Competitiveness Of The National Economies

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Lecture № 4

The theories of competitiveness Part II

Outline

1. **Introduction**
2. Theory of effective (workable) competition
3. Austrian school theory of competition
4. **The Theory of** Evolutionary economics
5. Theory of entrepreneurship and innovations
6. Krugman’s concept of competitiveness

Goal of this lecture:

- Giving a clear view to the Theory of effective (workable) competition
- Analyzing the Austrian school theory
- Defining the features of The Theory of Evolutionary economics
- Analyzing the Theory of entrepreneurship and innovations
- Analyzing Krugman's model of competition

Table 1. Selected concepts and theories related to competitiveness

Concept/Theory	Representative	Country	Main theses
1	2	3	4
Classical concepts and theories			
Concept of invisible hand	Adam Smith	Scotland	Each party involved in international free trade can gain benefits by specializing in the production of goods in which it holds an absolute advantage. So, let every country export those goods it produces at the lowest costs and import those goods it produces at the highest costs
Comparative advantage concept	David Ricardo	England	A country can benefit from foreign trade even if it lacks any absolute advantage over its trade partners in the goods' production. It only needs to have relative advantage in any good in order to sell it abroad
Heckscher-Ohlin trade theory (natural resource abundance theory)	Eli Heckscher Bertil Ohlin	Sweden	A country will specialize in producing and exporting those commodities which require relatively intensive use of locally abundant factors of production. Relatively capital- -abundant country will export capital-intensive commodities while relatively labour-abundant country will export labour-intensive commodities

Concept/Theory	Representative	Country	Main theses
1	2	3	4
Neoclassical, Austrian and institutional concepts and theories of competitiveness			
Theory of effective (workable) competition	John M. Clark	USA	Competitive advantage is driven by innovations introduced by the company. Innovations motivate firms to compete aggressively in order to obtain competitive advantage, which in turn leads to technological progress and economic growth at the macro-level
Theory of marketing behaviour	Wroe Alderson	USA	There are six potential sources of a firm's competitive advantage: market segmentation, a way of communication (i.e. promotion and advertising) and reaching out to the customers (choice of distribution channel), product development, process improvement, and product innovations
Austrian school theory	Ludwig von Mises	Austria	Market competition is an automatic dynamic process and not a specific market structure. The tendency towards market equilibrium is the result of entrepreneurial activity. An enterprise wins or loses in competition depending on the strength of its capabilities and the degree its offers match the market needs

Concept/Theory	Representative	Country	Main theses
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Neoclassical, Austrian and institutional concepts and theories of competitiveness			
Evolutionary economics	Joseph A. Schumpeter	Austria	Crucial to long-term survival of firms in the marketplace is their constant adjustment to changing environment, mainly due to searching out new innovative recombination of the garnered resources
Theory of entrepreneurship and innovations	Joseph A. Schumpeter	Austria	The company's ability to innovate is a key for achieving competitive advantage over its rivals. The ability to create new solutions and the predisposition to take risks associated with testing them in the market underline the competition process and entrepreneurship. Differences both in the level of innovative capacity and entrepreneurship result in differences in the competitive position of any economic agent
Institutional economics streams	Friedrich List Max Weber James Buchanan	Germany USA	In addition to economic factors, one's competitiveness is affected by social institutions such as public authorities, trade unions, financial institutions, socio-political organizations, ownership and organizational structures and mental habits, rules and codes of conduct

Concept/Theory	Representative	Country	Main theses
1	2	3	4
Contemporary concepts and theories of competitiveness			
Krugman's concept of competitiveness	Paul R. Krugman	USA	Productivity growth is the main driver of competitiveness. International competitiveness of countries is associated with their high standard of living
Porter's theory of competitiveness	Michael E. Porter	USA	Competitiveness depends on long run productivity, which increase requires a business environment that supports continual innovation in products, processes and management. The four underlining conditions driving the global competitiveness of country's companies include: factor endowments, demand conditions, related and supporting industries (clusters), and the firm's strategy, structure and rivalry

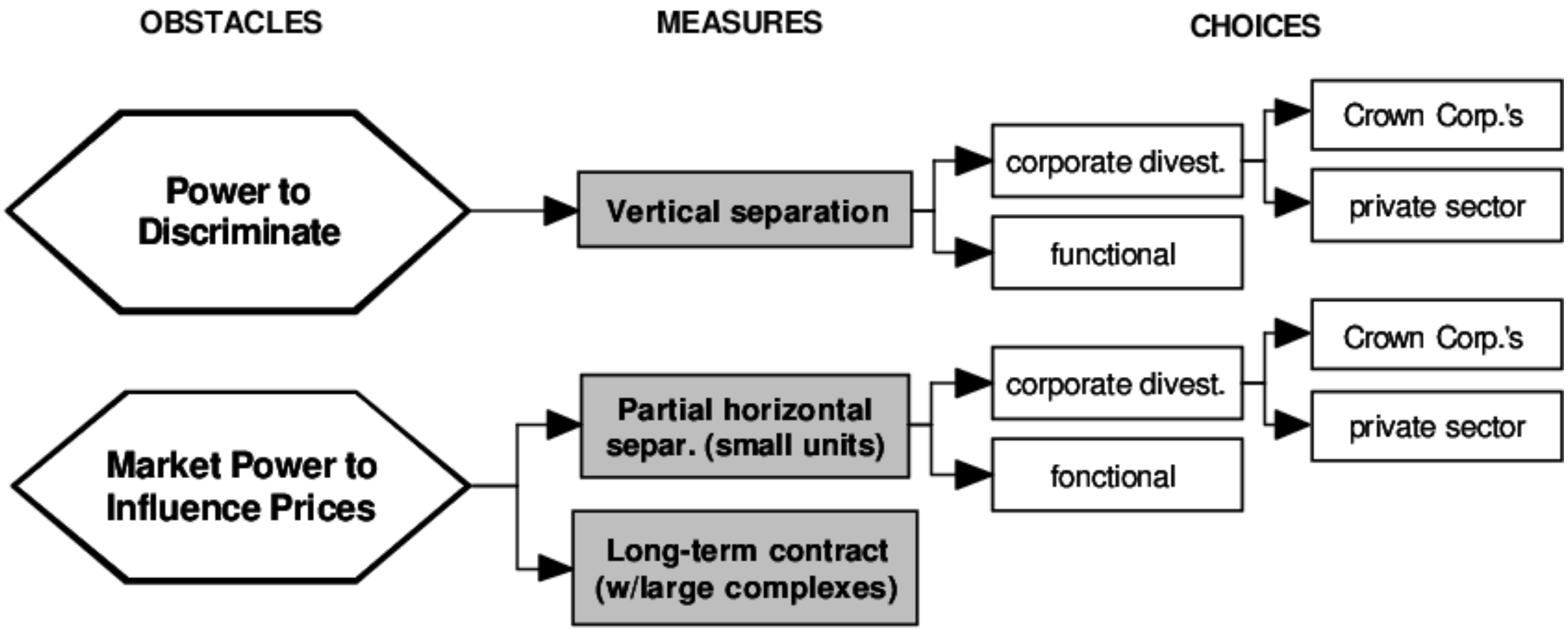
Theory of effective (workable) competition

Effective competition is a concept first proposed by John Maurice Clark, then under the name of "workable competition," as a "workable" alternative to the economic theory of perfect competition, as perfect competition is seldom observed in the real world.

The Concept of Workable Competition

- The concept of workable competition was first enunciated by economist John M. Clark in 1940.
- He argued that the goal of policy should be to make competition "workable," not necessarily perfect.
- He proposed wide ranging criteria for judging whether competition was workable, e.g. the number of firms should be at least large as economies of scale permit, promotional expenses should not be excessive and advertising should be informative.

Decision Points for Workable Competition in Large Hydro-Dominated Markets



Workable competition may be defined as follows:

The antitrust laws are not ... unwise in promoting competition.... Rivalry can tend toward the same results as the competitive model.. .. Rivalry tends to keep costs and prices lower and quality higher than monopoly would ....

It is said that an imperfect market whose results are "reasonably compatible" with "general economic welfare" is "workably competitive." Workable competition is not a precise concept, but directs our attention to firm behavior, economic performance, and market structure.

Workable competition may be defined as follows:

…The general behavioral outlines are much clearer than those for structure or performance. For example, each firm should make its production and marketing decisions-especially on price and output-independently and without collusion with its competitors. Firms should not attempt to exclude or eliminate rivals ... except through competition on the merits, nor, in general, should a seller attempt to link the purchase or sale of any product ... any other .... The most persuasive criterion for judging whether a market is workably competitive is its actual performance.

The following appear to be general signs of non-workable competition:

1. profits persistently above usual investment returns,
2. "scale of many firms seriously outside the optimal range,"
3. “considerable excess capacity not justified by secular change or reasonable stand-by provision,"
4. "excessive" selling costs,
5. "persistent lag in adoption of cost-reducing technical changes or persistent suppression of product changes which would advantage buyers."

The following appear to be general signs of non-workable competition: Innovation and Quality of Service

Presumption	Evidence	Suggestion
Competition is not workable	Quality of Service, previously good, is declining	Not Workable
	Inventions are slow to be put into service (innovation is slow)	Not Workable
	New products and services appear frequently (innovation is rapid)	Workable
	Quality of service has begun to improve, after a decline	Workable
	Advertizing and marketing expense high	Possibly workable
	Attempts at product differentiation	Possibly workable
	Productivity increasing more rapidly; costs declining	Becoming more competitive
	Reported profits declining (if previously unregulated)	Becoming more competitive
	Product proliferation	Depends (reinforces conclusions)

The key structural variables are

1. the number and size distribution of sellers;

2. the conditions of entry by other firms into the market.

Austrian school theory

The Austrian School is a heterodox school of economic thought that emphasizes the spontaneous organizing power of the price mechanism, which was influential in the late 19th and early 20th century.

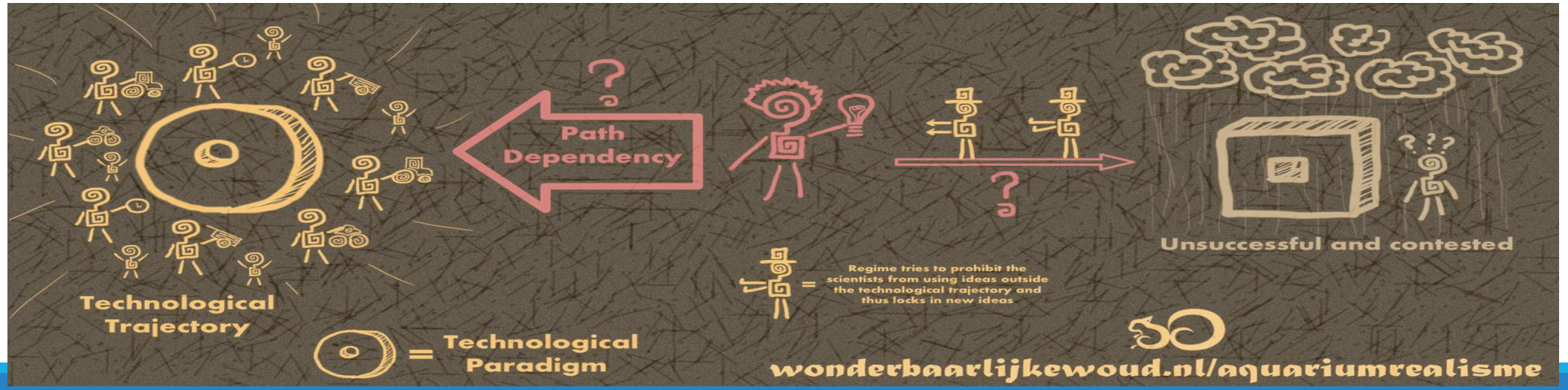
The Austrian economics based on three core concepts: entrepreneurship, subjectivism and market process, which became popular after that.

Austrian school theory

One of the Austrian's core concepts is ***entrepreneurship***. Austrian school thinks that the community is a collection of individuals. Individual's economic activity is a microcosm of the national economy. Through the interpretation of individual economic activities, reasoning illustrates the complexities of real economic phenomena. Entrepreneur is the individual here in the real economy. They are all different in each other. Therefore entrepreneurs in particular always face fundamental uncertainty.

What are “Evolutionary Economics”?

Evolutionary economics is a term coined by Thorstein Veblen (1857-1929), an American economist and sociologist. Veblen's evolutionary economics drew upon anthropology, sociology, psychology and Darwinian principles. Veblen's work was expanded upon by Joseph Schumpeter and several other economists in later years.



Evolutionary economics is part of mainstream economics as well as a heterodox school of economic thought that is inspired by evolutionary biology. Much like mainstream economics, it stresses complex interdependencies, competition, growth, structural change, and resource constraints but differs in the approaches which are used to analyze these phenomena.

Evolutionary economics deals with the study of processes that transform economy for firms, institutions, industries, employment, production, trade and growth within, through the actions of diverse agents from experience and interactions, using evolutionary methodology. Evolutionary economics analyses the unleashing of a process of technological and institutional innovation by generating and testing a diversity of ideas which discover and accumulate more survival value for the costs incurred than competing alternatives. The evidence suggests that it could be adaptive efficiency that defines economic efficiency. Mainstream economic reasoning begins with the postulates of scarcity and rational agents (that is, agents modeled as maximizing their individual welfare), with the "rational choice" for any agent being a straightforward exercise in mathematical optimization. There has been renewed interest in treating economic systems as evolutionary systems in the developing field of Complexity economics.

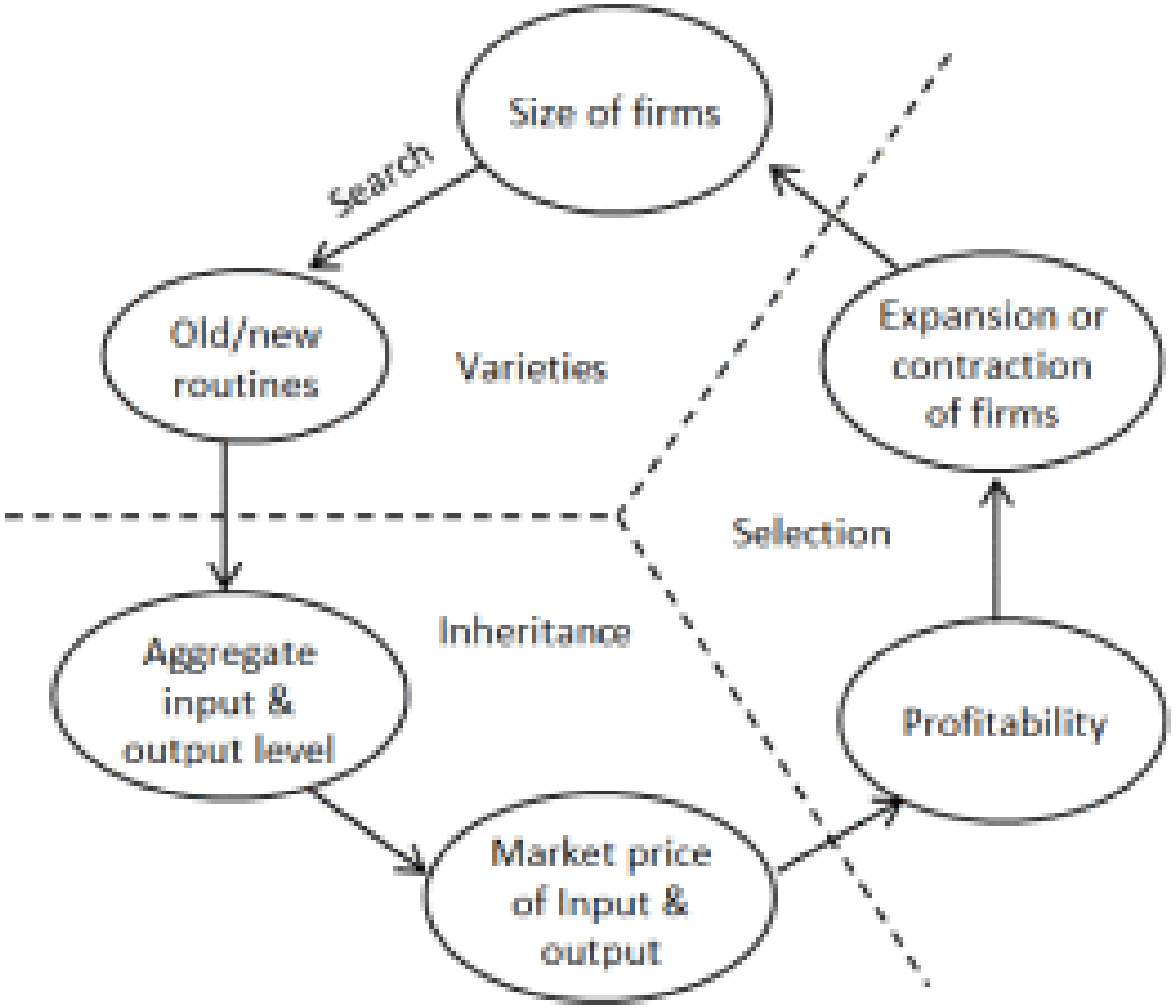
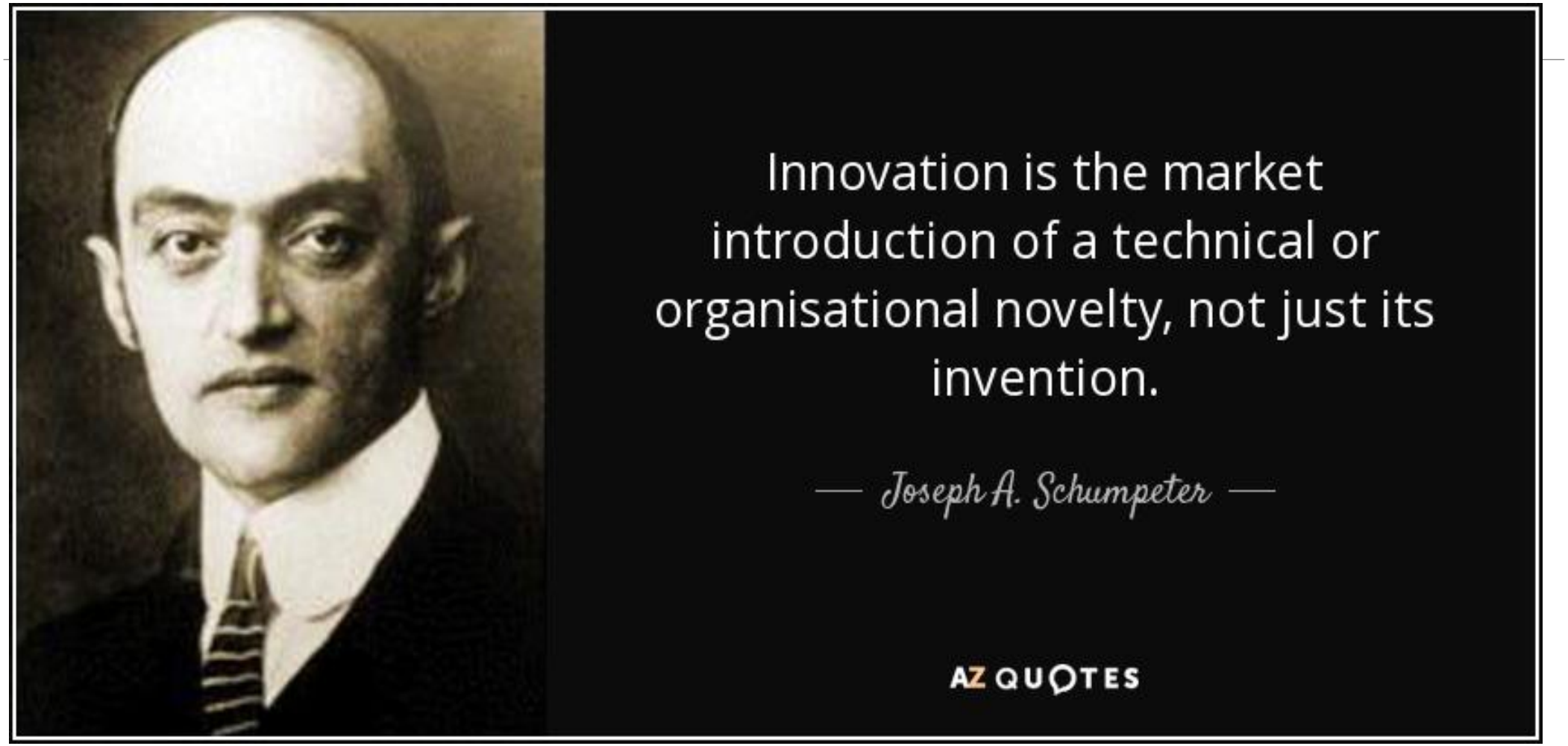


Figure 1 Typical evolutionary cycle
Source: summarised from Nelson and Winter (1982)

JOSEPH SCHUMPETER (1883 — 1950)



JOSEPH SCHUMPETER'S CONTRIBUTTION TO ENTREPRENEURSHIP:-

JOSEPH SCHUMPETER was the person who gave a well-rounded picture of an entrepreneur. He disclosed the various aspects of entrepreneurship and produced the competent history of entrepreneurship in economic theory.

In his book **The Theory of Economic Development** he said that art, political, innovative activities are on one side & repetitive and mechanical activities are on other side. He developed theories of interest, profit, credit & business cycle. He said that entrepreneur doesn't have to be a single person but can be an organization. He stressed more on technological innovations rather than on organizational innovations.

Technology revolution

U.S. Innovation Master Theorist: Josesph Schumpter

Tech innovation intrinsic to capitalist dynamic: AND

1. Innovation comes from the individual entrepreneur, not labor, government, or social relations.

2. Social relations are anti-innovative, so innovation must disrupt/destroy companies, industries, communities.

3. Governance--expressed as bureaucracy, democracy, unions, faculty senates, etc—is also anti-innovative.

4. Innovation's risk justifies unlimited capital accumulation and monopoly.

5. Innovation always means replacing human labor with technology.

KRUGMAN MODEL - MONOPOLISTIC COMPETITION

This model uses economies of scale, differentiated products and heterogenous preferences to explain intraindustry trade.

The essence of the model is as follows:

- preferences are heterogeneous between and within countries

- production experiences economies of scale

- products are differentiated

KRUGMAN MODEL - MONOPOLISTIC COMPETITION

Industries within a country will produce goods which are targeted for the majority of their home consumers, thereby, exploiting economies of scale. However, not all consumers have the same preferences. Some minority will have preferences for the styles etc. produced elsewhere. Domestic firms find small production runs costly and forgo this segment of the market. This minority then winds up buying imported goods. The converse is also true that some portion of foreign consumers will have a greater preference for home country goods and home country winds up exporting to foreign's minority's share of the market.

The implications for this model transcends a simple explanation of intra-industry trade. It lies at the heart of the controversy of managed trade and industrial policy. With economies of scale there are only a feasible small number of firms to satisfy world demand (aircraft, for example). Under these conditions, the principle of first movers winning market share makes for compelling logic for advocates of managed trade.

The model:

Preliminaries -

Economies of scale can be modelled by the following total cost linear equation,

$$\mathbf{C = F + cX.}$$

Total cost is equal to the sum of fixed costs (F) and variable costs cX. Note that the parameter c is constant marginal cost.

Average cost are: $\mathbf{AC = F/X + c}$

Monopolistically competitive firms face a downward sloping demand due to brand loyalty etc. Profit maximization Marginal revenue = Marginal Cost, but unlike perfect competition, marginal revenue no longer equals price.

Marginal Revenue (MR) - is the change in total revenue due to a change in quantity.

Assuming a linear demand curve given by:

$$\mathbf{X = A - BP,}$$

then by simple algebra - $A = X + BP$.

The inverse linear demand curve is $P = A/B - X/B$. MR from this is $MR = (A - 2X)/B$. Substitute in for A, $MR = (X + BP - 2X)/B = (BP - X)/B$, therefore

$$\mathbf{MR = P - X/B.}$$

Assumptions of the model.

Demand facing typical monopolistically competitive firm:

$$\mathbf{X = S[1/n - b(P - P_{avg})],}$$

where X is the firm's sales, S is the total sales of the industry, n the number of firms in the industry, P the price charged by the firm itself, and P_{avg} the average price charged by its competitors. The following intuition follows from this equation: if all firms charge the same price then $P = P_{avg}$ and the firms equally share the market. A firm charging more than the industry average will have a smaller market share and a firm less than the average will gain market share. A simplifying assumption is that total industry sales, S, is unaffected by price. This means that price competition simply rearranges market share without increasing the total.

Market equilibrium - first assume all firms are symmetric, the demand and cost functions are the same for all firms even though they are producing differentiated products. In order to determine the behavior of the firm we first need to describe the industry, that is to determine n and Pavg.

This is a 3 step process:

1) derive the relationship between the number of firms and the average cost of a typical firm. This relationship is upward sloping. The greater the number of firms the lower each firms output and with economies of scale the greater the average costs.
2) derive the relationship between the number of firms and the price that each firm charges which must equal Pavg in equilibrium. This will be downward sloping, the greater the number firms the greater the competition and consequently the lower the price charged by each firm.
3) with monopolistically competitive industry long profits equal zero. If price is greater than average cost then the number of firms will increase, if less then the number decreases. Thus the number of firms in the industry is determined by the relation of average costs and price to n.

The number of firms and average cost. Since all firms are symmetric then in equilibrium $P = P_{avg}$ then the firm's demand curve devolves into:

$X = S/n$, that is all firms equally share the market. Using the average cost function derived earlier,

$$AC = F/X + c = nF/S + c.$$

The more numerous the firms the higher the average cost, ceteris paribus.

The number of firms and the price. The price that the typical firm charges is also dependent on the number of firms. Each firm takes P_{avg} as exogenous. We can rewrite the firm' demand curve as:

$$\mathbf{X = (S/n + SbP_{avg}) - SbP}$$

which is nothing more than a linear function with $(S/n + SbP_{avg})$ being the intercept term and Sb the slope. Going back to the earlier derivation of MR we can write the firm's marginal revenue as:

$$\mathbf{MR = P - X/Sb.}$$

Profit maximization requires the equality of MR and MC, therefore:

$$\mathbf{P - X/Sb = c,}$$

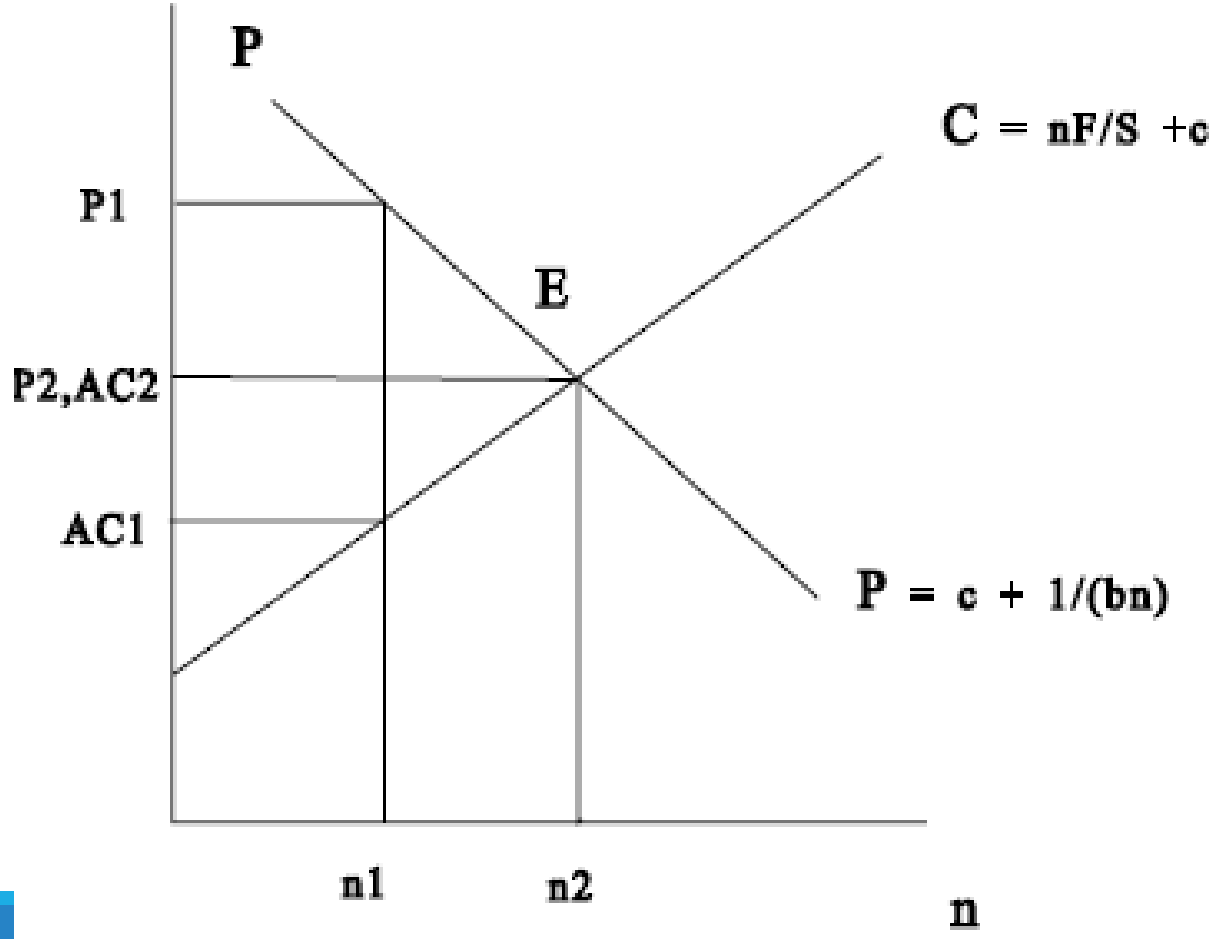
which rearranged leads to :

$$\mathbf{P = c + X/(Sb),}$$

but with each firm charging the same price then X is an equal share of the market, S/n, thus:

$$\mathbf{P = c + 1/(bn).}$$

Equilibrium number of firms. The following diagram shows the equilibrium number of firms such that there are zero profits.



Equilibrium occurs at n2 where price is equal to average cost, ie, zero economic profits. This is a long run equilibrium. Suppose that the number of firms was equal to n1. Then price would be P1 and average cost AC1. Under these conditions economic profits would be positive leading to entry increasing the number of firms up to n2. Should the number of firms be greater than n2 then the opposite would occur.

International Trade

We can now use this model to derive some important implications for international trade.
With international trade the size of the market increases. This enters in the average cost equation as S. An increase in S shifts the average cost curve downwards thus lowering the price of the good while increasing the number of viable firms. The greater the number of firms the more the number of differentiated products, thus international trade provides consumers with greater variety and lower prices. The P line is independent of S and therefore does not shift. Note though that with a non-horizontal P line the number of firms that will exist in the long run with trade is less than the sum of the numbers across countries in autarky. Who will win? Those who get there first!


Thank
you

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