

**EUROPEAN UNIVERSITY INSTITUTE, FLORENCE**

**DEPARTMENT OF LAW**

**EUI WORKING PAPER No. 87/282**

**MARKETS AND FALSE HIERARCHIES:  
SOME PROBLEMS IN TRANSACTION COST ECONOMICS**

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Printed in Italy in April 1987  
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## MARKETS AND FALSE HIERARCHIES:

### SOME PROBLEMS IN TRANSACTION COST ECONOMICS<sup>1</sup>

#### 1. INTRODUCTION

Transaction cost economics, or the markets and hierarchies framework, has emerged in recent years as an important new approach for dealing with a variety of problems in industrial organisation. Although Coase (1937) provided an early statement of the role of transaction costs in encouraging firm organisation to replace market exchange in certain circumstances, the development of transaction cost economics as a coherent and systematic industrial organisation framework did not take place until the 1970's. The rediscovery, development, and refinement of transaction costs as a possible analytical tool is due in large part to Oliver Williamson, whose outline of the framework is contained in three works. The initial statement, Markets and Hierarchies (1975, henceforth M & H) provided an integration and synthesis of some earlier applications of transaction cost economics in areas such as internal labour markets, vertical integration, conglomerates, and the economics of internal

organisation. Recently, his Economic Institutions of Capitalism (1985, henceforth E.I.S.) has further extended the boundaries of transaction cost economics, remaining broadly consistent with M & H and integrating much of its earlier arguments in the text. In addition, Economic Organisation (1986, henceforth E.O.) is a selected set of essays, some in transaction cost economics and some from an earlier period in Williamson's work. For our purposes, E.I.S. may be taken as a definitive and current statement of Williamson's approach to economics, though both of the other works extend the analysis in significant respects.

It is a tribute to the central importance of Williamson's work in this growing tradition that a critique of transaction cost economics can treat his texts as definitive. While other writers (often in areas outside industrial organisation) have utilised the framework, it is to a large extent inextricably associated with his analysis. Consequently, we shall treat these texts as representative of the transaction cost approach.

With this in mind, the main purpose of this paper can be introduced. It is argued below that transaction cost economics as presently constituted displays critical flaws that may impede and even prevent the realisation of its ambition of providing a useful explanatory framework in industrial organisation. Three crucial words above are 'as presently constituted.' We shall argue that there are specific and clear deficiencies in transaction cost economics that may lead to a failure of

analysis. Directions for modifying and developing the framework are suggested. The central theme of our paper is that transaction cost economics cannot yet be properly regarded as a fully developed 'markets and hierarchies' approach. The transaction cost perspective emphasises exchange based contractual relations to the detriment of other possible relationships, and consequently provides a distorted interpretation of hierarchical resource allocation. These problems are exacerbated by the absence of a theory of decision-making in transaction cost economics.

As well as detailing possible analytical deficiencies in the transaction cost tool kit, we shall also consider examples of how they may lead to problems and difficulties in arguments built on them.

We shall start with a brief outline of the transaction cost framework in the next section before suggesting an agenda for analysis of transaction cost economics in section 3. The agenda is composed of five elements; markets, products, decision-making, technological change and prices. In sections 4 to 8 we consider each item in turn from the perspective of how it is dealt with in transaction cost economics. In the final section we summarise the major arguments of this article before suggesting directions future research could take.

## 2. THE TRANSACTION COST FRAMEWORK

Although many complex and sophisticated edifices can and have been built on transaction cost principles, its foundations are simple and straightforward. Three concepts form the basis of transaction cost analysis; bounded rationality (cognitive and language limits on individuals' abilities to process and act on information), asset specificity (specialisation of assets with respect to use or users), and opportunism (self interest seeking with guile).

If bounded rationality, asset specificity and opportunism co-exist, then it may pose efficiency problems for the market mechanism. Interestingly, if any of the three conditions do not exist, then the market mechanism may still allocate resources effectively. Firstly, if there are no bounds on rationality, all future contingencies may be anticipated and incorporated into contractual agreements. Unbounded rationality excludes the possibility of unexpected events not allowed for in the contract, and so both or all parties may settle all problems from the outset. Contract may therefore be relied on to settle issues arising from problems of opportunism or asset specificity. Secondly, if asset specificity does not exist, then bounded rationality and opportunism are not serious problems. If assets can be easily transferred in and out of alternative uses then mistakes can be quickly and simply rectified and opportunism does

not have continuing or lasting effects. Finally, if opportunism is not a problem then asset specificity and bounded rationality are not serious impediments to the working of the market mechanism. For example, if the transacting world is populated by saints rather than opportunists, a simple promise to deal with future unexpected problems and surprises in a mutually fair and equitable manner should be sufficient to ensure the smooth functioning of the market mechanism (EIS PP 30-32).

Therefore, if any one of these conditions - bounded rationality, asset specificity, opportunism - does not exist, the market can be relied upon to deal with resource allocation problems smoothly and effectively. At first sight, this would appear to create a fairly strong case in favour of the apparent power and flexibility of the market mechanism. However, Williamson argues persuasively that situations in which all of these conditions are present are significant and pervasive problems in economic organisation. In those circumstances the market imperative is replaced by a broader imperative to; "Organise transactions so as to economise on bounded rationality while simultaneously safeguarding them against the hazards of opportunism." (EIS P32, italics in original).

At this point the analysis evolves into comparative analysis of alternative governance structures for organising transactions. For any given economic activity there usually exists a wide range of potential institutional forms within which it can be

organised, ranging from centralised hierarchies at one extreme and traditional market contracting at the other, with mixed or intermediate modes in between. The issue then becomes one of which institutional form constitutes the most efficient in terms of organising the specific activity.

The comparative basis of the analysis involves the recognition that all forms of economic organisation are likely to encounter problems in handling and processing the information involved in resource allocation if all these conditions of bounded rationality, asset specificity and opportunism are present. For example, market transactions may involve expensive legal contracting, time-wasting haggling, and costly monitoring, all of which may constitute transaction costs. One solution may be to internalise the transaction and so reduce transaction costs. Internal monitors such as supervisors or boards of directors are likely to be better informed (through experience and improved access to better quality and quantity of information) and in cases where individual performance can be ascertained, have available a more immediate direct range of rewards and penalties (bonus/promote/fire) than may be available in the market place (yell down the telephone/sue). Therefore, internal organisation of the transaction may be more efficient than market contracting in some circumstances to the extent it reduces bounded rationality problems and curbs opportunism. Consequently, the existence of transaction costs may encourage



expansion of corporate boundaries through merger, takeover or internal expansion.

However such internalisation is unlikely to be costless. In practice, enlargement of the bureaucracy through internalisation is likely to lead to impairment of incentives (EIS, PP 131-62). Markets involve what Williamson calls high-powered incentives such as profits and losses. These incentives may be blunted or sacrificed by internalisation. Promises to act efficiently made by internal actors in the resource allocation process are not costlessly enforceable. The bureaucracy may be more permissive and forgiving with respect to inefficient activity than is the impersonal world of the market place. Williamson argues that efficiency criteria will tend to encourage the appearance and continuance of the least cost alternative in different cases. Comparative analysis of firms and markets also permits the analysis to be extended into related areas of state intervention such as antitrust policy and allocation of franchises.

These concepts and principles constitute the basic foundations of transaction cost economics. In the next section we shall introduce a set of concepts that may help illuminate significant issues in transaction cost economics.

### 3. THE RESOURCE ALLOCATION AGENDA

In Kay (1984) it was argued that the neoclassical agenda was effectively limited to manifestations and refinements of essentially one decision problem, the optimal product-market price. Issues in competition, monopoly, externality, public goods, and factor markets can be regarded as applications and extensions of this basic problem. This perspective on the neoclassical agenda proved useful not only in identifying difficulties arising from this highly limited and selective agenda, but in analysing the context in which recent alternative contributions could be placed. We shall see it may also be useful in analysing the potential contribution to be made by transaction cost economics.

We shall extend our description of the agenda here to take into account an aspect that was ignored in the earlier analysis, the element of time. The neoclassical agenda could more accurately be described as being concerned with short (or long) run optimal product market price. This agenda may in turn be split up into its five components. The short/long run item emphasises that decisions may be classified in terms of whether or not all relevant costs are variable; the optimal criterion means that decisions can be expressed as problems in constrained maximisation; individual products form the basic element of analysis on the production side of the economic system; market

exchange is the basic form of governance; and price is sufficient information for decision-making purposes.

In fact, each of the five items can and has been criticised as involving a partial or limited interpretation of the resource allocation process. Firstly, the short/long orientation concentrates on classes of resource allocation decisions associated with conditions of static technology. Innovation is treated exogenously in this perspective. Schumpeter (1954) was one of the first economists to emphasise the significance of the very long run in economic and industrial development, but his theme has been taken up by a number of others in recent years, with Nelson and Winter (1982) representing the high water mark in this tradition at the moment. Secondly, the concept of optimality has been criticised by economists from a variety of perspectives, such as the Austrian, post-Keynesian, institutional and behavioural schools.<sup>2</sup> Informational considerations usually enter explicitly or implicitly into these analysts critiques, with optimality typically being regarded as an inapplicable concept in conditions where bounded rationality problems are significant. Thirdly, the role of products as the basic building blocks in the analysis of the firms has been challenged by those who take the view that the firm can be better regarded as a bundle of resources rather than as an aggregation of products. Penrose (1959) was the first to systematically develop this line of analysis. Fourthly, the market orientation of neoclassical

theory has been argued to be an inadequate basis for analysis of economic organisation. Williamson (M&H, EO, EIS) is the most prominent protagonist for the thesis that institutional forms other than markets may have significant implications for resource allocation questions. Finally, price may not be the only form of competition in practice. In conditions of bounded rationality, many other types of information may be significant, and indeed the role of price may be subverted or even swamped by the emergence of more dominant phenomena. A major theme of Schumpeter was the greater importance of technological competition compared to price competition, and this is an example of an area in which problems of variety, uncertainty, the very long run and bounded rationality are likely to reduce or eliminate the role of price as the arbitreur of resource allocation.

Therefore, all five components of the neoclassical agenda have been attacked, albeit typically in guerilla fashion by discontented and disconnected groups of renegade economists sniping away at pieces of the neoclassical monolith. Attacking on all five fronts at once has not been attempted, perhaps wisely in view of lessons from the history of warfare. For example, Schumpeter still retains product-markets as basic units of analysis, while Cyert and Marchs behavioural theory of the firm (1963) retained four components of the neoclassical agenda - short run product market price - in what was otherwise a radical exploration of the implications of bounded rationality.

The relationship between neoclassical theory and these guerilla groups is itself an interesting question which could usefully provide the basis for another paper. However in this paper we shall be concerned with exploring the claim that transaction cost economics is still strongly influenced by the five components of the neoclassical agenda, to its detriment. At first sight this might seem a surprising, even untenable, proposition. Innovation, non-optimal behaviour, the nature of resources, hierarchies and non-price information all figure more or less prominently in Williamson's analysis. To suggest that the neoclassical agenda limits or distorts transaction cost economics appears obviously refuted by actual observation.

In fact we shall argue that transaction cost contains a deeper affinity with neoclassical theory than may be apparent from consideration of surface differences. This in turn leads to problems of analysis that limits its present applicability and relevance.

We shall analyse transaction cost economics from the point of view of each of the five items discussed above. In section 4, the role of markets provides the starting point for markets versus hierarchies analysis. In section 5, the role of products in transaction cost analysis is analysed. Section 6 considers what, if anything, has been developed in transaction cost economics to replace the concept of optimality in decision making. The conflict between the short/long run orientation and

technological innovation in transaction cost economics is discussed in section 7. The role of price in transaction cost economics is considered in section 8, and the main arguments of the paper are then summarised in the final section, 9.

#### 4. MARKETS AND HIERARCHIES

The issue of markets versus hierarchies lies at the heart of transaction cost economics and sets the context for our analysis of that framework. We shall briefly outline Williamson's approach before discussing problems and difficulties arising from his interpretation. As we shall see, this fundamental issue colours and influences the discussion of other points developed in later sections.

##### 4.1 Williamson's treatment of hierarchy

"In the beginning there were markets" (EIS P.87). Williamson deliberately uses this perspective as starting point to analyse the problem of parties to the transaction, "crafting, governance structures responsive to their contracting needs" (EIS P.87). Only when market problems such as transaction costs create pressures for internalisation might the transaction be removed from external market exchange (EIS P.87). Thus, "one of the attractive attributes of the transaction-cost approach is that it reduces, essentially, to a study of contracting" (EO P.197). This perspective is carried to the logical conclusion of

analysing hierarchy in contractual terms; "if one or a few agents are responsible for negotiating all contracts, the contractual hierarchy is great. If instead each agent negotiates each interface separately, the contractual hierarchy is weak" (EIS P. 221). While Williamson acknowledges that hierarchy may also be analysed in decision-making terms (EIS P.221), it is the contractual interpretation of hierarchy which tends to infuse subsequent analysis of hierarchy in EIS. As we shall see in section 6, the role of decision-making tends to be neglected. Thus, contractual relations are analysable in terms of an exchange spectrum with pure market exchange at one extreme, centralised hierarchical organisation at the other, and hybrid forms such as franchising and joint ventures in between (EIS P 83).

For parties to be joined in a contractual agreement requires non-separabilities to be relatively unimportant, a condition which Williamson has argued is a fairly general one (M&H P. 49). Separabilities permit the development of an individualistic basis for the analysis of institutional forms and the incorporation of individual concepts like opportunism into the framework.

#### 4.2 Implications of Williamson's treatment of hierarchy

The first difficulty to be attended to arising from Williamson's analysis is what is meant by transaction. It is not defined in M&H or EIS, presumably because the concept is felt to

be so obvious as to be self-explanatory. Instead the reader is referred to John R. Commons' argument that the transaction should be regarded as the basic unit of analysis, though what Commons meant by transaction is not precisely defined (M&H, PP3, 254; EIS PP 3,6).

Williamson does define transaction in EO, but his definition falls into two parts which are not necessarily mutually consistent:

"The costs of running the economic system to which Arrow refers can be usefully thought of in contractual terms. Each feasible mode of conducting relations between technologically-separable entities can be examined with respect to the ex ante costs of negotiating and writing, as well as the ex post costs of executing, policing, and when disputes arise, remedying the (explicit or implicit) contract that joins them.

A transaction may thus be said to occur when a good or service is transferred across a technologically-separable interface. One stage of processing or assembly activity terminates and another begins" (EO P 139).

Arrows costs of running the economic system are transaction costs (EO P 136), and the first concept of transaction introduced above is a contractual or exchange based interpretation entirely consistent with Commons' definition; "actual transactions occur, of course between those who actually exchange products. The potential transactions are those which may or may not occur, since the parties are on the market and ready to exchange but do not" (1968, P.65, italics in original).



However, the second definition of transaction as transference across a technologically-separable interface is not necessarily the same thing at all. We can illustrate this with some examples, starting with a favourite fall back of economists, Robinson Crusoe.

Suppose Crusoe needs to have farming implements fashioned so that he can cultivate crops. The manufacture of implements and the cultivation of crops constitute technologically separable activities. The transference of the tools from the fabrication stage to utilisation in agriculture is therefore a transaction according to Williamsons' second interpretation.

We assume Crusoe's sojourn passes through three phases. During the first phase he is alone and makes all his own tools as well as farming his own crops. For the second phase, Man Friday arrives, Crusoe enslaves him and instructs him to make tools to assist Crusoe in his farming. At the beginning of the third phase, Man Friday rebels and refuses to co-operate unless Crusoe teaches him how to read English. Man Friday gets English lessons and Crusoe gets tools.

The three phases can be characterized as those of autonomy, authority and exchange respectively. In each case transactions in the sense of transferring a product (tools) through technologically separable interfaces (from fabrication to use in cultivation) takes place. Yet only in the third phase is there

any evidence of Williamson's first definition of transaction as an agreement to exchange.

It is not difficult to conceive of other examples. Suppose, for example, we have three farmers whose farms are run by professional farm managers. The three farmers share co-operative rights in a tractor. For simplicity, we assume the only contracts the farmers have to concern themselves with are the employment contracts for the respective farm managers and the terms and conditions under which each farmer can utilise the tractor.

Unfortunately the farmers are extremely opportunistic and the tractor contract proves highly expensive to all concerned; negotiating, policing and enforcing the contract takes up much time and wastes the resources of each of the parties. One farmer decides to buy out the other two; the overall effect is the switching of farm ownership and farm managers employment contracts to the farmer and the tearing up of the tractor co-operative agreement. The tractor is allocated to farms in much the same fashion as before.

The net effect is therefore the elimination of the transaction in the contractual sense and the preservation of the transaction in the physical transference sense. As in the first two phases of the Robinson Crusoe example, the two interpretations are not consistent. Unfortunately examples of

this type are commonplace. Mergers to deal with transaction costs involved in such problems as cross licensing of R & D, joint venture agreements, vertical relationships may all be intended to eliminate the transaction in the contractual sense but to preserve it in the physical sense. It is true that many of these may be expressible in internal market terms as in transfer pricing, but to presume that they automatically will be is to reduce the markets and hierarchies issue to external markets versus internal markets. In practice, autonomy and authority (fiat) may represent genuine alternatives to external markets and internal markets.

In fact, Williamson generally plumps for the contractual interpretation of transaction, as is obvious from the discussion in 4.1 above. This has a number of distorting effects on subsequent analysis. Both markets and hierarchies are presumed analysable as exchange systems in which contracting parties have a fundamental propensity to behave opportunistically. This is evident in M & H in which the transactional properties of external markets are compared and contrasted with those of internal markets in labour, capital and intermediate products. The concept of the firm as hierarchically organised is to some extent developed when the multidivisional form is discussed in chapter 8, but here the analysis is comparative only in so far as alternative hierarchies (U-form and M-form) are compared. Thus the comparative basis of Williamson's analysis is really internal markets versus external markets, or hierarchy versus

hierarchy, not market versus hierarchy. Even the analysis of hierarchy becomes finally reducible to a question of markets when Williamson concludes the superior efficiency of the M-form is due to its ability to create an internal capital market. Consequently, M & H is about markets, not markets and hierarchies. This perspective is carried to its logical conclusion in EIS where hierarchy itself is defined in contractual terms (see section 4.1 above).

The distorting effect of the market bias in transaction cost economics is also illustrated by Williamson's argument that; "the hazards of trading are less severe in Japan than in the United States because of cultural and institutional checks on opportunism" (EIS P 122). This interpretation of the Japanese system implicitly assumes (a) individual opportunism is still the driving force in economic relations, (b) culture operates only as a constraint. This contrasts strongly with other analysts' observation of Japan's emphasis on "group rather than individual, on cooperation and conciliation aimed at harmony, on national rather than personal welfare" (Patrick and Rosovsky, 1976, P 53). In fact, Williamson does appear to observe these effects in his informal description of the Japanese system (EIS PP120-3), yet he argues that, "the same principles that inform make or buy decisions in the United States and in other Western countries also apply in Japan", (EIS P 122), with opportunism retaining its place centre stage. However to analyse all economic relationships as definable in terms of opportunism runs the danger of cultural

and institutional myopia.<sup>3</sup> Williamson associates 'obedience' with utopian literatures and social engineering, and dismisses it as involving the unwarranted assumption of "mechanistic orderliness" (EIS PP49-50). Yet as far as Japan is concerned, recurrent themes of group harmony as opposed to individualistic self-interest suggest that obedience would be a more reasonable behavioural assumption than is opportunism. This is not possible in Williamson's analysis since the substitution of opportunism with obedience would effectively pull the plug on the existing transaction cost framework, as is obvious from the discussion in section 2 above.

Williamson argues that transaction cost economics draws upon contributions from literature in economics, law and organisation (EIS PP11-14). However, there is a tendency to selectively draw upon organisational analysis that is consistent with the principle of individual opportunism, while the emphasis on exchange based systems is reinforced by the contracting perspective provided by the law literature. As we shall see in the following sections there are further problems of analysis associated with this frame of reference.

##### 5. PRODUCTS AND DECOMPOSABILITY

The second item associated with the neoclassical agenda to be discussed here is the role of product and the related problem

of decomposability. Individual consumers and individual product-markets form the basic building blocks of neoclassical theory. Assumptions of individualism and separability permit the introduction of convenient behavioural assumptions like individual self interest, and also allows higher level phenomena (firms, industries, markets, economies) to be treated as simple aggregates of lower levels (products, consumers).<sup>4</sup> We shall consider the influence of this perspective on the transaction cost framework before looking at problems of interpretation as far as one major issue is concerned, Williamson's explanation for the existence of conglomerates.

### 5.1 Decomposability in Transaction Cost Economics

The concept of separability is a consistent theme in transaction cost economics as well as neoclassical economics (M & H pp.49-51; EO pp.66,145-7, EIS pp.282-3). If decision making units can be regarded as separable, the problem can be decomposed into constituent parts. A number of important implications follow upon this presumption, some of which have been touched on already. Firstly, as we saw in section 4.2, it encourages an emphasis on individualistic notions like opportunism at the expense of social or cultural perspectives that may involve more complex system-wide effects. Secondly, separability is a precondition of the creation of markets. If decision-making units can be treated as intrinsically separable, it is a simple step to then interpret relations between units as being exchange based.

Problems arise when this is pushed to the extent of seeing virtually all relations in market exchange terms, as we saw with the analysis of hierarchy in section 4.2. Thirdly, and perhaps less obviously, it may lead to an overemphasis on asset-specificity. Concepts such as synergy (Ansoff 1965) and economies of scope (Baumol et al, 1982)<sup>5</sup> are based on the idea that resources are not necessarily specific to particular product markets, but can be shared, leading to economies in production. Such non-specificities may be central to issues such as diversification and multinational enterprise (Teece, 1980, 1986; Kay, 1982; Galbraith and Kay, 1986). However non-specificities complicate the treatment of product-markets as independent, separable, units of analysis, and so there is a natural tendency for transaction cost economics to emphasise asset-specificity at the expense of non-specificity.

Fourthly, and related to the previous point, Williamson applies his framework to those systems in which product-markets can be treated as separable and independent to a considerable extent. For example, the basic product-markets analysed in M & H are intermediate product markets and the conglomerate. In the former, the product-market is treated in isolation, in the latter the unrelated basis of corporate diversification means that the different product-markets can be treated as separable profit centres. Intermediate cases of diversified firms linked by synergies in marketing, distribution and technology are

effectively excluded from discussion, and the omission is not rectified in EO or EIS.

Williamson in fact provides a transaction cost analysis of the conglomerate which he argues accounts for its evolution and development. However we shall argue below that his explanation is not satisfactory, and that ironically it may be better regarded as an argument for corporate specialisation rather than conglomerateness.

## 5.2 Conglomerateness and Transaction Costs

Williamson (M & H pp. 155-75, EO pp.154-8, EIS pp.286-8) provides an explanation for the existence of conglomerates based upon M-form principles and failures in the external capital market. As such it appears to offer a means of resolving the apparent paradoxical existence of firms operating unrelated product-markets with no obvious synergy benefits.

Williamson argues that the conglomerate may constitute a miniature capital market superior in performance to the external capital market. Firstly, internalisation of the capital market might enhance the quality and quantity of information available to providers of funds and give more direct control over auditing and the rewarding/penalising of performance. The advantages of internalisation in this respect were discussed earlier in section 2.



Secondly, divisionalisation encourages creation of profit centres as basic elements in an M-form (multi-division) structure. Divisionalised profit centres organised around product, territory or process may allow the creation of an internal capital market within the firm. Divisions can be assessed in terms of profit contribution; the development of this uniform, measurable standard facilitates divisional comparability and may have beneficial incentive effects on managers.

Williamson argues that the combination of internalisation and divisionalisation advantages permits the conglomerate to operate as a miniature capital market with associated attractive efficiency advantages. This is offered as a rationale for the conglomerate.

In fact, there is nothing wrong with the argument when it is offered in terms of why the conglomerate may be more efficient than the external capital market. Consistent with the general internal markets versus external markets orientation of M & H, this is how the analysis is developed. The idea that capital market failure may encourage internalisation and divisionalisation is persuasive.

The problems arise when this is offered as a rationale for the conglomerate. In this context, Williamson is comparing the wrong things. Instead of analysing why the conglomerate may be superior to the external capital market, transaction cost

economics has to explain why it may be superior to the specialised firm. By Williamson's own chosen criterion of efficiency, there must be some advantage that conglomerateness has over specialisation that encourages this strategy to evolve at the expense of the specialised firm. Unfortunately, the internalisation/divisionalisation thesis contains no such advantage. We can illustrate this with reference to a simple example.

Suppose we start off with a grouping of 9 independent firms - say 3 aerospace, 3 chemical and 3 electronics. The firms have all been facing capital market problems; possibly because the growth of the respective firms has tended to encourage separation of ownership and control (this is consistent with Williamson's analysis of the growth of specialised U-form or functionally organised firms; M & H pp.133-6). The firms can all be characterised in terms of lazy, incompetent managers wasting existing funds and being unable to attract new funds.

Creation of a miniature capital market could contribute towards the mitigation of some of these effects, and Williamson's internalisation/divisionalisation argument is helpful in explaining how this might be achieved. Amalgamation of firms by merger or takeover is an obvious device for this purpose.

However Williamson's internalisation/divisionalisation advantages are neutral as regards which pattern of amalgamation

should be adopted. Suppose one strategy would involve the amalgamation and divisionalisation of the three electronics firms, while a second would involve a combination of 3 firms, one from each sector. Both strategies could create internal capital markets and separate independent profit centres around the former corporate boundaries. Both the specialised electronics-based strategy and conglomerate strategy could extract the miniature capital market advantages associated with the multidivisional forms. In these respects at least, there is nothing to choose between them.

However, this apparent neutrality of effect is superficial. When the specialisation/conglomerate choice is examined further, there are in fact sound transaction cost reasons why the specialised strategy would appear to be generally superior. These relate to problems of performance comparability and the possibility of internal trading, respectively.

Firstly, similarity in technology and markets between divisions facilitates profit comparison between divisions and may improve the profit centre operation of the internal capital market, as Williamson recognises (EIS p.140). In principle it is easier to infer efficiency from performance within sectors than it is between sectors.

Secondly, if there are complementary markets or technologies between divisions as a consequence of specialisation as in the

electronics case, these may open up the possibility of internal trades or deals to exploit synergistic possibilities. The independence of the divisional profit centres need not be compromised, but the existence of internal senior management "umpires" may reduce the internal transaction costs of such deals compared to external options such as leasing, joint venture or licensing. In particular, opportunistic behaviour may be more easily rectified or prevented. The same transaction cost arguments used to justify the internal capital market can also be utilised in considering other internal markets involving inter-divisional transfers of informational human or physical resources. Williamson's own transaction cost tool-kit provides arguments for specialisation rather than conglomerateness. In short, there is no advantage that may be provided by the conglomerate in Williamson's analysis that could not also be provided by more specialised strategies. In addition, specialisation may provide additional efficiency gains over conglomerates. Consequently, Williamson does not explain why the conglomerate should evolve in preference to alternative corporate strategies.

In fact, the conglomerate is a relatively rare phenomena even among large firms (Rumelt, 1974; Channon, 1973, Dyas and Thanheiser 1976). What is missing from Williamson's analysis are positive reasons for choice of conglomerateness rather than specialisation in the cases where it does obtain. An alternative explanation is provided in Kay (1982 and 1984) in terms of

specialisation dangers; as well as providing synergies and economies, specialisation may provide vulnerability to environmental threats in turbulent, rapidly changing and uncertain environments. The conglomerate strategy is one option that may be adopted by corporate management in such

circumstances.<sup>6</sup> Management avoid market and technological linkages, not for internal efficiency gains but because they do not wish to tie their fate and the fate of the firm to a limited set of market and technological opportunities.

We shall conclude this section by emphasizing two points. Firstly, Williamson's emphasis on separability and individualism is consistent with the resultant focussing on the extreme case of the conglomerate in which the firm can be regarded as a highly decomposable system. However, even when it is similarly analysed in terms of decomposability around profit centres the specialised strategy appears potentially superior in efficiency terms to the conglomerate, *ceteris paribus*. In practice it may be that autonomy and fiat may augment or replace internal markets, hierarchy may provide an effective alternative to inter-divisional exchange agreements; the point here is that Williamson's argument is not convincing even on its own (contractual) terms.

Secondly, another consideration briefly touched on here will be developed in more detail in the next section, that is the role

of the environment. We have already seen that it is not possible to justify diversification in general and conglomerateness in particular by reference to internal efficiency considerations alone. Instead environmental considerations are likely to be important. In the next section we shall extend consideration of the role of the environment to transaction cost analysis of the evolution of the multi-divisional (M-form) structure.

#### 6. DECISION-MAKING AND THE ENVIRONMENT

The third item on the neoclassical agenda to influence the development of the transaction cost framework is the concept of optimality. The relationship between optimality and decision-making is not as obvious as might seem at first sight. While maximising behaviour may appear an obvious starting point from which to explore questions of optimality it is not essential; for example if the environment is stable and learning opportunities exist, satisficing decision-makers may converge on the maximising solution (Day, 1967).

Nevertheless, maximising has been a convenient decision-making base for neoclassical explorations. A related topic has been the role of competition as an environmental phenomenon encouraging or forcing efficient maximising behaviour. Decision-making and the environment are closely connected issues in neoclassical theory. Below we shall consider how transaction cost economics deals with these issues before looking at the

implications for one major issue analysed by Williamson, the evolution of the M-form corporation.

#### 6.1 Decision-making and the Environment in Transaction Cost Economics

Williamson's development of transaction cost economics does not really develop a theory of decision-making and neglects the role of environment. We shall consider both these points in turn.

Neoclassical theory has maximising criteria, behavioural and evolutionary theory have occasionally drawn upon the concept of satisficing. However, there is no corresponding principle or criteria for decision-making in Williamson's development of transaction cost economics. Instead efficiency criteria are assumed to win out in the end with no real analysis of the process by which efficiency decisions are made. Given the emphasis on the opportunistic individual as basic to analysis, the neglect of how such an individual makes a decision is particularly striking. Yet despite this neglect, a theme of Williamson's development has been emphasis on market versus organisational failure (eg. see EIS pp. 153). However, if we are being consistent in pursuing a comparative analysis, institutional performance would be relative rather than definable in terms of some absolute decision-making standard. Comparison should be in principle symmetrical in so far as we should be able

to talk of institutional success as the other side of the coin from failure. Defining performance in institutional failure terms implies some absolute standard lurking in the background, and it is tempting to identify this as the concept of optimality. This interpretation is given some weight by the optimality standard occasionally being made explicit, as in the case of the M-form hypothesis (M & H, p.150).

The second area of neglect, the nature and impact of the environment, is encouraged to the extent that the analysis is framed in comparative institutional terms. We can demonstrate this with an example of the transaction cost economics approach.

Suppose the firm has to produce  $Q$  of a particular product and the objective is to minimise costs. If neoclassical conditions hold as far as competition in product, capital and factor markets is concerned, and there are no bounded rationality problems, then neoclassical production costs  $S$  may be expressed as

$$S = P_K K + P_L L$$

where  $K$  is capital and  $L$  is labour and  $P_K$  and  $P_L$  are their respective prices. Now, suppose production can be organised two ways; a firm can carry out all production inhouse, or two firms can make a market agreement that involves contractual exchange of



resources to produce Q (e.g. through licencing, joint venture or sub-contracting). The first option involves organisation costs, the second may substitute some of the hierarchical costs with transaction costs. The choice may be now expressed as;

Choose lesser cost alternative where cost C;

$$C = S + f(E)$$

where  $f(E)$  represents the additional costs associated with respective forms of economic organisation. Since  $S$  represents identical base costs whatever the form of economic organisation, the appropriate decision is whether  $f(E)$  is greater or less under the market or hierarchial alternative.

Williamson emphasises that transaction cost economics is mainly concerned with assessment of distinct institutional alternatives (EO, pp.140 & 187) and our formulation above illustrates the typical decision problem that is associated with such analysis. Problems such as multinational enterprise vs licensing, diversification vs joint venture, vertical integration vs intermediate product markets, inhouse vs sub-contracting, and mergers vs market contracts can all be represented in similar fashion. There are two advantages that such a formulation provides. The first is that we can ignore neoclassical production costs since they are common to all institutional choices and so the question can be limited to which institutional form incurs the lesser costs of governance. The second advantage

is that demand considerations can be ignored for similar reasons. The analysis can therefore concentrate solely on the costs of governance internal to the respective systems by assuming that demand conditions and neoclassical production are the same for all institutional choices. It is very much a supply side analysis, though there is no real discussion of who makes decisions and how they are made.

However, reduction of the analysis to questions of governance is carried out at the expense of environmental considerations such as the role of competition and the demand mechanism. This perspective can lead to incompleteness of analysis as we shall see in the next section.

## 6.2 The Evolution of the M-Form Corporation

The evolution of the M-form corporation has been a major area of study in transaction cost economics (M & H, pp.132-54, EO pp. 65-77, 151-4, EIS, pp. 279-94). As well as providing a basis for analysis of the economics of internal organisation, Williamson has extended this analysis into investigation of conglomerate diversification and multinational enterprise. However we suggest here that there are problems with existing transaction cost explanations due to the ignoring of environmental questions. According to Williamson, U-form firms, that is those organised by functional specialism such as R & D, marketing, production and finance, eventually run into control

loss and strategy formulating problems as they expand in terms of size and diversity. Since all problems involving more than one function have to be co-ordinated and decided on at senior management level, centralisation of decisions results in a high level of organisation costs. Centralisation creates control loss problems by requiring information to pass through numerous levels before it is acted on; congestion and limited capacity, as far as information processing at senior management level is concerned, exacerbates these problems. Short run urgent operating crises may push out long run strategic decision making at this level. If senior management attempt to ease the information capacity problem by involving functional heads in top level decision making, pursuit of sub-goals by these functional heads may distort the profit orientation of the corporation. For these reasons there may be severe efficiency problems accompanying the growth and expansion of the U-form corporation.

Williamson argues the M-form, divisionalised corporation mitigates these problems. By giving divisions responsibility for inter-functional operating problems, control loss problems are reduced since most decisions can be taken lower down the system. Top management are freed to concentrate on longer run strategic problems, while the creation of divisional profit centres may facilitate the creation of an internal capital market, as we saw in section 5.2.

In fact, these arguments represent reasonable ex post

analysis of the relative superiority of M-form versus U-form for the large diversified corporation. The problems lie with Williamson's analysis of the evolution from U-form to M-form, following on Chandler's earlier analysis (1966).

Williamson argues that the expansion of the U-form leads to efficiency problems such as control loss and managerial discretion. The M-form provided a more efficient solution than either the U-form, or the holding company (H-form) alternative which lacked the selective strategic intervention mechanisms of the U-form. Consequently "in the degree to which the M-form is in fact the fitter, natural selection, which includes competition in the capital market, favors this result." (EIS, p.296).

The problem with this interpretation is that it puts the cart before the horse. Natural selection filters out inferior forms by creating inefficiency problems as a consequence of competition from superior forms. These problems typically become manifest after the appearance of the superior form, not before.

As Alchian points out; "even in a world of stupid men there would still be profits" (1950, p.213). The technologically inferior slide rule was still a viable commercial proposition until after the introduction of electronic calculators. The helpless dodo survived in an isolated and benign environment until the arrival of an aggressive predator, man. Import controls may protect a sleepy domestic industry from aggressive,

efficient, foreign competition and even allow it to be profitable. Natural selection selects present competitors, not future competitors. Since the M-form had not been introduced at the point during the inter-war period when many U-form corporations were experiencing crises that apparently led to the introduction of the M-form, (pp.348-9) it cannot be held accountable for these crises. In those circumstances, Williamson's identification of control loss and managerial discretion problems in the U-form as "the basic reason why the (M-form) corporation became necessary" (Williamson, 1971, p.348) is unconvincing. His interpretation of natural selection processes may explain adoption and diffusion of the M-form once introduced (EO, p.164) but not its initial development. All the managerial discretion and control loss problems analysed by Williamson (1971) are internally generated problems, but competition and natural selection works by creating externally generated problems in the systems environment. The logical conclusion of Williamson's analysis is that, "eventually (expansion of) the U-form structure defeats itself" (italics added) and results in the M-form innovation to solve these problems (1971, p.350). The inappropriate idea of self defeating systems is a consequence of ignoring competitive forces in evolving economic systems.

Williamson does not really develop the natural selection argument, but if we pursue this line of enquiry it might suggest interesting research questions for future analysis. We could

start be restating Alchian's earlier comment as implying "Even in a world of inefficient U-form corporations there would still be profits." If the U-form corporations are experiencing crises, why? Williamson points out that transitory market conditions often triggered the M-form innovaton, but comes back to managerial discretion and control loss problems as the major source of problems (1971, p.348). At this point we are stuck until we have some knowledge of the environmental conditions that are stimulating such crises. If it is simply that smaller firms are more efficient and more successful because U-forms have overexpanded, then this is an argument for limiting scale and/or growth, an argument recognised and discussed in a pre-transaction cost article, (Williamson 1967, reprinted EO chapter 3, but not mentioned in the context of the development of the M-form corporation). If it is the case that expanded U-forms are more efficient than their smaller more specialised brethren, they would still be one eyed men in the kingdom of the blind, prior to the emergence of two eyed M-forms. In fact, this latter interpretation is more reasonable in a transaction cost framework, otherwise we have to treat the overexpanded U-form development associated with the former interpretation as consistently irrational. However if we choose this route, it is not clear what crises could be provoked by U-form organisation since it is, at this stage, the only game in town.

The question is in fact an empirical one, but one in which questions of competition would be central. Natural selection

arguments are likely to be helpful, but care has to be taken with their formulation.

A final point regarding the U-form/M-form issue is that although a theory of decision-making is not adequately developed in transaction cost economics, Williamson does suggest; "to the extent that the coincidence of large, unitary form structures and nontrivial opportunity sets (mainly by reason of favorable market conditions) is observed in the economy, utility maximizing behaviour (and its attendant consequences) is to be expected (M & H, p.150f)". He argues that this allows his earlier analysis of managerial discretion theory in the context of U-form organisation to be applied in such cases.

In fact such integration of managerial discretion theory and transaction cost economics is not feasible; if utility maximising behaviour is possible then so also is profit-maximising, since the profit maximising outcome is a special case in all of the variety of managerial utility models put forward in Williamson

(1964).<sup>7</sup> The reason that managers do not profit maximise is not because they cannot, but because they do not wish to. There are other components of their utility function. The reason they are allowed to do so is because of information problems in the capital market. However, there are no information problems of internal organisation in managerial discretion theory, since

managers have the ability to maximise profits, if they so choose. There are no bounds on their rationality.

If Williamson's earlier managerial discretion theory was really applicable to overexpanded U-forms as he suggests, then it removes the foundations of his transaction cost economics. Given there are no informational problems of internal organisation in managerial discretion theory, the M-form innovation would be introduced to solve a non-existent problem. The analysis of the M-form only makes sense if there are severe problems of bounded rationality and information processing within the overexpanded U-form. The absence of these problems in managerial discretion theory leaves nothing for the M-form to do. Consequently, rather than augmenting transaction cost explanations of the evolution of the modern corporation, managerial discretion theory negates them. They are inconsistent and incompatible approaches between which a choice has to be made. The balance of argument probably does lie in favour of transaction cost economics, which means explicitly rejecting Williamson's earlier managerial discretion theory.

#### 7. THE SHORT RUN, THE LONG RUN AND TECHNOLOGICAL CHANGE

As Williamson implies, transaction cost economics is probably more applicable to the long run rather than the short run (EIS, p.23). Time is required to switch resources from one usage to another if institutional change is being effected.



However, Williamson (1986)(b) implies that the very long run is an area which transaction cost economics may find difficult to deal with, since most of the contracting issues of concern to transaction cost economics are of shorter duration. Despite the importance of technological innovation, its treatment in EIS is sparse (pp.141-44, with occasional mentions elsewhere). M & H devoted a chapter to technological change, but the analysis is really a review paper of existing studies. Innovation is not really properly assimilated into the transaction cost framework.

Williamson is aware of the difficulties and suggests that further study of the relations between organisation and innovation is needed. However there have been many such studies in recent years; it could be suggested that what is needed is an adequate conceptual framework to aid interpretation of this issue. The market bias in transaction cost economics discussed in section 4 makes this difficult. The long time horizons and high degrees of uncertainty associated with innovation creates substantial problems for any contractual arrangement, explicit or implicit.

Interestingly Williamson suggests "the role of competition in sorting out innovations according to their economic merit also warrants more complete treatment. The link to evolutionary economics (Nelson and Winter, 1982) will be especially instructive" (EIS p.404). Williamson is referring to organisational innovations, but his interpretation could be

easily extended to technological innovations. Usefully, evolutionary economics has a perspective based around the role of environment and the nature of resources that may provide a corrective to the supply based product oriented transaction cost approach. Also, the absence of a theory of search in transaction cost economics follows its neglect of decision making; the two issues are closely related. Evolutionary economics provides bases for analysis of decision-making and search that may generate useful clues as to how transactional cost economics could be modified in these respects, especially with respect to technological innovation.

At this point Williamson's approach is still effectively limited to the static technology long run on the neoclassical agenda, problems of the very long run being difficult to assimilate. However, these are hints as to how reformulation might be achieved that may better suit the framework as for as dealing with problems of technological change is concerned.

#### 8. PRICE AND INFORMATION

The last item on the neoclassical agenda that has influenced the development of transaction cost economics is price. Neoclassical theory revolves around the price mechanism as a resource allocating mechanism. In principle, transaction cost economics leaves price theory behind by revealing that many other types of information become important once bounded rationality

considerations are considered. In practice, price still plays a central role in the transaction cost economics of M & H, EO and EIS. Williamson synthesises the core of transaction cost arguments in EIS around a contractual scheme in which technology and governance systems are distinguishable in terms of the price associated with the respective systems (EIS pp.32-35). The basic scheme is applied repeatedly to transaction cost problems throughout the work. Price still serves as a major classificatory and analytical device in transaction cost economics.

Such an emphasis is understandable given the explicitly contractual basis of Williamson's transaction cost economics. Contracts suggest markets which naturally evoke the concept of price as a device for facilitating exchange. However, even in markets, price may play a relatively subordinate role in terms of desired or required information when bounded rationality problems are significant. When non-market relations are being investigated, price may not even be a consideration.<sup>8</sup> Its significance or implications, if any, may be swamped by the crackle and noise emanating from other major information problems.

Although Williamson argues that transaction cost economics builds upon contributions from organisation studies, little reference is made to recent work in this area. In fact there have been a number of studies carried out by organisation

theorists which suggest that traditional interpretations of the role of information in organisations require to be radically revised (March and Shapira, 1982). The role of information is more complex than was earlier supposed by theorists who treated it simply as an input into efficient decision making. Information both influences and is influenced by social system in complex organisations. March and Shapira cite evidence to suggest that most information is gathered for surveillance and monitoring purposes, not to make decisions, and that the value of information even in decision-making is linked more to the process rather than the substance of decision-making; given non-decomposability of performance measures as far as decision-makers are concerned, a decision-maker is likely to be judged in terms of technique rather than effect.<sup>9</sup> Information may serve more as symbol and reinforcement of authority and hierarchical position than as input into efficient decision-making (March and Shapira pp.97-9). For transaction cost economists interested in how alternative institutional forms handle and process information, the March and Shapira survey suggests new directions which analysis could take.<sup>10</sup>

The role of price in the transaction cost economics of M & H, EO and EIS echoes the preoccupation of neoclassical economics with markets and exchange relations. There is a need to modify the remit to properly analyse institutions as social systems in which information has a broader and more complex role than is

allowed for in price theoretic approaches. Price does not deserve its central role in transaction cost economics.

## 9. CONCLUSIONS

The five items of the neoclassical agenda have provided a useful basis for analysing the development of transaction cost economics up to this point. The major argument here is that transaction cost economics has encountered failures of analysis when considered on its own terms as an attempt to develop a comparative institutional approach to problems in economic organisation. However the mood of this paper is optimistic in so far as there already exist useful signposts and clues as to how reformulation can take place. Williamson has provided an extremely valuable tool kit which may be augmented by the work of other analysts.

The deficiencies of the transaction cost framework to date are rooted in the market bias of the approach. The contracting basis of transaction cost economics leads to an emphasis on markets, external and internal, and it has been argued here that it leads to a neglect or distortion of hierarchy and its effects. In fact, markets are very rare and occasional devices, most resource allocation being decided under conditions of autonomy or fiat. <sup>11</sup> The fact that many examples of resource allocation are

in principle decomposable into markets does not mean to say they necessarily will be.

The bias is reinforced by the presumption that in the beginning there were markets. We could as reasonably presume that in the beginning there were firms<sup>12</sup>, though this runs the danger of replacing a market bias with a hierarchical one. The individualistic orientation of such exchange based analysis also leads to pushing the concept of decomposability farther than is perhaps justified. Presuming that the world is decomposable into individual products means that the importance of non-specific assets in corporate resource allocation is obscured, and also leads to analytical problems as in the case of the explanation of the existence of the conglomerate. The contracting basis of transaction cost analysis also leads to an emphasis on short/long run neoclassical conditions of static technology at the expense of considerations of technological innovation, (exacerbated by the absence of a theory of search), and an overemphasis on price rather than other types of information. In an era of large diversified multinational corporations, neoclassical economists' faith that resource allocation questions can be satisfactorily resolved by examining price signals is rather like an anthropologist believing that Apache tribal relationships could be unravelled by monitoring their smoke signals. Transaction cost economics offers a means of escaping this trap, but it is disappointing that much of the analysis so far has argued that

opening the Russian doll of external markets only reveals another Russian doll of internal markets. The analysis of decision-making also goes by default, efficiency considerations being presumed to win out without sufficient analysis of how this will be achieved.

There are three major areas of focus that transaction cost economics should adopt now, each of them intended to compensate for the market bias in the present formulation of the approach.

Firstly, it may be more helpful in many circumstances to analyse the firm as a combination of resources rather than as an aggregation of products. Penrose (1959) and Nelson and Winter (1982) are indicative of how economic analysis can be developed in this respect.

Secondly, processes of decision making should be explicitly incorporated in transaction cost analysis with attention being paid to the associated problems of search, selection and the role of the environment. The volume by Ungson and Braunstein (1982) reviewing recent findings in behavioural decision making, human problem solving and organisational decision making provides useful outlines of the state of the art in these areas, the chapter by March and Shapira being particularly interesting. Earl (1984) also provides helpful analysis of corporate strategy and decision making. Also evolutionary theory (Nelson and Winter, 1982) may provide useful guidelines and hints.

Thirdly, the role of hierarchy, organisation and structure should be developed in the analysis. Market holds centre stage just now with hierarchy lurking offstage, but it should not be too difficult to push the latter on, with a little prompting from organization studies.<sup>13</sup>

We may borrow an image from Dickens and conjure up a ghost of Christmas yet-to-come for transaction cost economics if such cautions are ignored. The ghost haunts Baumol's (1986) review article of EIS where he suggests that the production function may be generalized to include governance expenses, with governance regarded as a necessary requirement of production. Once this is accomplished, we should "aspire to the beginnings of a theory of optimality in governance structure along with some comparative static analysis indicating how changes in values of some of the pertinent parameters affect the optimal structure" p.286. Baumol suggests that much could be learnt by analogy with standard welfare theory and that governance problems are reducible to problems in price theory; "there is every reason to expect that precisely analogous problems affect governance by price mechanism within the firm and that precisely analogous price modifications will sometimes serve the firm as well"<sup>14</sup> 8p.286).

The spectre of transaction cost economics taking the hand of contestable markets theory down the moribund road of reheated neoclassical economics is truly scary.<sup>15</sup> However, as even



Ebenezer Scrooge discovered, life is about choices, and we may take some comfort from the lack of inevitability in this vision. The ghost of Christmas yet-to-come is just a bad dream - isn't it?



## FOOTNOTES

1. This was written while on leave of absence from Heriot-Watt University as Jean Monnet Fellow in the Law Department, European University Institute, 1986-87. Thanks to Paul Hare, Geoff Wyatt, Frank Stephen, Gunther Teubner, Donald George for helpful comments, and of course general absolution to all of them from any responsibility for my mistakes or failings of analysis in what follows. Thanks also to Gail Strom and Joyce Reese for constructing order out of disorder in their production of this paper.
2. These different frameworks cover a wide area and each framework often contains significant internal differences of interpretation. For some discussion of the different approaches and references to related literature, see Kay (1984).
3. Williamson recognises that transaction cost economics would benefit from more sociological input (EIS p.17) that, in fact, the concept of power is underdeveloped (EIS, p.272) and that the framework should respond to lessons from organisation theory (EIS, p.402). However, these remarks do not influence the central tenet of the framework, that it is a contractual analysis based on exchange relations.
4. Kay (1984) discusses in some detail problems arising from the assumption of extreme decomposability.
5. Although the contestable markets literature tends not to refer to the earlier analysis of synergy in the corporate strategy literature, economies of scope are the same as synergy, that is, they derive from resource sharing between product-markets. Asset non-specificity therefore underlies economies of scope. Williamson (1986b) recognises the different starting points of contestable markets and transaction costs economics.
6. In some circumstances, there may be only limited opportunities for further operation in present markets and technologies because of the highly specialised and idiosyncratic nature of the resources. Market saturation or possible antitrust action against further growth by specialisation may require any additional growth be pursued through conglomerate diversification.

7. Optimality depends on perspective. There may be optimal outcomes from the point of view of the decision-makers, but not necessarily from the point of view of society.
8. Shadow price and opportunity cost considerations may exist even in non-market relations such as Crusoe's early sojourn on his island. The point here is that price is only one small piece of information out of many in circumstances involving severe problems of bounded rationality.
9. It is tempting to argue that this may help to account for the sustainability of the technique dominated neoclassical theory, though such a suggestion might be taken as a bit of a sideswipe.
10. March and Shapira also argue that organisations recognise the problem of "tainted" information, that is resulting from strategic misrepresentation for personal or subgroup reasons (p.98). This may provide interesting links with opportunistic behaviour in transaction cost economics.
11. For example, an individual in the normal course of everyday life makes many resource allocation decisions, only a few being decided by recourse to contract. Even for those decided in the context of contract (e.g., in employment), the decision and subsequent action itself may be influenced by many considerations other than commitments involved in the employment contract.
12. Giovanni Dosi has argued this point in seminar discussions.
13. Also, some analysis of how economic analysis could be integrated with hierarchical considerations is developed in Kay (1979, 1982, 1984 Chapter 6).
14. Baumol misrepresents Williamson's concept of opportunism when he defines it as simply "willingness to profit at the expense of others" (p.280). This appears no different from simpler concepts of self-interest seeking in traditional literatures. Williamson takes considerable pains to differentiate the concept of opportunism from these simpler concepts.
15. Comparable spectres appear in Rugmans (1981) interpretation of the multinational as an internal pricing mechanism and Caves (1982) analysis of multinationals in which he proceeds to outline optimal public policy guidelines using neoclassical principles and building on transaction cost arguments. Both recognise transaction cost problems encourage internalisation of markets, but still presume that standard price theory can be obviously modified to deal with the multinational enterprise.

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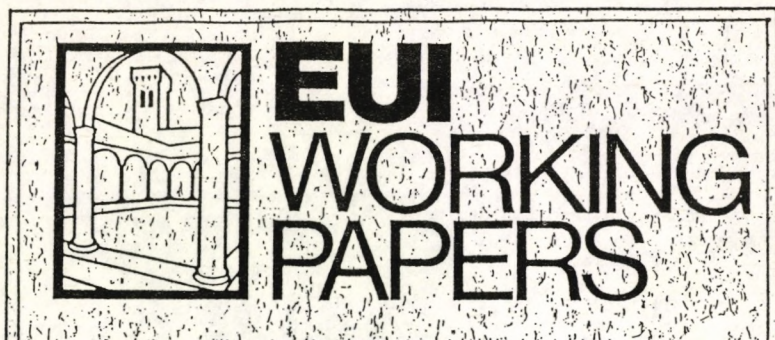
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