

Chapter Fourteen: The Marginalist School – Edgeworth and Clark

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Francis Edgeworth

1845-1926, Irish, later a professor at Oxford

Long time editor of Economic Journal, wrote Mathematical Psychics in 1881

Also wrote many articles

Accepted Bentham's notion of humans as "pleasure machines"

Early and forceful proponent of mathematical economics

Introduced and strongly supported the use of differential calculus

The Austrians/institutionalists argued against it

The zig-zag vs. equilibrium debate

Refining current knowledge vs. learning new knowledge

Three big contributions

Indifference curves

Oligopolistic pricing indeterminacy

Average and marginal productivity

Indifference Curves and Exchange

Using the example of Crusoe and Friday....

Drew their indifference curves when exchanging money and labor

(Insert Graph ch14a)

This is not the normal graph as we would view it today....

Analysis of graph

Friday's utility, increasing as we move south....

Crusoe's utility, increasing as we move north...

By drawing the tangency points, we get to the contract curve

And our final solution will be along that curve

Any other point, and one could gain without the other losing

Later known as Pareto Optimal

Edgeworth assumed measurable utility, and bilateral monopolies

With perfect completion, market prices would hold

The modern form of this, the Edgeworth box, developed by Pareto

Duopoly Theory

Again, Edgeworth found that price indeterminacy existed...

Assume like Cournot, two water producers, but.....

Neither one can produce enough water to satisfy all of demand

In the short run, the producers can charge different prices

(Insert Graph ch14b here)

Assume a monopolist to start....

The monopolist will charge where $MR = MC = 0$

Now assume a second firm enters the market
And assumes that firm 1's price is fixed
It can maximize profits by charging a lower price,
Because its MR curve is now different, lowering price leads to
Increased revenue, because it steals customers from firm 1

Marginal vs. Average Product

The consumption function was implied by Ricardo, but not spelled out
Edgeworth formalized it mathematically...

Assume that Land is fixed, but labor/capital is variable

Labor thus will have declining productivity

Edgeworth constructed a table of total, average and marginal products

Which we now generally teach graphically

(insert graph ch14c here)

Not that MP falls before average product begins to

And that average product is positive (but falling)

Even after $MP < 0$

John Bates Clark

1847 – 1938, American, studied at Amherst and Germany, tough many places

Veblen was his student....

About 1880, independently developed marginal utility (probably)

But more importantly, developed marginal theory in production

The distribution of wealth, 1899

Marginal Productivity Theory of Distribution

A theory of how wages/rents/profits are distributed.

Took marginalism, and applied it to all factors of productivity

Third annual American Economic association meeting 1889

Assumed declining marginal returns for all factors of production

Not because they were getting less efficient, but because

Other factors were fixed

Labor isn't getting worse, it's just standing in line at the factory

The variable factor is becoming so abundant that it is not valuable

(insert graph ch14d here)