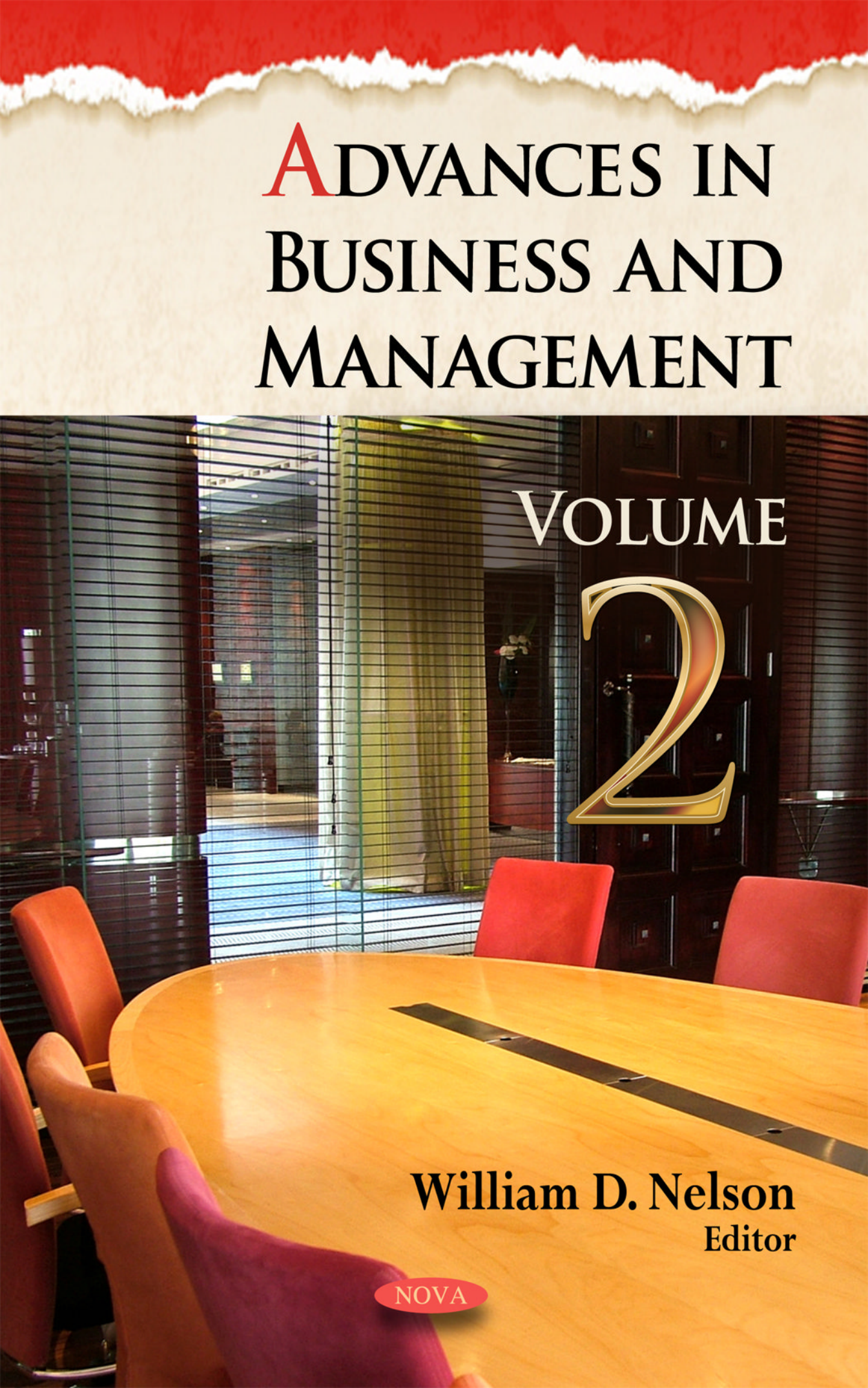




ADVANCES IN BUSINESS AND MANAGEMENT

VOLUME

2

William D. Nelson
Editor

NOVA

ADVANCES IN BUSINESS AND MANAGEMENT

ADVANCES IN BUSINESS AND MANAGEMENT

VOLUME 2

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**ADVANCES IN BUSINESS
AND MANAGEMENT**

VOLUME 2

WILLIAM D. NELSON
EDITOR



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New York

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PREFACE

This new and important book gathers topical research in the study of business and management techniques from across the globe. Some topics presented include transaction management as a practical tool for the organization of production; permanence or stability in the theory and practice of ethical business; business ethics pedagogy and corporate social responsibility in business management.

Chapter 1 - In this era of globalization the authors see an increase in specialization: the production chain is split up in more and more parts and the production of these parts is outsourced to those places in the world where production is relatively the cheapest and most efficient. This implies that transaction costs, associated with the coordination of production and trade in parts and components, become increasingly important. In small open service oriented economies like the Netherlands, transaction costs may amount to up to 50% of total value added. Therefore, the ability and skill of keeping transaction costs low is vital for the competitive position of a firm or country. This is what transaction management is about: create value from these transactions by keeping transaction costs as low as possible. Transaction management is based on modern theories of transaction costs economics, institutional economics, industrial organization and international trade and making these theories operational for strategic decision making in industry and government. This chapter surveys how transaction management as a practical tool for the organization of production which has been inspired by these modern economic theories.

Chapter 2 - Some broad areas of stability and permanence in the theory and practice of business ethics are identified, together with other areas of dynamic change. Various categories are organized into a stable framework incorporating a set of bi-polar components such as efficiency vs. justice, spanning themes such as character, with topical themes such as technology, money, property, poverty and ecology. Although every category and theme in the framework is likely to endure, their internal details and inter-relationships are highly dynamic. Philosophy is also changing, with several distinctive moral philosophies such as dialectics and pragmatism likely to rise to greater prominence, bringing with them an increased acceptance of the very idea of “business ethics”. Accordingly, it is possible to project some broad macro-trends involving (i) the re-emergent philosophies, (ii) trans-disciplinarity, (iii) the blurring and fading of boundaries, and (iv) general moral progress.

Chapter 3 - Faced with a daunting task of bridging the peak deficit of 12% in power generation, GoI (Government of India) recognized the fact that economies of scale in power plants can help it achieve cheaper power generation and faster capacity addition through

development of large size power projects using latest supercritical thermal technologies and that it needs to come out with policies and guidelines supporting development of economies of scale. Hence GoI formulated the UMPP (Ultra Mega Power Plants) Policy 2006 through various rounds of discussions with financing agencies, nodal agencies, regulators and developers. In the initial part, this paper presents an analysis of the UMPP Policy and the supporting competitive bidding framework, including analysis of responsibility of different stakeholders, different stages in the bidding process and appropriation of risks associated with the project amongst stakeholders. In the latter half of the paper, authors focus on the key challenges faced during the competitive bidding process. The paper highlights the key learnings from them for policy makers around the world, especially the developing countries which are looking at adopting the competitive bidding framework for infrastructure development.

Chapter 4 - Companies today face increasingly more complex and dynamic contexts where obtaining and maintaining some competitive advantage is certainly costly and complicated. This leads management to become aware of the consequences, either positive or negative, that their activity generates for society, since the company's global image will largely depend on those repercussions. Therefore, concepts such as Corporate Social Responsibility (CSR) become relevant elements for business management.

Taking such ideas as a reference, the present work intends to identify i) the drivers for the implementation of CSR practices, and ii) to assess the implications derived from the whole process. Accordingly, it is set out an empirical study that analyses the reality of nine (9) companies from different sectors. The information was obtained through semi-structured interviews with the managers of the companies and data were analysed by QSRNVivo software. The interviews were held between May 2006 and March 2007, and the conclusions were confirmed early in 2010, thus including a longitudinal cut in the study.

The literature revised revealed that one the major drivers for companies is the managers' attitude –proactive or reactive– towards these issues.

Our data confirm that companies are increasingly concerned about CSR. The market's competitive forces lead companies to find some differentiation sign that can also be in line with the needs of the customers that positively assess CSR actions (except those reactive companies). Consequently, the main drivers that apparently lead companies to develop such actions are the owners' values, the market tendency and, occasionally, the regulations in that field. We have also found that those environmentally-aware companies (those committed themselves to develop environmental strategies to minimise their negative impact on the environment) are more inclined to apply CSR philosophy in their management.

Chapter 5 - According to Stewardship Theory, conflict arises when agents and stewards work together, as the agent will tend to free ride over the steward, who feels betrayed and frustrated. While Stewardship Theory proposes a valuable alternative to Agency Theory, it is static, because it assumes no learning in individuals as a result of their interaction. This paper brings dynamics into the picture by introducing the learning that occurs inside each agent every time they interact. It is argued that individuals learn in the process of interaction and can change their preferences –not necessarily feel betrayed and frustrated. The decision making theory of Pérez López (1991 & 1993) gives foundations to the arguments proposed in the paper.

Chapter 6 - How to select a right procurement system is an essential decision in project management. The purpose of this article to provide a concise review of the recent advances

in understanding the selection of procurement systems and make suggestions on the future direction of research. From the perspective of transaction cost economics, construction procurers need to take into account the efficiency implications of bargaining power reversal in procuring a project. As three main types of procurement systems differ in their ability to shorten delivery time, adaptability to requirement changes and ability to identify liabilities, aligning procurement systems with project conditions would help mitigate the holdup threat and improve the overall efficiency of procurement. It is also suggested that, in the future, researchers in this field should seek to broaden the TCE framework to accommodate other important procurement decisions, particularly with respect to the handling of project risks.

Chapter 7 - The economic theory of transaction costs, as formulated by Williamson, springs from his interest in studies that explain the way markets function, combining this explanation with the institutional framework in which markets develop, in industrial economy and the economy of organizations (Coase, 1937, 1972; Bain, 1956, 1958; Alchian, 1965, 1969; Alchian and Demsetz, 1972; Arrow, 1959, 1973, 1974; Demsetz, 1991, 1995); from his interest in the studies that form the basis of organizational theory (Barnard, 1938; Cyert and March, 1963; Simon, 1947, 1983; Chandler, 1962; Ouchi, 1979, 1980). It is also the fruit of his philosophical and theoretical vocation, which took a strong hold when, following his education as an engineer at MIT, he found himself at Stanford where he came across the Principles of Samuelson, and shortly after, in the then named *Carnegie Tech*, he tackled organizational problems through the classes of James March and Herbert Simon.

Chapter 8 - The history of exploration reveals a pattern. First, government and the military enter the unknown world to establish basic infrastructure. Then private commercial entities and non-profit organizations follow with settlement and industrialization. That was most evident in the New World of the Americas,

Chapter 1

TRANSACTION MANAGEMENT: VALUE CREATION BY REDUCING TRANSACTION COSTS

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ABSTRACT

In this era of globalization we see an increase in specialization: the production chain is split up in more and more parts and the production of these parts is outsourced to those places in the world where production is relatively the cheapest and most efficient. This implies that transaction costs, associated with the coordination of production and trade in parts and components, become increasingly important. In small open service oriented economies like the Netherlands, transaction costs may amount to up to 50% of total value added. Therefore, the ability and skill of keeping transaction costs low is vital for the competitive position of a firm or country. This is what transaction management is about: create value from these transactions by keeping transaction costs as low as possible. Transaction management is based on modern theories of transaction costs economics, institutional economics, industrial organization and international trade and making these theories operational for strategic decision making in industry and government. This chapter surveys how transaction management as a practical tool for the organization of production which has been inspired by these modern economic theories.

Keywords: transaction costs, outsourcing, trade in tasks, fragmentation of production, make or buy decision, game of trust
JEL-codes: D23, F2, F43, L23

* Professor of economics, VU University Amsterdam.

1. INTRODUCTION

In this era of globalization and computerization the division of labour and specialization in production and services are the main sources of economic prosperity. Specialization uses economies of scale, and the skills and tools of others so that total production costs become lower, or the quality of the product or service is improved. This was already true in the time when Adam Smith wrote about the gains from specialisation in his "Wealth of Nations", but it is much more true in these modern times where production chains are split up further and further so that the fragmentation of production increases. In contrast to a producer who makes all parts and components of the product him- or herself, specialisation in manufacturing of parts and components and in services has become standard. Nowadays there are numerous examples of the outsourcing of tasks, especially outside of the core business of the organization (such as catering or maintenance in an office building, or outsourcing of administrative work). Instead of executing all of the tasks him- or herself, the producer of a final product or service has become the orchestrator successfully connecting the individual links of the production chain to one another. The focus now has become the orchestrating function which aims to exploit all advantages of specialization and fragmentation of the production as efficiently as possible. This development is especially relevant for open economies with a tradition as a trading nation, like the Netherlands. Such nations can be characterized as *transaction economies* (or orchestrating economies). Transaction economies focus more and more on the organization of production and on creation of value in the coordination of the supply chain.

This chapter takes transaction costs as a guiding principle. Apart from comparative advantages in production, transaction costs are the main determinant of (international) trade flows. Similarly, differences in transaction costs are crucial for the location and investment decisions of firms, on where to produce and also where to organize and orchestrate production in their headquarters. Knowledge on transaction costs, and how to manage these transactions, is of vital importance for these trade and investment decisions. Therefore, efficient *transaction management* which reduces transaction costs, will make existing trade more profitable and leads to more trade. It strengthens the competitive position of individual firms and, through spill-over effects, of the whole nation which enhances welfare. In this way a reduction of transaction costs creates value for the firm and overall society. The conundrum is that with lower transaction costs total transactions will rise more than proportionally, so that transaction costs will take a larger share of total costs. This enhances the importance and profitability of transaction management. Hence, in short *transaction management is the ability to keep the costs of trade transactions as low as possible so that the value creation from these transactions is optimized*.

The more knowledge we have on these aspects, which is partly tacit knowledge, the more we can do to strengthen our position of managing transactions. In the world of globalisation and global (out)sourcing it is vital for companies to preserve the orchestrating of function in production and the demand and supply networks. Major questions in this respect are: where and how can we buy ideas for new products and services, how do we obtain knowledge on making these products and providing these services, where do we find labour, and where and how can we go about continuation and improvement of selling these products and services at the highest margin? Financing and risk management are an important part of

that management function. This is a new role for the professional traders, which is another focus of transaction management.

The contents of the chapter follows. The underlying argument of transaction management is that much of the world's wealth comes from specialization and division of labour. That is what makes the fragmentation of today's production pay off and that is also why the focus of value creation increasingly lies in the efficiency of coordination. This is discussed in section 2.

Section 3 argues that the globalizing world with more and more specialization and an extended division of labour brings about more transactions. Transaction economies should focus continuously on reducing the transaction costs. Economic theory of transaction costs teaches us which types of transaction costs are involved and how transaction costs affect the working of the economy. It appears that transaction management can and is to be applied to a much broader range of 'transactions' than what one may initially be inclined to think.

A fundamental problem of exchange that brings about transaction costs, is that most trade transactions are characterized by a difference of timing -being sequential- between the moment of agreement on the transaction and the moment of delivery. A solution to this problem is institutionalizing the game of trust. Section 4 extensively discusses this aspect of transaction management.

Thanks to reduction of transaction costs through good transaction management, more parts of production can be outsourced to suppliers, subcontractors or specialised plants of companies. Sometimes outsourcing is in the home country, but more often work is outsourced abroad. This implies that outsourcing and offshoring become important as strategic decision tools in the transaction management of businesses. As was mentioned before, it transforms the internationally operating firms in the home country from the manufacturing oriented industry to one based on orchestration and transaction management. This transition is very much what can be observed in reality in the globalizing world. This is discussed in section 5. Characteristically, one lets others perform various tasks in the production chain, sometimes within another developed economy but more so in major emerging economies, including the BRIC's, where, for the time being, wages are low.

Finally section 6 summarizes the findings by review of the characteristics of transaction management.

2. SPECIALISATION AND COORDINATION

Comparative Advantages

Most developed countries, especially when characterized as open economies, with a high amount of trade, witness a decline in employment in agriculture and industry, with employment in trade and services showing an increasing trend. This trend has to do with increased *division of labour and specialization*, both within national economies and the world as an entity. Specialization means exploitation of economies of scale and using the diversification of skills and availability of resources in the production of goods and services. Production takes place in the place where it is relatively the cheapest. Availability in a country of raw materials and capital, both physical and human capital, functions to determine

what is produced and what is traded. These are known as the *comparative advantages* of a country in international trade. Traditional trade theory explains the goods and service trade flows from such comparative advantages. A country with rich natural resources has a competitive advantage in that aspect and will be able to sell its resources, whether processed or not, profitable in world markets. The same applies to a country where labour is relatively cheap, due to low wages, or to be more precise, where the productivity of labour is high relative to wages. In this case exports of labour intensive products and services are relatively profitable.

Yet these differences in available resources between countries - labour, capital and raw materials - only partially explain international trade. When all comparative advantages were fully exploited, world trade flows would be far greater than they actually are (see e.g. Trefler, 1995). The explanatory power of this type of comparative advantages appears limited in a modern economy. In international trade, and especially in those countries where trade and transactions are a driving force in the economy, other aspects play a more important role. Here it is essential to realize that trade is not for free, but brings about different kinds of costs. Indeed, the division of labour and specialization on the one hand has the effect that the production of goods and services becomes more efficient. This holds true both for the division of labour and specialization within firms, and between firms and countries. On the other hand, division of labour and specialization also imply that the various activities should be coordinated. All costs of this coordination can, in a broad sense, be regarded as *transaction costs* (see the next section). In the case of coordination between firms through the market, these (business) transactions imply a transfer of property rights. In this case of market transactions, we have horizontal transaction costs. But in a modern economy a large amount of the transactions takes place within companies. Part of it is intracompany trade, where sometimes market mechanisms for making transactions cost efficient are simulated – a form of transaction management, but also a lot of transactions occur within the firm hierarchy. Here we have vertical transaction costs. A part of transaction costs of firms in a modern society is also related to the labour market, such as search costs, hiring costs, firing costs and the cost of building up firm specific human capital.

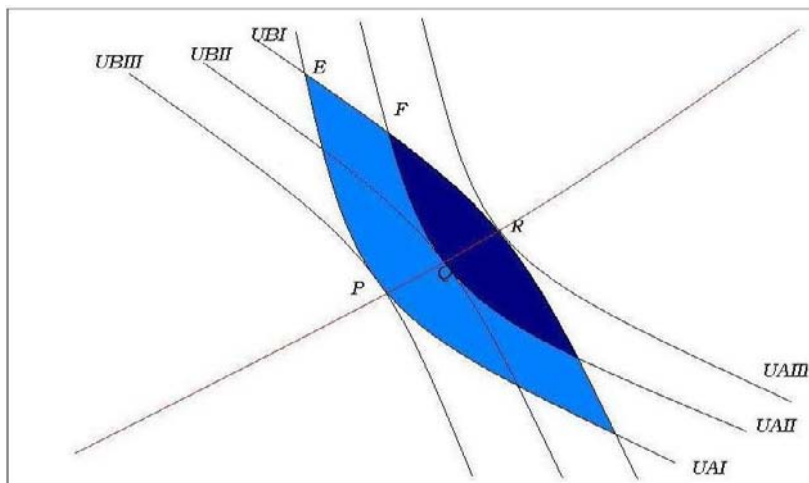


Figure 1. Edgeworth box.

Box 1. Exchange and transaction management according to the Edgeworth box

Economic textbooks illustrate the way in which exchange brings about an increase in welfare using the so-called Edgeworth box. This box of Figure 1 distinguishes two different goods (X and Y) and two different persons (or firms) (A and B). The box shows which exchange possibilities A and B have in the case of an initial distribution (endowment) of goods X and Y. For person A the origin is OA and for person B OB. In the origin OA the initial endowment is that person A owes nothing whereas person B owes the total available amount of goods X and Y. In origin OB person A owes everything and person B nothing. From OA the indifference curves UAI, UAI and UAI indicate which combinations of X and Y yield the same amount of utility (welfare) for A. The further the indifference curves are located from the origin, the higher the utility (welfare) for A. For person B the mirror image holds true from origin OB with indifference curves UBI, UBII and UBIII. The further UB is away from the origin OB, the higher is the utility and welfare for person B.

Now suppose that point F represents the initial distribution of X and Y. It means that A owes a lot more of good Y than B and B has initially about the same amount of good X than A. Note that the total amount of goods X and Y determines the size of the box. The figure shows that the initial endowment in point F allows for a welfare improvement of both persons – or at least not a reduction of welfare for one of the persons – when exchange takes place so that the distribution of goods X and Y moves to the area between the indifference curves UAI and UBI. This is a *Pareto improvement* where an exchange increases total wealth in such a way that none of the persons loses wealth. The actual amount of exchange of goods X and Y, and hence their relative prices, will depend on the bargaining power of both persons. Ultimately that determines which point on the contract curve QR is reached. If the initial endowment were more unequal in the sense that one person has more of X and the other more of Y (point E in the figure), then the potential for exchange to be welfare enhancing becomes larger. Now the area between UAI and UBI offers the possibility for a Pareto-improvement. The final outcome of an efficient exchange contract is now on the PR curve. The intuition is that specialization, where A produces one good and B the other good, represents a situation where there will be more exchange and hence the welfare effects of that exchange will be higher than in a situation where both persons are producers of both goods. It should be noted that such a Pareto-improvement does not bring about a redistribution of welfare and that the government should not interfere with the exchange for that reason. It only brings about more welfare, and the relative bargaining power solves the distribution problem (which is different from the redistribution problem)

In the traditional description of barter exchange, the Edgeworth box assumes that exchange is for free and that the negotiation about the exchange between the two parties does not affect their production possibilities or endowment (the total amount of X and Y is equal for any exchange). In other words: in the Edgeworth box there are no transaction costs.

The question now arises how the existence of efficiency gains due to specialization, but also the transaction costs that the exchange will bring about can be included, in this simple economic analysis of barter. Efficiency gains because of economies of scale in specialization mean that A will be able to produce more of the good where he/she has

comparative advantages and B more of the other good. So in total more of X and Y becomes available. It means that specialization makes the surface of the box is bigger. On the other hand, increased specialization means that there will be more exchange and that therefore the transaction costs increase. The time and effort that A and B have to spend on the exchange, and the consequent transaction costs, will result that less X and Y can be produced. Therefore the surface of the box becomes smaller. It is of importance to the welfare gain specialization yields that the increase of the surface of the box because the efficiency gain outweighs the decrease due to higher transaction costs. It is exactly what good transaction management should do: keep transaction costs low so that the opportunities to benefit from specialization can be exploited as much as possible. Moreover, keeping transaction costs low will also reduce as much as possible the distortion in the allocation of goods and services that transaction costs bring about. For that reason a role of the government is to facilitate good transaction management (e.g. through a good system of legal protection of property rights).

The balancing of on the one hand efficiency gains and on the other hand of transaction costs due to specialization leads to an addition to the traditional Edgeworth box diagram, which provides a stylized illustration of the welfare gains of exchange (see Box 1).

The trend of a continuous increase in the division of labour and in specialization is not that of today or tomorrow. As mentioned in the introduction, Adam Smith already noted in his famous pin factory example how the division of tasks greatly increases productivity. This increase in productivity eventually translates into higher wages, and more of purchasing power. It is evident that wealth, measured by material wealth, has in the past century increased significantly, mainly due to productivity improvements which were the result of labour division and specialization.

Obviously transaction costs, or to be more precise, the ability to reduce transaction costs, have much contributed to these developments. The upshot here is that transaction costs can be too high so that no (business) transactions take place. In that case, the benefits of division of labour and of specialization are not sufficient to outweigh the disadvantages, i.e. coordination costs that specialisation brings about. In this case a reduction of transaction costs may imply that further specialization is profitable and that therefore the amount of exchange (trade) increases (see Box 1). This also means that existing trade becomes cheaper. In both cases, the reduction in transaction costs increases *welfare*. In the context of the debate on globalization an important question is, who receives most of the benefits of the welfare increase. Solving part of the coordination problem evokes a distribution problem of welfare. From the perspective of national interest, it seems desirable that the benefit of the reduction of the transaction costs accrues to the home country. In the long run equilibrium situation with well functioning markets eventually the domestic consumer will benefit. However, from the perspective of international solidarity it may be desirable for others to profit from welfare gain as well, preferably to alleviate poverty in the world. In that sense good transaction management does not only improve prosperity at home it can also contribute to the welfare gains in the poor regions of the world. It should be mentioned, however, that there are still some snags to resolve with regard to the global distribution problem of exploiting increased trade opportunities, such as the cumbersome negotiations in the WTO (Doha Round) show.

Fragmentation of Production

The trend of ongoing global specialization and of division of labour has the effect that production chains are increasingly split up in various parts. The result is an increasing *fragmentation of production*. Those parts of the chain, which can be produced elsewhere at a lower price, become outsourced. In fact, this fragmentation of production has drastically changed the nature of trade to the extent that a different approach to trade theory is needed. No longer do comparative advantages in the production of goods and services explain trade flows. Instead, comparative advantages in performing tasks are the dominant determinant of international trade flows. It is a *trade in tasks* as Grossman and Rossi-Hansberg (2006, 2008) argue. This is further discussed in the next section.

Fragmentation of production takes place both nationally and globally. At the national level there is an increasing use of specialist subcontractors and suppliers. The number of self-employed without personnel (SWP'ers) has significantly increased in the recent period. At the global level the fragmentation of production and ongoing specialization is a major characteristic of the process of globalization. Thanks to a steady reduction of transaction costs it has become increasingly attractive to produce or buy components of products abroad. Outsourcing and the establishment of foreign branches (in the statistics recorded as foreign direct investment) are visible effects. Here the strategic decisions whether to 'make or buy', and where to locate the production – the location decision – are made though a comparison of the lower production costs with the higher transaction costs. Globalization and the increasing share of the transaction costs in total costs make it possible for an individual firm and also for a country as a whole not only to specialize in the field of production, but also in the field of fostering transactions and the coordination that is needed for these transactions to become and remain profitable. The latter is what happens in a transaction economy, assuming that such a transaction economy has a comparative advantage in conducting profitable transactions. In other words: a comparative advantage as a trading nation. It is a good and innovative *transaction management*, i.e. always finding new ways to create value in transactions, which is needed in order to safeguard comparative advantage in this field. This "specialization" to a transaction-economy (or orchestrating economy), implies that other countries, because of specific comparative advantages such as availability of raw materials, cheap labour and/or specific technical knowledge, will specialize in certain types of production, or assembly. (see e.g. Den Butter and Hayat, 2008)

3. TRANSACTION COSTS ECONOMICS

Categorization of Transaction Costs

The previous sections discuss the crucial importance of transaction costs in a world with increasing specialization and division of labour. The question now is how transaction costs can be defined and what types of transaction costs can be distinguished and categorized. Fragmentation of production, where the production chains of goods and services are split into a growing number of links, can be seen as a feature of specialization in the globalizing world. The economic theory of industrial organization partly explains how, and to what extent, this

happens. Formerly this theory was called the theory of 'external organization'. In an industrial organization with fragmented production it is from the analytical perspective, essential to distinguish between production costs and transaction costs. Production costs can be defined as all the costs which are made within the links of the production chain, including development costs. So, loosely speaking, transaction costs are all other costs that relate to coordinating and connecting the various links of the production chain.

From such perspective *transaction cost* can be defined as *the costs which are made in order to coordinate and connect all links in the production chain*. Hence a considerable part of transaction costs are in fact coordination costs. Transaction costs relate to both coordination and transfer costs within firms where coordination takes place through the hierarchy (vertical transaction costs), and to costs of outsourcing and trade between firms where coordination takes place via the market mechanism (horizontal transaction costs). As mentioned before, sometimes pseudo-market mechanisms (e.g. through competitive transfer prices) are introduced within a firm to keep these costs low and to promote internal efficiency. Thus, *transaction costs* can also be defined as *all costs of trade transactions in a broad sense*. Often, these costs relate to the "hassle" associated with the buying and selling of goods and services and the relocation of production. A firm which has the ability to create a more attractive market situation for its product by reducing the costs of trade can be internationally successful as this type of costs is important in international trade.

Box 2. Transaction management and marketing

Marketing can be considered a form of transaction management in so far as it is intended to provide information about the nature and quality of products or services. In principle, these forms of providing information through marketing reduce the information costs to buyers so that they will decide more often to purchase and make a transaction. The example of marketing shows that the line between what can be considered as the real production costs and what can be considered as transaction costs, is often difficult to draw. After all, marketing can also contribute to the image of a product and thereby increase the emotional value of the product. Think of all branded products and of the fact that some people are prepared to pay additional money if they can play on the same brand of basketball shoes such as what Michael Jordan did. That part of the marketing cost can, like the development costs and direct production costs, be considered as part of the actual production costs. The same holds true for television commercials. In principle, their intention is to provide information on products and services, albeit biased. Therefore the costs of these commercials can be considered part of transaction costs. However, for some, a television commercial is simply a fun movie, and thus a consumer good. The costs of making such a commercial would in that case be categorized as production costs.

In the case of 'real' trade through market transactions with horizontal transaction costs there is a transfer of property rights. In such a situation of market trade, transaction costs relate to finding a suitable trading partner, negotiating, setting up and signing a contract, monitoring compliance with the contract and imposing fines if the agreements are violated. Transaction costs are partly caused by formal trade barriers such as import tariffs, but an important part of these costs stem from informal barriers, arising from differences in language and culture, ignorance and lack of trust. This marks a distinction between 'hard' and 'soft'

transaction costs. The *hard transaction costs* include observable costs such as transport costs, import duties and customs tariffs. The *soft transaction costs* comprise all costs of making and monitoring contracts, information costs, costs due to cultural differences and miscommunication, unwritten laws, trust building, networking, risk costs, costs due to safety regulations and provisions, etc. These soft transaction costs are much harder to quantify than hard transaction costs. It is likely that in this era of globalization these soft transaction costs, where a good business sense is needed to estimate their sizes and, as much as possible avoid them, will become an increasingly important part of the total costs of economic activities. Indeed as the hard costs, due to trade liberalization and reducing transport costs decrease, the soft costs gain relative importance.

Hard and soft transaction costs not only play a role in the normal commercial transactions where goods or services change ownership. In the case of hiring personnel, there also are ample transaction costs to take into account: search costs, information costs, application costs, the costs of getting acquainted with the job, learning costs, redundancy costs and all costs of the personnel department, including advertising costs. Indeed, also here a contract is in a sense a form of transfer of property rights of an employee to his or her boss. In addition, the costs of marketing and information costs can partly been regarded as transaction costs (see Box 2). Within companies all kinds of departmental meetings, discussions about work routines, regulatory measures and internal compliance also bring about transaction costs.

Economic Theory of Transaction Costs

The focus of the economic theory on transaction costs is not new: Coase (1937) formulated the first ideas more than 70 years ago. The reason for Coase to consider transaction costs was in order to explain why firms of any size exist in a world where the invisible hand of the market mechanism is supposed to provide the optimal allocation of goods and resources. The answer has been given as: the allocation of goods through market trade is not free but brings about all kinds of transaction costs. According to this theory of Coase, firm size directly depends on the nature of the transaction. In the case that the (marginal) transaction costs are higher for exchange within the hierarchy than for exchange through the market, it is obvious that parts of the firm are to be split and benefit from lower transaction costs of trade through the market. Then the firm size decreases. The opposite - transaction costs are at the margin lower in the hierarchy than through the market - provides an argument for an expansion of the firm. It is also a reason why a takeover of a firm, or a merger between firms, would be considered to become successful. This argument is of current interest now that activist shareholders (private equity, hedge funds) interfere more and more with the strategic policies of the firms in this respect. The perils surrounding the credit crisis of 2007-2009 also show that when such strategic calculations with respect to marginal transaction costs subsequently prove to be wrong, this could bring about huge societal transaction costs.

The further development and application of the economic theory of transaction costs to exchange transactions in the (international) trade is of a much more recent date. This trade oriented theory of transaction costs is based upon a central notion in the work of Douglass North (1990), namely that ongoing interaction between rules and players, or between institutions and organizations, underlies success or failure of an economy. That is why trade

theory is linked with the theory of institutional economics. Institutions in the sense of North do not only include formal institutions, such as legal rules and regulations. Informal institutions are very important as well, or even more so. These include socio-cultural phenomena such as the prevailing values and norms, mutual trust, and the commercial or mercantile skills of a nation. This is where the "soft" transaction costs come into the picture. Greif (1993,1994) has shown that institutions play a crucial role in satisfying the basic condition for exchange, namely to be able to commit to a trade contract. (see the next section). In the early Middle Ages Jewish merchants - the "Maghribi traders" – were bound to keep their promises on trade agreements through family ties and other social networks, even though their deeds could only be controlled much later due to the large distances and time consuming travel. Later this institutional system of using family ties was replaced with legal systems as institutions.

Recent work by Helpman (2006) illustrates the importance of the transaction costs for the success of firms in internationalization. The argument is that doing international business brings about considerably high costs in the start-up of, and during international operations. The consequence of this is that internationalization is only feasible for a firm of sufficient size. This scale - or specialization: being knowledgeable of doing international business - makes it achievable to recover the investment costs on knowledge on transaction costs in international trade over several transactions. Such scale and specialized knowledge of international issues is a prerequisite for firms for having the ability to and continue operating successfully in the current status quo of "open borders". In terms of the Edgeworth box the high transaction costs of international trade should be compensated through the large productivity gains due to economies of scale within the hierarchy of the firm.

Definition of Transaction Costs in the Literature

As mentioned before, Coase (1937) was the first to introduce the concept of transaction costs in economic theory. His definition of transaction costs is short and compelling: *"The costs of using the price mechanism in the market."* In this perspective, transaction costs are all of the costs that the market mechanism and the functioning of the market bring about. The economic theory of transaction costs is subsequently elaborated by Oliver Williamson, who, in 2009, joined Coase and North as winners of the Nobel price in economics. Williamson defines transaction costs as *"the costs of running the economic system"* (see e.g. Williamson, 1975, who followed Arrow, 1969; see also Williamson, 1993, 1998, 2000). Nowadays, the term transaction costs relates mainly to the transaction itself: it covers *all costs involved in entering into, implementing and complying with a transaction*. From that perspective Cheung (1987) defines transaction costs *"as all costs that do not occur in "Robinson Crusoe" economy of direct exchange"*. In other words all costs that, in the description of welfare gains from exchange in the Edgeworth box are not taken into account.

North and Wallis (1994) distinguish between transformation costs and transaction costs. Transformation costs relate to the genuine processing of goods or services which is to be regarded as the actual production. In contrast, transaction costs occur when goods or services change ownership. North (1991) observes that, the neoclassical paradigm as primary basis for traditional mainstream economic theory only holds true when there are no transaction costs. In other words, neoclassical theory assumes a frictionless economy. On the other hand, when

there are transaction costs involved, this brings about allocative distortions. In that case the economy reaches a different equilibrium than when there would be no transaction costs. From the viewpoint of allocative efficiency, this new equilibrium is less than optimal. This is another way of illustrating the lower the transaction costs the better it is for social welfare. In that case, more welfare-enhancing transactions may occur.

Williamson (1985) distinguishes three sources of transaction costs, namely:

- Bounded rationality,
- Opportunistic behavior and
- 'Asset specificity'.

The *bounded rationality* has two reasons: (a) information complexity, and (b) information uncertainty (Dietrich, 1994). Informational complexity refers to the fact that individuals have limited abilities to process all of the information that is available. Hence an individual is unable to process all of the relevant aspects of a transaction. Informational uncertainty on the other hand refers to the fact that it is impossible to perfectly foresee all future states of the world. Individuals engaged in a transaction where they do not foresee all the contingencies involved can suffer from the incomplete understanding of information (Tirole, 1988). When individuals are not globally rational, but behave according to bounded rationality, it is impossible to specify complete contracts without costs. Hence bounded rationality may lead to transaction costs. However, it is not a sufficient condition for such costs to occur. Bounded rationality is also cost-rational, if the marginal benefits from additional information gathering no longer justify any additional transaction costs from any incomplete information and related incomplete contracts.

Opportunistic behaviour refers to the 'self-interest seeking behaviour' of individuals (Williamson, 1985). Without opportunistic behaviour it would not be necessary to fully specify complete contracts. Therefore, the transaction costs which would arise through bounded rationality do not exist per se, in the case that individuals do not want to gain advantage over the loss of another individual. However, when individuals exhibit opportunistic behaviour the opposite is true. Individuals use the incompleteness in contracts, which exist through bounded rationality, to their own gain. This opens up opportunities for strategic behaviour, and also executive hazards. In its turn this causes the necessity for trading partners to monitor each other and enforce contracts legally. The next section discusses how mutual trust may reduce opportunistic behaviour and imply lower transaction costs.

The third source of transaction costs that Williamson (1985) distinguishes, is the existence of *asset specificity*. Asset specificity is defined as the extent to which an investment supporting a transaction has more value in the transaction than in any other purpose (McGuinness, 1994). Asset specificity determines the scope of the continuing interest of both contracting parties in each other (Williamson, 1985). When there is no asset specificity, markets more perfectly are contestable, and individuals will not want to invest in continuing economic relationships (Dietrich, 1994).

Asset specificity relates to goods or services that are bound to certain specifications. When the first transaction has been defined and approved with respect to these specifications, the following transactions can take advantage of the fact that the specifications are known and thereby fewer transaction costs need to be made. By contrast, the more goods or services are

tailored to the individual requirements of the buyer, the higher the asset specificity. It is obvious that there is a relationship between asset specificity and standardization because standardization will make transparent the specifications and, therefore, reduce asset specificity. Uniform standards ensure that traders need to spend less time defining the specifications of the goods or services, so that they will encounter fewer transaction costs. By contrast, the demands of buyers to suppliers can be very specific so that standards have to be developed that can only be used in that particular situation. This enlarges the mutual interest that buyers and suppliers have in maintaining their trade relationships.

Modern Theories on Transaction Costs and the Organization of Production

Section 2 discusses that nowadays, with fragmentation of production and much international outsourcing, comparative advantages no longer, in the Ricardian sense, relate to finished products and services but rather to a trade in tasks. From that perspective Grossmann and Rossi-Hansberg (2008) present a model for the determinants of international trade, which makes the explicit distinction between trade in goods (which is the standard approach to modelling international trade) and trade in tasks. Here the production involves conducting a continuum of ‘tasks’. Different economies are now trading not in finished goods, but it is these tasks, or sub-sets of the production process, that are tradable. Some tasks may require high-skilled labour input, while other tasks require low-skilled labour or different categories of labour, or other factor inputs as capital and raw materials.

Tasks can be performed abroad when it is less costly for the firm to perform the task offshore than domestically. Offshoring tasks incurs transaction cost. The crucial assumption is that some tasks can be moved abroad more easily than others. This implies that moving some tasks abroad may incur more transaction cost than other tasks. So when will firms choose to move tasks abroad? This will be the case, when joint costs of foreign factor input and transaction costs are less than the domestic costs of factor input. Hence, in this framework some tasks still will be performed at home as others are performed abroad.

What are implications of this distinction between a trade in goods and trade in tasks? Let us assume, in this case, that only low-skilled tasks can be moved abroad. By lowering the transaction costs it becomes profitable to move more low-skill tasks abroad. Grossmann and Rossi-Hansberg (2008) distinguish three effects of reduction in transaction costs:

- i. a productivity effect;
- ii. a relative-price effect and
- iii. a labour-supply effect.

The productivity effect occurs through a decline in the costs of tasks being moved abroad. Firms incur lower costs when more tasks can be performed offshore being less costly, which drives up the demand for domestic factor inputs, hence increasing the return to domestic factors. The relative-price effect occurs by means of a change in the terms of trade of a country. This effect is likely to influence the return on low-skilled labour adversely. An improvement in the terms of trade, defined by the price of exports in terms of imports, can put downward pressure on low-skill wage as the exporting, high-skill industry becomes more profitable drawing resources from the import-competing sector. Finally the labour-supply

effect occurs through the release of domestic labour, as freed by moving labour abroad. This effect is also likely to depress the low-skill wages.

Meanwhile the decrease in the costs of offshoring affects high-skilled labour and other factor inputs as well. Offshoring of low-skill tasks has no productivity effect for other factor inputs, because it has no direct effect on the wage bill of these other factors. However, the relative-price effect and the labour-supply effect do have a direct effect. The relative-price effect, causing an increase in the terms of trade, boosts the high-skill intensive exporting industry hence the return on high-skilled labour. The labour-supply effect drives down relative prices of low-skilled labour which is equivalent to an increase in the relative price of high-skilled labour.

All in all, the conclusion from this theory on trade in tasks is that a decrease in the costs of offshoring can affect the returns on low- and high-skilled labour in different ways. When, for low-skilled labour, the positive productivity effect outweighs the negative relative-price and labour-supply effects, low-skilled labour will benefit. Otherwise the return on low-skilled labour decreases. The return on high-skilled labour will increase in all cases when both the relative-price effect and the labour-supply effect are positive. From the perspective of distribution the important issue is whether or not the positive effects for low-skilled labour outweigh the adverse effects. This appears to be different for a small and for a large economy.

In the first case domestic low-skilled labour benefits from the increased offshoring and domestic high-skilled labour, and other factors are unaffected. In the case of a large economy as for instance the United States, which can influence world prices, the situation is different. The question is does the productivity effect outweigh the relative-price effect. This depends, for example, on the elasticity of the demand of traded goods which determines the relative strength of price-movements. The conclusion is that, it is equally possible for low-skilled labour to benefit as loose out from the reduction in the costs of offshoring. The return on high-skilled labour is only affected by the relative-price effect hence benefits from reducing the costs of offshoring. These effects do not differ very much when one assumes other tasks next to low-skill tasks become tradable as well.

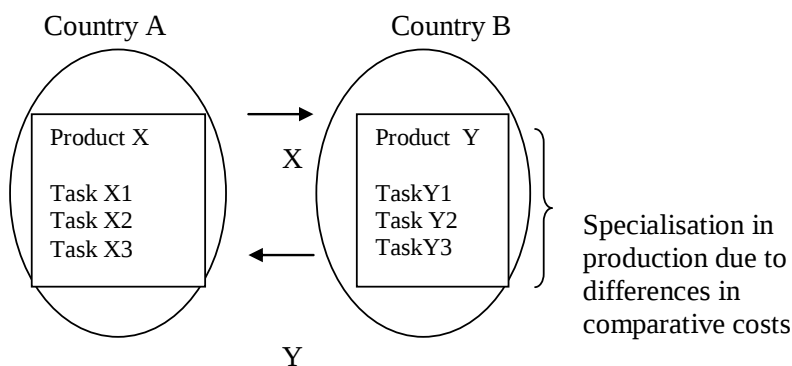


Figure 2a. Traditional Ricardian explanation of international trade .

However, the effect that domestic factors can gain from offshoring tasks can also be predicted by Ricardian determinants such as comparative advantages. So the question is whether the trade in tasks model really makes a difference in explaining the trade flows. Baldwin and Robert-Nicaud (2010) argue that it does. The special feature of the trade in tasks

model is that when certain tasks are moved abroad it is done so in all industries. For example, when low-skill tasks are moved abroad, this is done both in the industry which is intensive in low-skilled labour and the industry that is intensive in high-skilled labour. Therefore, trade in tasks will occur even when there are no differences in relative endowments. This kind of trade is not explained by the traditional Heckscher-Ohlin framework. Thus the trade in tasks model successfully links trade and transaction costs to Treffer's (1995) 'missing trade puzzle'.

Figures 2a and 2b picture the transition from trade in finished products and services to a trade of tasks (see Berghuis and Den Butter, 2009). Trade induced by comparative cost differences implies that a country will specialize in producing goods or services where its comparative cost advantage is largest compared to its trading partner. Figure 2a illustrates this traditional Ricardian trade theory for two countries, A and B. Country A produces product X and the whole production process with tasks X1, X2 and X3 is executed at home. A similar situation applies for country B with product Y. Here the tasks Y1, Y2 and Y3 are also conducted in the home country. In t For the sake of simplicity the numerical example assumes that employment at home does not change. The 10 employees who first were production workers, are now engaged in organizing and coordinating the production in the low wage country. In this example the outsourcing of production, and resulting increase in the production will create new employment abroad. How many new jobs are created in the low-wage country depends on the relative productivity and wages in that country. If productivity in the low wage country is half of that at home (5), the wages in the low wage country are assumed to be $\frac{1}{4}$ of the wages at home (2.5). It implies that the additional employment in the low wage country is 80 ($400 / (\frac{1}{2} \times 10)$).

The numerical example shows a number of strategic issues which should be taken into account in the decision to move production abroad:

- the size of the transaction costs of relocation; here also long term effects and risks should be considered.
- the price elasticity of demand, i.e. the ability to sell more products and the room it gives to reduce the product price as a consequence of the productivity gain; in other words, the issue is the distribution of productivity gains between consumers and producers.
- the future development of wages in the country whereto the production is outsourced; may be at the time the decision is taken, wages are still low, but maybe for the foreseeable future a significant increase will take place.
- the development of wages at home, including the transition costs of training of the employees for their new jobs as orchestrators and coordinators; these transition costs can be considered a non recurrent part of transaction costs. In this example these training costs are not taken into account. Furthermore, it is assumed that the wage of employees with an orchestrating function is equal to that of those with a production function.

It is clear that the strategic decision of firms to move production abroad is a difficult one and requires a lot of good information and intuition (which can be characterized as good trading skills and an entrepreneurial spirit). Underestimation of transaction costs associated with such outsourcing may cause that eventually outsourcing does not appear to be beneficial

after all and that the outsourcing of production is reversed. Another reason to regret the strategic decision to outsource may be that too much weight is given to labour costs and that the cultural differences in countries with low wages (e.g. in Asia) are not properly taken into account. These additional and unforeseen transaction costs may even be so large that it is ultimately better and more profitable to outsource to countries with higher wages (e.g. Eastern Europe) but where the cultural barriers are lower. Moreover, the numerical example assumes that the quality of the outsourced production is equal to the quality of production at home. Maintaining such quality in outsourced production may also entail unexpectedly high transaction costs, or it may lead to a poorer product quality so that the sales revenue decrease. It will also make outsourcing less profitable than originally expected.

In his traditional trade situation comparative advantages in production lead country A to export X to B, and country B exports product Y to A.

However, when the potential for increased fragmentation of production becomes exploited specialization will take place at a more detailed level, namely at the level of the tasks. Now, the international division of labour no longer covers the different products, but rather the tasks in production. The higher the degree of standardization and the less the customer contact – such is the case with less asset specificity - the easier it is to separate tasks that can be outsourced. Figure 2b assumes that the organization of the production of both product X and product Y takes place in country A. Apparently this country has a comparative advantage in orchestrating production. All the tasks with respect to product Y are outsourced to country B, while for product X only task X3 is conducted at home, for instance because that task requires specific skills which cannot be outsourced yet or because the transaction costs of outsourcing are higher than the reduction of the costs of the execution of the task. It is clear that a major change in trade flows between countries results from this new organization of production. Country A is exporting both products X and Y whereas it is importing in tasks. For country B, which has a comparative advantage in the execution of tasks, the opposite is true.

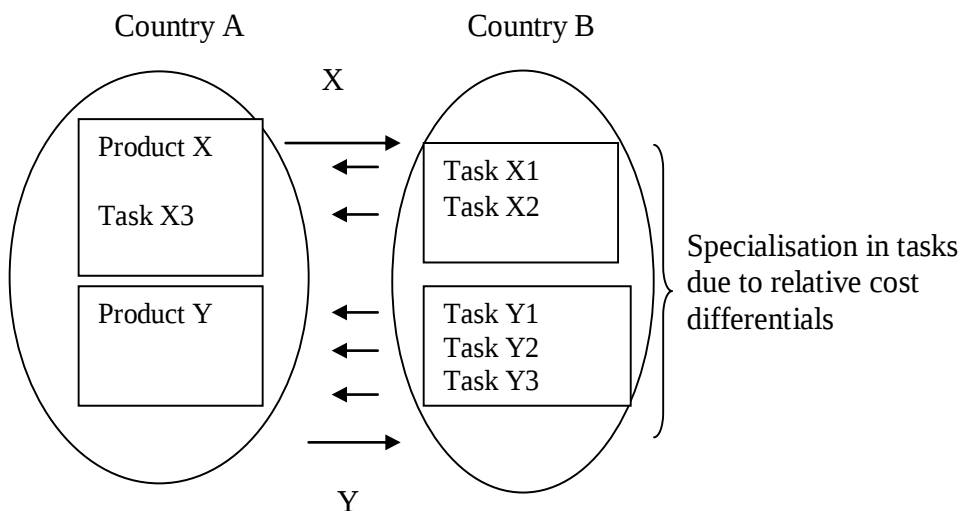


Figure 2b. International trade resulting from fragmentation of production and trade in tasks.

This trade in tasks can imply that the trade within industries, so called intra-industry trade increases. But this is not necessary. After all, the tasks that are outsourced can be executed equally well as services that are attributed to other sectors. Think of the production of chips that are used in products from different sectors, or think of outsourcing the administration and parts of the ICT. Whatever the case may be, the increased focus on trade in the tasks shows that a productivity increase does not solely have to be the consequence of a technological innovation in production, but that also a *transaction innovation*, which reduces transaction costs through better exploiting of trade in tasks, can lead to an increase of measured productivity in the industrial sector.

The Black Box of the Production Function

The obvious result of these changes in the way international trade depends on comparative advantages is that a new economic theory is needed to further a good understanding of the impact of globalization and fragmentation of production. The traditional theory of economic growth should be elaborated to really understand what is happening. In their review article on these new theoretical developments Antràs and Rossi-Hansberg (2008) argue that the traditional theory of the production function, it sees the way that production factors are transformed to a final product, as a black box. The new theory seeks to open this black box. Not just input volume of the production factors and possibilities for substitution are important for the description of the production process, but also organization of the production should be made endogenous. This creates a theory where elements of the theory of industrial organization are integrated into trade and growth theories. Transaction costs play a major role in this combination of theories. An important aspect of this theory is that heterogeneity of the production factors should be taken into account. In this context, Grossman and Maggi (2000) describe how the choice of organization of production may depend on the available qualities of the workforce. On the one hand there can be a production process where the knowledge of some brilliant creative people is needed, while on the other hand there can also be a production process which is based on established procedures utilizing reliable workers who are accustomed to complying with a hierarchical working environment. Firms can internally exploit this difference in talent for the organization of production, but it can give rise also to an international trade in tasks where one country is gifted with one type of talent and the other country with another type.

Measurement of Transaction Costs

The characterization of various types of transaction costs and the split-up of total production costs in actual production costs and transaction costs has, up to now, been discussed from a theoretical and qualitative perspective only, however, in order to be able to quantify the relative importance of transaction costs a considerable amount of research still must be done. A first step is in coming to a clear and operational classification of the various forms of transaction costs. This is necessary to show how important business transactions are for individual firms, and aggregated to the macro level, for the country as a whole. It should be realized that the transaction costs do not only relate to trade and activities that are directly

connected with the organization of production. Various business services which support these activities also bring about transaction costs. Consider the financial and legal services, and the bookkeeping and control services of accountants. These latter services ensure that official reporting of companies is correct so that everyone who has to do with the company (suppliers, customers, financiers, shareholders, government) is not obliged to make (transaction) costs to value the reporting by the companies themselves. Probably a calculation of total transaction costs at the macro level would show that these costs do increase, also relatively, in proportion to production costs. This seems to be paradoxical when the strength of a transaction economy is considered to be the ability of reducing transaction costs. Such a result would mean that lower transaction costs more than proportionally foster transactions so that the higher volume of transaction more than compensates the lower unit price of the transactions. It would corroborate the potential of the transaction economy. The lower transaction costs may involve an increase in the fragmentation of production, so that more tasks of the production process would be outsourced. This reduces the actual production costs so that transaction costs constitute a larger proportion of the total value added. The value creation in the transaction economy then becomes more transaction intensive.

To make a clear cut split up of total costs in transaction costs and production costs is not well-feasible. McCann et al. (2005) provide an excellent survey of these definition, categorization and measurement problems, focusing on the transaction costs of government regulation. In spite of these problems some attempts have been made to estimate the size of transaction costs at the macro level. Following the methodology of North and Wallis (1986), De Vor (1994) asserted that, in 1990 total transaction costs in the Netherlands economy amounted to almost 53% of the GNP. This implies that more than half of the value added in production in the Netherlands is related to conducting transactions. In the period 1960-1990 total transaction costs increased with about 9 %-points. This can be completely ascribed to an increase in the private sector. According to De Vor's measurement transaction costs in the private sector were (in 1990) over 5 times higher than the public sector. Van Dalen and Van Vuuren (2005) measure by means of occupational data that in the Netherlands approximately 25% of workers is employed in transaction jobs, and 29% if one includes transport tasks. However, these occupational data do not take into account the time spent on coordination by production workers. Klammer and McCloskey (1995) note that, one quarter of GDP is related to persuasion, i.e. talks in order to make "real production" possible. In their survey on "trade costs", Anderson and Van Wincoop (2004) illustrate the size of these trade costs by means of the tax equivalent of the costs: what would be the tax tariff on direct production costs if all trade costs were regarded as taxes – from a theoretical point of view trade costs have the same distortional effects on product markets as do taxes. Anderson and Van Wincoop have a rather broad definition of trade costs comprising most of the transaction costs which were discussed earlier in this section. Their main finding is that trade costs are large and variable. The example of the Barbie doll illustrates these large costs. The direct production costs of the doll are \$1, but they are sold in the US for about 10\$. The cost of transportation, marketing, wholesaling and retailing as such have an *ad valorem* tax equivalent of 900%. In their calculations, Anderson and Van Wincoop arrived at an estimate of the tax equivalent of "representative" trade costs for industrialized countries of 170%. The number breaks down as follows: 21% transportation costs, 44% border related trade barriers and 55% retail and wholesale distribution costs ($2.7 = 1.21 \cdot 1.44 \cdot 1.55$).

4. THE FUNDAMENTAL PROBLEM OF EXCHANGE AND TRANSACTION COST ECONOMICS

Transaction costs are associated with what Greif (2000) labels the fundamental problem of exchange. This fundamental problem is whether *one can ex ante commit to being able and willing to fulfil contractual obligations ex post*. In other words, a necessary condition for exchange is that for each partner in the exchange transaction there must be certainty that the other partner will keep its promise and deliver what has been agreed upon. Greif approaches this issue by stating that *one will not enter into a profitable exchange relationship until the other party can ex ante commit to fulfil his or her contractual obligations ex post*. Only under that condition the exchange can be mutually beneficial for both parties. This required security is often difficult to obtain because of a typical feature of many exchange transactions: it is *sequential*. It means that contracts and promises about delivery are made in advance of actual delivery and payment. This gives the party that is last to fulfil his or her obligations the opportunity to behave opportunistically and benefit at the expense of the other party. This problem becomes even worse when specific investments are required in a particular exchange relationship. In this situation there is the threat of a “hold-up”. Such hold-up – which is called after a raid on a stagecoach in the Wild West - implies that the last party to meet the obligations misuses the opportunity to change the conditions of the exchange to his or her advantage. In the case of a labour contract a hold-up may happen where a worker who has had high learning costs in order to get acquainted with the work and become productive, demands at that time a higher wage, so that his or her boss is unable to recover these learning costs. The threat of a hold-up constitutes an obstacle to entering into a exchange contract and should therefore be avoided. However, such a hold-up can only be avoided, when for both parties the associated transaction costs with keeping the contract are lower than of breaking the contract.

The fundamental problem of exchange thus essentially boils down to avoid the opportunistic behaviour associated with the sequential character of the exchange. In game theoretic terms the fundamental exchange problem can be understood as a form of the prisoners dilemma. The optimal solution in terms of welfare for both parties (the Pareto-optimal solution) implies that both sides behave cooperatively. However, for each party separately it is rational not doing so, which in principle results in a non Pareto-optimal outcome. That is why trade institutions are needed in order to ensure that there is an optimal solution in the prisoner's dilemma, for example through the enforcement of costly penalties if a party does not comply with the contract. In more general terms it is a solution of *the game of trust* which is required. A major observation in this respect is that institutions can contribute to this solution of the game of trust. This is elaborated below.

In a commercial exchange transaction three stages can be distinguished from the perspective of transaction costs, namely:

- The contact stage;
- The contract stage and
- The control stage

Table 1. Transaction costs in different stages of trade transactions

Stage	Type of transaction	Reason of costs	International complications	Due to:
Contact stage	Investment in information about customer / supplier or potential producer	Information is costly	Hindered communication	Differences in language
	Investing in the relationship	Information is incomplete		Differences in culture
		Information is unavailable		Differences in means of communication
Contract stage	Investment in costs of preparing contract	Distribution of profits	Divergent expectations between the parties, verification problems and uncertainty	Differences in culture
		Formulation of Agreement		Differences in legal system
Control stage	Costs of compliance of agreement	Monitoring costs	Greater uncertainty	Change of information by larger distance
	Investing in continuing/ improving the relationship	Enforcement of contract provisions		Problem of interpretation in verification
				Ignorance of law and system of values and norms

In the *contact* stage of a potential transaction, the buyer is looking for information about his or her preferred product (price and quality), potential suppliers, or, when the product does not yet exist, which producer could invent and/or produce it for her or him. The seller is trying to find a buyer for his or her product through marketing activities. Transaction costs come forth out the fact that information is not free, not complete and not easily accessible. Traders have to invest in search. Evidently, this search for information is more difficult when, in an international context, communication is blurred by differences in language, differences in ways of information distribution and differences in culture based business norms. Reduction of the transaction costs of contact involves a mechanism with two essential characteristics. Firstly, information about business opportunities must be spread to all members of the business community who might be interested to be informed. Secondly, it must be guaranteed that this information is of high quality, i.e. the information can be trusted to be relevant and true. The distribution of reliable information is a characteristic function of

networks (Casson, 1997). Mutual trust among the members of the network increases the quality of the information. Some empirical backing for this claim can be found in the studies of Rauch (2001) and Rauch and Trindade (2002) that point at the role of co-ethnic business networks in solving this problem of missing information about business opportunities. Ethnic (Chinese) networks seem to be more influential in bilateral trade on differentiated than homogeneous goods. Portes and Rey (1999) note the importance of the “geography of information”, measured by e.g. telephone call traffic and multinational bank branches, in a study on bilateral cross-border equity flows. Combes et al. (2002) present empirical support for their claim that business and social networks help to reduce informational trade barriers in France.

The *contract* stage starts directly after the moment the potential trading partners have found each other and are inclined to make a deal. Here transaction costs are made in negotiating the terms of the contract. Parties have to decide on how to make a reasonable split-up of the expected rents of the transaction and what to write down in the contract. They should not aim to put all eventualities in the contract. It is costly to write out all details, it is useless because some arrangements cannot be verified by third parties (verification problems), it is impossible because many eventualities can not be foreseen (fundamental uncertainty) and it may have unwarranted side-effects in the form of growing distrust between the parties if one takes explicit account of everything that might go wrong. Contracting becomes even harder in an international context. Parties have to learn the particularities of the legal system of the other country. In addition, cultural problems appear when one is contemplating what to write down (and what not) in the contract. The appropriate business norms vary between cultures. For example, in the United Kingdom it is common to write down every detail, while in other cultures, like the Dutch, it is customary to just write down the rough outline of the agreement and to fill in the details later, during the fulfilment of the agreement. These differences can lead to misunderstandings. Writing down all details creates a sphere of security in one case (the contract provides a solution for every problem that might occur), but it can also give a signal of distrust (why does the other party want to write down all these eventualities, does he foresee problems, doesn't he or she trust me?).

Cooray and Ratnatunga (2001) illustrate the problem in an interesting account of the troublesome co-operation between a Japanese customer and an Australian producer. They show how cultural differences lead to completely different perceptions about how to build a co-operative relationship. The Japanese buyer was focused on developing a long-term close relationship with his Australian partner, because it is customary in Japan to stay with a producer as long as the producer sells the product. It is a strategic decision with long-term consequences for a Japanese firm to choose a supplier. The Japanese therefore asked for much information about the quality and price of the product, and installed own personnel in the Australian firm, also because they are accustomed to co-operate with their producers to improve the product. The Australian firm however was not used to provide such detailed information about their production process and costs. A second problem arose, because the Australians wanted to develop the relationship along personal lines, while the Japanese counted on strict formal control and evaluation procedures. In the end, a *link-pin*, with knowledge of both cultures and companies, was hired to solve the mutual adjustment problems. In general, striving for low contract transaction costs implies quick negotiations that result in a fair distribution of the rents.

The stage of *control* consists of the monitoring and enforcement of the contract. Both involve high transaction costs, especially at large distances. Monitoring means that business partners check whether the other party is doing what he or she promised to do. If the check turns out that this is not the case, the next step is enforcement of the contract. The most common solution for enforcement is to start a legal procedure. Especially in international trading relationships, this is often a troublesome affair. It takes time and money in large quantities and foreigners often feel being mistreated by prejudiced national courts when they file a claim against a national company. The outcome of the process can be quite uncertain. In general, there is the verification problem, which means that it is often very difficult or even impossible for third parties, like judges, to value the quality of the goods or services delivered. Country specific cultural values and norms also penetrate the national legal systems (see Bachmann 2001). In the United Kingdom, the law is commonly regarded as a device to protect the people from the government. The basic thought is that the government should not interfere in private matters. British judges therefore base their decisions in legal disputes extensively on what parties have voluntarily agreed on, even when power asymmetries might have influenced the voluntary element. In contrast the German and Dutch legal systems take the idea that contracts should be “reasonable” for both parties. The government is seen as a mechanism to correct injustices. German and Dutch judges therefore have and use the right to reinterpret and reconstruct contracts until their outcome can be considered “reasonable” for both parties. This means that two contracts with the same wordings can lead to different legal decisions, depending on the kind of legal system in the country in which the file is claimed. Here, the control transaction costs can be held low in cases where the transaction partners comply to the terms of the agreement, so that there is no need for intensive monitoring nor legal enforcement.

Table 1 summarizes the various types of transaction costs which are encountered in the three stages. It also indicates the reasons for these costs. It should be noted that the costs in the first stage, the contact stage, are so called sunk costs, which means that these costs are also to be made when the contract and the ensuing trade exchange eventually does not take place.

Solutions to the Game of Trust

As mentioned above, Greif’s argument that finding a solution to the fundamental problem of exchange is finding a solution to the game of trust. Here trust may be a substitute for extensive negotiations and drafting of contracts which can bring about a lot of transaction costs, and which are, from the economic perspective, never “complete”. Trust can be seen as an expectation about the future behaviour of the trading partner, where a false expectation may bring about considerable costs. When both parties trust each other, it implies that both parties expect a cooperative behaviour of the other party and therefore expect explicit or implicit compliance with the agreements.

In fact, in many circumstances trust between trading parties can be seen as a co-operative solution of a prisoners’ dilemma where the trigger mechanism built in the repeated game does not completely exclude cheating. So placing trust is not a free lunch, there is a risk involved. That makes agents cautious to gather reliable information about potential business partners (contact), to carefully formulate the agreement (contract) and to adequately monitor and

enforce it (control). What do people indulge to accept these risks and to trust the other, or how can this risk be contaminated so trust can develop? To answer this question, two main types of trust generating mechanisms can be distinguished, respectively with a *formal* and an *informal* basis (Den Butter and Mosch, 2003, Mosch, 2004).

In the case of formal trust we can for instance think of legal protection with respect to agreements between parties, where fines, or even the prospect of going to jail, can prevent opportunistic behaviour. More in general, institutions constitute a major device of solving the game of trust.

This “formal trust” is related to the rational choice concept of trust (Coleman, 1990) and extrinsic motivation (Frey and Jegen, 2001). Formal trust is closely linked to what is known by other authors as instrumental trust, rational trust, calculative trust (Williamson, 1993), self-interested trust (Lyons and Mehta, 1997), synthetic trust (Putnam, 2000), fragile trust (Lindenberg, 2000), narrow trust or egoistic trust (Nooteboom, 2002) and, to some extent, system trust (Luhmann, 1997, Bachmann, 2001). All these notions of trust are related to each other, in the sense that they see this type of trust as being about the calculation of selfish interests in pecuniary terms. It expects that people take into account all financial incentives involved, use a “rational way of thinking” and are not “hindered” by emotions. So, if it is profitable to cheat, one will cheat without remorse. People will act trustworthily when it pays to act trustworthily. The main idea of this approach is that the trust problem can be understood as a social co-ordination problem. To prevent that both players end up in the Nash equilibrium outcome of the prisoner’s dilemma (both players playing the uncooperative or untrustworthy strategy), there are two solutions.

The first is to play the game an indefinite number of times. In other words, a repeated game is needed to solve the game of trust. This allows reputation effects to emerge. Trustworthy behaviour in the past forms a valuable asset, because it enhances the chance of finding future business partners. The reputation mechanism works best, when the time horizon of the players is large, when there are many potential partners, and when information about past behaviour is easily accessible to all players. This forms an important reason why trading networks exist, as they fulfil these requirements. The second solution is to change the outcomes of the game in such a way that it becomes favourable for the players to act in line with the agreement. On a bilateral level, this can be organised by promising bonuses for good compliance, or by taking “hostages” which are returned when the agreement has been fulfilled. Another way to invoke trustworthiness is by using intermediaries, for example banks that issue letters of credit. The most important way of solving the trust problem is of course by relying on the judicial power to enforce legal contracts. Threats of fines and imprisonment scare agents away from untrustworthy behaviour. So, according to this second solution a kind of contract, which is hopefully self-enforcing and prevents cheating, should preclude the traders to end up in the non-co-operative prisoner’s dilemma solution of no trade.

It should be noted that these trust mechanisms on a formal basis cannot take away all risk. In the first place, bounded rationality and incomplete information make it impossible to make all necessary calculations. Moreover, the behaviour of other people is guided by fundamental uncertainty called free will (Nooteboom, 2002). Good prior intentions can always change when unforeseen circumstances occur. It has already be noted that legal contracts can be expensive, inherently incomplete, possibly unverifiable and subject to the particularities of the addressed legal system. On top of this, too much emphasis on formal

trust might hurt informal trust. When relationships are guided by too much formal trust, based on extrinsic motivations, this can “crowd-out” informal trust which relies on intrinsic motivation (Tyler, 1998; Ostrom, 2000; Frey and Jegen, 2001; Bénabou and Tirole, 2003).

Trust mechanisms with an informal basis cover the relational and social-cultural mechanisms that build trust. Informal trust is based on intrinsic motivations (Frey, 1993). This type of trust is closely related to the concepts of social trust, moral trust, personal or blind trust (Williamson, 1993), socially-oriented trust (Lyons and Mehta, 1997), resilient trust (Lindenberg, 2000), broad or altruistic trust (Nooteboom, 2002), generalised trust (Putnam, 1993) and social capital (Fukuyama, 1995). Both at the individual level and at the institutional level, there are a number of different mechanisms that generate informal trust.

At the individual level, the way in which people deal with uncertainty varies from person to person. Responsible for this is the extent of “ontological security” a person experiences (Giddens, 1991). This has a direct influence on the individual “natural” level of trust in others, called “basic trust” (Giddens, 1991) or “trusting impulse” (Sztompka, 1999). In (bilateral) relationships, the problem of incomplete information is countered by the psychological mechanism of satisficing (Simon, 1983). Agents collect and process information unto a certain aspiration level. When co-operation goes on for a while, a personal relationship develops between the contracting partners and custom and routine slip in. This is a rational way to deal with bounded rationality, because the limited processing capacity of the human brain is not distracted by operations that go well. When the relationship proceeds within certain “tolerance boundaries”, attention can be given to other problems (Nooteboom, 2002). When these boundaries are crossed, the routine aspect of the trust relationship disappears and agents will pay close attention again to the relationship, collect information and possibly narrow the tolerance boundaries. When the relationship gets a very durable character, agents might reach the stage that they start to identify with each other and each others interests. This will first lead to making the relationship informally. Ethical and moral considerations start to rule the relationship. This can even lead to a distortion of the perception of the trustworthiness of the other party. An example of this is cognitive dissonance. Contradictions between facts (about the behaviour of the other party) and beliefs (about the trustworthiness of the other party) give an uneasy feeling, which is solved by reinterpreting the facts in such a way that the beliefs can hold. Then the relationship can be called one of blind trust. Apparently such situation should be avoided from the perspective of good transaction management, as it may incur unnecessarily high transaction costs.

Informal trust mechanisms are also active at a more collective level: in organisations, villages, cities, ethnic groups, networks and countries. In these groups, a trust culture might develop among its members. This is “a system of rules – norms and values – regulating granting trust and meeting, returning, and reciprocating trust; in short, rules about trust and trustworthiness” (Sztompka, 1999: 99). If social control is effective, breaking such rules is followed by serious social sanctions.

The advantage of informal trust mechanisms above formal trust mechanisms is that one does not have to pay to keep afloat an entire legal system with its lawmakers, lawyers, judges and police. However, building informal trust can be a very difficult and lengthy process, especially when one wants to enter a group or network of which the membership ties are based on kinship, ethnicity, religiosity or place of birth. Examples of such closed trade network date from the Maghribi traders in the eleventh century (Greif, 1989, 1993), the

Jewish diamond merchants in the 1960s (Wechsberg, 1966), to nowadays ethnic Chinese networks (Rauch and Trindade, 2002), mentioned before.

Micro economic game experiments suggest that these informal forms of trust are relevant to explain human behaviour in some economic situations. A common conclusion of those experiments – often shaped as social co-ordination problems – is that people are indeed inclined to behave trustingly and trustworthily (guided by norms as reciprocity and fairness), instead of playing the “rational” strategy of non co-operation. This result even holds true when high sums of money are at stake, when the participants are not students, and when no reputation effects can be built up (one-shot interaction with anonymous strangers); see Camerer and Thaler (1995), Berg, Dickhaut and McCabe (1995), Cameron (1999), Fehr and Gächter (2000) and Ostrom (2000).

A related informal form of trust is based on common values and norms. Being a member of the same cultural or religious society may induce people to trust and be trusted without any formal guarantee. This form of trust can primarily be found in homogenous communities with common values and norms where the “institutional setting” assures that in case of cheating the community will provide a costly punishment. These communities can consist of family, close friends, colleagues, members of the same profession, but also of citizens from the same village, region or country

It is difficult to judge which one of these different types of trust has most practical relevance. First there will be a substitution effect: when the legal system is better developed, the effects of corporate reputation and social networks are less important. Furthermore, there is complementarity: without a reasonably functioning legal system, reliance on an informal form of trust may also become more costly. In most practical situations there is generally a combination of two types of trust and their relevance may differ from situation to situation. In this respect, the question also arises to what extent both types of trust rely on rational behaviour or not. Here the distinction can be made between *calculative trust* and *moral trust*. Apparently formal trust can be associated with calculative trust and rational behaviour. But it may be true that reliance on informal trust can also be regarded as rational. Rationality, in this case, refers to a balancing of benefits and costs of cheating. For instance, when it has been very costly to build up a reputation of trustworthiness, and when by cheating this reputation gets lost whereas keeping the reputation will considerably reduce future transaction costs, it becomes rational not to cheat. This is exactly the repeated game character of the institutions for informal trust where a high price has to be paid for being expelled from the family or community, or for a loss of face. This may even explain why altruism has been detected in laboratory experiments with one shot games: the rationality to do so may be found in an intrinsic drive to conform to social habits, or even in a fear of “God”.

Trust is related to various forms of transaction costs. These transaction costs both comprise the costs made in order to establish trust based on formal institutions (contract drafting costs, investment costs in knowledge of foreign law, costs of monitoring arrangements, costs of legal proceedings for non-compliance) and to transaction costs associated with informal or relational aspects of trust (building common bonds and friendships, learning foreign languages and about foreign cultures). In terms of calculative trust all of these costs made to establish trust should be recovered by the lower transaction costs that the reputation of being trustworthy brings about. It should be mentioned that this building up of trust for trade relationships brings about positive externalities. Not only the traders themselves benefit from it in the negotiation of a transaction, the social welfare will

also increase due to the benefits of specialization and scale effects which result from the additional transactions. This emphasizes that the provision of an efficient working (international) legal system and education in foreign languages and cultures partly has the character of a public good and should be considered a reason for involvement of the government, e.g. by the establishment of institutions which contribute to a solution of the game of trust at low transaction costs. Problems of trust between countries will impede trade. Increased trust among countries will remove these informal barriers to trade and will foster trade.

All in all, the literature on trust provides insights in some general mechanisms, which govern the relationship between trade, transaction costs and trust. It gives rise to the following hypotheses:

1. Trust problems are a source of trade barriers and transaction costs. More trust means less trade barriers and less transaction costs. Thus, more trust leads to more trade.
2. Two types of trust can be distinguished: formal trust and informal trust. Both types are important in international trade.
3. Another distinction is between calculative trust and moral trust. Although at first sight calculative trust, which is considered to stem from rational behaviour, seems to be linked to formal trust, whereas informal trust can be identified with moral trust, this may not be true. In fact, many types of informal trust also stem from rational behaviour in the sense that cheating brings about less gains than the costs of loss of reputation. Here the solution of the game of trust is institutionalized as a repeated game.

5. THE ECONOMICS OF ORCHESTRATION

Orchestrating the Production Chain

As has been noted previously the global fragmentation of production that breaking up the production chain and outsourcing parts of the chain to be produced abroad becomes increasingly important. To know how to do this is precisely what creates value in the era of globalization. This decoupling of the production chain and creating value by outsourcing requires a good skill of organizing and coordinating the whole production process. This is what the orchestrating function is all about. Transaction economies like the Netherlands focus increasingly on this orchestrating function, presumably because of their comparative advantages in specific knowledge and infrastructure.. It induces a shift of economic activity from production itself to organizing production. This orchestration of the production based on the appropriate cost considerations of what, where and by whom to produce, is a vital issue for transaction management.

Orchestration Gains Importance with Fragmentation of Production

We can distinguish between comparative advantages *in* the various stages of production, and comparative advantages *between* different links of the chain. Large scale production,

technological progress, and process and product innovation within a link of the chain, provide an advantage in direct production costs. It will bring about an increase in productivity within the specific stage of the production process and cause a competitive advantage for making that specific part of the product.

Organizational innovations and innovations that improve the coordination between the links of the production chain, reduce transaction costs and thus create value by increasing productivity in the orchestrating function. This implies a competitive advantage in orchestration. In a transaction economy with a tradition of trading the focus is primarily on these kind of innovations that reduce transaction costs. Hence in such transaction economy economic activities are more and more directed toward the orchestrating function.

This increasing orientation of the industry sectors in transaction economies toward the orchestration function is inevitable in this era of globalization and fragmentation of production. Only those parts of the production chain where these economies have a real comparative advantage, are preserved for production at home. These are the parts of the chain which require very specific knowledge and where the coordination costs of outsourcing or subcontracting are higher than the benefits of specialization (see also figure 2b). The trend, however, is that the benefits of outsourcing or subcontracting increasingly outweigh coordination costs. That is precisely why much of the actual industrial production and even production of services is no longer located in the transaction economies. It is a development that is present within many traditional industries and the boundaries between industry and service sectors become increasingly blurred. The required knowledge for orchestration has a general and a firm-specific component, but it can be expected that the importance of sector-specific knowledge will diminish.

Outsourcing: Location and ‘Make or Buy’ Decision

The above arguments make clear that fragmentation of production can take place in various ways. It has already been indicated that a first important choice to be made for the organization of production is whether to coordinate through the hierarchy or through the market: the *‘make or buy’-decision*. This choice depends in conformity with the theory of Coase (1937) on the size of the transaction costs at the margin: when these marginal transaction costs are higher for production within a plant owned by the firm than when purchasing products from outside suppliers in the market, then production should be outsourced to the market. The opposite is true when purchasing at the market brings about more transaction costs, i.e. when vertical transaction costs are lower at the margin than horizontal transaction costs.

The second important choice is between foreign and domestic production, and more generally the choice is to determine where the individual components of the production will be carried out. This is the *location choice* (see Box 3). Again, transaction costs at the margin determine the choice. The relocation of production activities abroad - in general terms labelled as outsourcing and offshoring - where the transaction costs of moving production abroad are smaller than the gains through the decline in production costs, is now subject of much research. In case of outsourcing through the market it is indeed labelled and registered as outsourcing. In the case of foreign production in a plant owned by the firm, for example through a subsidiary, it is labelled and registered as foreign direct investment (FDI). Gains

from moving production abroad, either through outsourcing or through FDI, will eventually stem from those parts of the production where production abroad is much cheaper, e.g. because of low wages. In case of FDI, these are the *vertical* FDI. The resulting trade, which is intracompany trade, can directly be explained from the theory of comparative advantages in trade in tasks. However, much of the FDI has a *horizontal* nature: the same goods and services are produced abroad as at home. Here access to the local market is often seen as an opportunity, where the benefits of direct access outweigh the transaction costs of relocation and potential diseconomies of scale. It should be noted that the gains of direct market access can be seen as a reduction of transaction costs, so that both vertical and horizontal FDI can be explained by comparative advantages in transaction costs. Incidentally, Helpman (2006) argues that the distinction between horizontal and vertical FDI gradually disappears due to the development of more complex integration strategies.

Box 3. Krugman, winner of the Nobel price in economics in 2008 and the New Economic Geography

The location choice plays an important role in the theory of the New Economic Geography by Paul Krugman, winner of the Nobel Prize in Economics in 2008. It provides a complement to his ideas on international trade. Like in the theory of transaction management in this chapter, in Krugman's theory the focus is on the falling costs of transportation and interactions. As a result, economies of scale in production can be better exploited. It promotes global specialization and induces a greater product variety, and hence it results in higher real wages. Moreover, such a reduction of transaction costs causes migration to the cities, which leads to a larger population in urban areas. This phenomenon is especially apparent in developing countries. But also in the industrial world, this migration to the city has a self-reinforcing effect which creates a highly developed urban center with a periphery lagging behind in development. Krugman's ideas are very influential in policy analysis. An example is the analysis of the impact of the accession of new members to the European Union which is largely based on Krugman's approach. Something similar holds true for the regional policy of the European Union. Krugman has also shown that fears of a "race to the bottom" is unfounded in a world where scale effects of agglomeration economies are strong enough (Brakman et al, 2008).

Table 2 summarizes the various choices to be made in the location and 'make or buy' decisions.

Table 2. Make or buy and location decision

Ownership Location	Make	Buy
Home	Domestic integration	Domestic outsourcing (subcontracting)
Abroad (off shoring)	Foreign direct investment	International outsourcing

The role of transaction costs and productivity gains in outsourcing can be illustrated in the following stylized numerical example. Suppose a firm has 10 employees which produce 100 units of a product. There is no capital involved. At a wage level of 10, the labour costs are 100. Now the firm decides to outsource production to a country where production costs are half of those at home. In this new situation the 10 employees are transferred from production at home to the orchestration in the low wage country where they are able to achieve an output of 400 units. Production costs are now 200 (400×0.5) and the transaction costs of outsourcing 100 (pay for employees in the orchestrating function). Total costs are therefore 300, so that productivity rises with 100% (from 100 to 200). These profits can be distributed among the employees so that their wage increases to 20, or they can be used for reducing the price of the product (or it can be reinvested or be paid to shareholders). Whatever is the case, in the current compilation method of the National Accounts, the productivity gains are seen as to increase the productivity of the industry, while in reality it should be attributed to trade and transaction innovations and not to process or product innovations, such is usually the case with economic analyses of productivity growth in industry. Instead, it is the productivity effect of outsourcing, described by Grossman and Hansi-Rosberg (2008) in their theory on the trade in tasks, which causes this increase in productivity in industry.

For the sake of simplicity the numerical example assumes that employment at home does not change. The 10 employees who first were production workers, are now engaged in organizing and coordinating the production in the low wage country. In this example the outsourcing of production, and resulting increase in the production will create new employment abroad. How many new jobs are created in the low-wage country depends on the relative productivity and wages in that country. If productivity in the low wage country is half of that at home (5), the wages in the low wage country are assumed to be $\frac{1}{4}$ of the wages at home (2.5). It implies that the additional employment in the low wage country is 80 ($400 / (\frac{1}{2} \times 10)$).

The numerical example shows a number of strategic issues which should be taken into account in the decision to move production abroad:

- the size of the transaction costs of relocation; here also long term effects and risks should be considered.
- the price elasticity of demand, i.e. the ability to sell more products and the room it gives to reduce the product price as a consequence of the productivity gain; in other words, the issue is the distribution of productivity gains between consumers and producers.
- the future development of wages in the country whereto the production is outsourced; may be at the time the decision is taken, wages are still low, but maybe for the foreseeable future a significant increase will take place.
- the development of wages at home, including the transition costs of training of the employees for their new jobs as orchestrators and coordinators; these transition costs can be considered a non recurrent part of transaction costs. In this example these training costs are not taken into account. Furthermore, it is assumed that the wage of employees with an orchestrating function is equal to that of those with a production function.

It is clear that the strategic decision of firms to move production abroad is a difficult one and requires a lot of good information and intuition (which can be characterized as good trading skills and an entrepreneurial spirit). Underestimation of transaction costs associated with such outsourcing may cause that eventually outsourcing does not appear to be beneficial after all and that the outsourcing of production is reversed. Another reason to regret the strategic decision to outsource may be that too much weight is given to labour costs and that the cultural differences in countries with low wages (e.g. in Asia) are not properly taken into account. These additional and unforeseen transaction costs may even be so large that it is ultimately better and more profitable to outsource to countries with higher wages (e.g. Eastern Europe) but where the cultural barriers are lower. Moreover, the numerical example assumes that the quality of the outsourced production is equal to the quality of production at home. Maintaining such quality in outsourced production may also entail unexpectedly high transaction costs, or it may lead to a poorer product quality so that the sales revenue decrease. It will also make outsourcing less profitable than originally expected.

CONCLUSIONS

This chapter outlines the importance of transaction management for the Dutch economy and for similar modern open economies where welfare creation depends much on trade and the organization of production. In this context *transaction management is the skill and ability to keep transaction costs as low as possible in all given circumstances*. However, this proposition does not yet provide a clear picture of what transaction management really is, and of the reasons why it is an important method of strategic analysis in policy decisions for the industry. First some possible misconceptions about transaction management are pointed out.

- Transaction management goes far beyond its traditional meaning, namely minimizing the transaction costs of financial transactions, such as payment and administrative services. Yet it is noted that the way transaction management is elaborated in this chapter encompasses this original narrow connotation of transaction management.
- On the other hand, transaction management is no panacea for all problems where there is a need for cost reduction: it is a way of analysis from a specific perspective, namely that of the transaction costs.
- Transaction management does not solely seek to reduce existing transaction costs: there should be a good balance between existing and possible future transaction costs due to increased risks (eg. costs of safety).
- Transaction management is not one of the many heuristic management principles or tools: instead it is based on the scientific theory of transaction cost economics, a theory that was conveyed by Nobel Prize winners (Coase, North and Williamson) and that has been elaborated in articles in all leading economic journals.
- Transaction management does not become less relevant when transaction costs are reduced by good transaction management. On the contrary, thanks to good transaction management the globalized world has, and will, increasingly become more transaction intensive so that the importance of transaction management also increases. Transaction costs per transaction may decrease, but because of less

expensive transactions, it enables more fragmentation of production and trade in tasks, so that in the end the ratio of transaction costs to sheer production costs increases.

The above list already implicitly gives a number of characteristics of transaction management. What other aspects of transaction management are worth mentioning?

- Transaction management is a skill that creates great value especially in a transaction economy. Therefore it should be regarded as a key competence for the business sector in such transaction economies, and the education and science policy should be aware of that crucial role.
- Transaction management relates both to (horizontal) business transactions through the market and to (vertical) transactions through the hierarchy or through alliance agreements within companies.
- Transaction management translates theoretical knowledge of the economic theory of transaction costs (which combines parts of the macro oriented theories of institutional economics, industrial organization and international economics) to a practical decision method.
- Transaction management creates value in a globalizing world by promoting a further fragmentation of production. It implies that companies in transaction economies will increasingly be engaged in the orchestration of production and in the 'make or buy' and location decisions with respect to outsourcing of tasks.
- The fact that transaction management acts as key competence also means that trading nations remain an attractive location for foreign head offices from where the orchestrating function is performed.

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Chapter 2

STABILITY AND CHANGE IN BUSINESS ETHICS

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ABSTRACT

Some broad areas of stability and permanence in the theory and practice of business ethics are identified, together with other areas of dynamic change. Various categories are organized into a stable framework incorporating a set of bi-polar components such as efficiency vs. justice, spanning themes such as character, with topical themes such as technology, money, property, poverty and ecology. Although every category and theme in the framework is likely to endure, their internal details and inter-relationships are highly dynamic. Philosophy is also changing, with several distinctive moral philosophies such as dialectics and pragmatism likely to rise to greater prominence, bringing with them an increased acceptance of the very idea of “business ethics”. Accordingly, it is possible to project some broad macro-trends involving (i) the re-emergent philosophies, (ii) trans-disciplinarity, (iii) the blurring and fading of boundaries, and (iv) general moral progress.

1. INTRODUCTION

Forecasts of trends and their turning points are notoriously unreliable. Accordingly, this contribution to “Business Ethics in the 21st Century” focuses on identifying some broad areas of stability together with other areas of dynamic change. In the following section, various conceptual categories within business ethics are organized into a stable framework. This framework involves a set of bi-polar components such as left vs. right-leaning politics, or value-priorities such as efficiency vs. justice; with a set of spanning themes such as

character and intention, as well as a set of enduring but topical themes related to business ethics, such as technology, money, property, poverty and ecology. Whilst each of these categories and themes is likely to endure, their internal details and interrelationships are highly dynamic.

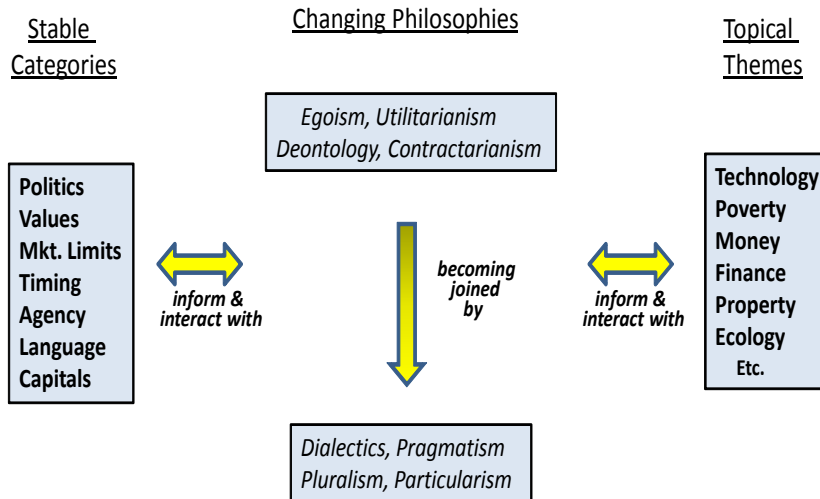


Figure 1. Stable categories, re-emerging philosophies and topical themes

There are many associated changes going on within philosophy itself. Accordingly a distinction is drawn (in section 3) between (i) the ethical theories, or forms of moral reasoning, that characterize many 20th century discussions of business ethics (i.e. theories such as egoism, utilitarianism, deontology, etc) and (ii) a set of re-emerging or more recent philosophies, including dialectics, pragmatism, pluralism and particularism (Figure 1). These are likely to join with the “forms” and to rise to greater prominence in the discourse and study of business ethics. Each of the re-emerging philosophies carries implications for business practices; but they also inform and interact with the topical themes. Accordingly, the themes of technology, poverty, money, finance, property and ecology are examined (in section 4) in the light of the re-emerging philosophies and some selected components of the stable framework. Finally, a few broad macro-trends are identified and discussed, including changes in philosophy, the blurring and fading of boundaries amongst many traditional categories, an increasing trend toward interdisciplinary approaches to business ethics, as well as the prospects for general moral progress. All such macro-trends, topical themes and stable components are, of course, interrelated in a myriad of complex ways. Accordingly, as a guide for readers, the particular relationships and associations that have been selected for discussion in this chapter are depicted in Figure 2, which maps out the overall structure of the chapter.

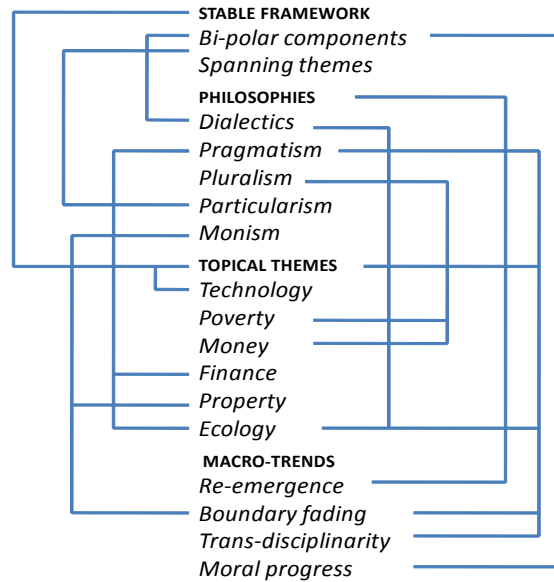


Figure 2. A map of the selected associations and relationships

2. THE STABLE FRAMEWORK

Business ethics has often been described as an oxymoron, with “business” and “ethics” expressing contrasting values, or value-priorities. This suggests that the set of human values, as generally understood, can be roughly partitioned with one sub-set associated with productive efficiency and exchange; another with justice, care, human rights and the avoidance of harms (cf. Singer, 2007 et seq).

Table 1. Some stable bi-polar components of business ethics

COMPONENT	LEFT-POLE	RIGHT-POLE
Values	<i>justice</i>	<i>efficiency</i>
Mkt. Limits	<i>compensate</i>	<i>exploit</i>
Systems	<i>stakeholder</i>	<i>shareholder</i>
Politics	<i>econ-left</i>	<i>econ-right</i>
Agency	<i>collective</i>	<i>individual</i>
Timing	<i>ethics now</i>	<i>ethics later</i>
Language	<i>values-based</i>	<i>value-based</i>
Capitals	<i>multi-forms</i>	<i>financial forms</i>

Several other components of the business ethics discourse have involved a similar contrast, or bi-polarity (Table 1). They include: generic strategic responses to the known limitations of market based systems (i.e. exploit vs. compensate), the stakeholder vs. shareholder models of management (that are broadly associated, in turn, with left vs. right political leanings and with regional variants of Capitalism); individual vs. collective moral-

agency arguments; the timing of ethics (i.e. doing good now vs. later); forms of capital (i.e. financial vs. social or ecological forms, etc.), and contrasting usages of language within the mainstream narratives of “business” and “ethics”. Despite the tensions, all these bi-polar components seem stable. That is, as categories, they are unlikely to change in the future.

Moreover, a number of “spanning themes” also tend to endure, including notions such as character, intention, and emotion, as well as sociological themes such as culture and macro-trends. The role of these spanning-themes in the framework differs from that of the bipolar-components, in that they are (i) more general and abstract, and (ii) are often deployed to qualify the component-poles. For example, one can consider “an intention to achieve justice”, or point to an “other-regarding character”, etc. In various 20th century contributions to business ethics, themes such as these have informed the poles of selected bi-polar components, as depicted in Figure 3. For example, the theme “character” has informed “business” because the motive to excel is associated with excellence and efficiency, yet virtue ethics also sees that a caring attitude or a commitment to humane ideals is a mark of good character. Likewise, the theme of “emotion” relates to business-as-usual (e.g. emotional intelligence) but also to ethics or the so-called moral sentiments.

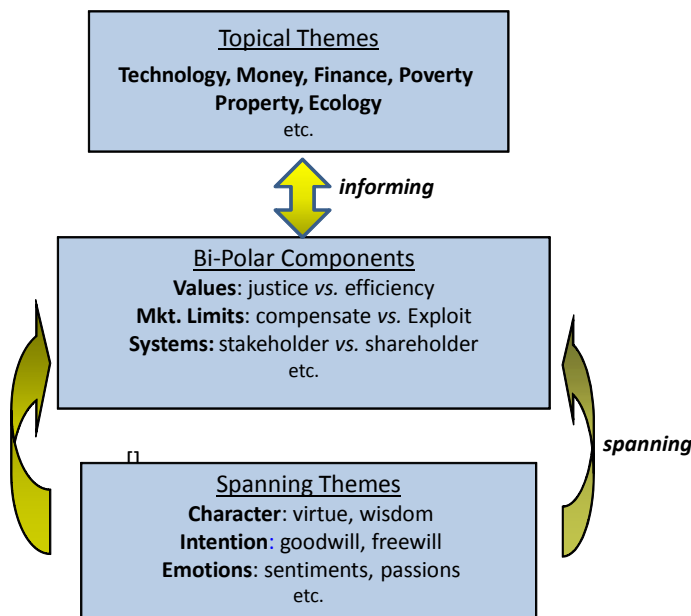


Figure 3. A stable framework

Many other discussions of business ethics have focused upon a relatively stable set of topical themes such as technology, money, finance, poverty, property-rights and the environment (or health and safety) as well as globalization or international trade. These themes are “topical” in the sense that they are often newsworthy, but they also endure as “topics” of scholarly research. Within each theme, of course, the situation and the details are not at all stable; indeed, they are highly dynamic. In addition, discipline-based research into the topical themes frequently informs the business ethics literature, but it is also informed by

it, as depicted in Figure 3. This two-way flow of knowledge between source disciplines and business studies is steadily increasing, in part because human activities and systems are increasingly becoming organized on business-like lines.

2.1 A typology

One can also point to some stable types of contribution to business ethics. Those are characterized here as synthesizing, separating, capturing, re-casting and combining-type contributions. A typology is shown in Table 2 that suggests how components, spanning themes, and types of contributions are inter-related. For example, in synthesizing, the poles of some selected bi-polar component(s) are brought together and unified. Put differently they are reconciled, balanced or harmonized; or cast as complementary, symbiotic, or synergistic. In the separating type of discussion or contribution, concepts from one side of the framework only are linked together in a way that mutually reinforces them through the persuasive association of ideas. In this case, economic efficiency might be linked to ethical egoism, with these two ideas jointly deployed as a justification for the shareholder model or the system of investor capitalism. In the re-casting type of contribution to business ethics, a claim is made that a particular bi-polar component or spanning theme is more useful than the others. Consider, for example, that one may “cast” ethics exclusively in terms of the character of the individuals involved (a spanning theme).

Table 2. A stable typology of contributions.

TYPE	DESCRIPTION
Informing	A topical theme is informed by component -poles(s), spanning -theme(s), or other types (refer to Figure 3 & 4)
Spanning	A spanning-theme is developed, or linked to some bi-polar components or topical-theme(s) (refer to Figure 3 & 4)
Synthesizing	The poles of selected bi-polar component(s) are unified or synthesized
Separating	Concepts from only one side of the framework are linked and used to inform topical-theme(s)
Re-casting	A claim that a particular component or spanning-theme yields superior insights or is persuasive
Capturing	Ethical categories are explained in terms of rational utility maximization, as in game theory
Combining	Two or more components or themes are explored jointly, opening up a space for inquiry

Next, in capturing-type contributions, moral categories such as altruism, guilt, gratitude and justice are discussed and analysed mathematically in terms of preference relations, as in game theoretic models. Finally, in combining-type contributions, two or more bi-polar components or spanning themes are explored in conjunction with one another. For example, the “market limitations” and “moral agency” components might be explored jointly.

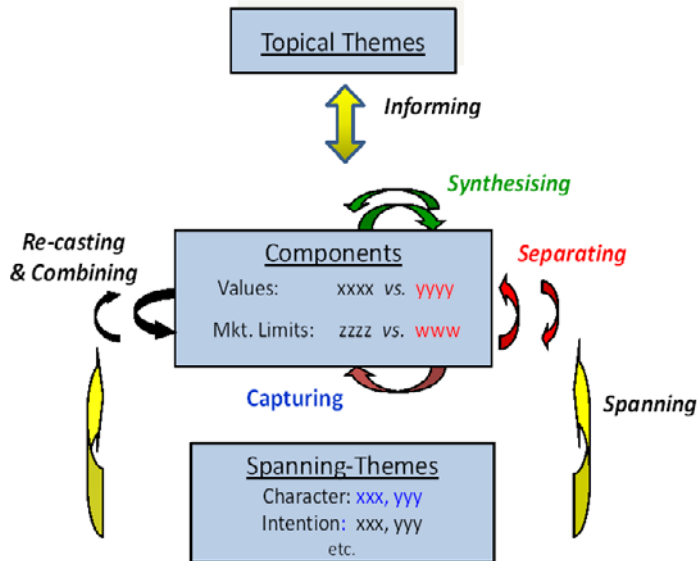


Figure 4. The stable framework and typology

In sum, the various components, themes and types comprise a stable framework that can be used to locate many existing and likely future contributions to business ethics as a subject, although the boundaries between the constructs and categories within the framework will undoubtedly shift, just as the detailed content of all the “topical themes” (e.g. technology) will change greatly; indeed probably more rapidly than in the past. Put differently, business ethics can be expected to continue “as usual” in the 21st century, to the extent that many developments in theory and practice will be located somewhere within this stable framework.

3. CHANGING PHILOSOPHIES

Just as particular technologies and business practices will change, so too will philosophical theories and understandings. In the 20th century, many contributions to business ethics involved the identification and discussion of correspondences between traditional forms of moral reasoning (i.e. egoism, utilitarianism, deontology etc.) and business-related categories or practices (Table 3).

For example, ethical egoism (i.e. the merits of pursuing self-interest) corresponds broadly, but in complex ways, to the shareholder model of management (i.e. wealth maximization). Similarly, utilitarianism (i.e. acting with the primary intention of producing the greatest good for greatest number of people) resembles the multi-stakeholder or stewardship models of business management, especially when harm-avoidance constraints are included in the model, so that no stakeholder group suffers excessively. Deontological ethical theory and the categorical imperative (the Golden Rule) also correspond to the stakeholder “model”, due to their shared notion of treating all stakeholders as ends-in themselves. The moral-political theory of contractarianism emphasizes the sanctity of agreements amongst individuals, which is central to business-as-usual, but it also focuses upon fairness and justice.

Finally, virtue-ethics involves the cultivation of good character and the exercise of wisdom, in business as elsewhere.

Table 3. Some correspondences between ethics and business concepts

TRADITIONAL MORAL-PHILOSOPHY	RELATED BUSINESS-ETHICS CONCEPT
<i>Egoism</i>	Shareholder model
<i>Utilitarianism</i>	Stakeholder model
<i>Deontology</i>	Kantian-Cap, Th-Y
<i>Contractarianism</i>	Fairness, exchanges
<i>Virtue-Ethics</i>	Character, wisdom

Table 4. Re-emergent moral philosophies with their business implications

RE-EMERGENT PHILOSOPHY	SOME IMPLICATIONS FOR FUTURE BUSINESS	RELATED TOPICAL THEME(S)
<i>Dialectics</i>	Ecological understanding	Ecology
<i>Pragmatism</i>	New methods, guidelines	Finance
<i>Pluralism</i>	Multi-dimensionality	Capital, Money, Poverty
<i>Particularism</i>	Explication, justification	Communications
<i>Monism</i>	Blurring of virtual-physical	Technology, Property

In the 21st century all such “traditional” ideas about ethics in general look set to be joined and to a certain extent displaced by several other re-emerging moral-philosophies (Table 4). These include: (i) dialectics: that is, focusing upon a pattern of thesis, anti-thesis and synthesis in dynamic social and ecological systems (section 3.1 below); (ii) classical American pragmatism, which is also associated with ecology and with practical business guidelines (see section 3.2 & 4.4; (iii) moral pluralism, which upholds the systematic consideration of an entire set of ethical theories (together, arguably, with many other multi-faceted constructs), and (iv) moral particularism, which upholds case-based identification of morally relevant features, rather than the application of moral rules. Finally, we might also witness, at some point in the future, a re-emergence of the 17th century philosophy of monism (an ontology), that sees no ultimate distinction between the physical and mental worlds.

Table 5. Partitioning the ethics set

LEFT-POLE	RIGHT-POLE
Deontology	Ethical Egoism
Utilitarianism - justice constraints	Utility-maximization in qualified markets
Contractarian justice	Contractarian exchange
← <i>Virtue-ethics, Re-Emergent Philosophies</i> →	

Setting aside a number of possible objections, this entire set of ethical theories including the traditional forms and the re-emergent philosophies can be placed relative to each other on

a map (Figure 5) which incorporates a partition that aligns roughly with the bi-polar components of the framework (Table 5).

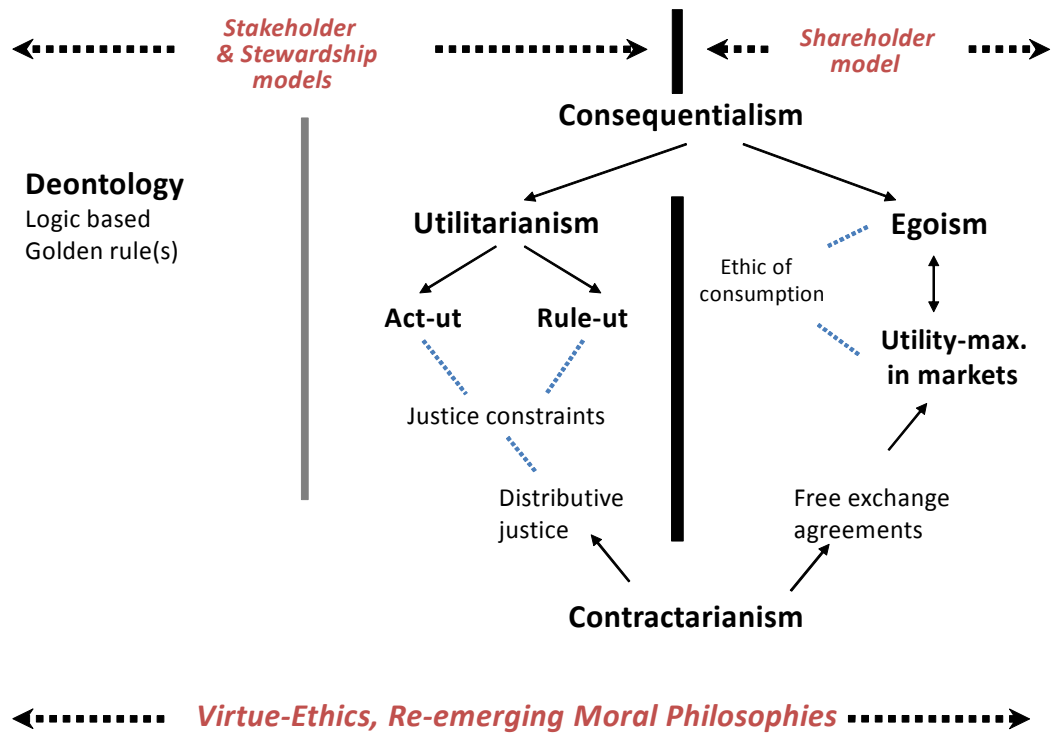


Figure 5. A map of the traditional and re-emerging moral philosophies

For example, ethical egoism is located on the same side of the framework as the principle of utility maximization that represents an ethic of exchange and consumption (in qualified markets) as well as the value of economic efficiency (a pole in the framework). On the other (i.e. stakeholder) side of the partition one finds various forms of utilitarianism. Deontology and the Golden Rule also belong on this side of the partition. Various other theories span the partition. Accordingly, they speak to some kind of combination or synthesis of shareholder and stakeholder models, along with a unification of all the other component poles. For example the contractarian notion of agreements locates it squarely on the “exchange and efficiency” side of the framework; but there is also an internally derived emphasis on distributive justice. Virtue ethics, to give another example, involves the spanning theme of character. Amongst the re-emergent philosophies, dialectics and pluralism span the partition in this way, but so too does pragmatism, in the sense that any sufficiently sustained inquiry must eventually leads to all the forms and “poles”. Finally, particularism spans the partition because in any given case, the morally relevant features can be expanded into reasons for action that also incorporate selected forms or poles from either side (refer to section 3.4 below and Appendix 1). In the remainder of this section, each of the re-emerging moral philosophies is briefly considered in connection with some business applications.

3.1 Dialectics

As a moral idea, the dialectic is by no means exhausted. Indeed, it comes to the fore in business ethics whenever conflicting perceptions and principles are in play. It has often been noted that bi-polar constructs like the ones in the framework can stimulate further inquiry in practice, along with the activation and assembly of the kind of knowledge that is inherently commercial and ethical; that is, involving the self with the other, the firm in its environment, the present and future, and so on. A more formal dialectical analysis of any business problem simply composes two conflicting narratives as its starting point: one commercial, the other more obviously ethical. “Synthesis” then consists of the creation of a new and more inclusive narrative. Two 20th century case studies provide brief examples, at the level of business strategy (i.e. meso-ethics). The first involves Canon Corporation in the late 1980s and the second involves Merck & Co (Table 6).

Table 6. Conflicting descriptions of business episodes

ENTITIES	REASONS AND JUSTIFICATIONS	
	<i>THESIS</i>	<i>Antithesis</i>
Canon	<i>kyosei</i> and common good, environmental-design	Monopoly, advantage, discrimination
Around 1994, the chairman, Mr Kaku, declared a corporate ethos of <i>Kyosei</i> : or “Living and working together for the common good”. At about the same time, Canon took a leading role in the “patent wars”. Staff were told to “be prepared for the era to come when only some companies, strong in patents, will cooperate with each other and survive”. On the one hand <i>Kyosei</i> emphasizes community, trust and the common good; on the other hand strategic patenting seeks unilateral advantage and is discriminatory.		
Merck	altruism, “medicine for the people”, NGO involvement	strategic philanthropy, profitable spin-offs, “medicine for the profits”, lobbying for strong IPR
In the late 1980s, the company developed a drug to cure river blindness, which affected some impoverished African communities. This “philanthropic” project aligned with the mission of “medicine for the people” and attracted support from NGOs. Predictably, it yielded profitable by-products including an A.I.D.S. treatment. However, affordable generic versions of the A.I.D.S drugs were forbidden by the patenting system, which Merck had strongly supported.		

One can also point to comparable conflicts in values or perceptions involving entire national or regional business cultures (i.e. macro-ethics). For example, perceived Eastern vs. Western value-conflicts have been the subject of many disputes. According to an article in *The Economist* (1998), written shortly after the Asian stock-market collapse:

“Attachment to family (now) becomes nepotism, the importance of personal relationships becomes cronyism, consensus become corrupt politics, conservatism and respect for authority becomes rigidity and an inability to innovate” and so on.

Other values with trans-valuations are listed in Table 7. For example, an “eastern” (Japanese) propensity to “wait and see” has been re-described as “a lack of leadership”. A network of trusted suppliers has been re-cast as proof of collusive practices, and so on. This kind of dialectical pattern of nested oppositions (whether realities or perceptions) seems likely to remain a prominent part of business ethics in future. In addition, two further aspects of dialectics also seem likely to endure. First, there is its association with ecology (refer to section 4.7 below). Secondly, there is its historical association with the great political struggles of the 20th century. These seem to serve as a warning, quite ironically, against the possibility that in the future the balance of power might move far away from governments (i.e. democracy and those interested in the common-good) and towards profit motivated corporations that are sometimes seen as totalitarian (e.g. MacPherson, 1985; Korten, 2001).

Table 7. Perceived regional cultural value-priorities with their *trans*-valuations

VALUE or <i>THESIS</i>	<i>TRANS-VALUE</i> or <i>ANTITHESIS</i>
“wait and see”	lack of leadership
teamwork	suppression of creativity
attachment to family	nepotism
respect for authority	paternalism
loyalty	dampen initiative
importance of relationships	cronyism
sociable gift giving	bribe, grease-payment
network of trusted suppliers	monopolistic practices
working for common good	creating moral boundaries
“one-in-spirit” with stockholders	excuse for slack
consensus, settlement	justifying corruption

3.2 Pragmatism

As an intellectual tradition, Classical American Pragmatism is quite independent of European Dialectics. However, pragmatism and dialectics do have several qualities or elements in common, all of which, fittingly, seem directly relevant to business ethics in a global context. These “qualities” include inquiry, comprehensiveness, non-termination, invention, ecology and iteration or recursion (Table 8).

“Inquiry” is a major theme within pragmatism. Charles Pierce considered that inquiry originates from an “irritation resulting from doubt, or because of a puzzling situation”, just as today’s business managers might be occasionally puzzled by normative ethics. Similarly, as already mentioned, an awareness and consideration of opposites activates and guides dialectical inquiry. Both philosophies also endorse the comprehensive surveying of relevant facts. John Dewey, for example, wrote that “there is no question of theory vs. practice, just intelligent practice vs. uninformed, stupid practice”, whilst dialectical reasoning has yielded practical methodologies for activating that intelligence. Much the same idea is found in many prominent contributions to military and corporate strategy: Sun Tzu, for example, emphasized knowing the “circumstances” in the very first page of *The Art of War*. Returning to 20th century British moral philosophy, Iris Murdoch wrote of a moral imperative to “gaze” at the

world, whilst David Hume stressed the importance of understanding all the facts when making ethical decisions. More recently, Amory Lovins (an American ecologist) claimed that “the single most important thing ... is to pay attention”. He meant to all aspects of a situation, but especially to ecological relationships and the associated environmental risks.

Table 8. Shared themes within pragmatism, dialectics and business ethics

THEME	PRAGMATISM	DIALECTICS	Implying that future business ethics involves...
Inquiry	truth as usefulness in inquiry and in action	activation of knowledge	awareness of full circumstances
Completeness	striving to relate all theories to a situation	incorporation of opposites	
Continuity	no conclusive termination	an unending process	continuous improvement
Invention	invention of ways to live	synthesis	imagination, good design
Iteration	inquiry is iterative	process repeatedly rises to new synthesis	expectations of recurring paradox and ambiguity

A third common theme shared by pragmatism and dialectics involves the continuous or ongoing nature of inquiry. Pragmatists refer to “continuous” invention (e.g. McVea, 2007) whilst Hegel (a Marxist) wrote long ago of an “unending” dialectical process. Finally, both philosophies accept the recursive (self-referential) nature of inquiry. Pierce, for example, wrote of “iterative” inquiry, just as Hegel described a dialectic that “rises to synthesis over and over again”. Further, common themes shared by pragmatism and dialectics can also be found at the meta-level, that is, in the critiques and evaluations of each complete philosophy (Table 9). These involve their shared imminence and (recursive) usefulness as philosophies, but also their tensions with other traditions that are in decline.

Table 9. Shared critiques and evaluations of pragmatism and dialectics

THEME	PRAGMATISM	DIALECTICS	Implying that future business ethics involves...
Imminence	“waiting around the corner”, foreshadowed	new dialectics, critical theory, etc.	a greater emphasis on pragmatism and dialectics
Usefulness	enables inquiry to advance, avoiding “roadblocks”	Fosters reflective thinking; improves prediction.	reflective practice
Opposition	Shared tensions with positivism, objectivism and rule-based ethics		a likely trend away from positivism, etc.
Ecology	organism functioning in environment	progress in sciences of life, dialectical biology	mutuality, evolutionary perspectives

Finally, both pragmatism and dialectics are strongly associated with ecological ways of thinking, a point that further underscores their likely re-emergence and relevance to 21st century ethics. In pragmatism, inquiry is seen to be carried out by a “goal-seeking organism”,

just as the dialectic has been associated with “life and mind” ever since it was first articulated by Plato, but with several additional linkages becoming apparent [much] more recently (refer to section 4.6, below).

3.3 Pluralism

Moral pluralism has also gained prominence, both as a formal moral philosophy and as a general attitude to theory-building and problem solving. Pluralism accommodates all the other forms of moral reasoning, so it spans the partition, as depicted on the map (refer to Table 5 and Figure 5). Although pluralism itself has several forms, it generally prescribes that a decision-maker ought to consider the entire set of forms of ethical reasoning as they apply to a problem, and then attempt to reach a cognitive equilibrium through some sort of disciplined reflection. It also generally sees that value conflicts can be settled in a spirit of tolerant co-existence, or even better, synthesized or dissolved through invention and moral imagination.

As with pragmatism, pluralism is also loosely associated with the idea that in solving real-world problems one always ought to contemplate and work with a multiplicity of forms, or sets of constructs, whether these be ethical theories (i.e. the whole map), or values (i.e. on both sides of the framework), or criteria (as in multi-criteria decision making), or cultures (i.e. diversity), or capital[s] (as in the multi-capital model discussed in section 4.3), or simply the many “facets” of any non-mechanical societal or strategic problem. For example, Amartya Sen (1999) particularly emphasized the need for a “multi-faceted” approach to poverty alleviation (refer to section 4.2). In general, therefore, pluralism has many interpretations and manifestations, all of which seem likely to remain a prominent part of business ethics, in the future.

3.4 Particularism

Whereas pluralism licenses a multiplicity of moral rules or principles, particularists (e.g. Dancy, 2004) claim that a morally sensitive person (or computer) does not really need any given principles and that such principles are often misapplied. Particularists also claim that morality does not have any distinctive structure like the map in Figure 5. Instead, a moral agent has to be skilled at identifying the “morally relevant features” of each situation, but these vary greatly between cases. This notion of “ethics without principles” also seems quite likely to become more widely accepted in the 21st century because:

- i. it aligns with the approach taken by computer engineers who are trying to design and build artificial moral agents (e.g. sociable robots). The focus of inquiry in this project is whether moral agents also need just a few “top down” principles to complement their particularist approach.
- ii. it points to a way of circumventing the obvious tension and hypocrisy that arises when applying moral principles like the Golden rule to a competitive context (i.e. the “oxymoron” of business ethics), and

- iii. it is likely that well-crafted justifications of corporate actions will be increasingly called for, but the idea of detecting morally relevant features can be applied to this task.

Expanding slightly on that last point, the crafting of “ethical” corporate communications would normally involve not only some selected features of a particular case (a business episode or case study) but also the kinds of basic moral categories that are listed in the stable framework (e.g. efficiency, justice, character, intention, etc.). Accordingly, the framework can be applied to help generate such communications and justifications, in any given case or episode (refer to Appendix 1).

3.5 Monism

Last, but perhaps not least in significance, one can consider the likely re-emergence of the philosophy of neutral monism. This three-centuries-old theory of belief (ontology or cosmology) seems to carry some profound implications for business ethics in the future. In the 17th century, Baruch Spinoza claimed that “*the physical and mental worlds are one and the same*”. He accordingly posited a “universal substance consisting of both body and mind” (*Wikipedia/ Spinoza*). Until recently, any such unified notion of “a substance” has been set aside in favor of the Cartesian separation of body and mind, along with the separation of the physical and symbolic worlds. That, in turn, has been widely associated with the “industrial age” and its mechanistic (rather than ecological) theories. In the post-industrial 21st century, as cyberspace becomes ever more engaging and sophisticated, Spinoza’s philosophy will probably no longer seem quite so radical. Indeed, the boundary between the symbolic / virtual worlds and the real / physical worlds has already become blurred. For example, in the 1980s fictional TV series *Star Trek (TNG)*, the time spent “in” the *Holodeck*, a simulated environment, seemed very realistic. Meanwhile, in current business, where “tele-presence” and “go to meeting” is replacing air travel, it will probably not be too long before that “meeting” is with a computer program (i.e. an artificial intelligence, or an artificial moral agent). Eventually the “meeting” will be between programs, so there will be no faces (real nor virtual) and no need for screens; yet the need for ethics will surely remain.

As with other theories of belief, monism carries some moral implications. As Gregory Bateson foresaw over forty years ago, a natural (physical) ecology can never be fully separated from an ecology of mind (see section 4.6). Accordingly, all “our” thoughts, computations and actions co-create the future environment (both real and virtual) which in turn shapes our prosperity or downfall (in this context one might think of the BP oil spill and the ease with which even a basic AMA could have forestalled it). Spinoza also argued that, under Monism, the entire universe (i.e. matter and thought) must be identically-equal to the God of monotheistic religions. In the 17th century, this theological equation resulted in his swift excommunication, yet it seems likely to fit quite well with 21st century cosmologies and spiritual understandings.

4. TOPICAL THEMES

In this section, the stable framework and the re-emerging philosophies are applied to the selected topical themes, including: *technology*, *money*, *finance*, *property*, *poverty* and *ecology*. As depicted in Figures 1 & 2 above, these “topics” interact in many ways. They also frequently inform various components of the framework, just as they tend to selectively support or challenge some of the moral philosophies.

4.1. Technology

Although the specifics always change, some generic ethical responses to technological risks have been proposed for businesses (i.e. *meso*-ethics) and for policy makers (i.e. *macro*-ethics). These involve the precautionary principle, intrinsic controls and standards for the life-cycle monitoring of products, together with wider-ranging changes in political philosophy or “paradigm-shifts” (Table 10). The precautionary principle holds that one “should not use scientific uncertainty as an excuse to postpone cost-effective measures to prevent environmental degradation”. It also seems that a much more basic principle is needed in order to prevent typical technology-related disasters (e.g. Challenger, Exxon - Valdez, Enron, AIG, BP, etc.), such as “pay attention” to things other than profit, or “know the circumstances” (see sections 3.2 & 4.4). It seems likely that regulations and corporate cultures will improve in this respect, in the future. Businesses will surely be more inclined to pre-empt disaster by building environmental and user safety (even restoration and health) routinely into all their products and processes. There will also probably be more of an effort to find ways of deploying any new risky technology to control itself, as in nuclear power plants where the laws of physics absolutely preclude a meltdown, or in *anti*-virus computer programs. Indeed, whenever profit has been at stake, corporations have been quick to adopt this “intrinsic” approach: as exemplified by digital anti-copying devices (see section 4.5).

According to existing proposals, regulators everywhere should also require businesses to adopt life-cycle standards of care. That is, environmental and health effects of a product should be monitored over the entire life cycle, including the cradle-to-cradle case. More generally, mandated corporate standards of care are needed, in the future, just as Margolis & Walsh (2003) have advanced the idea of a moral (and legal) duty “for a company to act when it creates bad conditions, or when there exists unjust conditions from which the company benefits”. Put differently, if businesses are going to continue to exploit the known limitations of markets for another century, they should be required to compensate for some of them, as well. This can be done quite effectively through taxation in partnership with good government, but also directly by mandated corporate “acts” of care (as depicted in Figure 16, below).

Table 10. Generic ethical responses to technological risks

GENERIC ETHIC	SUMMARY	COMMENT
Precautionary principle	Scientific uncertainty is no excuse for postponing safety measures	Many disasters caused by simple lack of attention to fully-understood problems
Intrinsic controls	Use the technology itself to control its risks, like <i>anti-virus</i> programs	Often done for profit, needs regulation or ethics for widespread adoption
Life-cycle standards	Monitor and counter effects of product over entire life cycle.	Part of a wider duty-to-act to compensate for harms caused in the pursuit of profit
Paradigm shift	Adopt re-emerging philosophies and the CHISEL concepts	Ecological understandings should replace mechanical metaphors and short term-ism
Globalize welfare	Efforts to ensure safety and the other human-goods should involve global networks, just like businesses.	Globalizing businesses can potentially be authentic partners in such networks (see “poverty” section)

Another broader response involves the kinds of changes alluded to earlier (in section 2), that is, changes in philosophy, paradigm, or way of thinking (see also section 4.4 below). For example, in the 21st century we will surely play down the mechanical metaphors of the industrial era in favor of a post-industrial ecological understanding (i.e. dialectics, self-production or *autopoiesis*, dynamic systems, chaos theory, catastrophe theory, etc.). In connection with nanotechnology, for example, the new key words are “criticality, holism, interaction, self-organization, emergence and long-term effects” (CHISEL). Finally, it has been predicted that new technologies like nanotechnology (NT) have “the capacity to increase the gap between the rich and poor”. For example, society might develop into an oppressive two-tier *nano-pan-opticon*, just as we already have two-tier marketing and intensive IT-based surveillance. In response, ethical businesses and good governments should help the “*nano-have-nots*” and find beneficial applications of surveillance technologies (refer to Section 4.3 below); but this can only now be done through global coordination and trans-national entities. Accordingly, there is an increasing apparent moral imperative to globalize welfare, safety and justice in line with business globalization.

Most such discussions of the risks associated with new technologies also fit quite neatly within the stable framework. For example, scientists and engineers tend to emphasize the differences between “the commercial discourse” about new technologies (e.g. nanotechnology, genetics, etc.), which broadly involves the right side of the framework, as contrasted with any “human welfare” discourse, which emphasizes the left side. This “fit” is displayed more fully in Table 11 which places some of the specific concerns that have been expressed about nanotechnology (cf. Hunt & Mehta, 2007) in the context of the stable framework.

Table 11. The stable framework applied to the ethics of nanotechnology.

FRAMEWORK ELEMENTS		FUTURE ETHICS & NANO-TECHNOLOGY*
Bi-polar components	Politics	NT will foster a political will to weaken (re-optimize) intellectual property regimes, as the NT <i>anti</i> -commons will soon become too obviously “tragic” (cf. section 4.5).
	Values	It will become obvious that strong IPR regimes are unjust, inefficient and undemocratic (section 4.5).
	Mkt. Limits	NT will increase pressure for (i) a company to act when it co-creates bad conditions, or (ii) when there exists unjust conditions from which the company benefits, as well as (iii) a general duty of beneficence in business.
	Agency	Generally, corporation will continue to exaggerate the conceptual difficulties of corporate moral agency, because this tends to strengthen opposition to laws on corporate (collective) criminal liability in NT related cases.
	Language	The commercial discourse about NT differs from the same human welfare discourse. A future discourse should refer instead to “criticality, holism, interaction, self-organization, emergence and long-term-ism” (i.e. CHISEL).
	Capitals	Tensions and will persist between financial & ecological forms. Due to the chaotic nature of technological change, one cannot know whether current NT related activities will disable future generations.
Topical themes	Property	IPR will increasingly be challenged, particularly by the combining of living and non-living things involving NT (and wet-AI). The patenting of the <i>nano</i> -tube is socially harmful, comparable to patenting bricks.
	Poverty	NT is likely to increase the gap between the rich and poor. A <i>nano</i> -divide might emerge, controlled by a <i>nano</i> -pan-opticon (cf. section 4.4)
Spanning themes	Macro trends	NT will be increasingly influential. Cornucopians envision see social benefits and an evolving sense of responsibility. Doomsayers see a risk of ecological catastrophe: “dust and grey goo” caused by out of control nano-replicators
	Persuasion / prescriptions	Institutions will have to think more about “promoting sustainable development and enhancing human life on a global scale”. We need to adopt the generic ethical responses to technological risks as listed in Table 13.
	Culture	Values derived from Buddhism, Shinto-ism & Confucianism entail a different approach to nature. However, <i>nano</i> -toxins respect neither culture nor borders (refer to sections 3.1 and 5) so we need to emphasize the co-production of the classical human goods and the pursuit of universal humane ideals.

*the right column is mainly sourced from Hunt & Mehta (eds.) 2007.

4.2. Poverty

In the last forty years or so, the globalization of business processes has been upheld by right-leaning commentators as a way of alleviating poverty; that is, globalization helps the poor. If the level of poverty had decreased unambiguously, this approach might have been vindicated, but reports on this topic have been decidedly mixed. If poverty is to be reduced in the 21st century, businesses will probably have to play a more direct role, by adopting a dual mission (or dual vision) of deliberately reducing poverty while also creating wealth. Put differently, their actions will have to express “poles” on both sides of the framework, reflecting efficiency *and* justice (cf. Kuttner 1984). For example, the extractive industries (oil, etc.) would have to pro-actively ensure that their activities do not deprive locals of their livelihoods, as was common in the 20th century in developing countries (but now also in the Gulf of Mexico).

The most obvious facet or form of poverty is a lack of income or assets, but the notion of poverty as capability-deprivation (or lack of competence, confidence, disempowerment, etc.) also merits increased attention in the future (Table 12). It has also become common to speak of an “impoverished understanding” or culture, or spirit. Indeed, each distinctive aspect or “form” of poverty constitutes a condition that can be either ignored or changed by business activities in the future. Furthermore, this change can be either positive or negative (Figure 6). In line with the dialectic (refer to section 3.1 and Figure 2) just about every proposition concerning the effects of business activities on poverty-alleviation has confronted a credible opposing claim about a negative effect.

Table 12. Some stable non-income forms of poverty

FORM	DESCRIPTION
Capability	A 2001 World Bank report cited <i>opportunity, security & empowerment</i> as the main components of any poverty-reduction strategy. These involve enabling then developing human capabilities.
Understanding	“Poverty of understanding” refers to an absence of the political awareness, practical know-how and scientific knowledge that can empower people to devise and implement solutions (with others) that improve their lives (e.g. Sen, 1999).
Culture	A culture is impoverished when it is oriented toward survival and security. This is as relevant in the 21 st century as it was 2500 year ago when Confucius wrote “people will proceed to what is good only when in bad years they shall not be in danger of perishing” (Wu, 1967 p230).
Environment	Environmental poverty (pollution, desertification, loss of species, etc) involves a loss of security and the destruction of culture. Sen (1999) noted that “the demise of old species, even old trees, can be a source of great distress”. This is especially the case for the income-poor who have extra reason to value any remaining public goods, such as free clean air and water.
Spirit	The notion of “spiritual impoverishment” has many aspects, several of which involve the above forms of poverty, but especially their combination.

Table 13. Propositions and counters about business and poverty

PROPOSITIONS INVOLVING	THESIS	ANTI-THESIS
Income	Provide jobs Increase global consumption	Create sweatshops Decrease local affordability
Capability Understanding Culture Environment	Create and share knowledge Create new cultures Restore environment Design ecologies	Protect and conceal knowledge Destroy old cultures Damage environment Destroy ecologies
Governments	Pay tax Lobby to update laws Stabilize government.	Avoid tax, lobby for advantage, less tax. Support corruption or oppression
Ideology	Keep dream alive Demonstrate mastery Encourage expression Engage in philanthropy	Frustrate with unrealistic goals Create slaves, colonize the mind Create alienation Reduce tax and improve image

Examples of these “propositions” and “counters” are categorized in Table 13. They start with some direct effects of business activities on the level and distribution of income (e.g. global consumption vs. local affordability, etc.). The direct effects of business on the *non*-income forms of poverty are then considered. Several other moral effects of business activity, in turn, operate *via* governments. Indeed, in the 21st century, businesses in many parts of the world are likely to continue to influence governments in two main ways: (i) directly through lobbying, and (ii) indirectly through ideological communications or corporate media. This influence has a flow-on effect on all forms of poverty, either for better (e.g. if it encourages opportunity, security, empowerment, and some redistribution) or for worse (e.g. if it promotes narrow interests while detracting or distracting attention from the common good).

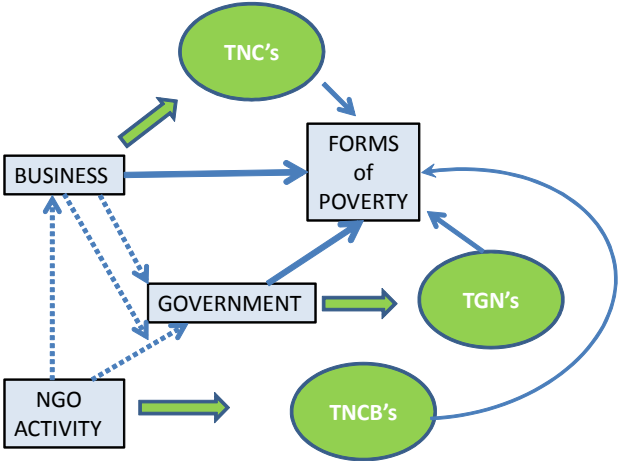


Figure 6. Internationalization of the partnership against poverty

In the future, it is possible that we might see benevolent influences deliberately exerted by some ethical business leaders upon uncaring or oppressive governments, around the world. As a first step, the managers themselves would have to become more fully cognizant of all of the above-mentioned oppositions or tensions, but it would also be necessary to routinely co-opt other institutions, particularly NGOs (as in the Merck case, section 3.1). Whilst many such organizations currently work diligently and directly on various facets of poverty, they can be more effective when joined by properly-motivated businesses and governments. This entire process of partnership becomes cast onto the global stage (i.e. “globalizing justice” mentioned in section 4.1) to the extent that the entities involved continue to pursue strategies of internationalization. Under this process (depicted by the heavy arrows in Figure 6) governments will increasingly participate in trans-governmental networks (TGNs), just as corporations will increasingly become trans-national (TNC’s). At the same time, NGOs expand their scope to become international (I-NGOs) or “trans-national communitarian bodies” (TNCBs) as Amitai Etzioni (2004) once described them. Many of these entities already share a vision a 21st century world community that is more inclusive, concerned with social justice and helps out those in poverty. On the other hand, a more pessimistic vision sees the continued rise of profit-driven “totalitarian” corporations that serve narrow interests and that result in islands of prosperity amidst an ocean of poverty.

4.3. Money

Just as poverty has many distinctive forms, so too does money. To the extent that money (or the lack of it) is indeed the root of all evil, ethical businesses would try to pressure governments and financial institutions to change the system[,] in some quite fundamental way. It is possible, therefore, that the locus of moral progress might shift somewhat in the 21st century away from the *meso*-level (i.e. efforts to change business culture and behavior through persuasion, regulation and partnership) and towards *macro*-ethics and the evolution or design of the entire monetary system. Indeed, we are just beginning to see how it might be possible, in the future, to apply “new” technologies (IT, NT, etc.) in ways that would completely transform the familiar concept of “money”.

To glimpse how this might be done, it is first necessary to consider the various distinctive forms of capital and the functions of “money”. In “*The Future of Money*”, Bernard Lietaer (2001) points out that the word “capital” was originally derived from the Latin *capitis* which means “of the head”: that is, head of cattle. Humans once measured value and status with cows, or with coins. In the late 20th century, the pluralist *multi*-capital conceptual framework and policy discourse re-deployed the word “capital” to refer to several distinct *forms*: not just financial or manufactured “capital” (i.e. traditional money or money-valued assets), but also to human, social, ecological, cultural, political and moral forms of “capital”, to mention a few. This discourse, with its associated discipline-based theory, has occasionally persuaded businesses (or students) to think about ways of developing all the forms, even to seek synergies (Figure 7). However, the multi-capital framework also carries some rather obvious implications about the concept of money: that is, if we have already progressed from cows to smart credit cards, why not further exploit the potential of technology to create a multi-dimensional form?

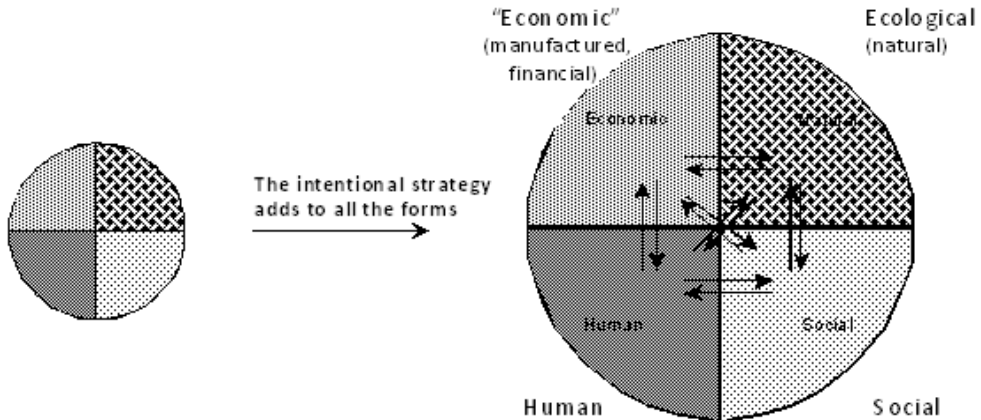


Figure 7. The multi-capital framework

With this idea in mind, Lietaer (2007) also listed several functions of traditional (scalar) “money”, including (i) a medium of exchange or payment, (ii) a standard of measure, (iii) a store of value, and (iv) a tool of empire-building (e.g. coins of the Roman empire, dollars, euros, yuan, etc). To these one might add the obvious role of money as an extrinsic motivator; that is, money can be used to quickly change human behavior. In addition, however, the last 30 years or so has witnessed two other common functions:

- vi. money has itself become an object of speculation (a recursive phenomenon), as an estimated 98% of Forex (currency) trading is speculative, and
- vii. money has increasingly become a co-enabler of access to virtual worlds, or a mechanism of authorization for almost all real/physical and virtual activities.

Put differently, money (or the electronic money-*nexus* as it is sometimes called) has become a system for instantly determining or co-determining all manner of personal (or corporate) entitlements and freedoms, often *via* complex computations. To give but one example, in order to physically enter any nation-state, an individual now needs electronic authorization from a bank as well as from a government department. Yet to move around in most virtual worlds, or to disembark on another planet, only a bank authorization is needed, at present. This “access and authorization” function of money in today’s internet-mediated society points to the possibility of an entirely different conception of money, hence also business ethics, in the future: one that is essentially technological and practical rather than philosophical or idealistic. To paraphrase Lietaer (p20):

“the future of money (and hence much of business ethics) ...lies... with the *further computerization* of our conventional currencies”

He then identified several *forms* of money that already exist (labeled actual or “A” in Table 14, column 5). These are national, multinational and community currencies, as well as global reference currency, internet currency and a “dual currency smart card”. To these one can add at least two more potential innovations (labeled potential or “P” in the table): the concepts of *siren dollars* and *vector money*, as follows:

Siren dollars: The name “siren dollars” refers to the Greek myth of *Ulysses and the Sirens*, in which Ulysses commanded his own crew to bind him to the mast of his ship, in order to deny him the “choice” of steering towards the sirens’ alluring song. That is, Ulysses rationally constrained his own future options: he anticipated and prevented his own personal weakness of will. This is also a rational and ethical form of consumer behavior that could be facilitated by a new kind of smart payment card. Individuals or businesses might “demand” or choose to obtain a “siren” payment card that reads stored data about all (scanned) purchases that are being considered, or in progress. The smart card access a database run by an ethical bank-like entity that duly “declines” any item known to be socially or environmentally damaging. The offending item(s) can be identified by the buyer who might then elect to pay with a (20th century) dumb card, if so desired. This kind of smart card uses traditional (scalar) money, but it authorizes only responsible transactions. In a sense it gives each individual a *greater* freedom of choice. Any citizen or corporation that considers themselves socially responsible, or “green” can choose to use these cards to rationally control themselves, quite like Ulysses.

Vector money: a more distant future (say 2050+) might see the implementation of a global vector money system. Here, all prices and earnings are in the form of vectors: a list of two or more separate numbers or dimensions (“Di” in Table 14) . This “vector price” represents two or more distinctive forms of capital (e.g. ecological, social, human, etc). The point is, just like today’s air-points and dollars, the “forms” can’t always be swapped, as one must have previously accrued enough of both forms (just as you can’t pay a few \$ to get those last few needed points).

Accordingly, when a person (or corporation) lacks, say, the ecological (green) capital needed to authorize a desired transaction, [they have to do] some kind of recorded restorative activity will be required, or else the completion of another transaction for a product or service that has a negative green price (because it, in turn, has been deemed by the system to be restorative). In this system, the database that authorizes “payment” (i.e. possession or access) is run and continually updated by a trans-national entity (a high-tech trans-governmental organization expressing the centuries-old idea of benevolent or good-governance). To obtain authorization or access, a buyer/applicant must have acquired enough of each form of capital to be able to afford the vector price. All amounts are electronically-recorded and personal (or corporate). All multi-capital-creation and destruction activities are detected through high-tech surveillance systems and mapped into personal entitlement-vector accounts.

For corporate “persons” this vector-money system would give real substance to the practice of triple-bottom line accounting: all “lines” in *any* account would indeed be triple, or more, so that social and environmental contributions would become a natural and unavoidable focus of concern for even the most cynical or recalcitrant CFO or CEO along with everyone else. In case all of this seems much too far-fetched, it might be worth noting (cf. Lietaer, 2007) that over twenty years ago the central bank in Finland issued a combined personal payment, social security and health management smart-card (i.e. separately records of financial, social and human capital) whilst in 1998, *Citibank* introduced biometric iris scanners in order to ensure that its authorizations are for the “right” person, so to speak.

Table 14. Current and future forms of money

FORM OF MONEY*	DESCRIPTION	COMMENTS	i	/ P
National currencies	The familiar 20 th century money	Now challenged by technology e.g. 98 % Forex transactions are speculative		
Multinational currencies	Large-regional currencies e.g. Euro, Asian-Yuan, Nafta-\$	Attempt to create a uniform economic and political space		P
Global reference currency	A scrip (paper) issued and accepted by many allied <i>corporations</i> worldwide for inter-corporate transactions.	Extension of the frequent- flier miles concept. A convergence of barter-trade and the cyber-economy.		P
Local (community) currency	Communities lacking traditional jobs create their own currencies to facilitate a local economy (i.e. exchange and work)	Possibly convertible to other forms of money		P
Internet currency	<i>Credits (points) earned on the net within virtual communities</i>	Possibly convertible to other currencies		P
Dual currency smart card	A payment card or device accesses data in a national currency <i>and</i> a local or corporate currency.	not necessarily convertible, e.g. pay \$ <i>and</i> "miles".		P
Siren dollars	Buyer obtains a smart payment card that reads scanned data about purchases in progress. It accesses a DB run by a bank-like entity and "declines" any item deemed socially or environmentally damaging. The item can be identified and buyer can still pay with a dumb card.	Citizens or corporations who consider themselves green freely choose to use these cards (i.e. to rationally control themselves, like Ulysses in the Sirens story.	+	
Vector money	All prices are vectors, representing 2+ forms of capital (ecological, social, human, etc). The database is run by a trans-national entity. Buyer must have earned, or acquired (through same-form-exchanges) enough of <i>each</i> form (like airports <i>and</i> \$. The vector of forms is e-recorded and personal, or corporate (making 'triple-bottom line accounting' real).	In a surveillance-oriented global society, all (multi-) capital-creation and destruction activities can potentially be detected and mapped onto personal entitlement vector 'accounts'.	+	

*First six rows mainly adapted from Lietaer (2007)

4.4 Finance

It will probably be well into the 21st century, perhaps even later, before anything like “vector money” gains much traction. Meanwhile, the re-emergent philosophies, particularly pragmatism can be used to derive several simple ethical guidelines for the application of traditional (scalar) funds (Table 15). Perhaps the most strongly supported guideline is simply to *pay attention* to details, when making business and investment decisions (refer to section 3.2). This straightforward prescription is neither original nor at all unique to pragmatism. However, it continues to be in tension with “modern” (i.e. 1930+) financial practice and theory, which encourages an exclusive focus on asset-prices. For example, many exchanged financial securities (e.g. collateralized debt obligations) have not been fully attended to and understood in recent times, even though their (scalar) price was.

Table 15. Pragmatic guidelines for financial-ethical decision making

ELEMENTS of 21 ST Century PRAGMATISM	CONTRASTING ELEMENTS of MODERN FINANCE THEORY	PROPERTIES & QUALITIES of PRAGMATISM	So future financial decisions will involve...	So the future financial decision-maker should...
Inquiry	equilibrium	truth as usefulness	attention to detail	<i>Pay attention, Fund concrete growth, Remain engaged</i>
Completeness	price, utility	relate all theories to a situation	deep knowledge of a situation	
Continuity	static discrete decisions	no termination	continuous adaptation	
Invention	analysis of given projects	invent ways to live	imagination, good design	
Iteration	preference relations	recursive relations	expectations of paradox	
Ecology	mechanism, detachment	organism within its environment	a sense of mutuality and co-production	

A second “interim” guideline is to invest traditional (scalar) money in multi-dimensional or *concrete growth*. In a major work on pragmatic philosophy applied to business ethics, Rosenthal and Buchholtz (2000) used this phrase “concrete growth” to refer to any process by which “humans achieve fuller, richer, more satisfying and more inclusive interactions with their *many* environments”. Traditionally, financial institutions have not been concerned with “concrete” growth in this sense: indeed there are many cases where for-profit transactions have quite obviously blocked it. A final pragmatic guideline is to *remain engaged*. This reflects the wider “inclusive interactive” quality of the pragmatic approach which William James himself contrasted with the “remoteness” of the “rationalistic temper”, which later became associated with Chicago School doctrines and “modern” finance theory.

Philosophical pragmatism also yields a way of thinking about change processes within the finance industry, such that the above guidelines might be taken more seriously. In the case

of investment appraisal models such as DCF/NPV, investment analysts can attempt to estimate cash-flows, in line with the exclusive focus on prices, but they should be encouraged (as practitioners or students) to think about this “attempt” as nothing more than an *aide-memoire* for directing attention to the entire web of relationships and “interactions” that are involved in any investment. All manner of macro-environmental issues are thereby swept into the investment appraisal process, which in turn promotes a richer conceptual model (Figure 8). Skilled analyst/inquirers might also investigate the underlying theoretical model (e.g. DCF/NPV), whereupon refinements of those models are also likely to be swept in. Once these reflective and recursive considerations become activated, the overall way of thinking associated with financial decisions will change, broadly in line with the guidelines and re-emergent philosophies.

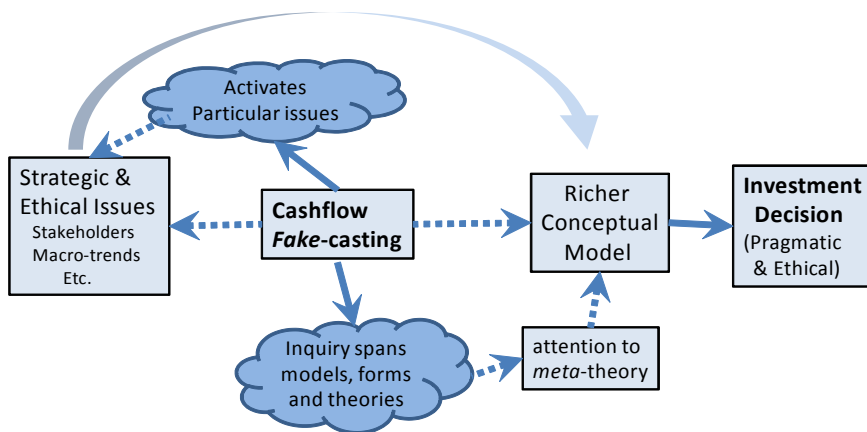


Figure 8. Traditional investment models can trigger pragmatic inquiry

4.5 Property

Notions of multi-dimensional capital, multi-environment growth and vector-determined authorization all point to a need to rethink the associated notion of property and property rights. One might start by recalling Munzer’s (1990) generalized definition of property as “*a relationship between people with respect to things*”. Those “things” and relationships are all changing in significant ways. For example, in older agrarian societies “ownership” of a head of cattle (*capitis*) simply meant that a person had specific rights, such as the right to use a degree of force to prevent others from milking it, or eating it. In the 21st century the “owned things” will increasingly include digital sequences, ecological processes and hybrid entities, so the focus will be upon so-called intellectual property. There have already been many objections to the ideological language of property. One obvious concern is that the biblical word “steal” implies deprivation of the victim (e.g. loss of a cow, or a car), whereas copying digital sequences or symbols does not, in general, seriously deprive anyone. Accordingly, Charles Handy (1994) has referred to the language of property as “an insult to democracy”,

just as David Vaver (2000), a legal scholar, concluded that “property language helps tip the balance against other rights, such as freedom of expression.”

There are indeed many ethical issues at stake with intellectual property (e.g. human relationships, democracy, freedom of expression, rights to parody, distributive justice and slavery, to mention a few), not to mention military interests (cf. Toffler & Toffler, 1990). Despite its importance, however, it is not clear how IPR regimes and the associated politics will play out in the 21st century. Within developing nations there has been political pressure for weaker regimes (e.g. Shiva & Holla-Bhar, 1996). More generally, there are signs of a growing acceptance of the idea that weaker regimes (e.g. shorter patents, copy-left, etc) can be both efficient (by limiting monopolies) *and* just, by distributing opportunities and empowerment more widely. Overall, the balance does seem likely to swing back towards democracy and the rights of individuals as citizens, if only because, at some point in the future, IPR laws will probably become obviously intrusive upon citizens’ basic freedoms and opportunities, or interfere with catastrophe-prevention in a *rich* part of the world. In Hunt & Mehta (2007), for example, it was noted that the many patents on the nano-tube are likely to become as socially damaging as patents on a brick would have been in ancient civilisations.

This likelihood of weaker IPR regimes in the future can also be related to *meso*-level business ethics, *via* a set of strategic business scenarios. The 2 x 2 matrix (Figure 9) is generated by having (a) co-produced rival goods (like cakes or hardware) and (b) non-rival goods (like software) priced to users at zero, or else greater-than-zero (Figure 8). The four resulting scenarios are (i) *status quo*, (ii) *looking glass*, (iii) *common sense*, and (iv) *utopia*. The first two envision strong IPR regimes, whilst the last two involve the predicted weaker regimes. Each scenario then corresponds with particular business-level strategies for (traditional, scalar) profit, as follows:

Status-quo: strong IPR regimes motivate a varied mixture of for-profit business strategies. For example, a small business that co-produces digital music or a software program, might adopt a promotional strategy (for profit) that focuses only on geographic segments that are within strong-IPR jurisdictions.

Common sense: Here, non-rival goods (e.g. a digital download) are free, but rival goods (e.g. hardware) are priced. A business entity that produces a digital sequence has to create new business models to secure a profit. For example, contractual arrangements can be made involving priced physical complements (auxiliary products). Profits would then depend upon the time-based and competency based advantages of the producer.

Looking –glass: In this scenario, hardware is given away free, with profits flowing only from the software. This seems to oppose common sense, but is in line with a prediction made over 30 years ago (at Apple). The scenario remains feasible, especially if strong regimes do remain in place. Many producers have successfully followed a variant of “looking-glass” with loss-leader hardware and expensive software.

Utopia: In Utopia, all goods are free. Robots (aided and supplemented perhaps by nanotechnology) produce and distribute every type of product, service and sequence. Very different economic and social “relationships” can then develop.

The predicted weakening of IPR regimes suggests that common sense might indeed prevail, so to speak, with digital sequences being free, or authorized by benevolent considerations, but with the possibility remaining of moral progress towards a kind of *utopia* in which an ethic of care prevails amidst an abundance of the human goods.

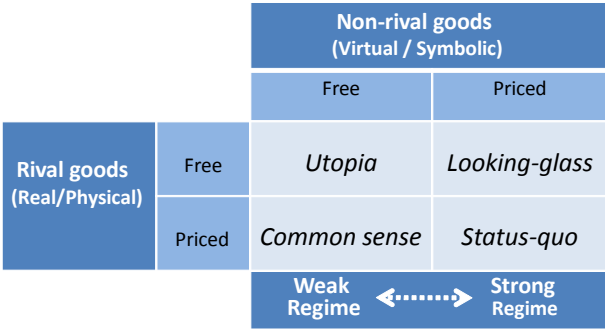


Figure 9. Future scenarios for IPR regimes

4.6. Ecology

The ideas that general moral progress is indeed possible and that catastrophe often triggers change gain some support from what has happened in the oil industry over the last thirty years. In the 1980s, industry thinking and practice was challenged by the exposure of pollution, corruption and the destruction of local village life in places like the Nigerian Rivers Delta region; but it was the events in Prince William Sound and the Gulf of Mexico (i.e. in rich countries) that created heavy pressure for change in the area of environmental safety, globally. The need for anticipatory precaution and an ethic of care is becoming ever more obvious. Indeed, there are already very many fine contributions and guides to this highly “topical” theme (e.g. Capra, 1970; Hawken, 1993 & 2007; McKibben, 2007; Lynas, 2007, to mention a few). All of these works are persuasive and they all agree on the need for fundamental change: that is, a paradigm shift involving alternative energy, re-localization, restorative designs, industrial ecologies and an increased general awareness of the concepts like CHISEL (mentioned in section 4.1).

Many of the contributions to the green business ethics literature *also* emphasize the need for greater efforts to alleviate poverty and to uphold social justice. Paul Hawken’s *one-bus theory*, for example, holds that millions of community-based organizations around the world are, in effect, all riding “the one bus” on their journey towards environmental health *and* poverty alleviation. This “bus” for the most part, is being driven around the left side of the “stable framework” (refer to section 2). Travelling around the right side, however, are the kinds of characters depicted in Tom Clancy’s fictional novel *Rainbow Six*: those un-virtuous or un-ethical entities would even contemplate eliminating most of humanity in order to make room for their own private enjoyment of “nature”. More broadly, there are left-leaning red-greens and right-leaning blue-greens, just as environmental poverty has been created in the past by bad private business practices (e.g. in the Gulf of Mexico) and by bad governments (e.g. the Aral Sea).

In view of the complexity scope and familiarity of the overall “green business” theme, just one often-neglected aspect is considered here in more detail: that is, the underlying web of linkages between ecology and *dialectics* (refer to section 3.1). To a very great extent,

ecological understandings (including the CHISEL concepts) go hand in hand with dialectics, so these ways of thinking will either re-emerge or else fade away, together, in the 21st Century. In fact, ever since it was first articulated by Plato, the dialectic has been intuitively associated with progress in the sciences of life and mind; although in the early 20th century it became more widely associated with the politics of poverty (i.e. the class struggle).

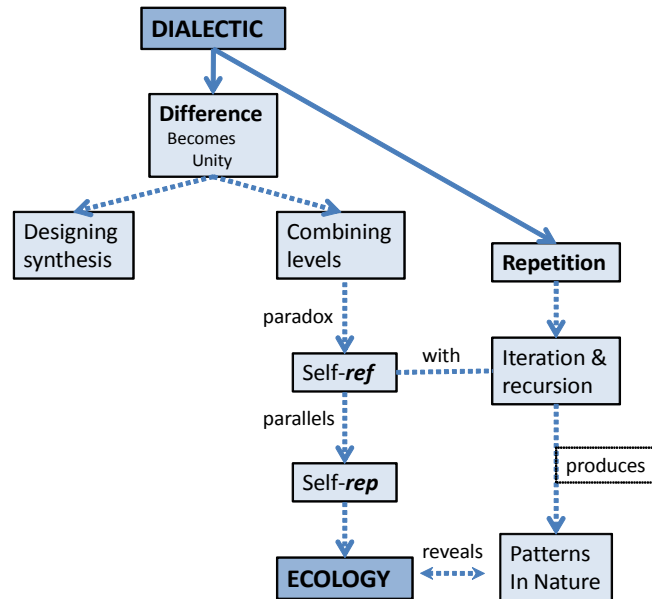


Figure 10. Dialectics and ecology

The web of associations involving dialectics and ecology (Figure 10) seems likely to grow in the future and become more widely appreciated. The late 20th century has already seen the development of ideas like dialectical biology (i.e. life) and dialectical psychology (mind). At the same time, in business, a concrete link was forged between dialectics and ecology with the well-known idea of “win-win” green business strategies involving the design of profitable but restorative products. These products, over their life cycle “give something back to” the natural environment, as depicted in the multi-capital model and as described and advocated in almost all the green-business literature.

There is, however, a third and more technical or abstract way of linking the dialectic with ecology (i.e. after ancient intuitions and contemporary win-win design). To see this, one must re-cast the dialectic in terms of the idea of *difference* (as in dialectical psychology). Thesis and anti-thesis (T-A) then become cast simply as perceived differences, that is, the elementary building block of all perception and cognition. Examples of these kinds of primitive “differences” also include (a) the binary 0 - 1, (b) the C – D moves in a Prisoners’ Dilemma Game, and (c) the “many – one” distinction in ancient Confucian philosophies, (d) the “well-behaved” vs. unbounded distinction in mathematical chaos theory, but especially (e) any “differences” in levels of meaning and representation. Synthesis (S) then becomes any

type of resolution of any of these differences, especially by means of operations that involve *self-reference* or self-replication.

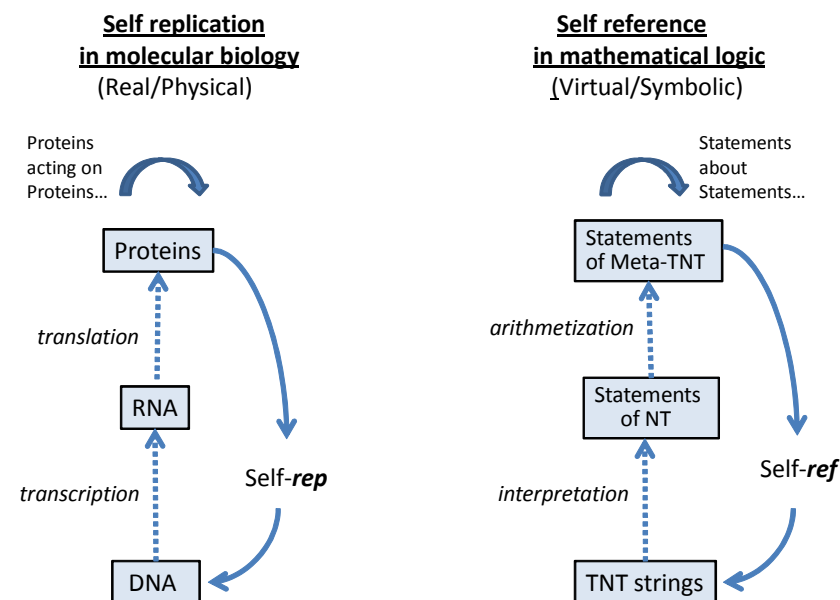


Figure 11. Self-reference parallels self-replication

As with the dialectic (and the above mentioned weakness-of-will), the elemental idea of self-reference originates in classical Greek thought (cf. Hofstadter, 1979). A significant step towards linking dialectics (in the mind) to ecology (in the physical world) occurred much later, however, in the 20th century, when Russell's mathematical paradox was re-stated in natural-language, as follows:

“In a certain village, there is a barber who only shaves the men who do not shave themselves. Who shaves the barber?”

In this statement, the “thesis” is that the barber shaves himself quickly generates the anti-thesis that he does not. The significance of the scene lies in the description that a real/physical entity (i.e. the barber) is “replicating” a slight variant of itself (i.e. the shaved version). Given the increasingly “virtual” nature of “real” life (refer to section 5, below) one might then inquire into the relationship between this kind of “self-production” and the kind of abstract self-reference or recursiveness that one encounters in mathematics (e.g. set theory, chaos theory, etc). Hofstadter (1979) explored this very question. He identified “some of the mechanisms that create self-*reference*” in various abstract (virtual / symbolic) contexts and he compared them, point by point, with real mechanisms in nature that self-*replicate*. He identified “many remarkable and beautiful parallels” as depicted in Figure 11 (adapted from Hofstadter 1979, p533). The figure can be appreciated without delving into the meaning of

the scientific terms (e.g. transcription¹¹, etc.). It thus appears that the physical and mental worlds are indeed “similar” with respect to their self-referential operations. Finally, (referring back to Figure 10, above) a fourth strand of the web that links dialectics with ecology involves the concept of *repetition* (i.e. repeated or iterated self-reference). The repeated or iterated operations in mathematical chaos theory, for example, produce fractal patterns that are almost identical to patterns found in nature (e.g. ferns). Thus, we have already substantially re-affirmed the historical ideas that:

- (i) dialectics and ecology are “riding the one bus”, so to speak, and
- (ii) dialectics in the mind (the virtual or symbolic) are an integral part of dialectics in the nature (the real or physical world).

This re-integration of ecology and dialectics, along with, the changing philosophies and the topical themes (refer back to Figure 2) together now point to some very broad macro-trends that seem rather likely to shape business prospects and to influence ethical behavior, throughout much of the 21st century.

5. MACRO-TRENDS

Despite a generally poor track record for forecasting macro-trends (typically separate forecasts of social, economic, ecological, political and technological, or ‘SEEPT’ trends), it does seem possible to identify some of the very broad and abstract trends that can be expected to shape business ethics in the 21st century. These include (i) the re-emergence or rise to greater prominence of several distinctive philosophies (as discussed in section 2); (iii) the blurring and fading of boundaries between many familiar conceptual categories, including the real and the virtual (e.g. 4.6 above), (iii) an increasing trend toward interdisciplinary approaches to business ethics (or “trans-disciplinarity”), and (iv) some gradual form of moral progress or the evolution of moral conscience, in business as elsewhere (Table 16).

With regard to the re-emergence of philosophies, the traditional forms of moral reasoning (e.g. utilitarianism, deontology, etc.), including the neo-classical economic paradigm, will probably become joined and somewhat overshadowed by dialectics, pragmatism, pluralism, particularism and monism (refer back to Figure 1) all of which embody an ecological understanding. Even if these philosophies are not considered in business in any abstract way, business practices in the future will surely have to embody some of their core elements or themes, in order to be recognized by the public as “ethical”. In line with this, it is also likely that the traditional boundary between normative and empirical types of knowledge within

¹¹ At the base of Figure 10 is a string of symbols within formal typographical number theory (T.N.T.) which corresponds to a single D.N.A molecule. The interpretation of the string (i.e. its conversion to a meaningful form) corresponds with the biological transcription of D.N.A to R.N.A (i.e. its conversion to active form) and so on. In this way, the “mechanism” of self-reference is seen to be the same (up to isomorphism) as the self-replication of a real/physical living system. These technical details do not matter at all for present purposes. The only point is that self-*reference* (a way of unifying differences, as in dialectics) is seen to be essentially the same (up to isomorphism) as self-*replication* in nature.

business ethics will become increasingly blurred. In dialectics, pragmatism and pluralism, the normative and empirical aspects of any inquiry are held to be an interwoven fabric of ideas or an elaborate relational whole (e.g. Rosenthal & Buchholtz, 2000). This trend towards re-unification is depicted in Figure 12 by the two-way arrow (diamond shaped) line-ends on the “normative-empirical” and “Business-Ethics” axes. The figure also depicts these two axes as non-orthogonal, because ethics is *prima-facie* normative whereas traditional business research is substantially empirical.

Table 16. Four macro-trends

MACRO-TREND	ELEMENTS
Re-emergence	dialectics pragmatism, particularism, monism
Boundary-fading	normative & empirical; real & virtual; multi-levels
Trans-disciplinarity	knowledge-economy, inter-relationships
Moral Progress	development of artificial morality and ‘moral-man’

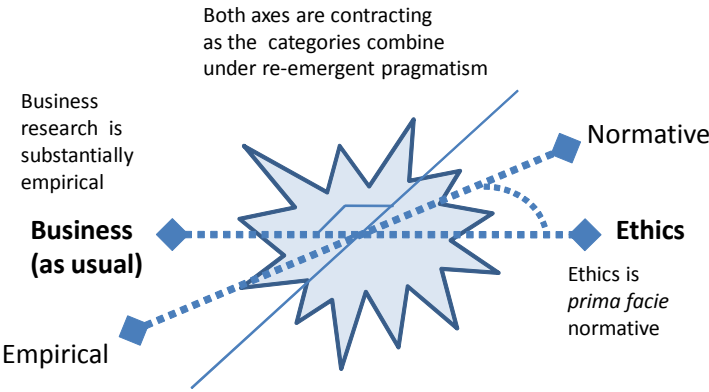


Figure 12. The blurring of the normative-empirical boundary in business ethics

In line with this re-unification, 21st century theories of business and ethics are also bound to be *trans-disciplinary* (Table 16, row 3). In general, future theories will place much more emphasis on inter-relationships and will no longer give separate consideration to the social, economic, ecological and technological categories, as these will increasingly appear co-extensive. Indeed, the popular phrase “knowledge-economy” itself challenges any notions of ethics or business being informed by any separated source disciplines (like sociology, psychology, economics, etc.). At the same time, within the remnants of each “source discipline” there has been an appropriate tendency to revisit and re-examine its own philosophical roots (Figure 13). Typically, the result of such introspection is that the re-emerging philosophies (e.g. pragmatism) are identified as the promising “sources” for future developments, within each particular discipline. Meanwhile, these philosophies are, in turn, being informed to some extent by developments in the cognitive sciences (refer to section 3.4).

Many other categories relevant to ethics and business are re-configuring, as “traditional” boundaries become increasingly blurred (Figure 14). At the level of the individual person, for example (i.e. *micro*-ethics) the so-called “boundary of the skin” has already been thoroughly infiltrated by intelligent technology such as bionic devices (*neuro*-prosthetics) and “wet-AI” whereby living cells are grafted onto silicon chips. At the level of the business organization (*meso*-ethics), boundaries have also become increasingly blurred as out-sourcing at the periphery becomes co-ordinated by artificial intelligence at the center (with autonomous intelligent-moral agents first guiding and then potentially running or even owning the “business”). Finally, as already mentioned in connection with “SEEPT” trends, boundaries within the macro-environment are also fading and re-configuring as logistics, financing and governance become ever more complex and transnational (refer also to Figure 6).

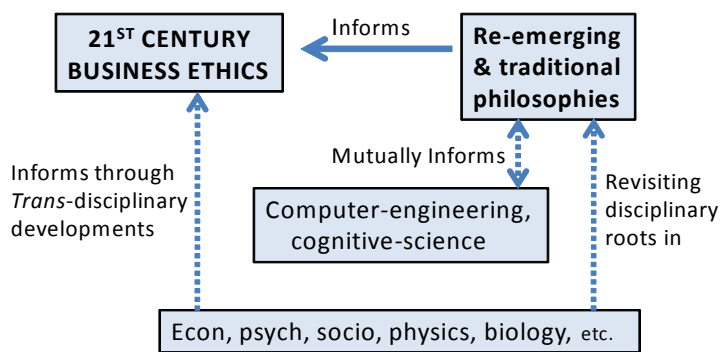


Figure 13. Trans-disciplinary developments inform business ethics

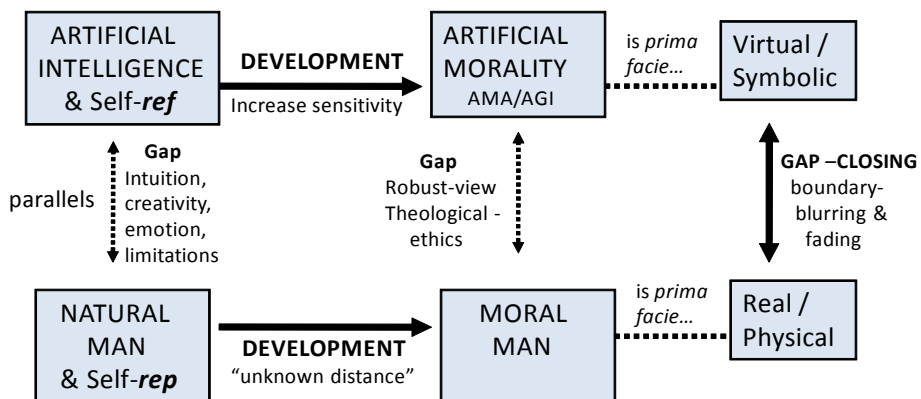


Figure 14. The development of conscience and the fading of boundaries

Finally, one must consider the traditional notion of the moral progress of “humanity” as a whole: that is, the gradual development of conscience. This notion has become complicated by technological changes involving artificial intelligence and artificial morality (Figure 14). A traditional notion of general moral progress has seen humans (i.e. Margaret Boden’s

“natural-man”) developing very gradually towards “moral-man”, thereby reducing what Herbert Marcuse once described as an “unknown distance” (i.e. between rationality and ethics). Meanwhile, at the virtual/symbolic level, rationality and artificial intelligence “develop” into a rational-morality or a “general intelligence”, as “sensitivity” increases (cf. Wallach & Allen, 2009). At the “rational” stage, however, there is a gap separating AI from natural man, due in part to human creativity, intuitions and emotions and cognitive limitations. At the moral man / general-intelligence stage of development, a similar “gap” remains due in part to the “robust” view of ethics which sees morality as uniquely human quality, but also due to an enduring theological view of ethics which tends to resist the idea of authentically moral machines. Yet, just as there is also a blurring of the boundary between the virtual and the real (e.g. re-emergent monism), both of these “gaps” (i.e. the horizontal and vertical aspects of Figure 14) seem to be closing, slowly.

CONCLUSION

At the start of this discussion, some broad areas of stability and permanence in business ethics were identified. Various conceptual categories were organized into a stable framework incorporating a set of bi-polar components, spanning themes and topical themes. It was then claimed that every category and theme and in that framework (e.g. efficiency, character, technology, etc.) seems likely to endure, although their internal details and inter-relationships can be expected to remain highly dynamic. Several imminent changes in philosophy were also discussed, with some distinctive moral philosophies probably rising to greater prominence in the 21st century, bringing with them an increased acceptance of the very idea of “business ethics”. Some selected relationships amongst the framework elements, philosophies and the topical themes were then considered, particularly the themes of technology, money, property, poverty and ecology. In each case, there was a underlying tacit assumption was that some type of moral progress is indeed possible, by deploying technology to overcome the known limitations of market based systems and to help bring about a shift in the dominant paradigm.

The question remains, therefore, as to whether or not humanity as a whole is really capable of making moral progress. Unfortunately, in line with the stable framework and re-emergent dialectics, there is, as yet, no resolution of this most fundamental question about human nature. For example, in the last few decades, according to Howard Cutler (a Psychiatrist), “the Dalai Lama’s view of the underlying compassionate nature of human beings seems to be slowly gaining ground... although it has been a struggle” (Howard Cutler with the *Dalai Lama*, 1998, p56). Early on in those same decades, (i.e. about thirty years ago) Harvard University’s first professor of business ethics, Kenneth Goodpaster, claimed that there was already “an evolution of moral consciousness in the executive suite”, in the USA. More recently, but in connection with the risks of specific new technologies, similar claims have been made that “a new sense of responsibility is evolving” (in connection with NT) or that we might witness in the future an *invisible hand of system interactions* whereby many artificial moral agents operating together leads to the overall good, even if those agents “individually” lack “ethical” values such as helping others (cf. Wallach & Allen, 2009).

Unfortunately, there is no way of knowing if the various claims and forecasts are reliable. They serve not so much to persuade us of likely futures, but to remind us of the continuing existence of optimists. Yet, there also seems to be as many pessimists who see a deterioration. To them, episodes such as Enron, AIG, Exxon-Valdez, BP etc. all seem to represent a kind of anti-thesis, just as poverty, climate change and energy supplies all seem to represent insurmountable challenges, or threats of apocalyptic destruction. Human morality *per se* will retain an element of a mystery. The robust (human-centered) and theological views of ethics seem likely to persist, alongside the traditional and re-emergent secular philosophies. Despite these “mysteries” there undoubtedly will be many efforts in the future, by a wide variety of entities and partnerships, to co-produce, distribute and authorize access to the classical human goods (i.e. wealth, justice, friendship, health and happiness) in innovative ways. These efforts will almost certainly be pragmatic (in the “what works” sense), but also technologically-enabled and multi-leveled: trans-national, as well as local. Whether they result in moral progress for humanity as a whole depends primarily on the strength of the opposition that they encounter, in the mind and on the ground.

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APPENDIX 1

THE STABLE FRAMEWORK, MORAL PARTICULARISM AND CORPORATE COMMUNICATIONS

Donaldson & Werhane (2008) reported a case in which a closely-held international company found out that some of its supplier entities were operating low-wage sweatshops in poor countries. A sub-committee was convened to discuss various options for increasing pay and improving local conditions. It was chaired by the daughter of the wealthy founder. In cases like this, one can use the elements of the stable framework (Table 1 and Figure 3) to help craft “feature”-based moral reasons for *either* (i) a shareholder-oriented course of action (i.e. business as usual) *or* (ii) a stakeholder-oriented (left leaning) strategy, involving improved working conditions and pay. The table below sets out some examples of corporate communications involving these kinds of particularist moral argumentation.

ORIENTATION or LEANING	ELEMENTS of FRAMEWORK	EXAMPLE of CORPORATE COMMUNICATION			
Shareholder-orientation (Right-leaning)	Right Component- Poles	The low cost of production is <i>efficient</i> and hence leads to more desired exchanges, overall. The lines of job applicants for each supplier factory are made up of many free <i>individuals</i> who are simply revealing their <i>preferences</i> for the job opportunities that have been created there. Any other <i>values</i> they may have are evidently outweighed by their need for money (or economic <i>utility</i>). The enterprise creates financial <i>capital</i> . The <i>trend</i> towards globalisation reflects the nature of technological progress and we ought to go with the flow. Most importantly ethics will come <i>later</i> , after competitive forces have led to more sweatshops, as these will eventually have to compete for labour, curing the “ills” of ISS’s and lifting the economy.			
	Spanning-Themes (Right-span)	A strong <i>character</i> would publicly declare that the working conditions are a necessary phase of development in the interests of all.	The <i>motive</i> of the working group is to protect reputation, preserve privilege and soothe consciences.	The <i>trend</i> towards labour standards and ownership plans results in <i>inefficiency</i> and abuse.	The company has a duty to <i>persuade</i> others that the best cure for the ills of sweatshops is more of the same.
Stakeholder-orientation (Left-leaning)	Left Component Poles	It is <i>unjust</i> to pay very low wages in harsh working conditions, in order to enrich owners who are often already wealthy. Many job applicants are not making free choices, instead they have been coerced into seeking this type of work because global market forces have disrupted their traditional means of survival (a basic <i>value</i>) and way of life. There is much local <i>value-destruction</i> in the service of the global economy. Accordingly, companies operating in developing regions have a corporate or <i>collective duty</i> to aid/assist local people directly (e.g. by sharing profits) and to generally <i>compensate</i> them for the value destruction..			
	Spanning-Themes (Left span)	If the controlling family members permit the poor working conditions in the subcontracted entities, this is likely to have a corrosive effect on their <i>characters</i> .	The <i>intention</i> of the working group is altruistic and praise -worthy, because pay increases will quickly improve the lives of the workers involved.	There is a worldwide <i>trend</i> towards higher labour standards and employee-ownership plans. The company should go along with this.	The company should set a <i>persuasive</i> example of ‘business partner engagement’ like the well-publicized Levi-Strauss case in the 1990’s.

Chapter 3

REVIEW OF INDIAN UMPP POLICY AND SUPPORTING FRAMEWORK: LESSONS FOR DEVELOPING COUNTRIES

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ABSTRACT

Faced with a daunting task of bridging the peak deficit of 12% in power generation, GoI (Government of India) recognized the fact that economies of scale in power plants can help it achieve cheaper power generation and faster capacity addition through development of large size power projects using latest supercritical thermal technologies and that it needs to come out with policies and guidelines supporting development of economies of scale. Hence GoI formulated the UMPP (Ultra Mega Power Plants) Policy 2006 through various rounds of discussions with financing agencies, nodal agencies, regulators and developers. In the initial part, this paper presents an analysis of the UMPP Policy and the supporting competitive bidding framework, including analysis of responsibility of different stakeholders, different stages in the bidding process and appropriation of risks associated with the project amongst stakeholders. In the latter half

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of the paper, authors focus on the key challenges faced during the competitive bidding process. The paper highlights the key learnings from them for policy makers around the world, especially the developing countries which are looking at adopting the competitive bidding framework for infrastructure development.

Keywords: Ultra Mega Power Plants; Competitive Bidding Guidelines; Risk evaluation

I. INTRODUCTION

Indian GDP growth is facing a significant obstacle in the form of power shortages in the country. India has seen an average power deficit of over 7% (refer Figure 1) for the past seven years while a peak deficit of over 12% was seen for the previous two years¹. In order to meet the ever growing requirement, GoI comes out with a Five Year Plan to bridge the demand supply gap. However, India has performed poorly against the set targets as highlighted in Figure 2.

Some of the major reasons for poor performance against the five year plan targets, especially during the 10th Five Year plan where the capacity addition fell short by nearly 50%, are presented in Figure 3.

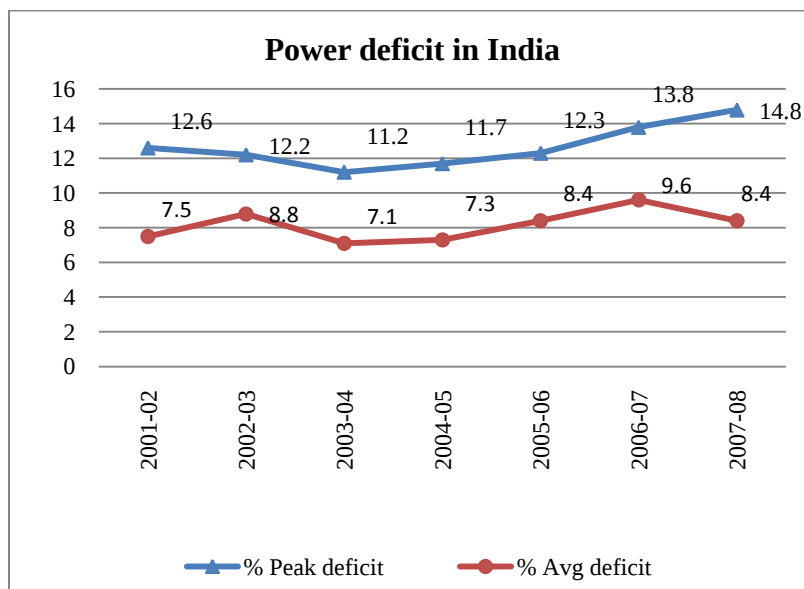
Despite the obstacles highlighted above, GoI has set an ambitious plan to add over 78,577 MW of capacity during the 11th Five Year plan (2007-2012) in order to meet the increasing power requirements². In lieu of the poor performance in the 10th Five Year plan, GoI recognized the fact it needs to support mega projects, each of which will add a significant capacity in the system, and that economies of scale in power plants can help it achieve cheaper power generation and faster capacity addition through development of large size power projects using latest super critical technologies. As a result, GoI formulated the UMPP Policy 2006 [5,6] and the idea of establishing Ultra Mega Power Plant (UMPP) projects came to the forefront. Through various rounds of discussions with financing agencies, nodal agencies, regulators and developers, GoI formulated the framework which would support the development of UMPPs. Another reason for undertaking large capacity addition through UMPPs was that there was hardly an effort at the state level to add generation capacity, primarily because the state utilities in the power sector were incurring huge losses and the State Governments were facing budget constraints which called for large capacity projects to be undertaken at the national level. A note on benefit of UMPPs is attached in the appendix.

A total of nine UMPP projects (refer Figure 4 attached in appendix) were shortlisted by the government under the UMPP Policy 2006, in different states, and Power Finance Corporation (PFC) was appointed as the nodal agency to carry out the competitive bidding process. An equal split between coastal and pit-head power plants was assured by GoI in order to reduce the fuel availability risk. Diversification was ensured across states to stimulate

¹ Conditions worsened in the summers of 2009 due to lower rainfall leading to low generation from the hydel capacity leading to a peak deficit of more than 16%. Prices of short term power reached a peak of \$ 0.26 from an average of \$ 0.1 (1 USD = INR 50).

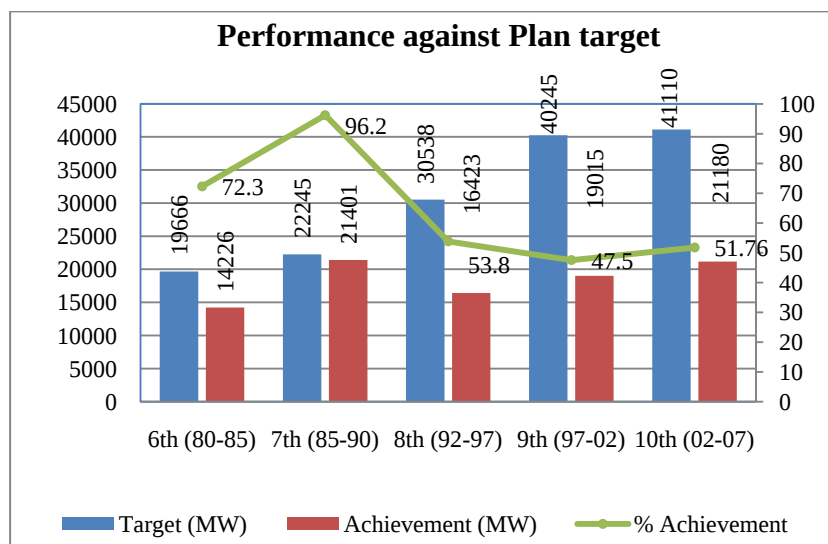
² Despite the huge capacity addition, India would face significant power shortages primarily due to increasing per capita consumption in urban areas and increased rural consumption envisaged due to its GoI's objective of "Power for all by 2012" i.e. increased rural electrification.

ancillary development in different states in order to help alleviate the state level infrastructure and manpower related constraints for the states to add new capacity on their own (as highlighted in type 2 issues). Besides this, diversification across states reduces the political risk to the UMPP programme as a whole. To encourage more participation from the private sector, government assumed a key role in the early project development phase by addressing the risks highlighted in Table 1. Other measures taken to address key risks are discussed in Table 2.



Source: CEA.

Figure 1. Energy deficit in India over the years.



Source: MoP.

Figure 2. Performance against targets for planned capacity additions during different Five Year Plan.

Table 1. Risk associated with power project development in India

Risk type	Risk profile	Risk borne by	
		Earlier	UMPP frame-work
Pre-construction / Project Assessment Risk:	- Each generation project would require several statutory clearances from various agencies both at State and Central level. Clearances might be required for crossing structures like forest, railways, airport authority and defence area clearance etc. - Most of these clearances are required from competent authorities in the State or Central Government Ministries and as per past trends available in different States. The delay in the approvals could increase the execution time of the project and hence adversely impact the commercial viability of the project	Project developer	Nodal agency (Government Agency)
Project Development Risk	Operational risks related to construction, commissioning and operations of the project come under this head. These risks can include cost escalation, delay in project commissioning, operational and maintenance risks etc.	Project developer	Project developer
Regulatory / Tariff-related Risk	- Project not awarded through the competitive bidding process would require that the actual cost data is to be submitted to the regulator. The tariff would then be fixed based on the costs as approved by the regulator. Hence there is a risk that the regulator might prune down certain costs or might not approve them altogether - However, in case of projects awarded through competitive bidding process, the tariffs as determined based on the bidding process are adopted by the regulatory commission and are not subject to any regulatory risk	Project developer	Risk mitigated
Payment / Off-taker's Risk	- Most of the power off-takers (Discom(s)) in India suffer from poor credit and most of them even have negative cash-flows. Hence the risk of default in payment i.e. off-taker's risk is high in India - Risk of payment default cannot be completely mitigated, however it is significantly reduced in the UMPP framework by allowing the project developer to sell the project to third party in case of default as well as the strong and having provision for "letter of credit" or Escrow accounts	Project developer	Project developer

Source: Ministry of Power (Competitive Bidding Guidelines)..

Type 1 issues	Type 2 issues
• Delays in forest clearances, land acquisitions etc. • Delays in acquiring coal, water, road linkages etc. • Non-availability of fuel and key materials • Slow process of decision making and cumbersome payment procedure adopted by public utilities • Delay in award of works (mainly in state sector)	• Limited manufacturing capability of main plant and balance of equipment • Inadequate construction and erection agencies • Inadequate transportation facilities for equipment and fuel • Manpower development including training facilities commensurate with large capacity addition • Delay in achieving financial closure, non-availability of escrow and other funding issues

Figure 3. Issues/reasons for poor performance in capacity addition during the 10th Five Year Plan.**Table 2. Measures taken to address key risks in undertaking power projects**

Risk	Ways to hedge the risk
Delay in project implementation	• PFC coordinating with different agencies to fast track initiation of project • SPV created to ensure initial requirements of sanctions and security clearances
Poor financial health of Discom(s)	• Adequate payment security mechanism (involving escrow account, revolving letter of credit) provided • Option of selling power to third party given to bidders in case the Discom defaults on payment
Regulatory risk – opening of Power Purchase Agreement (PPA)	• Competitive bidding guidelines issued by MoP ask the regulatory commission to approve the tariff which is an outcome of tariff based bidding process. This along with provisions in electricity act 2003 reduce the risk of opening of PPA
Non-availability of fuel	• Fuel type and sources to be identified by the SPV, limiting the risk of non-availability of fuel • Mining rights given to the winning bidder to avoid delays or any increase in cost of developing a mine
Limiting boiler manufacturing capability	• Private sector allowed to source boilers from foreign companies. This is expected to reduce the risk of delay in capacity additions due to shortage of manufacturing facilities (primarily with BHEL) in India

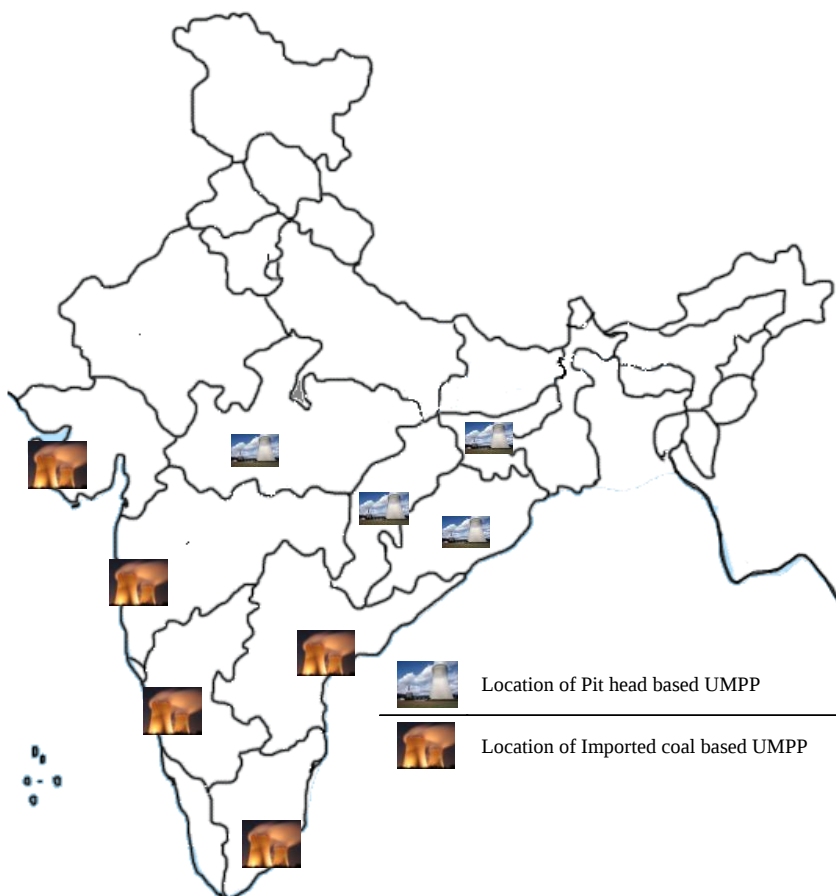
Source: Ministry of Power, Power Finance Corporation.

II. OPERATIONAL FRAMEWORK AS PER UMPP POLICY 2006

This section would highlight the operational framework as laid down in the UMPP Policy 2006 to carry out the entire UMPP bidding process. The idea is to describe the different agencies involved in the bidding process and highlight their roles and responsibilities as envisaged in the UMPP Policy. Also the reasons behind following such an operational framework have also been discussed.

As per the policy guidelines, In order to put the bidding process into motion the Central Electricity Authority (CEA) would identify sites and then hold consultations with the concerned State Government(s) regarding land availability and access to water. Next PFC, a public sector utility under MoP, will set up Special Purpose Vehicles (SPVs) for each UMPP separately. These SPVs are independent companies whose sole purpose is to operate the respective project and act as project development companies. They comprise of members from PFC and Discom(s) of States that would buy power from the UMPP and are formed as 100% subsidiaries of PFC.

During the pre-project development phase, the SPVs coordinate with various ministries and agencies of the Central Government and State Government on many aspects such as ensuring coal block allotment/ coal linkage, environment/forest clearances, water linkage, rehabilitation and resettlement (R&R) of project affected people, signing of power purchase agreements, making substantial progress on land acquisition progress, short listing potential buyers of power and ensuring suitable payment security mechanism. On an average this process involves interaction or coordination with about 30 departments/organizations of the Central and the State Government (source: MoP).



Source: Ministry of Power.

Figure 4. Geographical presence of the UMPP in India.

Table 3. Role of Different stakeholders involved

Stakeholder	Role
Power Finance Company	• Nodal agency responsible for facilitating the entire process from project initiation to project completion • Entrusted with the task to float the SPV for undertaking UMPP projects • Undertake preparatory activities like initial and detailed surveys (PFC appoints technical consultants for undertaking this task), fuel tie-ups, expediting clearances etc. and bring the project to a stage of readiness for handing over to developers • Invite EOI for exploring prospective bidders and subsequently inviting tariff bids for the project
Power Grid Corporation of India (PGCIL)	• Transmission system for the UMPPs to be undertaken by PGCIL acting in capacity as Central Transmission Utility (CTU)
State Government	• First and foremost task is to identify a suitable site for the construction of the UMPP inside the state in consultation with CEA • To provide required assistance in ensuring water availability to the project, land availability at reasonable price, environment clearance, relocation of affected families in the respective state and all possible help by the district administration • Wherever the State Governments are willing to participate by way of part equity in these projects, it is possible to provide for the same in the bid conditions while inviting competitive bidding for selecting the developers. This, however is optional for the State Government
Regulatory Agencies	• It is necessary to acquire the approval for the quantum of energy to be procured by the Discom(s) from the appropriate regulatory commission, <i>in case</i> the procurement exceeds additional demand forecast of the distribution company for the next three years • Regulatory commissions have to ensure that the bidding process being followed is indeed in accordance with the guidelines issued by the Ministry of Power • Any deviations from the standard bidding guidelines issued by the Ministry of Power, are to be pre-approved by the appropriate regulatory commission
Distribution Companies	• Inform the nodal agency about their power requirements and their power procurement plan so that the nodal agency can gauge power demand for central power plants like UMPPs • Sign the power off-taker's agreement with the shell companies and inform the State Transmission utility to undertake the necessary grid strengthening activities in order to smoothly evacuate the power generated
Shell Company ¹	• Preparation of project report • Land acquisition • Securing allocation of fuel linkages/coal blocks (for power plants based on domestic fuel linkage) • Securing allocation of water by State Government • Appointment of consultant for Environment Impact Assessment and Project Report • Appointment of consultant for international bid document preparation and evaluation • Various approvals and statutory clearances • Arrange for off-take/sale of power

¹ Special Purpose Vehicle formed by PFC for each UMPP.

Source: Power Finance Corporation, Ministry of Power (UMPP Competitive Bidding Guidelines).

Table 4. Sequential set of activities carried out for developing a UMPP

Activities	Detailed tasks
Site identification	• Sites identified by CEA in different states (as per UMPP Policy 2006) • Consultations held with the concerned state government for making available the land and consumptive water for the proposed UMPP
Project initiation	• Nodal Agency (PFC) floats an SPV to undertake the UMPP, executives from NTPC and PFC are appointed on the board of the SPVs • Preparatory activities like initial and detailed surveys (Environmental Impact Assessment, geological and hydrological studies), fuel tie-ups initiated • Subsequently the nodal agency interacts with other Government departments to acquire the required clearances. Bidding can be carried out once the following inputs/clearances are obtained:- a) Land acquisition b) Environmental clearance consisting of public hearing, state pollution control board and MOEF (EXPAND) clearance c) Identification of captive coal block, their geological reports and mining plans d) Water linkages e) Civil aviation clearance
Bid process	• Preparation of bidding documents (Prepared as per the guidelines issued by MoP for competitive bidding for two stage bidding process featuring RFQ and RFP). Two bid documents would be prepared by the consultants and subsequently would be reviewed by the core group (consists of representatives from CEA, PGCIL, PFC and State utilities). PPA would also be finalized in this stage • Power off-takers would be identified after consultation with State Governments and quantum of power to be procured by respective states would be finalized. PGCIL would subsequently prepare the master plan required for evacuation of power • Bid process initiated • Bid evaluation to be carried out by the SPV in consultation with the core group
Project completion	• Bid process complete, Letter of Intent (LOI) awarded to the winning bidder • SPV handed over to the winning bidder • Financial closure and project development initiated • Project Commissioning

Source: Author research.

The operating principle behind the policy framework formed above is that for successful implementation of any project, risks should be allocated to those participants who are in a best position to manage these risks. Government would be the best equipped to manage the initial risks in the UMPP such as environment and forest clearances, R&R issues, obtaining fuel linkages, making substantial progress on land acquisition etc while the bidders would be better equipped to manage project risks related to constructing the power plant. Significant advantage of this framework is that with a governmental entity taking the initial risks in the UMPPs, the perceived risks to the subsequent bidder(s) gets substantially reduced. Financially speaking, this reduces the cost of capital for the project, which results in lower tariffs.

Once the project development reaches a certain stage, the SPV invites bids for implementing the project through an international competitive bidding process. As per the “Guidelines for determination of Tariff Bidding Process for Procurement of Power by Distribution Licensees” [3] issued by GoI in 2005, there are two different types of competitive bidding process that can be followed. Case 1, where the location, technology or fuel is not specified in the bidding documents and Case 2, projects which specify the location as well as the type of fuel and its source (example-captive mines for coal based projects). All UMPPs fall under the category of Case 2 as the location of fuel is clearly identified.

Bidding documents are prepared as per the guidelines issued by MoP and are subsequently reviewed by the Core Group (comprising of CEA, PGCIL [central transmission utility], PFC and Discom(s)). The successful bidder is identified on the basis of the lowest 25 years levelled tariff. Bid documents (RFQ, RFP, PPA) do not allow changes in tariff or inserting additional conditions after the completion of the bidding process. This was done to uphold the spirit of the bidding process and to weed-out bids which are submitted with a view of cornering the UMPPs. However, revisions are allowed with respect to certain items like in the case of changes in declared price of land, changes in implementation of R&R (Rehabilitation and Resettlement) costs, changes in cost of environmental plan, changes in cost incurred while undertaking compulsory afforestation, changes in 80 IA (tax related) benefits and amendment of any law affecting tariff other than change in withholding tax rates on dividend distribution. It is to be noted that all the factors listed above are not in control of the bidders, most of them are regarding compliance to any new or stricter regulation while the others concern the costs of necessary issues that need to be dealt with (like R&R, land) which can only be estimated upto a reasonable extent and one can never be certain. Since the private party is not responsible for bearing the pre-project development risks (as defined in the UMPP Policy), these changes have been allowed.

Upon completion of the entire bidding process for selection of the project developer, the SPVs are to be transferred to the selected bidder. Table 3 captures the roles and responsibilities of the different stakeholder involved in a nutshell and Table 4 highlights the sequential steps of developing an UMPP.

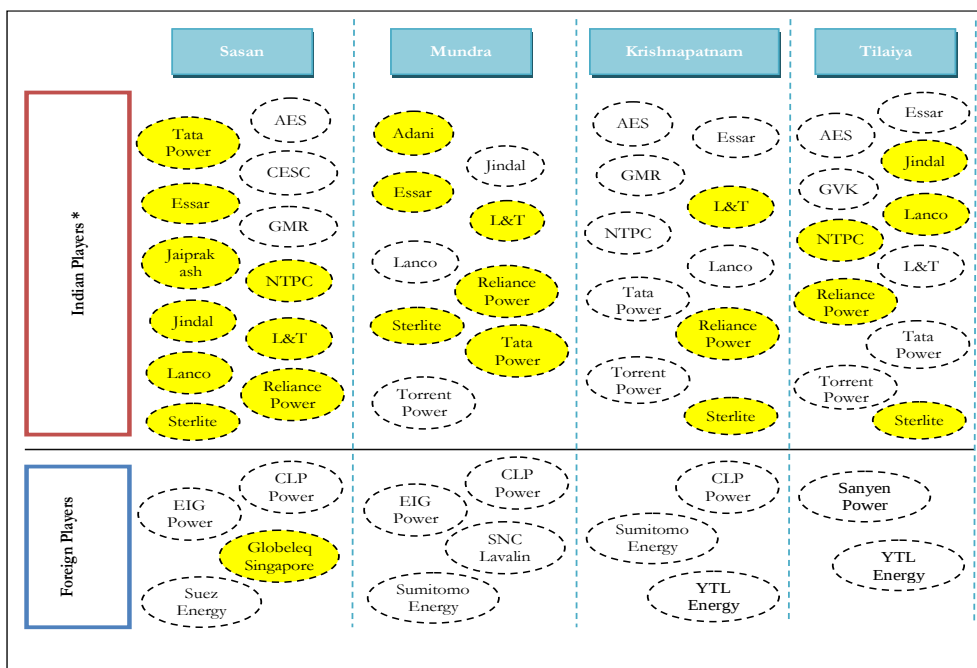
III. SUCCESS OF UMPP POLICY 2006

UMPP policy of India has seen its share of success. Competitive bidding process has been successfully carried out for four UMPP projects and the first two projects (held prior to

global recession that started in 2008) saw keen participation from several bidders (refer Figure 5 attached in appendix). 7 out of 9 bidders in Sasan UMPP quoted below INR 1.8 per unit and 3 bidders quoted below INR.1.45 per unit. This can reasonably qualify as a redefining moment for the Indian power sector where even the most efficient plants being operated by incumbents have higher costs (it is to be noted that significant incentives are offered to UMPP) and the bidding process has set a lower tariff benchmark for future bidding process. NTPC which is the leading power generating company in India has not been able to win a single UMPP and bids submitted by the highly regarded and efficient company were much higher than what was submitted by any of the private players.

One of the areas where the bidders had significantly reduced costs was the energy charges. Break-up of the bids submitted indicate that captive coal mining could yield substantially cheaper energy charges. Several private parties (Tatas, Jindal, Sterlite, etc.) have prior mining experience and hence their estimates are likely to be reasonably correct.

Given the shortage of equipment manufacturing capacity in India, most of the private companies asked the Chinese suppliers to submit their quotes for the manufacturing equipments. Chinese equipment manufacturers' indicated quotes which were about 30% lower [16] than the established benchmarks in India or quotes of BHEL (leading equipment supplier in India). However, no committed tie-ups were offered by any Chinese manufacturers prior to bidding as at that point of time Chinese suppliers were not permitted to supply supercritical technology outside China. This policy of Chinese Government was expected to change in the near future. It remains a question mark as to how the winners would have honored their bids if the policy was not to change!



* Players who finally submitted a financial bid quoting a tariff for power supply are highlighted in yellow.

Source: Power Finance Corporation.

Figure 5. Players that participated in RFQ process in the four UMPP projects bid so far.

While established public sector players have superior project management experience (especially true for NTPC), some of the commercial strategies adopted by private players are valuable lessons for SPSUs/CPSUs. Discussing all such strategies is outside the scope of the paper though one such strategy is discussed in the following section in order to highlight the policy shortcomings.

IV. CASE STUDIES: SHORTCOMINGS IN GOVERNMENT POLICY AND SUPPORTING FRAMEWORKS

The UMPP bidding framework followed in India can qualify as reasonably successful (so far) as it has seen keen participation from the private sector and so far four projects totaling 16,000 MW have been successfully awarded. However various issues and debates cropped up during the bidding process of these four projects. In this section we will highlight some of the ‘incidents’ or cases which led to litigation or debate amongst the policy makers as to how to handle the situation at hand. Some of these ‘incidents’ can be attributed to poor policy design and authors’ have proposed modifications to the design wherever applicable. This section would be of interest to policy makers and regulators in other developing South Asian countries like Nepal, Bhutan, Bangladesh, Cambodia etc. which might be looking at undertaking the competitive bidding approach for awarding big ticket projects.

A. Case 1: Lanco’s Bid Cancellation for Sasan UMPP [13]

A peculiar situation arose with the very first UMPP to be awarded. Nine bidders including Jindal and Lanco had submitted their bids for the Sasan UMPP. Lanco won the bid after quoting a tariff of INR 1.196 per unit, while Jindal came seventh in the final standing. Lanco had submitted the bid for Sasan in a consortium with Globeleq Singapore, where Lanco had 30% of shareholding and Globeleq had 70% of shareholding, making Globeleq the lead stakeholder.

Once the bidding was over, Globeleq of the UK decided to exit the power business and had put up Globeleq Singapore for sale. This was acquired by the Lanco and Jindal in a combined purchase. This raised issues about ownership transfer, thereby necessitating PFC to look into the project promoters once again. Beside the issue of change in ownership, it was also alleged that the consortium misrepresented facts during the bidding process. Let us detail the issues raised by the parties involved in the process:-

- *Breach of the bidding documents on account of change in the shareholding structure of Globeleq Singapore, as it was the Lead Member of the consortium:* Once the project was won by the consortium, Globeleq sold out its stake to Jindal and Lanco, exiting the project even before it was awarded. Since the financials of Globeleq Singapore were used to meet the financial and technical criteria to become eligible for the project, concerns were raised as to how it can totally exit the project. Secondly the stake was sold to Jindal, which was one of the party to the process and was ranked seventh.

It was highlighted by Globeleq that bidding documents do not prescribe any restrictions, whatsoever, on a change in the shareholding structure of the members of participating consortium and accordingly a change in the shareholding structure of Globeleq Singapore Pte. Limited does not violate the norms prescribed in the bidding documents.

This situation provides a key learning for the other developing countries planning to undertake competitive bidding process not only in the power sector but other infrastructure sector as well. On one hand it can be argued that in this globalized world with lots of M&A activity, constraining the consortium from bringing about changes in its structure would hamper its ability to execute the project (Reliance Power itself has been diluting stake to strategic partners like equipment manufacturers and generation companies to raise further capital for the UMPP's, does this lead to change in consortium and violation of bid process or not?). While on the other hand, if the winning bidder is allowed to change the structure of the winning consortium then it effectively reduces the overall competition in the process. Example – A new entrant might go for lower tariff while the major players would quote higher knowing that if they lose the project then they can just buy out the new entrant. It would even create incentives for the new entrant to quote lower tariff and then sell out stake in the project to the major players, making a quick capital gain on their investment. This creates a moral hazard for both the parties. Secondly if the lead member or a significant equity stakeholder divests beyond a certain point then it raises questions on the technical and financial capability of the consortium to complete the project in specified time. Given the fact that such projects are on a very large scale, consortium members should not be allowed to significantly change its structure, once the project is awarded to them.

We can quote another example here; Unitech India had got the pan-India mobile telecom license for INR 16,510 million. Even before making a single investment in the business, it sold 60% of its stake for INR 61,200 million, valuing the company at INR 116,200 million. Telecom ministry cried foul play, however there were no conditions laid down in the bidding process which prevented the private players from doing so. Clearly GoI lost a lot of money which could have been collected as license fee due to absence of a clause preventing sale of stake. This costly mistake can be attributed to poor policy design of the GoI. Subsequently the GoI on July 24, 2009 amended its policy and added a clause which imposed a three-year lock-in clause on stake sales by the owners of telecom companies, which were granted telecom licenses. This move was aimed at preventing the promoters of companies that acquired telecom licences and spectrum in early 2008 at throwaway rates from making windfall profits by selling stakes to foreign companies.

Considering the fact that the Sasan UMPP fiasco happened in 2006, Telecom ministry should have been more prudent and should have included the clause preventing stake-sale immediately after the project was awarded to the winning bidder. This is a key learning for the developing countries which are looking at designing frameworks and policies to carry out competitive bidding process for infrastructure related projects.

We believe drawbacks in bidding documents often create problems for projects. In a dynamic corporate atmosphere, the bidding documents should provide a clearer

exit route and have provisions for mergers and acquisitions and change in membership of bidding consortiums or provisions relating to lock-in requirement. Also, the bidding document should provide an alternate path in case the first bid is rejected and options have to be explored from the remaining bidders as was the case when once the bid by Lanco consortium was rejected and the GoI realized that there was no mechanism by which it could award the project. This led to considerable delay in awarding the project and the decision had to be finally referred to the EGoM (Empowered Group of Ministers, which comprises of representative from the Law Ministry, Power Ministry, Finance Ministry and Planning Commission of India)

Later on the following provisions were added in the RFQ to address this issue:-

“If the Bid is submitted by a Bidding Consortium, then

- i. The financial requirement to be met by each Member in Bidding Consortium shall be in proportion to the equity commitment by each of them;
 - ii. The technical experience criteria shall be met by the Lead Member of the Consortium;
 - iii. The technical and financial capability of a particular company shall not be used by more than one Member of a Bidding Consortium”
- *Misrepresentations of facts by the Globeleq Singapore, in relation to the qualifying criteria stated in the RFQ submission:* Allegation were made that Globeleq Singapore had used the financial and technical strengths of its parent company, Globeleq UK, in order to meet the criterion laid down in the RFQ document. However, the consortium did not provide a legally binding resolution from Globeleq Singapore’s parent Globeleq for associating itself with the project at the RFP stage. This was overlooked while awarding the letter of intent to the consortium.

Another issue was that Lanco had drawn upon the credentials of Lanco Kondapalli Private Ltd and Aban Power Company Ltd to meet the financial qualification requirement of the Sasan project, by submitting that the companies were its affiliates. However, no document/information was submitted by Lanco to support the same. Contrary to this, as per the red herring prospectus of Lanco Infratech dated October 23, 2006, stated that the said companies were not its affiliate as on May 31, 2006 i.e. even at the time of RFQ submission.

Against the above allegation, Globeleq contended that the RFQ did not prescribe any separate format for providing information in case of the bidding consortium members placing reliance on their parent entities. Hence, Globeleq Singapore provided the financial and technical information of its parent company Globeleq Limited, U.K. under its own name in the formats already prescribed. Globeleq contended that it had mentioned “Globeleq Singapore” as the lead member and hence no confusion should have been made that Globeleq UK i.e. the parent company was involved in the bidding process.

This situation arose because of improper vigilance and verification process followed during the bid evaluation process. The bid evaluation process should have been rigorous and complete. We should ensure proper due diligence in the evaluation process, if required, by seeking additional information from the bidders. Misrepresentation at any stage should result in cancellation of award and invitation to next ranked bidder in case bids are still valid.

Also, clarity was required on provisions relating to usage of parent companies technical and financial strengths to meet the bidding criterion. Bid submission formats and guidelines should be clear enough to establish usage of technical/financial strengths of the parent/affiliate/consortium partners in the bid process. It should also be noted that unless a consortium partner has put in equity, his financial/technical strengths cannot be used. Relevant provision to take care of this in the RFQ documents were:-

“The Bidding Company or a Consortium Member (including Lead Member) can take 100% benefit of the technical and financial capability of a Parent and/ or its Affiliates for the purpose of Bid Evaluation. If a Bidding Company or a Member in the Bidding Consortium wishes to take benefit of the technical and financial capability of its parent company and/ or its Affiliates, it will have to submit a legally binding undertaking supported by a board RFQ for long-term power procurement resolution in the RFP stage from its parent company and/ or its Affiliates stating that all the equity investment obligations of the Bidding Company or the Member of the Consortium shall be deemed to be equity investment obligations of the parent company and/ or its Affiliates and in the event of any default the same shall be met by the parent company and/ or its Affiliates. Moreover, the Bidding Company or the Consortium Member shall have to provide a certificate stating the exact relationship with such Parent and/or Affiliate including exact details about the equity shareholding. Such certificate shall be certified by the Company Secretary and one of the Directors of the Bidding Company/Consortium Member.”

Final outcome of the debate was that the Lanco's bid was cancelled and the project was awarded to L2 bidder, Reliance Power, which agreed to do match the bid by L1 bidder after being asked to do so by the evaluation committee. The final decision regarding the admissibility of such a decision, legally and politically, was taken by the EGoM. The issue was referred to the EGoM since neither the government nor the Power Finance Corporation could decide on the fate of the project.

We believe that the government policies and guidelines should clearly highlight the procedure and guidelines to be followed in situation where:-

- (a) Recourse is to be taken in case of number of bidders is less than 2 or in case a single bid is submitted. GoI was caught off-guard when it faced a similar situation when it went for the airport privatization process where only one bidder met the technical criterion laid down by the government. GoI wanted to award two airports to two different private operators to mitigate risks, however it faced a peculiar situation when only one bidder qualified for the bidding process and GoI had to devise an ad-hoc mechanism to award the two projects as it did not want to delay the already stretched out process
- (b) Any change in bidding consortium or ownership of the bidding entity happens post the award of the project. Guidelines can specifically deal with the situation if there is any change in ownership structure before the project becomes commercially operational like in the case of Sasan project or as highlighted in the case of Unitech.

B. Case 2: Tata Power Challenging Usage of Coal from Sasan's Pit-head Plant by Reliance Power for other Projects [11]

Reliance Power was awarded the Sasan UMPP after Lanco's bid was cancelled. As per the terms of tender of the power plant, its three coal blocks were allocated to Reliance Power for the exclusive use of the Sasan power plant. Reliance Power estimated that as per the mining plan, the coal reserves are more than enough for Sasan and sought permission from the central government to use excess coal reserve for the other (4000 MW) plant it was building in the same state (Madhya Pradesh) at Chitrangi. The Madhya Pradesh state government recommended to the GoI to permit Reliance Power to use the extra coal. The government referred the decision to EGoM who decided that the extra coal can be diverted as long as Sasan plant does not suffer and the power generated by the use of the extra coal at the other plant is sold through (a separate) competitive bidding route.

Tata Power filed a writ petition against this and termed the government's decision as 'arbitrary' and 'illegal' as it is against the express terms laid down in the bid document. It said that other bidders were not aware of the provision to use the coal for their other projects and this changes the economics of the UMPP. Tata Power argued that such information should have been provided to all the bidders upfront and this would have led to even more competition in the bidding, leading to lower tariffs. Tata's case was strengthened by the fact that while power from Sasan UMPP was to be sold at INR 1.196 per unit, the power from unit at Chitrangi could be sold by Reliance Power at market rates, despite the fact that the cost economics for the both plants were identical (getting same coal, getting same incentives on duties, taxes etc.). Subsequently, Reliance Power actually committed 1200 MW (out of 4000 MW) power from Chitrangi unit to MP Distribution companies at a tariff of INR 2.45 per unit whereas power from the Sasan UMPP was committed at INR 1.196 per unit.

GoI responded, saying that Tata Power in its appeal to the courts had suppressed material facts and information, it had no locus standi to file a petition, the bidders were required to make independent assessments and the EGoM's decision is in line with government's policies and was taken at the highest level. The final outcome of the litigation was that the Delhi High court ruled in favor of the GoI and legally³ upheld the decision of GoI. Subsequently Tata Power has moved to the Supreme Court of India on this issue and the case is pending before the apex court.

We believe that any changes; whether relating to government policy or terms and condition regarding the bidding process or any other information which could materially change the cost economics of the project; should be brought to the notice of all the bidders prior to the bidding process. Otherwise, the situation would lead to bidders trying to quote unviable tariffs and later resorting to lobbying with the Government to get additional benefits in its favor. This would lead to the winning bidder capturing all the benefits from any favorable change in policies/terms and guidelines.

Quoting another example, LANCO had been awarded the 1000 MW coal based Anpara (in Uttar Pradesh) thermal power project, on the basis of their lowest bid. One of the bidders

³ Courts can only decide on the legality of the decision taken by GoI. While the authors understand that the decision of GoI was constitutionally valid, they would like to differ because changing the terms & condition of the bid after awarding the project would create information asymmetry amongst the bidders and tarnish the reputation of the bidding process

was Reliance Power. LANCO wanted to increase capacity by 20% and was allowed by the state (Uttar Pradesh) cabinet to set up two 600 MW units instead of two 500 MW units which it had earlier proposed. Reliance Power challenged the decision of the state government stating that fresh bids should have been invited now that the economics have changed. Its petition however was dismissed and the capacity expansion was allowed under the bidding guidelines. We believe that allowing for change in unit configuration or allowing an additional unit on merchant basis are serious deviations and should be avoided altogether as they make the bidding process less transparent and can also lead to litigation(s).

The decision of the government is inconsistent with the commonly accepted bidding principles and the sanctity of bid invitation documents. Changing of guidelines after allotment may lead to speculation by the bidders regarding connected issues such as these and hence hinder efficient bidding.

C. Case 3: Reliance Power Winning 3 out of the 4 UMPP Projects Bid out so far [14]

Out of the four UMPPs awarded through the competitive bidding process, Reliance Power has won three of them. Concerns were raised within the government about the timely execution of UMPPs, reducing over-dependence on only one company to execute the flagship UMPP program and preventing companies from bidding for UMPPs merely as a pre-emptive measure. Government mulled over various proposals/suggestions given by different stakeholders to address this issue. Following three policy options were available to the GoI:-

- *Put a cap on number of projects that can be awarded to a single player (not implemented [15]):* Government ruled out the possibility of imposing a cap and cited the reason that “legally it is not possible to put a cap”.

We believed that GoI was correct in not putting a cap; however the reason for the same should not have been on legal ground but the fact that putting a cap went against the very basis of promoting competition in the bidding process. In order to ensure fair and transparent competitive bidding process, players should not be barred from bidding for multiple projects. Barring a bidder from bidding for multiple projects would only bring down competition in the bidding process while primary concerns relating to project execution would remain unaddressed. Instead, it is suggested that stricter provisions relating to performance guarantee should be incorporated

- *Companies wishing to build more than one UMPP would have to possess incremental net-worth or raise their net-worth to become eligible for another plant (implemented):* Stakeholders touted this as a welcome step, as this clause would stop the bidders from using one’s net-worth for multiple projects. For example – Let’s say that the financial criterion to become eligible for a UMPP was a net-worth of INR 20,000 million. The new clause ensures that if the company after winning a UMPP wants to bid for another UMPP, it would have to show incremental net-worth of INR 20,000 i.e. a total net-worth of INR 40,000 million and more.

- *Raise performance guarantee (implemented)*: Instead of putting a cap, GoI decided to hike the performance guarantee by 50% (performance guarantee for a single project is INR 30000 million) for the bidder who was in race for winning a second UMPP and in case the bidder is in race for winning a third UMPP, the performance guarantee is doubled. This clause was incorporated to ensure stricter performance guarantee compliance.

Hence the GoI took a policy decision not to put a cap on the number of projects a single company can win but agreed to incorporate a provision to raise the performance guarantee required to be submitted. We believe that while the clause for incremental net-worth would ensure that the firm selected for undertaking multiple projects has the necessary financial capability to execute the project and that firms do not end up taking more risk than their balance sheet would allow, however the clause relating to raising performance guarantee could have been implemented in a different way. Currently, PFC collects the performance guarantee from the winning bidder and this amount is locked with the nodal agency. Clearly if a lot of cash, in case of Reliance power equal to a sum of INR 13,500 million, is locked in with the nodal agency, it would only increase the cost of operation (due to locked funds) for the winning bidder and lead to higher tariff unnecessarily.

If GoI intended to incorporate stricter provisions relating to performance guarantee, it could have incorporated provisions to reduce realizable tariff by 5 paise per unit for one full year of operation (4000 MW plant generates ~30,000 MUs in a year and a penalty of 5 paise would mean an equivalent penalty of INR 1500 million) in case of second UMPP and 10 paise for third UMPP. By incorporating such a clause:

- It would ensure level-playing field for all the players as otherwise the cost of operation for a 2nd/3rd time bidder would be artificially increased due to locked funds
- Reduce inefficiencies which would be promoted by the clause introduced by GoI and lead to lower tariffs
- Result in a monetary pay-out similar to that of the penalty proposed by the GoI

D. Case 4: Reliance Power Refusing to Take Charge of Tilaiya UMPP after Winning the Bid [7]

In Jan 09 the lowest tariff. As per the bidding guidelines, Reliance Power was expected to take charge of the special purpose vehicle (Jharkhand Integrated Power limited) which was floated by PFC, within three months of winning the bid. However as of Jun 09, Reliance Power has refused to take charge of the SPV unless PFC gets all the statutory clearances

PFC, in its capacity as the nodal agency extended the bid validity by two months and the same was expected to expire on Jun 27, 09. Unless Reliance Power comes forward to take charge of the SPV, PFC would be forced to call for fresh bids. PFC is facing a stalemate situation as it did not want to call for fresh bids and Reliance Power is stuck with its stand of not extending the bid validity until PFC at least gets the forest clearance. However, extension of bid validity was necessary as the forest clearance was not expected any time soon.

As per the UMPP Policy 2006, PFC, in its capacity as the nodal agency, was required to acquire all the statutory clearances before inviting bids. However, PFC completed the entire bidding process but still did not get the forest clearance violating the UMPP Policy. Reliance Power has had a bad experience earlier with the Sasan UMPP [10] where it could not go ahead with project execution because the land acquisition process was not completed by PFC and was mired in controversy. This threatened on-time commissioning of the Sasan UMPP. Due to its bad experience earlier, Reliance Power refused to take charge of the UMPP as the financial bid was based on the understanding that the SPV along with all the statutory clearance would be handed over to the winning bidder within three months. Clearly if the process gets delayed, it means a negative financial impact for the winning bidder and hence the refusal to take charge of the UMPP.

The Financial bid is submitted by the bidder based on certain understanding and assurances. If the very basis of the bid is not fulfilled, it would lead to unwanted consequences like a failed project, negative investor sentiment or low participation from international bidders. Such incidents deter the international firms from participating in the bidding process for infrastructure projects as they are typically spread over a longer duration. Situations like this should be avoided at all cost to maintain investor sentiments and ensure greater participation.

E. Case 5: “Handicaps” Faced by Public Sector Utilities while Bidding for UMPPs [14, 12]

Another issue which needs to be addressed while designing policies and competitive bidding guidelines is ensuring a level playing field between the public and the private sector companies. Poor design of the bidding framework can end up creating an advantageous position for either of them. In this section, we would highlight one such situation being faced by an Indian public sector company NTPC. NTPC is India's largest power company and is currently ranked 317th in the ‘2009, Forbes Global 2000’ ranking of the World's biggest companies and has a current generating capacity of 30,644 MW.

However, in the four UMPPs which have been awarded so far, NTPC has been unable to win any of them. In fact the price quoted by NTPC has been significantly higher than the winning bid price. In this regard, NTPC and Ministry of Power have separately come out with clarifications highlighting the handicaps being faced by the public sector company while participating in the UMPP bidding due to certain policies of GoI. Let us discuss some of these handicaps in order to understand if there is a remedy.

- a. *GoI Policy regarding ceiling on equity investment in joint ventures:* As per NTPC the company is close to hitting the limit of its powers to make investments autonomously. This policy of GoI, unless reviewed, will seriously hamper NTPC's ability to participate in competitive bidding. The existing rules say “the ceiling on equity investment to establish financial joint ventures and wholly owned subsidiaries in India or abroad shall be 15 per cent of the net worth of the PSE (Public Sector Enterprise) in one project limited to INR 10 billion. The overall ceiling on such investment in all projects put together shall be 30 per cent of the net worth of the PSE”. These guidelines curtail the discretionary power vested with the independent

directors of the company and create unnecessary bureaucratic hurdle for the company to enter into JVs to bolster its technical competency, spread risks and bring down costs

Clearly the policy needs to be revised or an exception can be made for participation of NTPC in the UMPP bidding. Government agencies around the world need to frame the policies and guidelines keeping in mind the constraints that can be faced by the public sector companies in participating in the bidding framework. Either the design can incorporate changes to accommodate the public sector companies or an exception can be sought for participation in the bidding process. In line with this, Mr. Jairam Ramesh, Union Minister of State for Power and Commerce, has told the finance ministry that “Considering that NTPC shall be participating in competitive bids for UMPPs and the projects being promoted by States, the present limit of 30 per cent of net worth needs to be reviewed.”

- b. *Issue faced due to Central Vigilance Commission (CVC) guidelines:* The CVC guidelines do not allow commercial secrecy of the bidding offers submitted to NTPC by the vendors and as a result the power major is unable to maintain the confidentiality of costs in arriving at the bid prices. Before submitting bids for the power project, NTPC invites bids from its vendors who supply equipment for the project in question. NTPC decides its bid on the basis of lowest available price of power equipment supplied by vendors. According to the present CVC guidelines, this is an open and transparent process and no secrecy can be maintained by any public sector company in such matters and as a result the cost at which NTPC buys the equipment goes into the public domain not only giving private parties information about NTPC’s cost structure but also setting price benchmarks for them to negotiate with the vendors about prices.

CVC guidelines are required to be followed stringently in order to ensure transparency and accountability. However as seen above they are creating problems for the public sector company when participating in the bidding process. Some suggestions have been made to deal with these guidelines. One of the suggestions is that NTPC may enter into a “pre tie-up” with a manufacturer before bidding where it has no freedom to give a commitment to the pre tied-up party that the equipment shall be sourced from it. However this may affect the seriousness of the prospective bidders which in turn would affect the competitiveness of the prices quoted by them.

A modified version of the above suggestion is that NTPC should obtain tariff quotations from a set of empanelled equipment vendors through the process of inviting “limited tenders” prior to the bidding process for any major project. This way, the confidentiality of the quotes can be maintained since the quotations are not accepted in a bidding process and hence don’t need to be released in the public domain. NTPC can maintain the secrecy of the quotes as well as get estimates of the costs from the empanelled vendors in order to arrive at a bid. Empanelled vendors can be selected in a way to ensure the seriousness of the bidders.

Another suggestion being made is the opening of future tenders for various packages (boiler, turbine, auxiliaries) of its new projects by a high-level committee to maintain secrecy of quotes. However such provisions can at best be exceptions to the CVC guidelines rather than becoming norms for future projects.

- c. *Immense flexibility and discretionary power available with the private sector companies:* We would like to throw light on this issue by discussing the following example. Let's assume that in a bidding process it was decided that the single cost Figure would be decided by discounting the power payments to the developer in the future at a certain discounted rate and a plant load factor of 80% would be assumed in order to calculate the total fixed charge and variable charges being paid to the project developer. Let's assume both the public and private players have the same fixed and variable costs of INR 100 each and both know that they can operate the plant at 90% plant load factor. In such a case the public sector company would be required to quote the fixed and variable charges as INR 100 per MW and INR 1.25 per unit. However the private player would quote a lower fixed cost and a higher variable cost, say INR 50 per MW and INR 1.85 per unit. This way the total amount to be paid to the public sector company (ignoring the discounting factor) would be INR 200 ($100 + 1.25 \times 80$) while the amount paid to the private sector company would be INR 198 ($50 + 1.85 \times 80$) and hence the private sector company would end up winning the bidding process. However in reality both companies could have operated at a higher PLF due to operational effectiveness and the total amount paid to the public sector company would have been INR 212.5 ($100 + 1.25 \times 90$) whereas the private sector company would get INR 216.5 ($50 + 1.85 \times 90$). Clearly both the companies would have operated efficiently however the private sector company was able to innovatively win the bid and at the same time had a higher tariff than the public sector company. While the private sector company is not liable to explain its tariff structure, questions would have been raised to the public sector company to explain the bid had it submitted a skewed bid in line with the private player.

Similar concern has been raised by NTPC when its chairman questioned in an interview "if you quote three paise fixed charge and INR 1.16 as variable cost, will the country accept it? Will the consumer accept it? Will the political system accept it?" [9]

CONCLUSION

UMPP projects involve significantly high stakes from both the Government and the project developers as they are not only critical for the GoI to bridge the demand-supply gap but it is also essential to bridge it fast enough. On the other hand for the project developers these projects can form a significant part of their cap-ex/expansion plans with each project having a capital cost of more than USD 4 billion. Hence it is of great importance that the bidding process is carried out successfully.

Through this paper, we have highlighted the different policies of the GoI, the process that was followed by the GoI in the UMPP bidding process and the challenges/issues faced during the same. The bidding process followed highlighted how the government has taken a policy decision to limit its role to handling the initial risks where it can leverage its strengths and allow the project developer selected through the bidding process to undertake only the operational risks related to the project. This approach has not only reduced the cost of capital for the project but has also crashed the timeline for making the project commercially

operational. Allowing the project developer to focus only on the operational risks has also increased the chances of higher participation by leading global companies who have earlier shied away from developing countries because of red-tape and political risks.

Such a bidding process can be envisaged across other developing countries like Nepal (where involvement of multiple government agencies with over-lapping roles and responsibilities is creating delays in identification/awarding of projects for/through competitive bidding in the hydropower sector and subsequent delays in commercial operation due to multiple clearances required from a number of agencies). In fact finding in this paper can be used in the bid process design of other infrastructure sectors in India like roadways where land acquisition is a key risk for the project developer.

We believe that in the present environment of global M&A activities, increased participation of global majors in bidding in developing countries, fierce lobbying efforts by business enterprises and increased dependence on certain set of companies, it is very important for the government policies and bid process design as defined in these policies to address critical issues like (i) change in bidding consortium (ii) lock-in requirements (iii) single bid situation (iv) maintaining transparency and information symmetry amongst all bidders, (v) ensuring timely execution by financial penalties and performance guarantees (vi) handicaps faced by public sector, amongst all other issues in order to carry out a successful bidding process. Through this paper we have discussed certain ideas pertaining to above issues in order to help policy makers across the world, especially in developing countries, to make better decisions.

APPENDIX

Note on Benefits of UMPPs

Besides the benefits of large scale economies, there are many other benefits of UMPPs which are highlighted as follows:

- *Crashed time line:* The timelines for awarding the power projects under competitive bidding process has been significantly reduced from a total of 425 days earlier to 275 days only. As we can see from the following table, response time for submission of price bids has been significantly reduced from 180 days to 90 days and time for awarding the project to the winning bidder has been reduced from 125 days to 90 days.

Event	Standard timelines for project awarded under competitive bidding**	
1. Issue of RFQ Documents	Zero	Zero
2. Submission of Bids (RFQ)	45 days	45 days
3. Issue of RFP Documents	180 days*	90 days
4. Submission of Bids (RFP)	360 days	180 days
5. Selection of Developer/Transfer of SPV	425 days	275 days

* RFP is issued after 90 days, however subsequently to RFP issue bid conferences are organized and after 180 days RFP is finalized taking into account any revisions, if required.

** Source: Ministry of Power

*** Source: Request For Proposal for Sasan and Mundra UMPP 00

Besides reducing the timeline for awarding the project, the timeline for overall project development are also reduced because for a UMPP the nodal agency (PFC) initiates the process of getting required linkages and land acquisition, thereby reducing the total timeframe for commissioning the project.

- *Super Critical technology:* All UMPPs are required to operate super critical technology based coal boilers which would not only result in higher efficiency but also result in reduced emissions. UMPPs would also utilize washed coal and rejects in the CBFC boilers to produce additional power. Also, these projects were envisaged to have 100% ash utilization from the beginning of the project. Since the project would result in lower carbon reductions, carbon credits can accrue to the project further lowering tariffs.
- *Sale of power to multiples States:* Selling power to multiple states reduces the risk of payment default by reducing dependency on a single state. Also, it reduces the risk of creating pockets of surplus within the country which might have lead to inefficiencies.
- *Reduced risk for the bidders:* By apportioning the relevant risks to those participants who are in the best position to manage risks, the overall risk of the project is reduced. Government agencies are held responsible for managing the initial risks, especially regarding clearances and land acquisition, and the winning bidder is responsible for project commissioning and operations.
- *Payment Security Mechanism* – Default in payment is the most significant risk to a power project in the Indian scenario. To address this risk, a payment security mechanism consisting of the following provisions was made operational
 - i. Revolving letter of credit by distribution licensees
 - ii. Maintaining an escrow account with irrevocable claims on receivables of utilities and
 - iii. Providing the UMPP owner with an option to sell the power to other consumers (HT consumers) in case of default by one of the buyers

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Chapter 4

**IS CORPORATE SOCIAL RESPONSIBILITY
A COMMERCIAL CONCERN?
EVIDENCE FROM A MULTI-CASE STUDY**

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ABSTRACT

Companies today face increasingly more complex and dynamic contexts where obtaining and maintaining some competitive advantage is certainly costly and complicated. This leads management to become aware of the consequences, either positive or negative, that their activity generates for society, since the company's global image will largely depend on those repercussions. Therefore, concepts such as Corporate Social Responsibility (CSR) become relevant elements for business management.

Taking such ideas as a reference, the present work intends to identify i) the drivers for the implementation of CSR practices, and ii) to assess the implications derived from the whole process. Accordingly, it is set out an empirical study that analyses the reality of nine (9) companies from different sectors. The information was obtained through semi-structured interviews with the managers of the companies and data were analysed by QSRNVivo software. The interviews were held between May 2006 and March 2007, and the conclusions were confirmed early in 2010, thus including a longitudinal cut in the study.

The literature revised revealed that one the major drivers for companies is the managers' attitude –proactive or reactive– towards these issues.

Our data confirm that companies are increasingly concerned about CSR. The market's competitive forces lead companies to find some differentiation sign that can also be in line with the needs of the customers that positively assess CSR actions (except those reactive companies). Consequently, the main drivers that apparently lead companies to develop such actions are the owners' values, the market tendency and, occasionally, the regulations in that field. We have also found that those environmentally-aware companies (those committed themselves to develop environmental strategies to minimise their negative impact on the environment) are more inclined to apply CSR philosophy in their management.

Keywords: Corporate Social Responsibility, consumers, values, case study

1. INTRODUCTION

Companies face today increasingly more complex and dynamic contexts where obtaining and maintaining some competitive advantage is certainly costly and complicated. In this context, one of the main objectives is full consumer satisfaction, not only with the use of the product but also regarding the externalities generated by companies. Therefore, concepts like Corporate Social Responsibility (CSR) become reference elements for management.

CSR is increasingly present in Europe's and North America's political and economic scene, although the term is more deeply rooted in the USA (Doh and Guay, 2006).

A first approach to the concept of CSR reveals the response of many companies to a series of demands that promote an economic, technological and legal frame where social benefits take precedence over the traditional financial benefit (McWilliams and Siegel, 2001), either in a proactive form –based on the values and beliefs of the owners and/or the management– or in a reactive way –as a response to the pressure from market/consumers and legislation (Cambra et al., 2008).

From a commercial perspective, the consumer becomes a fundamental reference for companies. Those companies that best adapt to the consumer's needs and wishes and focus on long-term consumer satisfaction could obtain higher benefits for longer. Likewise, managers have to be aware of the externalities, both positive and negative, that their companies generate for society, since the company's global image will largely depend on that factor (Luo and Battacharya, 2006; Barens et al., 2005). Another author that studies the positive and negative impact of CSR is Devinney (2009), who focuses on the “good, the bad and the ugly” aspects of this concept. This author considers that it is “good” for companies to apply CSR since it allows them to identify social needs and find solutions. The term “bad” is associated with five faults attributed to companies: they exist to generate economic benefits, not to solve social problems; they use social regulations to meet their own needs; they do not represent society as a whole; most of them are socially conservative –they do things just for a clear profit–; and finally, CSR allows governments to drop some of their social responsibilities. The “ugly” aspect of CSR refers to how difficult it is to determine which competences of CSR may be linked to the company's results. Hence, it is necessary to define CSR accurately and know that it will be sustainable as long as companies expect to obtain benefits after their investments.

A large number of companies are aware of this corporate social responsibility and they sincerely care about both consumer satisfaction and the externalities they generate, whereas others simply try to adapt themselves to specific situations, act defensively and reap the benefits of the effort, thus transmitting a certain image. Works such as Crane's (2000) sustain that in some cases certain companies base their activity on the so-called self-interest ethics and focus all their effort on transmitting a suitable image –e.g. environmental respect– rather than on really caring about consumer needs and concerns and acting responsibly or ethically.

Consequently, taking such ideas as a reference, the present chapter attempts to i) identify the drivers to implement CSR practices, and ii) assess the implications. The conclusions are no supposed to be a decalogue of actions, but they aspire to be a guide of reflections for managers to become aware of the implications their decisions have in the short and long term. Therefore, the following section tackles the concept of CSR. The third section deals with the empirical study itself, developing a multiple case study. The final section highlights the main conclusions of the study.

2. CORPORATE SOCIAL RESPONSIBILITY (CSR)

Development of the CSR Concept

Defining what we understand by Corporate Social Responsibility (CSR) is not an easy task. The concept of CSR offers a wide range of theories and very different approaches that often raise controversy or are not very clear (Garriga and Melé, 2004).

Bowen (1953) already suggested that businessmen had to adopt policies, make decisions and follow lines of action in coherence with both their companies' objectives and the values of society. In the 1960s the works on CSR cover economic, legal and ethical aspects (Carroll, 1979). At present, works are aimed at clarifying and delving into this concept. Most of the definitions revised lay emphasis on the fact that companies have to sensitize themselves to society and they reveal the versatile nature of CSR.

Clarkson's (1995) work compiles some research done between 1983 and 1993 on the concept of CSR. This author concludes that no consensus has been reached on this term, although he differentiates between Corporate Social Responsibility (CSR1) and capacity of response from companies (CSR2). Therefore, it seems logical to believe that a differentiation is necessary between interest issues and social issues, since companies and their managers deal with the relationships with their stakeholders and not with society as a whole. Furthermore, it would be necessary to delimit the term by referring to institutional, organizational and even individual levels or contexts. Finally, it would be of interest to analyse the social result of a company, the result of responsibility in the management's actions, as well as their relationships with their stakeholders.

One of the most clarifying works on the concept of CSR is Garriga and Melé's (2004), who try to delimit the concept as mentioned above. These authors analysed the different theories on CSR and put them into four groups. The instrumental theories assume the function of wealth creation for the company as the only reason for social responsibility. The political theories claim that companies exert their power by using their responsibility. The integrating theories consider that companies should meet the demands of society. And the ethical theories

try to understand why the relationship between business and society is opposed to ethical values.

In this sense, authors like Doh and Guay (2006) defined CSR as all the measures adopted by a company to promote social benefits beyond the direct interests of the company and legal regulations. Recently, CSR has even been defined as an organisation's ethical duty, beyond legal requirements, to sensitively examine and effectively manage the impact of its internal and external relationships (Kolodinsky, Madden et al., 2010). The concept of CSR also involves relational organizations, since there is an interconnection between participants, shareholders and employees (Kolodinsky, Madden et al., 2010). The organizations that sensitively manage such relationships are more likely to turn their effort in CSR into a source of competitive advantage, thus obtaining the success of the organization in the long term.

Recently, authors like Bartkus and Glassman (2008) or Aguilera et al. (2007) have recommended to take care of the needs of other stakeholders such as owners/shareholders, employees or suppliers. As a result of such approach, many companies have identified, for example, a growing social interest for the environment or some concern about the social and financial situation of certain population segments or developing countries. Thus, Corporate Social Responsibility partly attempts to respond to those concerns. As Luo and Battacharya (2006) and Bigné et al. (2005) explain, CSR may be understood as *"the recognition and integration of environmental and social concerns into companies' actions, in such a way that their business practices meet such concerns"*. In other words, the creation of value for shareholders and stakeholders involves the creation of value for society. Companies have responsibility not only towards their shareholders but also towards their employees, suppliers and customers.

A large number of researchers have tried to develop models that illustrate companies' responsibility towards society. Quazi and O'Brien (2000) built up a bi-dimensional CSR model that distinguished between wide and narrow responsibilities, and the costs and benefits derived from CSR actions. Matten and Crane (2005) conceptualised corporate citizenship distinguishing between social, civil and political rights. Meehan et al. (2006) established a CSR model focused on ethical and social commitment, agreements with relevant partners and behaviour consistency.

As a summary, it can be said that the concept of CSR gathers instrumental, political, integrating and ethical aspects, following the compiling effort of Garriga and Melé (2004). Thus, such concept means a new business philosophy that will be a relevant source of value and wealth for companies, will increase their negotiation power over the social agents they deal with and will improve their interdepartmental relationship. Likewise, those companies that develop the concept will try to take social demands into consideration and will prove that obtaining business benefits is not necessarily against such demands.

Main Drivers for the Application of CSR in Companies

Since the middle of the twentieth century, some doubts have emerged as to the real reason for many organizations to implement CSR.

One of the main drivers to apply this concept within companies is undoubtedly the role of the management's or the owner's attitude towards this sort of issues. Thus, the revision of the literature on this subject revealed the existence of two opposite profiles of businessman. In

the first case, the decision of the manager to implement CSR in the organization intends to promote a more ethical, sustainable and respectful behaviour towards society and the environment. This is the case of a businessman who, voluntarily, selflessly and with deep conviction, looks for the self-realisation of all the company's workers, knowing that their work helps environmental protection and society's welfare. This would be an example of a proactive businessman. On the contrary, other businessmen make such decisions because they believe they will improve the company's image and increase sales figures. Such would be the case of a businessman with short-term vision who acts strategically following the ethics of self-interest. (Crane, 2000). A pioneering work in this field was Bowen's (1953), who pointed out that businessmen were the main responsible for their actions in a wider context than their bottom line, and he encouraged them to go beyond the simple economic interest. Still, CSR is considered as an important business strategy –93.5% of businessmen interviewed agreed with this statement– (Carroll, 1999). What is clear is that such practices are widely accepted by stakeholders that want them to be applied in strategic models (Lee, 2008; Porter and Kramer, 2006).

Providing a comprehensive managing framework to understand and obtain a good balance and orientation among the company's management that leads to implement CSR practices in marketing is one of the aims of the work of I. Maignan, Farrell and Ferrell (2005), where eight stages are proposed to apply CSR in marketing: first, to discover values and organizational rules; second, to identify the interested parties; third, to spot the issues of the interested parties; fourth, to assess the meaning of CSR; fifth, to revise the usual practices; sixth, to carry out CSR initiatives; seventh, to promote CSR by creating awareness and involving the interested parties; and eighth, to obtain information from the interested parties. All the marketing activities of a company –CSR is incorporated into marketing through processes based on: listening, communicating, adopting, recognizing, avoiding conflicts, working, etc.– are driven by the values and general regulations of the organization.

Therefore, the active support of the management and a positive attitude towards the implementation of CSR systems in the company are fundamental for the organizational change. It is them who give a meaning to company-society relationships (Pedersen, 2010).

Another important factor that facilitates the application of CSR philosophy within a company is the development of organisational capacities as a resource that helps the company to obtain competitive advantage (Linz, 1996). The literature on strategic management suggests that companies should develop different capacities that explain the success or failure as a company (Teece et al. 1997). In this sense, Black and Härtel (2003) introduce corporate management capacity to describe how a company can adapt to the social context and effectively respond to the demands of the different parties they interact with. These authors define such capacity according to two orientations that the company can follow: social responsibility orientation and public relations orientation, and they propose a CSR model based on four concepts: strategic management, social responsibility, public relations and marketing. The analysis performed for public and private companies suggests the existence of five managing capacities that can be measured separately: the value tune of public relations through which three factors are captured –the knowledge and use of the information on stakeholders, the strategic relevance of the PR function and the adaptation of the resources added to that function–, the participation of stakeholders, responsibility, ethics and dialogue.

Those environmentally concerned companies that opt to develop environmental strategies that minimise their negative impact on the environment are also more prone to apply CSR

philosophy in their management. Therefore, ecological management, also called green or environmental, would be another driver for CSR in companies. There are many good reasons for green management, but it is so relevant at this moment of history and in this cultural context because people expect that businessmen and managers (Starik and Marcus, 2000) carry out certain actions: a wise and responsible use of resources; environment protection; reducing to a minimum the amounts of air, water, energy, minerals and other materials used for the final products that the public consume; recycling and reusing those products as far as possible, rather than relying on nature to replace them; respecting natural calm and beauty; eliminating toxic products that damage people at their workplace; reducing the emission of greenhouse gases and avoiding activities that may be harmful for climate. But the question is, why are these activities so widely accepted? As observed in the accounts of numerous organisations, companies do not object to *green management* (Porter and van der Linde; Vogel 2005). Instead, they try to incorporate it and benefit from it. In fact, for some companies *green management* has generated competitive advantage. Such companies have not only been able to reduce costs and take the lead in that field by the application of environmental efficiency, but they have also followed a strategy based on the development of products for green market niches (Shrivastava, 1995).

Innovation opportunities in *green management* are many, but also are the handicaps. For instance, based on the evidence of case studies, Porter and Van der Linde (1995) concluded that expenditure on the so-called *green management* may improve a company's competitiveness, but it may also involve a high-risk investment for the company. Ecological management may be a different decision from the one commonly made by managers. But assuming that risk is present in all the decisions made by a company, but the risk of green management is not probably higher than the rest of management initiatives. Do companies face higher costs in their beginnings? (Capar and Kotabe, 2003). It is the relationship between ecological and financial benefit in U shape rather than lineal –as in other cases of management initiatives– what has to be explored (Lu and Beamish, 2004). Campbell (2006) also claimed that CSR is an area of growing interest for academics and professionals in theoretical and practical terms. A recent tendency in CSR literature is to analyse the institutional advantages derived from the implementation of CSR.

In this respect, literature has revealed the existence of companies that develop proactive strategies, considered as urgent, beneficial and sustainable ways in relation with the natural environment (Aragón-Correa and Rubio-López, 2007). In some cases, these companies follow this way on their own initiative, but in other cases they are forced by legislative pressure, by customers' demands or considering the possibility of obtaining competitive advantage in costs or differentiation (Fraj, Martínez and Matute, 2009a). The latter are defined in literature as companies that show a reactive behaviour towards social and environmental issues. Henriques and Sadorsky (1999) also observed that the relationship between the company's environmental commitment and stakeholders' perceptions is stronger for proactive companies than for reactive ones.

Finally, another major driver for the application of CSR in companies is the possibility of improving or increasing results. These authors revise a total of 21 empirical studies that measure the statistical association between perceived CSR and the traditional financial result. They find that those companies perceived as socially responsible obtain similar results to the ones that are not, and they called this phenomenon "the paradox of social cost". The works analysed span from 1972 to 1992 and, according to them, five explanations for the paradox

were found: first, socially responsible companies are identical to non-socially responsible ones; second, the experiments to prove the association between CSR and traditional financial results have not been thoroughly designed and controlled; third, a conscious search of CSR goals leads to better financial results; fourth, only those companies with a better performance in financial terms can afford a conscious search for CSR goals; and fifth, sometimes a conscious search for CSR goals results in better financial results.

In line with the reasoning above, Devinney (2009) has pointed out that the capacity of companies to recognize market demands facilitates the success of the business: *“the companies that work with the most socially acceptable practices will have more satisfied customers, but also more satisfied workers and suppliers who will improve the company’s performance, thus producing more satisfied owners. They will be able to obtain benefits for longer and successfully face potential adverse circumstances”* (p. 48). Consequently, CSR becomes a key notion for the strategic approach of many companies (Kotler and Lee, 2004; Lichtenstein et al., 2004).

Generally, as long as the market perceives the behaviour mentioned, unless it is perceived as opportunist, the literature predicts positive results in terms of brand image, positioning, customer satisfaction, sales figures and market value (Brown y Dacin, 1997; Barens et al., 2005). But not only financial results must be considered. Those companies concerned about economic, social and environmental aspects also seek other benefits. Thus, some works have analysed the existing relationship between the philosophy of environmental marketing and business results, studying the benefits derived from the demand and concluding that the development of environmental marketing strategies helps to optimise the commercial and economic benefits of companies (Fraj, Martínez and Matute, 2009; 2010). Moreover, environmental marketing is revealed as an excellent strategy to obtain competitive advantages in costs and in product differentiation (Fraj, Martínez and Matute, 2009).

Consequently, there are numerous driving factors of CSR philosophy that explain the different behaviours and strategies of companies in the market. The study of such factors would clarify the existing differences between companies in the same sector and would also explain the difficulties to enter some markets as a result of other obstacles.

This section shows there is a long way to go in terms of CSR. The present work attempts to identify some drivers to implement CSR practices in companies and the following section will try to find the keys to determine a certain concern level in customers, evaluating the implications derived, all of which are displayed in the empirical study below.

3. EMPIRICAL STUDY

This study is aimed at studying the drivers of CSR in companies and to what extent companies really care for their customers’ needs and concerns. Additionally, the reactions of the market in each situation will be tackled. Accordingly, some starting questions, that also represented the reference guide for data collection and the development of semi-structured interviews, are:

- Are companies really and sincerely concerned about their customers?
- What do companies understand by CSR? What are their drivers?

- Which factors affect this decision?
- Which implications can be derived for companies and customers?

We hence follow the methodological line proposed by McCutcheon and Meredith (1993) who recommend starting with a very simple initial formulation of the research problem. Only some variables with a recognized potential, *a priori*, in previous studies are specified. However, this formulation of the problem does not initially assume any causal relationship, but simply acts as a reference guide. It is proposed that i) aspects like the sector or the strategy of a company might influence CSR practices, and ii) CSR presents some potential to influence the company's results.

As for the technical features of the empirical work (see table 1), this study analyses the reality of 9 companies in different sectors. The first approaches to the selected companies revealed that they had very heterogeneous characteristics in sector, size, geographical area, strategic profile, property structure, internal organization, experience and management training. Therefore, considering the terminology proposed by Yin (1994), this is a case of multiple case study. Considering several independent cases makes the conclusions stronger, over the alternative of selecting an only study case. Having analysed several companies in the same sector (building) and other sectors reinforces the multiple case study pattern. Annex 2 shows the characteristics of the companies analysed. Their names have been replaced by numbers to guarantee anonymity.

The information was obtained mainly through semi-structured interviews with the companies' managers, so that the dynamic character of fit processes could be analysed. The questions cited above were utilised as a guideline. The interviews took place between May 2006 and March 2007. The conclusions were confirmed early in 2010, thus including a longitudinal cut in the study. The interviews were recorded and transcribed for further analysis. A protocol of action was created and data were triangulated, following all the recommendations of Yin (1994) to guarantee the reliability, validity and objectivity of the study.

Table 1. Fieldwork technical data

UNIVERSE: Spanish companies
SAMPLE: 9 companies.
GEOGRAPHICAL MARKETS: Based in Andalucía (2), Aragón (5), Cataluña (1), Madrid (1)
AVERAGE NUMBER OF EMPLOYEES: 84 (plus subcontracting and temporary jobs)
SECTORS: Real state, chemistry, car industry, food and agriculture, services.
MARKETS: regional, national, international (in some cases)
AVERAGE SALES FIGURES: not available; information not given by companies.
SOURCES OF INFORMATION
Primary: observation, in-depth interviews revision of internal documents, informal visits.
Secondary: bibliographic revision, reports from institutions, press releases, internet sites.
KEY INFORMANTS: 9
DATES: May 2006 – March 2007 (1st stage); January-February 2010 (2 nd stage)
DATA ANALYSIS: QSR Nvivo Demo software

The information was analysed through QSRNVivo software, recommended for the analysis of qualitative data. In this respect, it is necessary to explain that the software does not replace the actions of the researcher when carrying out the analysis, but it is an essential help to store, manage, encode (and re-code), organise and recover information (Maclaran and Catterall, 2002). Additionally, a preliminary report was written and sent to the interviewees to verify whether the conclusions were in line with the interviewees' comments. This process of interviewer-interviewee interaction after the interviews and before the final report has been defended in the literature by, among others, authors like Miles and Huberman (1994) and Yin (1994) as a suitable strategy to reduce the potential subjectivity of the study related to the researcher's bias.

4. RESULTS

The initial questions mentioned above act as a guide for the analysis. In addition, the information obtained is complemented with a specific bibliographic revision which helps to define the variables derived from the research. These variables have to be interpreted in the context that defines case study. The management of the database structure and the analysis of the information obtained is the whole research team's responsibility.

Annex 1 displays the summary of the information coding process, differentiating between theoretical variables (T) –defined before the analysis of the information according to the bibliography– and induced variables (I) –defined by the research team along the coding process. This section reproduces some of the most outstanding *verbatim*s from the interviews that form the whole database of the research.

Consequently, this research suggests that companies are increasingly concerned about CSR. Competitive and market forces lead companies to find some differentiation sign in line with their customers' needs. The data obtained also allow indicate two different behaviour profiles: proactive and reactive companies. Statements like the ones below support such idea.

"We enjoy helping children to do sports... soccer, basketball and other team sports... we also have a specific programme for young sportsmen/women... we think that we have responsibility for them... children are the future of our society. Of course we would like our potential customers to know this, but we are sure that the money we spend is higher than the impact we get. If we spend that amount of money on advertising our firm will be better known, but we have a responsibility with society" (Company 1)

"Of course we have a responsibility with society, we have always thought that... our firm is well positioned not only because of the quality of our construction, design, price and guarantees but also because of the image we have for consumers... Everybody knows we distribute an amount of our profits to development and cooperation programmes worldwide for a long time... this is not a last-minute strategy to show that we are in line with societal values... so probably we are in better position than those who have only recently decided to show a responsible image" (Company 3)

"We are so small, we cannot do many things... in our city people enjoy playing soccer and ice-hockey, so we decided to give money for both the local championship and the hockey team... This is our way to say Hi, we are here and we are aware of your desires, wishes and concerns!" (Company 5)

“If market wants social commitment we have to show social commitment. We can support some campaigns but we need to communicate ~~to~~ with our potential consumers. I do not want to work against the market trends... this is what my father and my grandfather explained to me... the only thing is that market does not react immediately” (Company 6)

Thus, companies 1, 3, 5, 7 and 8 would correspond to a proactive profile, whereas companies 2, 4, 6 and 9 would have a reactive character. The latter group recognises that they have recently started to tackle the CSR concept, when sales have become more difficult.

As for the group of proactive companies, it is striking to see that CSR decisions are closely connected with the value structure of these companies' owners and/or managers.

“I believe in CSR... we have obligations with society and with future generations, so since the foundation of the firm three years ago I was sure that implementing CSR activities was necessary. I also knew that CSR was a fashionable concept... Investors did not demand it but as a CEO I talk to them about CSR's potentials, so we started up some collaborations with local agents as well as with environmental associations and our strategy has been highly valued” (Company 8)

“We have not many laws related to socially responsible behaviours...but we have always developed some activities in such line. I trust ~~on~~ people and we get resources from society, so we have obligations... and CSR is one of the tools we have to say thanks and show gratitude...” (Company 7)

“I understand that we have responsibilities with people... with our society... that we only have one planet... but if nobody, and I am talking about my reference market, values my effort, why should I invest in environmentally friendly systems? Only a few of my competitors do it, so... Many times I am in conflict... I want to do one thing but I have to do the opposite... For this reason I love laws... if I had to follow a certain rule and all of my competitors also had to comply with it my competitive position would be similar to theirs” (Company 6)

This statement proves to be extremely relevant, since in cases where either the market or business values are not enough to develop CSR actions, and in those cases where the externalities generated may be harmful for society, a suitable legal framework will be necessary. This idea is also portrayed in company 9:

“An unavoidable commitment of our firm has been and will always be to comply with the legislation” (Company 9)

Furthermore, the study attempted to unveil the market reaction towards actions developed by companies. Data suggest that the market, on the whole, has a positive assessment of CSR actions, except for the case of reactive companies. These companies are sometimes considered as opportunist and thus are penalised. For example:

“Sales have slowed, and if we want to sell at all we have to deliver exactly what customers are looking for... now more than ever we need to be market oriented and sensitive to customer preferences... this approach is not only a must if profit is to be made, but if we are to survive at all... and preferences are not only related with the product but also with other social aspects such as cultural or sport sponsorship, environmental and development programmes... So we have recently decided to give some money for cultural activities, for development

programmes through Aldeas Infantiles -Spanish association for helping children in developing countries- and of course we want the market to know this... but we are not sure if we are achieving this objective... maybe more time is needed... ” (Company 4)

Consequently, the major drivers of CSR for companies are, apparently, the owners’/managers’ values, market tendencies and, occasionally, regulations.

5. DISCUSSION AND CONCLUSIONS

The existence of abundant literature on CSR related themes reveals that this is an issue of interest because of its topicality and the repercussions this business philosophy represents for companies. It is a current issue, although it started to be mentioned in the mid 1990s, being companies unaware of it, as the definition of the concept proves. And it is an issue of interest due to the consequences that follow from its application in companies. In the present times, when companies face up a highly competitive and exigent market and they are going through a period of difficulties as a result of the financial crisis, many have seen CSR as a reason to differentiate their offer and maintain themselves in the market or invigorate their business.

The more market-oriented companies often anticipate the others and design processes and strategies that consider social and environmental demands. These companies follow a proactive policy, usually obtain the management’s support to develop social and environmental initiatives, have environmental management as a priority in the organisation, spread information on those issues in and out of the company, and promote awareness programmes and environmental training. On the other hand, less market-oriented companies show a more reactive behaviour, that is to say, they have a shorter-term sales vision, have no support from the management in social and environmental issues, and if they ever do it, it is sheer opportunism. This type of companies believe that environmental management is unnecessary, and do not even intend to develop training programmes for the employees on such issues. There are other companies that follow a defensive behaviour or attitude, and they were defined by Henriques and Sadorsky (1999) some as “defensive” and others as “accommodative”. Nevertheless, the cases reported in this study would belong to both extremes. That behaviour is certainly conditioned, in some cases, by the company’s size and sector. Thus, bigger companies and those with a stronger environmental impact are often more aware of CSR philosophy.

As initially remarked in this chapter, the major factors that have driven the development of CSR in companies are the management’s commitment to social and environmental aspects, the relevance attached by the company to environmental management and the possibility of obtaining better results. After revising the main works on CSR, it has been observed that market-oriented companies always try to anticipate any potential change, and thus they pioneer the application of ISO norms and standards, the creation of sustainability reports according to the Global Reporting Initiative (GRI) criteria, they run for prizes that recognize good social and environmental practice, etc. And the origin of their market orientation and their long-term vision lies, in most cases, in the management’s commitment to those issues and the employees’ careful and constant training. It also seems logical to think that companies with such behaviour intend to reach a privileged position in their sector and exemplary results, but, which business does not?.

According to Peattie and Crane's (2005) work on the mistakes that environmental marketing often makes, companies have to consider that the application of CSR philosophy will be effective when: first, they are market-oriented and not sales-oriented, being sales an added promotional dimension; second, they consider all the company's departments when attempting to change their organisational culture; third, they set a long-term horizon to obtain any benefit and competitive advantage; and fourth, innovation and business imagination prevail over fast and ephemeral benefits.

This study has revealed a growing concern among companies for this issue and it is the market itself, increasingly more competitive, the one that drives them to find some type of differentiation and have a greater consideration for competitors and customers. Therefore, it is essential for companies to be market-oriented since this will allow them to constantly anticipate and adapt to the future changes that may occur in social, economic, technological and legislative aspects.

Despite the relevance of our conclusions and the richness of implications for professional good practice and management, the following limitations are worthy of mention:

- The study is mainly based on personal opinions as expressed in interviews. Hence, bias may occur both as a result of the particular image key informants wish to portray and due to inevitable idiosyncrasies in individual perceptions of the concepts we analyse.
- The study is subject to the inherent limitations of case study based research. One should exercise caution when attempting to extrapolate conclusions, therefore, as similarities and differences in economic and business environments must be thoroughly assessed before any kind of analytical generalization can be carried out. The nature of the case studies analyzed (intra-industry) also guarantees the reliability and significance of the results, while our longitudinal approach also increases the interest and relevance of the findings.

Proposals for future lines of research include extending the study to different sectors and cultural/geographical contexts with the objective to enrich findings and broaden the scope by including new factors in the discussion. Analysing a more heterogeneous sample population comprised of companies categorized by sector, size and country would help to determine the potential significance of propositions derived from our research. Studies which compare family versus non-family firms would be also of interest in order to test the relevance of values.

ANNEX 1: SUMMARY OF THE CODING PROCESS¹

dimension	Variable	Definition	Nature
Market-industry	Competitive pressure	Industry's competitive situation, offer-demand relationship, no. of competitors, alternatives for consumers	Theoretical
Company character	Owners'/managers' ethical pattern: values	Beliefs and values system of people responsible	Induced
	Management training	Training level, differentiating between basic, intermediate, superior + general or specific	Induced
	Behaviour profile	<i>Proactive</i> : anticipation <i>Reactive</i> : reaction	Induced
Legal aspects	Regulations	Set of rules related to the product's characteristics, industry, manufacturing process...	Theoretical
Results	Objective	Benefits, market share	Theoretical
	Subjective	Survival likelihood, customer's perceived satisfaction	Induced

APPENDIX 2: CHARACTERISTICS OF THE FIRMS INCLUDED IN THE MULTI-CASE STUDY²

Company	Industry	N° of employees	Volume of business (millions of euros)	Geographical Markets	Profile ²	Social marketing campaigns?
1	Real State	50	52	Spain (Madrid, Zaragoza and Mediterranean coast)	Proactive	YES (sport sponsorship)
2	Real State	8	4	Spain (Zaragoza)	Reactive	NO
3	Real State	n.a.	751	Spain, Portugal and Poland	Proactive	YES (development programs sponsorship in India and El Salvador)

¹ The nodes included in this table are those directly related to the article's theme. These nodes may be globally considered as theoretical nodes, if researchers in further studies so decide.

² Source: firms.

Table. Continued

Company	Industry	N° of employ- ees	Volume of business (millions of euros)	Geogra- phical Markets	Profile 2	Social marketing campaigns?
4	Real State	285	270	Spain (Cataluña, mainly) and Europe	Reactive	YES (in-kind contributions)
5	Real State	29	7	Spain (Aragón, Pyrenees area)	Proactive	YES (sport sponsorship)
6	Chemical	13	4,5	Spain (Aragón, Madrid, Cataluña), France, Italy, Portugal, Marocco	Reactive	NO
7	Services	19	7	Spain	Proactive	YES (sport sponsorship)
8	Winery	9	3	Spain (80%), international markets (15%: UK, Switzerland, mainly)	Proactive	YES (local programs of cooperation)
9	Automobile	670	7,5	International scope	Reactive	YES (internal brochures and web mainly)

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Chapter 5

**WHEN AGENTS BECOME STEWARDS:
INTRODUCING LEARNING
IN THE STEWARDSHIP THEORY**

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ABSTRACT

According to Stewardship Theory, conflict arises when agents and stewards work together, as the agent will tend to free ride over the steward, who feels betrayed and frustrated. While Stewardship Theory proposes a valuable alternative to Agency Theory, it is static, because it assumes no learning in individuals as a result of their interaction. This paper brings dynamics into the picture by introducing the learning that occurs inside each agent every time they interact. It is argued that individuals learn in the process of interaction and can change their preferences –not necessarily feel betrayed and frustrated. The decision making theory of Pérez López (1991 & 1993) gives foundations to the arguments proposed in the paper.

**1. AGENCY THEORY AND THE NEED FOR
MORE PRO-MANAGEMENT THEORY**

There is a recent claim for theories that present a more positive view of managers and organizations (Donaldson, 2005; Nahapiet et al., 2005). Research is now forced to confront fundamental views of human intentionality and motivation in order to understand complex organizational phenomena, like social capital or cooperation (Nahapiet et al., 2005). Influential authors like Barnard (1938) or Simon (1991) asserted that the research agenda should be leaded with empirically valid postulates about the nature of human beings, and what motivates those real human beings in real organizations. These postulates, though, would

require a better alignment of corporate and social interests, to reconcile the economic and moral dimensions of management (Ghoshal and Moran, 1996). In this vein, Donaldson and Davis (1991 & 1993) rethought the corporate governance issue by challenging the prevailing assumptions of human motivation that derived from Agency Theory. These authors developed Stewardship Theory, a new perspective to understand the existing relationships between ownership and the management of the firm. Over the last two decades, several contributions have confronted the opposing views of Stewardship Theory and Agency Theory. Empirical studies have attempted to validate the two different theories as a “one best way” to corporate governance, assuming either one model or the other (Davis et al., 1997). Nevertheless, the challenge lies in blending the best of both models and furthering conceptual advance (Hambrick, 2005).

While Stewardship theory arises as an important counterweight to Agency Theory, it suffers from being static, as it considers the relationship of Principal-Agent at a single point in time. While this simplifying assumption allows to picture a comprehensive model, it does not reflect the motivation that agents may have to deviate from an agent position towards a steward one. According to this theory, when an agent and steward interact together, the first behaves opportunistically and the second feels betrayed, what results in a situation where the two parties end up adopting an agent position. The objective of this paper is, precisely, to introduce learning and dynamics into the principal-steward relationship. It explained both the mechanisms through which an agent can learn to be a steward, and the crucial role that the principal plays in this process. After this introductory section, where we revise the main tenets and flaws of Agency Theory, the second section deepens into the Stewardship Theory as the organizational counterweight to economic theories of management. The third section explains why Stewardship Theory suffers from being static, and underpins the importance of introducing learning in the relationship dynamics between principals and agents. The fourth section proposes a theory of human action that allows a better comprehension of both the dynamism in the principal-agent relationship, and the managerial mechanisms that influence an agent to become an steward. The fifth section concludes and summarizes the paper.

Agency Theory, developed in the financial economics literature (e.g., Jensen and Meckling, 1976; Fama and Jensen, 1983), has attracted organization theorists and strategic management scholars, resulting in a large number of studies over the last three decades. Agency theory asserts that, due to the separation of ownership and control in modern corporations, there is often a divergence of interests between the parties involved: the principal and the agent (Hoskisson et al., 1999). Owners become principals when they contract with executives to manage their firms for them. Principals invest their capital in a company and design governance systems that maximizes their utility. The executive accepts the agent status when they perceive the opportunity to maximize their own utility. Agents accept managing the principal's capital because they perceive more utility with this opportunity than with other possible alternatives. The crux of this matter is that principals delegate authority to agents to act on their behalf. It is this delegation that allows agents to act opportunistically at the expense of principals' wealth (Davis et al., 1997). For Agency Theory the central problem of corporate governance is how the principals ensure that executives act in the shareholders' interests rather than their own.

Two agency problems arise under circumstances of incomplete information and uncertainty: adverse selection –the principal cannot assess if the agent does represent his ability to the job for which he is being paid- and moral hazard –the principal cannot be sure if

the agent has put his maximum effort- (Eisenhardt, 1989). Both individuals are motivated by opportunities for their own personal gain, and conflict occurs when the interests of the agent diverge from those of the principals (Jensen and Meckling, 1976). The interest divergence among the two actors may lead to losses to the principal, who ends up imposing control structures upon the agent to mitigate the potential abuse of delegation and information asymmetry (Eisenhardt, 1989). The objective of AT is, precisely, to reduce the agency costs derived from the principals' internal controls to keep the agent's self-serving behaviour in check (Jensen and Meckling, 1976). Agency Theory prescribes several governance mechanisms to protect shareholders returns and facilitate principal-agent interest alignment. Some of those mechanisms are financial incentive schemes –e.g., long-term rewards for the agent tied to firm performance- or the design of an appropriate governance structure for the firm –e.g., increasing the number of outside board members to perform audits and evaluations- (Daily et al., 2003).

The model of man underlying agency theory is that of a rational actor who seeks to maximize his or her utility with the least possible expenditure (Jensen and Meckling, 1976). Agency theory assumes that human beings are bounded rational, self-interested, and opportunistic (Eisenhardt, 1989); a calculating individual that seeks to attain rewards and avoid punishment, especially financial ones (Donaldson and Davis, 1991). The firm is conceived as a nexus of contracts, and it is assumed that contracts can motivate, reward and supervise agent's efforts (Hoskisson et al., 1999). Economics of the organization has often been criticized for its reductionist model of human motivation, an over-simplification for mathematical modelling (Perrow, 1986; Ghoshal and Moran, 1996). Despite this reductionism, in science the validity of a model has traditionally rested on the utility of its predictions, not on the accuracy of its assumptions (Donaldson, 1990); that is why a simplistic model of human motivation like that of Agency Theory has been considered scientifically valid. The problem lies in the fact that this reductionist assumptions of human motivation guide both organization and managerial theory building, and serve to produce behaviour in the organization that is consistent with those assumptions (Ferraro et al., 2005). Moving towards a more humanistic managerial perspective like Stewardship Theory may not readily yield sharp and testable propositions (Ghoshal, 2005), but it won't provide simple and reductionist managerial propositions. This is the attempt of stewardship theory that we describe next.

STEWARDSHIP THEORY: MAIN TENETS AND ASSUMPTIONS

Stewardship theory has been framed as the organizational behaviour counterweight to rational action theories of management (Donaldson and Davis, 1991 & 1993). This theory holds that there is no conflict of interest between managers and owners, and that the goal of governance is, precisely, to find the mechanisms and structure that facilitate the most effective coordination between the two parties (Donaldson, 1990). Stewardship theory holds that there is no inherent problem of executive control, meaning that organizational managers tend to be benign in their actions (Donaldson, 2008). The essential assumption underlying the prescriptions of stewardship theory is that the behaviours of the manager are aligned with the interests of the principals. Stewardship theory places greater value on goal convergence

among the parties involved in corporate governance than on the agent's self-interest (Van Slyke, 2006). The economic benefit for the principal is a principal-steward relationship results from a lower transaction costs associated with the lower need of economic incentives and monitoring. Researchers, in general, have tended to ignore the principal as the agent and have overemphasized the role of the manager as the agent.

The model of man in stewardship theory is someone whose behaviour is ordered such that pro-organizational behaviours have higher utility than individualistic behaviours (Davis et al., 1997). This model of man is rational as well, but perceives greater utility in cooperative behaviours than in self-serving behaviours. A steward's utility function is maximized when the shareholders' wealth is maximized. The steward perceives that the utility gained from interest alignment and collaborative behaviour with the principal is higher than the utility that can be gained through individualistic, self-serving behaviours (Davis et al., 1997). Stewards are motivated by intrinsic rewards –i.e., reciprocity, mission alignment- rather than solely extrinsic rewards. The steward, as opposed to the agent, places greater value on collective rather than individual goals; the steward understands the success of the firm as his own achievement. Therefore, the major difference between both theories is on the nature of motivation. AT places more emphasis on extrinsic motivation, while Stewardship theory is focused on intrinsic rewards that are not easily quantified –i.e., growth, achievement, duty-.

Stewardship theory is mainly concerned with identifying the situations in which the interests of the principal and the steward are aligned (Donaldson and Davis, 1991 & 1993). According to this theory, there are situational and psychological factors that predispose individuals to become agents or stewards. On the one hand, there are situational factors that influence the executive to become a steward. These situational factors refer to the surrounding cultural context, rather than to an organization's work environment. Some of the situational factors that predispose an individual towards stewardship are working in an involvement-oriented management system –i.e., as opposed to a control-oriented management system-, a collectivistic culture –i.e., as opposed to an individualistic one-, a low-power distance culture, or when corporate governance structures give them authority and discretion they have a tendency to act as stewards (Donaldson and Davis, 1991). On the other hand, there are psychological factors that predispose the executive to become a steward. Some of these factors are having higher-order motivations, better disposition to identify with the objectives of the firm, value commitment orientation, and greater use of personal power as a basis to influence others (Davis et al., 1997). To sum up, the psychological and situational characteristics of the principal and the manager are antecedents for their rational choice between agency or stewardship relationships (Davis et al., 1997).

According to Davis et al., (1997), the process through which the parties decide to be agents or stewards can be synthesized as follows: First, this is a decision made by both parties of the relationship. Second, the psychological characteristics and the cultural background of each party predispose the individuals to make a particular choice. And finally, the expectation that each party has about other will influence the choice between agency or stewardship relationships. Davis et al., (1997) remain silent, however, about the specific interactions of antecedents in the prediction of stewardship versus agency theory. When the factors that surround the individual, both psychological and situational, are aligned to make him decide as a steward or agent, the situation is clear as there is no conflict inside the person. The problem arises when there are conflicting forces between the psychological and the situational factors. For instance, some of the psychological attributes of the individual may predispose him to

become an agent –e.g., the manager is solely motivated by extrinsic motives-, whereas the situational mechanisms orient him to become a steward –e.g., empowerment management systems-. This mismatch between the management philosophy of the company and the psychological characteristics of the manager remains rather unexplored under current stewardship theory. In the existing literature on stewardship theory it is not evident which are the underlying mechanisms that make an individual opt for one position or the other, what sort of situational factors –if any- can influence the person to transcend his own self-interest, and how the individual resolves his internal inter-motivational conflict. This paper aims to contribute to explain how to resolve the dilemma of conflicting factors within the agent.

Another point that needs further exploration in Stewardship Theory is the assumption that becoming a steward or an agent is the result of a rational process. In this rational process, the individual evaluates the pros and cons of one position versus the other. For instance, there are contributions in stewardship literature that argue that stewards are not altruistic, but that there are situations where executives perceive that serving shareholders' interests also serves their own interests (Lane et al., 1998). In this situation, agents would recognize that the firm's performance directly impacts perceptions of their individual performance. In other words, in being effective stewards of the organization, they also manage their own careers (Daily et al., 2003). This underlying argument raises an important question: How can an individual rationally decide whether his nature is that of a steward or an agent? What role motivation plays in this picture? We believe there is still a lot of work to do in terms of the underlying assumptions and mechanisms that define the theory of stewardship, and further theoretical perspectives are needed to help to explain its predictions. Following sections attempt to advance in this direction.

INTRODUCING DYNAMISM AND LEARNING IN THE PROBLEM

We argue that one of the most influential situational factors that affect the manager to become an agent or a steward is his direct relationship with the principal. Davis et al., (1997) represent this relationship with their Principal-Manager choice model. According to these authors, parties position themselves depending on the level of risk that is acceptable to each individual and his willingness to trust the other party. In this dilemma, the parties find themselves with three possible situations. *Situation #1*: When both the principal and the manager choose an agency relationship, the result is a principal-agent relationship. This situation benefits from a low risk of betrayal, as the principal puts in place the mechanisms to monitor agent's behaviour and the costs are controlled. *Situation #2*: When both the principal and the manager choose a stewardship relationship, the principal decides to invest in an involvement oriented and empowering situation because he trust in the behaviour of the manager. The situation of principal-steward benefits from the highest joint utility, and mutual gains are maximized. *Situation #3*: The dilemma occurs when the parties diverge in their choice. This is the case when the principal decides to be a steward while the manager decides to act as an agent. According to stewardship theory, the principal will feel betrayed because the manager acts opportunistically and takes advantage of the lack of control, so the principal will start monitoring and withdrawing empowerment. In a nutshell, when mixed-motive choice exists, the party choosing stewardship is betrayed, and the party choosing agency

benefits from opportunism. The relationship necessarily derives with time in a situation where both parties opt to behave like agents.

This Principal-Manager choice model, as Davis et al., (1997) state it, reflects two individuals choosing to become either a steward or agent at a single point in time. While this simplifying assumption allows a clearer picture of the model, a strong implication is that if one party is betrayed, the resulting relationship moves inevitably toward an agency model. The theory suffers from being static. This is the case because when time and relationships' dynamics are not considered in the pictures, individuals don't have any incentive to invest in a long term relationship characterized by trust and reciprocity. The authors themselves notice this limitation, and claim for further research exploring the choice of agency versus stewardship relationships over time. By introducing variables in the analysis that help to capture the dynamics of this relationship, the model gains realism. Agents become individuals capable of learning and changing their preferences as they interact throughout time. In sum, Davis et al., (1997) argue for the necessity of future research deepening in the dynamism of the interaction between agents and stewards.

The objective of next section is, precisely, to propose a theory of human interaction that describes the dynamism in the principal-agent relationship, and allows a broader comprehension of the different elements –i.e., besides pure rationality- that influence an individual to become an agent/steward. This theory brings into the analysis both the learning of the parties when they interact, and the stewardship development that results from that learning. It explains how managers can change over time from a position of agents towards a position of stewards, and the importance of principal's role in that learning process. While the principal can be considered a situational factor around the manager, it certainly detaches from the cultural aspect that have some of the factors proposed by Davis et al., (1997), and lets us to escape from the deterministic flavour that dominates existing literature.

The theory proposed in this article relies on the assumptions that stewardship relationships rely heavily on the trust and reciprocity developed between the principal and the manager through a history of interactions. It is argued that when the principal's relationship with the manager is characterized by honesty and uprightness, he is helping the manager to learn how to value the consequences of his decisions in others' welfare, and they may help to change his preferences and develop identification with the firm. Up to this moment, the debate of stewardship formation has been dominated by rationality; however, we will argue how there are elements that transcend rationality –i.e., evaluative learning, transcendent motives, etc- and are crucial to understand why individuals are disposed to move beyond an opportunistic position.

The logic of this theory can be stated in economic terms. In a principal-steward relationship, the principal invests significantly on time to manage the relationship in a collectively interested manner. While this may have associated costs in early stages of the relationship, it is an appropriate mean of controlling managerial opportunism in the long run. What we are suggesting is that the agency problem is not uniform throughout the life of a relationship. It is likely that, at a first stage, agency is most applicable. However, transaction costs may decrease as the parties comprehend the other's motives. Agency concerns rapidly decline when followed by potential upswings and increasing reciprocity among the parties. This means that agency theory offers little explanation concerning behaviours after alignment of interests is achieved (Jensen, 1983). In the long run, there will be benefits associated with a principal-steward relationship, because there won't be costs associated with the necessity of

continuous revision of the contract and strict monitoring controls. Such a cost reduction not only benefits the firm, but also the steward, who takes advantage from a higher involvement in contract definition and less exposure to monitoring costs (Van Slyke, 2006).

WHEN AGENTS BECOME STEWARDS: PEREZ LOPEZ THEORY

As stated in previous sections so far there has not been a clear theory that explains how and why an individual decides to act as an agent or as a steward. Our thesis is that it is the dynamism surged trough the interaction between two parties that determines the attitude chosen by each of them. To propose an explanation of the dynamics between two parties we rely on the work of Perez Lopez (See Perez Lopez 1991, 1993; Rosanas 2008 and Argandoña 2008).

It is through the succession of interactions between two parties what determines the relationship between both and the evolution of this relationship over time. For an interaction between two parties we understand a decision of one of them (that we call Active Agent (AA) following the Perez Lopez notation) that leads to an action (a) that affects to the other part (that we call Reactive Agent (RA)). The Reactive Agent in turn produces a reaction that affects to the Active Agent. Figure 1 depicts this situation. In our framework the principal can be considered the Active Agent and the manager the Reactive Agent. Whatever decision made by the principal can be considered as the action, and the response of the manager the reaction. As they interact over time, they alternate the role of active and reactive agents. The history of the interactions between both parties determines the state and the quality of the relationship between them. To understand how this relationship evolves over time we need to introduce a classification of the outcomes of a decision made for any of the agents.

What motivates an agent to initiate an action is to solve a problem. We assume the action chosen affects a second part (the reactive agent) otherwise it has no organizational interest. This action has three kinds of results or outcomes that we call extrinsic, intrinsic and transcendental results:

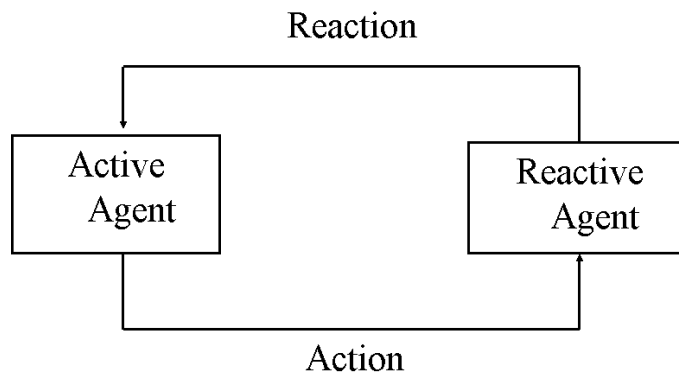


Figure 1. Interaction between two agents.

- Extrinsic results: the action of the active agent and the reaction of the reactive agent. They are observable outcomes.
- Intrinsic results: they are all the things that happen in the interiority of the active agent as a consequence of the action undertaken. The changes that the action produces in the active agent. As a consequence of these changes, the decision rule of the active agent changes. These intrinsic results are not observable from the outside as they occur in the interior of the active agent. They are inferable in the long term as they affect future decisions of the active agent and her relationship with the reactive agent.
- Transcendental results: they are all the things that happen in the interiority of the reactive agent –whoever she might be- as a consequence of the active agent's action. All the things said of the intrinsic results with respect the active agent can be said of the transcendental results with respect to the reactive agent, with the only difference that the intrinsic results are caused by the active agent on himself while the transcendental are caused on the reactive agent by the other part.

Defined in this way, intrinsic results of an interaction is whatever learning the interaction produces in the Active Agent. Likewise transcendental results are the learning that the interaction produces in the Reactive Agent. This learning can be operative learning or relational learning. Operative learning is the one that enables the agent to produce actions or reactions the she was not able to produce before. To learn a language; to learn to drive a car, or to work with a new software package are examples of operative learning. On the other hand, relational learning is whatever learning one part has about the motives and intentions of the other part when they both interact. The interactions between two parties are reflection of the underlying motivations of each. These motivations can be inferred from these interactions. This learning about the other's motivations is what we call relational learning. This learning will be present in and will condition future interactions between both parties. Rosanas (2008) develops more deeply these notions of learning¹. Part of the relational learning that a sequence of interactions produces in one of the parts is the condition of agent or steward chosen by the other part.

At this point, three different kinds of motivation rise as a logical consequence of the classification of the results of a decision. An agent, when making a decision, may do it pursuing an extrinsic result, an intrinsic or a transcendental one. Depending of which of them he pursues we say that she acts out of extrinsic, intrinsic or transcendental motivation. So depending of what are the objectives that move a person to act, we say that that person has one of these three types of motivations. Of course, in a specific decision the most normal thing is that one pursues the three kind of different results; the motivation to act is in general a combination of the three different kinds of motivations. When a physician performs a heart surgery he may do it to make money (extrinsic motivation) as well as to get a qualification as physician (intrinsic motivation) and to cure a sickness of her patient (transcendental motivation). There is only a motivation to act, but this motivation is the composition of the extrinsic, intrinsic and transcendental motivation.

¹ Although in his paper he calls evaluative learning what we call here relational learning.

This classification of motivations helps to understand the choice individuals make when deciding whether to behave as agents or as stewards. People who place a high weight to the extrinsic results and have more extrinsic motivation tend to choose a agent role, whereas people that value more transcendental results and have more transcendent motivation tend to act as stewards. It is very often observed that agents only pay attention to the extrinsic results as they are the only observable from the outside, and those are the results that solve or not the problem that originated the action. This is the reason for which we observe many principal-manager relationships like a principal-Agent one. But they are the transcendental results those that determine the quality of the relationship between two parties and are the intrinsic results those that determine the capacity of the active agent to engage in a better or worse relationship with any other reactive agent. So a necessary condition for someone to choose a steward attitude is that she include a component of transcendental motivation in her motivation to act.

It is through a chain of interactions –actions followed by reactions- that the relationship between two parties –principal and manager- is forged. If one part –i.e., principal- does not pay attention to the transcendental results, it makes the other part –i.e., manager- more difficult to pay attention to the transcendental results too, resulting in a relationship of lack of trust and need of monitoring between both parts yielding a situation in which Agency Theory will explain their behaviour. On the contrary, if one of the parties –i.e., principal- pays attention to the transcendental results of her decisions, she is helping the other part –i.e., manager- to pay attention to the transcendental results of her decisions too. At this point three things may happen; the first is that the other part (the reactive agent or manager in our scheme) was already motivated to pay attention to the transcendental results of her decisions. In this case a steward relationship is developed very quickly and easily. The second thing that may happen is that this reactive agent was initially not considering the transcendental results of her decisions but paying attention to the decisions made by the active agent –the way this active agent takes into account the transcendental results; the impact of her decisions in the reactive agent- makes her to start thinking of the transcendental results of her own decisions. In this way, the active agent is starting to develop a steward relationship with the reactive agent. Initially the reactive agent had only the capacity of develop a agency relationship with anybody, but through the learning produced by the interactions with the active agent, she develops herself up to the point of being able to engage in a steward relationship. If we apply this logic to our discussion, we realize that a Steward-Agent relationship, after a sequence of interactions, may end up in a Steward-Steward relationship if the steward manages to produce a positive relational learning in the agent or may end up in an Agent-Agent relationship if the Steward cannot improve the motivational quality of the Agent and she ends up behaving as an agent. The third case is when the active agent considers the transcendental results of her actions; she is trying to make the reactive agent aware –through her interactions- of the transcendental results of her decisions, and nevertheless the reactive agent keeps considering only the extrinsic results of her decisions. In such a case it is not possible to develop a steward relationship between both parts.

We see that it is through the relational learning produced in the agents by their interactions with other agents what produces their capacity or incapacity to enter in relationships further than those prescribed by agency theory. This ability or inability is precisely the main intrinsic outcome of the decisions of an agent. A steward or agency

relationship is developed through the relational learning produced in the agents in the successive interactions among themselves about the intentions and motivations of each other.

To this point we need to introduce the notion of virtuality. From the concepts discussed so far it might make readers to think that the choice between to be an agent or an steward relies on the rational knowledge that the parts have about what is the best attitude to choose when making decisions. One may think that once one part rationally understands what the best attitude is, then one can choose the preferred one. But things are not so simple. One thing is to rationally understand what the most convenient attitude is and the other is to embrace it. To embrace an agent role may be simple, but to act like a steward is normally more difficult. The reason is selfishness. When acting like an Agent one is pursuing a selfish attitude and so the motivation to act like that can be said is a spontaneous one. On the other hand to act as a steward may mean many times to overcome the selfish attitude of pursuing personal goals in order to achieve transcendental results. To chose to follow a transcendental result is does not lead to a spontaneous action. It requires in addition to a high enough rationality to understand that someone else's goal is worthy to pursue, an enough level of virtue. Virtuality can be defined as the capacity to control the spontaneous impulse to pursue our own goals in order to act pursuing the transcendental results that the rationality proposes us as worthy to be pursued. Without virtuality; without virtue, if one decides to act as a steward she can find difficult to act like that. The lack of virtue impedes her to undertake the actions needed to act like a steward.

CONCLUSIONS: LONG TERM RELATIONSHIPS INFLUENCE THE CHOICE OF STEWARDSHIP ROLES

Davis et al., (1997), in order to advance in the dilemma of choosing between an agency versus a stewardship relationship, adopted the simplifying assumption of a choice at a single point in time. While this simplifying assumption allows picturing a comprehensive model, it does not reflect the motivation that agents may have to deviate from an agent position towards a steward one. This is, with a single point in time approach, the inevitable progression of a conflicting relationship is toward an agency solution. According to this theory, when an agent and steward interact together, the first behaves opportunistically and the second feels betrayed, what results in a situation where the two parties end up adopting an agent position. The theory suffers from being static, it does not consider that the role of a long-term relationship is central to the choice of stewardship roles. This paper attempted to bring dynamism into the picture by describing how the dynamic relationship between Active Agent and Reactive Agent evolves over time. It is argued that when two parties approach a principal-manager relationship with a long term perspective, they may deviate from their initial position –either steward or agent- as a result of the learning that takes place when they interact. For instance, if one party behaves like a steward but is betrayed by the other party – who acts like an agent-, she may be willing to invest further efforts and time in order to change the attitude of his counterpart, and not necessarily behave like an agent too. In sum, introducing time and evolving relationships allows a better understanding of why agent-steward interactions not necessarily result in an agent solution.

According to Stewardship Theory, there are situational and psychological factors that predispose individuals to become either agents or stewards. Current literature is able to explain the equilibrium that results when the psychological and situational are aligned to make an individual decide as a steward or agent. However, existing literature is silent about a situation where there are conflicting forces between the psychological and the situational factors. This is the case, for instance, of a mismatch between the management philosophy of the company and the psychological characteristics of the manager. According to the work of Davis et al., (1997), this situation will inevitably result in an agency relationship. Our proposal, rather than a deterministic approach, was oriented to understand how an individual can change their internal state –i.e., from agent to steward- by interacting with her counterpart. It is argued that agents can learn to become stewards by shifting their internal motivation, from extrinsic towards transcendent motives. More concretely, we focused on how agents, with the interaction with stewards, may change over time and learn to value the consequences of their decisions in other individuals. Like this, a conflicting situation between certain negative personal traits and positive situational factors –i.e., a principal who values the transcendent results of his decisions- may result in a steward relationship.

According to existing stewardship literature, becoming a steward or an agent results merely from a rational process. We have wondered how an individual can rationally decide whether her nature is that of a steward or an agent. In the existing literature on stewardship theory it is not evident which are the underlying mechanisms that make an individual opt for one position or the other. It is necessary to understand what kind of inner force impulses the person to transcend her own self-interest and resolve her internal inter-motivational conflict. This paper outlined the role that virtuality plays to explain how an individual may move from an agent position –oriented towards extrinsic results- towards a steward position –oriented towards transcendent results-. It has been argued that virtuality complements rationality by controlling the spontaneous impulse to pursue pure extrinsic results –as opposed to transcendent results-.

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Chapter 6

SELECTING PROCUREMENT SYSTEMS FOR CAPITAL PROJECTS: A TRANSACTION COST PERSPECTIVE

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ABSTRACT

How to select a right procurement system is an essential decision in project management. The purpose of this article is to provide a concise review of the recent advances in understanding the selection of procurement systems and make suggestions on the future direction of research. From the perspective of transaction cost economics, construction procurers need to take into account the efficiency implications of bargaining power reversal in procuring a project. As three main types of procurement systems differ in their ability to shorten delivery time, adaptability to requirement changes and ability to identify liabilities, aligning procurement systems with project conditions would help mitigate the holdup threat and improve the overall efficiency of procurement. It is also suggested that, in the future, researchers in this field should seek to broaden the TCE framework to accommodate other important procurement decisions, particularly with respect to the handling of project risks.

1. INTRODUCTION

Infrastructure and buildings are critical inputs in economic development, particularly those with high spill over effects and high impacts on improvement of human wellbeing. The production of this type of capital goods differs from that of consumer goods in many aspects: discontinuous workload, mobile production site, less specific lump sum production investment, and endogenous design (Chang & Ive, 2007). The joint effect of these characteristics leads to project delivery taking forms distinct from those used for the typical transactions analysed in economics.

There is a wide range of procurement systems (also known as procurement routes) in use by construction procurers. Even though economic studies of organisation have been extraordinarily vibrant and fruitful in the past decades, our economic understanding of the selection of capital asset procurement systems is just at a nascent stage. There have been three lines of work.

First, choosing a right procurement system is believed to be one of the most important factors to project success. Given both this belief and the fact of recent innovations in procurement systems (such as partnering and the Private Finance Initiative), researchers in the field of construction and project management have attempted to devise a technique for aiding the procurer. Putting aside the practical usefulness of these tools, the theoretical basis on which they are built is normally not rigorous, offering scant insights into the intrinsic economic differences of procurement systems.

Second, while construction procurement has received attention in the economics of information (ex. Tirole & Laffont, 1993), the analysis is conducted at an abstract level, where procurement systems are simplified as nothing more than complete contracts that are presumed to be able to govern all contingencies during the contract life. In this complete contracting world, transaction governance structure has no role to play.

Third, transaction cost economics opens up the “black box” of organisation, stressing the importance of matching governance structures with transaction types. However, the focus of analysis was initially chiefly placed on polar modes of governance structure (i.e., hierarchy and market) with less attention being paid to intermediate ones (ex. Williamson, 1975). Whereas the hybrid mode was introduced at a later stage to patch up this limitation, little advance occurred in unravelling the mysteries of this highly heterogeneous (hybrid) class of governance structure, procurement system being a case in point. As a result, the present authors had to go back to square one and follow the methodology set out by Williamson (1985, 1996) to develop a transaction cost economics (TCE) theory of the procurement system by incorporating the economic features of procurement systems into modelling. After a decade of efforts, we have arrived at a point of reflection about what we have achieved so far and what still needs to be done in the future. This paper is structured as follows. After a brief introduction of procurement systems in section 2, the methodology underlying transaction cost economics is discussed in section 3. Next we offer three steps to the application of this methodology in the context of procurement systems. Section 7 provides conclusions and suggestions for the way forward.

2. MAIN TYPES OF CONSTRUCTION PROCUREMENT SYSTEM

In its broadest sense, construction procurement involves not only production of various types of facilities, but also financing and operation of them. In this paper, we will restrict our focus to the former, narrower scope. In current practice, there are three main types of procurement system that are used to govern the production part of construction procurement: the Traditional Method (TM); the Design-Build Method (DBM); and the Management Method (MM) (see Figure 1). Traditionally, the procurer retains a designer to complete the drawing and specifications before putting the construction of the project up for tender, so construction and design have to proceed sequentially. However, the increasing pace of

changes in business environments made the Traditional Method inadequate to satisfy the procurer's growing demand for fast delivery. The pressure to complete earlier led to the emergence of two new systems that allow the progress of works to be overlapped. In Design-Build, the project is let immediately after the scope of the project and key objectives/specifications have been preliminarily specified (known as concept design in practice). The early engagement of the design-and-build contractor matters because it creates the possibility of synchronising design and construction. The contractor is given choices to optimise the coordination between detailed design and construction of work packages. The delivery time can be further squeezed by using the Management Method. In it a professional project management company is involved from the very beginning, giving the procurer an option to seek a global optimisation in arranging the schedule of design and construction. Contracts for construction of each work package can then be placed 'just in time', or as soon as design of that package is complete. The downside risk of taking down this route is the increased complexity in coordinating independent work package contractors and identifying their liabilities, if something were to go wrong.

Alongside pressure for earlier completion, another client pressure for innovation in procurement system concerned problems of poor 'visibility', especially to a court or adjudicator, of facts determining responsibility for non-performance of projects. The DB method in part emerged in response to this problem.

3. THE METHODOLOGY OF TRANSACTION COST ECONOMICS

Transaction cost economics was inspired by a fundamental question addressed in Coase (1937): why are there firms at all? At a time when neoclassical economics predominated and the magic the market is expected to wield reached the summit of imagination, this new research direction lay fallow till Coase himself provided a clue to the answer (Coase, 1960). Using the market to allocate scarce resources is actually not as "frictionless" as assumed in neoclassical theory. Market governance is one possible governance structure, amongst several. When a governance structure is too costly to run, an alternative will be invented to supplant the existing one. Does this mean that what exists in reality must be the most efficient one? Not quite so. However, decision makers are presumably able to learn from failure and find more successful choices in the long run. Through an evolution-like (differential success) process of learning, the claim is that choice of governance structures will settle in certain patterns. The problem is how to make the theory refutable? A good strategy is to derive predictions of the conditions under which each governance structure (in our case, each procurement system) is expected in theory to enjoy relative advantages over the others, so that these predictions can be tested against the equilibrium decisions observed in the real world. For this purpose, TCE develops a methodology building around a tripod of propositions:

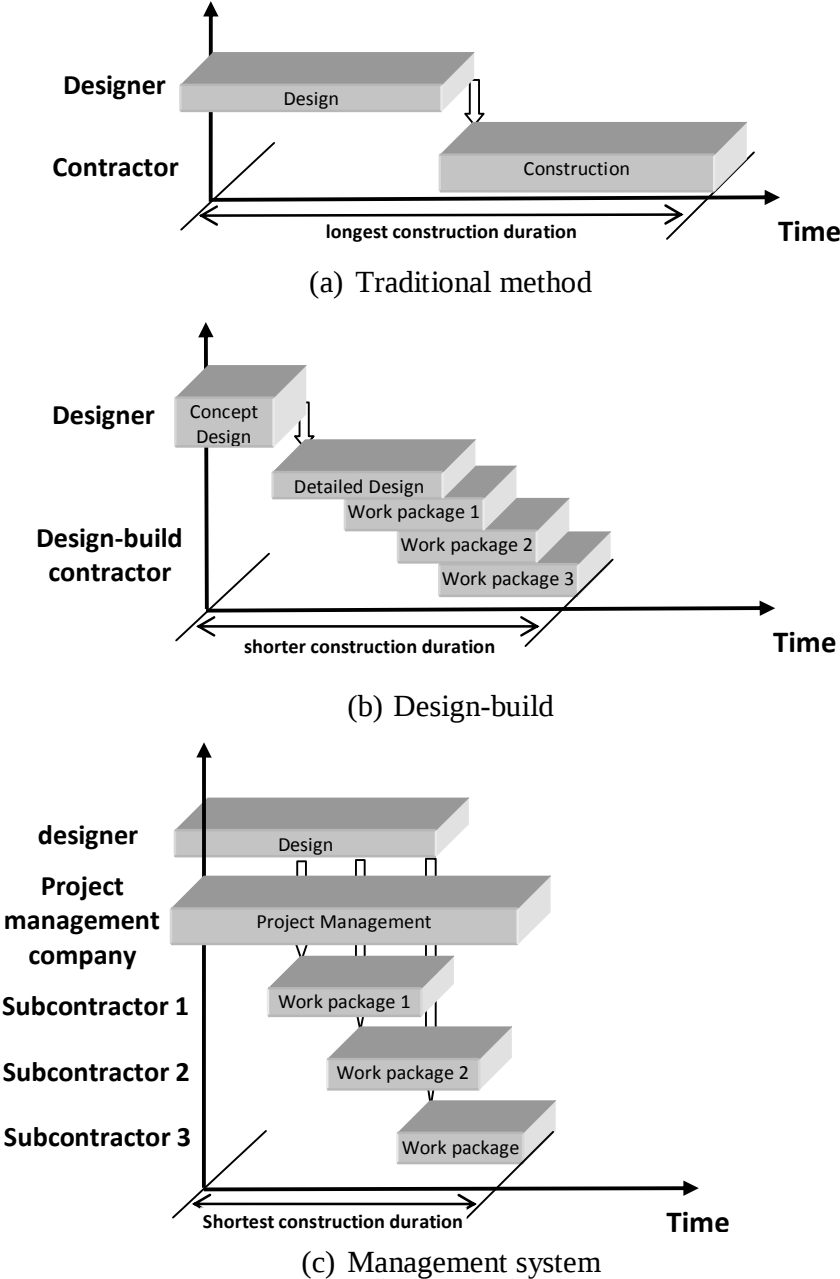


Figure 1. Three Main Procurement Systems.

1. The cost of using the market varies with transaction types;
2. One governance structure can handle a particular type of transaction in a more efficient way than the others;
3. Therefore, aligning governance structure with transaction type can enhance efficiency.

As most of the TCE analysis is set in the context of “make or buy” decisions, it is useful to take it as an example to illustrate how this model works.

Firstly, transacting through a market is costly. Apart from the resources incurred in searching-out trading counterparties, drafting and negotiating contracts, and monitoring performance, extra costs may be needed to sort out the disputes arising from post-contract renegotiations when unforeseen contingencies occur. The severity of the disputes chiefly depends on how much money is up for division. A good measure has to capture how much a trader would rather concede than simply drop out of the transaction in renegotiations. Klein et al.(1978) ingeniously connected a classic economic concept of quasi rent with the vulnerability of a trader in the transaction. It’s the expectation of the existence of quasi rent that causes transactional problems. What factor may contribute to the formation of this expectation? The answer Williamson offered is asset specificity. An asset is said to be specific when much of its original value would be lost if deployed to the best alternative use. The pressure to keep the asset in its best use, makes the investing party vulnerable to post-investment renegotiations. This expectation of opportunistic pricing by the counterparty will either prevent transactions depending on asset specificity from occurring or will lead to a worsening of transactional relationships. The problem gets worse the less we can rule out the possibility that unforeseen events may occur. However, the exercise of opportunistic strategy is not unbridled, particularly in dealing with repeat trading parties. As a result, asset specificity, together with two auxiliary factors of uncertainty/complexity and frequency, are the key determinants of transaction costs. It follows that using the market to handle transactions involving specific investment may prove to be costly, leaving the trader to wonder whether doing it in-house (making the transaction an internal one, between parts of a single firm) would be better. But why might a non-market governance structure have lower transaction costs, so that choice of governance structure matters? This is the question the second step of the methodology needs to answer.

A good way to think about the intrinsic differences among alternative governance structures is to examine how efficiently unforeseen contingencies can be handled. Williamson (1991) suggests three dimensions to be of critical importance. First, we should be concerned with how easily new information can be incorporated into the terms of transactions. Whilst the market is superior in generating unbiased price signals to guide scarce resources to their best use under known and given conditions, hierarchy can help facilitate the coordinated actions in coping when conditions change. Spontaneous adaptability versus deliberate adaptability is therefore the first point of difference to note. The second dimension worth exploring comprises the instruments available for a buyer in a transaction to get his/her expected quality when contingencies impact on a complex transaction. When goods are purchased from the market, the suppliers have strong incentives to pare down production cost because they will reap all the benefits of cost savings. By contrast, internal production gives traders greater control over the production and quality of the goods. Incentive intensity versus control is therefore the second difference to consider. Last, the efficiency of dispute resolution under a governance structure is also important. Disputes arising in market transactions are normally resolved via a relatively formal mechanism, such as arbitration or court. This is not the case in internal transactions in which the settlement of disputes is left to higher authority within the company.

The final step of the methodology is to discover the types of transaction each organisational form is best suited to govern. A transaction involving large lump-sum specific

investment may pose great hazards to the investing party if it is done through the market. The advantage of hierarchy in deliberate adaptability, control over the transaction, and dispute resolution will then tend to outweigh its weakness in spontaneous adaptability and incentive intensity, indicating that the greater the specific investment involved, the more relatively efficient in-house production will become and the more likely it will be chosen as governance structure.

All of the above section is the standard TCE of make-or-buy. But how is this relevant to selection between construction procurement systems, when none of those involve 'in house' provision by the construction client? Our answer is as follows.

Firstly, that there is a fundamental difference in the amount of client control and adaptation involved between buying the whole of a project as one integrated transaction and buying it as a client-coordinated set of transactions.

Second, that before a particular package of a project is put out to construction contract (but whilst it is being designed) the client exercises powers of control and adaptation of the kind that TCE associates with 'in house' provision. Whereas, once the relevant construction contract is signed, the package and transaction moves over from 'make' to 'buy'.

4. THREE CHALLENGES FOR A PROCUREMENT SYSTEM POSED BY THE ECONOMIC CHARACTERISTICS OF PROJECTS

Following the methodology of TCE, the first step is to explore the characteristics of projects that may alter the relative advantages of procurement systems. We have identified three factors that need to be considered: benefit of fast delivery, degree of process specificity and complexity of specialisation.

Construction procurers mostly set completion deadlines based on their business considerations. The demand for shorter delivery times should reflect the net benefit of early completion in NPV terms. When the benefits are large, the procurement system able to fast track the project will be more highly valued and thus more likely to be chosen.

Both the second and third factors are associated with transactional dangers posed to construction procurers. Before a project is contracted, the procurer can decide what he/she wants to build and, most of the time, dictate the terms of transaction. However, after the contract is signed, the procurer's advantage in bargaining power may reverse (and we will see that procurement systems differ in when they cause this 'fundamental transformation' to occur). Chang & Ive (2007) argues that how far the scale of bargaining power will tip towards the contractor at post-contract stage depends on the degree of *process specificity*, which, unlike other types of asset specificity, emphasises the lock-in effect arising from specific trading conditions during the transaction process. Throughout that process the value of the built asset, the amount of payments made by the client and the amount of costs incurred by the contractor all grow at potentially divergent rates. In principle, the bargaining power of the procurer weakens as the project progresses. This is because the procurer normally has more to lose at a later stage of the project, were it stalled. At any point in time during the post-contract stage, the procurer would take one of the following two options as a baseline when figuring out how much concession he/she may have to make in renegotiations: one option is selling the incomplete project in the market (the 'abandon' option); and the other is replacing the

existing contractor (the 'switch' option)¹. Normally, the cost of switching should be much lower than the cost of abandonment, so the switch option should be treated as the binding condition. To get a more precise measurement of process specificity, it is useful to spell out the elements of costs that the procurer would incur in the event of rejection of an opportunistic renegotiation demand leading to replacement ('switching'): (1) opportunity cost of delays in completion due to extra time spent in retendering the project and getting the new contractor up to speed; (2) extra costs due to repeated setup on the project site; (3) risk premium required by the replacement contractor for taking the quality risk hidden in the disrupted project; (4) the costs incurred for identifying the liabilities between the original and replacement contractor. The cost of switching only tells half of the story. The other half lies in the contractor's quasi rent. The contractor's willingness to stay in the transaction is affected by the combination of the following factors (Chang, 2008): (1) the size of the (unrealised) expected profit; (2) cost variance from the uncompleted part of the project (the difference between payments still to be received and costs still to be incurred); (3) the falls in value of physical assets purchased by the contractor for undertaking the project. Generally, in western countries (with no 'mobilisation payments' but with interim payments and modest retentions, as well as strong legal enforcement), the procurer's quasi-rent is greater than the contractor's. The larger the difference, the more vulnerable the procurer becomes.

Not only can holdup problems trigger rent seeking behaviour, but also there are measurement problems. How far a project can be divided up, to a great extent, is constrained by the degree of difficulty in managing and observing the interfaces among work packages. Two closely interconnected work packages had better be bundled together so as to avoid the likely disputes in assigning liabilities. When it becomes hard to hold parties liable for quality problems they cause, some room will be created for opportunistic exploitation in a similar vein as the holdup problem. The severity of measurement problems in a project can change the relative desirability of procurement systems as well.

5. THE DIMENSIONS IN WHICH PROCUREMENT SYSTEMS ARE DIFFERENTIATED

The key task of this step is to discover the dimensions that distinguish the relative efficacy of three procurement systems in achieving the procurer's objectives. The three procurement systems differ in organisational arrangements, which in turn affect their economic characteristics.

The first dimension is *capability to shorten delivery time*. As shown in Figure 1, the Management Method offers the procurer the greatest possibility of overlapping design and construction and thus of overlapping work packages. Design-Build comes next because the project is let only after the concept design is done, which reduces the room for fast tracking.

¹ But see also Ive and Chang (2007) for a different argument, in which the client's problem is how much, after requiring changes, they may have to pay a contractor to expedite rather than delay a project. Here the contractor avoids the opportunistic threat of the kind of evident serious breach of contract that would allow them to be replaced (the 'switch' option) without compensation.

The Traditional Method is the slowest route as all of the design work has to be completed prior to commencement of construction work.

Next, we should look at *adaptability to requirement changes* that the three systems offer. It is not uncommon in practice that procurers find it desirable to change requirements in response to new information at post-contract stage. Whilst minor variations can be easily adjusted in accordance with the agreed schedule of rates, the pricing of major changes would involve renegotiations. These prices are determined in absence of competition and are therefore much higher. How big the surcharge is depends on the relative bargaining power of the two parties. The Management Method, which divides up the project into several small parts and lets them sequentially to different independent work package contractors, allows the procurer to change mind until later in the construction phase (because the part of the project involved probably hasn't been let yet) and, if necessary, replace the work package contractors with relative ease (because the size of the work under the management of a single work package contractor is smaller and the markets for replacement contractors are thicker). Lying at the opposite side of the spectrum is Design-Build which bundles detailed design and construction work into a single contract. This concentration of responsibilities puts the client requiring changes in an even more vulnerable position for three reasons:

- 1) Delegating both design and construction to the same contractor will intensify the asymmetry of information on quality between the incumbent contractor and any possible replacement contractor, leading to an increase in risk premium demanded by the replacement contractor and making switch-over more costly.
- 2) Design-Build is closer to performance based contracting, which means the outcome of the project will be judged against performance specifications, not by conformance to detailed drawings and specifications. The replacement contractor may face a difficult choice between following the design of the original contractor and working out a new design. Neither of these choices is good for the procurer. In the former, it will be hard to tell who to blame, were something to go wrong. In the latter, the extra cost will be passed on to the procurer and, what is more, it is uncertain how well the new design will fit into the old one.
- 3) The tender cost involved in replacing the existing contractor and bringing in a new one will be higher.

Comparatively, the Traditional Method is in the middle, less adaptable than the Management Method as all construction work is let in one go, making late requirement changes costly, but more adaptable than Design-Build because availability of detailed design can help reduce uncertainty over quality (and because, under TM, the construction contract is signed later than under DBM, and therefore the requirement for change is more likely to be identified before the contract is signed).

The last factor to consider is *ability to identify liabilities*. In terms of the number of contracts awarded in a project, Design-Build is the most integrated route and Management is the most fragmented one. Integration of work can deliver a direct benefit to the procurer by making it easier to find the party responsible for non-performance. Design-Build offers the single point of responsibility so that the procurer can always know where his/her finger should point to in pursuit of remedy. The Traditional Method involves the independent working of designer and contractor, whereby disagreements can emerge as to who bears the

responsibility for the problem found, because there are always two possibilities: poor design and poor workmanship. In the Management system, this problem gets worse with more work package contractors working in a contractually independent way. Now a defect may result from faulty design, mis-management by the task undertaker, or a problem left over by other contractors. In principle, the more contracts there are involved in a project, the more trouble is to be anticipated in resolving disputes over quality.

The above three factors make up the principle of Inconsistent Trinity (Ive & Chang, 2007), which argues that, in selecting a procurement system, the client will inevitably face a tradeoff between the procurement system best able to deliver: (1) fastest completion of the project; (2) least vulnerability when making changes; as well as (3) least vulnerability to non-performance. A direct implication of this principle is that which procurement system is most desirable should depend on the attributes of the project, because these will determine for the client the relative importance of each aspect of what each procurement system offers.

6. ALIGNING TRANSACTION WITH GOVERNANCE STRUCTURE

Procurement system for a project has to be chosen in a way that can increase project NPV as much as possible, while keeping transaction costs as low as possible. This goal translates into the conceptual framework shown in Figure 2, where three components of the objective function lie in the centre with dimensions of procurement systems and attributes of projects on the two sides for showing how alignment is achieved. First, where early completion delivers high benefits, a procurement system that can progress design and construction in parallel will be chosen so as to increase the net present value of the project. Second, where procurers may incur significant losses in the event of contractor replacement, a procurement system that can lower the procurer's need to make price concessions in renegotiations should be favoured so as to reduce transaction costs from holdup. Third, where coordination across design and construction of a work package and across work packages is complicated, a procurement system that offers a clear line of responsibility should be used so as to reduce transaction costs from measurement difficulties.

We are now in a position to take one step further: to identify the conditions under which one procurement system is more likely to be used, because it is then more efficient, than the other two. First of all, other things being equal, high benefits of early completion make the Management Method's merit of fast-tracking become significant in increasing the project NPV and hence increase its chance of being chosen. However, when fast delivery makes little difference to the procurer, the Traditional method's weakness in delivery time will be blunted. Design-build should be found in the middle in terms of efficiency, and therefore use, in this respect.

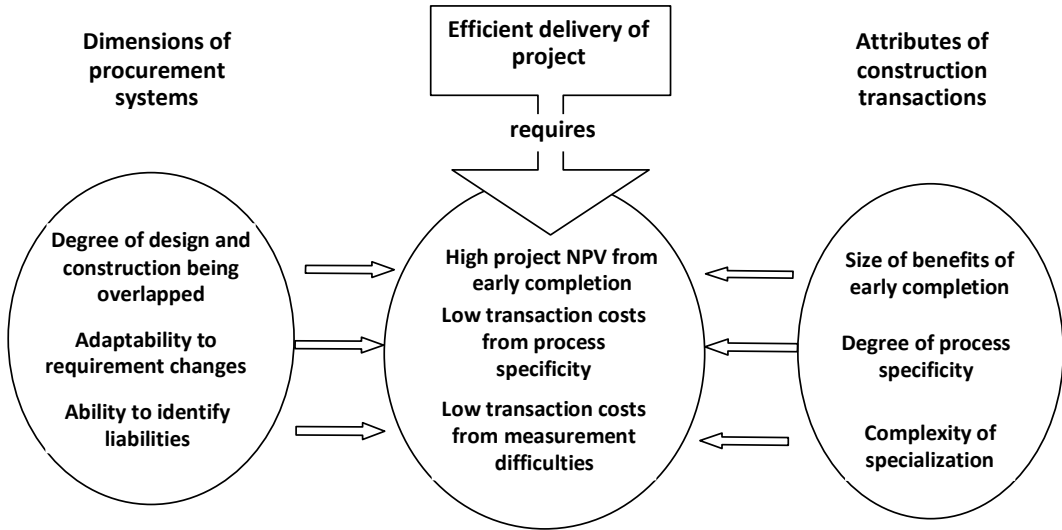


Figure 2. Alignment of procurement systems with project types Source: adopted from Chang (2001).

However, the presence of process specificity poses transactional hazards to the procurer. Sequential letting of small parts of the project in the Management system gives the procurer the greatest room to comfortably implement requirement changes under the threat of holdup. If this threat is not so conspicuous, the procurer would not be so reluctant to leave the whole project in one firm’s hands, blunting the undesirability of Design-Build in this respect. The Traditional Method stands in the middle range of this factor.

Last, high interconnection of work packages magnifies Design-Build’s advantage in assuring delivery of contractible quality. On the opposite side, the fragmented nature of the Management system won’t be so much of a concern to the procurer if the project can be divided neatly into stand-alone parts. Comparatively, the Traditional Method again lies in the middle from the viewpoint of this dimension.

Figure 3 reveals that one procurement system only dominates over the others in one combination of attributes. In other conditions, which procurement system is most efficient will depends on the relative strength of the effect of all three factors.

Empirical Results

How well do the theoretical predictions shown in Figure 3 square with the data? In Chang (2007), the hypotheses derived from TCE reasoning are tested against the actual choice between traditional method and design-build in 207 projects. To do this, the factors that would alleviate and aggravate the effects of three main transaction attributes were considered as well, including uncertainty, use of partnering agreement and impact of delay. Apart from

complexity of specialisation², the other five factors are all statistically significant explanatory variables for choice of procurement systems.

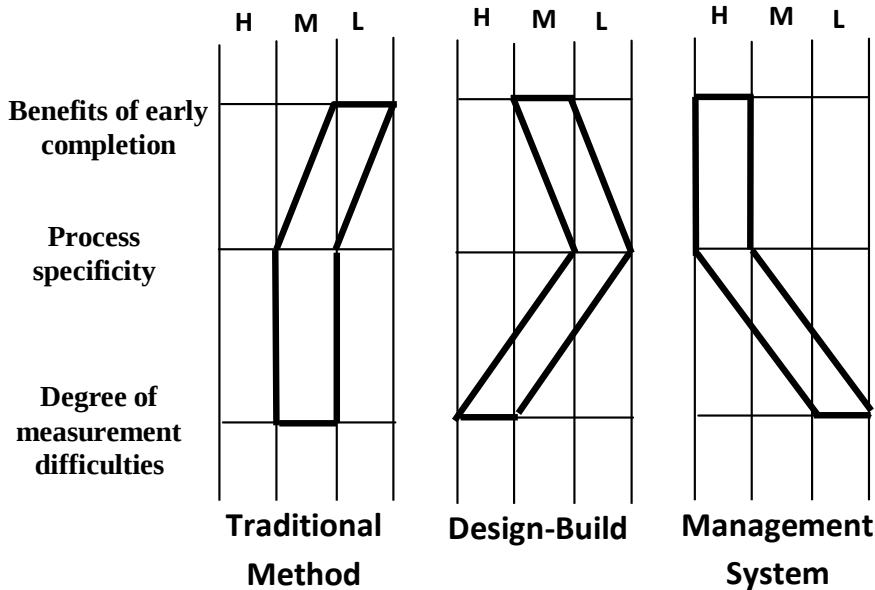


Figure 3. Conditions that each of the procurement systems dominate Source: adopted from Chang (2001).

CONCLUSIONS

In recent decades, we have seen transaction cost economics spark a wave of academic interest in studies of organisation. The most profound contribution of TCE should be seen to be the development of its three-part methodology, which can be applied to a wide range of organisational arrangements. Selection of procurement systems for construction projects is one of the oldest mundane organisational decisions in human history, but also one of the least studied ones in the economics literature. This paper aims to provide a summary of the main theoretical advances in understanding this decision. Built on the methodology of TCE, the new theory suggests that benefits of early delivery, degree of process specificity and complexity of specialisation make up a theoretical basis for explaining procurement system selection behaviour. Most of the key predictions derived from the theory are borne out by the few empirical studies so far done on real data. More empirical studies would clearly be desirable.

² This factor is most useful in differentiating the Management system from the other two choices. Due to insufficient number of cases in the sample, the choice of Management system is not analyzed in that study. However, if low frequency in the sample reflects low frequency in the population of projects, it could perhaps be inferred that, for most clients, measurement problems predominate over hold-up problems or benefits from earlier completion. It also needs to be recognised that in practice MM is found mostly in large projects, suggesting it displays an element of fixed cost as a governance structure.

Whereas TCE is able theoretically to explain the choices among existing organisational arrangements and normatively recommend some empirically corroborated rules for novice decision makers to follow, it is unable to provide a tool for guiding the design of new organisation forms. This limitation is too significant to be ignored, because the key decisions involved in construction procurement are not only selection of procurement systems, but also choice of contract form, insurance, bonding instruments and bid review criteria. Can all of these important issues be accommodated into the current TCE framework? The answer is difficult. Whilst the issue of incentive alignment is mentioned in the TCE framework, it is downplayed as of secondary importance. On the other hand, whilst the function of bonding can be well incorporated as a way to mitigate holdup, insurance and bid review criteria seem to have no role to play. It's perhaps a good time to think about how to develop a broader theory that incorporates but also goes beyond TCE and seek a new ground for the next generation theory of construction procurement, perhaps involving a return to issues of production cost, in its aspect as an occasional source of a major risk that some recent clients have found they did not effectively transfer.

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Chapter 7

THE THEORY OF OLIVER WILLIAMSON: THEORETICAL FOUNDATIONS AND SOME CRITICAL CONSIDERATIONS

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INTRODUCTION

The economic theory of transaction costs, as formulated by Williamson, springs from his interest in studies that explain the way markets function, combining this explanation with the institutional framework in which markets develop, in an industrial economy and the economy of organizations (Coase, 1937, 1972; Bain, 1956, 1958; Alchian, 1965, 1969; Alchian and Demsetz, 1972; Arrow, 1959, 1973, 1974; Demsetz, 1991, 1995), to his interest in the studies that form the basis of organizational theory (Barnard, 1938; Cyert and March, 1963; Simon, 1947, 1983; Chandler, 1962; Ouchi, 1979, 1980). It is also the fruit of his philosophical and theoretical vocation, which took a strong hold when, following his education as an engineer at MIT, he found himself at Stanford where he came across the Principles of Samuelson and shortly after, in the then named *Carnegie Tech*, he tackled organizational problems through the classes of James March and Herbert Simon.

These economic and social problems were to him a fascinating set of questions that could be studied from the perspective of his competences as an engineer, and which were studied, above all, from the viewpoint of his philosophical capacity and theoretical reflection. While reminiscing about that time, Williamson says that “*Carnegie was a perfectly incredible*

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experience. The hum of research activity was evident upon walking through the doors,” (Williamson, 1986: xiii).

Williamson’s research into transaction cost economics (TCE), coinciding with the 1937 pioneering contribution of Coase, entails establishing the factor or explanatory variables that determine the most efficient form of governance of economic activity. In the words of Coase (*Ibid.*: 389), it involves:

bridging “what appear to be a gap in economic theory between the assumption (...) that resources are allocated by means of the price mechanism and the assumption (...) that this allocation is dependent on the entrepreneur-co-ordinator. We have to explain the basis on which, in practice, this choice between alternatives is effected.”

Coase believed, as later did Williamson, that the choice of mechanism for prices (the market) or the entrepreneurial-co-ordinator (organization by the firm), depends upon the relative costs of each option or on the compared efficiency of those governance structures. There is also a third governance structure, stating that economic activity organized through a contractual relationship between firms (Coase, 1937: 395-396) may be an alternative that entails lower (or more efficient) costs that *naturally* impose themselves each time the market (the suppliers or distributors) provides inputs or services at a lower cost than via the internal organization of the client firm.

The modern view of transaction costs as the theory that simultaneously explains the organization, markets, and the contractual relations between firms, and which explains *each and every one* of these governance structures precisely *in relation to the others* (each of them exists because they are more efficient for organizing particular activities), was constructed by Williamson. However, when characterizing this theory, it is useful, at times, to compare it with the pioneering work of Coase. The two authors adopt very different approaches and, although it is not our intention to carry out a systematic comparison between the two, occasional comparisons serve to underline the important contributions of Williamson and some of their limitations.

In the following paragraphs, we firstly establish the nucleus of the fundamental concepts of Williamson’s TCE by examining the different governance structures or institutional alternatives that TCE proposes. The contribution of Williamson reflected in this section is enormous. We go on to put forward some critical considerations and theoretical proposals that correspond basically to his heuristic model, the integration of incentives in organizational forms, idiosyncratic demand, and the way of conceiving transactions in general.

Without the theory created by Williamson, none of these criticisms or additions to the theory we propose herein would be possible. Once the theory exists though, and it becomes the patrimony of the entire scientific community, criticism and proposals for broadening the theory, and the discussion of some of its assumptions or models is undoubtedly a way of enriching said theory.

FUNDAMENTAL CONCEPTS (1): THE BASIC THEORY OF THE MAKE OR BUY DECISION

The behaviour supposedly inherent in the *opportunistic search for self interest* and strongly in *intentional limited rationality* underpin Williamson's TCE, but with the addition of an important philosophical dimension in comparison to his previous work. On pages 65-67 of his classic work (1985), Williamson considers whether the scenario where the limits to reason and opportunity are absent is, in fact, the state of human happiness, but whilst there are limits to reason and people act opportunistically in their own interests, there will always be difficulties in establishing agreements which entail high contracting and transaction costs.

With regards to opportunism, Williamson merely states that "some individuals are opportunistic some of the time and that differential trustworthiness is rarely transparent *ex ante*," (1985: 64) which, in terms of the market, involves negotiation costs needed to establish agreements and guarantees. Given that this behavioural situation can be generalized, the greater or lesser difficulty encountered in reaching an agreement and the corresponding contractual costs influence the amount of activities integrated within the firm and the structure of production of the different industries, all of which must be explained by knowing the economic or social forces that guide behavior in one way or another.

Williamson's fundamental contribution in this respect is the existence of markets with competition amongst many (*large numbers*) or among few (*small numbers*). When there is a large number of suppliers and an equally large demand in the relationship between supplier and client firms, *competition disciplines behaviour and corrects opportunism*, thereby establishing general conditions that agents must accept, thus enabling agreements and reducing contractual costs (or transaction costs). Under such conditions, the integration of activities among client firms will be reduced and the industry structure will be characterized by the existence of many supplier (or distributor) firms leading to a greater fragmentation of the industry.

When, on the other hand, there are few suppliers and a small number of clients in the relationship between supplier or distributor firms and client firms, *weak competition does not correct opportunism*, thus hindering agreements and increasing contracting (or transaction) costs. Such conditions foster the integration of activities into the client firm and lead to a concentration of the industry.

The fundamental contribution from Williamson in this respect is the *identification of the economic cause that leads to the existence of small numbers*: the existence of *specific investment* (or special investment carried out by suppliers or distributors for a small number of clients, whose alternative uses involve very relevant costs). These investments reduce the scope of the market to include goods or services obtained through *specific assets* and will even lead to a bilateral relationship between the client firm and the supplier (or distributor) firm. Therefore, where there is an absence of competition as a mechanism for disciplining opportunism, transaction costs increase, and thus hinder exchange and lead to the integration of activities within the firm, thereby explaining concentration in the industry.

This, *a grosso modo*, is Williamson's essential contribution to the understanding of markets and how production is structured in industry, in which transactions are the explanatory variable and the form of governance, and industrial structures are the explained variables. If the level of specific investment is low and involves few relevant transaction

costs, the most efficient governance structure will be the market (instantaneous or *spot* market) which, in general, corresponds to the case of fragmented industries. If the level of specific investment is considerable, and involves transaction costs that are relevant but which can be absorbed by both sides, generally the governance structure will consist of establishing agreements or safeguards that reduce the risk of investment and, depending on the difficulties and costs inherent in agreements, industries will be more or less fragmented. If the demand for a specific investment is ultimately very high, and contracting costs cannot be taken on by any of the sides, then the governance structure will consist of internally organizing the activity, thereby increasing the size of the firm and the concentration of the industry.

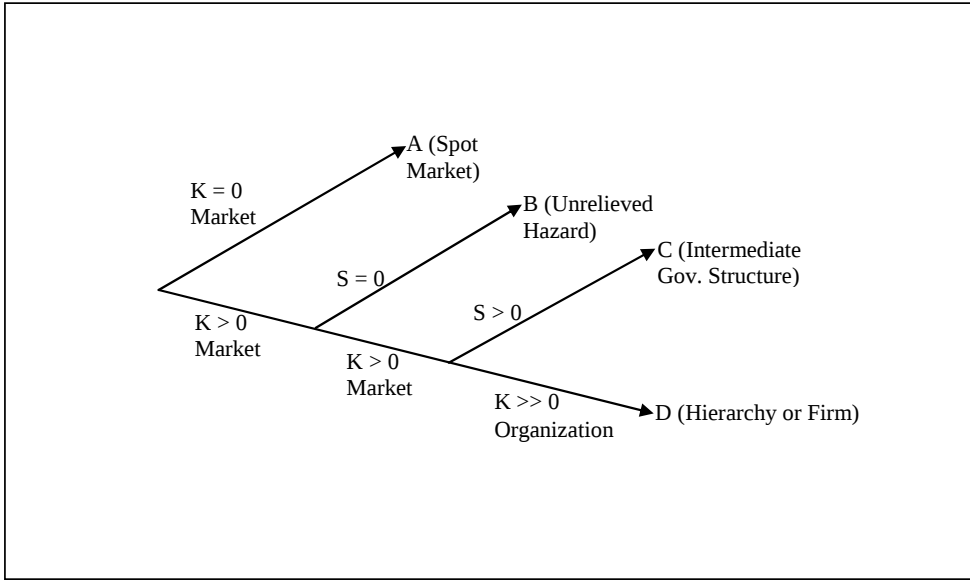
The model described in the previous paragraph is completed by the *level of uncertainty in the market*, whose alterations enable or hinder contracts (make them cheaper or more expensive), along with the *condition of recurrence*, which corresponds to the number of transactions carried out within the framework of a contract, either reducing or increasing the cost of unit exchanges. The relation of causality that Williamson establishes between types of transaction and governance structures is thus completed, explaining the structure of industry, or what Coase (1991) called the *institutional structure of production*.

This comparison with Coase (1937, 1972) to Williamson's proposal is an indication of the latter author's extraordinary theoretical contribution. While for Coase (1937: 390-391) the costs of "organizing" through the mechanism of pricing are costs of information (discovering what the relevant prices are), negotiation, and conclusion of a separate contract whose causes and intensity we are unaware of, Williamson, by making a crossover of assumptions on behavior with the level of specific investment, provides an explanation for the economic conditions that lead to certain levels of negotiation and transaction costs.

Institutional alternatives about make or buy decisions. If we establish the notation $K = 0$ when the level of specific investment is scarcely relevant, $K > 0$ when the specific investment is relevant but can be assumed by both sides, and $K \gg 0$ when the importance of the specific investment means that there are no guarantees or safeguards between the supplier firm and the client firm (or between the client firm and the distributor); we denote the absence of guarantees or safeguards by $S > 0$ y $S = 0$, we can then explain branches A, B, and C in figure 1.

As you can see, for $K = 0$ (branch A in figure 1), the governance structure is the market. It is a situation that entails competition between many, which disciplines behaviour, thereby reducing transaction costs and making it a better idea to externalize activities. For $K > 0$ (branches B and C of figure 1), the specific investment is relevant but manageable for both sides, and the exchange is able to proceed without any type of agreement or establishment of a set of guarantees with the client firm (branch B and branch C, figure 1). The establishment of guarantees, the most frequent solution, realigns incentives, as the possibility of some type of penalization if the contract is not fulfilled exists, creating a specialized governance structure and introducing trading regularities that support and signal continuity intentions (Williamson, 1985: 34).

For $K \gg 0$, once the level of specific investment cannot be satisfactorily guaranteed by any set of safeguards, the most efficient governance structure is the firm (branch D, figure 1). However, this governance structure opens up new possibilities and requires new fundamental concepts.



Adapted from Williamson 1985: 33.

Figure 1. Basic contractual map

FUNDAMENTAL CONCEPTS (2): ORGANIZATIONAL THEORY

In the realm of the governance structures of the firm, new possibilities appear, in such a way that branch D of figure 1 now unfolds (in figure 2) into branches D, E, and F. Basic organizational theory can be summarized by what Williamson calls the *hierarchical decomposition principle* (1981a: 1550), *incentive ramifications* (1985: 140), and the *requirements* (or *idiosyncratic demand*) of some organizational units on others (*ibid.*: 275-277).

With regard to the *hierarchical decomposition principle*, with a view of enabling the structuring of different operative and organizational problems and facilitating the exercise of limited rationality (Simon, 1947, 1973), the total system of decisions needs to be made into relative independent subsystems. In the words of Williamson (1981a: 1550),

“[t]his applies to both vertical and horizontal aspects of the organization. (...). The vertical slice entails grouping the operating parts into separable entities, the interaction within which are strong and between which are weak. The horizontal slice has temporal ramifications of a strategic versus operating kind. Problems are thus factored in such a way that the higher frequency (or short run dynamics) are associated with the operating parts while the lower frequency (or long range dynamics) are associated with the strategic system.”¹

¹ Simon (1962: 477) is cited by Williamson as a reference for the paragraph shown here in speech marks.

Therefore, departmentalization, in both a horizontal and vertical sense, groups together tasks and problems according to their degree of homogeneity, thus enabling technical operations and the use of rationality at all levels of the organization.

With regard to the *ramification of incentives or differences between varying types of incentives*, Williamson states that markets are severe, and do not forgive errors (*high-powered incentives*), whilst organizations are sympathetic with their members (*low powered incentives*); highlighting, moreover, that high-powered incentives do not work well in organizations (1985: 135-140).

High-powered incentives in organizations consist of measuring the performance of different agents according to the benefit obtained, which is clearly applicable to the managers of organizational units whose earnings and costs can be known separately. In such a case, the profit and loss account decides. However, this can have negative consequences for the firm. The profit and loss account can be improved by avoiding costs (with an uncertain outcome) in R+D, by reducing costs in maintaining technical equipment or via other similar actions. It will therefore be necessary to apply *low-powered incentives*, based, above all, on the observation of the actions of agents, which allow for a more complete assessment. The cost of applying these less demanding incentives, apart from the costs inherent in the observation and description of work, lies in the fact that they allow, to a certain extent, non-optimal behaviour. But (Williamson, 1985: 137)

“it is in the mutual interest of firm and worker to safeguard the employment relation against abrupt termination (by either party) wherever labour develops firm specific skills and knowledge during the course of its employment.”

Finally, the *requirements or idiosyncratic demands* of some organizational units on others have sizeable importance in explaining the organizational forms proposed by Williamson and some critical considerations surrounding his theory. The specific or idiosyncratic demands of certain organizations (organizational units or firms) on others, at operational levels (Williamson, 1985: 275) or strategic ones (*Ibid.*: 277), explain the organizational forms (*Ibid.*: Chapter 11) and allow for the differentiation, at the same time, of two types of transactions: those that correspond to the supplier firm – client firm relationship (*Ibid.*: 92) and those that describe the relationships between the client firm and the distributors and retailers (Williamson, 1981a: 1549) or with the partners of a joint strategy (Williamson, 1985: 277). In the first case, client verification of the fulfilment of the contract on the part of the supplier, including the quality of the product, appears to be perfectly possible. In the second:

“if the quality debasement (...) of distributors give rise to negative externalities, the costs of which can be incompletely assigned to the originators, failure to extent quality control over distribution will result in suboptimization. Autonomous contracting thus gives way to obligational market contracting (...) if not forward integration into distribution” (Williamson, 1981a: 1549).

As a result, some vertical integration processes (forward integration) of activities and the corresponding organizational forms, are due to a particular type of transaction (operative or strategic) in which the difficulty of measurement and control of *idiosyncratic demands* (ID) are of particular relevance.

Figure 2, which shows the offshoots of branch D of figure 1 into branches D, E, and F, incorporates make or buy decisions and the choice of organizational form with regard to institutional alternatives.

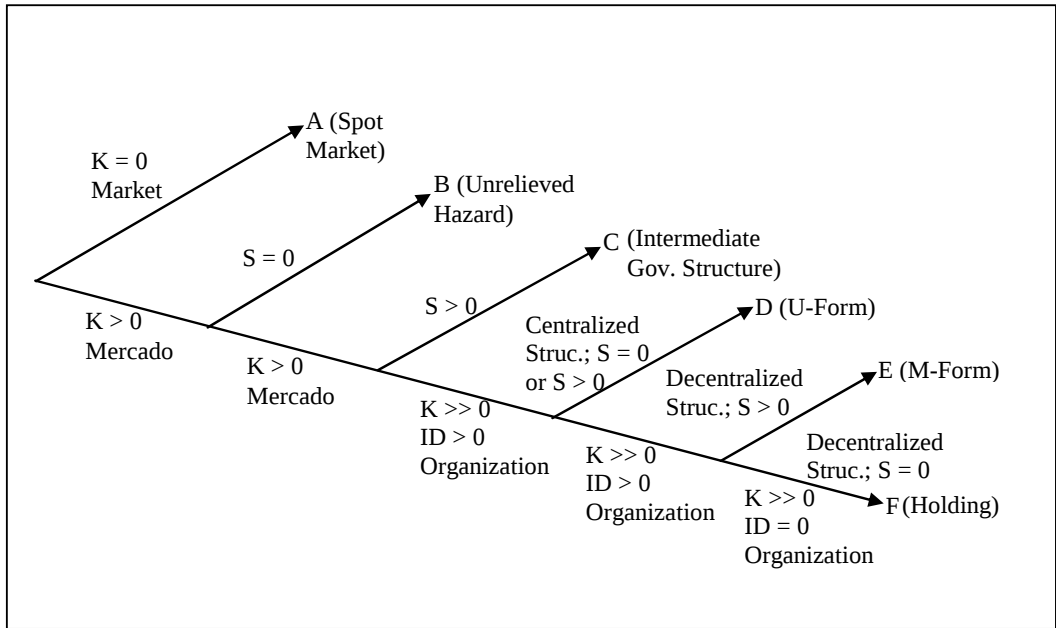
Institutional alternatives inside organizations: idiosyncratic demand. If we establish the notations $ID = 0$ when there is no idiosyncratic demand from some organizational units on others and $ID > 0$ when those demands exist and they materialize in the form of organizing activities, branches D, E, and F of figure 2 can be explained.

The identification and explanation of branches D, E, and F of figure 2 has to be supported by notations K , S , and ID , and by the concept of a *centralized structure* or a *decentralized structure* (Williamson, 1985: Chapter 11). In branch D, we have $K \gg 0$ which implies the organization of firms as a governance structure; $ID > 0$, which is coherent with the conditions of the market ($K \gg 0$), demands that the organization be constituted with a particular relationship between its different units, and the existence of a *centralized structure* which implies the hierarchical centralization of different organizational units, thereby complying with the demands of the ID . This corresponds to the type of firm that Williamson named the U-Form. In this organizational form, $S = 0$ or $S > 0$ (see paragraph below).

Branch E corresponds to $K \gg 0$, which has the organization of firms as its governance structure; $ID > 0$, which needs common purposes and the internal coherence of the organization of a *decentralized structure*, and $S > 0$ which, in terms of the organization, should be interpreted as the set of safeguards or guarantees of coordination designed by the firm, in such a way that *decentralization* occurs simultaneously with the fit required for *idiosyncratic demand*. This firm, whose units or divisions are decentralized, corresponds to the multidivisional firm or M-Form described by Williamson.

Finally, branch F, which is very different from the previous ones, is characterized by $K \gg 0$, $ID = 0$, a *decentralized structure*, and $S = 0$. The absence of *idiosyncratic demand* allows the structure to be *decentralized* and, at the same time, does not guarantee the existance of sufficient coordination ($S = 0$). This organization, the Holding-Form or H-Form, is a spurious organizational form that does not correspond to the requirements of coordination, control, and common strategic purpose, which are essential for obtaining organizational efficiency.

Figure 2 shows a complete map of the basic theory of Williamson discussed up to this point. In the following sections, and within the framework of a number of critical considerations, which are, above all, proposals that add to the theory, we will go on to examine Williamson's heuristic model (1981b, 1985), revise the alignment of incentives in the most complex organizational forms studied by Williamson (the M-Form), interpret idiosyncratic demand as one of the greatest contributions by Williamson, and finally, look at the way in which transactions are conceived in Williamson's TCE, proposing a much wider concept.



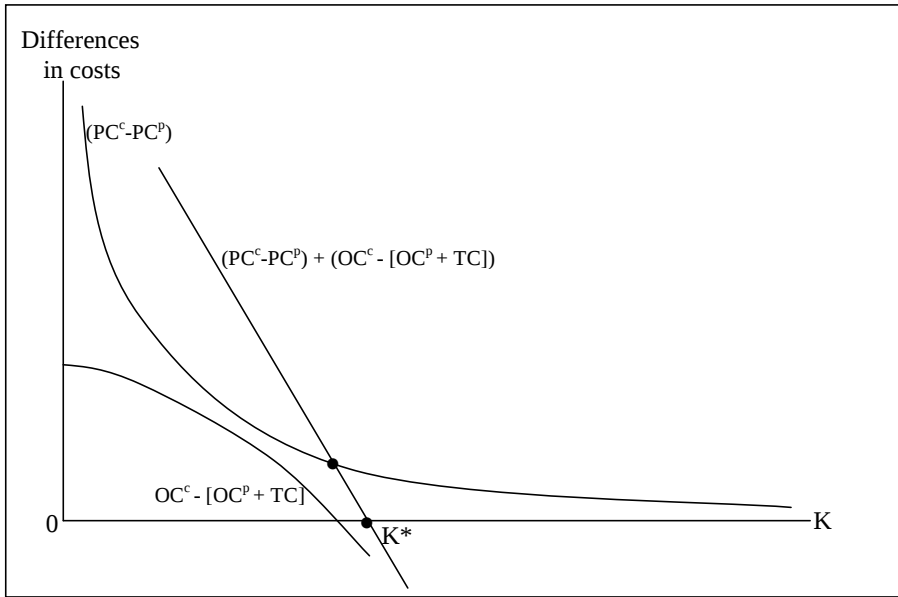
Adapted from Williamson (2008: 9)

Figure 2. Comprehensive contractual map

THE HEURISTIC MODEL: CRITICAL CONSIDERATIONS AND THEORETICAL PROPOSALS

With reference to figure 2, the heuristic model (figure 3) analyzes the alternatives between branches A, B, or C (using the pricing mechanism), and those of the other branches D and E (organizing the activity internally). The analysis is based on the transaction costs compared for the two alternatives in a relationship of exchange that refers, fundamentally, to supplier and client firms.

In Williamson's proposal, (1981b, 1985: 90-95), the differences between the production costs of the client firm (PC^C) and the production costs of the supplier firm (PC^P), for each level of specific investment (K), leads to the curve $PC^C - PC^P$ in figure 3. Supplier firms accumulate demand from different clients and this leads them to greater economies of scale and scope, as well as lower costs, although this difference tends towards zero when the level of specific investment results in a bilateral relationship. The scale for that investment will then be the same for the supplier and the client, although the supplier firm, in all likelihood, will continue to enjoy greater economies of scope (Williamson, 1981: 1547).



Adapted from Williamson (1985: 93)

Figure 3. Heuristic model

Consequently, in figure 3, the $PC^c - PC^p$ curve, which is asymptotic to the axis of specific investment (K), is convex with regard to the origin and is always situated in the positive quadrant. In addition, the differences between the costs incurred by the client firm of organizing the activity (OC^c) and the costs of the supplier firm organizing the activity (OC^p) plus the cost of using the market, or transaction cost (TC), yields the curve $OC^c - (OC^p + TC)$. We can consider this curve as an equilateral hyperbole that is symmetrically opposite to the previous one and is concave with regard to the origin. The sum of the two equilateral opposite hyperboles yields the straight line $(PC^c - PC^p) + (OC^c - [OC^p + TC])$ which indicates the point K^* on the abscissa, to the right of which the client firm will organize the activity internally (branches D and E of figure 2) and to the left of which it is desirable to externalize the activity (branches A, B, and C of figure 2).

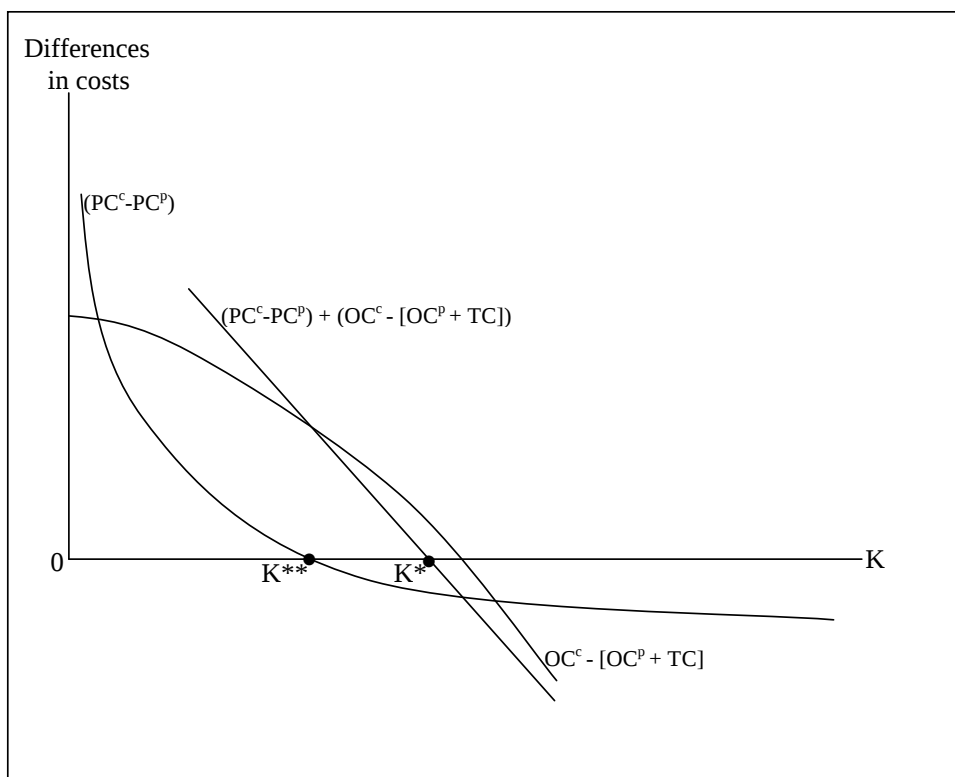
Williamson's criterion to this approach, in the resulting analysis, is one strictly based on compared costs. The most desirable alternative is that which is more efficient. With regard to the theory that can be taken from this model, Figure 3 shows a situation in which, from the point of view of the relative costs of production, the supplier is always the more efficient option and externalizing is a worthwhile venture. Therefore, "only when contracting difficulties intrude does the firm and market comparison support vertical integration," (Williamson, 1985: 94).

However, it is perhaps advisable to consider another possible heuristic model (or an addition to the same one). When we are dealing with suppliers on a worldwide scale, as occurs in the auto industry, Williamson's proposal is flawless. But in supplier parks of large firms, there are local suppliers that do not accumulate demand and that depend, to a certain extent, on the know-how of the client firm. In this case, which is also of a general nature, one section of the curve $PC^c - PC^p$ can become negative as shown in figure 4. Historical circumstances, as Williamson said, or concrete reality (the reputation of the client firm, the

search for flexibility of the client to avoid an increase in fixed structure, etc.) may explain the desirability of externalizing activities with $PC^c < PC^p$.

Nevertheless, in this respect, reasoning that better fits the essential nucleus of Williamson's TCE can –and should– be constructed. As we have mentioned earlier, low-powered incentives have cost disadvantages with regard to those of the market and if this difference is the basis of the desire to avoid an increase in the size of the firm's structure, Figure 4 can be discussed precisely in terms of Williamson's TCE, enhancing the heuristic model.

Figure 4 is an exact replica of Figure 3 but with the curve $OC^c - (OC^p + TC)$ displaced upwards due to the greater difference in organization costs in the supplier's favor, and the curve $PC^c - PC^p$ displaced downwards because of the lower production costs incurred by the client firm (and/or the greater production costs of the supplier firm). This displacement means that to the left of K^* it becomes desirable to externalize (between K^{**} and K^*) the space in which $PC^c - PC^p < 0$, and where externalization or outsourcing is still the best option. In short, *the advantage of avoiding low-powered incentives outweighs the disadvantage of the relative production costs*. The heuristic model is thus enhanced by reflecting the case of local suppliers and highlighting the fact that high-powered incentives, as opposed to low-powered ones (whose effects are shown in $OC^c - (OC^p + TC)$), can play an important role in TCE externalization decisions.



Adapted from Williamson (1985: 93)

Figure 4. Heuristic model (enhanced)

ORGANIZATIONAL FORM AND INCENTIVE ALIGNMENT: THE CASE OF THE M-FORM

In Figure 2, we characterize the divisional organizational form (M-Form) as that which corresponds to $K \gg 0$, $ID > 0$, has a *decentralized* structure (or hierarchical relationship), and has established safeguards or procedures ($S > 0$) that guarantee the coordination of its different units (Williamson, 1975, 1981, 1985).

The suitability of diversifying and differentiating the organization into different units may be due to the fact that it is so spread out geographically, as in the case of the railroads in the USA (Chandler, 1977), or to the strategic diversification of the different products it offers (Galbraith, 1993) which makes it suitable to establish separate units for different groups of products or services. Williamson (1985: 279-284) states that a multidivisional firm is characterized by (1) having large organizational units or divisions, where operational work is carried out quasi-autonomously; (2) the fact that the income and costs of these semi-autonomous divisions can be calculated separately and, hence, can be administered as profit-making centers; (3) the existence of a *general office* where the company's high-level executives work; and (4) the existence of a large highly skilled support staff linked to top management.

The efficient fit of the characteristics described consists of conditions where (1) the divisions are responsible for the administration of operations and this (a) allows them to determine the operative responsibilities of the management of each division and (b) frees up time for top management to deal with global, strategic affairs; (2) the existence of each division as a profit center allows for the application of *high-powered incentives*, based on the profits obtained, for the management of each division;² (3) the general office, through its large number of support staff, can observe and describe how each division is carrying out its different activities with the ability to evaluate it; such supervision is related to *low-powered incentives*; and (4) the assessment of each division allows the allocation of financial and other corporate resources to each department, situating the division in its corresponding role in the overall company strategy.

What we believe to be of substantial importance in the two preceding paragraphs that describe the M-Form, and where we believe that Williamson's theory can be taken to even greater depths (using the valuable materials provided by the author himself), lies in the crossover between *high-powered incentives* (profit measurement), and *low-powered incentives* (descriptions of behavior). The M-Form is probably a superior form of organization, at least in its canonical model, because the existence of divisions allows for a balanced mix of these two types of incentives.

This gives a broader perspective on Williamson's vision of the M-Form. Williamson is perhaps excessively concerned with preventing the harmful effects of the application of high-powered incentives which, used to the right end (and with less intensity than the information on behavior), can contribute to the alignment of incentives.

² Williamson does not refer to the application of high-powered incentives in his description of the divisional firm. He is more interested in the description of the basic structure of the M-Form than in questions related to incentives.

IDIOSYNCRATIC DEMAND AS A CAUSE OF THE EXISTENCE OF ORGANIZATIONS

Idiosyncratic demand (Williamson, 1985: 275 y 277) is the most powerful concept in literature for explaining the existence of organizations, better than the dimensions of the organization that obey technological indivisibilities, obtaining economies of scale, or economies of team production (Alchian and Demsetz, 1972). The union within a single organization of organizational units whose respective technologies are separable without losing efficiency can only be explained by *requirement* or by *idiosyncratic demand* (or *specific demand*) of some units on others.

ID is the very essence of the organization. Units will be *together*, they will belong to the same hierarchical authority (centralized in the U-Form, decentralized in the M-Form), not because it is more costly to establish an agreement that reduces the risk of specific investment in material assets, but because it is essential to ensure suitable behavior from some units towards others. ID is a demand on forms of behavior displayed by different units towards each other.

This question can have a strategic dimension, as in the case of the railroad companies in the US in the 19th Century that wanted analogous behavior from partners and the difficulties they encountered lead them to integration (Chandler, 1977; Williamson, 1985), or it can be related to *externalities* that originate in the behavior of distributors or retailers, which are difficult to measure and control, and whose actions deteriorate the image or brand name of a good or service (Williamson, 1981a: 1549). When the behavior required by organizational units (or firms) of other organizational units (or firms) cannot be satisfactorily obtained, measured, and/or verified, the requirement or *idiosyncratic demand* can only be satisfied via the integration of different units (or organizations) into a larger organization.

This concept provides an explanation of organization that, just as Williamson proposes, goes further than an explanation based on technology. Nevertheless, Williamson has not completely underlined the importance of the concept of *idiosyncratic demand*.

The essential question that underlies the reasoning put forward in this section, as it does throughout the chapter, is that the alternative solutions to the integration of organizational units via the use of the market are less efficient. The comparison with organizational market solutions is a permanent necessity in constructing organizational theory (Williamson, 1981a), although in this case, the comparison between internal and external transaction costs is, *de facto*, not possible.

THE TRANSACTION AS A UNIT OF ANALYSIS: A BROADER CONCEPTION

Although it can be done entirely synthetically, defining the unit of analysis of a theory is a complex question. When Williamson refers to the unit of analysis of his theory as *transaction*, whose principal dimensions are *frequency of transaction*, *uncertainty*, and *asset specificity* (Williamson, 1993a: 234-235), he is leaving out, if we accept the proposals developed in this study, important parts of his theory (singularly, idiosyncratic demand).

Transaction as the unit of analysis in TCE can be reviewed in more ambitious terms than what would be required for an adaptation to the thinking of Williamson. For Williamson, if we consider his work on a general level (1975, 1979, 1981a, 1985, 1991, 1993b, 1999, 2000, 2003, 2005, 2008), transaction is associated with costs that generate the establishment of the conditions for exchange and the effective results of that exchange. When $K = 0$, the establishment of the conditions for exchange has zero cost and the exchange occurs on the spot market; when $K > 0$, and firms generally protect themselves with $S > 0$, establishing the conditions for exchange generates costs *ex ante* (establishing the agreement, drawing up the contract) and costs *ex post* (overseeing its fulfilment, adapting it to unforeseen conditions) in order to be able to carry it out in a stable way and with a suitable level of uncertainty; and when $K \gg 0$ and $ID > 0$, establishing the conditions for exchange between the hierarchical authority and the actions of employees implies design costs of the organizational structure and coordination/ supervision costs (in short, organization costs).

Without considering the costs of the spot market, which are not relevant, the other two costs, which we can call *contract costs* or *organization costs*, are, in Williamson's theory, costs linked to the intermediate governance structure that ensures the safeguards or guarantees; and in the second case, *indirect production costs*; in a way that, in any case of transaction and production, appears to be perfectly separated not only for methodological reasons but by the way in which Williamson conceives transaction: a question that is explained from assumptions on behavior and the legal and organizational elements that intervene, perfectly separated from production and its costs.³

However, in Coase (1937), the question is different with regard to internal transactions. These transactions, of an organizational nature, are made up of all the necessary costs for organizing production and obtaining the product, in such a way that the transaction implicitly includes production or, put differently, the internal transaction costs are equivalent to all the necessary direct and indirect production costs for obtaining the product.

It should be added that if internal transaction costs (establishment of structure, coordination, and control) include production, this fact becomes transcendental (without altering the methodological separation and the conceptual order). It implies, *de facto*, that TCE can include a part of the RBV (resource-based view). ID could be extended to cover the suitability of integrating other activities or organizational units, in the interests of the firm in developing new products, new lines of innovation, or new knowledge.

There is not room in this chapter for developing these ideas to a sufficient length, but the points that appear here are enough to show that the (theoretical) world, or an important part of it, is yet to be constructed.

FINAL THOUGHTS

None of what we have written here would have been possible without the pioneering contributions of some classic authors (Coase, 1937; Barnard, 1938; Simon, 1947) and, above all, it would not have been possible without the extraordinary contribution of Williamson

³ Specific investment, correctly understood, does not interfere in the argument put forward herein.

himself. But the work of Oliver E. Williamson, present-day author and, at the same time a classic, deserves and requires the consideration and development of all its potential.

Systematically and carefully, but without false adulation that turns its contributions into empty words, the theory should continue to be developed, at the same time as, in its current state, it allows us to understand the phenomena of markets and organizations. The fact that the spot market, contractual relationships between organizations, and the internal organization of activities can be understood only as an efficient choice in comparison with the other two, it endows TCE with a special value, and, on the other hand, the theory allows us to establish a relevant relationship between the explanatory variables (K, ID) and the explained variables (market or organization and types of organization), and opens the door to new developments, some of which we have attempted to outline in the sections above.

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Chapter 8

PRIVATE ENTERPRISE CHALLENGES OFFWORLD: UTILIZING SPACE RESOURCES FOR ECONOMIC RENEWAL

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ABSTRACT

The history of exploration reveals a pattern. First, government and the military enter the unknown world to establish basic infrastructure. Then private commercial entities and non-profit organizations follow with settlement and industrialization. That was most evident in the New World of the Americas,

INTRODUCTION

From North to South, especially during the 15th to 17th centuries. Europeans arrived there initially under government sponsorship with military support to explore and establish outposts or colonies. The next stage saw large trading companies and entrepreneurs recruiting investors and colonists for the exploitation of new opportunities and wealth. And so it has evolved with outer space and its infinite resources. Government space agencies, initially from Russia and the United States, opened the space frontier through their cosmonauts and

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astronauts, mainly military pilots and scientific or medical personnel. In the first fifty years of the Space Age, the private sector was involved largely through aerospace contractors and satellite communication corporations. The 21st century has seen the emergence of space entrepreneurs and tourism. Private enterprise worldwide will now become the principal force behind humanity's expansion offworld, resulting in major development of our potential as a species!

Today, there is global concern on how to recover from the current economic recession. In America, for example, the public, like members of government, seemingly are fixated on a \$12 plus trillion national debt that originated with its last Presidential administration. Daily, this liability grows alarmingly when interest is added! In such serious financial crises, the attention of most citizens is not on outer space and its development. Yet, in the United States, for instance, there is a case for the White House and Congress to make in support of space investments. *Possibly, the only long-term strategy we have for reducing national deficits is by immediately utilizing space resources.* This approach is in harmony with the President's 2010 State of the Union Address which encourages innovation, entrepreneurship, creation of new infrastructure and more jobs to get the country out of its "fiscal hole" and contribute to international economic recovery.

The American taxpayer still awaits a "return on investment" for their huge expenditures on the Apollo mission program. But the profitable satellite industry has already proven the case for greater funding of space business endeavors. Space tourism and transportation are already demonstrating the possibilities for private business. Now is the time to enlighten citizens of the vast resources to be tapped on the Moon. We could not only mine the lunar surface for valuable minerals and gems, but we could use its water and regolith to support luna industrialization and settlement! An increased focus on space undertakings will not only provide new knowledge and job growth, but stimulate science and education. High frontier activities are complex, costly, and risky for both life and fortunes. Therefore, it is my conviction, there is a need to form a Global Space Trust in which both private and public sectors may cooperate in joint ventures to build less expensive offworld transportation systems and infrastructure. The model provided by 16 nations to agree on the construction and operation of the International Space Station needs to be extended so as to encourage more private sector participation and management. Such collaboration is needed in the next stage of developing human facilities and enterprise for permanent return to the Moon, and eventually onward journeys to Mars and beyond! To that end, some advocates have called for the founding of a Lunar Economic Development Authority or Lunar Economic Infrastructure Corporation.

Further, the world's aerospace community has an obligation and expertise to inform our fellow citizens that by moving beyond Earth, we can preserve our planet and keep it a green paradise. Gradually, all of the mining that despoils our home planet can be transferred to the isolation of the Moon, including atomic and fusion energy. Instead of using fossil fuels that pollute our environment, there is also endless, clean space-based energy to use, such as through a Lunar Solar Power System, on or around the Moon. We need the vision of the rocket scientist, Krafft Ehrlicke, on the extraterrestrial imperative – he had an open mindset about making the most of solar system opportunities and its endless resources! Realise that both planetary and national security depend upon vigorous space undertakings involving both the public and private sectors.

TRANSFORMING SPACE VISIONS INTO REALITIES

Human dreams and ideas span time, often taking centuries before being transformed into worthwhile activities. Some of our forebears dimly perceived the spectacular achievements which this generation has witnessed since the dawn of the Space Age. But so few are aware of humanity's challenges ahead in exploring and settling offworld! Ultimately, that process will lead to a higher state of consciousness for our species, as well as a new designation for humanity – spacekind. Only then will our species truly achieve its full potential.

In the future, our descendants may remember the 21st century primarily for proving that humanity is not Earth-bound, but that our species is able to live and work in a microgravity environment. The last five decades may be viewed as a watershed period for commercial space and living aloft. It was a period when nations shifted from space competition to cooperation, from a space race to forming joint ventures for international macroprojects. The satellite industry not only turned our world into a *global village* by its communication capabilities, but demonstrated that it could be an extremely profitable and useful undertaking. Where would health care, mobile phones, and global telecommunications be without space technology! Furthermore, orbital imaging and sensing have shown myriad practical applications on Earth, even in protecting our planet's environment. The Russian space station Mir became the first platform for true international cooperation by agreements which brought aboard Europeans, Japanese, and even Americans. Today, the International Space Station expands the opportunities for its national partners to prove that *space is the place for synergy*. Hopefully, China will soon be invited to participate in that venture. Before the end of this decade, the whole ISS administration should be privatised and commercialised. Now spacefaring nations have much to gain in forming partnerships in lunar missions, particularly toward the goal of returning humans to the Moon permanently!

To lead the exploration and development of the space frontier, advancing science, technology, and enterprise, by building institutions and systems that make accessible vast new resources and support human settlements beyond Earth orbit, from the highlands of the Moon to the plains of Mars. (*Pioneering the Space Frontier*, 1986, p. 2.)

To actually implement such lofty goals requires global *transformational leadership* in both the public and the private sectors now and in the centuries ahead. The business community at large, not just aerospace and communication satellite companies, must lead in the creation of a space ethos that supports an enlarged and well-funded space endeavors, both in the public and private sectors. Yes, space is a place for fulfilling dreams, as well as for acquiring knowledge and promoting free enterprise!

But how? Specifically, as a case in point, how can America further capitalize upon its \$20 billion plus investment in the *Apollo* lunar landings? How can all nations get payback on their total space expenditures, especially through the *utilization of space-based resources*? Some innovative answers may be gleaned from the reports and recommendations of various space studies over past decades (e.g., NASA-SP509, 1992). Apart from the technical and economic insights, especially for the establishment of a lunar base, these studies include proposals for:

- building public consensus and financial support for the space program;

- initiatives within the private sector to foster the peaceful use of space by its exploration and industrialization;
- legislation that would transform the nation's space agency, as well as its policies and procedures so as to facilitate private space enterprise;
- revision of bureaucratic Federal rules and regulations regarding private space launches and activities;
- promotion of educational and research endeavors that prepare the next generation of spacefarers for offworld challenges!

Outer space is also a place for science and astronomy, and much more! Already, a private undertaking is under way to build an automated International Lunar Observatory (EM: info@iloa.org). At this juncture, the justification for peaceful and commercial development of space resources is more human and scientific, than economic or political. The rationale for moving forward on the space frontier has to do with discoveries which maintain technological excellence, security, and leadership in a knowledge culture! Space undertakings can benefit the Earth's peoples, especially in the developing economies, by technology transfer within the twin planet economies of Earth-Moon. Our aspirations should be to actualize our potential by extending human presence throughout our universe. One proposal from Kim Peart of far-away Tasmania is worthy of implementation – namely, the formation of a Solar Peace Corps to take a proactive role to ensure peace and security within our solar system, especially through utilization of the Sun's energy and system's resources. The aim is to connect Earth's children to the wealth of a Solar economy.

Here are five specific strategies that our government and space activists can take toward the creation of a spacefaring civilization:

1. National, Regional, and Global Convocations on Space Enterprises

Individuals and organizations can raise the public's awareness by sponsoring space enterprise forums at both the local and world levels. Although this can be accomplished in actual group meetings, the best prospects for raising public consciousness on the necessity of space exploration and development may be the Internet and international television. Think back to the global media encounters sponsored by rock stars, environmentalists, and others with a humanitarian cause. Suppose supporters were to promote the existing Global Space Day to include world television and computer exchanges about humanity's future beyond Earth. The primary objective would be to further understanding and consensus on improving the quality of life for this planet's inhabitants by peaceful, commercial exploration and use of space-based resources. The second purpose would be to help earthkind appreciate the importance of human migration to the Moon and beyond. The impact on world citizens would go beyond present space gatherings among only the professional elite. It is the masses of human being who need information and education about the necessity for our moving beyond Earth. Then people might become global leaders in the creation of a World Space Fair.

2. Alternative Funding of Space Enterprises

New options must be pursued for financing space ventures, other than through the taxes and the annual governmental budget allocations. That traditional public sector approach will not obtain the \$700 billion which the National Commission on Space estimated is required over the next five decades to open up the space frontier. Nor will the \$200 billion plus needed to build a lunar base be secured by usual financial methods. Where are funds of that magnitude to come from, especially with huge national deficits and legislative spending restrictions? The history of both the Shuttle and the Space Station to date has been that of government cut-backs which undermined NASA designs and safety in mission planning and execution. In this century, the funding will come mainly from private investments and venture capitalists.

Creating a space ethos implies getting the masses of our citizens involved in space ventures, by some manner or other. In a democratic, free enterprise society, what better way to accomplish this than as a “financial investor.” Innovative ways for space financing must be sought that provide citizens and entrepreneurs with financial incentives, like tax rebates, sale of bonds, or opportunities for private equity funds. To capitalize upon the enormous public interest and good will generated by the space program in the past sixty years, alternative or supplementary funding possibilities should be explored, including the authorization of stock sales in limited R&D technological space partnerships or trading companies. Recall that back in the Sputnik days, the COMSAT offering on the stock exchange was oversubscribed by the public!

Public lotteries to support scientific exploration and civilizing ventures in the newly opened frontiers are part of national experiences. Since the 15th century, European countries have used the lottery device to raise capital for public works. In 1612, the English used this means to support the Jamestown settlement. In the New World, the colonists and first citizens of the American republic employed this mechanism to fund the establishment of higher education, including Harvard, Kings College (Columbia), Dartmouth, Yale, and other universities. In the 19th century, Americans again used lotteries to open up the Western frontier. During the present decade in the U.S.A., for instance, lotteries have become popular again within states to fund public services, particularly education. Today, many foreign countries, such as Australia and Mexico, successfully utilize lotteries or games of chance as a means of raising money to accomplish social goals. In the United States, the National Space Society (www.nss.org) in particular, should lobby for establishment of a World Space Lottery Fund.

If income produced from new funding sources is to alleviate the tax burden of central governments relative to space expenditures, the investment scope must be vastly broadened. That is what underlies the proposal of attorney Declan O'Donnell and myself in the 1990s to establish space authorities, such as a Lunar Economic Development Authority, modelled on the successful Tennessee Valley Authority. Presently, a successor strategy is being suggested in terms of a Lunar Infrastructure Development Corporation, by Drs. Buzz Aldrin and Tom Matula. More creative methods of external financing of space enterprise will occur with the formation of innovative institutions for that purpose. With the proper space ethos in a country, extraterrestrial endeavors would be perceived as a primary national interest and asset. The public generally does not fully appreciate the handsome paybacks and spinoffs that resulted

from previous space investments. To ensure citizen involvement in underwriting civilian space ventures, more research is needed both by government and universities on this subject.

Were more private space capitalization encouraged, then public policy makers and world leaders would be challenged to cooperate in setting disbursement objectives for the money so raised. The public is more likely to contribute enthusiastically by purchasing space bonds, stocks, or lottery tickets if the initial funds raised were devoted exclusively or primarily to offworld economic, international, and scientific use, in preference to military “star wars” type of activities. For example, the initial target might be in the area of space transportation systems. That is, to build the space “highway” for the first few hundred kilometres out of our “gravity well” into Lower Earth Orbit, the most difficult part of interplanetary travel. Global participation in financing joint space ventures could provide advanced aerospace planes and reusable launch vehicles capable of operating in geosynchronous orbit or beyond... . Just as the Conestoga wagons and railroad opened up Western resources to the nation, so will these less expensive spacecraft bring resources from orbit back to benefit the home planet.

There already exist basic constituencies to enhance the success for alternative forms of space promotion and financing, such as among:

- 3,000,000 members of fifty space advocacy groups worldwide who have an estimated aggregate budget today of more than \$30 million;
- beside the science fiction supporters, millions of space media fans from *Star Trek* television viewers and other numerous motion pictures like *2001* and *Apollo 13*, to the worldwide audience who witness the satellite televising of space feats or watching television productions, such as Disney's *Plymouth* series about the first lunar community;
- the millions of people who make up the global space community – *aerospace* workers and contractors, astronomers and engineers, professors and students, et al.

Before his death, Gerard O'Neill, the visionary scientist for the high frontier, predicted that it will be private capital that will eventually finance space industrialization and colonization. The continued internationalization of space activities will attract such global investment.

3. Refocusing of National Space Agencies

The emergence of new work culture based on knowledge calls for the organizational renewal of varied space administrations within the spacefaring nations. Not only do they need to cooperate more effectively on planning joint ventures, but there may be a need now for creation of a Global Space Administration, Authority, or Agency. Such an entity could coordinate the combined efforts of both the public and private sectors in space development worldwide. Such an international institution might prevent overlapping missions, facilitate cost savings, and concentrate efforts on space macroprojects with the best prospects for ROI. With a modernized charter, this space clearinghouse and research center might obtain more creative financing and planning of space activities, particularly with reference to space technology transfer, as well as attracting more venture capital and licensing space trading corporations. In past centuries, great trading corporations were formed by rulers and/or

private investors to facilitate exploration and commerce in unknown or foreign lands. The 21st century may replicate this approach by international space trading entities, comparable to existing multinational communication satellite corporations.

4. Increasing Involvement in Space by Government Entities

In the United States the Executive branch of our government can do much to refocus its departments and agencies toward space development. The U. S. State Department could be doing more with the United Nations and other countries in promoting an updating of existing space treaties! Federal departments, such as Commerce, Labor, Transportation, and Treasury should be simplifying rules and regulations to foster private space enterprise. The Department of Energy, for instance, should be facilitating research into space-based energy, The National Laboratories and the National Academy of Science should be devoting more research to space needs and challenges for human beings. The National Aeronautics and Space Administration needs organizational renewal so as to reduce its field centers' overhead so that more of its funding can be devoted to promotion of exploration and private space enterprise. The NASA television channel and many of its publications could do much more to get public support for their space missions and technological spinoffs.

5. Convoking a 2012 White House Conference on Space Enterprise

Traditionally, the Administration has used the WHC strategy to focus national attention on a U.S. problem or challenge. Therefore, in 2011, President Obama should call for a White House Conference on Space Enterprise as a means for promoting jobs, education, science, and technology, as well as space industrialization and settlement. A Commission should be appointed to plan for this event, including invitations to delegates who are knowledgeable professionals and entrepreneurs in the fields of aerospace and finance. My proposal is that three Apollo astronauts be invited to serve as honorary co-chairmen (e.g., Buzz Aldrin, Neil Armstrong, and Harrison Schmitt), while the three operating chairpersons would be from private enterprise and academia (e.g. Professor A. A. Harrison, Elon Musk, and Burt Rutan). The goal would be to hold this event in Washington, D. C., within two years of the conference announcement. All space organizations and media would also be invited to send observers. Once the WHC has made its report and recommendations, then it is up the Administration, Congress, and NASA to implement them so as to revive our economy and retain our world space leadership!

It should be noted that many of the ideas in this "white paper" originated from a NASA Summer Study at the California Space Institute where the author was a Faculty Fellow. The four volumes of proceedings were published under the title, Space Resources by the U. S. Printing Office (NASA SP-509, 1992; now available from www.univelt.com). More specifically, the scholars and experts gathered there endorsed this recommendation for a White House Conference on Space Enterprise in volume 4, Social Concerns

PUBLIC ACTION

Citizen involvement in any of the above five strategies would contribute to humanity's offworld progress. Michael Simon when president of International Space Enterprises, maintained that government and industry should do more real joint space ventures. This engineer and entrepreneur made a case for space commercialisation and lunar development. Within a free enterprise system, government would encourage the private sector to greater responsibility and risk by creating:

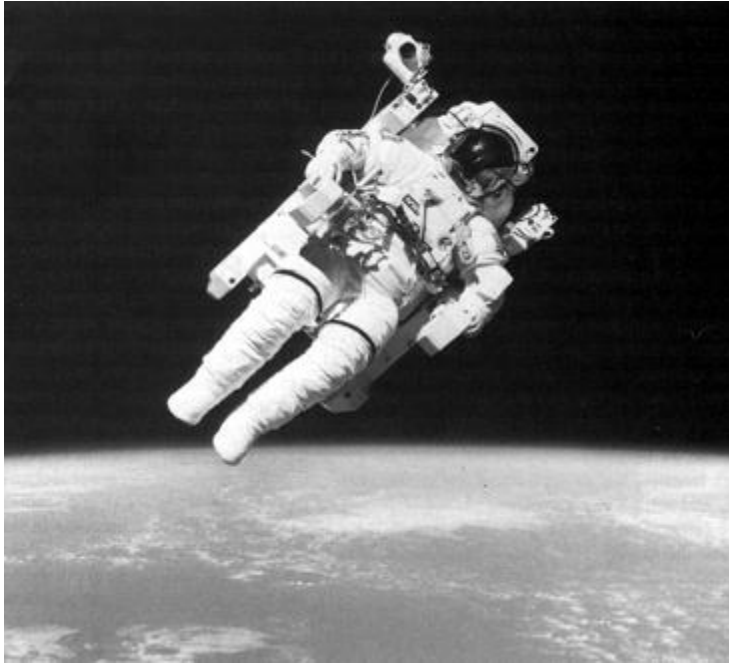


Photo Source: NASA Headquarters.

Exhibit 1. Orbital Envoys of Humankind. Every spacefarer represents the human family offworld, whether as astronaut, worker or technaut, tourist, or settler. The hopes of our species in the future depends on their high performance aloft. And they are enhanced in space by our robotic creations.

- incentives for tax payers who invest in space enterprise;
- policies promoting innovative space entrepreneurialism;
- mechanisms for improving space market responsiveness;
- opportunities for achieving large-scale commercial benefits;
- initiatives which encourage synergy among companies, universities, and government entities engaged in working together to apply space research and transfer technology.

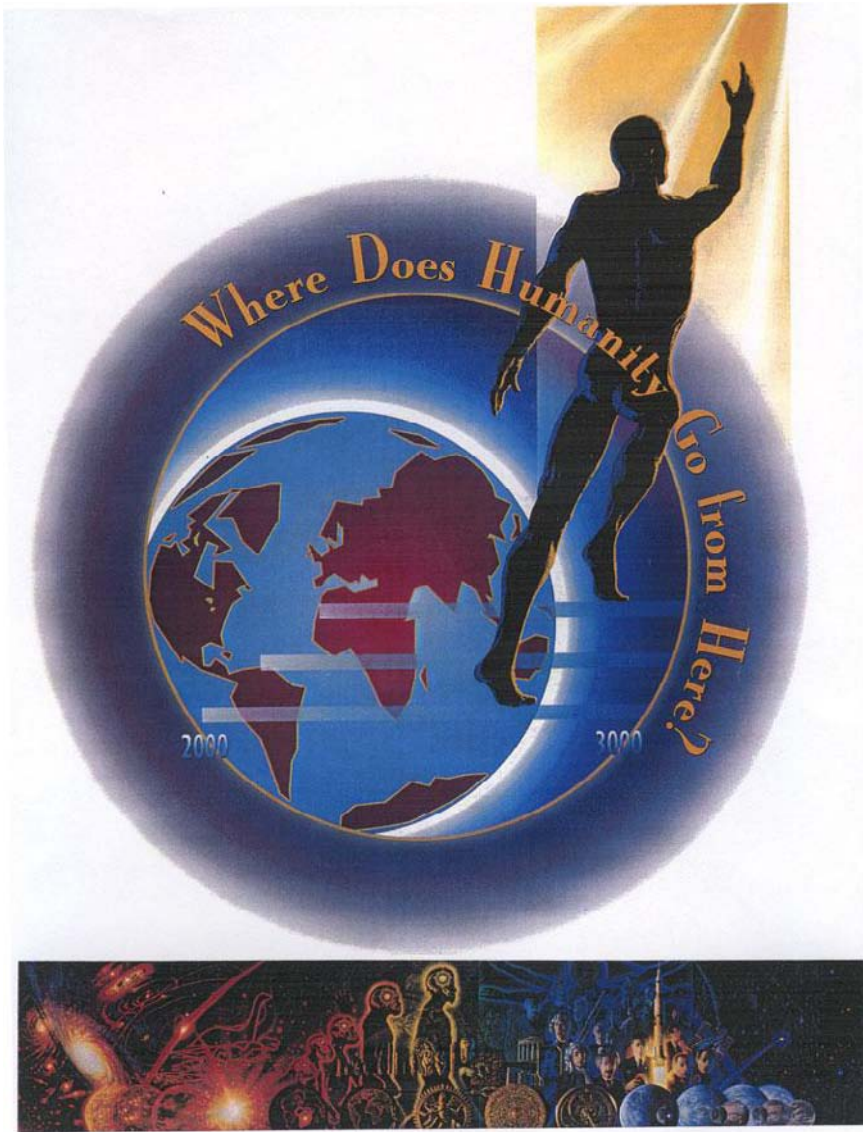


Exhibit 2. Human Emergence in Space. It is your author's conclusion in his latest book, *Toward Human Emergence*, that humanity can only actualise our potential as a species offworld (www.hrdpress.com). Source: The above illustrations are from the Foundation For the Future with art work of Robert McCall. (www.futurefoundation.org).

Perhaps Simon best stated the case for investment in space development in his volume, *Keeping the Dream Alive*:

The era in which we live presents humanity with three great challenges: to live in peace, to bring economic prosperity to all people, and to offer tomorrow's generations an exciting future of physical and spiritual growth. During its relatively brief existence, the Space Program has emerged as a central force in our quest to meet all of these challenges. By breaching the bonds of our home planet, we have taken the tentative early steps to become an advanced interplanetary civilization. The impact of the embryonic space age on our lives,

already great, will expand and intensify in the years to come, as our horizons become as limitless as the Universe itself.

The UN has already designated those who go aloft as humanity's *envoys of humanity* (see exhibit 1). *To create a spacefaring civilization*, these words of Robinson and White highlight the global paradigm shift under way:

Our embryonic envoys have been essential intelligence agents for greater understanding of this survival vision—a total view. Through our efforts to propagate our envoys into the cosmos, through their own personal preparation and adjustments, and also through our remote biotechnological reception of their new transglobal outlook, our envoys have helped us begin to understand the systematic, dynamic, multidimensional, and continuous nature of the cosmos.

CONCLUSIONS

If space visions are to be turned into meaningful achievements, then global leaders worldwide need to support utilization of space resources. This will not only revitalize national economies, but can eliminate poverty on this planet.

Global leadership within all segments of both the public and private sectors could transform peoples' goodwill into a space ethos that permeates our lives toward opening up the high frontier. Contemporary space entrepreneurs are proving the value of space enterprises! When the majority of the world's population perceive the economic and human advantage to be gained offworld, then energies will be directed into its development and settlement. As astrophysicist and author David Brin reminds us, *science* and its child, *technology*, are cooperative endeavors requiring knowledge to be shared, especially when applied beyond Earth. But it will be global business leaders, particularly, who will demonstrate the viability of space commerce. But the real vision to implement is that space is the place where *human emergence* will truly occur (see exhibit 2).

For travelers, it is not enough to see the horizon alone. We must make sure of what is beyond the horizon, and go there together.

Kemal Ataturk

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