

**BUSINESS AND FINANCIAL ENVIRONMENT  
A Provisional Text**

**(Revised October 2010)**

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## INTRODUCTION

*Economics along with as psychology and sociology and areas of application in accounting and finance, are the foundation of the analysis of management decisions, including strategy, marketing, human resource studies and operations. We should distinguish between analysis of business decision making, which I see as describing the system state in which business takes place (inner and outer dynamics, grammar and payoffs) accurately and the strategic process (search among alternatives, choice and commitment to a particular set of actions, implementation and adaptation).*

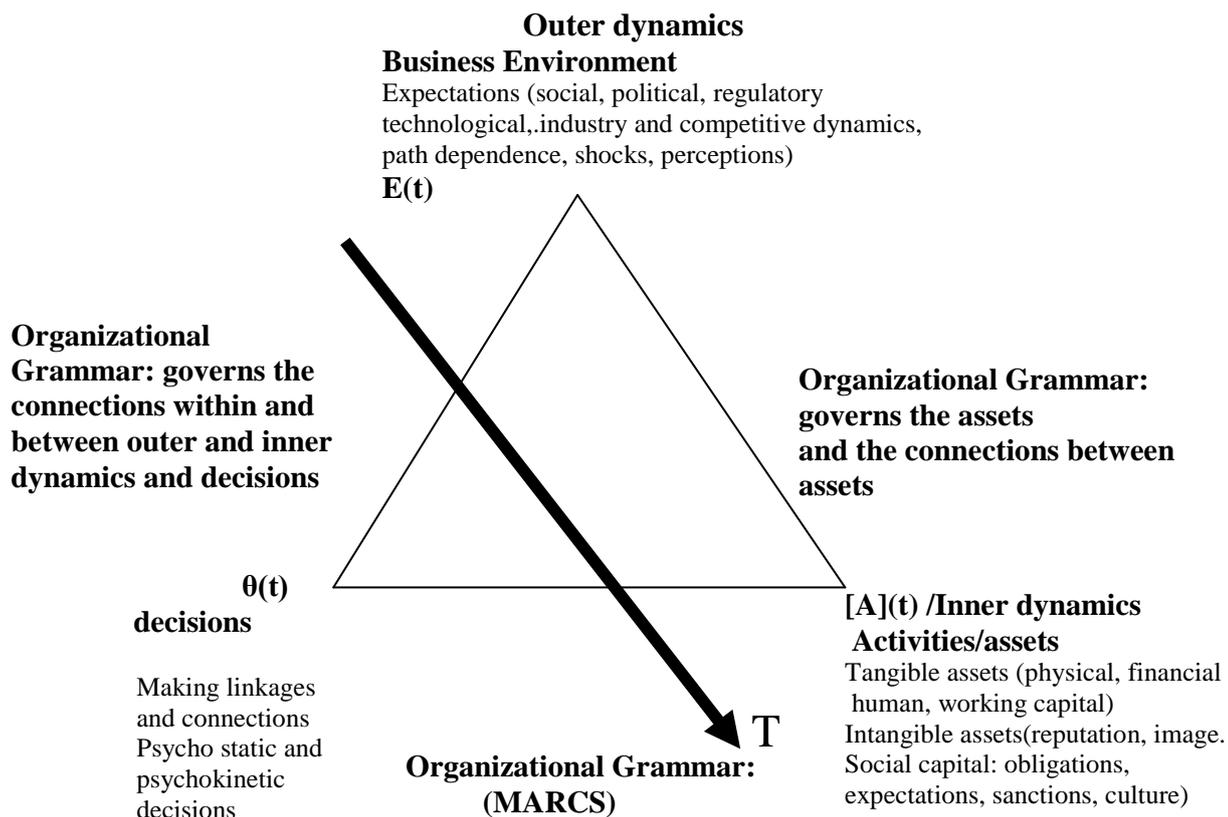
1. We begin with an overview of the relation between managerial economics and strategy. Then we go on to discuss micro and macro aspects of the business environment.
2. Managerial economics together with other disciplines such as psychology and sociology are important foundations of corporate strategy (or business policy as it is sometimes called). Increasingly techniques and approaches found in the physical and biological sciences, will become more evident in management in so far as they are concerned with searching for solutions to complex problems about the evolution and transition of systems. This applies to all the sub-disciplines of management; strategy, marketing, operations and operations research, accounting, and to some extent human resource management and finance and accounting which are important disciplines related to.
3. The role of strategy is to generate payoffs; that is returns to the stakeholders (shareholders, creditors, customers, employees governments, ecologies) of organizations or societies. The fitness of organizations or societies is measured by their sustainability, their ability to persist and grow over time, and to generate payoffs for their various stakeholders.
4. According to the current discourse of the market economy the principal stakeholder in organizations is said to be the shareholder. Management text generally proclaim this view as if it were self evidently true. In fact concentration on the interests of shareholders and on creating shareholder value is relatively new. And it is a view that is most pronounced in Anglo Saxon economies.

### **A meta model or framework**

*A definition of the strategic problem is that it is an organizations attempt to reconcile the changes in the business environment (outer dynamics) with its internal capabilities (inner dynamics).*

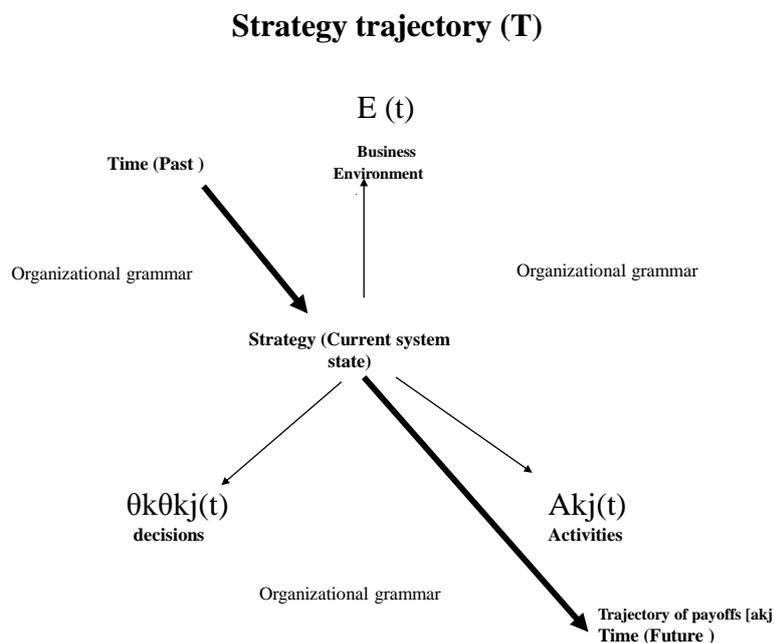
5. At this point in the text we introduce a simple strategic framework. Later we discuss the role of managerial economics within that framework. *The simple model is expressed as a meta model because most of the models in the study and practice of management fit into one or more of the categories of the meta model.*

6. Normal science in economics is gradually moving away from a mechanistic methodology to one that is linked more closely to an evolutionary approach. The notion of the economy as a complex adaptive system is particularly important.
7. Figure 4 pictures organizational payoffs as resulting from the interaction of four complex adaptive systems: inner dynamics, outer dynamics, payoffs and organizational grammar.
8. The model is termed a meta model first because most strategic theories fit into one or other of its categories and second because the role of managerial economics is discussed below in terms of the meta model.
9. Consider outer dynamics first. Important elements of outer dynamics are (a) competitive dynamics, the strategies of rivals, and partners, technological change, government policy, (b) random shocks and events that are unpredictable, (c) history and path dependence (decisions taken in the past affect future possibilities and determine the system state of an organization see below).



**Figure 1a**

10. Since these elements change through time strategy consists of a set of moves, a trajectory (T) through time in response to these changes.
11. We define the existing condition of the environment and the organizations capabilities as **the system state** and strategy as a trajectory T through time takes place in a series of systems states (the environment keeps changing). All this take in the context of a set of rules, regulations, conventions norms, cultures, treaties, contracts, formal and informal arrangements – which we term **organizational grammar**.
12. An alternative way of presenting the strategic process is illustrated in figure 2.



**Figure 2<sup>1</sup>**

13. Inner dynamics are made up of the organizations assets and decisions that are made about the use of these assets. Analysis of the process of organizing inner dynamics in the face of changing outer dynamics is described in a group of theories variously described as resource based theory, capability or competence theory, and dynamic capability theory.

<sup>1</sup> See table 1 below for explanations of elements in the diagram. Generally E is outer dynamics A refers to assets and  $\theta$  refers to decisions. The letter t (in E(t)) for example is meant to remind you that we are talking about a particular moment in time.  $\theta_i \theta_j$  stand for decisions and are meant to remind you that in organizations for example there is not a single decision maker and the decisions of one person (i for example may be Igor) have an impact on the effect of the decisions and outcomes of another person (j, who for example may be Jane), and so on.

Roughly speaking the three related theories are distinguished as follows.

**Resource based theory** focuses on the importance decisions about the creation and use of tangible and intangible assets;

**Capability or competence theory** emphasizes (together with tangible and intangible assets), the importance of the stock of knowledge existing in organizations and societies;

**Dynamic capability theory** tends to emphasize (together with tangible and intangible assets, and the stock of knowledge) the importance of the capacity to learn and adapt to changing outer dynamics. The latter set of theories also emphasize the importance of corporate (or societal) cultures, structures and architectures (things we later classify as part of organizational grammar).

### BOX 1

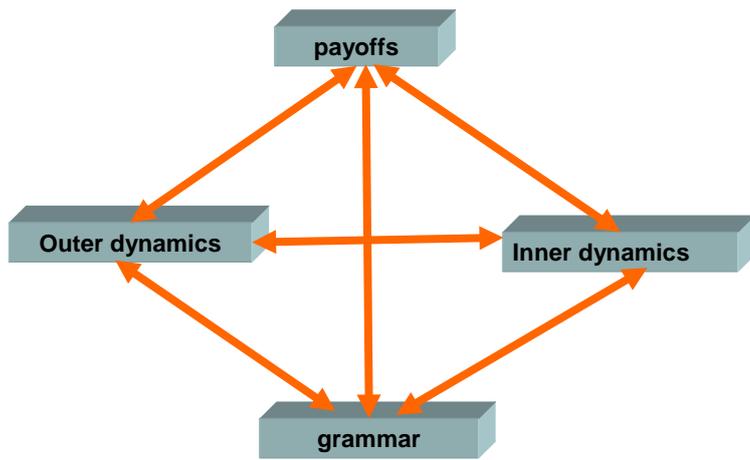
14. The categories in the simple model ideas are summarized by the metaphor of the game of chess in box 2 below.

A game of chess can be described as a set of **system states** through time, defined by the positions of the pieces on the board (one player's pieces in relation to his or her opponents), is conditioned by a set of rules (**grammar**), and play proceeds as a **trajectory** (moves of the pieces) through time. **Outer dynamics** are sometimes called the business **environment** which consists of the other player, the room, its temperature, the board itself, and so on. **Inner dynamics** are sometimes described as a firm's capabilities.

**Capabilities** are defined by the player's assets (including human assets – his or her skills, their capability of learning and adapting to new information) and the decisions he or she takes (using assets and linking them together). **Grammar** is made up of the rules of the game of chess. The chess example is a simple one but it serves to illustrate the categories of the meta model and this is illustrated in table 1 below.

### BOX 2

15. Figure 3 describes the context of strategy as a meta model Table I briefly describes the main elements of the meta model.



<b>OUTER DYNAMICS</b>	<i>The outer dynamics of the game made up of the features of the room (temperature, background noise for example) the audience and their support for one player or another , the time and place of the match the competitors and how they are matched against each other: if there are more than two players for example, who is matched against whom, when and in what order the games take place.</i>
<b>INNER DYNAMICS</b>	<i>The inner dynamics, refers to the assets of the particular player (whose strategy and success we are concerned with) in terms of skills, intelligence, foresight, experience, and reputation, and the decisions he or she takes.</i>
<b>GRAMMAR</b>	<i>The grammar of the game consists of the chess pieces (knight, bishop, pawn and so on) and the rules that govern how each piece is permitted to move.</i>
<b>PAYOFFS</b>	<i>Payoffs from the game in monetary terms are prize money. In none monetary terms they may be measured in terms of the players utility (or disutility) from winning (or losing). If we extend the example to include other stakeholders this includes, for example, the pleasure or the utility the audience gets from the game and in monetary terms it includes the proceeds of betting on the games .</i>

**Table 1**

**Organizational grammar explained further**

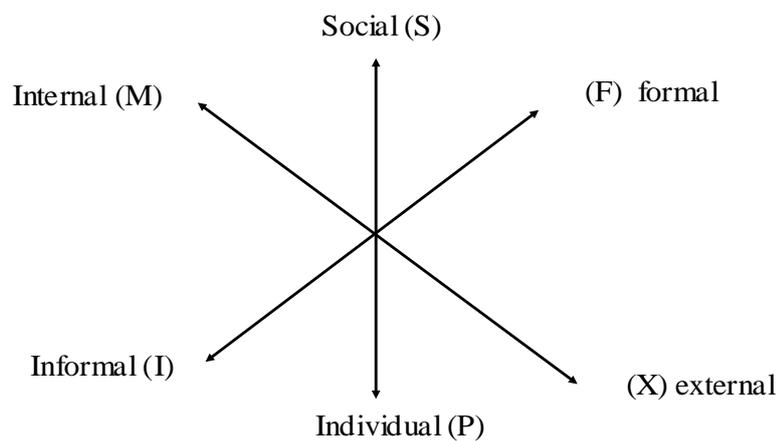
*Organizational grammar describes the rules of the strategic game. The elements of grammar are summarized by the acronym **marcs***

16. In the analytic model grammar includes the inner personal grammar (mind sets) that governs ordinary consciousness. The role of mind sets is important; attitudes of mind and implicit assumptions held by the individual often unconsciously. Grammar in an outer sense consists of the rules, regulations; that is, architectures and routines, Often countries have shared mindsets because their citizens share experiences and institutions: similarly people who work in the the same organizations are said to have a shared (corporate) culture. Such shared values and assumptions, we refer to as culture, The networks that connect the architectures and routine are included in the firms structures.
17. The acronym **marcs** is a convenient way of describing grammar.
18. We can think of organizational grammar as having three dimensions: *formal informal, external internal and social individual*, as in table 2 below.

<b>FORMAL/ INFORMAL</b>	<p><i>Formal mechanisms</i> include rules, laws, regulations, treaties, hierarchies, agreements, contracts; <i>Informal mechanisms</i> include customs, cultures, habits, norms, values, a sense of mission, or a vision of the future.</p>
<b>INTERNAL/EXTERNAL</b>	<p><i>Formal</i> and <i>informal</i> mechanisms are constructed both <i>internally</i> and <i>externally</i>: firms have their own rules, cultures and so on in addition to those that operate at a societal level.</p>
<b>INDIVIDUAL/SOCIAL</b>	<p>In addition there are <i>individual</i> and <i>social</i> values, norms and perhaps most important, habits of behavior and thought that govern individual and social behavior.</p>

**Table 2**

Alternatively the dimensions of grammar can be described by the diagram in Figure 4.



**Figure 4 Dimensions of organizational grammar**

### **A note on payoffs**

*The current discourse (roughly speaking the implicit assumptions behind most management texts) of management focuses almost entirely upon the need to create shareholder value. Payoffs to other stakeholders are at least equally important.*

19. Payoffs are a surplus over and above costs. Payoffs are the surplus that an organization has available to distribute to its stakeholders; to shareholders in the form of profits, dividends; to customers as value for money; to employees as wages or working conditions for employees; or to the care or welfare of the community; or to sustaining the environment, the ecological systems of the globe, and its creatures.
20. Payoffs are the result of the interaction between four complex systems: payoffs themselves, inner dynamics, outer dynamics and organizational grammar.

### **Strategy and game theory**

*Game theory is intrinsic to management because the outcomes of decisions depend on the reactions of other decision makers or stakeholders.*

21. Game theory is intrinsic to strategy: the key insight with respect to a firm's strategy is that the outcome of a strategy pursued by one player (or firm) depends on the responses or reactions of other players (or other firms). Within a firm the outcome of a strategy designed by the CEO for example depends on the reactions of other *players* in the company who are supposed to implement the strategy; *Can they or will they do so?*
22. Using the language of game theory a complete statement of strategy in for example a game of chess would specify a sequence of decisions and moves as the game unfolds.<sup>2</sup>

### **Bounded rationality**

*Analysis is greatly simplified if it is assumed that decision makers attempt to optimize or maximize payoffs. But decisions are subject to limitations of knowledge and understanding (bounded rationality).*

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1. <sup>2</sup> The extra (marginal) revenues generated by a reduction in one firm's prices for product X) depend on how other firms (producing product X) respond to that price change. Do other firms keep their prices constant? In which case demand expands along DD<sub>1</sub>. Or do they allow their prices to fall? In which case demand expands along DD<sub>2</sub>. Note that DD<sub>1</sub> is more elastic than DD<sub>2</sub>.

23. In fact so many possibilities are encompassed by strategy that a complete specification is impossible. Hence strategy is often summarized broadly by mission statements and statements of mission, business definition, and intent. A simplistic version of this is to summarize the firm's objectives by the statement that it attempts to maximize profit.
24. A more realistic assumption, given that firms have many stakeholders and interest groups is to say that it *satisfices* - an ugly word but one that captures the idea that decision makers try to balance the (often conflicting) objectives of many stakeholders. This is all part of the strategy game.
25. The two limitations with respect to information processing:  
a) limited powers of calculation and  
b) limited powers of cognition.  
are the basis of what Herbert Simon speaks about as **Bounded Rationality**.
26. Note that developments in information and biotechnology have vastly expanded our capacities for processing information. In the early stages of the industrial revolution technology replaced manual tasks by machines (mechanical reproduction). In the new economy of later capitalism technology has begun to replace processes formerly carried out by (human) cognitive and neural functions by machines.
27. Decision-makers cannot possibly consider all alternative scenarios and possibilities. Often decisions involve NP hard problems. That is why we describe strategy as a search process. Humans limit themselves to a few search alternatives. The reason is that they operate in conditions of Bounded Rationality: uncertainty, limited information and limited powers of cognition.

### **Procedural Rationality**

*Procedural rationality implies that decision makers (or agents) carry out rational procedures in making decisions; search among alternatives, choice, implementation and adaptation in response to mistakes, miscalculations and change.*

28. All perhaps we can hope for is **procedural rationality**, that is behaving consistently, and taking account of opportunity costs and the impact on ones own decisions of the responses of others.
29. Jungian psychology offers an interesting summary of the factors entering into the decision process. A rational spectrum thinking and feeling is represented on the vertical axis; and an irrational spectrum, instinct (sensation) and intuition (wisdom is presented on the horizontal axis. See figure 5.

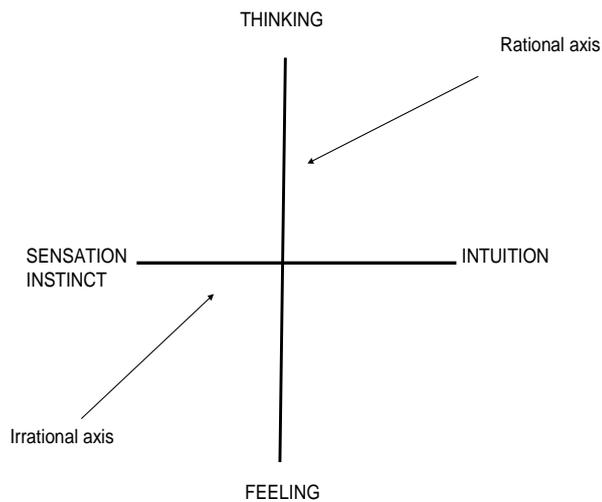


Figure 5

30. If we superimpose the responses introversion and extroversion on to the four personality types in figure 5 we have 8 personality types. If we also note that according to Jung individuals have one dominant function on each of the two axes (rational and irrational) and that in turn either rationality or irrationality dominates, we have 16 personality types.
31. Contrary to the Myers Briggs adoption of Jungian typology, Jung felt that an individuals particular type might vary over a lifetime or even over short spans of time.
32. Bear in mind that the simplification of optimization, or maximization though exceedingly useful, must be stretched to include the behaviour of all (16) personality types. So we should not be too literal about it.
33. Bear in mind also the usefulness of the maximization simplification throughout science. In evolutionary biology for example it is useful to think of bacterium as an agent, swimming upstream in order to optimize the amount of glucose it needs.
34. Rationality is distinct from irrationality in the Jungian model: rationality implies a *yes or no* response (like dislike in the case of feeling and an attempt at a logical response in the case of thinking): irrationality implies perhaps *fight or flight* or *gut response* in the case of instinct and a kind of wisdom with respect to the future in the case of intuition.

## MARKETS

*Markets are means of exchanging property rights. If property rights are private (private property rights then market economies may emerge.*

35. The major concepts you meet in an introductory course in economics are markets and opportunity costs.
36. What happens on markets is that people exchange ownership: or more formally they exchange their property rights over goods, transferring ownership from one person to another<sup>3</sup>. For this to happen efficiently a market economy has to have a well developed legal framework; this is part of the grammar of markets.
37. There have been many failures attributed to attempting to set up a market economy without an appropriate legal framework: or without an appropriate grammar which includes apart from a legal framework a disposition to trade (or exchange) and a willingness on the part of society to respect private property.
38. Generally capitalism consists of two distinct markets: (a) the market for goods and services and (b) the market for financial assets, especially debt and equity. This observation was emphasized Joseph Schumpeter in his analysis of capitalism.

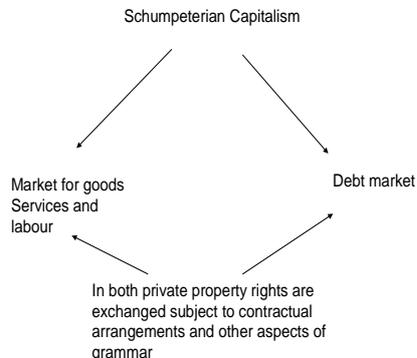


Figure 6

39. The purpose of one market (for goods and services) is to exchange private property, the purpose of the second (the debt/financial services) market is to provide a means of channeling saving into productive investment.
40. If property rights are defined and effective, then there is an incentive in a market economy for people to put the assets they own to their most valuable use. Hence a connection that is often made between the existence of a market economy and efficiency.

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<sup>3</sup> See section on property rights in the appendix below.

41. The working of markets are usually illustrated by supply demand diagrams as in figure 6. Such diagrams illustrate the notion of decentralized decision making. In a market economy, decisions are not made by a central planning agency (as in a statist economy): decisions are made by individual suppliers and demanders; that is decision making is decentralized.
42. Generally more will be supplied at a high than at a low price; hence supply such slope upwards. Similarly less will be demanded at high prices than a low prices: hence demand curves will slope downwards as in figure 6a and 6b below.

### Shifts in supply and demand curves

43. Figure 6 (a) defines demand and supply curves. Figure 6 (b) illustrate the impact of shifts in supply and demand curves. A decrease in supply (illustrated by a leftward shift in the supply curve) results in an increase in market clearing price and a reduction in quantity. An increase in demand (a rightward shift in the demand curve) results in an increase in market clearing price and quantity.
44. Shifts in both supply and demand curves are illustrated on the right hand side of figure 6 below. When both curves shift, without specific information about the extent of each shift in supply and demand curves, we can only make predictions about changes in either price or quantity. You may want to experiment with this idea for yourself.

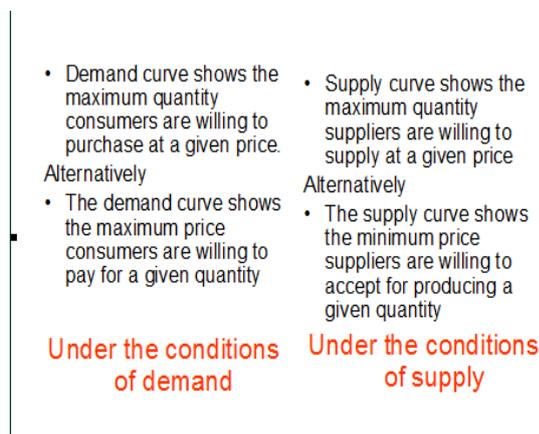


Figure 6a

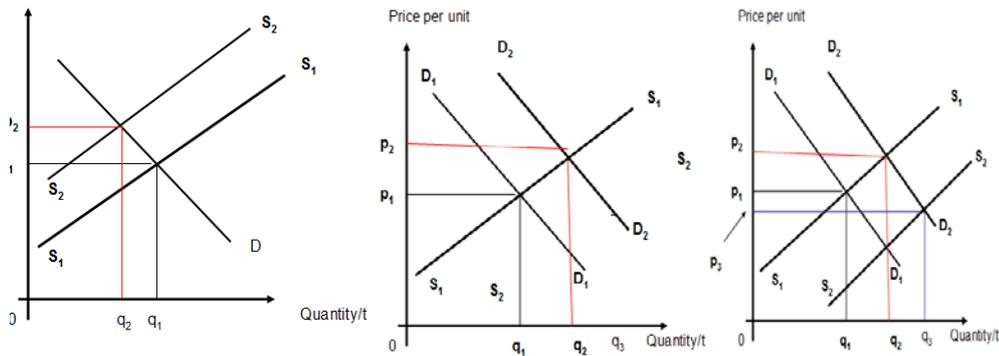


Figure 6b

### Decentralized decision making

*F. Hayek noted long ago the impossibility of central planning. It remains popular and perhaps inevitable within firms however especially in large firms. Even in governments it remains popular: government attempts at control in for example the British National Health Service (NHS) and education is through setting a multitude of outcomes: planning by qualities rather than by prices or quantities.*

45. In figure 6 no one needs to know the individual needs and wants of demanders, nor does any one individual need to know the capabilities of suppliers. Changes in supply or demand or both bring about responses in amounts supplied or demanded as a result of changes in price.
46. In the early 1930's an Austrian economist F. Hayek predicted the failure of centrally planned or statist economies, because, he argued, central planners needed too much information; information about the needs and wishes of millions of individual demanders and suppliers; needs and wishes that were constantly changing as a result for example of changes in the inner and outer dynamics of organizations and in organizational grammar.
47. Furthermore given private property markets provide incentives to optimize the value of assets that they own: that is to respond to changes in supply or demand conditions..
48. Thus markets are said to be efficient ways of allocating scarce resources; efficient in two senses; (a) informational efficiency in the sense of Hayek (only local information about demand and supply is required by decision makers) and (b) efficiency in terms of incentives.
49. Adam Smith spoke of an Invisible Hand existing in that somehow markets synchronized the decisions of millions of (often) selfish agents and result in an optimal allocation of resources. Individually selfish grammar was he thought not only neutralized by a grammar operating at the social level: but more than that, markets resulted in a positive sum game in which everyone benefited through mutual beneficial exchange.

## **The efficiency of the market systems**

50. A benchmark that economists tend to use for measuring the efficiency of an economy is the degree of competition. Perfect competition (price equal to marginal cost) for example produces an efficient allocation of resources. Perfect competition is of course an ideal state. However the availability of information (cheaply) is one of the conditions for perfect competition and one of the effects of the network economy is to increase the information available to buyers and sellers (and reduce the costs of obtaining information).

## **Social or Pareto optimum**

*Pareto optimum as a social optimum is defined as a situation in which it is impossible to make one person better off without making another worse off. Thus it is neutral with respect to distribution of income and wealth. It elevates efficiency above justice or fairness.*

51. Put another way, markets may provide a social optimum in that if they clear (that is if demand equals supply) then no further gains from trade or exchange exist. Thus we have a social optimum; defined in terms of exchange (between firms and individuals) in which firms trade (their goods and services) hire labour (and other resources in the value chain) in response to the demand of households and continue to do so so long as (net) benefits from trading exist: that is so long as the benefits exceed the costs..

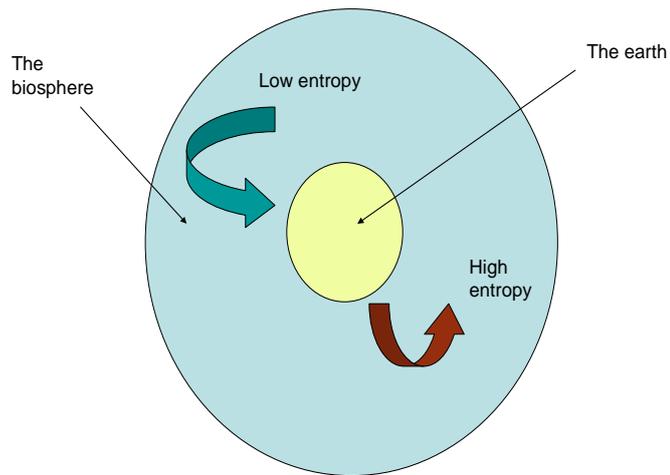
52. The social optimum is thus defined as a situation in which no further gains from trade are possible: it is defined as a situation in which it is impossible to make one individual better off without making another worse off – Pareto optimum named after the economist V. Pareto.

53. Unlike many current advocates of free markets, Adam Smith was in no doubt that in addition to (the grammar) of the Invisible Hand, markets required careful regulation, especially to prevent powerful groups exploiting weaker ones (monopoly, oligopoly and monopsony).

54. Thus he wrote of the need to regulate monopolies and cartels that attempt to fix prices to their own advantage and to the disadvantage of others. Unless markets are regulated, the individual grammar of greed and selfishness may subvert the social grammar of the Invisible Hand.

## **The entropy law**

*Economies are not self contained, merely systems of exchange between agents. They are open systems, transacting with the biosphere; extracting low entropy or useful resources from the biosphere and depositing high entropy, waste and pollution into the biosphere.*



55. Gaia theory places life itself at the centre rather than human beings. Rational approaches (maximizing, minimizing, optimizing) approaches tend to see the world, the ecological system, that is, as having merely the purpose of providing resources to be consumed by human beings. It takes an anthropomorphic view of the world. Gaia theory, pioneered by Lovelace sees the entire planet, its plants animals, and ecosystem generally as consisting of interdependent parts that depend on one another for existence.

### **Gaia theory**

James Lovelock in the 1960's was the first to state the **Gaia hypothesis**. He published his ideas formally in the *New Scientist* (February 13, 1975) and in 1979 in *Gaia: A new look at life on Earth*. Living matter on this planet, he thinks is a single organism that is self-regulating. The earth, he thinks, is a living system, which he names after the Greek goddess, *Gaia*.

The Gaia hypothesis has a weak form (Weak Gaia) and a more radical strong form (Strong Gaia).

According to the weak form, that few would deny, the Earth a coevolving system, radically altered by the living creatures that inhabit the earth; plants, animals humans. The stronger forms is that the Earth's biosphere is a complex adaptive system, acting in a self-organizing way, that keeps the sub-systems of which it is composed, in a state (meta-equilibrium) that supports life.

The history of evolution, ecology and climate show that the exact characteristics of this equilibrium have changed, sometimes very rapidly, causing extinctions of species and the emergence of new species, and the rise and fall of civilizations; these are emergent properties of complex adaptive systems.

Some thinkers emphasize the importance of dramatic changes that have taken place from time to time, disturbing the balance of life dramatically, leading to punctuated equilibrium; periods of stability punctuated by huge disturbances.

The strong Gaia hypothesis is that all life forms are part of one single living planetary being *Gaia*; the atmosphere, the sea and the earths crust, plants animals and humans co-evolve as part of a single Gaia, the living earth.

Lovelock defines Gaia as; *a complex entity involving the Earth's biosphere, atmosphere, oceans, and soil; the totality constituting a feedback or cybernetic system which seeks an optimal physical and chemical environment for life on this planet.*

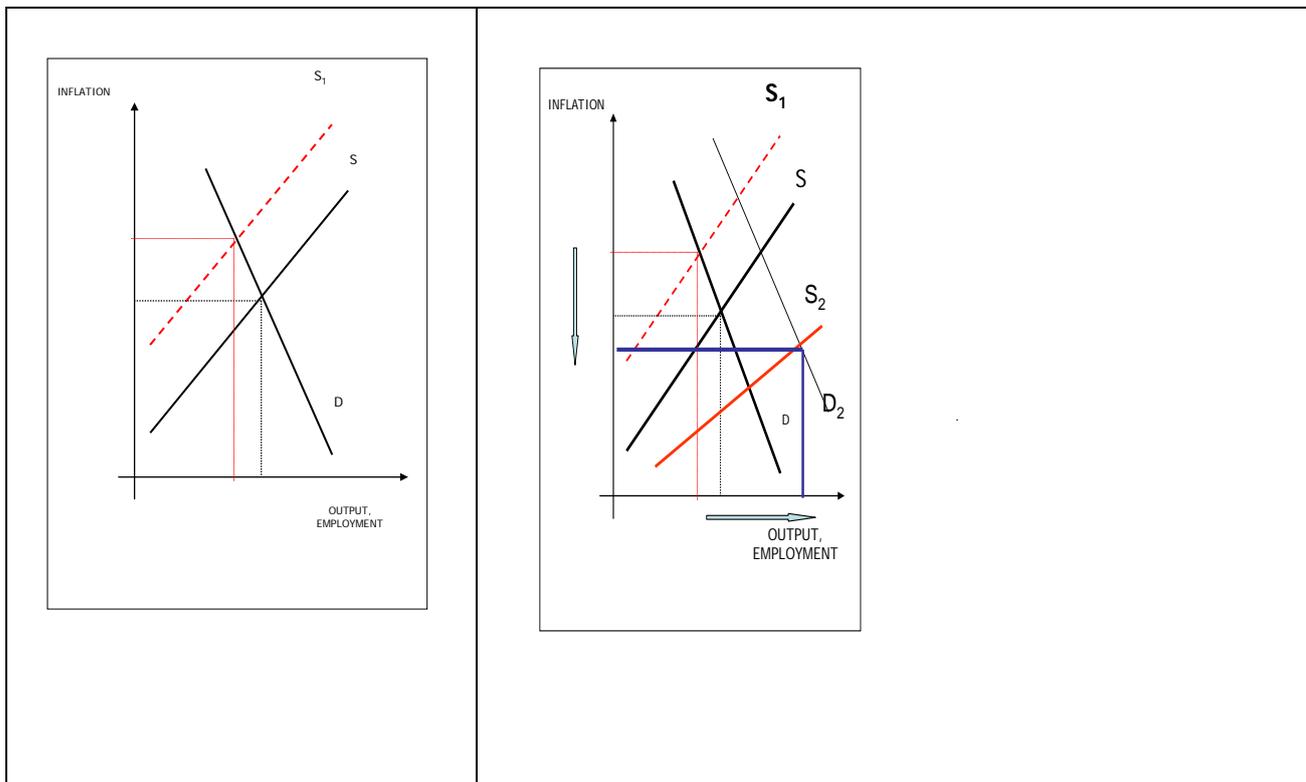
Box 3

### **Oil price shocks**

56. Figure 8 provides a different kind of illustration; oil price shocks. The diagrams are different from the preceding diagrams. On the horizontal axis we have (not output of a particular good or service but) aggregate output and on the vertical axis we have (not price) but inflation, that is, the rate of increase in the overall price level (not  $p$  as in the earlier diagrams but  $dP/dt$ , the rate of change so as we move up the vertical axis in the direction of the vertical arrows, inflation accelerates  $d^2P/dt^2 > 0$ ). Supply and demand curves in figure 8 are aggregate supply and demand curves for the goods and services in the entire economy.

57. In the early 1970's following the an Arab Israeli War OPEC placed an embargo on oil exports; illustrated by a shift left in the supply curve in 7(a). The embargo resulted both in increased inflationary pressure and a fall in employment, output and economic growth throughout the Western countries. A major recession followed the embargo, often termed stagflation, a mix of high inflation and unemployment.

58. The situation in the early part of this century was very different. Unprecedented global growth resulted in increased demand for oil (and for natural resources generally). In itself this would have accelerated inflationary pressure. However the increase in demand for oil was accompanied by increases in world growth and productivity, much of it originating in Asia. Thus the aggregate supply curve shifted rightwards, illustrated in 8(b) resulting in increased world output, growth and employment, accompanied (at the time of writing) by no increase in world inflationary pressure.



(a)

(b)

Figure 8

## Economic rent

59. Sometimes payoffs especially profits, are described as economic rent. This dates back to the time when the essential produce of a society was agricultural produce and the essential factor of production was land.
60. Economic rent refers to the excess returns that accrue to an asset or factor of production because it is scarce. The concept of economic rent used to be associated with land: rent was said to occur because some land was more fertile than others and hence earned a return that was above normal or average.
61. Note in the figure that when demand increases from DD1 to DD2, firms enjoy a price increase and the shaded area represents economic rent.
62. Soon rent came to be applied to all factors, especially labour: rent of ability referred to the fact that some skills were scarce and possessors of those skills earned a rent of ability. Hence a firm can be said to earn (or fail to earn a rent based on its **capabilities**).
63. Often the term profit is used as a synonym for economic rent. We will use the term payoff recognizing that
- organizations have many stakeholders,
  - payoffs take many forms and
  - distributed between stakeholders in any number of ways.
64. The shareholder value model focuses only on one set of stakeholders, the shareholder and one set of payoffs shareholder returns. *I leave you to evaluate this prejudice that is the basic assumption of most MBA text; considering that the shareholder is only one of a number of stakeholders (or constituents) of a firm.*

## Competitive advantage

65. The idea of rent has carried over into the field of strategy. Competitive advantage is a version of rent. It is a return above normal to a firm that occurs because it has special (scarce) resources (brand, niche, reputation perhaps) that enable it to differentiate its product and hence to charge a premium price. It may have special resources or capabilities that enable it to produce at lower costs than rivals..

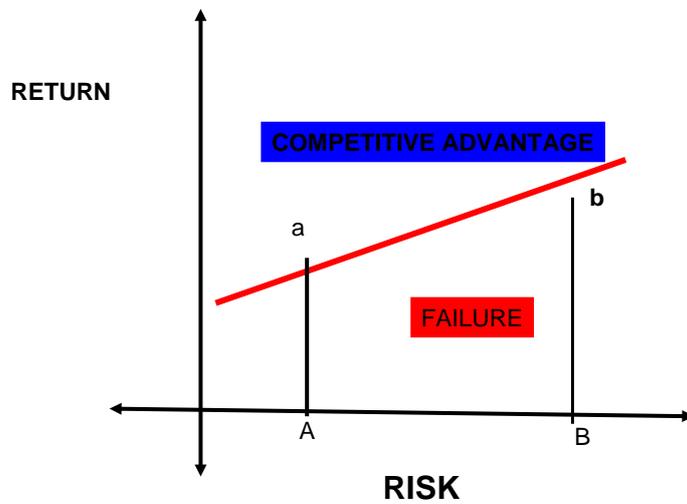
## Competitive advantage

- Competitive advantage:  
a return above normal to the company or organization.
- Measured by:
  - profits above average for the sector or industry
  - Above average share price growth
  - Above average **PAYOFFS** returns to stakeholders generally

66. Competitive advantage is defined as a **rate of return that is above normal for the sector or the risk class in which the organization competes**. In the figure below you can see that (if we make the assumption of risk averse behavior) higher risk is associated with higher returns: that is on average investors and firms require higher returns to compensate for absorbing higher risk. Hence the competitive advantage line slopes upwards to the right.

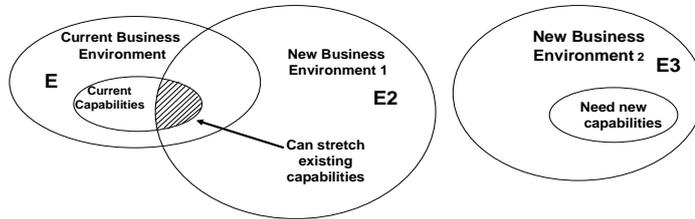
67. A further implication of this definition of competitive advantage is that higher returns do not guarantee competitive advantage or even survival. In the diagram below B earns a higher return than A yet it is the former (A) who earns competitive advantage and the latter (B) who does not: B does not earn a return that is appropriate to the risk of the project or projects which (as a firm or an individual) in which B is involved.

68. Economic rent as noted above can accrue to any of the assets listed in figure 1. The idea of dynamic capability is an extension of competitive advantage and rent. Dynamic capabilities refer to a firm's capacity to sustain competitive advantage by learning and adapting its strategy over time in response to changes in the business environment. The capacity to learn and adapt is also an asset.



**Figure 9**

69. Strategy is partly a process of reconciling the business environment (**outer dynamics**) of an organization with its **dynamic capabilities**: the resources it has available (**inner dynamics**) and the organizational and architectures routines and culture that link these assets together and preserve and advance the knowledge and expertise that the firm possesses (**organizational grammar, marcs**). This is illustrated in figure 10 below.
70. A key organizational problem is the necessity to create a self adaptive system; an organization that is capable of adapting to change. In the discourse of competitive advantage possessing dynamic enables an organization earn sustainable rents or sustainable competitive advantage.
71. A typical situation is illustrated in figure when a firm faces a change in its business environment. Can it stretch its capabilities to meet the new environment?



**Figure 10**

72. Roughly speaking **dynamic capabilities describe the unique qualities that organizations may possess which enable them to compete successfully (that means earning an economic rent) and adapt to change.** It should be noted that most organizations have very short lifetimes which implies that very few of them possesses dynamic capabilities<sup>4</sup>.

**The industry structure conduct and performance approach (SCP)**

73. Important elements outer dynamics Industry structure and the conduct of firms (the degree of competition, monopoly, market power barriers to new entrants and so on) within the industry.

Industry Structure	<ul style="list-style-type: none"> <li>• Number of competing firms</li> <li>• Homogeneity of products</li> <li>• Ease of entry and exit</li> </ul>	<p>THE DISCOURSE OF COMPETITIVE ADVANTAGE (Focus on shareholders as stakeholders)</p>
Conduct of firms	<ul style="list-style-type: none"> <li>• Price taking or price making</li> <li>• Product differentiation</li> <li>• Exploitation of market power</li> </ul>	
Performance (affecting only stockholders)	<ul style="list-style-type: none"> <li>• Firms may earn supernormal profit (competitive advantage) or merely survive or fail</li> <li>• Society; efficient allocation of resources,</li> </ul>	
Monetary returns		
Performance (affecting all stakeholders)	<ul style="list-style-type: none"> <li>• Sustainability, responsibility and ethics.</li> <li>• Social welfare and distribution</li> <li>• Ecology</li> </ul>	<p>AN ALTERNATIVE DISCOURSE (a broader view of stakeholders and payoffs)</p>
Payoffs		

<sup>4</sup> See appendix below.

## Profit maximization

74. Much of economics proceeds on the assumption that main stakeholder is the owner or stockholder so the objective is profit maximization or the search for competitive advantage (a return above normal for the risk class or sector); under conditions of bounded rationality (limited information and powers of calculation). Focus on competitive advantage leads naturally to discussion of costs and revenues
75. A common assumption in economics is that economic agents (producers or consumers) are profit maximisers or utility maximisers. Although the assumption is in some senses unreal (see the comments above about bounded rationality) it is very useful in that it enables economists to make predictions about the future.
76. Technically if profits are defined as the difference between revenues  $R$  and (opportunity costs)  $C$ , they are maximized at levels of output ( $Q$ ) where marginal revenues (additions to total revenues from additional units of output  $dR/dQ$  equal marginal cost  $dC/dQ$ .
77. If marginal revenues exceed marginal costs then it is worth expanding output and if marginal costs exceed marginal revenue then profit can be increased if output is contracted. If we think of organizations as producing payoffs (that is returns to the entire stakeholder group) rather than just profit (returns to equity holders) then it makes sense (and links with game theory) to think of firms as maximizing payoffs (that is attempting to reach a position where marginal benefits (MB) equal marginal costs (MC) (both accruing to all stakeholders.
78. This kind of maximization only holds when we have very simple functions to deal with: regular profit hills where maximization occurs at the top of a (convex shaped) hill and the hill only has one peak. Typically in business managers are dealing with rugged landscapes rather than nicely shaped hills. But the assumption of convexity is very useful and widespread in economics and finance.

## Stakeholders

79. The term stakeholder refers to all those individuals or group whose are affected by the decisions of organizations and the outcomes of organizational strategy; shareholders, partners, owner managers, customers and clients, employees, managers, the government, competitors, collaborators, the community at large. Organizations have many decision-makers whose objectives may conflict, simply because they have different objectives.

## MACROECONOMIC BACKGROUND

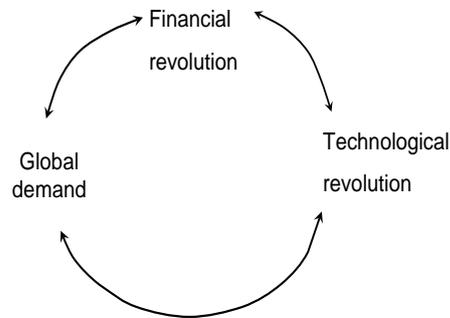
### New capitalism

80. Probably for the first time in history a single system of economic organization prevails - capitalism or the market system: I use the terms equivalently.
81. As Schumpeter noted more than fifty years ago, a capitalist system has two distinct features: private ownership complemented by the availability of debt capital.
82. New capitalism has two additional features: it relies heavily upon the information content of products and processes and it is a global phenomenon, profoundly influenced by the USA.
83. These two features distinguish New Capitalism, which developed in the latter part of the twentieth century, from older versions: in particular the global capitalism that developed in the latter part of the nineteenth century and lasted until the First World War.
84. Key aspects of modern economic history are the emergence of the New Economy, especially in the United States. The term New Economy describes the increasing importance of industries based upon *information and communications technology* (ICT). In the USA, for example, New Economy industries account for only around 5-6% Of employment and output, yet they account for most of the growth in the economy as a whole. The same is true in the UK, although the ICT sectors are much smaller in absolute terms.
85. As a result of the information revolution, the information content of products has increased immensely. Much of our society is concerned with the production of information; including information technology itself.
86. But more significant is the extent to which it is concerned with the production of images and signs. We are increasingly identified by what we consume. What we are is signaled by what we wear, eat travel in and so on. In the effort to maintain demand products, advertising, images are are increasingly linked to two aspects of human consciousness: anxiety and libido:

### Globalization

87. The global economy (New Capitalism) results from interactions between
- A financial revolution; deregulated foreign exchange markets and financial sectors
  - A revolution in new technology industries especially information, telecommunications and bio technology and
  - Globalization in the search for larger markets.

Outer dynamics  
Globalisation  
as a complex adaptive system

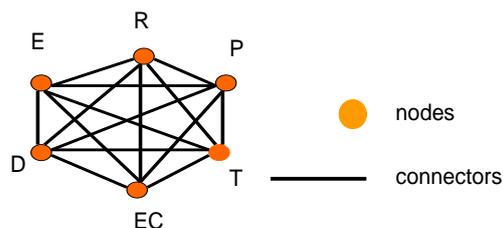


88. The financial revolution of the 1970's and 1980's took the form of liberalization of foreign exchange markets and the deregulation of domestic capital markets. Liberalization took the form of flexible exchange rates and enabling capital to move across national boundaries in the pursuit of higher returns.
89. Deregulation of capital markets meant that financial institutions were able to become like supermarkets offering many types of financial assets: previously firms had been specialized, offering a limited range of assets, under conditions of restricted competition.
90. Deregulation of capital markets resulted in the creation capital (including new financial assets) to finance the technological revolution in information and communications technology. It created an international market in foreign direct investment (FDI). The provision of debt capital together that feed the technological revolution created vast potential to produce new products. This in turn led to the need to globalize in order to expand markets and demand.
91. At a time when governments appeared to abandon Keynesianism, firms adopted it enthusiastically. They recognized that only high levels of global demand could enable them to recover the sunk costs associated with the technological revolution the requirements for high returns on capital invested by shareholders and creditors.
92. Thus a positive feedback system developed: finance feeding technology, and technology requiring high levels of global demand to buy its products, global markets increasing competition and the need for capital and new technology.

## Globalization and networks

93. Globalization itself involves the endless creation of new products, markets and niches. Entire industries are transformed and regrouped.
94. It transforms work, redistributes income and wealth, reduces the power of organized labor, enriches some and impoverishes others.
95. Globalization results in complex interactions of economics (E), politics (P), technology (T) ecology (EC) and demography (D), religion (R) and many other factors. They are represented by the nodes of the network diagram below and linked together as part of an interdependent feedback system.

### Complex adaptive systems as networks



96. The interactions illustrated in the figure above, result in contradictions, ambiguity, growth and decline, evolution and revolution, the simultaneous growth of nationalism, regionalism and ethnicity alongside convergence of lifestyles, cultures, fashions. In the global economy there is an absence of dominant super competitors politically or economically, who can really control the process. All these things are features of complex adaptive systems.
97. Globalisation is a feature of the new era of capitalism which is in itself a complex adaptive system. Information and knowledge are the dominant sources of the competitive advantage of firms, and the competitiveness of nations. In many ways the world economy has become global. Financial capital and information, to a large extent beyond the control of national governments, flow across national boundaries.

## The global economy as a complex adaptive system

98. The global economy is a complex adaptive system with the following characteristics

### The global economy as a complex adaptive system

- The overall direction of the global economy is determined by the interaction of many agents and firms distributed throughout the global acting in parallel with one another. The action of any one unit depends on the state and action of many other units.
- There are rarely any global controls on interactions – controls are provided by mechanisms of competition and co-ordination mediated by organizational grammar.
- The economy has many levels of interaction and organization. Units at any given level serve as building blocks for constructing units at higher levels. The global economy consists of coalitions of coalitions ...of activities within businesses, between businesses within and between organizations, between organizations – mergers, acquisitions, partnerships, alliances, supply chains contracting out and so on....
- The global economy is not just hierarchical: it is a network of relationships with entangling interactions (associations, communications, international institutions, governmental and non governmental agencies,) within and between levels.
- The system is evolutionary since coalitions, the building blocks, are recombined and revised continually as people and organizations accumulates experience and adapt.
- There are many niches that can be exploited by adaptations that fit them..
- There is no universal super power or competitor that can fill all niches: as is the case in any complex adaptive system or ecology like a tropical forest.
- Niches are continually being created by new technologies. The very act of filling a niche provides creating new niches: network effects, demand side increasing returns, parasites, symbiosis, and competitive exclusion).
- Perpetual novelty results.
- Because there are so many niches serving many purposes and needs, the system operates far from equilibrium or optimum or global attractor. Changes improvements and otherwise are always possible and occur regularly.

## Kronos capitalism

99. Business enterprises, organizations and institutions have, over the last twenty years or so, made the transition from the production of **use** and **exchange** values; the production of goods and services that are merely useful or produced because they could be exchanged for other goods or services. The system has increasingly become concerned with the production of **symbols and images**: the creation brands, reputation, corporate identity have become sources of competitive advantage.

100. But more than this. The very productivity of capitalism is a source of instability. The system depends upon its ability to create demand, to create an insatiable appetite for ever more products and services: if it cannot do this the system fails. To sustain and protect itself it must constantly destroy existing products and create the demand for new products.
101. This is why there is so much emphasis upon symbols and signs. Products and may be useful and satisfy a real needs, but needs and wants may not be as insatiable as the system requires. So as existing needs and wants are satisfied, new ones must be created, and the goods and services that satisfied the old needs and wants must somehow be destroyed, and demand created for new ones.
102. Like Kronos, the God who consumed his own children to protect himself, so capitalism must consume its own creations.
103. Linking products and services, with brands, signs and symbols identifies them with deep psychological needs, with anxiety, fear sex drives, libido, they and only they can not so much satisfy, but temporarily assuage, like a narcotic fix, that must be renewed, perpetually.
104. The signs and images of Kronos capitalism create a hyper-reality though the communications media, TV, print, radio, telecommunications and the world wide web, that consumers can buy into: that can be destroyed, eaten, consumed, killed and replaced by new productions. By constantly renewing their consumption, and only by doing so, consumers are able to buy into a soap opera, created by the corporations of Kronos capitalism

## **Postmodernity**

105. The enlightenment project (*with its emphasis on reason and individuality, rather than subordination of the individual to faith*) resulted from the development of modern science from the sixteenth century onwards in Europe. Many of the ideas of modern science and technology had a much earlier origin; much earlier in China and later in early Islamic cultures for example.
106. Gradually the development of science led to the growth of affluent societies of the developed world and parts of the emerging economies; a process speeded up by globalization.
107. Confidence in science led to the substitution of faith and religions by belief scientific truths and a rather muddled view that all aspects of reality can be understood by the methods of science.
108. Postmodernism (*and poststructuralism*) are notions that are difficult to define. They reject the idea that there is an ultimate truth discoverable by scientific method. Instead they maintain that truth has many dimensions; that there is no ultimate truth; the many versions or dimensions of truth (in science, Marxism, religions, propounded in universities, business, politics, literature, the arts, the

media, the church), reflect particular points of view and one of their functions is to increase the power and influence of particular groups in society (those who propound them in universities, business, politics, literature, the arts, the media, the church and so on).

109. In our terms, grammar shapes truth according to particular perspectives that suit current norms and the interests of certain groups.
110. Alongside modernism (the outcome of the enlightenment project) and its faith in science, and postmodernism (with its distrust of grand narratives scientific or otherwise) fundamentalism has arisen. Fundamentalism represents resurgence of faith in authority and traditions.
111. Fundamentalism is generally associated with Islam but it also apparent in Western evangelical religions (and allegiance to crude positivism in some areas of science – especially social science very academic ideology has its own *Taliban*<sup>5</sup>). Fundamentalism also appears in the guise of neo-conservatism in the United States.
112. Thus in the realm of ideas, tension exists between three different paradigms (traditions, ways of thinking), *reason, relativism, and faith*.

### **America**

113. This brings us to the second feature of New Capitalism. In addition to the emphasis on information, the second factor the dominance of the USA in culture, military power and political influence. The American project consists (i) maintaining American dominance and (ii) introducing open markets, for capital and goods to the global economy, (iii) introducing democratic style governments, (iv) establishing human rights. Aspect (i) of the project moderates (ii), (iii) and (iv) when they seem to be in conflict with what the USA sees as its interests.
114. The USA is dominant but not all powerful: able to exert enormous influence but not control. Thus in New Capitalism we have a global phenomenon without a global government capable of exerting control.
115. The effects of this incapacity we see in the partial meltdown of financial sectors across the world from time to time and of course in the rise of terrorism.
116. New Capitalism and globalization has brought world growth in terms of absolute incomes, but increasing disparity of incomes and wealth both within nations and between them. The poor are evident in every state and many states have a concentration of poverty.

### **Recession**

117. After more than ten years of almost uninterrupted growth in OECD nations, in the new century we see the positive feedback process in reverse. Led by stock

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<sup>5</sup> It is interesting to exercise to trace the extent to which business has its own language or discourse.

markets, and over-investment at the later stages of the business cycle in the 1990's, the new century began with recession, and high levels of indebtedness. The problems facing the world economy in the early part of the new century were deflation and recession rather than inflation (and the tradeoff between growth and inflation which was so much the concern in the latter half of the twentieth century).

118. We should distinguish between positive deflation, which occurs when prices fall due to technological change and increased productivity and negative deflation which is the result of deficient demand. In the case of positive deflation, falling prices are the medium for distributing productivity gains. In the case of negative deflation falling prices occur as a result of the continuing capacity of capitalism to produce more products than can be effectively demanded. The main difference between the two types of deflation, is that in the case of positive deflation, demand exists whereas in the other case it does not.

119. We should distinguish between the New Economy and New Capitalism. The New Economy refers to a fact that seemed to emerge in the late twentieth century: Economic systems appeared to be able to sustain higher growth and lower unemployment than had seemed possible earlier in the century (especially between the late 1960's and the early 1990's).

120. The story is not new. In every stage of Capitalism a business cycle arises. This happens as a result of technological change which drives an upswing in the cycle and overinvestment (irrational exuberance), driven by over optimism that results in overcapacity to produce in some sectors and hence recession, that serves the purpose of realigning demand supply and expectations.

## DEMAND MANAGEMENT AND THE BUSINESS CYCLE

121. We discuss the macroeconomic level we discuss the following issues mainly historically.

- **Keynesian** ideas of demand management and the synthesis with **Monetarist** notions of management through interest rates (the money supply).
- the **ideological differences** of these approaches about assumptions about the market economy
- the role of **anticipations, perceptions and expectations** especially of risk.

### Keynesian Analysis

122. In Keynesian analysis aggregate demand determines **growth** and **employment**. **Investment** is an important and unstable component of demand which magnifies fluctuations (booms and slumps) through the **multiplier**. Governments in a closed economy can influence aggregate demand decisively through its **budget** (taxes and expenditures).

123. Keynesian analysis also involves a value judgement that markets are the best form of organization that we possess, but they are often defective, precipitating booms and slumps that require government budgetary intervention. Market systems inevitably mean inequality that can be alleviated by maintaining high levels of employment and a welfare state. It is no accident that the Welfare State in the UK really surfaced at the time of the ascendancy of Keynesianism between 1945 and 1960.
124. By investment in this instance, I mean a real expenditure on an asset that will help produce an additional income stream in the future; purchase of a physical asset, investment in education, spending on a new road or other infrastructure by governments.
125. The **multiplier** simply states that the total impact of investment on an economy will always be greater than the original investment. This is so because the original investment expenditure ends up as someone's income (wages or rent or interest or profit) and part of this income is spent, creating further income and so on.
126. The **multiplier** principle holds for any increase in spending in the economy (export spending, government spending). The multiplier can work in a negative way too. A decline in investment spending (or any component of spending) in one year as compared to another will cause a magnified decline in income.
127. The closer an economy is to full employment of its available resources, the more the multiplier effect will impact on prices (inflation) and the less it will impact on real spending a real income.
128. Keynesian analysis involves a value judgement that markets are the best form of organization that we possess, but they are often defective, precipitating booms and slumps that require government budgetary intervention.
129. Market systems, Keynes thought, inevitably mean inequality. Inequality is necessary that can be alleviated by maintaining high levels of employment and a welfare state. It is no accident that the Welfare State in the UK really surfaced at the time of the ascendancy of Keynesianism between 1945 and 1960
130. The Keynesian era (the 1950's and 1960's) in the West coincided with a golden age of growth and employment. It came to an end as a result of
- destabilization of the world economy in the 1970's
  - increasing interdependence between economies, which meant that national governments had less control over their domestic economy?
  - falling rates of profit, which probably resulted from the high levels of employment between 1945 - 70, which increased the bargaining power of organized labour?
  - failures of Statism. Statism describes systems (whole economy's or sectors within the economy) where decisions are based on political and ideology rather than on ground of pure profit (Eastern Europe and privatized sectors of Western economies for example).

## The monetary sector

131. The most important thing to understand in this section is that people (and organizations) make two distinct decisions (a) how much to spend, save invest and so on, (b) how to hold their assets in order to carry out these decisions; that is how much in cash and how much in assets that earn interest (interest bearing assets). This section is concerned with (b). The previous section was concerned with (a).
132. Monetarism encompasses a number of profound beliefs
- that **markets are efficient**
  - **budget deficits** are inherently inflationary
  - **growth** is determined essentially by **supply side factors** (technology, education, training, management)
  - **inflation is a tax** often imposed deliberately by governments through budget deficits
  - expectations are **rational**.
133. The simple monetary rule is to keep the rate of growth of the money supply in line with productivity. This is achieved by appropriate adjustment in base rates by the Central Bank. Currently the Bank of England, the UK Central Bank has the role of setting base rates in such a way that target inflation rates (set by the Government) are achieved.
134. Other rules follow from the simple monetary rule;
- open the economy to international trade and foreign direct investment through currency deregulation.
  - privatize state owned assets.
  - reduce the ratio of government debt relative to GDP.
  - reduce the fiscal deficit (the difference between government spending and taxation –this has to be financed by debt).
135. Measures to achieve a reduction in the importance of the government sector can take any number of forms; deregulation, liberalisation, contracting out, licensing, joint capital projects (public and private), reduction of state subsidies, as well as outright sale of state owned assets.
136. Another strategy is to reduce the budget deficit to around 3% of GDP and government debt to around 50% of the GDP.
137. Such strategies are incorporated in the Maastricht treaty and in the provisions for the European Single Currency and in the conditions for IMF and World Bank loans.
138. The simple monetary rule (not so simple in fact) in effect means using monetary policy to put a bound on inflationary expectations.
139. Monetary Policy involves raising (or lowering) interest rates. Raising (or lowering) interest rates reduces (increases) demand through reducing (increasing) wealth; consumption investment or rising (lowering) the exchange rate.

140. A simplified account of the reasoning behind the above assertions is as follows. Wealth is affected via the impact on bond holdings for example. Bond prices are set by dividing their coupon by the appropriate discount rate. Investment and consumption are reduced via rising (lowering) the cost of borrowing. Monetary policy also affects demand through the exchange rate. Higher interest rates drag in foreign funds (given an allowance for risk) thus bringing an appreciation (depreciation) of the exchange rate: this in turn reduces pressure from export demand and reduces the price of imports. A reduction in import prices reduces inflation because it reduces the cost of living index.
141. Governments according to Monetarism can do little about the growth employment tradeoff. In general attempts to stimulate demand in order to raise growth rates or reduce unemployment below its natural rate, or non accelerating inflation rate (NAIRU) will simple result in faster inflation.
142. Governments it is thought will do far better by sticking to the simple monetary rule. Monetarism has become the dominant ideology in current economics. But it is thought, the inflation employment tradeoff can be modified in the long run:
- by increasing labour mobility, (through education, training),
  - deregulation of labour markets (not fixing minimum wages too high, reducing the powers of Trades Unions), and
  - moderating the non wage costs of employment (pensions, job security and the like).
143. An interesting fact is that although NAIRU has increased in most of mainland Europe, since the 1960's, in the USA, after increasing in the 1970's and 1980's, it has since declined to its 1960's level. The UK has also had a similar experience to the USA, (but a less marked reduction).
144. We should note that the statements of conventional wisdom about current economic contained in the paragraphs above are statements of conviction and belief rather than objective descriptions of the nature of the world. Perhaps purely objective descriptions do not exist: there are many different ways of looking at the world, and of interpreting data. Such considerations are beyond the scope of these notes.
145. However, it may be noted, that what we have described as conventional wisdom in economics is consistent with diverting the surplus (the difference between revenues and opportunity costs) created by a market system increasingly to profits, and especially to stockholders.

## MORE MICROECONOMIC FOUNDATIONS

**146. These sections outline the nature of a market economy. Related concepts of opportunity cost, rent as a return over cost, competitive advantage, and risk are described. We also introduce the idea of the evolution of market economies from the production of use values in the early stages of capitalism, through to focus on exchange values, specialization, and scale and scope economies, to the current emphasis upon the production of symbols, identities and information.**

147. Strategy is a balance between the firm's objectives, the business environment, and the firm's dynamic capabilities: its resources (summarized by the production and cost function or the value chain) and its management and organizational capacities.

148. .

### Risk

149. Risk is a key element in all the branches of business. A good way of understanding risk and uncertainty is through the image of a network of interconnections. The global economic system for example consists of a network of relationships between economics, politics, ideology, demography, ecology and so on.

150. Risk arises because neither the environment of firms nor their dynamic capabilities can be known with certainty. Decisions are taken with bounded rationality; that is with limited powers of cognition (of possibilities) and powers of calculation (of the vastness of contingencies).

151. The risk associated with an asset, a stock or a bond for example is measured variability of its return (standard deviation or variance): that is the geometric mean or sum of the squares of square of the differences between the mean value of an asset and its values at successive moments of time.

152. Generally speaking the capital asset pricing model asserts that the higher the perceived risk of an asset the higher the expected return.

153. Risks are diversified by holding a portfolio of assets whose returns are not perfectly correlated (correlation coefficient  $\rho < 1$ ). Generally by holding a portfolio of around 15-20 assets whose returns are not perfectly correlated, systematic risk can be diversified away. That still leaves undiversifiable risk (market risk) which cannot be diversified away: the unexpected always happens; markets may crash, firms go bust, governments renege on debts, cyclones, earthquakes or revolutions may occur.

154. However we do have a measure for the undiversifiable risk of an asset. This is termed the assets Beta value ( $\beta$ ). If an asset has a Beta of greater than one roughly

speaking this means that the undiversifiable (or market) risk of the asset is greater than that of an average of the market as a whole (say the FTSE 100).

155. Risk is closely connected to the leverage of an organization. The degree of flexibility a firm has depends in an important way upon its leverage (or to use a synonymous term, gearing). Two kinds of leverage are noted later: operating leverage and financial leverage.

### **Risk and leverage (gearing)**

156. Firms in New Capitalism have striven to reduce the risks of operating leverage by reducing the ratio of fixed and sunk costs to variable cost (operating leverage): buy contracting out, sub contracting, divesting business units and functions, cutting down on stocks by just in time production and so on.

157. *Financial leverage.* If a firm has no debt, it has no interest expenses. If the firm uses debt financing (rather than equity financing, or use of its own undistributed profit) it has to pay interest. Financial leverage measures the extent that firm's activities are financed by debt.

158. So the greater the financial leverage, that is the more it finances its activities by debt, the greater the financial risk, in the sense of bankruptcy.

### **Opportunity cost**

159. True costs, in the sense of those costs which are relevant to a decision are opportunity costs. Opportunity costs are defined by the values of what is forgone as a result of a decision or activity..

160. The opportunity cost of undertaking an investment project is that component of expenditure that cannot be reversed, cannot be clawed back once a commitment to the investment is undertaken.

161. This is not to deny the existence of other costs: historic costs, replacement costs and so on. Nor is it to deny their importance. But for decision making, what matters is opportunity cost.

162. Opportunity cost measures cost as the highest valued alternative foregone. Opportunity cost is perhaps the most important concept in this text. It underlies strategy and economics. The idea is deceptively simple; the cost of any activity is measured by the highest valued alternative foregone because of it. Consider just a few examples. Sometimes opportunity cost is measured in money terms. If I hire labour I must pay wages. If I borrow I incur interest charges. If I buy a car I incur an immediate cost in the sense that the purchase price will normally be less than the resale price, and the longer I continue to own the car the

greater the gap will be. If I spend all I earn I cannot save. If I use the time and other resources owned by the firm to produce one brand of a commodity on a particular market, I may give up the chance of profitable opportunities elsewhere. Sometimes opportunity costs are not directly measurable in money terms. If I write this text, I cannot simultaneously produce an academic paper. If you spend too much time working then you give up the opportunity of spending time with your family.

163. The important point for decision making is that it is the highest valued alternative that is important. It may be worthwhile spending my money on a car, or hiring an extra worker, or expending scarce funds on research and development of a product, because as far as I can tell these are ways of spending money that give a greater return than any other alternative. Similarly if I fail to cover opportunity cost, there is some alternative activity which gives a higher return; meaning that the current activity incurs losses.

164. Two things should be stressed here. We cannot know in advance whether opportunity costs will be covered: this is because the future cannot be known with certainty. Objectives may conflict, so it may be necessary to make trade-offs between them.

165. Hence in deciding strategy and determining opportunity cost it is necessary to consider priorities. To whose objectives, from the stakeholder group as a whole are we going to give priority? From whose point of view should we consider alternatives? How are we going to trade-off the interests of one group against another?

### **Two types of fixed cost: F1(sunk) and F2(fixed) costs**

166. Fixed costs are those costs that do not vary with output. There are two kinds of fixed costs F: Sunk costs F1 and fixed costs proper F2. So  $F = F1 + F2$ .

167. Sunk costs are expenditures which once incurred can never be recovered; the difference between the purchase and resale price of an asset: some expenditure on advertising and promotion, expenditures on research and development, capital expenditures that cannot be recovered, sunk costs associated with labour contracts (redundancy, pension, training costs for example). Once incurred sunk costs are unavoidable.

168. Thus we come to an important economic proposition. True costs, in the sense of costs that should influence decisions, are sunk costs. Let us emphasise. True (opportunity) costs are those costs which once incurred are unavoidable: sunk costs.

Fixed costs proper refer to those costs that do not vary with output, but are avoidable by quitting, going out of business altogether; the costs of running a machine, of incurring liabilities the health, safety and welfare of employees, for example.

### **Unavoidable and avoidable costs**

169. Unavoidable costs are those costs that cannot be avoided by cutting down on output. Obviously sunk costs fit into the category of unavoidable.

170. Costs can be avoided by two strategies:

- a) cutting back on output (making marginal changes in the rate of production) and
- b) quitting altogether (producing a zero output).

### **Variable cost**

171. Variable costs are those costs that vary directly with output; raw material costs, fuel costs, some maintenance and wear and tear costs, costs of labour that vary with output, costs of hired items that vary with output. Variable costs can be avoided by cutting down output – by making marginal changes in output.

172. Thus we come to another important point. Marginal costs, those costs which vary directly with output consist entirely of variable costs.

173. Consider two types of decision (i) how much to produce (ii) whether to stay in business. For decision (i) what matters is variable or marginal cost. For decision (ii) what matters is fixed cost proper, those costs that can be avoided by going out of business.

### **Operating leverage**

174. One measure of *operating leverage* (or gearing) is the ratio of fixed costs to variable costs. The greater the operating leverage the greater the risk.

175. Scale and scope economies refer to reductions in average costs that occur as the firm expands the scale or scope of its output (see below) if the firm's share of the market or scale of output is not sufficient to achieve scale economies than there are other ways of reducing operating leverage.

### **Irreversibility and cost**

176. We note three types of cost.  $F_1 + F_2 + V$ : sunk cost, fixed cost and variable costs. Such costs can occur anywhere in the value chain (in operations, marketing, sales and service, for example).

177. Fixed costs  $F_2$  (insurance on a car) do not vary with output (mileage) but they can be avoided by going out of business (selling the car).

178. Variable costs  $V$  increase directly with output (costs of petrol in the car). Marginal costs (extra costs - mathematically the derivative of total cost) are made up entirely of variable costs. Variable costs can be avoided by cutting down on output or by going out of business.

179. Sunk costs  $F_2$  cannot be avoided: once incurred they are irreversible.

## **Scale and Scope economies**

180. Scale and scope economies arise because sunk and fixed costs can be spread of larger volumes of output.
181. Sunk costs and fixed costs add to risk through operation leverage. Information technology and lean production techniques, downsizing, subcontracting and partnerships are ways of achieving mean that scale and scope economies whilst minimizing the risks of operating leverage.

## **Signs information and the productivity paradox**

182. In primitive societies use values predominated. In industrial economies exchange values became the norm. In the current stage of modern capitalism, the information age, and semiotics have become dominant.
183. Goods and services have become signs through marketing, advertising, the media and conspicuous consumption. Signs take on global significance as information connects economies.
184. A productivity paradox exists. In advanced economies, the major impact of information has been to intensify competition, change the nature of work and learning rather than to raise the rate of growth of productivity, which seems to have slowed since the 1970's.

## **Household production**

185. We discuss how in market economies households have their own production function, using products and services (capital or sunk costs) as a substitute for time.
186. Products and services are vectors of characteristics, which give utility and signification.  
Product differentiation takes the form of altering vectors of characteristics. It is possible  
because markets are segmented. One way of expressing segmentation is to say that elasticities  
vary.
187. Over the last two decades, the terms of the trade-off have been decided in market economies in favour profit and the interests of the shareholder. Where there

is no identifiable shareholder the concern has been with profit, or in the case of public sector organizations, with the taxpayer, with emphasis on value for money. The underlying concept has been opportunity cost. Given the decision about trade-offs, made explicitly or implicitly, the question asked is; *Are opportunity costs being covered?*

188. In the sessions we discuss the significance of macroeconomic policies for businesses and business strategy, and link the arguments with the comments upon microeconomics.

## **Social Cost**

189. Social costs include all the costs involved in a decision: those borne by the decision-maker (for example, the firm that bears its labour, raw material costs, and its costs of capital). They also include spillover effects on other stakeholders (through pollution, excessive depletion of natural resources, damages to other species, for example).

190. The problem of social cost arises because some resources that are scarce (the environment, the commons the fishery, the ozone layer, for example) are treated by decision-makers as if they were free. They do so because property rights covering common property are such that no price is charged for their use and therefore firms treated scarce environmental resources as if they are free, when in reality they are scarce.

191. This brings us to a fundamental issue: exactly what is exchanged in a market (capitalist) economy? Markets involve the transfer of ownership of property rights: Ownership is exchanged. If property rights are well defined then people take account of the alternative uses of the goods or services they demand and supply.

192. Problems arise when

- private property rights are not well defined, or
- resources are owned in common by society as a whole.

193. In the first case it is difficult to exclude people from the good or service even though they do not pay for it: in the second case in a sense no one owns it because everyone does. So people may behave opportunistically: treating scarce resources as if they were free, not considering alternative uses (which may bring of higher value), and in so doing reducing increasing their own welfare or utility at the expense of everybody else.

194. Treating resources as if they were free, when in fact they are scarce to some stakeholders, results in their misallocation, in the sense that their true opportunity costs are ignored. The issues here are too complicated to be encapsulated in a few paragraphs, but you can see the gist of the economic reasoning.

195. Macro policies such as reduction of subsidies, liberalization of trade, convertibility of the currency, and privatization are frequently carried out without

due regard for the opportunity costs borne by those people who are adversely affected by such changes: their opportunity cost are ignored.

196. Social costs include all the costs involved in a decision: those borne by the decision-maker (for example, the firm that bears its labour, raw material costs, and its costs of capital). They also include spillover effects on other stakeholders (through pollution, excessive depletion of natural resources, damages to other species, for example). The problem arises because resources that are scarce (the environment, the commons the fishery, the ozone layer, for example) are treated by decision-makers as if they were free.
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200. Reduction of subsidies, liberalization of trade, convertibility of the currency, and privatization are applications of the principle of opportunity cost. These actions perhaps inevitably tend to overlook their social consequences.

## Market Demand

201. **Products and services are vectors of characteristics**, which give utility and signification. **Product differentiation** takes the form of altering vectors of characteristics. It is possible because markets are **segmented**. One way of expressing segmentation is to say that **elasticities** vary.
202. **Price elasticity ( $E_p$ ) measures the responsiveness of demand and expenditure to price changes**. An elasticity of 0.4 (inelastic) means that a 10% reduction (rise) in price will be accompanied by a 4% reduction (rise) in sales.
203. **Income elasticity ( $E_y$ ) measures the percent change in quantity bought in response to a percent change in income**.

**ELASTICITIES**

$E_p = |E_p|$  = price elasticity

$E_y$  = income elasticity

$$E_p = \frac{\% \text{ change in quantity demanded}}{\% \text{ change in price}}$$

$$E_y = \frac{\% \text{ change in quantity demanded}}{\% \text{ change in income}}$$

	Effect on sales revenue of price reduction	Effect on sales revenue of a price increase
Elastic $E_p > 1$	Sales Revenue RISES	Sales Revenue FALLS
Inelastic $E_p < 1$	Sales Revenue FALLS	Sales Revenue RISES

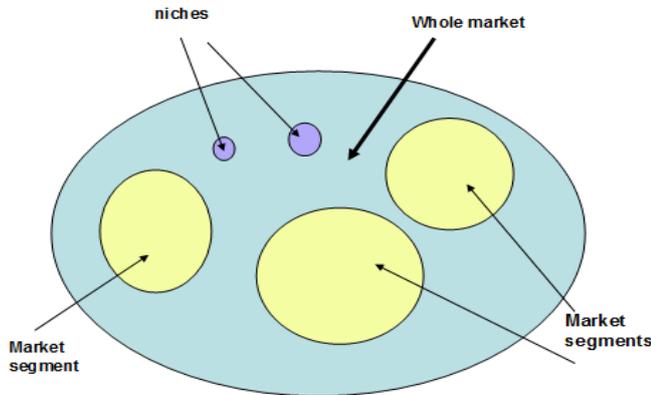
204. Elasticity of 1.7 (elastic) means that a 10% reduction (rise) in price will be accompanied by a 17% rise (fall) in sales. Elasticity is critical to pricing policy. Price reductions should only take place when demand is elastic. Similarly price should be increased if demand is inelastic. Note the distinction between sales (q) and sales revenue (pq.).

205. I explain three **critical economic relationships underlying marketing** in modern economies.

- $E_m = \sum s_i E_i$  ( $i = 1, 2, \dots, m$ ): where  $E_m$  denotes the elasticity of the market as a whole  $E_i$  denotes the elasticity of the segment  $i$ ,  $E_i$  denotes the elasticity of the segment  $i$  and  $s_i$  denotes the share of the segment in total expenditure on the good.

Elasticity of demand for the market as a whole (for a particular product X)	equals	the sum of the elasticity of each of the segments of the market multiplied by the share of that segment in total expenditure on the market.
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Elasticity of firms demand  
=  
elasticity of market demand  
multiplied by  
the firms market share



- $MR_j = P_j [1 - S_j/E_j]$  Where  $MR_j$  is marginal revenue of firm  $j$ ;  $P_j$  is the price it charges;  $S_j$  is the share of firm  $j$  share of the market ( $q_j/Q$ ) and  $0 \leq S_j \leq 1$ ;  $E_j$  is the Elasticity of demand for product  $j$ .

Marginal revenue	equals	Price multiplied by a weight. (The smaller the share of the market, and the bigger the market elasticity of demand, the smaller the weight)
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- The closer price is to marginal revenue the flatter the firms demand curve and the less is its control over price.

206. Where price is a parameter, out of the firm's control, control, it receives the same price for all units it can feasibly sell : (  $MR = Price$ ). The firm is driven to compete on cost alone. Such is the situation in a *commoditized* industry and in a situation known as perfect competition.

### Barriers to entry

207. The dominant factors in achieving and sustaining a high market share can be **barriers to entry**.

208. Entry barriers range from advantages over would be competitors gained from scale and scope, to branding, import restriction, government monopolies, patents, predatory pricing, and control over distribution channels.

209. Essentially barriers to entry in the examples above constitute negative sum gains (the losses to players as a whole outweigh the gains to a few).

210. Barriers to entry can be classified as follows:
- Economies of Scale
  - Product Differentiation
  - Cost advantages independent of scale
    - Proprietary technology
    - Know how
    - Favourable access to raw materials
    - Learning curve effects
  - Contrived Deterrence (*entry preventing prices, predatory pricing*)
  - Government Regulation of Entry

### **Information as a public good**

211. In the New economy the key determinant of competitiveness, productivity and competitive advantage is information.
212. Information or knowledge is a plastic resource. It can be moulded into an infinite number of shapes or forms.
213. Information is a public good in the sense that it possesses (i) Non rivalry and (ii) Non excludability.
214. Non rivalry means that consumption by one individual does not reduce the amount available for anyone else - quite the reverse.
215. Non excludability means that it is difficult to exclude non payers.
216. Since the consumption of information involves non rivalry, the marginal cost of an extra consumer of information is zero.
217. Hence non excludability would not be a problem except that creating information and knowledge often incurs huge sunk costs. Unless these sunk costs are retrieved through the sale of the product that incorporates the information, there may neither be neither the funds nor the incentive to finance further investments in knowledge.
218. The problem of appropriating the benefits or revenues from the sale of information goods is achieved through the control of the distribution channels: think of publishers of books, producers of software, distributors of films, music TV, or multi media.
219. New technologies may disintermediate existing distribution channels. Video on demand, DVD's, for example, threaten to disintermediate existing distribution channels - who respond by undertaking mergers acquisitions, entering partnerships, or stifling the new technologies.

### **Network effects**

220. The New Economy is characterized by Network Effects. Network Effects can take three forms. (i) Direct effects. The value of a product is directly linked to the number of users of the product, for example, fax machines, telephone or the Internet. (ii) Indirect effects. The value of a product is linked to the number of uses of a complementary good, for example, PCs and PC software, video players and video games. (iii) Post-purchase service network effects. A product's value is enhanced if it includes an extensive servicing network, important for products such as cars or PC's.

221. Network effects may involve new pricing strategies; giving the product away and selling updates, servicing or complementary products for example.

222. As market economies evolve, the scope of competition expands. Competition by is no longer limited to rivalry with respect to price and quality. It extends to technology, innovation, new organizational forms and structures, deregulation and globalisation.

