BUSINESS AND FINANCIAL ENVIRONMENT

Provisional Text

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These brief notes paraphrase of some of the lecture content and are a background for the preparation of your assignment. They should be read alongside the lecture and studied carefully afterwards.

One of the problems with the text is that it is very long. These notes present the course in a very condensed form.

The content of the notes is more conceptual than the lecture sessions - when many more examples will be given. Try to understand the main concepts and this will enable you to get more out of the taught sessions.

As you will see the sections are numbered and ordered under separate headings. As far as possible each heading and even each of the numbered sections is intended to be self contained.

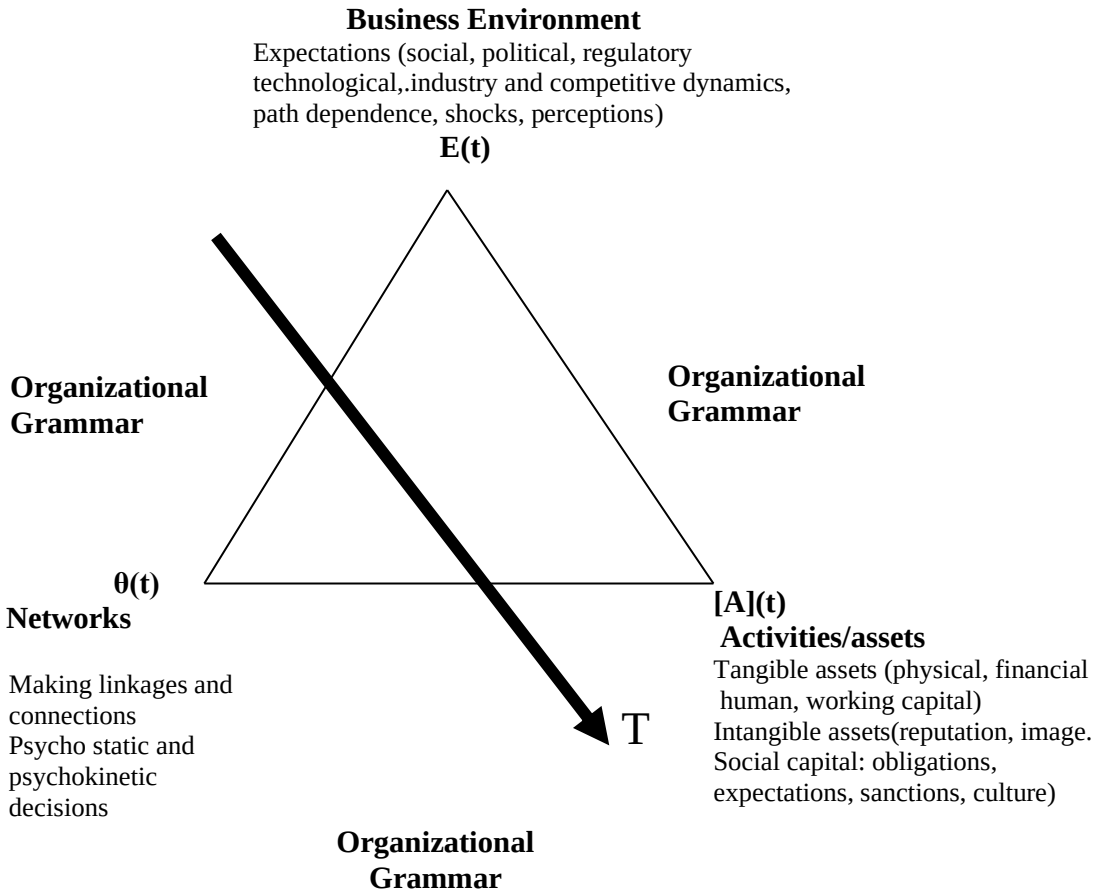
INTRODUCTION

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. Roughly speaking this part of the business environment course focuses on
    a) factors that influence the firm but which are more or less beyond the firm's control (external dynamics) and
    b) factors that relate to organizational capabilities (internal dynamics).

3. The most important elements of external dynamics are (a) expectations (about the strategies of rivals, 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).

4. Strategy is an attempt to reconcile the organizations environment at a point in time E(t) with the firm's capabilities in terms of assets A(t) and networks θ(t). See figure 1 below. Since these elements change through time strategy consists of a set of moves, a trajectory (T) through time.



5. At any given time the business environment (E(t)) and the capabilities (that is the organizations assets A(t) and the way these assets are linked together by decisions θ) are defined. 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. 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**.

6. To take a simple strategic example, in just the way that a game of chess is defined as a set of **system states** (positions of the pieces on the board), is conditioned by a set of rules (**grammar**), and play proceeds as a **trajectory** (moves of the pieces) through time. The **environment** consists of the other player, the room its temperature and so on. **Capabilities** are defined by the player's assets (including human assets – especially the capability of learning and adapting to new information) and the decisions he or she takes (linking the assets).

7. This course is a very important component of your strategy course. Its importance springs from two aspects: (i) discussion of the business environment and (ii) providing the foundations of strategic analysis. It is also the basis of much of what you will learn in marketing, operations and accounting and finance. In so far as we talk about incentives, wages and salaries and human capital it parallels what you study in human resource management.

8. Unfortunately economists have neglected important psychological issues. 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.

Strategy and game theory

9. You can also view strategy as a game. The system state of the game consists of the alignment of pieces on the board and the rules of the game: decisions or moves have to take account of the possible moves of other players. The system state corresponds approximately to the business environment – the subject matter of this course.

10. Using the language of game theory a complete statement of strategy would specify a sequence of decisions as the game unfolds.

11. Game theory is intrinsic to strategy.

12. The key insight from game theory with respect to a firm's strategy is that that the outcome of a strategy pursued by one player (firm) depends on the responses or reactions of other players (in other firms or organizations, or indeed of players within the given firm or organization).

Bounded rationality

13. 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.

14. 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.

15. These twin limitations with respect to information processing:
    a) limited powers of calculation and
    b) limited powers of cognition.

    These limitations are the basis of what Herbert Simon speaks about as Bounded rationality.

16. Note that developments in information and biotechnology have vastly expanded our capacities for processing information.

17. 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.

18. However, decision-makers cannot possibly do not 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

19. 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.

Economic rent

20. Economic rent refers to the excess returns that accrue to a factor 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.

21. 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).

22. Often the term profit is used as a synonym for economic rent.

Competitive advantage

23. 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.

24. 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.

25. Strategy is a search process: a process of reconciling the business environment of an organization with its **dynamic capabilities**: the resources it has available 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.

26. Roughly speaking dynamic capabilities describe the unique qualities that organizations may possess which enable them to compete successfully (adaptation). It should be noted that most organizations have very short lifetimes which implies that very few of them possesses dynamic capabilities.

Industry structure conduct and performance

Industry Structure	• Number of competing firms • Homogeneity of products • Ease of entry and exit	THE DISCOURSE OF COMPETITIVE ADVANTAGE
Conduct of firms	• Price taking or price making • Product differentiation • Exploitation of market power	
Performance (affecting only stockholders) Monetary returns	• Firms may earn supernormal or normal profit (competitive advantage or survival) or fail • Society; efficient allocation of resources,	
Performance (affecting all stakeholders) Payoffs	• Sustainability, responsibility and ethics. • Social welfare and distribution • Ecology	AN ALTERNATIVE DISCOURSE

Table Structure conduct and performance and alternative discourses

Profit maximization

27. 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.

28. 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.

29. If marginal revenues exceed marginal costs than 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.

Stakeholders

30. 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.

31. 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.

32. We divide the lecture into two parts: a discussion of the macro environment or the economy as a whole and the micro environment, the firm and its customers, and the industry and sector in which the firm competes.

33. The sessions 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.

MACROECONOMIC BACKGROUND

34. Probably for the first time in history a single system of economic organization prevails - capitalism or the market system: I use the terms equivalently.

35. As Schumpeter noted more than fifty years ago, a capitalist system has two distinct features: private ownership complemented by the availability of debt capital.

36. 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.

37. 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.

38. 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% 0f 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.

39. The information content of products has increased immensely as a result of the recent technological revolution. Our society is concerned with the production of information. This of course includes information technology itself.

40. 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 the libido: a nihilistic soap opera is an overstated description of New Capitalism – but not I think too overstated.

41. The global economy (New Capitalism) results from interactions between
    - finance,
    - new technology industries, and
    - decentralized Keynesianism.

42. 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.

43. Deregulation meant roughly speaking 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.

44. Deregulation of capital markets resulted in the creation capital (including new financial assets) to finance the technological revolution in information and communications technology. The vast potential to produce new products led to the need to globalize in order to expand markets and demand.

45. 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.

46. 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.

47. The enlightenment project *(with its emphasis on reason and individuality, rather than subordination of the individual to faith)* resulted in the development of modern science: from the sixteenth century onwards led to materialism and belief in empirically verifiable objective truth.

48. Postmodernism *(and poststructuralism)* rejects notions of the validity of grand narratives and ultimate truth, and the objectivity of science. Rather it posits the significance of alternative narratives and the role of power in the search for knowledge. Language is seen by postmodernists as coloring investigations – acting as a grammar that shapes truth according to particular perspectives that suit current norms and the interests of power groups in universities, science and politics.

49. 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.

50. 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*[1]*)*. Fundamentalism also appears in the guise of neo-conservatism in the United States.

51. Thus in the realm of ideas, tension exists between three different paradigms (traditions, ways of thinking), *reason, relativism, and faith*.

52. 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.

53. 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.

54. 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.

55. 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

56. 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 markets, and over-investment at the later stages of the business cycle in the 1990's, the new century has begun with recession, and high levels of indebtedness. The problems facing the world economy in the early part of the new century are 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).

Inflation

57. 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.

58. 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).

[1] It is interesting to exercise to trace the extent to which business has its own language or discourse.

59. 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.

Globalisation

60. Globalisation itself involves the endless creation of new products, markets and niches. Entire industries are transformed and regrouped.

61. It transforms work, redistributes income and wealth, reduces the power of organized labor, enriches some and impoverishes others.

62. It seems to be tied to the expansion of capitalism as a self organizing form. Globalisation is a complex interaction of economics, politics and social trends, of technology and finance, of ecology and demography, liberalism and fundamentalism.

63. It incorporates seeming contradictions, through the simultaneous growth of nationalism, regionalism and ethnicity. In the global economy there is an absence of dominant super competitors politically or economically, who can really control the process.

64. In the new era of capitalism, 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.

65. Business enterprises, organizations and institutions have, over the last twenty years or so, made the transition from the mere production of use and exchange values. The system has increasingly become concerned with the production of symbols and images, Identity, and the related concepts of image and reputation, acts as means of communication and perhaps as sources of competitive advantage.

The global economy as a complex adaptive system

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

- The overall direction of the economy is determined by the interaction of many dispersed units in parallel. 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 standard operating procedures.
- 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 overall organization is not just hierarchical: it has entangling interactions (associations, communications) within and between levels.

- The building blocks are recombined and revised continually as the system accumulates experience and adapts.
- There are many niches that can be exploited by particular adaptations.
- There is no universal super-competitor that can fill all niches: any more than there would be in a complex ecological system like a tropical forest.
- Niches are continually being created by new technologies and the very act of filling a niche provides new niches: 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. Improvements are always possible and occur regularly.

DEMAND MANAGEMENT AND THE BUSINESS CYCLE

67. 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

68. 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).

69. 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.

70. 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.

71. 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.

72. 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.

73. 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.

74. 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.

75. 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

76. 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

77. 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).

78. 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**.

79. 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.

80. 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).

81. 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.

82. Another strategy is to reduce the budget deficit to around 3% of GDP and government debt to around 50% of the GDP.

83. 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.

84. The simple monetary rule (not so simple in fact) in effect means using monetary policy to put a bound on inflationary expectations.

85. 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.

86. 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.

87. 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.

88. 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).

89. 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).

90. 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.

91. 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

92. 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.

93. 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.

Risk

94. 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.

95. 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).

96. 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.

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

98. 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.

99. However we do have a measure for the undiversifiable risk of an asset. This is termed the assets Beta value (β). 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).

100. 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)

101. 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.

102. *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 does have to pay interest. Financial leverage measures the extent that firm's activities are financed by debt.

103. 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

104. 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. The opportunity cost of coming to this lecture is the value of the most valuable (in your opinion) alternative.

105. 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.

106. 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.

107. 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 forgone 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.

108. 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.

109. 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.

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

110. 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.

111. 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.

112. 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

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

114. 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

115. 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.

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

117. 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

118. 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.

119. 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

120. We note three types of cost. F1 + F2 +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).

121. Fixed costs F2 (insurance on a car) do not vary with output (mileage) but they can be avoided by going out of business (selling the car).

122. 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.

123. Sunk costs F2 cannot be avoided: once incurred they are irreversible.

Scale and Scope economies

124. Scale and scope economies arise because sunk and fixed costs can be spread of larger volumes of output.

125. 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

126. In primitive societies use values predominate. In industrial economies exchange values become the norm. In the current stage of modern capitalism, the information age, and semiotics have become dominant.

127. Goods and services have become signs through marketing, advertising, the media and conspicuous consumption. Signs take on global significance as information connects economies.

128. 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

129. 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.

130. 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.

131. 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*?

132. 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

133. 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).

134. 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.

135. 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.

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

137. 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.

138. 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.

139. 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.

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144. 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

145. **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 **elasticties** vary.

146. **Elasticity (E) 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.

147. 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.).

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

- $Em=\Sigma siEi$ $(i = 1,2,\ldots m)$: where Em denotes the elasticity of the market as a whole Ei denotes the elasticity of the segment i, Ei denotes the elasticity of the segment i and si 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.

- $MRj = Pj [1 – Sj/Ej]$ Where MRj is marginal revenue of firm j; Pj is the price it charges; Sj is the share of firm j share of the market (qj/Q) and $0 \leq Sj \leq 1$); Ej is the Elasticity of demand for product j.

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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)

- The closer price is to marginal revenue the flatter the firms demand curve and the less is its control over price.

149. 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

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

151. 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.

152. 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).

153. 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

154. In the New economy the key determinant of competitiveness, productivity and competitive advantage is information.

155. Information or knowledge is a plastic resource. It can be moulded into an infinite number of shapes or forms.

156. Information is a public good in the sense that it possesses (i) Non rivalry and (ii) Non excludability.

157. Non rivalry means that consumption by one individual does not reduce the amount available for anyone else - quite the reverse.

158. Non excludability means that it is difficult to exclude non payers.

159. Since the consumption of information involves non rivalry, the marginal cost of an extra consumer of information is zero.

160. 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.

161. 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.

162. 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

163. 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.

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

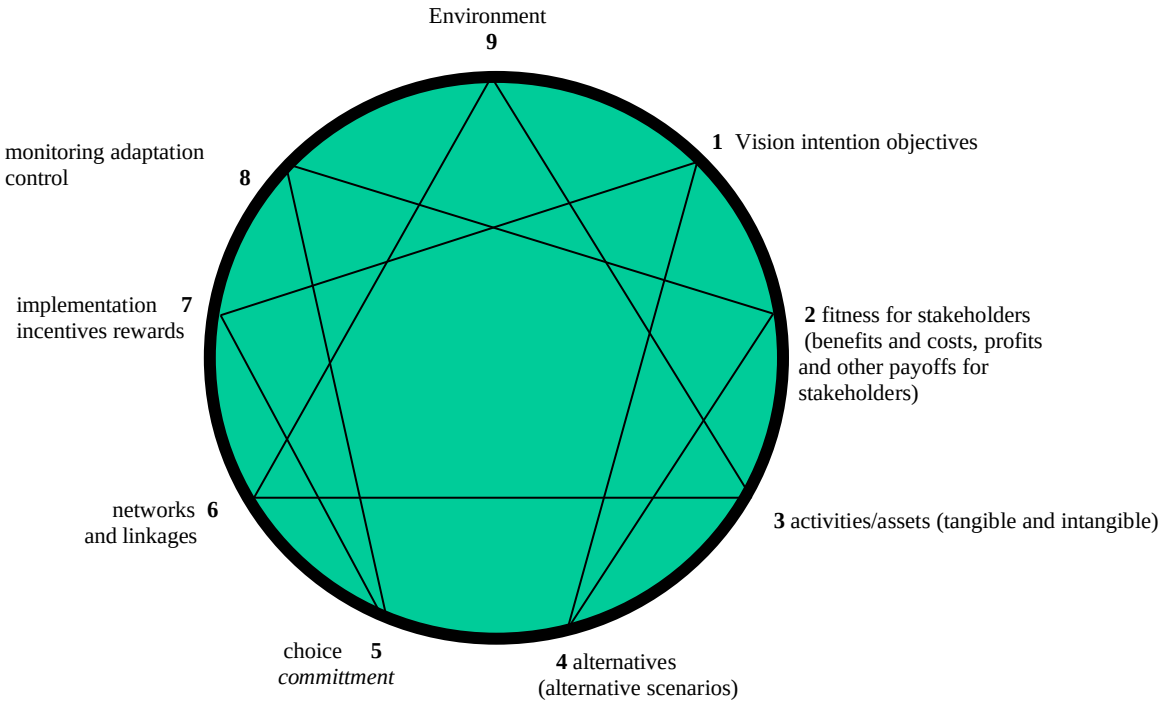
165. As market economies evolve, the scope of competition expands. Competition by is no longer limited to rivalry with respect to price and quality. It extends to technology, innovation, new organizational forms and structures, deregulation and globalisation.

Revised September 2004
Appendix

A NOTE ON STRATEGY AS A MANDALA

(THE ENNEAGRAM)

Enneagram of strategy



The geometry of the enneagram illustrates the irrational numbers π (22/7) and the golden section φ (1.6180339…).The Enneagram should be thought of as a creative tool. It is defined by the dynamic pattern that follows the sequence 1,4,2,8, 5,7,1,4,2…. I have embedded the strategy triangle (Figure 1) in that shape. This illustrates the strategic analysis: reconciling capabilities (the 3 ↔ 6 axis with the external environment 9 ↔3 and 9 ↔ 6 axes). All connections are mediated by organizational grammar.

The sequence 142857142…. spells out strategy as a process. Note that the sequence represents geometrically, the irrational number derived from the fractions, 1/7 (0·42851…), 2/7 (0·85142…), 3/7 (0·4285714…), and so on. Also note that the shape is divided into two linked sections defined by 1,4,2, on the circle and 8,5,7. The first part is concerned *recognizing potential*; aligning feasible objectives with alternative scenarios for policy. The second part is concerned with *realizing potential* through choice, implementation, and adaptation. Linkage between the two parts is provided by adaptation/alternative scenario axis, (8,2) and the implementation/objectives axis (7,1): learning requires adaptation to alternative scenarios as time unfolds, and adjustment of aims in the light of attempts at implementation. Traditionally the Enneagram is a mandala., a pattern for contemplation.