

- Neoclassical: named so by later economists to stress continuity with earlier classical school
- One step back from the marginal revolution – not as “pure” as Jevons or the Austrians

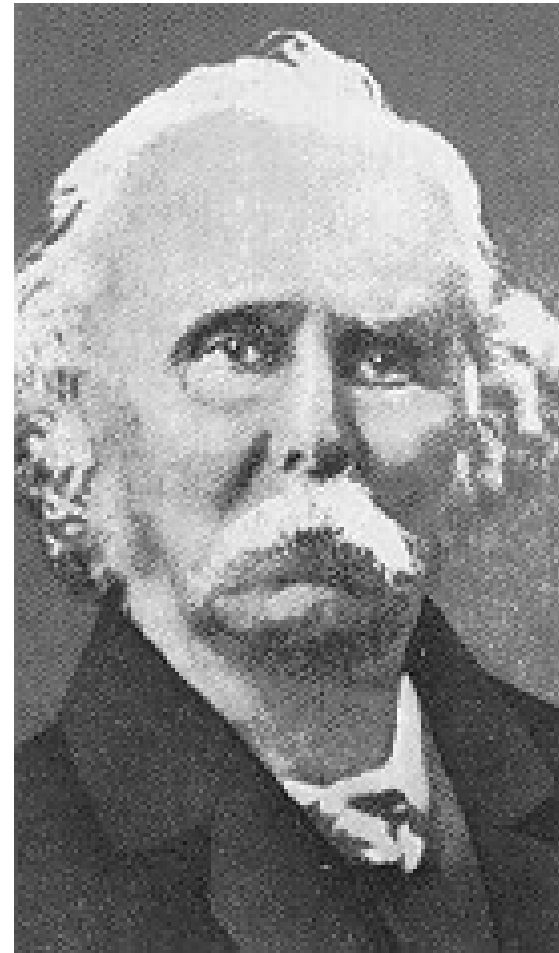
### The Mystery

- Why did Marshall come to dominate economics so thoroughly, for so long?
- British prestige
- Positivism of the age
  - › Closeness to theory of evolution
  - › Integration of some new mathematical tool, Gauss’s work (e.g., Marshall begins referring to “normal values”)
- Employment of basic conceptual tools for graphical exposition



## Alfred Marshall (1842-1924)

- Born in London, son of BoE clerk
- Received scholarship to go to Oxford to study classics; went to Cambridge for mathematics
- Fellow of St John's College and lecturer in mathematics 1868, interest in economics gradually increased
- Appointed professor of political economy at Cambridge 1884, resigned 1908, stayed in Cambridge till his death





## Early Work

- Review of Jevons 1872
- Collection of essays on international trade and value theory 1879
- *Economics of Industry* 1879

## The *Principles of Economics* (8 editions, 1890-1920)

- The key reference text for generations of students
- Keynes: you only need to read Marshall's *Principles* to become a good economist
- Smaller guide, *Elements of Economics of Industry* 1892, popular among students
- Many changes from one edition to the next
  - Marshall worked over two components of his thought
  - Equilibrium analysis and evolutionary approach to economics



## Marshall's Vision

- Reconcile subjectivism and the objective theory of the classical school
- Develop economics as a stringent, logical theory, using tools of equilibrium analysis, *and* see it in a more evolutionary way
  - Uniting influences from historicist, classical and marginalist economists

## Definition of Economics

“Political economy, or economics, is the study of man’s actions in the ordinary business of life”

- Later changed in fourth edition to “study of mankind”

## Method

- Homo economicus / “rational economic man” a necessary construct
    - The focus on selfish motives allows for measurability
  - Facts alone cannot teach us anything, they need to be understood in light of theory
    - But economic laws nevertheless only hypothetical
    - Marshall explicitly situates himself between the theoretical Ricardian tradition and the empirical historicist tradition
-



## Marginal Utility

- No long discussion of preferences or value scales, or measuring utility
  - Willingness to pay the measure of marginal utility

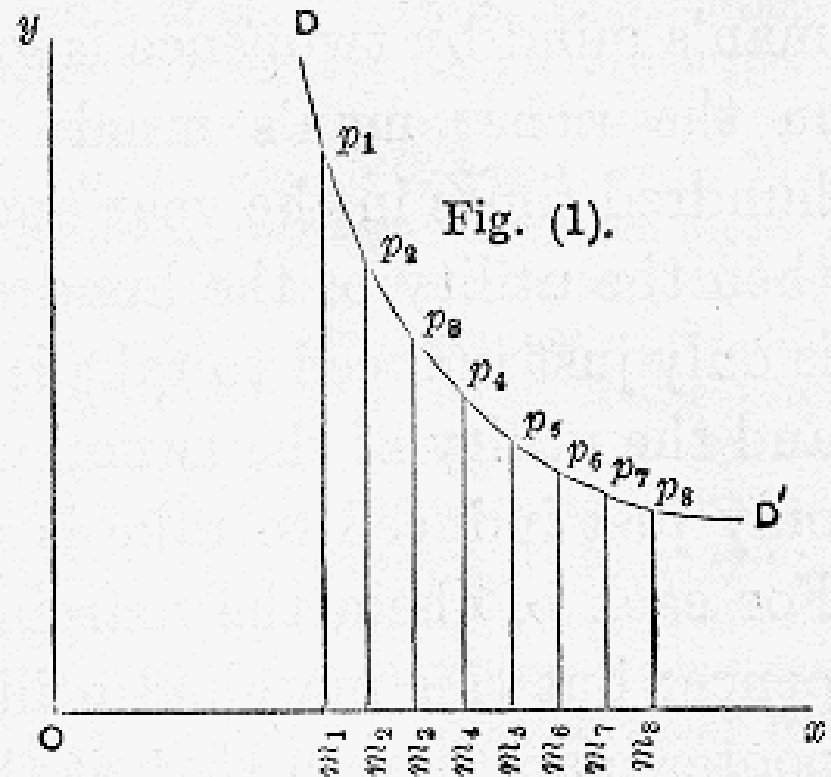
## Law of Demand and Diagrams

- “The greater the amount to be sold, the smaller will be the price at which it will find purchasers”
- Presented graphically, price at the vertical and quantity demanded on the horizontal axis
  - Marshall had already developed this in his trade theory of the 1870s, where two countries exchanging two goods presented in this way
  - Thus one country’s demand for import of commodity  $A$  constitutes the supply of or export of commodity  $B$
- Basis of modern graphical presentation from here



# Marshall's Demand Curve

|      | tenths of<br>an inch. |  | fortieths of<br>an inch. |
|------|-----------------------|--|--------------------------|
| take | $Om_1=6$ , and draw   |  | $m_1p_1=50$              |
|      | $Om_2=7$ „ „          |  | $m_2p_2=40$              |
|      | $Om_3=8$ „ „          |  | $m_3p_3=33$              |
|      | $Om_4=9$ „ „          |  | $m_4p_4=28$              |
|      | $Om_5=10$ „ „         |  | $m_5p_5=24$              |
|      | $Om_6=11$ „ „         |  | $m_6p_6=21$              |
|      | $Om_7=12$ „ „         |  | $m_7p_7=19$              |
|      | $Om_8=13$ „ „         |  | $m_8p_8=17$              |







## Supply Functions – Going Beyond Jevons

- Jevons had looked only at labour – labour is supplied until the marginal disutility of an additional unit of labour exceeds the marginal utility of what it produced
- But labour is not the only input, what about other factors?
- How do we generalize to the firm, industry and whole economy?
  - If we only look at partial analysis, the firm can always obtain additional labour from other industries, doesn't increase marginal disutility of labour

## Laws of Returns

- Marshall adopted Ricardian differential rent, modified: developed a theory of diminishing returns of a means of production used in an industry
- Smithian division of labour leads to increasing returns
- Thus Marshall developed a framework where sometimes there are diminishing returns, sometimes increasing returns, and sometimes constant returns
  - The supply curve is rising, falling and horizontal, respectively



## Marshall's Problem

- Marshall accepted the subjective theory of value: subjective preferences determine demand, basis of the law of demand
- But he also wanted to integrate the objective, cost-of-production value theory of the classical school

## Marshall's Solution

- Supply is determined by costs of production
  - Costs of production are objective
  - Diminishing returns in each industry determine supply of factors between industries
  - Price – long-run equilibrium price, or the “normal value” around which prices oscillate – is determined by both supply and demand
  - Scissors metaphor: just like both blades of the scissor cut, so both supply and demand determine prices
-



## Marshall's Distrust for General Equilibrium Analysis

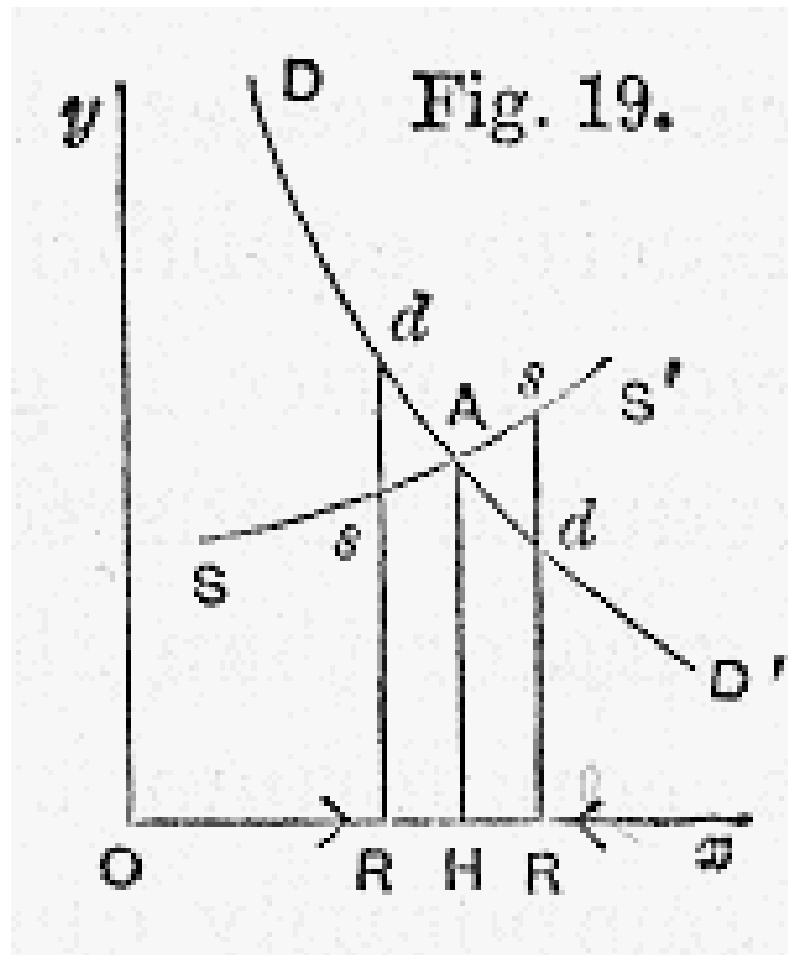
- Simplifications and assumptions OK for describing individual markets
- In the overall economy, these assumptions can distort the picture, one's theory becomes less and less attuned to reality as one goes on
- Marshall stuck to analysing the markets for individual commodities
  - Hence partial equilibrium analysis

## Some other concepts developed by Marshall

- Elasticity of demand and supply
  - Consumers' surplus
  - Producers' surplus
  - External economies and diseconomies
-



# Marshallian Partial Equilibrium





## Descriptive Economics

- The economy consist of different industries producing the same commodity, made up of firms
- Perfect competition: the decisions of each firm has no influence on equilibrium of the industry (quantity and price)
- Differentiation between very, short, short, long and very long equilibria
- Analytical tools confined to the short run equilibria. To describe the long run, Marshall used biological metaphor

## The Representative Firm

- Analytical problem: showing an equilibrium point under competition and increasing returns
- Explanation: there are many firms in each industry, each at different stage of their life cycle
  - “Young” firms experience increasing returns, develop in a competitive environment
  - “Mature” firms have reached dimensions where elements of growth and decay balance out
  - Finally, some firms are decaying
- The “representative firm” is of average dimensions, in the middle of its development process, experiencing increasing returns even if overall population of firms is stationary



## The Cambridge Equation

- $kY=M$
- M is the money supply, Y is national income, and k is the share of income economic agents wish to keep in their cash balance
- Alternative to Fisher's equation of exchange:  $MV=PT$

## Different Views on Money

- Fisher only sees it as transactions demand, Marshall adds precautionary demand
- Marshall closer to view of demand for money as demand to hold
- Both understand demand for money as a function of income



## Huge Influence

- He shaped Cambridge curriculum, made Cambridge into the centre of British economics
- Appointments to other universities often went to his pupils
- Founded the British Economic Association 1885, now the Royal Economic Society
- Why? – there were well-established chairs of economics with their own traditions before Marshall throughout Britain, e.g., the Oxford Drummond Chair

## Marshall the great synthesizer – a man for his age

- His economics drew from the classical school and the marginalists, evolutionism and mathematics
- He gave economics its modern graphical appearance – more “scientific”
- In favour of “economic chivalry” – interventionism – even before studying economics
  - Marshall began this study when a friend told him his schemes for social reform incompatible with laws of economics



## 5. A. C. Pigou and Welfare Economics

- Arthur Cecil Pigou (1877-1959) the principal student of Marshall (along with Keynes)
- Marshall's chosen successor to the Cambridge chair 1908, retired 1943
- Developed Marshall's theory of the firm and industry
- Developed the field of welfare economics
- Main rival of Keynes – Keynes's theories often simply an attack on Pigou







# The Theory of the Firm

---

- Pigou and the American Jacob Viner (1892-1970) each independently developed the theory of the firm, in 1928 and 1931 respectively
- Used U-shaped cost curves showing average and marginal costs to determine short and long-run equilibrium for firms
- Under perfect competition, the firm will produce where curves intersect, at the bottom of the average cost curve
- Just like in the textbooks until today



## Main Work

- *Wealth and Welfare* (1912), expanded into *The Economics of Welfare* (1920)
- Pigou made systematic use of the Marshallian concepts
- Consumer surplus: utility is measured in money, under assumption of constant utility of money
  - The difference between price paid and utility (willingness to pay) summed up
- External economies and diseconomies: benefits and costs not captured by the firm
- Pigou proposed *social cost* and *social benefit* to capture full impact of individual decisions

## Pigovian Taxes and Subsidies

- If the firm does not take account of social cost, tax it to reduce output to a level consonant with total social and private costs
  - If the firm produces external economies, benefits, which it cannot profit from, it should be subsidized to ensure a level of output consonant with total benefits
  - Classic examples: pollution and education
-



- Out of the Marshallian system grew the ideas of imperfect and monopolistic competition
  - These concepts connected to Joan Robinson (1903-83) and her book *The Economics of Imperfect Competition* (1933) and Edward Chamberlin (1899-1967) and his *The Theory of Monopolistic Competition* (1933)
  - Preceding ten-year controversy in *The Economic Journal* over Marshall's concepts of increasing, constant and decreasing returns to firms and industries
  - In reality, firms have some influence on the shape of the industry – price and quantity produced and so on
  - Chamberlin in particular stressed the freedoms enjoyed by each firm due to “market imperfections”
    - Product variation makes Marshallian notion of industry meaningless
    - There is instead a continuum of variations of quality between products of firms
  - Note that Chamberlin did not mean it as a critique of free markets
  - On the contrary, he just described how markets actually worked
    - Robinson more critical
-