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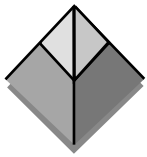

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Corporate Generals: The Military Metaphor of Strategy

PHILIP A. TALBOT*

INTRODUCTION

The lexicon of modern management vocabulary contains many words that betray a martial origin. These semantics of management are redolent with military phraseology such as tactics, operations, staff and divisions. This idea is extended further when the business world is often recorded in military terms whereby companies become the metaphors for armies and competition becomes a metaphor for war. The application of such military terminology may arise out of the origins of modern business formation in the 19th century. The early mechanistic industrial business structures were based on existing military organisational models and it became the paradox of the modern era of unrestricted *laissez-faire* and private enterprise that it had been forced to resort to the only other available models of large-scale management: armies (Hobsbawm, 1995). Martial language has since become the common currency of reporting business activity. Thus, the Irish Takeover Panel (*Irish Examiner*, 21 November 2002) reported that it would impose radical controls over the media wars waged by opposing factions in the future takeover battles of quoted companies. The Jersey President of Economic Development commented that the "air price war could be good for customers in the short term" (BBC Business News, 22 September 2003).

However, the use of such metaphors is paradoxical, in that it can create both powerful insights into theory and at the same time it can create distortions so that a way of seeing becomes a way of not seeing (Morgan, 1997). The metaphor can subsequently provide both different and competing perspectives that are neither inherently right nor wrong, which can focus our attention on the salient features of organisations. In reality, no pitched battles or wars are being waged involving death, destruction and conquest, yet corporate success can be hailed as a victory, corporate defeats as the territorial loss of market share. A hostile takeover can become the metaphor for total corporate defeat and subjugation, where the casualty rates are calculated in the redundancies due to rationalisation.

The recognition of these distortions permits the identification of the true metaphor and the ability to appreciate that no single theory will produce an all-

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encompassing view (Morgan, 1997). One management word in particular, strategy, which has become a discipline in its own right, has both an implicit and explicit military antecedence, which, though routinely alluded to in management texts, is inadequately explored. The object of this paper is to redress this imbalance through the examination of historical military, naval and business literature to debate the soundness of the military metaphor that is inexactly accorded to modern strategy.

The Archaeology of Strategy

Within a business context, strategy is a discipline that is practised by senior management and has been defined as, essentially, "planning or designing to achieve aims, goals or objectives" (Ansoff, 1965). A more recent definition described strategy as "the direction and scope for the organisation through its configuration of resources within a changing environment to meet the needs of markets and fulfil stakeholder expectations" (Johnson and Scholes, 1999). In temporal measurement, strategy is a parvenu, since it did not become a subject of serious management education until the 1970s, although it had irregularly appeared after 1945 in the guise of managerial science or managerial planning. The word strategy is derived from the Greek "strat-egos" meaning the "army's leader" or, in contemporary language, a general. The military antecedence of the word strategy thus becomes apparent and the implication is that universal strategic concepts derived from a martial framework became applicable to commercial practice (Cummings, 1993).

The concept of military strategy, though, should not be viewed solely as the knowledge construct of a Western philosophy but one that was recognised in both the Far and Middle East. Recently, it has been fashionable to quote the ancient Chinese author Sun Tzu who wrote *The Art of War* around 600 B.C., which contains many contemporary maxims that are thought applicable to a modern business environment. Sun Tzu's text has become so popular that it has achieved recent best-seller status – two millennia after its first appearance. He added a caveat to his framework of guiding principles by stating that its successful application required leaders who were wise, humane, sincere, courageous and strict – characteristics that can be absent amongst some senior managers, as reflected by certain recent corporate scandals. Sun Tzu's ideas have recently been reduced to short, pithy aphorisms contained within six principles by McNeilly (1996).

The popularity of this ancient text reinforces the modern managerial attachment and reluctance to abandon the military metaphor as both a source of guidance and inspiration. Nevertheless, it is within Western philosophy that the main influences of military strategy are to be discovered, though one writer (Bracker, 1980) has gone so far as to identify strategy as first appearing in the Old Testament of the Bible, but he mainly focuses on strategic origins in the texts of the ancient Greeks, "strat-egos" as planning the destruction of one's enemies through the effective use of resources. Bracker controversially lamented the disappearance of the strategic idea that had featured in the works of Homer,

Euripides and Socrates through the fall of the Greek city-states and failed to reappear until after the Second World War. The ancient Greek writer, Aeneas Tacitus, "The Tactician", was identified as the provider of the earliest surviving strategy text from the 4th century B.C. when he described the preparations and provisioning for war along with encampments and stratagems. It is on this basis that he is identified as the first author of strategy.

Table 11.1: Sun Tzu Strategy

Sun Tzu Strategy	Contemporary Strategic Equivalent
Win without fighting	Capture the market without destroying it; avoid fierce price competition that renders the remaining business unprofitable
Avoid enemy's strengths and attack his weaknesses	Use intelligence and deceit to achieve this
Know and understand the enemy, yourself and the terrain	SWOT analysis
Think ahead and act fast	Prepare for potential competitive reactions; always be ahead of your competitors
Be proactive rather than reactive	Especially in deciding and dictating the nature and strength of the competition
Trust and treat your own people fairly	Your confidence in your workforce will be well rewarded

Bracker's allegation that strategy disappeared until post-1945 ignores several important military and naval theoretical texts that were produced during the intervening period. *Outline of Tactics* and *O Strategos* (the general), written by Greeks Asclepioditus and Onasander, were both translated into Latin and remained popular in Europe until the 18th century, as did the Roman Frontius's *Strategemata*, which has been translated as meaning "tricks of the trade". A less well-known text, simply because it was not produced in the West and in Latin, was the *Straegikon of the Byzantine Empire*, which advocated an adherence to flexibility, secrecy and guile to achieve victory. The medieval period remained barren of any original thought in this area and it was only during the Renaissance that new texts began to appear. Macchiavelli is often cited as one of "the makers of modern strategy" from his work *L'Arte Della Guerra* (1520–1) and he remained highly regarded until the 18th century, despite his lack of first-hand military experience. Macchiavelli based his ideas on his studies of ancient Rome and the classical texts, so his work is lacking in originality. He advised that "a commander should never fight a battle unless he has the advantage, or if he is not compelled by necessity" and the general was "to have near him faithful men skilful in war and prudent, with whom he continually advises". Finally, he adds that when "your enemy is near to desperation … you ought to avoid battle so far as in your power".

The era of modern military strategic thinking began in the intellectual turbulence of the Enlightenment. This Age of Reason produced a transition from homo civilis to homo economicus, which involved the rationalisation of selfishness and self-interest, the privatisation of virtue and the demoralisation of luxury, pride and avarice (Porter, 2000). The high priest of political economy advocated this idea. Adam Smith in his seminal *Wealth of Nations* (1776) stated that society would grow into "a properly commercial society" whereby minimal government interference would be exercised in the economy. The new professional armies of the period witnessed the reintroduction of universal methods of discipline unknown since the classical era.

It is within this economically rational driven age that another metaphor of the man-machine was first formulated and encountered in both the new armies and industrial organisations. This was because the manoeuvres and military drill of the new armies required the discipline and co-ordination of docile bodies of soldiery so that the body became "manipulated, shaped, trained, which obeys, responds, becomes skilful and increases its forces" and at the same time produced the insidious militarisation of the large workshops (Foucault, 1991). It has been argued that such machine-based organisations became bureaucracies, which have subsequently shaped the basic perceptions of organisation (Morgan, 1997). The return to the classical ideas of organisation was successfully demonstrated by King Frederick the Great of Prussia, who is perceived as the archetypical military figure of the man-machine ideology since he had an infatuation for mechanical automata. Morgan attests that, "Much was learned from the military ... (the Prussian Army) ... had emerged as a prototype of mechanistic organisation. He borrowed much from the practice of the Roman legions, and the reformed European armies of the sixteenth century" and Prussian success led to the replication of Prussian methods throughout Europe.

The first acknowledged writer of strategy in this period was the Prussian Von Buelow (1799) who wrote *The Spirit of Modern War*. Buelow departed from previous ideology by placing greater reliance on the use of maps, maths and geometry so that generalship no longer had to be carried out directly in the field but could be successfully conducted from a military headquarters by issuing directions and orders to units via a staff. This development may be regarded as the development of a new type of scientific strategy, a precursor of the information age that heralded a move to exercising control and direction through a bureaucracy rather than through direct personal management. The Prussian defined strategy as "all military movements out of the enemy's common range or range of vision" and tactics as "all movements within that range" (Van Creveld, 2000). Von Buelow placed greater emphasis on preserving lines of communication and supply, focusing on organisational, technical and tactical aspects of large-scale operations. A similar situation began to arise in the business world with the growth of entities that became too large and impracticable for individual owner/manager control. Increasingly, the manager became secluded from the direct workplace, remote in his office, the equivalent of the military headquarters, measuring performance via regular reports and issuing orders

through their middle managers, the equivalent of the army staff officers. Thus was born the classic "command-and-control" system of organisation which manifested itself in the M-Form of organisation structure (Talbot, 2003).

Von Buelow, who was ridiculed by Tolstoy in his novel *War and Peace*, remains relatively unknown in comparison to the more famous Swiss, Jomini, and the Prussian, Von Clausewitz. Jomini fought in the army of the Emperor Napoleon I, became a chief of staff to Marshal Ney and later served with the Russian Army. He expanded on Buelow's ideas in his *Treatise on the Grand Operations of War* (1804–5) and *The Art of War* (1830), introducing the concept of the theatre of operations, whereby operations were conducted against multiple enemies (the equivalent of a company trading in the marketplace with many competitors) and the zone of operations, which was the space between army's base and objectives (the current business position and the ultimate business goal). Great reliance was placed on securing lines of operations for supplies and cutting the enemies' lines. This would either force the enemy to surrender (which happened to the Austrians at Ulm in 1805) and save them the expense of direct battle or, more usually, place the enemy at a severe disadvantage for a confrontational battle of annihilation.

Von Clausewitz, arguably the most famous and recognised of military theorists, served on the Prussian military staff and was later in charge of the staff college, the Kriegsakademie (founded 1810) in Berlin. His most famous and often-quoted maxim is that "war is simply the continuation of policy by other means" and if the military metaphor is to be believed, then business strategy is the natural extension of business tactics. He saw strategy as the art of using battles to gain the objectives of the campaign, "no one starts a war – or rather, no one in his senses ought to do so – without first being clear in his mind what he intends to achieve by that war and how he conducts it". In his work *On War* written in 1832 he stated, "the best strategy is always to be very strong, first in the general and then at the decisive point". It was notable that the establishment of a Prussian general staff in 1803 had created the first of its type. Its function was to apply the same principles of rational organisation and planning to war that were already transforming the wider European society (Dyer, 1985). The Kriegsakademie's function was to educate and instruct its officer corps where admission to its ranks no longer depended on aristocratic birthrights but on education and examination in military subjects. Promotion was governed by performance reports and further exams so that only the most gifted individuals were promoted to the senior ranks of the officer corps. The efficient Prussian model of administration and co-ordination proved so successful in the Napoleonic campaigns and other wars of the 19th century that it became the international benchmark of excellence and was replicated unevenly elsewhere in other nations. Therefore, it could be argued that the senior Prussian officer recruitment and education process was the forerunner of the 20th century business schools, which, like the Kreigsakademie, have proliferated.

In Great Britain, the then leading industrial nation, the army General Staff was not formed until as late as 1912. This may reflect the retention of an amateur

and gentlemanly philosophy on war and its theories, which may be indicative of a wider cultural rejection of "professionalism" and an adherence to an outmoded form of paternalistic and gentlemanly capitalism. The British attitude of the period may be encapsulated in the comment of the longstanding British Army Commander in Chief during this period, the notoriously reactionary Duke of Cambridge, who is reputed to have said, "I abhor all change even when it is for the better" (Keown-Boyd, 1986). This mindset may largely reflect the absence of British contributions to strategic ideas in all fields, which contributed to overall British industrial decline (Weiner, 1992).

However, Clausewitz and Jomini still retained the overall "big idea" that strategy was designed to defeat the enemy's main army in a battle of annihilation and then seize his capital city. This was inelegantly summed up by the American Civil War Union General Sherman as "getting there fastest with the mostest". The professional military view remained attached to this concept, which became inapplicable in Western capitalism, where the dangers of monopoly capitalism became unacceptable and were progressively regulated against by national governments. It is here that the paradox of the military metaphor breaks down. Military strategy is focused on achieving the ultimate victory of one side but in the business arena corporate victory is regarded as a type of corporate dictatorship that must be resisted at all costs.

Other writers (Hoskin, Macve and Stone, 1998) have seen the birth of modern business strategy in the naval strategy enunciated by the American, Alfred Thayer Mahan (1890 and 1892) at the end of the 19th century. Mahan became acknowledged as the pre-eminent naval theorist of his day and his texts had a profound impact that extended beyond purely naval staffs, which strongly influenced political opinions prior to the Great War. Mahan argued that by controlling the sea-lanes, exercising pre-emptive control and restricting enemy action, victory could be achieved and conflict avoided. Strategy thus became a constant vigilance and boundaries became irrelevant impositions. Mahan is similar to Von Buelow in that he defined theatres of war and victory accrued from dominating theatres and denying these to the enemy. Logistics had become all important in this type of strategy. The two world wars, particularly the Second World War, revealed that the new industrial wars were won by a strategy that operated globally and in theatres of war where economic resources and production capacities proved dominant even when faced by occasionally superior tactics.

It is conventionally assumed that the strategic military success of the Second World War achieved by the western allies somehow smoothly transferred into the business environment in an era where military terminology was well known and in widespread use. It is from post-1945 that managerial science appears in education, accompanied by an increasing and continuing plethora of texts. Bracker identified the first cohort of business strategy writers as emerging in 1947, with Von Neumann and Morgenstern's "games theory", to be followed by a profusion of similar writers. The emergence of business strategy under various nomenclatures arose because the drivers of change as identified by Ansoff (1969)

comprised a marked acceleration of change within firms and the accelerated application of science and technology to the process of management. The American business and economic historian Chandler (1962) differentiated the emergence of the strategic from the tactical thus: "Strategic decisions are concerned with the long-term health of the enterprise. Tactical decisions deal more with the day-to-day activities necessary for efficient and smooth operations." In the military sphere, the adoption of nuclear weapons ensured that successfully fighting a nuclear war by the opposing power blocs became impossible, so mutual deterrence operated MAD (Mutually Assured Destruction). Nonetheless, the NATO strategic idea of the 1960s of operating a flexible response strategy by fighting a conventional war to oppose Soviet aggression without resorting to nuclear weapons was largely illusory, because imminent defeat or stalemate for either side would have initiated a nuclear strike and subsequent levels of massive retaliation that would have led to the total devastation of both opponents.

The archaeology of military and business strategy has now been explored and arrives at the present day. Outright price wars and unrestricted competition to the death – even if the political and economic structures allowed them to occur – are unlikely to succeed, providing at best a phyrric victory that weakens the surviving company to the point of collapse.

> Violence between great opponents is inherently difficult to control, and cannot be controlled unilaterally … once hostilities begin; the level of violence has in modern times tended always to go up. (Kaplan, 1983)

Therefore, limited advantages may be sought at the sub-nuclear level in conventional business warfare without the threat of loss of total market share and financial collapse. If the analogy of the Cold War is invoked, it is important to maintain position and strengths and invest in technology so that the opposition has to invest at similar levels until it ultimately implodes and business dominance is attained.

Conclusion

Is the military metaphor sufficiently robust to view senior managers as the equivalent of military staffs employing military strategies to the battlefield of the global marketplace with its theatres and zones of war? The ostensible semantic links and martial management language provide an identifiable historical timeline back to the ancient Greeks and Sun Tzu. However, comparing modern industrial and post-industrial society with agricultural societies is not comparing like with like and so the metaphor is adequate only up to a point, when it disintegrates. The same may be said of the Clausewitz school of the total war of annihilation, since, to adapt Clausewitz's metaphor, business is simply not the continuation of a war policy by other means. The Mahan thesis modified by the nuclear age is more plausible by seeking victory without conflict. However, these military metaphors have a strictly limited

scope. Only open and limited price wars between companies offer the application of the war analogy. In a modern company, the ultimate ruler or commanding officer is the shareholder but there is no military equivalent of the customer. Companies are designed to service the customer stakeholder group and the coherence of the military analogy then falters. Chandler (1977) even states that the initial development of complex business organisations from mid-19th century USA cannot be attributed to the military sphere. Military strategy has noticeably not featured strongly in the works of the major management gurus other than as a cursory reference in their writings or in the strategic tools employed in the business world.

Table 11.2: Timeline of Military and Business Strategy

Timeline	Military Strategy	Business Structures	Business Strategists and Strategic Tools
BC	Aeneas Tacitus Sun Tzu Asclepioditus Frontius Onasander	Owner Managers – local markets	Command and control
AD 500	Byzantine Straegikon		
1500s	Machiavelli		
1799–1830s	Von Buelow Jomini Clausewitz	Emergence of large enterprises, companies, shareholder stakeholders and national markets	
1899	Mahan – naval strategy		
1945–1950s	Nuclear deterrence – MAD theorem	Regional markets	Van Neumann and Morgenstern – games theory Drucker –The Practice of Management
1960s			Chandler and Ansoff – SWOT
1970s		Globalisation	Professional strategy firms – Value Chains
1980s			Porter and Drucker – global quality, TQM,
1990s			Mintzberg – Core Competency Value System

Nevertheless, the military metaphor should not be totally rejected, as it offers useful though limited contributions to modern strategic discourse. In contrast, others have argued that there is a more continuous and explicit link: "Business

cannot now distance itself from the military discourse of strategy by externalising it as a post-Second World War import: rather both business and war have become the war of the accountants" (Van Creveld, 1977). Indeed, the education of modern managers remains reluctant to abandon the military metaphor (Table 11.3), which inevitably must condition the mindset of future generations of corporate leaders.

Table 11.3: Strategy, Tactics and Operational Control

Example	Army	Industry
Main objective Secondary objective	Defeat Enemy Preserve our forces	25% return on capital Increase market share
Strategy	Attack through border Use 24,000 infantry	Sell on the basis that a 20% increase in sales and production capacity will reduce unit cost by 25%. Use £10m capital
Tactics	Send 3/4 troops in first; hold 1/4 reserve; 12,000 infantry to seize ports at night; 6,000 to sever communications; 6,000 in reserve.	Drop selling prices now by 5%. Offer 5% bulk buying discounts.
Operational control	Monitor progress towards ports. Re-deploy if opposition stiffer than expected.	Monitor sales progress. Ensure machines and labour are ready to take up 20% unused capacity.

Source: *Chartered Institute of Management Accountants, 1991*

However, modern post-industrial organisations are less rigid and hierarchical, since contemporary business operations require more flexible structures that are not so reliant on the command-and-control structures of another era. The new skills of management are softer and the days when chief executive officers announced orders and barked, via mid-level sergeant managers, at docile privates who blindly obeyed them are over (Cloke and Goldsmith, 2002). Therefore, the apparent military link is deceptive and ultimately illusory. At the same time, it remains seductive and damaging, as it subconsciously appeals to the inherent and timeless aggressive human instincts aimed at confrontation, which are hidden beyond a thin veneer of civilised behaviour and convention. Even now, in the era of modern HRM, it is being reported that a "corporate war" is raging over the "the war on talent" where such terms allegedly proliferate in senior HRM circles (Reeves, 2003). Nevertheless, business language is not the same as military language and its excessive application can desensitise those who apply it to its true meaning. It should be remembered that the military metaphor works only up to a certain level before it breaks down and then it becomes of restricted relevance, but at the beginning of the 21st century it still continues to condition an overall approach to strategic thinking that is hard to abandon.

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Towards a Re-Conceptualisation of Service Failure and Service Recovery: A Consumer-Business Perspective

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INTRODUCTION

Maintaining current customers and attracting new ones is of great importance in marketing. Literature demonstrates that at least equal importance should be placed on maintaining current customers as well as recruiting new ones (Reichheld and Sasser, 1990). An important element for keeping customers is to demonstrate true commitment when a service failure occurs (Lovelock and Wright, 1998).

This paper aims to present a more realistic approach to understanding customer dissatisfaction arising from service failure, taking into account suggestions in the literature that include context specificity, elements of Hoffman and Kelley's (2000) contingency framework and idiosyncratic tendencies that are important for understanding the holistic process of service recovery.

The paper is primarily concerned with forwarding a "more inclusive" model for service recovery. A new model is posited based on extant literature and theories on consumer complaining behaviour, service failure and service recovery. The main theories discussed are disconfirmation theory, equity theory, prospect theory and attribution theory. The author concludes by highlighting the unique features of this "more inclusive" model and implores other scholars to test empirically the model in future research.

DISCONFIRMATION AND EQUITY THEORY

Complaint satisfaction is a prerequisite for customer retention (Stauss, 2002). In fact, it may be seen as the ultimate test of commitment towards customer service. Customers' complaint satisfaction refers not only to the problem solution offered by the company but also to additional attributes of the complaint-handling process.

Two important theoretical paradigms are prevalent in service-recovery

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research. The first is disconfirmation theory, which takes into account the difference between expectations and perceptions (see for example Patterson, 1993). The second is equity theory, which is concerned with the overall fairness of the complaint process via distributive, procedural or interactional justice elements (see for example Tax et al., 1998; Stauss, 2002; Santos and Rossi, 2003). Oliver and Swan (1989) argued that disconfirmation and equity are conceptually distinct and can be considered as complementary drivers of satisfaction. Despite being different, Andreassen (2000) argued that the attribute performance evaluation of service recovery is part of the equity judgement. Andreassen's (2000) study supports the disconfirmation paradigm and proves that disconfirmation and equity operate in tandem as two factors that have a significant impact on satisfaction with service recovery. In addition, perceived quality of service recovery was found to be an important input factor in equity formation.

Building upon the foundations of equity theory (Adams, 1965), recent evidence in services literature suggests that customers involved in service failure form their perceptions of justice on several factors: the perceived fairness of the service-recovery outcome (distributive justice), the perceived fairness of the procedures (procedural justice) and the perceived fairness of the manner in which they were treated (interactional justice). Many studies show that complaint satisfaction has a positive (in)direct influence on transaction satisfaction, commitment, trust, word of mouth and repurchase intentions (for example Bearden and Oliver, 1985; Fornell and Wernerfelt, 1987; Reichheld, 1993; Spreng et al., 1995; Smith and Bolton, 1998; Tax, Brown and Chandrashekaran, 1998; Webster and Sundaram, 1998; Andreassen, 1999; Blodgett and Anderson, 2000; Miller, Craighead and Karwan, 2000; de Ruyter and Wetzels, 2000; Maxham, 2001; Stauss, 2002). According to equity theory, as the size of the loss gets larger, the customer is likely to be less satisfied with the service recovery (Levesque and McDougall, 2000). Zemke and Schaaf (1989) introduced the notion of annoyance and victimisation. According to Zemke and Schaaf (1989), more extensive service-recovery efforts are needed to correct victimisation than annoyance. It must be remembered that customer perceptions of the seriousness of service failure are individually based or idiosyncratic. Thus, context specificity is important in the design of any service-recovery research (Lewis and Spyrakopoulos, 2001; Mattila, 2001).

Prospect and Attribution Theory

According to prospect theory (Kahneman and Tversky, 1979; Maxham and Netemeyer, 2002), people value a certain gain more than a probable gain with an equal or greater expected value; the opposite is true for losses. Displeasure associated with the loss is greater than the pleasure associated with the same amount of gains. Therefore, people respond differently, depending on whether the choices are framed in terms of gains or in terms of losses. Prospect theory holds that there are recurring biases driven by psychological factors that influence people's choices under uncertainty. In particular, it assumes that

people are more motivated by losses than by gains and as a result will devote more energy to avoiding loss than to achieving gain. Thus, if consumers believe that service failure is likely from a particular service provider, the incentive to use that provider (assuming there are other alternatives) is weakened, particularly following a poor evaluation of service recovery in the past.

Attribution theory is also important here. Attribution theory was developed over time from the theories of Fritz Heider, Edward Jones, Keith Davis and Harold Kelley. All were social psychologists. Attribution theory describes the processes of explaining events and the behavioural and emotional consequences of those explanations. There are two types of attribution: external attribution and internal attribution. An external attribution assigns causality to an outside agent or force. An external attribution claims that some outside factor motivated the event. Maxham and Netemeyer (2002) labelled this as "unstable attribution", where the effect of a service failure is beyond the control of the organisation. By contrast, an internal attribution assigns causality to factors within the person. Maxham and Netemeyer (2002) labelled this as "stable attribution", where the company accepts responsibility for the service failure and initiates attempts to minimise such "errors" in the future.

Prospect theory and attribution theory are particularly important in service failure and service-recovery research. These theories suggest that dissatisfaction with the service has a greater impact on customer satisfaction and repurchase intention than satisfaction with the service (Maxham and Netemeyer, 2002). These two theories are also important for understanding the "recovery paradox". The recovery-paradox concept asserts that if a customer complaint is satisfactorily dealt with, customers are likely to rate the service firm higher on relationship marketing variables than they did in the pre-service failure level (see for example McCollough and Bharadwaj, 1992; Michel, 2001; Maxham and Netemeyer, 2002). However, Maxham and Netemeyer (2002) assert that this will only be successful as long as the service failure was unique or the cause of failure was beyond the control of the service provider (i.e. unstable attribution). Maxham and Netemeyer also stated that the impact of the recovery paradox diminishes with each service failure. Hence, mistakes in services will happen, but it is how the company deals with and manages these situations that have consequences for re-patronage behaviour and intent.

JUSTIFICATION FOR A "MORE INCLUSIVE" MODEL

Despite several service-recovery models having been presented in the last decade (see for example Goodwin and Ross, 1990; Boshoff, 1997; Bejou and Palmer, 1998; Lovelock and Wright, 1998; Tax et al., 1998; Smith et al., 1999; Andreassen, 2000; Estelami, 2000; Hoffman and Kelley, 2000; Teo and Lim, 2001; Buttle and Burton, 2002; Maxham and Netemeyer, 2002; Stauss, 2002; Santos and Rossi, 2003), they have tended to lack the framework required for a holistic understanding of service failure, consumer complaining behaviour and evaluations of service-recovery attempts. The models may therefore be described as somewhat myopic in their outlook and applicability. In addition,

some models may be too simplistic (Goodwin and Ross, 1990; Bejou and Palmer, 1998; Tax et al., 1998; Andreassen, 2000; Teo and Lim, 2001; Maxham and Netemeyer, 2002) and thus limited in practical usefulness. Other models contain critical deficiencies in understanding complexity and non-linearity of service recovery (Boshoff, 1997; Lovelock and Wright, 1998; Hoffman and Kelley, 2000; Buttle and Burton, 2002; Santos and Rossi, 2003). None of the models systematically assemble the antecedents and consequences of customer dissatisfaction arising from service failure, which is likely to lead to "voice", in order to understand the totality of service recovery.

A systems view of service recovery suggests that there are four main dimensions that need to form part of any service-recovery model: awareness, process, quality and intent. At best, extant models seem only to be concerned with some combination of these dimensions, but not all four. Despite the fact that several useful future research agendas have been presented in recent literature concerning service failure and recovery (see for example Tax et al., 1998; Hoffman and Kelley, 2000; Mattila, 2001), none of the suggestions seem to have been integrated into the domain of relevant published research. Thus, this research aims to develop a more realistic approach to understanding customer dissatisfaction arising from service failure, taking into account suggestions in the literature that include context specificity, elements of Hoffman and Kelley's (2000) contingency framework and idiosyncratic tendencies that are important for understanding the holistic process of service recovery.

Introducing a "More Inclusive" Model

As a result of a thorough literature review on service failure, consumer complaint behaviour, service recovery and evaluations of service recovery, a "more inclusive" conceptual model is presented (see Figure 1.1). This "re-conceptualisation" contains elements of awareness (or attitude), process quality and intent. As stated previously, extant research does not address all four components in one model. The model presented aims to understand service recovery from a holistic, systems approach.

Awareness Dimension

The model posits that "perceptions of value", "importance of service failure", "annoyance at service failure" and "attitude towards the company" are important variables in the awareness dimension. This is the stage in which consumers are given reason to complain. An attitudinal dimension is also present in this stage and it is important to note that any attitudinal variation that may occur is dependent on the service context (Zemke and Schaaf, 1989; Smith et al., 1999; Hoffman and Kelley, 2000; Lewis and Spyrakopoulos, 2001; Mattila, 2001), service type (Smith et al., 1999; Mattila, 2001), the nature of the failure (Lewis and Spyrakopoulos, 2001), the magnitude of the failure (Lewis and Spyrakopoulos, 2001; Mattila, 2001) and the importance of the relationship (Bejou and Palmer, 1998; Hoffman and Kelley, 2000; Buttle and Burton, 2002). The context specificity of a particular service can have an impact on a

customer's perception of service value (Brady and Robertson, 2001) and the importance of the service failure to a customer (Lewis and Spyrakopoulos, 2001; Mattila, 2001). The perception of service and importance of the service failure would determine the level of annoyance the customer has with a service failure (Zemke and Schaaf, 1989; Levesque and McDougall, 2000). The perception and level of annoyance are positioned as key factors influencing "voice", which would then form input to the process stage.

Process and Quality Dimensions

The process stage includes "expectations of service recovery" and the three justice variables of distributive, procedural and interactional justice. Once the customer has formed certain expectations (which may also be based on the attitude and reputation of that company in the marketplace), these expectations are then "tested" against some pre-determined internalised level of acceptance or tolerance thresholds in the complainant's psyche. This forms the core dimension of service recovery.

Distributive justice refers to the perceived fairness of the actual outcome or consequences of a decision, for example the level of refund or exchange offered. It examines the manner in which resources are allocated among exchange parties either by proportionality or equality (Goodwin and Ross, 1992).

Procedural justice refers to whether the procedures, or criteria, used in making the decision are perceived as fair: for example, how quickly a problem was resolved or if both sides were allowed to tell their story. It has also been referred to as a standard that can be applied to resolve conflict (Lind and Tyler, 1988). Procedural justice is centrally concerned with satisfaction on a moral and ethical level and is only attained when information given is awarded due to attention and consideration (Palmer et al., 2000).

Interactional justice refers broadly to the fairness of the interpersonal treatment people receive during the enactment of procedures. Services typically are labour intensive, thus the importance of this dimension cannot be overstated. Literature demonstrates that the sooner recovery takes place, the higher the level of compensation provided and the closer the person who performs the recovery is to front-line personnel, the more significant would be the hypothesised improvement in customer satisfaction (Boshoff, 1997). Boshoff (1997) also reported that, relating to time ("how quickly"), over the short term, speed of recovery is not very important but it is clear that disconfirmation cannot be allowed to ferment for too long. Boshoff stated that if it is left too long, recovery would require considerable levels of atonement to decrease levels of dissatisfaction. The organisational level of the person involved in service recovery ("who") efforts was also not significant as a main effect and only had a marginal impact if combined with time, but an immediate apology was important. In summary, Boshoff (1997) reported that it does not matter greatly who performs the service recovery as long as it is not left too late and as long as it is accompanied by acceptable levels of atonement.

The process stage deals with the evaluation and mitigation of customer

satisfaction or dissatisfaction (for a full discussion of these factors, see Boshoff, 1997 and Tax et al., 1998). In the process stage, it is important to include the nature and magnitude of the service failure, individual consumer psychographics, context specificity and elements of Hoffman and Kelley's (2000) contingency approach. Our model assumes that these elements are an integral component of any service-recovery research.

The quality stage superimposes the process stage. The quality stage includes the variables "attitudes towards the company", "overall perceptions of (in)equity", "overall satisfaction", "prior experience with brand in a service context" and "blame" (attribution). Combined with the process stage, it is noteworthy that the model incorporates the four theories discussed earlier, i.e. disconfirmation theory, equity theory, prospect theory and attribution theory. It also contains similar architecture to SERVQUAL (Parasuraman et al., 1985) (Q=P-E) and SERVPERF (Cronin and Taylor, 1992) (outcome based). Thus, the model has, at its core, consumer evaluations of the quality of the complaint process.

The Intent Dimension

The intent dimension integrates the relationship marketing literature into service recovery and is based on the work of Gabarino and Johnson (1999). It correlates the immediate outcome or evaluation of service-recovery attempts, i.e. (dis)satisfaction, together with a global evaluation of the relationship marketing variables (Bejou and Palmer, 1998; Buttle and Burton, 2002). It illustrates the influence of complaint satisfaction or dissatisfaction on transaction satisfaction, commitment, trust, word of mouth and repurchase intentions (see for example Bearden and Oliver, 1985; Fornell and Wernerfelt, 1987; Reichheld, 1993; Lovelock and Wright, 1998; Tax et al., 1998; Andreassen, 1999; Blodgett and Anderson, 2000; Miller, Craighead and Karwan, 2000; de Ruyter and Wetzels, 2000; Maxham, 2001; Stauss, 2002).

The AP_QI Model

Because this model includes the four important dimensions suggested in systems research, the author labels the model the AP_QI model for service-recovery research (Awareness, Process, Quality and Intent). The AP_QI model has a number of unique features that make it suitable for empirical testing which should yield interesting results for both academic and practitioner audiences:

- it presents a holistic structure for analysing and understanding service failure and service recovery attempts in its entirety;
- it integrates previous literature in the area and includes aspects of non-linearity, complexity, consumer heterogeneity, together with the nature, type and magnitude of service failure;
- it incorporates elements of disconfirmation, equity, prospect and

attribution theory in addition to adopting principles borrowed from SERVQUAL and SERVPERF;
- through the appropriate design of research instruments, it can also accommodate the multiple recovery and double deviation effects through "attitude towards next service failure";
- although rooted in a C2B setting with strong relational elements, it may also be applicable in analysing isolated transactions. It is, of course, applicable for B2B research as well.

Conclusion and Future Direction

The author provided a guiding framework for the comprehensive understanding of service failure, consumer complaint behaviour and service recovery. The AP_QI model is grounded in literature and is empirically testable. It encompasses many theories discussed in a number of related publications. The proposed model has several unique characteristics, which have been described above.

The author would like to encourage other scholars to critique, use and/or build upon the AP_QI model by testing it in the hope of attaining a more complete understanding of service recovery resulting from service dissatisfaction.

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Investigating Aspects of Public Private Partnerships in Ireland

PETER CLARKE AND KEVIN HEALY*

"Facilities so vital to a nation's economy should be encouraged with incentives to attract investment in viable projects, priced according to supply and demand rather than politics."

(SAVAS, 2000: 237)

INTRODUCTION TO PUBLIC PRIVATE PARTNERSHIPS (PPPS)

A PPP can be defined as an agreement between the public sector and a private sector company to provide an asset or service that traditionally has been provided by a public authority. As Grout (1997) points out, the central feature of PPP projects is the obligation of the government to purchase, directly or indirectly, a flow of services over time rather than the capital asset that provides the services. In most cases, ownership of the facility is transferred to the government at the end of the agreed period at no extra cost. At date of transfer, the private sector consortium should have generated enough revenue to cover its initial investment and make a reasonable profit. A PPP recognises that both the public and private sectors receive certain advantages relative to the others in the performance of specific tasks. By allowing each sector to do what it does best, public services and infrastructure can be provided in the most economically efficient manner (Department of Finance, 2002). When popularised by the Conservative government in the UK over a decade ago, PPPs were initially viewed from a macro-economic perspective of providing additional public services (for example new hospitals) without increasing public sector borrowing. This was an important concern, given the EU Stability and Growth pact requirement, whereby the State is limited to an overall government borrowing limit of 3 per cent of Gross Domestic Product. In recent times, the debate on PPPs has focussed on a more micro concern of achieving value for money.

PPPs are relatively new in Ireland and, to date, have attracted little serious investigation. This is surprising, given the significant amounts of money involved and the rather poor performance of certain projects to date. Perhaps the most visible form of PPP in Ireland will be the operation of the public transport system, LUAS, which is seldom out of the news. Another example is the Kilcock-

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Kinnegad motor way, which is expected to reduce the travelling time from Dublin to Galway by about 30 minutes and is being built at a cost in excess of €500 million.

This pilot study, based on limited methodology, examines certain aspects of PPPs in Ireland and is divided into three main sections. The next section briefly outlines the origins of PPPs in Ireland. A section highlighting some of the important principles and issues of PPPs then follows. The subsequent section describes the research methodology in this study and presents the research findings together with a discussion thereon.

ORIGINS OF PPPS IN IRELAND

In Ireland, many of the aspects of PPPs were incorporated in the late 1980s with the building of two toll bridges in Dublin – the East Link and the West Link (Cullen, 2001). Subsequently, IBEC/CIF (1998a, 1998b) detailed the merits of PPPs as a means of investing in public infrastructure, as did a report by Farrell Grant Sparks et al. (1998). This latter report highlighted the fact that the climate for the introduction of PPPs was favourable but noted that PPPs were not to be considered as the complete solution for Ireland's infrastructure deficiencies. Rather, PPPs are to be seen as playing an additional or incremental role, which should not replace existing programmes or plans for exchequer capital spending (i.e. traditional procurement). The above reports were written when Ireland's significant "infrastructure gap" was obvious for many to witness and comment on.

Also significant is the fact that, from 2004, co-financing for Ireland's infrastructure from the EU Regional Development Fund will be sharply curtailed and this will have huge financial implications for Ireland. Perhaps not surprisingly, the development of PPPs is an important element of the National Development Plan 2000–2006 (1999). The Plan commits to using PPPs as a core mechanism to deliver on the infrastructure agenda and a total of €2.35 billion of private sector finance in PPP projects is specified and detailed below in Table 2.1, together with the proposed PPP investment as a percentage of total investment. It is important to note that the Department of Finance (2001) considers that the level of investment presented in the table is very much a minimum target.

Table 2.1: PPP Funding Targets

Category	PPP Investment €m	PPP Investment as % of Total Investment
National roads	1,270	23
Public transport	381	60
Water services	127	9
Waste management	571	69
Total	**2,349**	**28**

Source: *National Development Plan 2000–2006, (1999)*

Principles and Issues of PPPs

In theory, PPPs should be implemented when they create more benefits than costs for both private and public partners and produce a greater net benefit to taxpayers and society when compared to the traditional procurement method. This net benefit is reflected through the "value-for-money" concept. Value for money can be defined as the optimum combination of cost, quality, efficiency and effectiveness (Farrell Grant Sparks et al., 1998).

Value-for-Money Drivers

The factors that determine whether a project delivers value for money will vary by type of project and by sector. The Department of Environment (2000a) specifies that value-for-money assessment comprises two key elements: monetary comparison and non-monetary comparison. Monetary comparison represents a comparison of the cost of the preferred PPP tender, with the cost of traditional public sector procurement expressed in terms of discounted cash flows over the life of the contract. Non-monetary comparison involves all the factors that are difficult to quantify in monetary terms, but their value to government and the wider public is significant. Examples include speed of project delivery, quality of service and security of supply.

An investigation of some 29 projects in the UK, undertaken as part of their Public Finance Initiative (PFI), identified 6 primary value-for-money drivers, which are reproduced below in Table 2.2 (with a maximum score of 18 and a minimum score of 1).

Table 2.2: Value-for-Money Drivers in the PFI

Response Category	Total Points	Average Score
Risk transfer	338	15.36
Output-based specification	267	12.14
Long-term nature of contracts	256	11.64
Performance measurements and incentives	250	11.36
Competition	232	10.35
Private sector management skills	220	10.00

Source: *Andersen et al. (2000) Value-for-Money Drivers in the PFI*

The principal evidence that value for money has been achieved is normally provided through the use of a Public Sector Comparator (PSC) (Farrell Grant Sparks et al., 1998). The (UK) Treasury Taskforce (1999) explains that the PSC must reflect not only certain procurement costs but also the risk that additional costs may arise. Thus, what distinguishes a PSC from an ordinary economic appraisal model is the identification and, where possible, quantification of the risks associated with the traditional public sector procurement of the project (Farrell Grant Sparks et al., 1998).

Definition of the PSC

In the UK, the Treasury Taskforce has issued a series of Technical Notes providing guidelines on PFI procurement. According to Technical Note 5 (Treasury Taskforce, 1999), the PSC can be defined as a hypothetical risk-adjusted costing, with the public sector as a supplier. This estimate is expressed in net present value terms and is based on the premise that the project is to be financed, owned and implemented by government.

Clearly, the calculation and application of the PSC can make a PPP project appear better or worse in terms of value for money (Blackwell, 2000). The PSC is, essentially, a discounted cash flow model. A fundamental principle of discounted cash flow analysis is that money spent now or in the near future carries a higher "present value" cost than money spent several years later. Therefore, the higher the discount rate applied, the lower the present value placed on expenditure in future years (Brealey and Myers, 2000). For evaluation purposes, the discount rate used may either be the nominal (or money) rate or the real rate of interest (i.e. adjusted for inflation). The money rate of interest is that which is quoted in the "market" and is the rate of interest with which most people are familiar. However, the *real* rate of interest is lower than the money rate of interest in an inflationary environment. As Clarke (1982) cautioned some time ago, the key to proper evaluation of long-term investment projects lies in utilising the proper discount rate and cash projections. One should either make cash flow projections in money terms and discount them using the money rate of interest or make cash flow projections in real terms and discount them with the real rate of interest.

Until recently, the UK Treasury Taskforce recommended a (real) rate of 6 per cent, which has been roundly criticised as too high. Gaffney et al. (1999) highlight that the viability of a PPP scheme is very sensitive to the discount rate that is used and Table 2.3 shows the varying effect of the discount rate on the results of an economic appraisal for a PFI project. The table shows that at 6 per cent, the PFI scheme is slightly cheaper than its public sector equivalent and is thus held to be better value for money. When the discount rate is reduced by only 0.5 per cent, the outcome of the appraisal is reversed and the public sector procurement is more attractive, and this continues to increase as the discount rate is reduced. Thus, economic advantage and value for money is, to a large extent, a product of the discount rate used.

Table 2.3: Varying Effects of Discount Rates

Discount Rate (%)	Public Sector Option (£000s)	Private Financing Initiative (PFI) (£000s)	Economic Advantage of PFI (£000s)
6.0	174,337	172,663	1,704
5.5	185,803	186,692	(889)
5.0	198,884	202,043	(3,159)

Source: *Gaffney, Pollock, Price and Shaoul (1999)*

Criticisms of the PSC

Vickers and Pollock (2000) contend that the economic appraisal methodology used in the PSC contains at least two disputable components: discounting and the costing of risk transfer. As discussed in the previous section, use of the 6 per cent discount rate is considered at the higher end of the scale. As a result, Gaffney et al. (1999) argue that the underlying economic analysis is biased towards highlighting the economic advantage of private finance. Although all projects have to pass the PSC test, it may be in the interests of government or a local authority to make sure the figures favour the PFI. An interesting and recent development in the UK is the reduction of the discount rate. This should make PFI schemes, in general, less attractive and many will fail to show value for money.

With respect to the second component, the costing of risk is potentially subjective, as the value for transferred risk cannot be factually determined (Institute of Fiscal Studies, 2002). As Vickers and Pollock (2000) note, risk transfer valuations are contentious. Analysing the Andersen et al. report, *Value-for-Money Drivers in the PFI* (2000), risk transfer valuations accounted for 60 per cent of forecast cost savings. Gaffney et al. (1999) also reflect on risk transfer and in particular the discount rate of 6 per cent. In their opinion, there are several problems with the risk adjustment carried out in the appraisal of PFI schemes. Throughout the PFI appraisal, all costs are "risk adjusted". Yet, the discount rate applied already takes account of an element of risk, as it is set at a level that is deemed by the Treasury to be higher than a risk-free interest rate. Thus, it is argued that the cost of risk is effectively counted twice.

In addition, the problem with the value-for-money test in its present form is that it uses the same discount rate to ascertain the present value of both cost and revenue streams. This is not appropriate if the risks of both the cost and revenue streams are the same, which is unlikely. Grout (1997) recommends that the cost stream should use a lower discount rate than the revenue stream. Further, he highlights two reasons why the private sector firm will bear more risk than the PSC indicates. Firstly, the company runs the risk of large costs if it is unable to finish the project on time. If a project is supposed to deliver services for 25 years and comes on stream 5 years late, then the contract does not extend the process by five years but only pays out for 20 years. The private sector loses more than 20 per cent of the value since the years that receive no payment are the initial years, those with the highest present value. Secondly, under a PFI arrangement, any future uncertainty regarding the costs of providing a public service are borne by the private firm, effectively insuring the State against future increases to input costs. However, some project contracts may not specify this.

In summary, there is a growing body of opinion that PSCs are not robust enough by themselves to guarantee value for money. While a PSC can play a part in judging value, a single-figure computation should not be relied upon (Public Finance, 2002).

RESEARCH METHODOLOGY, FINDINGS AND DISCUSSION

In view of the relatively recent introduction of PPP in Ireland, a combination of a mail survey and a semi-structured interview is used to gain greater understanding of the PSC and its role in the PPP process. The mail survey was used in this study to provide an understanding of how the private sector perceived and applied the PSC through representing public sector interests in PPP projects. The mail survey was addressed to each of the five (Irish) accountancy firms, which advised the public sector on PPP projects in Ireland. The questionnaires were mailed in July 2002 and four responses were received. (The very small sample size and research methodology represent serious limitations for this study but, nevertheless, important insights were obtained and this was the objective of this pilot study). The questionnaire used in this study contained sixteen questions and was five pages in length.

In addition, a single in-depth interview was conducted, jointly, with a finance specialist and a programme manager from the PPP unit, within the Department of Finance. The interviewees were contacted prior to the interview to explain the purpose and nature of the research. They consequently entered the interview with a sense of openness and understanding. A mixture of open and probing questions was used during the interview that lasted between 40 and 50 minutes. The interview was not recorded. While this may constitute a further limitation of the research, it provided a friendly and relaxed atmosphere that facilitated the free flow of discussion.

Research Findings

Due to confidentiality, the accountancy firms surveyed are not identified, nor will reference be drawn to the particular projects that the firms have used for the basis of their answers. Results of the survey are presented under the following headings: general information, value-for-money drivers, the PSC/discount rate and the role of the Department of Finance.

General Information

In a relatively short period, the accountancy firms have acquired extensive experience with respect to work carried out for the public sector in PPPs. Respondents were asked whether the current economic climate (summer 2002), characterised by funding constraints, would provide an increased opportunity for PPP procurement in Ireland. There was 100 per cent agreement that this would be the case.

When asked of the barriers to the successful implementation of PPP projects in Ireland, varied responses were received. However, three of the professional accountancy firms specifically mentioned the following as the principal barriers: project delay in the procurement department, delay in government approval and a serious lack of deal flow. The over-expectation of risk transfer and high bid costs were mentioned as being important barriers.

Value-for-Money Drivers

Table 2.4 identifies the six main perceived "value-for-money drivers" of PPPs in Ireland from the point of view of the respondents. The questionnaire contained nine "value-for-money drivers" and nine points were awarded for a ranking of one, eight points for a ranking of two and so on. The scores and rankings are summarised in Table 2.2 and they are consistent with the previously mentioned UK report (Andersen et al., 2000).

Table 2.4: Drivers of Value for Money in PPPs

Response Category	Total Points	Average Score
Risk transfer	34	8.50
Output-based specification	32	8.00
Competition	27	6.75
Innovation	26	6.50
Private sector management skills	21	5.25
Long-term nature of contracts	14	3.50

PSC/Discount Rate

All the responding accountancy firms indicated that PSCs had been used in their project appraisals. As can be seen from Table 2.5, the discount rates used in the PSC are different between accountancy firms. This was partly due, in the opinion of respondents, to the absence of clear guidelines from the Department. The discount rates are not identified with the accountancy firms for reasons of confidentiality.

Table 2.5: Real and Nominal Rates for the PSC

Accountancy Firm	Real Rate %	Inflation %	Nominal Rate %
A (Pre Dept of Finance)	5	3.0	8.15
A (Dept of Finance new requirement)	–	2.0	5.38
B	6	2.5	8.65
C	3.73	2.0	5.80
D	3.73	2.0	5.80

With respect to Firm A, a 5 per cent real rate was being used before the Department of Finance issued a recommendation and subsequently it used a nominal rate of 5.38 per cent – based on a 30-year government borrowing rate. Firm B would use a real rate of 6 per cent, based on their experience with the PFI in the UK. The decision of both firms C and D to use a 5.8 per cent nominal rate was prompted by the Department of Finance. Interestingly, all the firms used personnel from their associated UK offices to aid in the identification and application of the discount rate. This may highlight the

usefulness of international links to professional accountancy firms when advising on potential government contracts.

Three out of the four accountancy firms believe that the discount rates used in the PSCs are too low. It is important to note that a high discount rate favours the PPP process, i.e. using the private sector. The accountancy firms surveyed would like to see PPP projects develop in this country and their collective expertise and experience tells them the rates used by the Department of Finance are too low and effectively discriminate against PPPs in favour of the traditional procurement method of public sector provision. The respondents argued that, while the rates suggested by the Department of Finance are an accurate reflection of public sector borrowing, they are not an accurate reflection of the cost to the private sector of the project. There is also controversy with respect to the forecast inflation rate currently being used by the Department of Finance. The Department currently requires a rate of 2 per cent to be used for inflation in PPP project appraisals. Two of the accountancy firms believe that the current inflation rate being used is not an accurate reflection of price increases and another firm believes that the issue of inflation may require further examination in the future. However, it was stated that, for political reasons, the Department could not be seen to use any other rate, as this would imply that they are not adhering to European Central Bank (ECB) targets. Perhaps not surprisingly, the officials of the Department disagreed with that assessment. They pointed out that the inflation forecasts were contained in the Irish update to the Stability and Growth Pact. In addition, PPP projects are long term and therefore all assumptions are based on projected long-term outcomes. The Department officials saw no reason why Ireland should sustain a rate of inflation that differs materially from the ECB target rate.

Both interviewees from the PPP unit agreed that the PSC is a prerequisite for all projects where government funds are to be used. However, it was not to be considered as comprising the "pass or fail" threshold. When asked how much weight is attached to the benefits of non-monetary terms, for example early delivery of project, it was noted that "some" consideration would be given to these non-financial elements.

It was noted during the course of the interview that the Department of Finance intends to introduce a range of rates to be used in the construction of a PSC. These rates will depend on the exact type of project and how many years the PPP is procured over. This, they explained, was the reason why the results of the mail survey indicated varying discount rates in the PSC. However, it is important to stress here that, in order to facilitate the development of PPPs, these discount rates should be agreed and known in advance. It is understandable that the private sector requires an adequate return for their proposed investment. If the required return is too high then the bids submitted would be higher than the traditional cost and the project would not advance. If this is discovered only when the relevant government body is evaluating the bids, it is likely to lead to frustration on the part of the bidders. Bidders will have already expended vast sums of money in the bid process only to discover that the project clearly was

not feasible for PPP! Certainly, this issue is worthy of future investigation and clarification.

Role of the Department of Finance

The Department of Finance was criticised by the professional accountancy firms in relation to "deal flow" and the length of time taken to approve projects. Whether this criticism reflects only on the PPP unit in the Department of Finance is questionable. The PPP unit rejects the criticism of lack of deal flow outright. They explain that project proposals are not the focus of the Department of Finance, as responsibility for this rests with each individual department. One of the accountancy firms was of the opinion that the lack of training and education resources available to public sector bodies has resulted in this lack of deal flow.

The officials from the PPP unit maintain that PPPs are only at the pilot stage and as such the number of projects involved is quite small. In the opinion of the interviewees, this facilitates the learning process and is in line with Goodbody's (2002) long-term view of establishing the required structures that will help ensure increased deal flow in the future.

Limitations of Research

It is important to highlight the limitations of the methodology. Since PPPs are at a relatively early stage of development in Ireland, the population of "professional advisors" is small. In effect, only five professional accountancy firms have extensive experience of advising public sector bodies on PPPs in Ireland and four responded to this survey. A single interview with PPP unit officials can at best provide initial insights to a very complex and important PPP process. In addition, the preliminary inferences that can be drawn from this pilot study must be viewed in the context that they represent perceptions at a particular moment in time. It clearly would have been preferable to conduct some type of longitudinal study but the nature of the research process precluded this.

Summary and Conclusion

It is anticipated that PPP will play an ever-increasing role in infrastructure procurement in Ireland over the next few years. Public finances are under strain and PPPs can be an attractive financing alternative, provided they can be shown to deliver value for money. Notwithstanding the apparent appetite for PPPs in this country, there appears to be a serious question mark over the availability of PPP projects, i.e. deal flow.

The value-for-money drivers identified in the mail survey follow a similar pattern to that of their UK counterpart with "risk transfer" and "output-based specification" ranking in both as the number one and two respectively.

Despite some obvious flaws, the PSC is an important tool in demonstrating value for money in a PPP project. Yet, this research clearly shows that the professional accountancy firms who represent public sector bodies are unhappy

with the Department's requirements regarding the discount rates in PSCs. This study does not suggest an appropriate value for the discount rate. Rather, it merely highlights the contention that exists between the Department and the professional accountancy firms surveyed and acknowledges that the choice of a "fair" discount rate could be an area of future investigation.

The fact that the Department appears to favour "low" discount rates may restrict the widespread implementation of PPPs in Ireland. If this is so, then additional budgetary pressures will come to bear on the public sector's finances as traditionally procured spending on essential infrastructure projects increases in future years. In recent months, calls for greater transparency and clarity have been made by prominent individuals in this country to remove some of the obstacles to assessing PPPs true merits and benefits to the taxpayer. Critical details of PPP deals, such as the margins on investment return, the exact scale of committed private sector revenue and tax incentives, are not revealed to the public on the grounds of "commercial sensitivity", according to the PPP unit in the Department of Finance. In the UK, there is anecdotal evidence that PPP deals can produce margins of 10 per cent on construction contracts – more than twice the industry average. Certainly, the financial evaluation process associated with PPP needs more exploration and debate; otherwise, such projects may be decided on spurious arithmetical calculations that may further political rather than economic aims.

Future research could investigate the accuracy or otherwise of the financial data submitted as a crucial part of the PPP bid process, together with an investigation of their adherence to project time scales. However, it may be easier to demonstrate adherence to time scales and projected cost in relation to a PPP project than to prove the more important principle of "value for money". Thus, in some ways, it is ironic that PPPs may be the only way to deliver the kind of vast infrastructure improvements needed by our economy!

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Kurt Lewin: The "Practical Theorist" for the 21st Century

DAVID COGHLAN* AND TERESA BRANNICK**

Kurt Lewin (1890–1946) is considered to be the father of social psychology and in Cartwright's words, "when the intellectual history of the twentieth century is written, Kurt Lewin will surely be counted as one of those few men whose work changed fundamentally the course of social science" (1951: 159). Lewin's contribution to social psychology in general and to the theory and practice of planned change has been well documented and described (Patnoe, 1988; Burke, 2002). Lewin's influence is everywhere in contemporary management: running meetings, work design, training, team development, systems change, leadership styles, participative methods, survey feedback methods, consultation skills, change theory and action research. In the words of Kleiner, "Nearly every sincere effort to improve organisations from within can be traced back to him, often through a thicket of tangled, hidden influences" (1996: 30).

Marrow's (1969) biography of Lewin remains the authoritative work on the subject. Lewin was born in Prussia in 1890. After his family moved to Berlin, he enrolled in the University of Berlin and began doctoral studies in psychology, an emerging offshoot of philosophy. After serving in the First World War, he returned to academia and embarked on a teaching career in Berlin. In contrast with the class-conscious academic norms of the day, Lewin was charismatic, egalitarian, accessible to his students and constantly sitting with his students in cafes and in his home engaging them in long hours of vigorous and provocative discussions of philosophy, psychology and everyday problems. His *Quasslestrippe* group was the best known of these informal settings and from it emerged considerable research (de Rivera, 1976).

With the rise of Nazism, Lewin knew that, as a Jew, he could not get a permanent position so he left Germany in 1933 and settled in the United States. After two years at Cornell, he held a research position at the University of Iowa. As Lewin's work became known, many of the most distinguished social psychologists of the current and next generation came to visit him: Margaret

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Mead, Gordon Allport, Abraham Maslow, Alvin Zander, Alec Bavelas, Ronald Lippitt, Dorian Cartwright, John French and Leon Festinger among others.

By 1944, Lewin was seeking to move beyond Iowa. Douglas McGregor invited him to MIT where he founded the Research Center for Group Dynamics. The Research Center for Group Dynamics at MIT was founded with three objectives: to develop a scientific understanding of the functioning of groups, to bridge the gap between social science knowledge and practice, and to set up a doctoral programme in social psychology (Cartwright, 1959). The list of those who worked with Lewin at MIT reads like a "who's who" of social psychology: Leon Festinger, Morton Deutsch, Ron Lippitt, Stanley Schachter, Kurt Back, Harold Kelley, John Thibaut, to name the more famous (Patnoe, 1988). After Lewin's untimely death in 1947, the Center moved to the University of Michigan and joined with Likert's Survey Research Center to form the Institute for Social Research.

Lewin never wrote a book. His writings are spread across a series of papers. A great deal of Lewin's early work is in German and has not been translated. In 1997, the American Psychology Association published a volume comprising two previously published, out-of-print collections of Lewin's papers, *Resolving Social Conflicts* (1948) and *Field Theory in Social Science* (1951), the former reflecting Lewin's practical action research work and the latter his theoretical work. Two years later it published a second volume, a collection of Lewin's papers (Gold, 1999). So now, with the publication of these two volumes, some of his important papers are readily accessible. There are two major treatises on Lewin's work, Cartwright (1959) and Deutsch (1968), and some commemorative volumes (Stivers and Wheelan, 1986; Wheelan, Pepitone and Abt, 1990; *Journal of Social Issues*, 1992). A popular introduction to Lewin's impact on management thinking and organisation studies is found in Weisbord (1987).

Overall his contribution to management was his way of thinking. This article reflects on Lewin's contribution to methodology in social science research and explores how his concerns with linking theory and practice and the high value he placed on democracy have shaped the development of action research.

Actionable Knowledge: Lewin's Contribution

For Lewin, it was not enough to try to explain things; one also had to try to change them and to involve others in that process of understanding and change. It was clear to Lewin and others that working at changing human systems often involved variables that could not be controlled by traditional research methods developed in the physical sciences. These insights led to the development of action research and the powerful notion that human systems could only be understood and changed if one involved the members of the system in the inquiry process itself. So the tradition of involving the members of an organisation in the change process, which is the hallmark of organisation development, originated in a scientific premise that this is the way to get better data and to effect change. The Harwood pajama factory is credited with being the first industrial site where Lewin's notion of action research was

implemented (Coch and French, 1948). The researchers were essentially addressing the question of how to introduce technological change into the company where there was strong resistance to change. They set up two approaches to introducing the change: representative participation and total participation in discussing the implementation. Using these two approaches, they were able to show differing effects of each approach on productivity and on the acceptance of the change. The results indicated that productivity increased faster and beyond previous levels in groups where total participation was used as a means of introducing the change.

Lewin was a pioneer researcher in producing actionable knowledge. Argyris (1993) identifies four core themes in Lewin's work.

1. For Lewin, sound theory was practical and he integrated theory and practice in several ways: by framing the social sciences as the study of problems; by electing to study problems that were critical to society; by beginning research by observing real life; and by connecting all problems, however big or small, to theory (Sandelands, 1990). This was not the norm among social scientists of his day.
2. He designed his research by framing the whole and then differentiating the parts. He drew on metaphors and representations. One well-known metaphor of his is the "gatekeeper", i.e. the one who controls the gate that permits or inhibits members to fulfil their goals (Lewin, 1948b). His topological representations are the forerunner of systemic representations.
3. He produced constructs to both generalise and to understand the individual situation. He was the researcher–interventionist and sought to enact change in social systems.
4. He was concerned with placing social science at the service of democracy. He was explicit about his concern for developing a better world and in this regard, he predated those who sought to empower the dispossessed. An integral part of the contemporary action research community follows in this tradition.

In Argyris' view, by enacting these four values, Lewin changed the role of those being studied from subjects to clients. He wanted to be of help and if successful would improve the quality of the client's life and produce actionable knowledge.

The famous Iowa studies provide a good illustration of Lewin at work and are an example of Argyris' four themes discussed above. The US government was seeking to respond to meat shortages during the war by changing meat-eating habits. As Lewin asked himself the question, "Why do people eat what they eat?" he found himself examining a variety of social, economic and technological processes. The critical task at the outset was to enable the women (as the "gatekeepers" to their families' dinner tables) to unlearn their well-embedded habits with regard to the forms of meat they supplied to their families and to relearn new habits which were inclusive of forms of meat they previously

considered to be inferior and would not supply to their families. It was through the research that Lewin developed his theory of quasi-stationary equilibrium, gatekeepers and change. The results of these experiments led to Lewin's conceptualisation that people change when they experience the need for change (unfreezing), move to a new standard of behaviour and values (moving) and stabilise the change in normative behaviour (refreezing) (Lewin, 1948b, 1951). Later Schein (1961, 1996) developed Lewin's framework by articulating the psychological dynamics that occur within Lewin's three stages of change. Lewin further asserted that change occurs given conditions which emphasise reduction of those forces restraining change, rather than an increase in the forces driving change. These two learnings from the Iowa studies became the basic philosophical tenets of organisation development (OD) (Coghlan and Mc Auliffe, 2003). Attending to creating the motivation to change by helping people see the need for change and take ownership of it is as important as the changing process itself and the efforts to reinforce change and ensure it survives. Reducing threat and creating psychological safety enable members of organisations to engage in a change process and help make it work. Another outcome from the Iowa studies was Lewin's notion of the theorist and practitioner co-operating to advance theory and improve social practice (Cartwright, 1978).

Action Research

Action research is one of Lewin's enduring legacies (Dickens and Watkins, 1999). Action research focuses on research *in* action rather than research *about* action. Nowadays, the term "action research" is a generic one and is used to refer to a broad range of activities and methods. At its core, action research is a research approach that focuses on simultaneous action and research in a participative manner. Within this approach are multiple paradigms or methodologies, each of which has its own distinctive emphasis (Greenwood and Levin, 1998; Coghlan and Brannick, 2001). Some action research methodologies have developed from sociology and focus on how communities as socio-political systems enact change. These approaches tend to focus on structural emancipatory issues, relating to, for example, education, social exclusion, and power and control (Whyte, 1991; Lynch, 1999; Fals-Borda, 2001). Other action research methodologies have their origins in applied behavioural science and have developed in the organisational context (Schein, 1995; Coghlan and Brannick, 2001). It provides a vehicle for academic–practitioner collaboration and for research by practitioners (Coghlan, 2003; Adler, Shani and Styhre, 2004).

For Argyris (Argyris, Putnam and Smith, 1985), the core tenets of action research as Lewin conceived and used it are:

1. It involves change experiments on real problems in social systems. It focuses on a particular problem and seeks to provide assistance to the client system.
2. Like social management more generally, it involves iterative cycles of

identifying a problem, planning, acting and evaluating.

3. The intended change in an action research project typically involves re-education, a term that refers to changing patterns of thinking and action that are presently well established in individuals and groups. Effective re-education depends on participation by clients in diagnosis, fact-finding and free choice to engage in new kinds of action.
4. It challenges the status quo from a participative perspective, which is congruent with the requirements of effective re-education.
5. It is intended to contribute simultaneously to basic knowledge in social science and to social action in everyday life. High standards for developing theory and empirically testing propositions organised by theory are not to be sacrificed nor the relation to practice lost.

A significant feature of all action research is that the purpose of research is not simply or even primarily to contribute to the fund of knowledge in a field, or even to develop emancipatory theory, but rather to forge a more direct link between intellectual knowledge/theory and action so that each inquiry contributes directly to the flourishing of human persons and their communities (Reason and Bradbury, 2001). It is participative, in that the members of the system that is being studied participate actively in the process. It aims at both taking action and creating knowledge or theory about that action (Greenwood and Levin, 1998; Coghlan and Brannick, 2001; Reason and Bradbury, 2001). Since its intended outcomes include both an action and a theory outcome, it does not recognise the traditional distinction between academic and practitioner knowledge. According to principles of action research, the traditional split between research and action is, in many respects, a false distinction and it is based typically on extreme views of what academic researchers and practitioners are.

There is a resurgence of interest in and use of action research (Reason and Bradbury, 2001). One reason for this is the increasing dissatisfaction with positivist science and the gap it inherently creates between theory and practice (Susman and Evered, 1978; Thomas and Tymon, 1982; Lowendahl and Revang, 1998; Starkey and Madan, 2001). As Reason and Torbert (2001: 6) argue, following the linguistic turn of post-modern interpretism of the past 30 years, which views reality as a human construction based on language, it is time for an "action turn" that aims at "timely, voluntary, mutual, validity-testing, transformative action in all moments of living".

In contemporary discussions of social science research, pragmatic–critical realism is an approach that differs from positivism and post-modernism in that it articulates a clear position on action. A premise underlying pragmatism is that all human behaviour and all human knowledge take place within and simultaneously reconstruct culturally derived meanings. Pragmatic–critical realism demands a reflexive political praxis. In other words, knowledge claims do not relate to some quest for foundational knowledge, as is the case for positivists and post-modernists, but instead look to practical and political consequences (Johnson and Duberley, 2000).

Conclusion

By all accounts Kurt Lewin was an extraordinary person. His curiosity, constant inquiry and energy in engaging those around him in vigorous conversation created both tough rigorous research and warm-hearted communities of inquiry (Deutsch, 1992). After his experiences in the Germany of the 1930s, his deep commitment to democracy underpinned all his work. In the words of Kleiner and Maguire, "Lewin was a complete psychologist – a theorist, a methodologist and a practitioner" (1986: 12). If the research we conduct into the processes of organisations and how they are managed, into how organisations and communities contribute to the development and flourishing of our world and planet is conducted in the real world of action and contributes to forging "a more direct link between intellectual knowledge and moment to moment personal and social action, so that inquiry contributes directly to the flourishing of human persons, their communities and the ecosystems of which they are part" (Reason and Torbert, 2001: 6), then we can rightly acknowledge Lewin and his legacy as our own.

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Towards Developing a Food Safety Model: An Insider Research Approach

PAT DOYLE* AND TERESA BRANNICK**

INTRODUCTION

On the 23 June 1877, Benjamin Disraeli, then prime minister of the UK, addressed the nation stating that, "the health of a people is really the foundation upon which all their happiness and all their power as a state depend". This profound statement is equally true today from a public health and well-being viewpoint.

Insider action research is used to develop a food safety model in a business environment. The author, who is a full-time employee of Premier Dairies consumer foods, carried out research on the food safety area of the business, as an insider researcher. Premier Dairies is a consumer-driven fresh-food business with over 100 years of a proud tradition of servicing the consumer with fresh food products. The author was requested to head up the Project Hero multi-disciplined steering committee. One of the primary objectives of this project is to research the importance of food safety to the consumer. Full access for food safety information was agreed at steering-committee level and the project was driven from board level. The author was recognised as a person with management change skills in the consumer business. The company was not concerned about confidentiality, patent or copyrights for this food safety project. Premier Dairies expected competitive advantage to be obtained from a food safety and marketing perspective.

Of increasing importance to consumers are issues of food safety and traceability. Consumers have become more aware of food safety and traceability as a result of increasing public concern with Bovine Spongiform Encephalopathy (BSE), the human killer bacterium E.Coli 0157H7, salmonella in eggs and chickens, genetically modified foods, growth hormones, antibiotics and contamination with other such dangerous substances as dioxins and benzene. They now expect adequate and effective control systems in the food chain to minimise the risk of rogue proteins, pathogenic bacteria, toxins, antibiotics and

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other hazardous substances. Food safety and traceability must be clearly directed at protecting the consumer, due to consumers' growing awareness of the potential health dangers of food.

Globalisation of food companies has given rise to large centralised distribution depots, which has lengthened the food chain and further increased the risk of contamination. The advent of mass-produced convenience foods means people take less time and care in food preparation. There is an increasing demand for ready-to-go foods, resulting in non-traditional outlets, for example forecourts, serving such food products. An increasing trend of more people eating outside the home is resulting in a higher proportion of people at risk to food scare outbreaks and illness, as detailed in the Food Safety Authority Survey of 2002.

Background to Developing a Food Safety Model

Lucretius (BC, 99–55) the Roman poet and philosopher stated: "What is food to one man may be fierce poison to another". This is still a highly relevant statement, as recent food scares by dioxins, genetically modified foods, BSE and foot and mouth epidemics caused consumers to be more concerned about the possibility of being poisoned by the food they eat. From time immemorial, man has worried about mistakes and their consequences. The Babylonian king Hommurabi (about 1700 BC) heralded today's notion of product safety, when consequences of a building falling were laid down. In 1951, Juran published his first edition of *Quality Control Handbook*, which became the bible for quality control during this period. In 1956, Armond Feiggenbaum developed Juran's ideas further by introducing the concept of Total Quality Control (TQC). TQC fostered the principle of inter-functional teams that would share the responsibility for all phases of design, manufacture distribution and marketing of a product. In the late 1950s, Tauchi, a Japanese quality engineer, developed the now famous Toyota system with such concepts as Just in Time (JIT) and Quality Circles (QC). Kuoru in 1985 focused on the philosophies and principles of quality assurance in the commercial world. The International Standardisation Organisation (ISO) began operations in 1947 with the following mission:

> … to promote the development of standardisation of related activities in the world with a view to facilitating the international exchanges of goods and services and to developing co-operation in spheres of intellectual, scientific, technological and economic activity.

The ISO released its first core series of five quality-assurance standards in 1987: ISO 9000, ISO 9001, ISO 9002, ISO 9003, ISO 9004. The ISO series was revised in 1994 to harmonise elements of quality systems and to include a customer focus. ISO 9004, Part 2 in particular, deals with service quality for business. More recently, ISO 14001 is the common environmental standard.

The Occupational Health and Safety (OHAS) 18001 standard deals with occupational health and safety requirements. ISO is now an internationally recognised standard for all areas of consumer quality assurance.

Hazard analysis is a critical assessment of all potential risks associated with the food chain to protect human consumption from the primary producer to the consumer. The pathway to the Hazard Analysis and Critical Control Point (HACCP) system started in 1959, when the Pillsbury Company was asked to produce a food that could be used under zero gravity conditions in the space capsule. NASA required Pillsbury to keep adequate records to ensure that all the raw materials could be traced back to source. HACCP is the systematic study of ingredients, processing, handling, packaging, storage, distribution and consumer use. This analysis enables us to identify the process flow together with critical areas that might contribute to a safety hazard. Information of this nature allows us to determine the Critical Control Point (CCP) of the food chain under investigation (Pierson and Corlett, 1992). The definition of a CCP is "any activity in the food chain from raw material to finished product where the loss of control can result in an unacceptable food safety risk". Particular areas of concern are pathogens, toxins, antibiotics, dioxins, heavy metals, prions, pesticides and other hazardous chemicals in food products. The HACCP method has been used by the US National Academy of Sciences to promote food safety and traceability principles since 1985.

The generic HACCP system consists of seven principles that outline how to establish, implement and maintain a HACCP plan for any operation under examination. The following is a summary of the seven HACCP principles:

1. conduct a hazard analysis;
2. determine the CCP;
3. establish critical limit(s);
4. establish a system to monitor control of the CCP;
5. establish corrective action to be taken when monitoring indicates that a CCP is not under control;
6. establish proper procedures for verification to confirm that the HACCP system is working effectively;
7. establish documentation concerning all procedures and records appropriate to these principles and their application.

It is vital that a HACCP team be assembled consisting of experts in food production who are well informed on food safety and traceability measures.

Total Quality Management (TQM) is a comprehensive approach to improving competitiveness, effectiveness and flexibility through planning, organising and controlling each activity. Gavin (1970) proposes a list of seven critical dimensions of quality that serves as a useful framework for strategic analysis: performance, reliability, conformance, durability, serviceability, aesthetics and perceived quality. TQM requires a mindset change starting with top management, where a total commitment to quality needs to be demonstrated

with each individual playing their respective role (Porter and Rayner, 1992). TQM is concerned with changing attitudes, behaviour and skills so that the very culture of the organisation becomes one of preventing quality failure and doing the right thing right – first time, every time. Oakland (1993) outlines five principals of TQM: customer, culture, commitment, communication and process. Cullen and Halligum (1987) detailed the continuous improvement cycle for TQM systems. Consumer focus is clearly the primary driver for developing and improving products in the food business.

Good Manufacturing Practice (GMP) is based on the principle of continuous improvement, simplicity, the elimination of waste, minimising process variation and producing safe products. All employees are potential problem solvers, if adequately trained and focused to identify problems and implement improvements in the food chain. Plant and office layouts should be kept compact and safe to ensure low inventory. This will facilitate productivity and effectiveness in the business (Huge and Anderson, 1988). In 1986, Shonberger stated, "GMP is not merely arranging resources in order to produce goods and services, but it is marshalling resources for continual improvement". Clean production and waste minimisation is imperative in any good manufacturing operation. Premier Dairies launched a World Class Manufacturing (WCM) continuous improvement programme in January 1997 to obtain a best practice operation for the consumer products business unit.

The Elements of a Food Safety Model

The key components or features of a food safety model are traceability, hygiene, food legislation, managers' decision-making process, health and safety in the workplace, consumer culture and new product development.

Traceability

Traceability is defined as "the ability to trace both products and activities as core entities in the food chain system" (Kim et al., 1995). Traceability and adequate labelling of food products is now an essential element of food safety, because of the increase in genetically modified foods, food additives and food scares. When food is processed, it is necessary to identify the source of raw materials used in the manufacture of the batch. A practicable way to check a food chain system is to take samples of finished product and carry out a systematic audit back to the raw materials and packaging. Moe (1998) described traceability as the "ability to monitor a product through the total food chain". Liquid milk, for example, has the following food chain cycle: primary dairy farm, milk assembly, processing, distribution, retailing and consumer.

Hygiene

The word hygiene is Greek in origin and comes from *Hygeia*, the Greek goddess of health. Since the earliest times, hygienic codes of practice have been in operation to ensure the safe production of food. Codes of practice (COP)

have a major role to play in helping the food industry to protect the consumer and comply with our food regulations (EU Hygiene and Foodstuffs Regulation 2000). The EU food policy is built on stringent food safety standards which serve to protect and promote the health of the consumer. The EU Commission's White Paper on Food Safety (2000) advocates "[a] co-ordinated and holistic approach towards hygiene as an essential element of food safety". The EU Council Directive 93/43/EC outlines the rules for hygiene of foodstuffs and the procedures for verification and compliance with these rules. However, the primary responsibility for food safety rests with industry. Primary producers and suppliers must operate self-checking quality-control procedures. Codes of practice protect the consumer by providing safe products and enables industry to optimise on scarce resources. Continuous improvement hygiene programmes ensure that codes of practice are reviewed on an ongoing basis in the interest of food safety and traceability.

Food Legislation

Food legislation is documented and reviewed by Doyle and Smith (1989), O'Rourke (2001) and in Food Safety Facts 2003, with a particular focus on food safety and traceability. The Food Safety Authority of Ireland was established in January 1999 to enforce legislation and to promote a greater awareness of the issues involved in food safety. The Food Safety Promotion Board was set up under the Belfast Agreement on the 2 December 1999. This board provides information and advice on food safety matters and runs public awareness programmes on the importance of food safety. The European Food Safety Authority (EFSA) came into operation through the EU 178/2002 Directive on the 28 January 2002. The main aims of EFSA are safety risk assessment and communications on the Rapid Alert System (RAS) to consumers and industry.

Decision-Making Process for Managers

Managers spend much of their time solving problems and making decisions. Problems occur as a result of dynamic change in the business environment. The decision-making process involves evaluating, selecting and implementing a course of action for problem solving. Decision making is defined as making a choice between alternatives (Churchman, 1968). Simon (1960) viewed decision making as a three-stage continuous process, beginning with intelligence, followed by design and choice. A typical decision-making situation has three potential outcomes: certainty, risk and uncertainty. Very few decisions are made with perfect information, because obtaining such information is attempting to control future events, which is impossible. Successful management depends on the ability to predict and control human behaviour in a given environment and thus optimising on positive cash flows and profits.

More than ever, insight into the future of business is the difference between success and failure. Decision-making analysis concentrates on the value of information and the cost of obtaining such information. The purpose of a

decision model is to provide decision makers with insights regarding the decision-making process in such a way as to enhance their overall intuitive decision-making ability. Decision models are important for food safety risk assessment and the development of quality safety systems. Lindbloom (1957) postulated the "muddling through" decision-making process in an organisational environment. Decision models should have a manageable number of variables, reflect reality and should not be over-simplified. Executive decision-making styles need to be included in the development of the model by the researcher. The decision model should be viewed as one of many possible inputs into the eventual decision. Gorry and Morton (1971) outlined three decision-making types: structured, semi-structured and unstructured for operational and management controls and strategic planning. Byrd and Moore (1982) have reviewed the application of the following models in a business environment: mathematical models, materials requirement planning, regression models, critical path method, project evaluation and review technique, decision tree, probabilistic simulation models, deterministic simulation models, linear programming and strategic models. The decision-making process may be viewed in terms of normative (prescriptive) and descriptive models based on the concept of rationality. The normative model defines how a decision maker should act to make decisions, while the descriptive approach describes how decisions are actually made. The objective of this research is to develop a descriptive food safety model based on rationality and practical business experience.

Health, Safety and Welfare

Safety, health and welfare in work are well documented by Byrne (2001). There is now a need to ensure health, safety and welfare in the workplace operates at the highest level consistent with technical development and economic social progress. There are now requirements that a health, safety and welfare policy mission statement is agreed by the business and fully implemented by safe codes of practice. It is essential that EU and Irish health, safety and welfare legislation be adhered to at the highest practicable level to create a safer workplace environment (Safety, Health and Welfare Act, 1989). The operation of working partnerships between employers and employees on health and safety management systems helps to prevent injuries and ill health in the workplace and contributes to improved work practices. Animal health and welfare is based on the principles of humane care and use. This necessitates the provision of essential food, water shelter and healthcare, together with the alleviation of pain and suffering. Consumers feel happier about meat and meat products coming from well-cared-for animals and birds. MAFF Codes of Practice (1991) detail the five freedoms for farm animals as freedom from hunger, thirst, stress, movement and access to shelter. It is important that the best codes of practice are operated, which will satisfy the consumer and produce a quality food product.

Consumer Culture

Culture is the collective memory of society and is continually evolving. Culture has a rich intellectual background involving the wisdom, knowledge, beliefs, customs and skills that are available to members of a society or group. Culture has been defined by Kluckholm and Kelley (1945) as a distinctive way of life of a group of people – their complete design for living. It is a learned and shared way of thinking and acting of a group of people. Consumption choices cannot be understood without considering the cultural context in which they are made.

Culture is the "prism" through which people view products and try to make sense of their own and other people's consumer behaviour. In a consumer culture, a clear focus is given to provide a quality product or service on a consistent basis to the consumer. The objective is to protect consumer health by ensuring that the food consumed meets the highest standards of food safety and hygiene. The people consumer culture philosophy is providing the consumer with a product and service of "quality second to none".

There is a relationship between technological innovation and a changing culture in the area of food safety and traceability. Consumers purchase for the purpose of individual household consumption. They now have more power, because they are in a position to make choices about their individual purchases. There is considerable consumer information available on the range of price and quality of products by using traditional sources as well as the Internet. Healthy, wholesome, pure food and a healthy lifestyle are important for both the consumer and society. Healthy people require less healthcare provision and have a lower frequency of absence from work. Since "the consumer is regarded as king", the action-research approach ensures that the consumer's views are fully taken into consideration in developing a food safety model.

New Product Development (NPD)

The economics and technology of new product development were reviewed by Desrosier and Desrosier (1971). Allen (1993) developed a guide to successful new products for people carrying out NPD work. This approach involves a structured approach from the product concept to commercialisation of the product in the marketplace. Product development involves cross-functional managers from marketing, quality assurance, finance and business development operating as a team. Systematic innovation requires a willingness to look on change as an opportunity. Food safety and quality assurance requirements need to be built into the product under development from the concept stage of the NPD process. Continuous quality improvement is essential in an NPD product cycle to ensure that consumer requirements are achieved from a food safety and hygiene viewpoint.

Research Methodology

Insider research is described by Coghlan and Brannick (2001) as academic research carried out by full-time employees on a particular topic in their own

organisation. Effective insider research conforms to high standards of intellectual rigour, which can be undertaken in the three main research traditions of post-positivism, hermeneutics and action research. Insider research enables the researcher–manager to carry out research on a food safety topic of particular interest to the company. The research, which I will be carrying out in Premier Dairy food business, will be using action research as the main methodology. Action research links methodology, theory, people and practice. Action research is a participative process, where all the members involved in the study participate in the iterative cyclical process. The objectives of action research are about taking action and creating theory about that action (Coghlan and Brannick, 2001; Reason and Bradbury, 2001). The development of theory in action research is achieved by going through a cyclical iterative research process. There are two action research cycles: one is core action research of planning, taking action and evaluating the action taken; the other involves reflecting on the action research of the first cycle. Action research involves participation by people, which ensures a better commitment from everyone involved in the study, together with an invaluable learning process for the company. Action research is a simple basic research-structured approach and gives a better insight as to what organisations are really like (Krim, 1988; Bartunek et al., 2000). Action research combines the notion of academic and practitioner knowledge, together with action about action. Action research approach is a sea change from the more familiar hypothetico-deductive research method previously used by this author.

The author had previous experience as the sole insider researcher (Doyle, 1978) using the more traditional hypothetico-deductive research methodology. The insider researcher used well-equipped company laboratories to investigate the factors affecting somatic cell counting in the biochemistry area of bovine mastitis control. The author made a research paper presentation to the chairman of Shannonside Co-Op and his board on the application and benefits of the research work to the co-operative. The chairman's response was "that this was a well-structured piece of research, which could be used in a practical way to improve the quality of milk supplied to the co-operative" by its milk shareholders. In due course, the research findings were implemented to the benefit of both the co-operative and the member milk suppliers.

Two data-generated techniques were used: consumer focus groups and the Nominal Group Technique (NGT). Consumer focus groups consist of up to twelve suitable people convened to participate on a chosen topic using a facilitator (Greenbaum, 1993). The consumer focus group approach encourages uninhibited spontaneous ideas to be presented by the individuals participating in the group. The consumer focus group sessions are more effective when held in a room with circular seating and a microphone for recording (Hoffel, 1994). Consumer focus groups are a good methodology to explore why people have views and concerns on particular issues, for example food products. When interpreting the results of focus groups, emphasis should be placed on ideas, themes and relationships. The author has had the experience of using consumer

focus groups in Premier Dairies (1999) for idea generation and concept testing in developing new food products. The purpose of involving consumer focus groups was to obtain a detailed insight into issues and concerns of consumers to food safety and traceability (Doyle, 1999).

Individual members participating in the consumer focus groups were randomly selected from an ABCD1 consumer panel (Kotler et al., 1996). A pilot session of a consumer focus group was carried out involving 10 consumers with an age profile of 16 to 75 years. Three separate consumer focus groups involving 9 to 10 consumer participants per session took place on 3 consequent mornings. Each group session convened for up to 2 hours and 40 minutes. The total time duration for the 3 separate group sessions was 8 hours and 25 minutes. The room seating arrangement was semi-circular and tea/coffee was made available to the participants. The main issues and concerns raised at each group session were recorded by the facilitator on a flip chart and further discussed for any clarifications. The following statement was made by the facilitator at the start of each consumer focus group and the purpose of the session was explained: "Identify and define the issues and concerns of consumers on food safety".

The NGT method was used to develop a food safety assurance model involving a multi-disciplined expert group. The NGT was developed by Fox (1989) to obtain benefits from group participation in problem solving in a structured way and controlling dominant personalities. The NGT uses structured rules to generate and prioritise ideas. It involves up to twelve experts participating as individuals in a group session with defined rules to generate a solution to a "nominal question" (Doyle, 1998). The facilitator of the group organises the participants into a semi-circular seating arrangement and encourages ideas and views in writing from them in rotational order. This structured layout ensures that the author-facilitator of the NGT meetings alternates in a clockwise/anti-clockwise rotation with the participants. A flip chart is used by the facilitator to identify and record the main elements of response to the subject under research. The recruitment and selection process of the individual experts for the NGT project focused on both the academic and practical experience required for the food safety research project.

The individuals of the NGT group were selected to include all the relevant necessary disciples of operations, technical, sales, quality and marketing areas of the food business. The functional and industry experience of the management expert group is given in Table 8.1.

This NGT approach ensured optimum input from all the expert participants. It also initiated a learning process for the individual members. The multi-disciplined expert team outlined in Table 8.1 has 171 years of experience in the food business. Each member of the expert group had a third-level degree qualification in one of the following areas: food, agriculture, technology, marketing, quality assurance, sales and food business. The implicit experiential knowledge of the expert group was captured on a real food safety topic in a Premier Dairies environment. Premier Dairies as a company has over 100 years experience in the food business directly serving the consumer.

The "nominal" task set by the author-facilitator at the start of the NGT group session was to "develop and prioritise the essential elements of a food safety model". The members of management who participated in the NGT group meetings were also briefed on the information obtained from the consumer focus group sessions. The purpose of this approach was to ensure that the development of the food safety model was driven with a consumer focus.

Table 8.1: Multi-Disciplined NGT Expert Group

Function	Years' Industry Experience
Procurement Director	28
Operations Manager	14
Quality Assurance Manager	26
Milk Assembly Manager	32
Milk Quality Manager	12
Farm Adviser	10
Milk Quality Adviser	11
Milk Technologist	22
Marketing/Sales Manager	16
Total Years	**171**

Results and Discussion

The first section presents the findings from the consumer focus groups and the final section looks at the findings from the NGT.

Food Safety Issues

The following food safety issues were identified by the consumer focus group sessions:

- mass-produced convenience foods where people take less time and care in food preparation and production;
- increased growth in ready-to-go foods being served from non-traditional retail outlets;
- increased eating outside the home, which gives rise to higher food safety risks;
- higher risk to more people, due to the "greying" population;
- increase in the food chain from production to the consumer;
- increased shelf-life of fresh food products;
- best codes of practice not always followed in the food chain;
- more virulent strains of food-borne bacteria are evolving;
- animal welfare is becoming more important in the primary production of food;
- increased focus on the protection of the environment in food production;
- perception that genetically modified foods are unsafe;

- lack of trust of commercial food scientists, who have a vested interest;
- increased awareness of chemical residues in food;
- awareness of food safety has increased due to awareness programmes;
- emphasis on supplying below-cost food to the consumer, leading to unsafe food;
- perception that a wholesome raw material gave a quality final product.

Food Safety Concerns

The following food safety concerns were identified by the consumer focus group sessions:

- BSE in beef;
- use of illegal substances in livestock production;
- virulent bacterium e.coli 0157h;
- listeria bacteria in soft cheeses and pate;
- inadequacy of food labelling;
- false health claims for some functional food products;
- antibiotic residues in meat and milk products;
- salmonella bacteria in egg and poultry products;
- the development of antibiotic resistance in some human bacteria;
- dioxin levels in food products;
- pesticide residues in food;
- perceived increased food safety and health risks;
- risk of bio-terrorism in the food chain;
- the "people culture" of providing safe wholesome food to the consumer;
- foot and mouth disease in cattle, sheep and pigs;
- poor hygienic food production practices.

Consumer Typology

The following are consumer typologies that were identified from the consumer focus group sessions.

Dismisser

Those in this consumer group have traditional food values, and are defensive about their eating habits and critical of health and safety matters. They are dismissive of health scares and food safety issues:

- "You can take health scares too far."
- "If you took notice of everything that's bad for you, you wouldn't get out of bed in the morning."
- "You would eat nothing if you knew everything that was in the food."

Pragmatist

Consumers in this group are educated and prepared to moderate their habits based on a food scare. They are selective in what foods they eat and keep themselves well informed on any new relevant food innovations.

- "You have to think about these issues, but don't lose sleep over them."
- "You hear about a food scare such as BSE, salmonella or dioxin, you think about it and then change what you have to do."
- "You keep yourself informed on food safety matters and respond accordingly."

Worriers

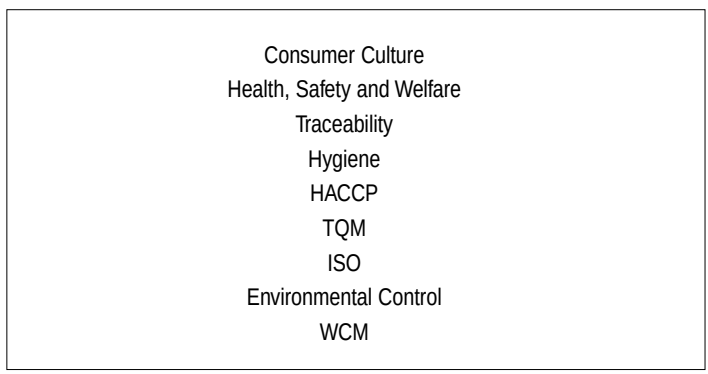
This group is made up of consumers who are anxious and scared about eating any kind of food and feel doomed with all the food safety issues. They are frightened by health scare issues and are quite particular as to what they eat.

- "It is terrible really, we could all be poisoned and we wouldn't know."
- "You can't take a chance with anything you eat these days."
- "We will all end up with foot and mouth disease."

The NGT expert group which subsequently developed the food safety model took the views of the three consumer groups into consideration. After 3 hours and 20 minutes of the NGT session, a vote was taken to rank the nine elements identified by the group members for the food safety model. This food safety model was clearly driven with a "consumer focus" from the primary producer to the consumer.

The nine elements, Consumer Culture, Health, Safety and Welfare, Traceability, Hygiene, Hazard Analysis Critical Control Point (HACCP), Total Quality Management (TQM), International Standards Organisation (ISO), Environmental Control and World-Class Manufacturing (WCM) are ranked in order of importance and are shown in Figure 8.1.

Figure 8.1: Prioritised Elements of Food Safety Model



The expert group and author-facilitator decided to assemble a further NGT session, which took 2 hours and 45 minutes. This gave individual participants time to reflect on the nine-element model generated in the first session. The

group then established essential sub-elements of the model. The second NGT session took place within two weeks of the first and the results of the sub-elements of the food safety model are detailed below:

Consumer Culture
Food safety statement, food taste, nutritional values, growing consumer awareness, lifestyle changes, changing eating habits, consumer service.

Health, Safety and Welfare
Public health awareness, ageing population, growth of obesity, human health and welfare, human well-being, animal health, animal welfare, food bio-terrorism, pro-biotic foods.

Traceability
Raw material ingredients, safety risk analysis, food training programmes, final product ingredients, food chain length and traceability of raw materials.

Hygiene
Quality control, food preservation, prevention of food spoilage, good hygienic practices, shelf life of product, pest and vermin control, good personal hygiene, good food preparation.

Hazard Analysis Critical Control Point
Good process control, optimum food storage, identifies food intolerances, use of functional foods, and identify critical control points and food hazards.

Total Quality Management.
Continuous quality improvement, effective quality assurance programme, total quality management strategy, management quality circle team.

International Standard Organisation
Food legislation protection, good codes of practice, food inspection procedures, maintenance of the storage cold chain, good food control systems, food conformance analysis, food legislation compliance, consistent quality food.

Environmental Control
Minimise waste disposal, reduce packaging, encourage organic food production, reduce and recycle packaging, energy conservation, sustainable food production, non-pollution of water, land, air and sea.

World-Class Manufacturing
Good manufacturing practice, effective efficient production, high care manufacturing and benchmarking of manufacturing operation.

Conclusion

Insider research is seldom used effectively in commercial or service organisations. The objective of this research is to use insider action research to develop a food safety model in a business setting. A descriptive food safety model is developed as an effective aid to decision makers of quality assurance food safety systems. A food safety research topic was selected by the strategic steering committee of Premier Dairies. A multi-disciplined expert group of full-time Premier employees was involved in the development of the food safety model. With insider research, a full-time employee carries out academic research on a topic of interest in the business. Action research is the main feature of this research project, which interlinks people, theory, methodology and practice. Consumer focus groups and the NGT are used as data generation techniques.

Insider researchers need to have a good understanding of the principles of research in order for the research project to be sufficiently rigorous and effective. The academic supervisor needs to have a clear insight into the research topic and be capable of bridging both theory and practice. My academic supervisor Dr T. Brannick focused me on the importance of the research methodologies and data generation techniques of the project and not just on the results. The author is of the view that the insider research approach opens up rich sites of untapped research in a business environment. The right balance needs to be obtained between academic theory and the operational practice of the business for the particular research topics under investigation.

Consumer focus groups identified important issues and concerns of food safety and traceability. Three consumer typologies of dismissers, pragmatists and worriers were also identified from the consumer focus group research. The information received from the consumer focus groups gives a particular insight into the "psyche" of the consumer and gave a real consumer perspective in the development of the food safety model.

The NGT expert individual member participants were fully briefed on the cyclical iterative nature of action research in developing the food safety model in Premier Dairies. The author was aware of his dual role as senior manager and researcher in the commercial setting of the organisation and at all times attempted to remain impartial and focused. The action research approach was a significant change from the more traditional post-positivism approach previously undertaken by this author and the company, as an insider researcher. The NGT involved twelve multi-disciplined experts participating in a structured group session with defined rules to generate answers to a "nominal question". The members participating in the NGT group session had collectively 171 years' experience in the food industry and each member had the minimum qualification of a third level university degree in their respective discipline. The author-facilitator of the NGT group sessions encouraged ideas and views in writing from the members participating in a structured way to the topic being addressed. The following are the main elements of the food safety model in sequential order: consumer culture; health, safety and welfare; traceability;

hygiene; hazard analysis; critical control points; total quality management; international standards organisation; environmental control; and world-class manufacturing.

The manager/researcher was a direct employee of Premier Dairies as an executive director for 25 years. During this employment period, the author would have obtained an insight into the consumer culture of the business across all the functional departments. However, the manager/researcher was required to use his executive director negotiating skills to obtain marketing information from the Marketing Director necessary for this project. Role duality of manager/researcher needs to be carefully managed to achieve a more rigorous detailed food safety research project. The researcher role was required to achieve academic rigour in the research methodologies used in contrast to business-driven projects. Some research experience is important to ensure that adequate focus is given to action research, consumer focus groups and the NGT. The capturing of tacit experiential knowledge from the employees participating in the research is effective in these research projects.

The nine-element food safety model together with the sub-elements detailed above embrace all the essential components of a broad food model. It is proposed to investigate the effectiveness of this model with the intention to develop and implement food safety strategies and systems in the consumer food business.

Consumer training programmes in the food industry need to be developed on an ongoing basis in a formal structured way. This programme should consist of a training plan with a focus on consumers' need. This planned programme requires implementation and completion within a defined time-frame. The effectiveness of the training should be understood and assessed at clearly defined intervals of not more than one year. Necessary information on employee education, training skills and consumer service should be adequately maintained by the business.

The author found the traditional hypothetico-deductive research method more structured in an insider research environment than the action research approach. This research methodology contrasts with the action research method, which is more iterative and reflective in nature. The action research method is more process focused than content specific with the eventual outcome less clear. Evidently, further research practice is required by the manager/author in the critical reflective action research process of a business environment. The use of insider research, action research, NGT and consumer focus groups research techniques in this research was clearly a learning experience for the author, the participants and Premier Dairies consumer business.

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Hedge Funds: An Irish Perspective[1]

MARK HUTCHINSON*

INTRODUCTION

The International Financial Services Centre (IFSC) in Ireland is gradually becoming a major centre for hedge-fund operations. Industry reports suggest that there are up to 66 hedge funds domiciled in Ireland. Funds are attracted primarily by the low corporation tax rate, but also by the progressive attitude of the Irish regulatory authorities. In addition, a sample of hedge funds examined in this paper suggests that the Irish Stock Exchange is the most popular exchange listing for hedge funds and fund of funds. Despite Ireland's emergence as a hedge-fund centre, as yet there has been no research dealing with Ireland in the literature. The purpose of this article is to introduce hedge funds, review the development of the industry in Ireland and discuss the alternative strategies followed by funds and their relative performance, and how this performance compares to traditional asset classes such as equities and bonds.

Subsequent to this introductory section, the paper is set out as follows: the next section gives a definition of hedge funds and a brief history, followed by a review of the hedge-fund industry in Ireland. The trading styles used by hedge funds are then described and the returns to the different strategies analysed. The final section of the paper provides a summary and conclusion.

DEFINITION AND HISTORY OF HEDGE FUNDS

Hedge funds are private investment vehicles where the manager has a significant personal stake in the fund and enjoys a high level of flexibility to employ a broad spectrum of dynamic trading strategies involving use of derivatives, short selling[2] and leverage in order to enhance returns and better manage risk. It is this dynamic use of derivatives and short selling that differentiates hedge funds from traditional investment vehicles such as mutual funds and index trackers.

Fund of funds can be defined as investment vehicles offering investors exposure to a group of portfolio-manager-selected hedge funds employing a range of trading strategies. To avoid exposure to specific manager- or investment-strategy risk, a typical fund of funds would invest in 8 to 10 different hedge-fund strategies and 30 to 50 managers.

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Despite the perceived innovation, hedge funds are not an investment product of the 1990s. The person widely accepted as having started the first hedge fund is Alfred Winslow Jones (see Fung and Hsieh, 1999; Argawal and Naik, 2000; Ineichen, 2000 etc.). Jones started his private partnership fund on 1 January 1949 and employed a long short strategy in order to increase returns and hedge a degree of market exposure. In 1966, an article appeared in *Fortune* magazine describing Jones' investment style and strong returns. This article attracted significant attention, capital and new funds to the hedge-fund industry. However, during and after the downturn of 1969, many funds experienced difficulty due to their net long bias and there was a net outflow of money out of hedge funds. In the mid- to late 1980s, with the emergence of managers such as George Soros and Julian Robertson, generating returns of at least 40 per cent per annum, the industry began to return to prominence. More recently, hedge funds have generally remained out of the spotlight, with the exception of the high-profile failure of Long Term Capital Management (LTCM)[3] in 1998.

The Hedge-Fund Industry in Ireland

The Irish hedge-fund industry has grown quickly over the last couple of years. During this period, the Irish Stock Exchange has become the exchange listing of choice for hedge funds and fund of funds. Table 3.1 is reproduced from data supplied by EurekaHedge Pte Ltd. Out of a sample of 346 hedge funds, 71 have a stock exchange listing. Of these 71, 65 are listed on the Irish Stock Exchange. From a sample of 555 funds of funds, 26 per cent have a listing and 66 per cent of those listed have an Irish Stock Exchange listing. It would appear that, in total, about one-quarter of hedge funds and fund of funds have a stock exchange listing and three-quarters of those listed are listed on the Irish Stock Exchange.

Table 3.1: Hedge Funds and Global Fund of Funds Listed in Ireland

	Hedge Funds	Fund of Funds	Combined
Total Sample	346	555	901
Funds with a Listing	71	163	234
% Listed	21	29	26
Funds Listed on ISE	65	108	173
% of Listed Funds on ISE	92	66	74

Source: *EurekaHedge Pte. Ltd*

The main attraction of a stock exchange listing is that it increases a fund's potential investor base. Some institutions in continental Europe are restricted from investing in funds which do not have a European stock exchange listing. The other advantage is that a listing allows investors to mark their investment to market. The Irish Stock Exchange's main advantages over other exchanges are reputation, ease of listing and low cost.

In addition to the funds listed on the Irish Stock Exchange, there are also many funds operating from Ireland. In 2001, A&L Goodbody (2001) estimated that there were 25 hedge funds domiciled in Ireland. As of 30 June 2002, William Fry (2002) put that number closer to 66. The attraction of an Irish domicile is, in order of importance, the attractive tax rates, the existence of a responsible and progressive system of regulation and, of course, Ireland's position both within the Eurozone and in close proximity to London.

The profits of investment managers, custodians and other service providers operating in the IFSC benefit from a 10 per cent corporation tax rate that is currently being phased out, to be replaced by the standard corporation tax rate of 12.5 per cent. This compares favourably with rates of between 25 per cent and 36 per cent in the G7 group of countries. In addition, collective investment undertakings established in the IFSC enjoy a complete exemption from all forms of taxation on income and gains. There are no withholding taxes on distributions to investors. Issues, transfers and repurchases of units are similarly free of tax. No net asset value or similar taxes are levied. Unlike the special IFSC corporation tax rate, these additional exemptions are not being phased out.

Up to 1 May 2003, the Central Bank of Ireland (CBI) regulated the financial services industry in Ireland. These powers have now been transferred to the newly formed Irish Financial Services Regulatory Authority (IFSRA). Central Bank of Ireland (2002) contained a series of notifications describing the restrictions on an investment vehicles' leverage and investment objectives to allow access to different types of investors. They divide funds into two types depending on their investor type – the Professional Investor Fund (PIF) and the Qualifying Investor Fund (QIF) – and allow for a third umbrella fund, the Fund of Funds.

The minimum investment in a PIF is €125,000 and most of the CBI's general fund restrictions regarding leverage and investment objectives may be disapplied. According to William Fry (2002), most hedge-fund strategies can be accommodated within a PIF structure, subject to certain restrictions on the nature of leveraged futures and options that can be used.

For a QIF, all of the CBI's conditions and restrictions on leverage and investment objectives are disapplied in full. A QIF has a minimum investment of €250,000, with the additional stipulation that an investor in a QIF must meet certain criteria regarding minimum net worth. For private investors, this minimum is set at €1.25 million (excluding household residence and household goods), with a requirement for institutions to have capital or investments worth €25 million (or the beneficial owners of the institution must be qualifying investors in their own right).

As of December 2002, the CBI has also imposed conditions in relation to retail investment in hedge funds. The investment vehicle which the CBI has deemed suitable for retail investors is the fund of funds. The main conditions the CBI has set for fund of funds to qualify for sale to retail investors cover diversification, minimum subscription and auditing, and controls of the underlying hedge-fund schemes.

> The scheme may not invest more than 5% of the net assets in the units of any one scheme or more than 10% in the units of schemes managed by the same management company. These limits may be raised to 10% and 20% respectively if the management company is authorised to provide investment management services in an OECD jurisdiction. (Central Bank of Ireland, 2002)

It should be noted that related companies/institutions are regarded as a single management company. With regard to minimum subscription, "[t]he scheme must have a minimum subscription requirement of €12,500 or its equivalent in other currencies. This requirement may be disapplied where acceptable arrangements are in place to provide full capital protection to the capital subscribed by investors" (Central Bank of Ireland, 2002).

The final condition covers auditing and control of the underlying schemes. "The underlying schemes must be subject to independent audit in accordance with generally accepted international accounting standards [and] must have arrangements in place such that all assets are held by a party/parties independent of the manager of the scheme" (Central Bank of Ireland, 2002).

The CBI's treatment of hedge-fund products is among the more liberal in the OECD and differs considerably from the United Kingdom. FSA (2002) presents the current hedge fund regulatory environment in the United Kingdom. Although there are hedge-fund managers in the United Kingdom, almost all funds are domiciled offshore due to tax considerations. There is no specific regulatory regime for marketing hedge-fund products. Generally, hedge funds can only be marketed to intermediates, market-counter parties or persons for whom the investment is considered suitable by an FSA authorised firm. Retail investors can invest in fund of funds that are set up as limited companies and listed on the London Stock Exchange, but this has been due to market innovation rather than policy design.

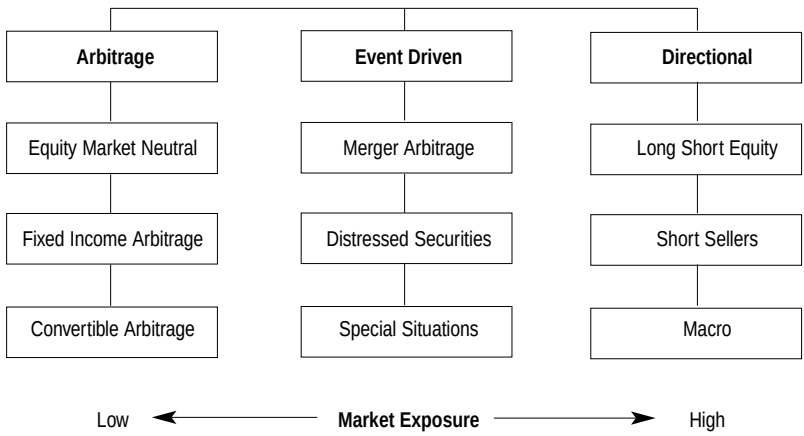
In the US, hedge funds are restricted to "accredited" investors but fund of funds products can currently be sold with a minimum investment of $25,000. However, as discussed in Tannebaum and Cruz (2003), this is currently an area being reviewed by the SEC, with a view to greater regulation of retail hedge-fund products. Switzerland, under the Swiss Investment Funds Act, amended in 1994, allows funds domiciled in the European Economic Area, United States, Guernsey and Jersey to be sold to Swiss investors. There is no minimum investment but, to May 2002, it has never been below Sfr10,000 (€6,558).[4] In Singapore, hedge funds can be sold to the public subject to a minimum investment of S$100,000 (€49,928) per investor, adequate risk disclosure in the prospectus and suitable manager expertise.

Hedge-Fund Trading Styles

Hedge funds use a variety of different styles to generate high absolute returns, irrespective of market conditions. Although these strategies do not aim to outperform equity or bond benchmarks, some of the strategies are more closely correlated with financial markets. This paper follows Ineichen (2000) by classifying

funds into three main trading styles, according to their historic correlation with equity markets. Figure 3.1 sets out the three main hedge-fund-style classifications – arbitrage, event driven and directional – and further subdivides them into nine distinct trading strategies. On the left of Figure 3.1 are the strategies with the lowest historic correlation with financial markets, while those strategies on the right have the highest historic correlation with financial markets.

Figure 3.1: Hedge-Fund Trading Styles and Strategies



Source: *Ineichen (2000)*

The textbook definition of *arbitrage* is, "the purchase and immediate sale of equivalent assets in order to earn a sure profit from difference in their prices" (Bodie and Merton, 1998). However, in well-functioning capital markets, the opportunity for a risk-free profit does not normally arise. According to Taleb (1996), a trader definition of arbitrage is "a form of trading that takes a bet on the differential between instruments, generally with the belief that the returns will be attractive relative to the risk incurred". Within the broad arbitrage trading style, there are three main hedge-fund trading strategies: equity-market neutral, fixed-income arbitrage and convertible-bond arbitrage.

Equity-market neutral funds take matched long and short positions of equal monetary value within a sector/country. Funds are heavily diversified with lots of long/short positions in many different stocks. The advantage of this strategy is that unlike a long-only portfolio, a market-neutral portfolio is not heavily exposed to market movements and, unlike a less diversified portfolio, the fund is not overly exposed to stock specific news. Trading decisions are taken based upon in-depth statistical analysis of historical data, identifying and exploiting equity relationships and inefficiencies. To illustrate with a simple example: if a fund observed that, historically, on 90 per cent of the trading days following a rise in AIB's share price, Bank of Ireland rose 1 per cent and AIB was unchanged, then following a rise in AIB's share price, the fund would go long Bank of Ireland

short AIB for one day, hoping to capture the expected relationship/inefficiency.

The fixed-income arbitrageur takes positions in government bonds, investment grade corporate bonds, government agency securities, swap contracts and futures and options on fixed-income securities to exploit the relative values of the different instruments. The fund is constructed so that it is hedged against large interest rate risk. As the margins on fixed-income arbitrage are relatively small, a larger degree of leverage is usually employed. (Fixed-income markets tend to be less volatile than equity markets, so more leverage does not necessarily mean more risk. Nonetheless, the largest hedge fund failure to date was Long Term Capital Management, a fixed-income arbitrage fund.)

Convertible bond arbitrage funds attempt to exploit under-pricing of convertible securities by purchasing the under-valued security and hedging market and credit risk using the underlying share and credit default swaps.

Event driven is the second broad style of hedge fund. Generally, event-driven funds focus on generating returns from identifying securities that can benefit from the occurrence of extraordinary transactions. Examples of extraordinary transactions are mergers, acquisitions and carveouts. More specifically, event-driven funds tend to specialise in one of three areas: merger arbitrage, distressed securities and special situations.

Merger arbitrage involves taking long and short positions in companies that are engaged in corporate mergers or acquisitions. These corporate deals can be divided into two main types: cash and share. With all share mergers, funds generally buy shares of the company being acquired and sell short the shares of the acquiring company in a proportion that reflects the proposed merger agreement. Whereas with cash mergers, the fund will buy the shares of the company being acquired below the agreed merger price and profit from the narrowing of the spread between the two when the deal is completed.

Distressed securities funds generally accumulate securities of financially troubled companies. These securities often trade at substantial discounts to par value. Hedge funds accumulate them with the belief that they can be sold at a profit in the secondary market or with the expectation that the company may be recapitalised, restructured or liquidated.

Special situations funds seek returns from a variety of corporate events. Examples of special situations strategies are capital structure arbitrage and the arbitrage of equity index constituent changes. With capital structure arbitrage, funds exploit the mispricing of different parts of the capital structure of a company. Arbitraging of equity index constituent changes takes place when an equity index that is heavily tracked (for example the FTSE 100) ejects a company and replaces it with another. By anticipating that the ejected company will have to be sold by index trackers and the replacing company has to be purchased, the funds can generate returns.

The third broad style is the *directional style*. This category of hedge funds tends to have a higher expected return, standard deviation of returns and correlation with financial markets than the two other styles. This category can be further subdivided into three strategies: long short equity, short sellers and macro funds.

Alfred Jones' fund, the "original" hedge fund, was a long short equity fund and it remains the most popular strategy, with 30 per cent of total hedge-fund assets. The long short equity manager uses short positions for two reasons: to attempt to profit from a drop in prices or to hedge the portfolio from market risk. Returns are generated by the stock selection skill of the manager. These funds tend to specialise by region or sector and had excellent performance throughout the 1990s. However, their aggregate performance has been poor over the last two to three years, as, intuitively, those managers with a long bias would have had superior prior performance and have attracted more funds.

Short sellers specialise in seeking profit from a decline in stocks, while earning interest on the proceeds from the short sale of stock. Obviously, the performance of these funds was poor during the 1990s due to the strong negative correlation with equity markets. These funds were the best performers in 2001 and 2002.

The strategies described so far in this section are clearly definable. In contrast, *macro funds* enjoy remarkable flexibility regarding investment and trading strategy. They take long and short positions in currencies, bonds, equities and commodities. Through their size (an estimated 15 per cent of hedge-fund assets under management) and the degree of leverage used, they are believed to have a considerable influence on world markets. Trading decisions are based upon the fund managers' macro-economic views. The triggering of the 1992 break-up of the exchange-rate mechanism in Europe was partly attributed to the activities of macro funds, which viewed the partially fixed exchange rates in Europe as being unsustainable considering the economics of the different countries.

Strategy Returns

Before analysing the statistical properties of hedge-fund strategy returns, it should be noted that the returns being analysed are for hedge-fund strategy indices. When looking at the returns to an index of hedge funds, there are two main issues that need to be addressed before proceeding: survivor bias and diversification.

Survivor bias exists where managers with poor track records exit an index, while managers with good records remain. If survivor bias is large, then the historical returns of an index that studies only survivors will overestimate historical returns. Brown, Goetzmann and Ibbotson (1999) and Fung and Hsieh (1997) have estimated this bias to be in the range of 1.5 per cent to 3 per cent per annum. Counteracting this bias, when comparing hedge-fund returns to equity and bond indices, the HedgeIndex data is net of fees, whereas to invest in an equity or bond index tracker would reduce those indices' returns by between 0.75 per cent and 1 per cent per annum.

Regarding *diversification*, it would be expected that skewness and kurtosis for an index's returns would not be so pronounced as for individual fund returns. Kat and Lu (2002) document portfolios of funds for the period 1994 to 2001 exhibiting lower kurtosis but more pronounced skewness than individual funds. However, as hedge-fund investors would generally hold portfolios of funds or

invest in fund of funds with similar properties to indices, the relative statistical attributes of individual funds is not overly important.

The returns, standard deviation, skewness and kurtosis of returns to the different strategies are set out in Table 3.2. The hedge-fund data that was used to calculate these statistics is from 31 December 1993 to 30 June 2003, net of all fees, and was sourced from HedgeIndex, a joint venture between Credit Suisse First Boston and Tremont Advisors, providing asset-weighted indices of hedge-fund performance. Equity and bond index data for the same period was downloaded from DataStream. The ISEQ, FTSE 100 and S&P 500 are broad-based equity indices in Ireland, the United Kingdom and the United States respectively. Ireland and Euro Bond Indices are MSCI aggregate value weighted indices of corporate and government bonds in Ireland and the Eurozone respectively. The VIX is a volatility index calculated by the Chicago Board Option Exchange. It is calculated by taking a weighted average of the implied volatilities of eight 30-day call and put options to provide an estimate of equity market volatility.

Returns (x_i) for all time series are calculated using the formula in equation 1.

$$x_i = Ln\left[\frac{P_t}{P_{t-1}}\right] \tag{1}$$

Annualised mean monthly returns (*AMMR*) are calculated as described in equation 2.

$$AMMR = 12 \times \frac{\sum_{i=1}^{n} x_i}{n} \tag{2}$$

Annualised monthly standard deviations (σ_i) are calculated as described in equation 3.

$$\sigma i = \sqrt{\frac{\sum_{i=1}^{n}(x_i - \bar{x})^2}{n-1}} \times \sqrt{12} \tag{3}$$

Skewness characterises the degree of asymmetry of a distribution around its mean. Positive skewness indicates a distribution with an asymmetric tail extending towards more positive values. Negative skewness indicates a distribution with an asymmetric tail extending towards more negative values. Obviously, from an investors' perspective, positive skewed returns are superior to no skewness or negative skewness. Skewness values are calculated as described in equation 4.

$$skewness = \frac{m_3}{m_2\sqrt{m_2}} \tag{4}$$

where

$$m_j = \frac{1}{n}\sum_{i=1}^{n}(x_i - \bar{x})^j \tag{5}$$

Kurtosis characterises the relative peakedness or flatness of a distribution compared with the normal distribution. Positive kurtosis indicates a relatively peaked distribution with more occurrences in the middle and at the extreme tails of the distribution. Negative kurtosis indicates a relatively flat distribution, with fewer occurrences in the middle and at the extreme tails of the distribution. Intuitively, investors should view an investment with returns showing high positive kurtosis as unfavourable, indicating more frequent extreme observations.

$$Kurtosis = \frac{m_4}{m_2^2} - 3 \qquad (6)$$

Table 3.2: Hedge Fund, Equity and Bond Returns 1993–2003

	MEAN %	STD DEV %	SKEW	KURTOSIS
Arbitrage				
Equity Mkt Ntrl	10.3	3.1	0.15	0.11
Fixed Inc Arb	6.7	4.1	-3.41	17.71
Convertible Arbitrage	10.1	4.8	-1.67	4.39
Event Driven				
Merger Arbitrage	8.0	4.6	-1.42	6.50
Distressed	12.3	7.3	-3.00	18.16
Special Situations	9.6	6.6	-2.92	18.59
Directional				
Long/Short Equity	11.1	11.1	-0.00	3.24
Short Sellers	-1.5	17.9	0.66	1.15
Macro	13.5	12.3	-0.24	1.99
Equity Indices				
ISEQ	8.6	18.6	-0.79	1.05
FTSE 100	1.7	15.0	-0.66	0.35
S&P 500	7.8	16.2	-0.70	0.52
Bond Indices				
Ireland Bond Index	7.6	4.5	-0.19	-0.11
Europe Bond Index	7.0	3.6	-0.23	-0.32

Source: *CSFB/Tremont HedgeIndex; DataStream*

The highest returning strategy over the period was global macro, with an annualised mean monthly return of 13.5 per cent. However, this strategy has the second highest standard deviation. Another strategy with a high standard deviation is short sellers, which have performed consistently badly other than

in 2001 and 2002, when they returned an average 6.3 per cent per annum. Equity market neutral exhibits the lowest standard deviation combined with an annualised mean return of 10.3 per cent per annum.

None of the hedge-fund strategies exhibit negative kurtosis. Special situations, distressed securities and fixed-income arbitrage have the highest kurtosis, indicating more observations at the extreme tails of the distribution. These three strategies also exhibit the largest negative skewness, indicating that the majority of extreme observations occurred on loss-making days. A closer look at the data shows that the worst monthly returns of fixed-income arbitrage, distressed securities and special situations were -7.2 per cent, -13.3 per cent and -12.7 per cent. All three of these observations occurred in a period of extreme market stress around the collapse of Long Term Capital Management from August to October 1998. Equity market neutral, short sellers and macro all have the smallest absolute levels of skewness and kurtosis.

Looking at equity indices, the ISEQ, FTSE 100 and S&P 500, while generally having more desirable skewness and kurtosis characteristics, generated lower returns for a higher standard deviation than the majority of hedge-fund strategies, with the exception of short sellers. Bond indices demonstrate low standard deviation, reasonably high returns with minimal skew and kurtosis.

Table 3.3 illustrates the correlations between the individual hedge-fund trading strategy returns and the returns to different market factors. Correlations between hedge-fund returns and market factors are calculated as described in equation 7.

$$\rho_{xy} = \frac{\sigma_{xy}}{\sigma_x \sigma_y} \tag{7}$$

where

$$\sigma_{xy} = \frac{1}{n} \sum_{i=1}^{n} (x - \bar{x})(y - \bar{y}) \tag{8}$$

Consistent with other studies (see Schneeweis, Kazemi and Martin, 2003), equities are a factor in the returns to most hedge-fund strategies. Event-driven and directional strategies tend to be particularly correlated with equities. However, due to their low correlation, the addition of convertible or fixed-income arbitrage to a portfolio of equities would add considerable diversification benefits.

Bonds are obviously important for fixed-income arbitrage and their correlation with macro funds suggests that these funds operate in bond markets. However, bonds have very little correlation with any of the other strategies.

An increase in equity market volatility is negative for event-driven and directional funds, with the exception of short sellers, who obviously benefit from falling markets, something typically associated with rising equity market volatility. Equity market volatility has very little relationship with any of the arbitrage strategies.

Table 3.3: Correlations between Hedge Funds and Major Market Factors 1993–2003*

	ISEQ	FTSE100	S&P 500	Ireland Bond Index	Euro Bond Index	VIX
Arbitrage						
Equity Mkt Ntrl	0.28	0.32	0.40	0.08	0.05	-0.16
Fixed Inc Arb	0.14	0.11	0.04	0.23	0.21	0.08
Convertible Arbitrage	0.27	0.16	0.14	0.13	0.14	0.02
Event Driven						
Merger Arbitrage	0.45	0.40	0.45	-0.04	-0.06	-0.32
Distressed	0.58	0.48	0.56	0.07	0.03	-0.41
Special Situations	0.53	0.44	0.49	-0.00	-0.05	-0.31
Directional						
Long/Short Equity	0.52	0.48	0.59	0.09	0.03	-0.37
Short Sellers	-0.64	-0.60	-0.76	-0.03	0.06	0.53
Macro	0.22	0.23	0.23	0.33	0.26	-0.14

Source: *CSFB/Tremont HedgeIndex; DataStream*

*Table 3.3 illustrates the correlations between the individual hedge-fund trading strategy returns and the returns to different market factors over the period 31 Decemeber 1993 to 30 June 2003. The ISEQ, FTSE 100 and S&P 500 are broad-based equity indices in Ireland, the United Kingdom and the United States respectively. Ireland and Euro Bond Indices are MSCI aggregate value weighted indices of corporate and government bonds in Ireland and the Eurozone. The VIX is an equity volatility index calculated by the Chicago Board Option Exchange. It is calculated by taking a weighted average of the implied volatilities of 8 30-day call and put options to provide an estimate of equity market volatility.

SUMMARY AND CONCLUSION

This paper outlines the development of the hedge-fund industry and the regulatory environment in Ireland. The main strategies pursued by these funds, the returns to the different strategies over the last ten years and the market factors which influence these returns are also discussed.

The hedge-fund industry is one of the fastest growing sectors in financial services. Barra RogersCasey (2001) estimates that there are at least 6,000 hedge funds in operation globally managing more than €500 billion in assets. The IFSC, due to its attractive tax rates, progressive regulatory environment and close proximity to London, is in a key position to enjoy the benefits of the industry's growth. At the same time, the Irish Stock Exchange is establishing a reputation as the premier listing for these funds. If, as forecast, the hedge-fund industry continues its rapid growth, then Ireland seems well positioned to benefit.

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1 The author is grateful to EurekaHedge Pte. Ltd. for the use of their hedge-fund database, CSFB/Tremont HedgeIndex for the use of their hedge-fund index data and would also like to thank the Irish Stock Exchange for their assistance.

2 Short selling is a trade in which the fund borrows a security, sells it, then at a later time repurchases it and returns it to the party who initially loaned the security. The short seller profits if the security has dropped in value and realises a loss if it has risen in value.

3 In October 1998, Long Term Capital Management (LTCM) had trading losses of $3.6 billion and the fund had to be bailed out by a consortium of banks brought together by the New York Federal Reserve.

Many articles have been devoted to LTCM but, from an investing point of view, the lessons to be drawn from the failure are:

i Like equities, hedge funds are not a risk-free asset class: just as companies go bankrupt, hedge funds will also go bankrupt. Many funds failed before LTCM and many have failed since.

ii Like equities, when one fund goes bankrupt it does not mean all funds will go bankrupt.

iii Therefore, as with equities, hedge-fund investors should hold diversified portfolios of hedge funds.

4 Currency equivalents here and elsewhere are rounded and use exchange rates on 6 August 2003.

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The Profitability of Momentum Strategies Based on the Release of Firms' Quarterly Results: Evidence from the Constituents of the DAX 30

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INTRODUCTION

A large number of studies, predominantly US based, document predictability in equity returns, whereby stocks that performed well in the past continue to do so in the future (see for example Jegadeesh and Titman, 1993; Chan et al., 1996). Such studies are referred to as momentum (relative strength) studies and document that for holding periods of three to twelve months, purchasing past "winners" and disposing of past "losers" generates statistically significant abnormal returns.

Such strategies are a violation of market efficiency at its most basic (weak-form) level. It is not surprising, therefore, that the very nature of the levels of return generated by such momentum-based trading strategies has spawned considerable academic debate. Some have argued that the profitability of such strategies can be explained by market microstructure-related effects, serial correlation in common-factor realisations, the presence of a delayed price reaction to a common factor, use of an inappropriate return-generating model and the size effect (for example Lo and MacKinley, 1990; Conrad and Kaul, 1993; Fama and French, 1996). Others have argued that the profitability of such strategies can be explained by the market's systematic under-reaction to firm-specific news (for example Chan et al., 1996; Liu et al., 1999).

Very little research has been conducted on momentum strategies outside the US. Following the methodology of Jegadeesh and Titman (1993), Liu et al. (1999) document profitable price-momentum strategies in the UK market that are consistent with market under-reaction to industry- or firm-specific news. Ryan and Overmeyer (2003) investigate the profitability of price-momentum strategies on the DAX 100. They find that such strategies are profitable and readily exploitable by institutional investors who tend to concentrate their portfolio

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weights in large capitalisation stocks. Such profitability is not explained by failure to adjust for systematic risk, delayed reaction to a common factor or serial correlation in common-factor realisations. They conclude their results may be consistent with under-reaction to firm- or industry-related news.

In this paper, we explore whether the profitability of the price-momentum strategies on the largest capitalisation stocks on the German market as reported in Ryan and Overmeyer (2003) is related to the market's reaction to firm-specific news or, more specifically, accounting-related news. Concentrating on the largest capitalisation stocks has a number of advantages. Firstly, no previous research explicitly investigates the under-reaction to firm-specific news in the context of the very largest stocks quoted on a national market. Secondly, by focusing on the largest capitalisation German stocks, we can explicitly investigate the potential for large institutional investors, who tend to concentrate their portfolio weights in such large stocks to exploit potentially any profitability that may arise. Thirdly, such stocks are less likely to be subject to microstructure biases (Conrad and Kaul, 1993; Ball et al., 1995). Finally, chasing momentum profits is trading intensive, so much of the potential profits may potentially be dissipated by transaction costs. Transactions costs, such as commissions and bid-ask spreads, are lower for our stocks than for their smaller counterparts.[1,2]

In the next section, we provide our rationale for exploring the profitability of accounting-based momentum strategies and in the following section, we present our data and methodology. In the subsequent section, we report the returns associated with the momentum strategies and in the final section, we summarise and present our conclusions.

Momentum Strategies Based on a Firm's Accounting Releases

In order to examine more precisely whether the predictability of future returns from past returns and, therefore, momentum profits are due to the market's under-reaction to information, the market response to past accounting-based news is examined. It is natural to look to a firm's accounting releases to try to understand stock price movements, as they are the primary routine mechanism by which companies communicate with the market and are, therefore, obvious candidates to consider first as underlying causes of the momentum effect.

In this study, we attempt to relate the evidence on momentum in stock prices to the evidence on the market's under-reaction to accounting-based information. For instance, among others, Bernard and Thomas (1989), Bernard et al. (1995) and Liu et al. (2000) find that firms reporting unexpectedly high earnings outperform firms reporting unexpectedly poor earnings. The superior performance persists over a period of about six months after the earnings announcement. Givoly and Lakonishok (1979) report similar patterns in the response of prices to revisions in analysts' forecasts of earnings. Affleck-Graves and Mendenhall (1992) examine the Value Line timeliness ranking system (a model based on a combination of past earnings and price momentum, among other variables) and suggest that earnings surprises account for Value Line's ability

to predict future returns.

We explore the possibility that the profitability of price-momentum strategies reported in Ryan and Overmeyer (2003) is largely due to the component of returns that is related to accounting-related news. If this explanation is correct, then the profitability of the price-momentum strategies reported in Ryan and Overmeyer (2003) will not be profitable after accounting for past innovations in earnings and other accounting-based information.

However, it is possible that strategies based on either past returns or a firm's formal accounting releases exploit market under-reaction to different pieces of information. For example, an accounting-results-based momentum strategy may benefit from under-reaction to information related to short-term accounting information, while a price-momentum strategy may benefit from the market's slow response to a broader set of information. In this case, one could expect that each of the momentum strategies is individually successful and that one effect is not completely subsumed by the other.

Chan et al. (1996) investigate this possibility using US data and find that price-momentum strategies are still profitable after controlling for the impact of accounting information. No evidence exists on the contribution of the market's under-reaction to accounting releases in explaining the profitability of price-momentum strategies outside of the US. We will redress this imbalance for the largest capitalisation stocks in the German market.

Sample and Methodology

For our purposes, no public database exists that collects firms' formal accounting release announcement dates for publicly listed German companies over the period of the Ryan and Overmeyer (2003) study.[3] Therefore, our sample is restricted to 30 German blue-chip companies that form the DAX 30, where quarterly results are published in the main German financial newspaper, the *Handelsblatt*. Our sample period, January 1995 to June 2000, is chosen because before 1995, most major German companies did not publish quarterly results on a regular basis.[4]

The price-momentum portfolios are formed on the same basis as Ryan and Overmeyer (2003). At the start of each month, all stocks with a return history of at least twelve months are ranked and assigned to portfolios on the basis of their past six-month price performance. A buy-and-hold return is then computed for each portfolio for the subsequent twelve-month period.

To relate the evidence on price momentum to that on accounting momentum, a measure of market surprise as suggested by Chan, Jegadeesh and Lakonishok (1996) is used. Using this approach, we rank the stocks every month based on the cumulative abnormal stock return around the most recent announcement date up to month t.

ABR is defined as:

$$ABR_{it} = \sum_{j=-2}^{+1} \left(r_{ij} - r_{mj} \right)$$

where r_{ij} is stock i's return on day j (with the quarterly results being announced on day 0 and r_{mj} is the return on the DAX 100).[5] We aggregate returns until one day after the announcement date to account for the possibility of delayed stock-price reaction. This measure is a very clear measure of market surprise, since it does not require an explicit model for investor expectations.[6] Accumulating the return from two days prior to the announcement date is designed to take account of prior information leakage and information search by market participants in the days prior to the *known* release date (Kim and Verrecchia, 1991).

The abnormal return around the announcement is used as a measure of surprise. As Chan et al. (1996) note, to the extent that the market responds slowly to accounting-related news, we should expect to see a drift in future stock returns that can be predicted by the sign and magnitude of the abnormal announcement return. Thus, we should see stocks with large favourable announcement returns subsequently outperform stocks with large unfavourable announcement returns.

RESULTS

Price Momentum

Firstly, the correlation between the price-momentum measure and the accounting-based momentum measure are examined in order to assess whether the performance of the different momentum strategies are based on the same effects. The correlation coefficient between both strategies is calculated using monthly observations pooled across stocks. With a coefficient of 0.201, the strategies are positively correlated with one another, but the coefficients are not large. The relatively low correlation suggests that the six-month price-momentum strategy and the ABR accounting-momentum strategy are not entirely based on the same information.[7] Rather, they may capture different aspects of the change in a company's performance.

Panel A of Table 4.1 reports the stock-price performance of portfolios formed on the basis of prior six-month returns, where portfolio I comprises past "winners" (top-ten companies in terms of prior six-month price performance) and portfolio II comprises past "losers" (bottom-ten companies in terms of prior six-month price performance).[8] We employ the prior six-month return performance to make direct comparisons with Ryan and Overmeyer (2003) and also because this is the standard approach used in prior research (for example Chan et al., 1996; Rouwenhorst, 1998). Panel B of Table 4.1 reports the abnormal return around the release of the quarterly results for the same portfolios of stocks as reported in Panel A.

In Panel A, we report that subsequent to the portfolio formation date, the portfolio of past winners outperforms the loser portfolio. Three months after portfolio formation, the cumulative excess return of the winner portfolio is 8.5 per cent, compared with 5.6 per cent for the loser portfolio. Thus, the winner portfolio outperforms the loser portfolio by 2.9 per cent (t-stat = 1.07).[9] After 6 months, the pattern is unchanged. With 15.2 per cent, the cumulative return of

the winner portfolio is 3.0 per cent (t-stat = 0.82) higher than the return of the loser portfolio (12.2 per cent). However, after 12 months, the cumulative return differences have reversed. With a return of 27.9 per cent, the cumulative return of the winner portfolio is not significantly different from the cumulative return of the portfolio of past losers (28.5 per cent).

Table 4.1: Characteristics of the Price Momentum Portfolios Based on Six-Month Prior Price Performance*

Panel A: Cumulative returns	Winner	Loser	Difference in return	t-stats
Past 6-month return	0.055	-0.009	0.064	
Return 3 months after portfolio formation	0.085	0.056	0.029	1.07
Return 6 months after portfolio formation	0.152	0.122	0.030	0.82
Return 12 months after portfolio formation	0.279	0.285	-0.006	-0.117

Panel B: Abnormal return around the quarterly results	Winner	Loser	Difference in return	t-stats
Most recent announcement	0.013	-0.011	0.024	
First quarter after portfolio formation	0.005	0.003	0.002	0.42
Second quarter after portfolio formation	0.009	0.002	0.007	2.84**
Third quarter after portfolio formation	0.009	0.001	0.008	2.26**
Fourth quarter after portfolio formation	0.004	0.006	-0.002	-0.58

* Panel A presents the cumulative returns of the portfolios where the momentum portfolios are formed on the basis the six-month price performance prior to portfolio formation. Panel B presents the 3-day abnormal return measured around the release of the quarterly results for those portfolios presented in Panel A.

** = statistically significant at a = 0.05 (student t- distribution).

However, though the differential returns are in the expected direction (past winners outperform past losers) for at least the six-month period after the initial portfolio-formation period, they are not statistically significant. Thus, our results in Panel A contrast with the reported results of Ryan and Overmeyer (2003), who find, for portfolios based on the constituents of the DAX 100, that winners outperform losers for a twelve-month horizon. Therefore, on a face-value basis, it appears that the characteristics of the 30 largest stocks may differ from those of the remaining 70 stocks that make up

the DAX 100. In other words, the profitability of price-momentum strategies may be a function of company size[10] or, alternatively, the characteristics of the investors who dominate the shareholder registers of such companies.[11]

Panel B of Table 4.1 shows that the past price performance of the portfolios is closely related to the price response to the most recent quarterly results. Abnormal three-day announcement returns rise from the loser to the winner momentum portfolio. There is a difference of 2.4 per cent between the loser and the winner portfolio based on the most recently reported quarterly results prior to portfolio formation.

In contrast to the price-momentum strategy, the differences in the price response around the dates of subsequent quarterly results continue over the periods following portfolio formation. The abnormal return around the first subsequent announcement is higher by 0.2 per cent (t-stat = 0.42) for winner stocks compared to loser stocks. In the second and third announcement following portfolio formation, the abnormal return is larger for winner stocks by 0.7 per cent (t-stat = 2.84) and 0.8 per cent (t-stat = 2.26) respectively. Though statistically significant, these returns are, however, unlikely to be economically significant, taking into account reasonable transaction costs. By the fourth quarter, there is a difference of –0.2 per cent but it is not statistically significant (t-stat=-0.58).

Momentum Strategies Based on the Release of Firms' Quarterly Results

In the last subsection, we find for our sample companies the returns to a price-momentum strategy of buying the ten stocks with the highest performance based on the preceding six months' price performance and selling (shorting) the ten stocks with the worst six months' price performance does not generate statistically significant returns. In contrast, if investors were to concentrate their trading strategy solely in the days surrounding the release of the quarterly results, they would be able to capture statistically significant profits. However, as previously pointed out, the returns from pursuing such a strategy, though statistically significant, are likely to be substantially eroded by reasonable transaction costs and therefore are unlikely to be economically significant and hence not exploitable by investors. In this subsection, in contrast to the approach adopted in the previous subsection, we form our momentum portfolios on the basis of price performance around the most recent quarterly results (rather than on the basis of prior six-month returns) and investigate the profitability of momentum strategies based on such an approach.

Table 4.2 shows the performance of the quarterly results-based momentum portfolios formed on the basis of abnormal returns around the most recent set of quarterly results. The portfolio of winners (losers) consists of those ten stocks that generated the highest (lowest) abnormal return performance in the three-day period surrounding the publication of the quarterly results in the period immediately prior to portfolio formation. Panel A reports the price reaction in the three-day period surrounding the release of the quarterly results for the four

Table 4.2: Characteristics of the Earnings Momentum Portfolios Based on the Abnormal Return around the Earnings Announcement*

Panel A: Abnormal return around the most recent quarterly results	Winner	Loser	Difference in return	t-stats
Most recent announcement	0.045	-0.039	0.079	
First quarter after portfolio formation	0.030	-0.023	0.053	16.97**
Second quarter after portfolio formation	0.008	0.002	0.006	3.12**
Third quarter after portfolio formation	0.006	0.003	0.003	0.87
Fourth quarter after portfolio formation	0.006	0.001	0.005	1.85

Panel B: Cumulative returns	Winner	Loser	Difference in return	t-stats
Past 6-month return	0.099	0.030	0.069	
Return 3 months after portfolio formation	0.048	0.077	-0.029	-1.02
Return 6 months after portfolio formation	0.123	0.130	-0.007	-0.42
Return 12 months after portfolio formation	0.317	0.266	0.051	1.80

* Panel A presents the abnormal return measured around the release of the quarterly results for those portfolios based on the price reaction to the most recent quarterly results prior to portfolio formation. Panel B presents the cumulative price momentum returns of the portfolios presented in Panel A.

** = statistically significant at a = 0.05 (student t- distribution).

quarters after the initial portfolio formation period. Panel B reports the associated price performance in the subsequent four quarters for those portfolios reported in Panel A.

In Panel A we find in the first quarter following their initial formation winners outperform losers by 5.3 per cent in the three-day period surrounding the announcement of the quarterly results (t-stat = 16.97).[12] In the following quarter, the return difference is 0.6 per cent (t-stat = 3.12), but this differential return would not be economically significant after taking into account realistic transaction costs. Thereafter, in the remaining two quarters though the

differential returns are in the expected direction (0.3 per cent in quarter three and 0.5 per cent in quarter four), they are not statistically significant (0.87 and 1.85 respectively).

Table 4.2, Panel B shows that the price performance of the portfolios is closely related to price returns in the period surrounding the release of the most recent quarterly results prior to portfolio formation. There is a difference of 6.9 per cent in price performance between the loser and the winner portfolio. However, after formation the pattern reverses. During the six months following formation, the loser portfolio clearly outperforms the winner portfolio (-0.7 per cent, t-stat = -0.42). After six months, the picture changes again, so that in the first year following formation, the winner portfolio (with a cumulative return of 31.7 per cent) outperforms the loser portfolio (with a cumulative return of 26.6 per cent) but the return differential is not statistically significant (t = 1.80).

In aggregate, investors would not usefully profit by buying past winners and selling past losers based on the abnormal returns around the most recent quarterly results and taking a position in those stocks for a one-year period. Rather, investors would be better advised simply to concentrate their trading activity in the three-day period surrounding the release of the quarterly results in the subsequent quarter. The returns to pursuing such a strategy are both statistically and economically significant.

Summary and Conclusion

In this paper, we evaluate whether the profitability of the price-momentum strategies of Ryan and Overmeyer (2003) are driven by the market's under-reaction to firm news, more specifically accounting-related news. We find that for the constituents of the DAX 30, forming momentum portfolios based on past price performance, the profitability of momentum strategies is not economically significant.

However, we find the magnitude of the potential returns to buying past winners and selling past losers is both statistically and economically significant if investors form their portfolios based on the market's reaction to the most recent quarterly results and buy past winners and sell past losers in the three-day period surrounding the release of the subsequent quarterly results. In other words, the surprise value of the most recent quarterly results is a good predictor of the "surprise" value of the next reported quarterly results.

One possible interpretation of our results is that the profitability of price-momentum strategies reported in prior research may be a function of company size or investor characteristics, as we report no evidence of exploitable profits by pursuing such a strategy by restricting our sample stocks to the very largest capitalisation stocks. In contrast, however, momentum strategies based on the release of firm's quarterly results are profitable. Such results are consistent with evidence in relation to the well-known post-earnings-announcement-drift (PEAD) phenomenon documented in Bernard and Thomas (1989).

We can conclude that institutional investors who concentrate their portfolio holdings in the largest market capitalisation stocks can usefully exploit

momentum strategies conditioned on the market's response to firms' formal accounting disclosures. However, further research is necessary to investigate whether such results are replicable across the very largest stocks in other markets and across different periods to ensure our results are not market or time-period specific.

We may speculate that the differences in profitability between momentum strategies based on prior price performance and those based on the price response surrounding the most recent quarterly results may be explained in the context of Merton's (1987) model of capital market equilibrium with incomplete information. Predictability of future stock returns based on past price changes may be a stock market anomaly that is not exploitable for large stocks that are closely followed by the financial press and related media and by the investment analyst community. Merton argues that such close scrutiny will keep the market in such stocks informationally efficient, so reducing the potential for anomalous behaviour. However, there may still be exploitable opportunities surrounding what Merton terms "complex" information releases, the valuation impact of which is not immediately quantifiable. In these circumstances, the market may take time to assimilate, interpret and process such information. Such arguments on the complexity and difficulty in interpreting accounting information are advanced by Pritamani and Singal (2001) to rationalise the delay in the market's response to accounting news in their study, compared to the more immediate price reaction to other company news categories such as corporate restructuring activity and announcements of capital structure changes.

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1 Commissions are set at 0.06 per cent of the market value of shares. However, there are discounts for larger orders. In practice, therefore, commissions are lower for the largest capitalisation stocks as they are more liquid and tend to trade in larger tranches.

2 Strictly speaking, the German market is an auction market whereby trading follows an auction procedure which takes place at twelve noon each day. No bid-ask spreads are quoted. As stocks are called in sequence, all orders are crossed at a single price. In a perfectly efficient market, the time series of prices should behave as if all transactions took place at a price mid-way between the bid and ask price, i.e. prices would behave as if there was no bid-ask spread. However, Haller and Stoll (1989) find evidence of an implicit bid-ask spread, which they attribute to prices being driven away from their true underlying equilibrium value by temporary order imbalances. They also report that the implied spread is larger for small firms than large firms and is negatively related to the volume of trading.

3 The Ryan and Overmeyer (2003) price-momentum study covers the period January 1990 to April 2000 and the sample stocks are drawn from the constituents of the DAX 100.

4 By basing our analysis on the release of firms' quarterly results our study is comparable to the approach adopted in Chan et al. (1996), the only extant study investigating whether the profitability of price-momentum strategies are attributable to investors' under-reaction to firms' formal accounting releases.

5 As we are working with daily data and a short-event period, more sophisticated return-

generating models are unlikely to add to our results (Kothari, 2001 § 4.4.1.1).

6 Another way of measuring the information content of a firm's formal accounting releases is in terms of standardised unexpected earnings. However, this variable requires a model of expected earnings and hence runs the risk of specification error. In addition, this measure is restrictive as it only considers earnings and ignores other accounting-related information.

7 The correlation coefficient between the six-month price-momentum strategy and the accounting-based momentum strategy based on abnormal returns around the release of the quarterly results is very similar to the correlation coefficient between both strategies of 0.16 found by Chan et al. (1996).

8 We omit from our analysis the ten stocks that lie in the middle of the distribution stocks in terms of past price performance.

9 We employ t-statistics based on the student's t-distribution to allow for the fact that our data may not be exactly normally distributed due to sample size restrictions.

10 Merton (1987) argues that "smaller" firms are more likely to exhibit anomalous behaviour, such as momentum, than are "larger" firms, as they are less closely followed by the financial press and the community of investment analysts.

11 Behavioural theories have been advanced as to why certain types of traders may depart from the paradigm of rational economic behaviour and systematically under-react to corporate news (for example Barberis et al., 1998; Daniel et al., 1998; and Hong and Stein 1999).

12 This return differential remains statistically significant even after taking into account realistic transaction costs of 1 per cent.

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Acute Hospital Waiting Lists: Analysis, Evaluation and Recommendations[1]

RAY KINSELLA*

INTRODUCTION

The purpose of this article is to provide an insight into the nature of the waiting list problem, its socially regressive consequences and the extent to which it is an embedded feature in the Acute A & E sector which these new policy initiatives are intended to address.

The government published its health strategy equality and fairness report in 2001. This was the genesis of a variety of strategies and reports – over 140 – culminating in the Health Reform Programme of June 2003. This programme set out a wide range of institutional changes in the healthcare service, including the establishment of a Health Service Executive, among whose responsibilities will be a National Hospitals Office. The programme also contains extensive provisions dealing with performance measurement, increased accountability and strengthening in the governance of greatly reduced boards and agencies.

More specifically, in the acute sector, the report of the national task force on medical staffing (the Hanley Report) published in October 2003 contains fundamental changes both in staffing and funding of A & E departments, aimed at providing a consultant-delivered service as well as the establishment of a major network of acute hospitals providing A & E services. The impact of the new arrangements on waiting lists will be the touchstone for evaluation by the public whether or not these arrangements are successful. Waiting lists, or more specifically the time that individuals spend waiting for admissions to the acute hospital sector, are a key issue in the management of the health sector.

They raise fundamental issues of equity in terms of, for example, buying elective treatment and the effective use of scarce healthcare resources. Over the last decade, successive governments have undertaken initiatives designed to reduce both the numbers on waiting lists and the amount of time patients spend waiting for access to treatment. In spite of expenditure of some £130 million under the Waiting List Initiative (WLI) and recent initiatives by government and some health boards, the average numbers on waiting lists remains more or less the same at 30,000.

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The purpose of this paper is to address in a systematic manner the reasons why this problem remains a pervasive feature of the Irish healthcare system. It sets out specific recommendations which would have a material impact in reducing the size of lists, and the waiting times, in the acute system.

The findings of the paper are based, in the main, on a Harvard Case Study Analysis.[2] Essentially, this involved the application of the Harvard Case Study methodology with some 50 participants drawn from senior management across a whole range of business and technology disciplines. The focus was unequivocally on the application of "best practice" in planning, logistics and process management to the management of waiting lists.

BACKGROUND

In this section, we briefly review the existing Department of Health and Children (DOHC) data on waiting lists. The data published by the DOHC relates to inpatients in public and voluntary hospitals. These constraints provide a useful perspective both as regards improvements in absolute numbers on waiting lists and the numbers categorised by speciality at national and regional/local hospitals in each of the health board regions.

Table 6.1 provides an overview of the inpatient list, by speciality, within each of the health boards. At the end of the March 2001 Quarter, there were some 26,000 individuals recorded on the waiting lists for admission to the public hospital system.[3]

Table 6.1: Public Inpatient Waiting List by Specialty, March 2001

Specialty	Eastern	Midland	Mid-Western	North-Eastern	North-Western	South-Eastern	Southern	Western	TOTAL
Accident & Emergency	0								0
Cardiac Surgery	423	0	0				28		451
Cardiology	830		0				75	32	937
Dental	126		75			133		8	342
Dermatology	60								60
ENT	2,627	1,004	142	153	279	140	328	515	5,188
Endocrine	143								143
Gastro-Enterology	286								286
Genito-Urinary	152								152
Gynaecology	566	1	59	151	53	259	42	75	1,206
Haematology	1								1
Infectious Diseases	7								7
Maxillo-Facial	129								129
Medicine	43		18	48		2			111
Metabolic	28								28

Nephrology	68								68
Neurology	178						6		184
Neurosurgery	401								401
Oncology	1								1
Opthalmology	1,742		369		92	262	230	194	2,889
Orthopaedics	1,935	397	171	325	194	275	517	424	4,238
Paediatrics	5								5
Pain	464					20		3	487
Plastic Surgery	1,442	0					138	593	2,173
Psychiatry	7								7
Radiology	3								3
Respiratory	162								162
Rheumatology	62						2		64
Surgery	1,831	112	151	219	212	362	57	175	3,119
Urology	954	42	1	139	31	10	49	227	1,453
Vascular	1,079	65	13	236	59	160	358	173	2,143
All Specialties	**15,755**	**1,621**	**999**	**1,271**	**920**	**1,623**	**1,830**	**2,419**	**26,438**

Source: *DOHC*

Table 6.1 shows that the distribution of waiting lists is totally skewed towards the Eastern Region. Taking the waiting lists for all specialities, some 70 per cent relates to individuals from within the Eastern Region. It is clearly the case that waiting lists will reflect the lop-sided distribution of population in Ireland. Most national specialisms are located within the Eastern Region. While government policy is to encourage self-sufficiency within the different health boards, the reality is that many people still wish to travel to Dublin. Thus, patients from the ERHA may be "crowded-out" simply because of the volume of patients from outside of the region. This emphasises the importance of more even distribution of facilities, including medical manpower, across the country. This imbalance undermines the rationale behind the present number of health boards. Devolution to, and development of, regional and local hospitals as well as a new generation of well-resourced "group clinics" would allow the outsourcing of a wide range of procedures which overly clog up the acute sector – and could therefore complement a significant reduction in the present health board structure. Much closer integration of systems across health board regions – as well as *access* to the MIS by patients and GPs – is needed in order to even out such imbalances.

Table 6.2 shows the corresponding quarterly figures for each year since the Waiting List Initiative (WLI) began in 1993, together with yearly expenditure under the WLI.

Table 6.2: Waiting Lists, 1993–2000

Year	Amount (£m)	March	June	September	December
1993	20.0	39,423	40,130	25,165	25,373
1994	10.0	27,576	24,778	27,633	23,835
1995	8.0	27,475	27,696	27,004	27,752
1996	12.0	28,865	30,447	31,519	25,959
1997	8.0	29,069	30,453	32,252	32,206
1998	12.0	33,847	34,331	35,405	36,883
1999	20.0	34,996	33,924	33,555	36,855
2000	34.57	34,370	31,851	29,657	27,857
Total					
1993–2000: £124.57m					

Source: *DOHC*

It is clear that the numbers on the list vary significantly across each year. Equally, while the *average* number for 2000 (30.9) shows a significant reduction over the last three years, it was much the same as the 1997 figure. However, there has been a reduction in the waiting list for a number of specialties since 2000, reflecting the substantial commitment of government in this regard.[4]

Table 6.3: Waiting Lists for Top-Ten Specialties, March 2001

Specialism	Number (000)
ENT	5,188
Orthopaedics	4,238
Surgery	3,119
Opthalmology	2,889
Vascular	2,143
Plastic Surgery	2,117
Urology	1,453
Cardiac	1,388*
Gynaecology	1,206
Pain	486
ALL SPECIALTIES	**24,227**

Source: *Based on DOHC*
* Includes Cardiac Surgery and Cardiology

Finally, Table 6.3 shows the waiting list in respect of the top-ten specialties, as at December 2000. It highlights the different "capacity needs" to deal with each of these specialties and helps identify how at least some of these could be

shifted either across health board areas (depending on whether the necessary facilities existed in a major regional hospital) or from the public to the private system. We return to these points later.

There is a major ethical dimension to waiting lists: people believe – and they are correct (see below) – that private health insurance (PHI) facilitates quicker access to acute care. However, the affordability of PHI means that a large swathe of people simply cannot afford it. The larger the waiting lists, the more disadvantaged and marginalised are those individuals caught within the present system.

The statistical evidence of the recent BUPA Ireland/ESRI national survey[5] – the largest ever carried out – on these points is compelling:

- 90 per cent of people believe that hospital care can be obtained more quickly in the private system compared with the public system;
- levels of educational attainment and social groupings are closely correlated to PHI coverage. Some 60 per cent of those with third-level education have PHI coverage compared with, for example, 37 per cent of those who have the equivalent of the Junior Certificate. Equally, whereas 68 per cent of those in professional/management categories have PHI coverage, less than 40 per cent of skilled manual and 18 per cent of unskilled manual workers are covered.

That is why waiting lists are not simply an expression of "excess" demand or a crude rationing device to accommodate demand within the finite resources available to government. They are an ethical issue, with a very direct impact upon the social cohesion of the country.

Developments in Policy

In the less benign economic environment of the late 1980s and early 1990s, waiting lists were perceived as an, albeit unfair, rationing device. Progressively, beginning with the WLI in 1993, policy has moved away from the crude and counterproductive cuts in beds/wards. Since 1997, waiting lists have emerged as a highly potent symbol of failings in the acute system. The difficulties inherent in managing what is an especially complex issue, one which far transcends the question of funding, is reflected in the input of a whole series of policy reviews.

- Medical Manpower Forum;
- Report on Working Candidates/Junior Doctors;
- Commission on Nursing;
- Strategic Assessment (jointly with the Department of Finance in consultation with the Social Partners of Bed Capacity;
- Review of Primary Care Services;
- Strategic/Consultative Review on the Health System;
- National Development Plan 2000–2006, which provides for an investment

> of £1 billion to improve the capacity of acute hospital facilities to partly meet the prospective increase in demand.[6]

However, the most focussed evaluation of waiting lists was undertaken by the Review Group established in 1998. This merits a special mention because it established a very specific reference point, not least in regard to its recommendations.

(i) Report of the Waiting List Review Group

In 1998, the government established a task force to address the problem of waiting lists. The terms of reference were:

> To examine the underlying factors giving rise to waiting lists and waiting times and to make recommendations on the most appropriate means of addressing the underlying causes of substantial waiting lists and waiting times.

The review should have particular regard to:

- The net effect of the current WLI on waiting lists and waiting times;
- Any incentive effects of the WLI on participating hospitals in relation to their activity and treatment schedules;
- The extent to which hospitals can consistently and accurately validate their waiting lists; and
- The adequacy of existing information systems to permit routine evaluation of the WLI.

Source: *Task Force on Waiting Lists, DOHC*

In setting out a proposed approach to the issue, the Group proposed a series of short-, long- and medium-term initiatives. Taken together, these stand as a "strategic checklist".

Over and above the necessary input from the highly informed healthcare professionals that constituted the Review Group, there was a need to draw on "Best of World" insights and practices across a wider range of management and technological competencies. At the heart of the waiting-list problem are issues, not just of resource allocation, but also of the technical efficiency and cost-effectiveness of processes – and these are not unique to healthcare. Indeed, those in the manufacturing and service sectors who have built sustainable excellence in a highly demanding and competitive marketplace through process innovation have important insights to bring to the process management of the waiting-list issue.

It is a pity that the Terms of Reference precluded the Group from developing a number of more radical scenarios which questioned the logic of existing arrangements and the constraints they impose on developing more innovative approaches to reducing waiting lists.

(ii) Recent Factors

We now turn to the present situation in respect of waiting lists. Summarised below are recent factors impacting on acute hospitals' capacity to deal with waiting lists. These include:

- Increased A & E admissions (particularly the elderly);
- Cancellation of five- and seven-day planned work because of the above;
- Inability to deal with existing hospital waiting lists;
- Lack of nursing staff particularly in HDU, intensive care/coronary care, A & E and theatre;
- Difficulties in the placement of patients requiring non-hospital care who have finished the acute phase of treatment (age >65, <65 years);
- Chronic difficulties in staff recruitment and retention – nursing, clerical and catering and housekeeping;
- The lack of a national, highly integrated programme of investment in high technology diagnostic systems;
- A lack of adequate pre-treatment facilities and the kind of "step-down" facilities that would lessen candidate strain – at the point of discharge. These have been referred to in successive reports – but have not been systematically put in place across the acute public system.[7]

Research Approach

In evaluating alternative approaches to the underlying causes of the waiting-list issue, three main perspectives were used. The primary methodology used was the Harvard Case Study approach, which involved some 50 senior and middle management drawn from manufacturing and service industry. The second method used was process mapping. Essentially, this involved tracking the steps involved, from the initial contact with the GP, through referral, into and then out of the acute hospital setting. Here, the impact of factors such as thru-put of the OPD, constraints in bed capacity, staffing level, facilities as well as the impact of the lack of acute medical and A & E admissions all impact on waiting lists and times.

The third component of the approach involved a review of waiting-list data. In particular, the lack of standardisation in relation to issues such as inclusion of day cases and validation is highlighted, as well as the impact of confidentiality requirements, in respect of private patients, on the robustness and relevance of the published waiting-list data. The objective is to focus attention on the need for a "clean" data set and to evaluate the contribution which such a standardised "clean" data set would make to materially reducing the size of the waiting list. Clearly, this raises an issue of accountability. Whose responsibility is it to ensure a person receives their surgery? The consultant? The speciality within the hospital? The hospital management? The Department of Health and Children? This is obviously a fundamental concern; you can only manage that which you can measure and for which you are accountable.

There is a second issue: to the extent that a consultant's waiting list comes

within the domain of their personal practice, it is impossible to compile a robust national picture of the size of the waiting list and to compile a transparent list (using identical protocols/severity criteria) across both public and private sectors.

Analysis

(i) The Harvard/Stakeholder Approach

We begin by looking at the perspectives of each of the different stakeholders involved in the "waiting list" process: the GP, the hospital manager, the consultant, the nursing staff, the admissions officer, the Department of Health and Children and, most importantly, the patient. The perspectives of each of these concerning the management of waiting lists are set out in Figure 6.1. The value of this approach is this: the existence, scale, impact and management of waiting lists must be seen in a *holistic* perspective. Managing the waiting-list issue requires reconciling and accommodating the different perspectives of each of these stakeholders.

What quickly becomes apparent is that each, in isolation, sees the problem from their own unique perspective. Also apparent is the interaction – the jostling – of these different perspectives in pursuit of what is, in fact, a common goal.

Figure 6.1: Systems Issues in Waiting List Management

GP Stage	• Gatekeepers of the system. • Refer, on average, 7% of patients onto acute system. • Role is constrained by lack of information feedback from hospitals and MIS development.	• GPs concerned that patients get lost in hospital system and are not referred back to the community for ongoing management. Direct access to hospital diagnostics. • Adjustment in GP referrals towards a "best practise" would have major impact on acute sector.
Consultant Private Patients	• Those with PMI, or who are self-funded, may attend outpatient department (OPD) or meet with their consultants in their private practice. • Surgery, if appropriate, is arranged once diagnosis is made. • Choice of location and time.	• Significantly less waiting time compared with public patients; depending on classification, patient is given a date (which may be some months ahead). • Surgery arranged in a private hospital or in a private bed in a public hospital. • There are now some waiting lists for private patients in public hospitals.
Outpatient Department	• First encounter by patient with the acute system unless admitted through A & E. • May be long waiting lists for new patients seeking an initial appointment: this information is not formally	• Many problems with patients returning on an ongoing basis to the OPD – failure to move these patients out of the system means new patients cannot be seen. • Lack of capacity in OPD a concern in many hospitals.

	recorded. Some waiting lists for OPD may be closed. • Presence of senior staff extremely important – they are the decision makers who determine whether, and when, a patient gets put on a waiting list and under which severity category the patient is placed, i.e."Soon","Urgent", "Routine".	• Lack of protocols regarding new attendees. • Lack of consistence/agreement as to which patients go on a waiting list and under which severity category. • Ideally, there is a need for chronic conditions (e.g. diabetes) to be managed in the community rather than having people continually attending the OPD in hospitals.
Waiting Lists	• Severity determined by senior doctors in OPD. • Admissions office informed; list kept by speciality, by consultant and by severity category. • Patients listed as "Routine" or even "Soon" can be on lists for surgery for years: not usually reviewed in OPD as a matter of course unless patient requests reassessment.	• System open to accusation of inequity and lack of transparency. • Need for national approach to waiting list management and evaluation of pilot programmes and studies currently underway nationally. • Validation and prioritisation of waiting-lists is a key issue – some patients may be on several lists – there is a need to balance confidentiality with effective management, possibly through a unique ID number. • Patient must be on a list for three months before they are officially regarded as being on a waiting list by DOHC. • Lack of rigorous and equitable protocols to judge criteria for admission onto a list and allocation to the appropriate severity classification.
Hospital Issues	• Capacity: major concern particularly for hospitals with A & E facilities. • "Bed Blockers", inappropriate admissions, poor discharge planning, lack of sufficient staff to ensure effective admission/discharges as well as lack of "step-down" and rehabilitation beds all compound the problem. • Increasing demand for surgery and increasing numbers of older patients in the system exacerbate the capacity issue. • Trauma and medical admissions will overflow into elective beds.	• Delicate balance: need to cater for those requiring emergency admissions while reducing waiting lists. The patient on a trolley in A & E is competing with the person on a waiting list for years for the same bed! • Bed management is becoming increasingly important. • Equity and management issues around admitting patients well in advance of surgery in order to "book the bed". • Ring-fenced beds ensure treatment to those on waiting lists for the speciality.

Theatre	• Limited theatre time per consultant. • Recruitment and retention of sufficient staff is a key constraint. • Need for 24-hour, 7-day process arrangement approach as well as additional capacity.	• Need for objective utilisation study. • Management of theatre capacity and time a priority. • Scope for more flexible capacity management (e.g. all weekend use) which is a feature of private hospitals.
WLI Funding	• DOHC view this is as supplementary income but the view of some hospital managers is that it is part of annual income. • DOHC allows the hospital/health board to use the WLI funding as it sees fit in the treatment of patients on lists.	• Funding can be diverted to cover general hospital expenditure, which dilutes the impact of WLI. • Increasing controls and closer monitoring of waiting-list activity and funding, with hospital returns now submitted more frequently. • Phase II activity commissioned with agencies on a basis of capacity and tendering. • Negotiations with and outsourcing of numbers in selected specialities to selected private institutions is an emerging trend.
Bigger Picture	• Waiting lists are only one element in total hospital activity. • Medical manpower: recruitment and retention of staff, in particular nurses, is central to capacity. • Inadequate number of consultant posts despite recent increases – government initiative may resolve this. • Need for stronger management: much of existing practice, both managerial and medical, continues on a historic basis. • Role of PMI has had a very genuine influence on practice and management. • Need for more pre-assessment facilities.	• Need for clinical audit and involvement of physicians in management. • There is a need for a thorough review of work practices including process mapping throughout hospitals, i.e. basic workplace study groups and more medical education/career development. • Need to promote evidences-based practice and use of protocols. • Need for more pre-assessment clinic.

The Positive Side	• Of central importance is the fact that many thousands of procedures are successfully carried out each year in our acute system. Commendable as it is, it is not the focus of this paper, though is still worth emphasising. • Several initiatives underway throughout the country. • Scope for public/private partnerships especially in relation to waiting-list reduction. Steps have been taken in this regard within some health boards. • Strong commitment to alleviate the problem – prioritised by politicians, hospital and Health Boards. • Major review of bed capacity, which will see more beds opened completed by government. • Active initiatives to recruit and retain staff (especially nurses).	• Need to promote same-day admissions for elective surgery and pre-assessment clinics. • Increased role for bed managers; consider the role of a National Bed Bureau. • Information systems for "real time" information on status of *each* bed in *each* hospital.
Issues for Thought...	• UK's NHS/private 'concordat' to reduce waiting lists. • Hospital consolidation vs regional/local devolution – availability of adequate oncology service. • Number of health boards excessive: duplication and makes policy/strategy more difficult. • Separation of public funding for hospital entitlement from the delivery (via public acute hospitals) of such services. • North/south co-operations in acute hospital sector. • Most elective work (including OPD sessions) is done in regular working hours, i.e. from Monday to Friday between 9 am and 5 pm, with facilities lying idle outside of these hours.	

The GP is the de-facto "gate keeper" to the hospital system. Referral rates for GPs differ significantly. This is an important anomaly in the system that can be addressed. Even a small reduction in referral rates by GPs will have a disproportionate impact on congestion within the acute hospital system.

The hospital manager is accountable for the effective use of resources and, in this context, for the delivering on specific commitments to the DOHC in respect of waiting lists. The nursing staff, for their part, are at the "cutting edge" of the intake of patients through casualty and for the provision of care during the stay of patients in the system.

The perspectives of each of these stakeholders set out were gleaned from in-depth interviews at a large Dublin teaching hospital. It is important to point out that while the views expressed do not claim to be valid for all stakeholders in a particular category, they are reasonably representative. *Taken as a whole*, they provide a foundation for achieving goal congruence and for capturing and reconciling very different but equally informed perspectives on efficient, cost-effective waiting-list management. Moreover, they provide an indispensable backdrop to the second part of our analysis – process management – to which we now turn.

(ii) Process Management

What is presented in Figures 6.2 to 6.6 is a process flow chart which the Case Study Group[8] developed and which explains the processes by which patients get onto a waiting list and why it takes such an amount of time for them to get their surgery, as well as the impact of the many external factors influencing the elective workload of a hospital. While there may be some variation between hospitals, the process, as set out in Figures 6.2 to 6.6, is representative across the acute hospital sector as a whole.

Getting into the System

The first point of contact for the patient is their GP. Following assessment, the GP will decide whether to refer the patient to a specialist. While on average, GPs only refer some 6 per cent of their patients on for further tests or management, a minor variation in GP referral will have a major impact on the hospital system. It is for this reason that GPs are regarded as the "gate keepers" to the system. One of the shortcomings in the current system is that GPs may be unaware of the waiting lists for the first appointment for the *individual* consultant to whom the patient is referred.

There is increasing demand overall for acute hospital services, with patients automatically expecting referrals to specialists. Patients are increasingly well educated and often arrive at a GP surgery armed with the latest medical developments from the Internet. This, and increasing litigation, will influence referrals to acute hospitals.

There is also a very strong link between what happens in OPD and the

Figure 6.2: Overall Process Flow

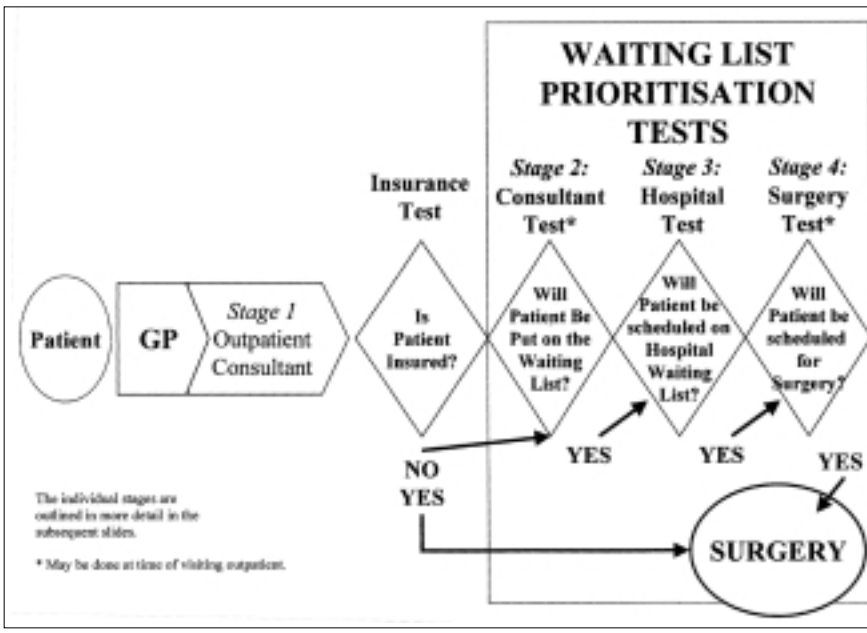


Figure 6.3: Stage 1: Out Patient

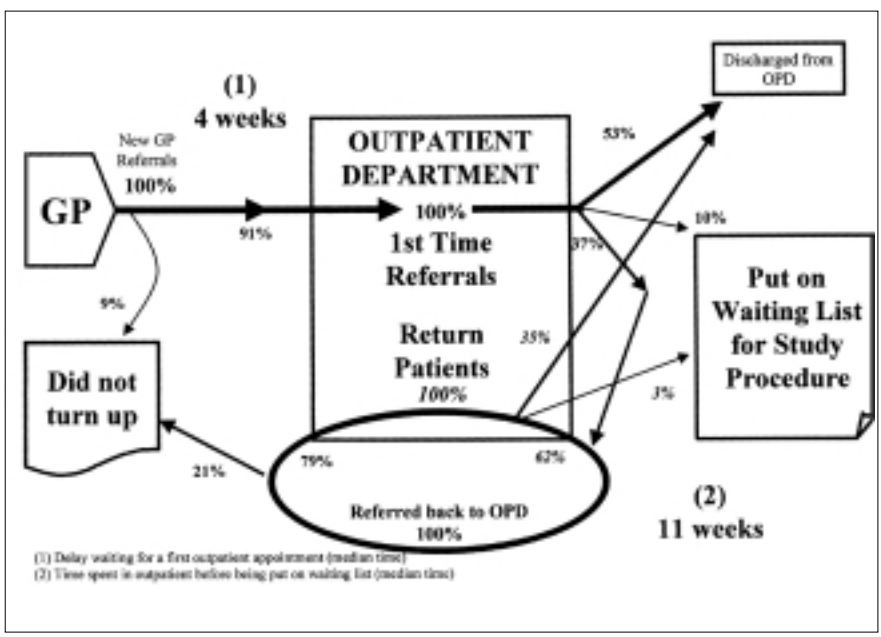


Figure 6.4: Stage 2: Consultant Test

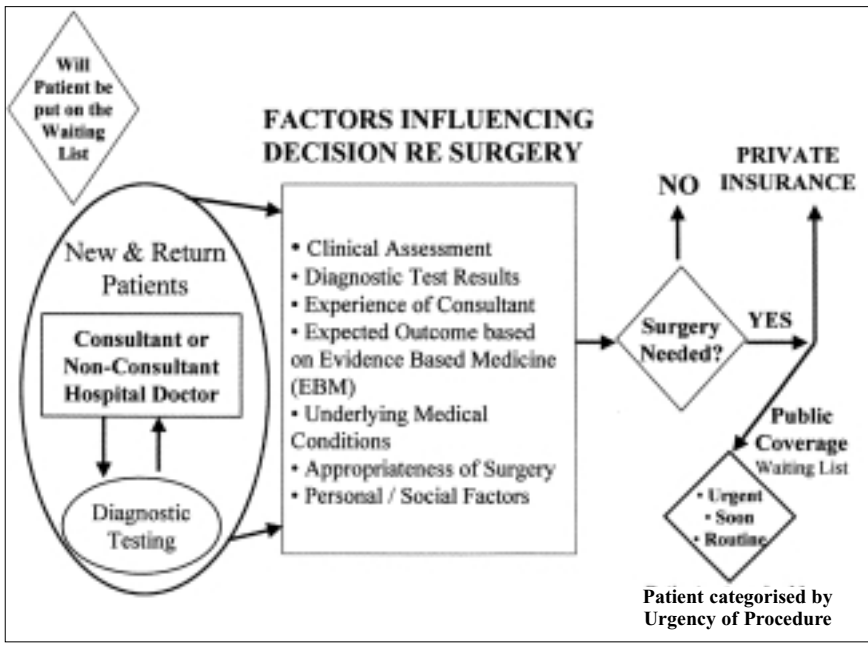


Figure 6.5: Stage 3: Hospital Test

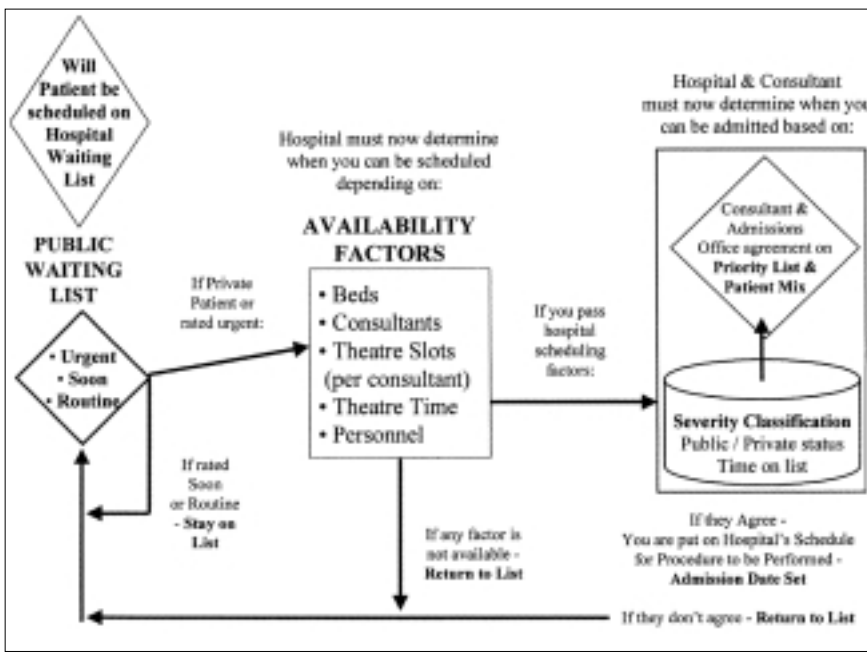
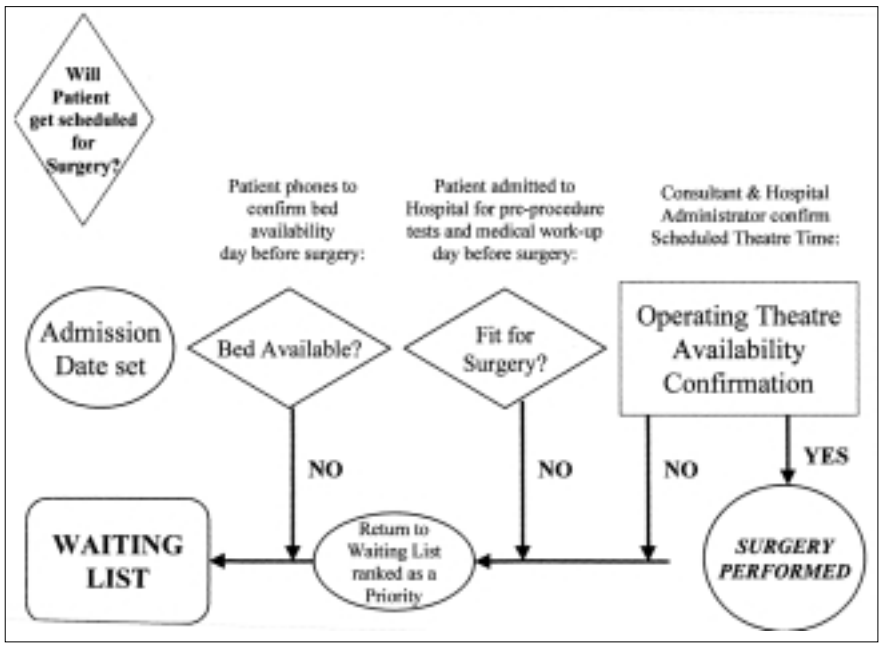


Figure 6.6: Stage 4: Surgery Test



effective management of waiting lists. While OPD could be regarded as meriting a case study in itself, it is important to refer to it in the overall context of the present study.

Outpatients

OPD is the first point of contact for most people to the acute hospital system. It is the area where many of the key decisions are made in relation to patient management. OPD is often attended by both public and private patients and it is only after their OPD assessment that those with PMI opt to use it to expedite their date of surgery, compared with public patients. This raises major issues of equity and of equality of access.

Current practice is for a GP to send a letter of referral to the OPD office. However, there are no protocols or guidelines concerning patient profiles that GPs send to the hospital. This is a significant deficiency, since often the patient may be inappropriate or could just as well be treated within a GP clinic. The introduction of guidelines on types of patients to be referred would make an impact on the increasing numbers being referred to OPD.

Prof. Leslie Daly's (UCD) authoritative study provides a clear overview of how the OPD system works, with a mix of new and "return" patients. Prof. Daly reviewed several clinics and the results clearly highlight the impact of poor

management of OPD, the need for strict protocols and the importance of senior medical decision makers in OPD ensuring appropriate care and prudent management. Lack of senior staff in OPD leads to increased rates of return patients. Prof. Daly's study clearly demonstrates the negative effect of "return" patients in clogging up the system.

OPD is, therefore, one area where there could be an immediate impact if information on waiting times could be made accessible to GPs, ideally on a website. This would enable GPs to inform patients as to the expected length of waiting and allow the public waiting list to be more effectively managed. At present, five Dublin hospitals are responsible for the majority of waiting lists: this small number would facilitate such process throughput management.

Managing Admissions through the OPD

The key decisions regarding admission are made in the OPD. There are a number of dimensions to this. Firstly, there is the management of the patient: decision on admittance is made on the basis of clinical assessment, result of diagnostic tests, age, expected outcome, underlying medical condition as well as personal factors. At the heart of the patient-management process at this point is this: does the patient have PHI? If they do, they are usually given a date to come in for surgery (TCI) often at a convenient time and/or at the location of their choice. If not, they may – depending on their categorisation – get locked into the public waiting-list system.

A decision is made to categorise the patient into one of three categories – "Urgent", "Routine" and "Soon" – based on the view of the admitting doctor. Clearly, a person diagnosed as being "urgently" in need of surgery will have a better chance of getting an early date, as opposed to someone categorised as "Routine". For the latter, while hospitals do endeavour to take those from the end of their list, the patient can, in practice, wait indefinitely without a realistic expectation of treatment.

A different set of decisions arises in the case of patients without PHI. To begin with, once a person on the public list is referred for surgery, they are not generally routinely contacted again until they are called for surgery. However, some people/families will continually contact the admissions office. While the office cannot change a person's priority status, it can refer the patient back to OPD, where they may be given a higher priority rating but keep their initial date of referral for surgery, thus increasing their chances of being called at an earlier date. In effect, those who shout the loudest may gain faster access, while the less vocal may be disadvantaged.

The list does not differentiate between those who are actually waiting for surgery and those who while they need surgery, are not ready for it. The UK has overcome this particular situation through the establishment of a so-called "suspended" waiting list. For example, a person who has unstable angina (chest pain) may be on waiting list for a hip replacement but in reality, that person cannot be considered a candidate for surgery as long as they are medically unstable.

There may be real advantages in integrating the concept of a suspended list, with the deferment of pre-admission facilities (as in Canada). In the latter, patients are admitted for a complete check several weeks prior to admission for a scheduled procedure. Any unknown conditions that might delay scheduled treatment once admitted (leading to extensive bed usage) could be identified and addressed in good time. This makes for the best possible use of the acute bed capacity.

Comparative Perspectives

Many international projects have been undertaken to make the requirements for surgery more open and transparent, the two most notable being the New Zealand Project and an initiative currently ongoing in Salisbury in the UK. In Ireland, a recent study undertaken in the Mid-Western Health Board focused on the value of giving orthopaedic patients awaiting treatment a "needs-based" assessment. The objective was to identify those who were most in need. This process improved transparency, efficiency and service quality by reassessing patients and clarifying their needs, on the basis of an internationally recognised, objective classification system. This enabled the patients most disabled by arthritis to be prioritised for treatment within the acute sector.

Getting from the List to a Bed

The process of getting a patient from the list to a bed is a joint effort involving the medical staff, admissions office and bed managers in balancing the requirement of groups of surgeons and their patients within the existing resources. The admissions staff usually try to fill the beds allocated to the speciality. However, within this blend, there is a need to accommodate both public and private patients, the varying levels of acuity (i.e. major/minor procedures) as well day cases and inpatients for all surgeons.

The single most important limiting factor is bed availability. Many hospitals, particularly in the winter months, have full occupancy; frequently, surgical beds will be occupied by medical emergency cases, thus preventing the surgeon admitting an elective patient. Those hospitals with A & E departments are at particular risk of having all beds filled with emergency patients.

In general, elective patients are given a provisional TCI date that is four weeks in advance of their surgery. All admissions have to ring to confirm bed availability the day before their surgery. If the bed is unavailable, the patient returns to the waiting list with their initial date of assessment. Lack of bed availability is the single most common reason why people have their provisional date for admission cancelled. A key issue throughout the Dublin hospitals is the large numbers of beds closed due to lack of staff, particularly nursing staff.

If there is a bed for the patient, the person is normally admitted one to two days before their date. The patient is "medically worked up", i.e. assessed for fitness for surgery. Patients may have deteriorated since their assessment date. During the time spent getting on the list and subsequently waiting on the list, they may require additional/unforeseen medical treatment prior to surgery,

which can delay the surgical date or require the patient be returned home until they are medically fit.

This system can be improved. The patient could be admitted the day of their surgery, as is the case in the US and Canada, *if* patients undergo/attend a pre-admission unit. These "day areas" conduct all necessary, routine tests up to three weeks in advance of surgery, thus freeing up beds, discovering any abnormalities in advance of admission and, for example, allowing a move to a suspended list where it is necessary.

Finally, once the patient, the staff, the theatre and the bed are arranged, surgery will occur.

List Management

In terms of proactively managing waiting lists, there are a number of points that need to be addressed. The first is the *reliability* of the existing data, in terms of coverage and an effective definition of what is being measured. A second point relates to the ongoing *validation* of waiting lists: for example, some patients may remain on the list even after surgery. A third point relates to the possible adoption in Ireland of the suspended-list procedure referred to above.

The political dimension of waiting lists cannot be overestimated. Often when an audit of names on waiting lists is undertaken, the reduction in numbers is misconstrued as a "fudging" of figures for political gain, even though this is manifestly not the case.

In theory, a person has to wait for three months before their name is put onto a waiting list. Therefore, a person who has been waiting for two and a half months and is then called for surgery will not be registered as having undergone surgery from the waiting list. In addition, in some specialities (notably cardiac), patients require immediate surgery and, as such, never appear on waiting lists. "Ownership" of lists and the question of the possible transferability of patients also merit consideration.

In their report, the Review Group recommend allocating money on the basis of appropriate business plans, whereby those who had proven efficient in dealing with waiting lists and who had adequate staffing and capacity would be entitled to more money. Without doubt, there is a need to focus on *commissioning* work rather than arbitrarily giving money in the hope that it will make some impact.

(iii) Data Evaluation and Information Management

The third component of the analysis relates to the waiting-list data – the logical starting point for any national strategy to manage waiting lists. At present:

- The data gives no indication of waiting times, either for specialists – which would be an important advance – or for procedures.
- It relates to inpatients. In some instances, for individuals awaiting an appointment for day care treatment the effects can be equally distressing and costly and should, therefore, be encompassed in the data.

- The data relates only to public/voluntary hospitals. Under present arrangements, encompassing private sector data is not possible. This "reporting" gap means that a true national picture of waiting lists is not available.
- Turning to the data, there are widely acknowledged constraints. For example, from a hospital perspective, patients waiting for less than three months are, in effect, not resourced to be treated within the public system.
- More generally, the validity of comparisons in waiting lists over an eight-year period is questionable, given the changes in procedures, for example the significant move to day care surgery as well as changes in bed capacity.
- Some institutions focus on inpatient procedures only, while others include day cases in their quarterly returns to the DOHC/health board. This issue itself potentially raises difficult issues for hospital managers: for example, a decision by a major hospital to include day cases may significantly increase the size of their waiting list, thereby targeting them for unwarranted criticism. It raises the issue of the importance of holistic waiting-list systems that are properly integrated with other relevant activities within hospitals.
- The compilation of quarterly returns at the level of the individual hospital gives rise to difficulties.

The most important point that arises from this review is the need to extend the waiting-list data – to develop a single national waiting list – while, at the same time, making it more accessible to all stakeholders.

At the institutional level, the DOHC should require the mandatory adoption, within a specified period, by all hospitals of the "Best of Breed" reporting systems currently in use in a small number of major hospitals. Equally, responsibility for the waiting-list reporting template, statistical processing and reporting software could be transferred directly to the CSO. This would mean that individual hospitals would report directly to the CSO and that the validation of waiting lists would be the sole responsibility of the CSO. Specifically, this would have the following advantages:

1. It would involve the hospitals directly inputting waiting-list data to the CSO; at present, this is done through the eight Health Boards.
2. It would ensure that the analysis and evaluation of waiting-list data was configured to better management of waiting lists at a national level. For example, having the CSO validate a single set of waiting-list data would allow for better access, through new MIS, by GPs and the public. There are also obvious synergies between waiting-list data and other socio-demographic statistical series that the CSO presently publish.

The underlying premise is quite simple: the business of Health Boards is service planning and the operation of facilities. Equally, the business of the DOHC is policy development including strategic planning. The business of the CSO is

the implementation of "Best of World" statistical methodologies. It is precisely because waiting lists are so problematic at present that the system needs to become more transparent and less politicised and, more importantly, be presented in the most robust and flexible form.

Recommendations

The main elements of an integrated national waiting-list strategy are set out in Figure 6.7. The recommendations have their foundation in four key components:

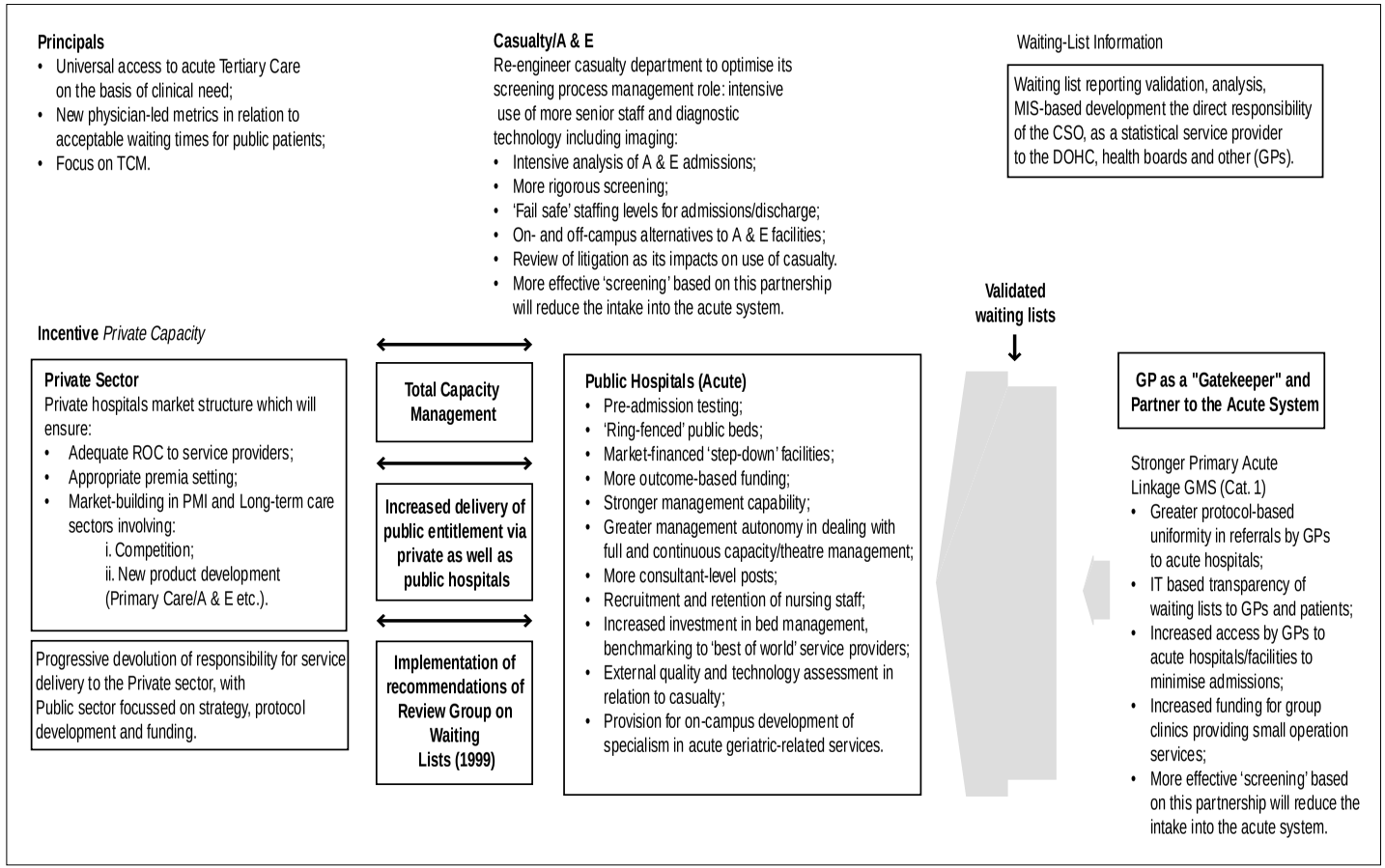
1. Recognition of the ethical responsibility of government to ensure timely universal access to the acute system on the basis of clinical need. Targets – for example no more than three/six/twelve months – are indicative, arbitrary and lack any substantive clinical meaning. The recent experience of the UK is that an inappropriate or badly directed obsession with waiting lists *per se* can, in some circumstances, be inequitable, clinically misguided and impose serious pressures on clinicians and hospital management.
2. The efficiency of the GP as a gatekeeper to the acute system. Reduction towards "best case" referral rates is the key to improving this efficiency. The greater the degree of this convergence, the greater the efficiency benefit to the acute system.

   Referral rates could be significantly reduced through encouraging a new generation of group clinics, with a sufficiently large capacity, to which a wide range of treatments which presently "clog up" the acute system could, in effect, be outsourced.
3. In terms of comprehensively addressing the waiting-list issue, there is a need to focus on the total capacity (that is, public *and* private). In addition, there is a need to develop waiting lists by procedure to facilitate more effective management of clinical resources throughout the country.
4. Finally, there needs to be a rebalancing of the public/private mix within the health sector and a move towards greater reliance on the private sector in delivering innovative service outcomes in the best interests of all citizens.

The evidence suggests that it would be more efficient for the Exchequer, for society and in terms of individual patient outcomes if the "universal" entitlement were delivered to a progressively greater extent through the private sector.

The National Review Group estimates that approximately 5,000 beds are needed over the ten-year period up to 2011. The fully costed requirements for servicing each bed implies a total expenditure in excess of £2bn, with significant ongoing costs to be borne by the Exchequer. The BUPA Ireland/ESRI National Study clearly indicates that the public, across a range of factors, perceive there to

Figure 6.7: Key Elements of an Integrated Waiting-List Strategy



be better outcomes within the private sector. This raises the question of why the Exchequer should assume the burden of wholly funding and delivering, via the public system, this quantity of additional acute services, when it could be more cost-effectively delivered through private capacity, with the State delivering and monitoring clinical outcomes in terms of easier access, equality and sustainability.

Addressing the waiting-list issue cannot occur in isolation. Increasing waiting lists are manifestations of a multi-system problem and addressing surgical lists in isolation will have little impact upon this problem. For a significant improvement there needs to be a radical overhaul of the system.

- The total capacity of what is, as noted, really one system should be deployed to reduce waiting lists.
- There is a need to follow up with the recommendations from the 1999 Waiting List Review Group, particularly those related to the development of on-campus facilities to reduce pressure on A & E, as well as step-down facilities and long-term care.
- There is a need for the use of pre-admission units, which would facilitate same-day admission for elective patients and would ensure patients are fit, upon admission, to undergo surgery.
- There is a need for a more substantial presence of senior decision makers (admission/discharge) in casualty and in the system generally. There is undoubtedly an issue with competing demands upon consultants' time – teaching, administrative and private patient commitments limit consultants' availability for public elective work.

Substantial changes in this area should be scoped and led by the appropriate bodies (colleges) themselves in order to ensure that the system, as a whole, remains physician-led as the best guarantor of retaining its "public good"/patient-focussed ethos.

In addition to shortages of staff and, in particular, specialised nursing staff, there is vast under-utilisation of existing resources. Theoretically, public hospitals are open on a 24-hour basis, 7 days a week, but in reality operate on a Monday to Friday, 8 am to 5 pm basis. This includes hours of operation of theatres. Why should the public system not operate outside of these hours? WLI funding should be made available to pay staff and should be strictly monitored to ensure value for money. The reality is such that the shortage of nurses may restrict this option in the short term.

There should be a mandatory requirement to inform patients as to the length of waiting lists and the option to go elsewhere should be considered. An important innovation in this regard would be to deepen the waiting-list data a further tranche, to encompass procedure-specific monitoring of waiting times. This would enable a much more efficient concentration of resources in the areas that need them the most.

The "engineering" of A & E in terms of "Best Practise" in service industries

needs to be urgently addressed. This should encompass enhanced diagnostics within A & E together with process management benchmarked against "Best of World" (for example airports) flow-through systems.

The current public hospital system operates under very tight specific financial constraints. The idea is to increase activity and thus thru-put of patients, and to undertake more elective work. In its annual service plan, each hospital projects, and therefore budgets for, a specific number of procedures. While increased elective activity will have a positive impact on the waiting list, the hospital cannot allow itself to go over its allocation, since a deficit will over-run into the following year's financial allocation. This has the consequence of disincentivising productivity and, indeed, elective work is frequently cancelled where hospitals/health boards realise they are "over budget". This makes no sense where the capacity to deal with elective patients is there and where such cancellation simply defers procedures, which may affect the individual patient and will ultimately lead to higher costs.

The waiting-list issue will not be resolved as a problem that is, somehow, external to the acute system. Waiting lists are embedded within – and a product of – an acute system that is flawed, inequitable and in need of re-engineering in order to face the challenges of the future.

APPENDIX

Report of the Waiting-List Review Group Short, Medium and Long-Term Recommendations

Short-term Recommendations: 1998

- Further study of hospital capacity is needed as a matter of urgency. Some hospitals have reached full capacity with existing resources in relation to elective work. Where staffing is an issue, these hospitals should be funded for the provision of appropriate temporary staff in target specialities, subject to certain conditions. Where physical capacity is an issue, favourable consideration should be given to developing, in the medium to long term, additional capacity in hospitals that demonstrate that their existing facilities are already appropriately utilised and fully committed.

- Agencies should be asked to review their information systems to ensure that they can maintain accurate and up-to-date WLI data and should be assisted if specific shortfalls are identified. The Department of Health and Children should develop and implement an improved IT system for recording and analysing national WLI data.

- Hospitals should carry out a bulk postal review of patients on their waiting lists where they have not done so in the previous twelve months. There should be an agreed protocol for periodic further reviews on a selective basis following this validation process.

- A set of short-term steps relating to the operation of hospital services should be taken. These include an improved flow of information between primary and hospital care regarding the status of patients on waiting lists; a continued move towards day case work; the appointment of bed managers and bed utilisation committees; agreement under each agency's services plan regarding the mix of public and private patients treated; and a written policy on planning the discharge of older patients and on liaising with community-based services.

Medium-term Recommendations: 1999

- A number of steps should be taken during the course of 1999. These are summarised below:

- WLI funding should focus on a limited number of specialities and take the greatest possible account of health and social gain, the priority set according to clinical judgement and the length of time already waited by patients.

- The present system of allocating WLI funding may act as a disincentive to hospitals to improve their waiting-list performance. The Department of Health and Children should consider introducing positive financial incentives to hospitals to reduce their waiting times. A proportion of total WLI funding could be retained by the Department for distribution to the hospitals that showed the greatest reduction in waiting times in target specialities. The details of any such incentive system should be developed in conjunction with the relevant hospitals.

- Protocols should be developed in all major waiting-list specialities for the validation and prioritisation of cases. This should be done either at national level through protocols devised by the relevant professional bodies, or at local level by individual hospitals.

- A number of measures should be pursued to reduce the pressure from A & E services on acute beds. These include developing rapid diagnostic systems for common emergency presentations; developing effective care guidelines for managing conditions that no longer require admission; further developing treatment/observation areas to allow frequent review of certain cases; and improving access by general practitioner to urgent specialist opinion.

Long-term Recommendations: 1999–2001

- The availability of beds for elective treatments is being restricted due to a number of factors. These include shortfalls in the provision of services for older people (and others who may need long-term care) such as day investigation facilities, rehabilitation facilities, community-based support services and long-term residential care places. The shortfalls in these services result in inappropriate use of acute hospital facilities and thus severely hamper the ability of hospitals to provide treatments to patients on public waiting lists.

- The development of Geriatric Day Hospitals on the site of acute hospitals should be prioritised in the medium to long term. The next priority should be the development of rehabilitation facilities on acute hospital sites where they do not already exist. Both of these developments would significantly increase the appropriate utilisation of scarce acute hospital services.

- Each health board should evaluate the long-term residential care needs of its region. There should then be a planned programme of investment in appropriate facilities for those in need of long-term care.

- For acute patients, the case for providing stand-alone day surgery units on

the site of acute hospitals should be examined closely. Since many patients who are on public waiting lists could be treated on a day care bases, a dedicated day surgery unit could greatly protect them from delays that arise from other hospital pressures.

- The question of providing additional hostel or other short-term accommodation for patients who do not otherwise need to stay overnight in an acute bed should be pursued as a means of reducing unnecessary hospital stays.

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1 The genesis of this paper was a Case Study developed for and by the Harvard Association of Ireland. The input of Fidelma McHale, Dermot Berkery and Daniel McGowan was, quite simply, invaluable. The responses, and suggestions, of participants at the Case Study presentation were insightful and far-thinking and were greatly appreciated. The assistance of David Christopher was also much appreciated. The usual caveat applies.

2 The input and advice of Fidelma McHale is gratefully acknowledged.

3 Movements in waiting lists, by speciality, for *each* individual public hospital is also published by the DOHC.

4 See *Dáil Debates* (Written Answers) 22 May 2001 (par. 73) and also Minister's statement in a debate on health services, 22 May 2001, p. 145.

5 J. Williams and D. Watson (2001) "Perceptions of the Quality of Health Care in the Public and Private Sectors in Ireland" (Foreword by Ray Kinsella), *Report to Centre for Insurance Studies*, Dublin, ESRI.

6 St Vincent's Hospital Annual Report, 1999.

7 Based on St Vincent's Hospital Annual Report, 1999.

8 Particular thanks are due to Fidelma McHale and, also, to the work of Prof Leslie Daly in this field.

The Doctoral *Viva*: A Great Educational Experience or a Gun Fight at the OK Corral?

DAN REMENYI*, ARTHUR MONEY**, DAVID PRICE** AND FRANK BANNISTER*

THE DOCTORAL DEGREE

The doctoral degree is the highest degree a university or a business school has to offer. It is considered the pinnacle of the education process. In the business and management field of study, it is awarded to individuals who have clearly demonstrated a high level of competence in the research process by being able to add something of value to the body of theoretical knowledge in their field of study.

To obtain a doctorate a candidate needs to have undertaken a substantial programme of original research. In this context, originality may take several forms. It could be based on a new theory that is being developed or an old theory that is being tested. An old theory may have been examined and modified for a set of specific circumstances such as a unique way in which it applies to a particular industry. The originality might also in part be related to a novel research methodology that has been used in the research programme, or it may be derived from the fact that the domain in which the theory and the methodology is being applied has not previously been approached or studied in this way.

A doctoral candidate is expected to be fully familiar with all the important literature appertaining to the subject area that is being researched, as well as to have a broad knowledge and understanding of the subject in general. This is the essence of scholarship. In the field of business and management studies, this typically requires familiarity with two or on occasion three literatures.[1] The candidate has to show that they have understood and critically assessed all the main issues, especially the theoretical ones, in the field of study. Arising out of this critical assessment, they will then extend the body of knowledge by developing

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a new aspect of the field of study. To achieve this, it is essential that the researcher be fully conversant with the principal research methodologies available. This is because the researcher's claim to have contributed to the body of theoretical knowledge needs to be justified by demonstrating that a sound scholarly approach has been taken to the research.

Although an increasing number of universities offer a course in aspects of research methodology, sometimes this does not constitute a formal part of the doctorate.[2] In such cases, the doctoral candidate is left very much on their own to sort out their understanding of research methodology and where this occurs, it is most important that the candidate attend several conferences and research colloquia to make up for this lack of discussion. There are many topics under the heading of research methodology and the degree candidate may have to show knowledge of several of these. An area of great importance, into which the examiners will certainly enquire, is the justification of the approach taken in the research. This must be made on both a practical and a philosophical level and explains to some extent why the main doctoral degree is still the doctor of philosophy.[3]

The Examination

Somewhere between three to eight years[4] after the doctoral degree candidate has registered, the dissertation will be completed and submitted for examination.

The examination consists of two distinct parts, which are semi-independent of each other. These are the evaluation of the formal written dissertation[5] and the assessment of the doctoral degree candidate at a *viva voce*. These two parts of the doctoral examination are semi-independent in the sense that a candidate may have presented a good dissertation but be shown to be inadequate at the *viva voce*; conversely, a candidate may have produced a poor dissertation and be able to redeem themselves at the *viva voce*.

Once the dissertation has been submitted (or sometimes even before this[6]) examiners are appointed who will be responsible for evaluating the dissertation and attending the *viva voce* to assess the degree candidate. The *viva* or the *viva voce*, which is Latin for The Living Voice, in the UK and in the Republic of Ireland is held in private and is an integral part of a doctoral examination.[7] The principle is that the doctorate will not be awarded until the degree candidate has demonstrated in person[8] that they are fully acquainted with the material in the dissertation and that they have a thorough understanding of all the issues that surround the topic. It is clear that by far the most effective way for this personal demonstration of competence to be achieved is through an oral encounter or discourse between the degree candidate and examiners who have sufficient knowledge of the field of study and of research methods to assess the candidate's competence.

The Examining Group

The *viva* is attended by the degree candidate, the examiners and sometimes by

the Director or Dean of Research from the university or business school at which the candidate is registered. In some institutions, the degree candidate's supervisor can also attend this examination.[9] Most institutions appoint one internal examiner and one external examiner. The internal examiner will be a knowledgeable individual working at the same university or business school who will frequently be from the same or an adjacent field of study to that of the candidate, but who will not have had any direct involvement in helping with the dissertation. The external examiner will be an expert in the field of study which has been researched and in which the degree candidate is being examined, and will probably hold a senior appointment at a similar university or business school.[10]

The *viva* will normally be conducted between one and three months after the dissertation has been submitted. The actual timing will depend on the availabilities of the examiners but it is important to hold this event while the material is fresh in the mind of the degree candidate.

While the arrangements described above do vary considerably, in all cases a group of examiners will be assembled for the *viva*.[11] They will then spend time talking to the candidate and, at the end of this discussion, will decide if and under exactly what conditions a doctorate will be awarded.

Examiners

The supervisor and the university, if they are doing their job properly, will select and appoint an appropriate examiner(s). Some universities will actually discuss possible examiners with the candidate. In no circumstances would it be appropriate for a candidate to pick their examiners, but sometimes the candidate's knowledge of experts in the field of study may be better than that of the supervisor and, for this reason, the supervisor may wish to consult with the candidate about the options.[12] Examiners, or at least external examiners, should be expert in both the field of study and the research methodology used, as well as have a wide knowledge of research methodology generally. It can happen that an external examiner is chosen who is deeply unsympathetic to the philosophy or methodology adopted by the candidate. When this happens, the unfortunate candidate can find themselves being sent off to investigate a completely new literature that happens to be the pet field of the examiner. It is the responsibility of the supervisor to ensure that this does not happen.

The Outcome of a *Viva*

The outcome of a *viva* can also vary considerably. At the positive end of the spectrum, the examiners may decide to award the degree without asking the candidate to undertake any changes or improvements to the dissertation. At the other end, the examiners can, at least in theory, fail the candidate. Although examiners always reserve the right to fail a candidate, it is very unusual for this to happen. One of the reasons for this is that an outright failure would reflect badly on both the supervisor and the institution in general. For this reason, weak candidates are normally advised not to proceed to examination.[13]

If the dissertation is not of sufficient quality and if the doctoral candidate is not competent, then the usual procedure is for the examiners to request additional work. They can instruct the doctoral candidate to review a body of literature or to repeat or extend an evidence collection exercise that could take at least another year – maybe even two or three years. This outcome would not be regarded as a success.

An outright failure is unusual and will only occur in extreme circumstances such as when there is clear evidence of complete incompetence or maybe of some form of cheating. The term failure here is being used in the sense that the degree candidate is told that the work is so poor that the university is discontinuing their registration and that the work will not be considered for any other degree at that institution. There is another set of circumstances that is sometimes referred to by academics as failure of the doctorate. This occurs when the degree candidate is told that their work is not appropriate for a doctorate, but that it is adequate for a master degree such as a MPhil.[14]

It is not that uncommon for the examiners, even when the dissertation and the *viva* are both good, to require some additional work to be done. In fact, examiners sometimes, if not often, feel that they need to ask the candidate to add something to the dissertation so that the examiner has made a contribution to or just made their mark on the work. The candidate should not be concerned when this happens.

The *Viva* Process

The oral examination itself has been known to be as short as 60 minutes and as long as all day.[15] It is often the case that the shorter the duration of the examination the more competent the degree candidate. When a *viva* takes many hours, it is often because the examiners are trying hard to find the positive side of the candidate's research.

The viva process is, or should be, simply one of scholarly debate, which is stimulated by the examiners and especially the external examiner. This debate can be challenging, with the candidate being required to face quite penetrating questioning. The examiners will have previously read the dissertation and in some instances will have already shared their personal views by means of a pre-*viva* report. In the case of strong candidates, the examiners may have decided that, subject to the doctoral degree candidate not making a fool of themselves during the *viva*, the degree will be awarded.

Tone of the *Viva*

The tone of the *viva* will of course depend upon the individuals taking part and it can vary considerably. The candidate can do a great deal to influence the mood of the examination through dress, body language and general behaviour. It needs to be understood by the candidate that they are seeking the acceptance of the examiners and thus need to exude confidence without arrogance. It is extremely important that *egos* do not become vulnerable, as this can lead to unpleasantness. The candidate needs to be conscious of the fact that there is a

substantial imbalance in power between themselves and the examiners. However, the examiners need to ensure that the candidate does not feel unduly pressurised and that they may have a break for refreshments whenever it is required during the examination.

In general terms, the *viva* is not intended to be confrontational or adversarial. The main purpose of the event is to confirm what the doctoral degree candidate actually knows about the research and the field of study in order to be confident that the doctorate has been duly earned. If the degree candidate has obtained an excessive amount of help in producing their dissertation, this should become obvious in the debate. Many successful doctoral degree candidates have reported that the examination was actually a pleasant experience and that they learnt quite a lot from it. However, it is not guaranteed that this will be the case and from time to time, the experience is reported as being very harrowing indeed. The doctoral candidate needs to be prepared for this eventuality.

Central Issues to be Raised at the *Viva*

There are seven central issues that should be addressed by the examiners in establishing whether the doctoral candidate has met the requirements. These are high-level issues or concerns that go to the very heart of a doctoral degree.

1. Does the candidate have a thorough understanding of the field in which the dissertation is presented?
2. Is there a clearly articulated research question that seeks to establish a new theory, refute an old theory or develop an extension of an existing theory?
3. Is the work framed within the body of current theoretical knowledge or has an established theory been used as a base for testing new ideas?
4. Has the research been conducted with appropriate procedures, discursive or observational and analytical, quantitative or qualitative?
5. Has the contribution to the body of theoretical knowledge been expressed clearly as a convincing and reflective argument?
6. Has it been demonstrated that the new theoretical knowledge has practical management validity and utility, i.e. potential value in use?
7. Is the work substantively that of the candidate?

If these criteria are met, even if not entirely, then the research should have a sound claim to be regarded as both rigorous and relevant, which is central to the doctorate.

A Contribution to the Body of Theoretical Knowledge

A contribution to the body of theoretical knowledge is notoriously difficult to define and thus it is useful to think of it in terms of two broad issues. Firstly, it is essential that the doctoral degree candidate produce some new and interesting ideas as a result of the research. New and interesting ideas can of course have a number of meanings, but certainly the research findings should not smack of recycled motherhoods. There should be some angle that the examiners have not

thought of before.[16] Specifically, the new angle could be an extension of existing theory, a new application of existing theory or a confirmation or rejection of some aspect of an existing theory.[17]

Secondly, the findings of the research should have a degree of general applicability. This does not have to be very broad, but the research finding should in the field of business and management studies be relevant and have real value to a reasonable number of practising managers.

From the point of view of the *viva*, the examiners will try to probe the doctoral candidate on these issues and will use detailed questions in order to evaluate to what extent the candidate has achieved these points.

Possible Detailed *Viva* Questions

Although every *viva* will be different, a number of generic questions that will usually be asked at any business and management studies doctoral examination can be identified. The detailed form or wording of the questions will vary, but they will usually fall within eight major groups and it is useful to be aware of these.

1. The first group of questions relates to confirming the degree candidate's understanding of the doctoral degree objectives and how the degree can affect the life and the career of the candidate. These questions are often asked to simply warm up the examination process. Thus, these questions relate to the degree objectives.
2. The second set of questions relates to the degree process and concerns whether this process had the effect on the candidate that is normally intended. Thus, the second group of questions deals with personal development.
3. The third set of questions relates to issues concerning the research question. In some respects, this is significant because if a poor research question was originally chosen it can adversely affect the rest of the work.
4. The fourth set of questions relates to issues concerning research methodology. Here the research candidate is being asked to demonstrate their understanding of the philosophical underpinning of the research and to show the different views which could have been adopted. The candidate might, for example, be asked whether there were any alternative approaches considered and to compare the relative merits of such alternatives with the method chosen.
5. The fifth set of questions relates to issues concerning fieldwork. Here the research candidate is being asked to demonstrate their understanding of the different approaches to evidence collection and the management thereof.
6. The sixth set of questions relates to the analysis of the evidence. Here the research candidate is being asked to demonstrate their understanding of the decisions that were taken with regard to the selection and use of the quantitative or qualitative tools utilised.

7. The seventh set of questions relates to the results of the research. In some respects this is the most difficult part of the research process and perhaps only really strong doctoral degree candidates should be expected to perform really well here. The main reason for this is that even with good research results the candidate will have to apply considerable creativity to come up with something new and interesting to add to the body of theoretical knowledge. However, it is important for all candidates to have some explanation as to how their theory generation and its validation proceeded.
8. The eighth set of questions relates to the value of the results. In the field of business and management studies, it is important that the research be seen to have real utility and this set of questions helps to focus on this.

It is obvious that there are no right or wrong answers to these questions. The questions are used to stimulate debate, which will allow the degree candidate to show their understanding of the research and the field of study in general. Although these questions, from Set 3 onwards, have been listed in the order in which the dissertation would probably have been written, it is quite possible that the examiners could select questions virtually at random.

SET 1: *Questions used to warm up, i.e. related to the degree objectives*

1. Why did you undertake a doctorate?
2. What did you think a doctorate was when you started out on your studies and what do you think it is today?
3. Who are the main stakeholders in this research? In which way will they be able to benefit from the results of your research?
4. What will a doctorate do for you in your private life and your business career?

SET 2: *Questions related to personal development*

5. What do we know now that we did not know before you started your doctorate studies?
6. What would you say were the most important things that you learnt from your research both in terms of personal development and from a contribution to the body-of-knowledge point of view?
7. What would you do differently if you were starting now?

SET 3: *Questions related to the research question*

8. What was the original problem/research question?
9. In which theoretical frame of reference were you able to place this research question?
10. How was the research question modified as a result of the literature search?
11. Why was it changed?
12. Specifically, which authors most influenced your thinking about your research question?

13. In what way does your research question seek to establish a new theory, refute an old theory or develop an extension of an old theory?
14. How do you describe your theoretical conjecture and how did you derive your hypotheses, empirical generalisations or propositions for testing?

SET 4: *Questions related to the research methodology*

15. How would you describe your research methodology?
16. What influenced you to choose this approach to your research?
17. What other research methods did you give serious consideration to and why did you reject them?
18. What would you say were the central methodological difficulties you experienced whilst doing your research and how did you overcome these challenges?
19. How would you advise a student on the research process with specific reference to methodology?
20. What are the philosophical assumptions underlying your methodology?

SET 5: *Questions related to the field work*

21. What was your primary method of evidence collection?
22. How did you acquire an appropriate measuring instrument?
23. Did you undertake a pilot study and if so how would you describe its outcome?
24. How did you locate a suitable sample of informants?
25. How do you know the informants/sample that you used are/is representative? If is it not representative, how do you defend its use?
26. What sort of research protocol did you use?
27. How did you decide when you had enough evidence to proceed with your analysis?
28. How would you describe the achievements of your fieldwork?
29. What, on reflection, are the limitations, if any, of the approach you used in your fieldwork?

SET 6: *Questions related to the analysis of the evidence*

30. What analytical techniques did you use to help you understand the evidence you collected?
31. Why did you choose these specific tools?
32. What other tools did you consider and why did you reject them?
33. What were the biggest surprises you encountered and can you give an account of what was occurring?
34. Did your analysis of the evidence support your theoretical conjectures and if not how did this influence your theory development?

SET 7: *Questions related to the results of the research*

35. How would you describe your thesis?

36. How did you arrive at your final thesis?
37. In what way does it contribute to the body of theoretical knowledge?
38. How do you regard your work from the point of view of the validity and reliability of the findings?
39. How do you regard your work from the point of view of generalisability?

SET 8: *Questions related to the value of your results*

40. How have you demonstrated that the new theoretical knowledge you have contributed has practical management validity and utility?
41. How might the results of this research be converted into a practical application or outcome?
42. What are the major weaknesses of your research?
43. What questions have you discovered in your research that still need addressing?
44. Where might this research go from here?

It is important to point out that it is not likely that all these questions will be raised at one *viva* examination. It would simply take too much time. However, a substantial set of these is likely to be asked at any thorough examination.

Satisfying the Examiners

It is not possible to provide specific guidance as to what will satisfy a set of examiners. However, one important guideline is that candidates should listen carefully to the questions asked and give a clear and concise answer. By the end of the examination, it is likely that the doctoral degree candidate will have demonstrated that they know at least as much, and preferably more, about the specific topic as the examiners. The degree candidate will also have demonstrated that they have thought through all the issues related to the type of research undertaken and will have shown a high degree of competence in the way the research was pursued.

Summary and Conclusion

The *viva* is an integral part of the doctoral degree examination and it is important that a doctoral degree candidate perform well at this. The objective of the *viva* is to establish, as fully as possible, the breadth and depth of knowledge of the degree candidate. This is achieved by establishing a meaningful or insightful debate, dialogue or conversation between the examiners and the doctoral degree candidate. This is typically initiated by a series of questions.

The exact form of the *viva* will differ with the examiners and the precise subject of the degree being examined. However, it is possible to anticipate the general nature of the discussion and therefore anticipate some of the questions that are likely to be asked. These may fall into the eight categories discussed earlier, related to the degree objectives, personal development, the research question, the research methodology, the field work, the analysis of the evidence,

the results of the research and the value of the results. Degree candidates can simulate their *viva* by using the above questions. If they feel competent with these questions, they should also be able to answer questions on the more specific aspects of their research.

The outcome of most *viva* examinations is that, subject to some changes, the doctoral degree will be awarded. However, there are occasions when the degree candidate is instructed to do considerably more work or is even told that their research is not good enough to be awarded a doctorate.

The *viva* itself is often a great educational experience for the degree candidate and should be even for the examiners themselves. It should not be seen as a confrontational or adversarial event. The *viva* has actually failed in its purpose if it becomes the Gun Fight at the OK Corral.

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1 In some cases, more than three literatures can be involved. When this happens, candidates should really review their research question. Even attempting to be fully familiar with three bodies of literature is too much for most doctoral degree candidates.

2 To be a formal part of the degree, these courses need to be compulsory. In the UK, for example, the Economic and Social Sciences Research Council (ESRC) and the Sciences and Engineering Research Council (SERC) etc. increasingly require methodology courses.

3 Of course there are now numerous different doctorates including doctor of science, doctor of engineering, doctor of education, doctor of commerce and doctor of business administration, to mention only four.

4 Three years is often regarded as the minimum number of years a full-time doctoral degree candidate should spend on the degree and eight years is normally regarded as the maximum.

5 Although by no means in universal use, the term dissertation is preferred to thesis, as it more accurately describes the document that is submitted. The Oxford dictionary defines dissertation as a long essay, especially one written for a university degree or diploma, from the Latin dissertare meaning "continue to discuss"; the Oxford dictionary defines a thesis as a statement or theory that is put forward as a premise to be maintained or proved. In Hegelian philosophy, a thesis is a proposition forming the first stage in the process of dialectical reasoning.

6 Increasingly, supervisors are thinking about appropriate examiners before the dissertation is submitted. It is certainly not satisfactory for the Dean of Research to be rushing around trying to find an examiner sometime after the dissertation has been submitted!

7 In the USA, the *viva* is referred to as the doctoral defence. The doctoral defence has virtually the same objectives and form as the *viva*. However, due to the structure of the typical doctorate from a US university there may be less emphasis placed of the theory development aspect of this degree.

8 In the Southern hemisphere, in countries such as Australia and South Africa, *vivas* are uncommon. Universities in these countries frequently do not believe that there is adequate expertise in their countries to examine doctorates and they also believe that they cannot financially afford to bring individuals from abroad. Consequently doctoral examinations are conducted by written report.

9 Not very long ago, it was customary for the supervisor to be one of the examiners.

However, this has largely been abandoned. Of course, in a very important sense, the supervisor is always a sort of examiner and if a doctoral degree candidate does not have the full backing of their supervisor, then the outcome of the examination may not be favourable. At some universities, the supervisor may only attend the *viva* with the express permission of the degree candidate.

10 The holding of a senior position is often more important than the formal qualifications of the examiners. Where a member of the university or business school faculty is being examined, there are sometimes two external examiners and, on occasion, no internal examiner.

11 Some universities will allow one of the examiners to be absent from the *viva* and will accept a written report from that examiner. There normally has to be a good reason for this absence.

12 It is important that the supervisor, the examiners and the student be independent. This is difficult to define and the key issue is that there is a high degree of intellectual and personal integrity among the individuals concerned.

13 Candidates usually have the right to demand an examination. When a candidate disregards advice not to proceed to examination and forces one, it is often not successful.

14 With regard to obtaining an MPhil in lieu of a doctorate, the actual mechanism depends on the particular university or business school. In some cases, it will be decided that a masters will be awarded at the end of the unsuccessful *viva*. In other cases, it will be only decided that the doctoral degree dissertation will be withdrawn and that the work will be resubmitted for separate reconsideration as a masters degree. In some cases, it may be necessary to allow a period of six months to elapse before the work may be re-submitted for consideration for an MPhil.

15 There have even been incidents where the *viva* has run into a second day. However, this is very unusual.

16 This does not mean that the candidate has to be unknown to the examiner or vice versa. They may well know each other or at least each other's work through conferences or journal articles, but the new and interesting ideas in the dissertation should have been first encountered by the examiners through the work of the candidate.

17 It is possible that a completely new theory is formulated by a doctoral degree candidate, but this is a rather rare event and should not be expected.

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Methodological Note on Interviewing Public Actors[1]

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Introduction

This "Methodological Note" addresses a number of issues related to the adoption of an intensive and longitudinal research methodology premised on semi-structured interviews with key public actors involved in the Irish social partnership process and/or associated institutions. In particular, this "note" focuses on the factors that underpinned the selection of the aforementioned methodological approach, the design of the questionnaires, the process of selecting individuals for interviews and the data-gathering exercise.

Research Question

This author's study of the Irish social partnership addressed three interrelated research questions. Firstly, it examined the emergence and evolution of the Irish social partnership as a mode of negotiated socio-economic governance within the public policy-making domain. Secondly, it analysed the "*strategic capacity*" of the key actors involved in the process in terms of their *willingness* and *ability* to engage in effective socio-economic concertation. Thirdly, it sought to explain, evaluate and characterise the nature and achievements of the Irish social partnership experiment in the period 1987 to 2000.

Research Methodology

This study adopted an intensive and longitudinal research methodology premised on semi-structured interviews with key informants. In particular, it was considered essential to conduct interviews with the labour market, administrative and political *elites*, that is key public actors with detailed experience and inside knowledge of the social partnership process, social partner organisations and the national public policy-making process. This choice of research methodology was shaped by the following considerations. Firstly, drawing on the relevant literature, the concept of an "Actors' Strategic Capacity" (see Figure 9.1) was developed as a framework for operationalising an "actor-centred institutionalist" approach to the analysis of the establishment and evolution of social partnership in Ireland since 1987. This concept of

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strategic capacity necessitates a strong focus on the interests and strategies of the participating actors and their evolving associational assessment of the requisite *political value* of engaging in peak-level concertation.

Secondly, the focus on the evolution of the social partnership as a mode of negotiated socio-economic governance within the public policy domain ensured that it was necessary to explore the dynamics of the interactions between the participating actors who have been involved in peak-level economic and social concertation. This was reinforced moreover by the fact that literature on social partnership and neo-corporatism highlights the degree to which peak-level consensual policy making is underpinned by the fostering of an appropriate social architecture. Intensive interviews in particular offered the researcher an opportunity to focus on tacit issues such as trust, shared understanding, personalised interrelationships and informal conventions and norms.

Thirdly, within the respective social partner organisations, it has been the national leaders who have been directly involved in the ongoing process of intra-associational debate and deliberation that has shaped and formulated associational strategies and policies in the period under review. These same individuals have also been engaged in a routine process of horizontal deliberation with the other social partner organisations. Similarly, their counterparts in the upper echelons of the political and administrative system have also been key participants in shaping the evolution of the social partnership process. Indeed ultimately, it is these labour market, political and administrative elites who have been responsible for "brokering" successive national agreements, shaping the evolution of the social partnership process and rallying and authorising support for this process within both social partner associations and the broader national political domain.

Consequently, a series of intensive interviews with social partner and administrative elites was viewed as the most appropriate and viable research methodology for garnering key information and critical insights regarding the evolution and development of the Irish social partnership experiment in the period 1987 to 2000.

Selection of Interviewees

The interviewees for this research were drawn from the following organisations and institutions:

- senior officials from the Irish Congress of Trade Unions (ICTU) and national trade union leaders/officers;
- senior directors within the Irish Business and Employers Confederation (IBEC);
- senior figures from the Social Pillar (community and voluntary sector organisations);
- senior figures within state-sponsored labour market and social partner organisations;

- senior civil and public servants;
- political advisors;
- academics and commentators;
- senior officials within the peak farmers' associations.

A full list of the individuals that were interviewed is provided in Table 9.1. The interviewees were selected in a manner that ensured that not only were all the main participant organisations and institutions researched, but also that they encapsulated the entire period under review, namely 1987–2000. Thus, for example, the trade union interviewees incorporated individuals who were centrally involved in the social partnership process for all or part of this period (1987–2000). For each of the groupings listed above, moreover, it was essential to select individuals who played pivotal roles not only within their own organisation but also within the social partnership process and associated institutional arrangements. In this regard, aside from using secondary literature to identify individuals, expert opinion was also canvassed to ensure that the list of candidates included the key players in the social partnership process.

In relation to the ICTU, it was particularly important to try to capture the nature of the intra-associational deliberation that occurred within the organisation over the period 1987 to 2000. As such, the list of candidates from the labour movement included senior ICTU officials, national trade union leaders (public and private sector trade unions) and, critically, individuals who have emerged as either strong advocates or strident critics of the social partnership process. Finally, it was also important to ensure that the trade union listing included some individuals who have been involved in social partner policy bodies and various public policy committees and/or working groups that have evolved within the social partnership framework.

Although within the IBEC there is less public articulation of divergent positions in relation to the social partnership process compared with the ICTU, it was considered necessary to canvass again the views of a range of senior officials within the peak employers' association. Aside from seeking to gather multiple perspectives, this also reflected the fact that senior officials have performed different functions and roles within both the IBEC and the social partnership process. As with the ICTU, it was also important to ensure that there were individuals in the interview list who had experience of the various public policy institutions and working groups that have been established under the ambit of social partnership. As is evident from Table 9.1, the interview list also includes senior representatives from the social pillar and the peak farming organisations. The same criteria that shaped the selection of individuals within both the ICTU and the IBEC were equally applicable to these social partner organisations.

Given that a key focus of this research is on the Irish social partnership as a mode of negotiated socio-economic governance it was also essential to ensure that the interview list incorporated individuals who have been involved in either social partner advisory bodies and/or public policy groupings that have emerged

under the framework of the national level social partnership. This was particularly important in relation to both the evaluation of the effectiveness of the social partnership as mode of negotiated governance and to the assessment of the social partners as policy actors. The emphasis on how the social partnership has evolved as a mode of negotiated governance also ensured that it was important to interview senior civil servants who not only had experience of the policy process in general but also had been directly involved in the social partnership process. In relation to the main political parties, several individuals were interviewed who had served as policy advisors and offered an insight into the perspective of the political parties. As is evident from Table 9.1, no actual politicians were interviewed for this research study. This absence of politicians was primarily due to problems in gaining access. However, the combination of the aforementioned interviews with policy advisors in conjunction with secondary research material – Dáil Reports (Parliamentary Records), published speeches and policy documents – attenuated this deficiency somewhat. In finalising the initial interview list, it was also necessary to ensure that it incorporated a range of individuals who were centrally involved in the negotiation of the fourth national agreement, Partnership 2000, as this was to be used as a case study of how a social partner agreement was brokered. Finally, as the interviews were conducted, several additional names were added to the original interview list to reflect emerging issues and themes arose. Additionally, in several instances, the original interviewees made suggestions regarding people who they considered it would be worthwhile talking to as part of this research. Consequently, the final list of interviews was compiled in part using a "snowball sample" technique.

Questionnaire Design

As indicated above the interviews were premised on semi-structured questionnaires with key headings informed by the literature. Although a number of key themes were explored in each of the interviews, the semi-structured questionnaire was customised in each case to reflect the role and position of the individual in question. Thus, for some senior trade union leaders, the negotiation of a national deal or the formulation of associational policy may have been a major focus of the interview, while for other trade unionists, the research interview may have placed more emphasis on their experience of participating in the public policy domain through their participation in meso-policy networks and/or committees. In this regard therefore, it was important to have an awareness of the position, roles and functions that an individual may have undertaken within both their own organisation and the social partnership process in general. Critically, the interviews themselves also generated research questions and themes that were addressed in subsequent interviews and, as such, the research journey served to shape and influence the design of the questionnaires.

Data Gathering

Approximately two-thirds of the interviews were conducted in the months

between March and July 1997, which was the period immediately after the negotiation and ratification of the fourth national programme Partnership 2000 (1997–2000). The final set of interviews was conducted in the six-month period April to August 2000. Conducting interviews in the aftermath of the negotiation process for Partnership 2000 proved beneficial to the research for a number of reasons. Firstly, it provided an opportunity to explore with key actors the dynamics of the negotiation process in which they had recently been involved. Secondly, as the deal was completed and ratified, the key figures were more willing to engage in reflection and debate about both the negotiations process and the social partnership process itself. Indeed, there was a general sense in which these elite players actually welcomed the opportunity to engage in a degree of "reflection" about a process in which they had been so centrally involved. Certainly, gaining both access to and critical insights from social partner elites would have been more problematic if the author had attempted to conduct the interviews in the final months of a national programme when the focus is very much on whether there will be a successor agreement. These months tend to be characterised by a degree of public posturing and some heightening of tensions, as the various parties prepare for the forthcoming negotiations. Indeed, despite the fact that the social partnership has been in place since 1987, these negotiations can be invariably intensive and protracted in nature. As such, there would be a degree of hesitancy in publicly engaging in debate about the social partnership process at this time. Further rounds of interviews were subsequently conducted in the months between March and July 2000 and, in this instance, they succeeded the negotiation and ratification of the fifth national agreement, the Programme for Prosperity and Fairness.

The interviews were recorded, with the consent of the individuals. An assurance of complete confidentiality was essential for the integrity of the interviews and the research. Each individual was also offered the opportunity to receive a full written transcript of the interview if they so wished. While no individual refused to be recorded, at certain junctures in some interviews, the interviewee requested that the tape recorder be switched off, as they were addressing a particularly sensitive issue. In such circumstances, the issues of confidentiality and integrity were again paramount. As these taped interviews collectively represent "oral" testaments of the experiences of actors involved in national policy issues, it is the author's intention, with the permission of the interviewees, to archive this material and make it publicly available for research purposes.

Conclusion

The intensive research methodology outlined above ensured that this research study of the Irish social partnership was informed by the critical insights and knowledge of the elite cadre of individuals who were responsible for initiating, shaping and progressing the evolution of the Irish social partnership experiment since 1987. Equally, it afforded important insights into how the strategies and interests of the individual social partner organisations, in

particular the ICTU and the IBEC, have evolved within the context of over a decade of peak-level concertation. Canvassing a range of perspectives within these aforementioned associations reinforced this focus on intra-associational deliberation and policy formulation.

There are a number of problems inherent in a reliance on interviews with key actors who were/are so involved in the social partnership process. Firstly, there is the question of subjectivity, as these are actors with an individual and associational interest in the process. Secondly, one is reliant on the participants' knowledge and memory. Thirdly, it is suggested that the actors often display an underestimation of the basic structural power relations in society and, in particular, may over-emphasise the role played by "social dialogue" in achieving particular social and economic objectives.

In operationalising a research methodology that is reliant on interviews with elite public actors, it is important to be aware of these limitations and problems. The issue of "subjectivity" is partially attenuated by ensuring that one garners multiple perspectives within and between organisations. Additionally, the accumulation of practical knowledge over the course of the research journey serves to temper overt subjectivity. The reliance on memory was not overly problematic in this particular research, as it was focused on a comparatively short time span. Also, as indicated above, the interview list was designed in such a manner that it incorporated individuals who collectively offered the researcher direct experience of all of the national agreements to date. Finally, the gains afforded by this intensive research methodology in terms of collating the experience, insights and knowledge of the elite actors who have been involved in a process of macro-political bargaining since 1987 outweighs, though does not remove, some of the concerns listed above.

Figure 9.1: Actors' Strategic Capacity

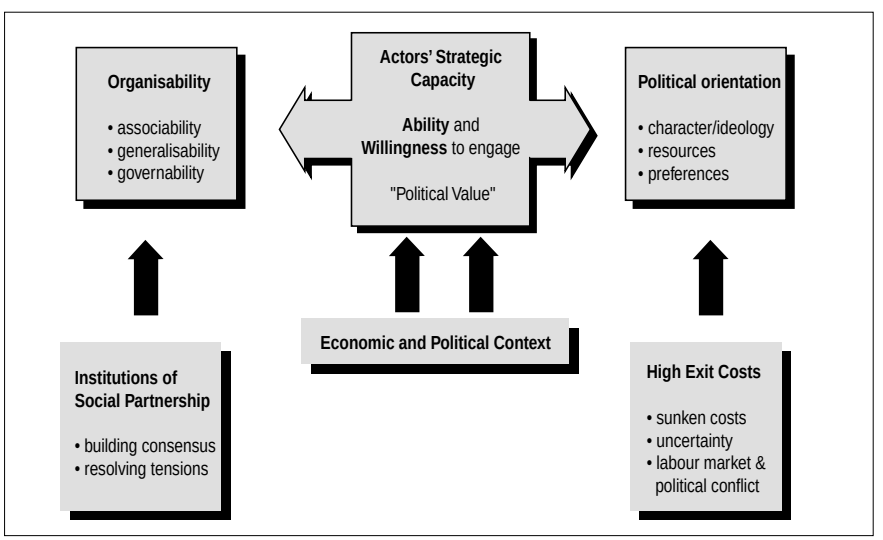

Table 9.1: List of Interviewees 1997–2000[2]

Name	Position/Function
Peter Cassells	General Secretary, ICTU
Patricia O'Donovan	Deputy General Secretary, ICTU
Joe O'Toole	General Secretary, INTO
Sean O'Riordain	General Secretary, AHCPS
Dan Murphy	General Secretary, PSEU
Maurice Sheehan	Assistant General Secretary, MANDATE
Bernard Harbour	Head of Research, IMPACT
Mick O'Reilly	General Secretary, ATGWU
Noel O'Neill	General Secretary, UCATT
Dan Miller	Deputy General Secretary, TEEU
Phil Flynn	IR Consultant (Ex-General Secretary, IMPACT)
Kevin Duffy	Deputy General Secretary, ICTU
Bill Attley	President, SIPTU
Manus O'Riordain	Head of Research, SIPTU
Jimmy Somers	General Secretary, SIPTU
John Dunne	Director General, IBEC
Brian Geogehan	Director of Economic Affairs, IBEC
Brendan Butler (1997)	Chief Executive of Small Firms Association
Brendan Butler (2000)	Director of Social Policy, IBEC
Gerry Dempsey	Director of Human Resources, IBEC
Turlough O'Sullivan	Director of Industrial Relations Division, IBEC
Kieran Mulvey	Chief Executive, Labour Relations Commission
Declan Morrin	Head of Advisory Service, Labour Relations Commission
Paddy Teahon	Secretary General, Department of the Taoiseach
Dermot McCarthy	Assistant Secretary, Department of the Taoiseach
Sara Cantillon	Principal Officer, Department of the Taoiseach
Kevin Bonner	Secretary General, Department of Enterprise Trade and Employment
Julie O'Neill	Principal Officer, Department of the Tanaiste
Michael Tutty	Deputy Secretary, Department of Finance
Sylda Langford	Assistant Secretary, Department of Justice Equality and Law Reform
Padraig O'hUighinn	Ex-Secretary General, Department of Taoiseach
Senior Civil Servants	Department of Social Community and Family Affairs; Department of the Taoiseach, Department of Agriculture, Department of Justice Equality and Law Reform; Department of Environment and Local Government
Sean Dooney	Ex-Senior Civil Servant, Department of Agriculture
Sean O'Hegarty	Director, NESF
Sean Healy	CORI
Mike Allen (1997)	General Secretary, INOU
Mary Murphy	Assistant General Secretary, INOU

Mike Allen (2000)	General Secretary, Labour Party (2000)
Tony Monks	General Secretary, INOU (2000)
Susan McNaughton	Research Officer, National Womens Council of Ireland
Orla O'Connor	Head of Policy, National Womens Council of Ireland & Community Platform
Noreen Byrne	Chief Executive, National Womens Council of Ireland
Niall Crowley	Director, Pavee Point
Simon Nugent	Director, Youth Council of Ireland
Greg Tierney	ICOS
Con Lucey	Chief Economist, IFA
Professor Patrick Honohan	ESRI
Dr. Martin Mansergh	Head of Research, Fianna Fáil
Brendan Kennedy	Programme Manager and policy advisor to Ruari Quinn (Minister of Finance 1995–1997)
Professor Michael Laver	Politics Department, Trinity College Dublin
Professor Eunan O'Halpin	Business School, Dublin City University

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1 I would like to thank Professor John Tomaney for his advice, support and friendship during this research.

2 Approximately two-thirds of the interviews took place in the first six months of 1997 with a further round of interviews being conducted in 2000. Several of the individuals in the list were interviewed twice in part due to changes in their position. The title attributed to each of the individuals reflects their position when interviewed.

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Intangible Resources as Drivers of Performance: Evidences from a Spanish Study of Manufacturing Firms

VICENTE A. LÓPEZ*

INTRODUCTION

The purpose of this paper is to try to expound a conceptual framework which, following the resource-based-view (RBV) of the firm, enables us to know the significance of a group of intangible resources (company reputation, product reputation, human capital and organisational culture) in relation to business performance. In addition, we will test the descriptive power of the proposed model by empirically studying a sample of Spanish manufacturing firms holding the ISO 9000:1994 certificate of quality.

THEORY DEVELOPMENT: BACKGROUND

One of the first attempts to define the firm as a unique and organised collection of resources (in contrast to the traditional conceptualisation of the neoclassical approach, which used to identify the firm with the production function) was made by Edith Penrose (1959). Despite this fact, the resource-based-view literature only recognises the role deployed by Wernerfelt (1984) as one of the pioneers of the perspective. We acknowledge that some of the basic RBV postulates were introduced by Penrose in 1959 who established a relationship between organisational resources and firm growth.

The main contribution of Penrose (1959) does not lie only in the definition of the firm, but also in explaining its growth process and stating what are the boundaries of that growth. According to Penrose, the boundaries of growth are to be sought "inside" the firm and not just in the external environment. Throughout their history, firms could generate resources internally, or acquire in the markets those they needed for developing their activity. But these resources are often underused, i.e. firms hold a larger volume than they strictly need to keep on developing the same activity using the same intensity. Thus,

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organisations can continue developing, as they hold idle resources, for which they try to find new applications. The use of these unused resources in most cases can lead to new complementary uses, which enables firms to exploit the idle resources, and this would make it possible for them to find new underused resources and, therefore, to perpetuate this process (Penrose, 1959).

The main concepts of the resource-based-view, i.e. the definitions of resources and capabilities, have given rise to some controversy (see for example Amit and Shoemaker, 1993, or Priem and Buttler, 2001). Aaker's (1989) and Hall's (1992) papers suggested that assets would be what firms "have" and capability, competence and ability would be what organisations "do". Itami (1987) added that capabilities, competences or abilities are people dependent, just as Hall (1993) classified. According to Cuervo (1999), competences are "interactions" among resources and capabilities would be the "abilities" to develop resources and competences.

According to Grant (1991a), resources can be also considered as "inputs" of the productive process that constitute the basic unit of the analysis. He suggested that individual assets are not going to be productive by themselves, owing to the fact that productivity requires co-operation and co-ordination of resources; thus introducing the concept of capabilities: a group or equipment of resources carrying out a particular "task or activity". Therefore, the single addition of individual resources does not constitute a unit; a collective guidance is required, which leads us to the concept of complex patterns of co-ordination between resources and persons. Introducing the concept of "organisational routines" (Nelson and Winter, 1982) is the best way to explain this. "Organisational routines" are regular, predictable activity patterns made up through sequences of actions co-ordinated by persons who act because of a motivation or a specific problem. Presenting the concept of "organisational routines" serves as a convergence between the evolutionary or ecological perspective and that of resources (Montgomery, 1995). Routines have the same meaning for firms as genes do for the human being. The ability of firms to reach co-operation and co-ordination in work teams is a critical component in the relationship between resources and capabilities, taking the learning into account as a key concept in order to achieve them, and this leads us to the learning school (Mintzberg et al., 1998).

The development of sustainable competitive advantages that usually transmit long-term rents to organisations, as Wernerfelt (1984) proposed, is based on selected company resources. Not all company resources have the strategic potential to be able to carry out such tasks as long-term rents, so it is necessary to assess what resources, capabilities and different routes of knowledge in organisations should be chosen and to analyse why these resources can boost organisations. Not all researchers agree when proposing a name for these driving resources of organisational success. Thus, "critical resources" for Wernerfelt (1984) mean the same as "strategic factors" for Barney (1991) and "strategic assets" or "inputs" for Amit and Shoemaker (1993), which, according to Conner (1991), are "able to produce sustainable rents". There is no agreement on the requirements

that inputs must meet to let us classify them as "strategic" (Grant, 1991a; Barney, 1991; Amit and Shoemaker, 1993; Peteraf, 1993; Tampoe, 1994; Hamel and Prahalad, 1998). Most of these papers are centred on two features that provide the strategic potential of resources: replicability and transferability (Fernández et al., 1997). The criteria proposed in RBV literature for those inputs having sustainable competitive advantage are not the most appropriate for empirical research, maybe because they are not sensitive to the context in which they act. This can be seen in the revision of the bibliography on RBV.

Intangible Resources as Potential Rent Drivers

As we mentioned before, and according to the RBV, resources are the decisive factors in the competitive advantage of firms and their performance and, therefore, the main concern of the executives should be the selection, acquirement and management of "competitively" superior resources. The RBV prescribes that only those resources having certain peculiarities are able to generate superior levels of economic rents (Amit and Shoemaker, 1993); therefore, the property of or control over these strategic assets will determine which of the firms obtain superior profits and which do not.

We can often find very restrictive definitions of assets, including those that can be valued, such as physical assets (Jacobson, 1992). This restrictive conceptualisation determines that a significant group of intangible resources may not be seen in balance sheets or in the financial statements of firms. A group of relevant researchers, including Itami (1987), lean towards this, and they point out that the intangible assets of organisations have the ability to create competitive advantages. Some empirical studies that have tried to measure the capability of tangible assets in order to explain the differences of profitability obtained by firms had great spread. However, very few researchers have tried to determine the role that intangible resources can play. According to some RBV researchers, there are certain difficulties in defining intangible resources and capabilities separately; however, the common underlying connection between these two concepts, just as Fernández et al. (1997) defend, is based on the fact that both routes of knowledge have different levels of complexity that are held or controlled by firms.

According to Hall (1992), intangible resources must be considered as "assets", since they are "things that you have", and most of them are often legally protected. In the RBV context, intangible resources are considered as decisive factors of the competitive advantage of firms and, therefore, of their performance (Grant, 1996). Consequently, this RBV prescription is considered for us as a key reference for the empirical study developed in this piece of work: "intangible" resources are the decisive factors of the competitive advantage of firms and their performance.

In this paper, a limited number of intangible resources are studied separately and in depth, and this allows us to empirically check them later. There exist some other ways of considering and assessing intangible resources of organisations, for example models of intellectual capital (Edvinsson, 1997). Generally, intellectual

capital is broken down in several stocks of intangible resources, for which a group of indicators is proposed in order to capture the value generated by the immaterials contemplated in each of these frameworks.

There exists plenty of literature on classification of resources and the underlying criteria of each author are very dissimilar (Hall, 1992; Markides and Williamson, 1994; Grant, 1996). Two taxonomies of resources will be used for our empirical study: those of Grant (1991b) and Hall (1992). Intangible resources (Hall, 1992) can be divided as assets or abilities. Brands, patents, copyrights, registered designs, contracts, trade secrets, reputation and networks are included in "asset" intangible resources. Abilities are human capital and culture. However, Grant (1991b) does not consider human capital as intangible and proposes a specific category: human resources. According to Hall (1992), intangible resources can also be classified as dependent on persons or independent of them. Intangible resources dependent on people include human capital (employees, distributors, suppliers, etc.), as well as organisational culture, reputation and networks. Intangible resources independent from people are contracts, licences, trade secrets, intellectual property rights of patents and data bases.

Empirical Study and Results

The main prescription of the RBV perspective is that strategic assets are decisive factors of the competitive advantage and performance of firms. Based on the definition of strategic assets and on resource-based-view logic, it can be assumed that strategic assets are intangible resources and, consequently, starting from Aaker's (1989), Hall's (1992) and Grant's (1991b) studies, a relationship among intangible resources in the model proposed is established ("company reputation", "product or service reputation", "human capital" and "organisational culture" with "organisational performance").

In the empirical model, the four intangible resources are considered indirect variables of the potential value of the intangibles observed. The subjective nature of managers' perceptions is often seen as a problem for the research. Perceptions do not necessarily have to correspond to an objective assessment; however, their influence becomes clearer when managers take decisions. In spite of these weaknesses, other authors have established that even when "more objective" indicators are available, executives' perceptions have been used as worthwhile alternatives in different empirical pieces of work developed according to the RBV (Powell, 1996; Vicente-Lorente, 2001; Wilcox and Zeitgaml, 2001).

The valuation of company performance (response variable) has been the subject of a detailed description in the literature of strategic management (Chakravarthy, 1986; Venkatraman and Ramanuhan, 1986; Camisón and Guia, 1999), without having agreed on which is the most relevant measure of the performance. Some of the most recent research carried out according to the RBV distinguishes two classifications of indicative elements when assessing the organisational performance: market position or growth and profitability (Pettus, 2001). The first classification, market position or growth, considers sales, market share, change in sales, change in market share, change in number of employees

and change in total assets. The second classification, profitability, contemplates return on assets, return on equity, profit margin and net profits. In the empirical study, the return on assets was adopted for each company of the sample as a proxy variable of the organisational performance. The calculation of the return on assets was performed as an average of the period 1994–97. This alternative shows certain advantages, as it enables the smoothing of the data and, therefore, the correction of possible transitional effects derived from any anomalous activity in any of the years taken into account (Hill et al., 1992). Besides, it enhances the normality of the distribution, which is necessary in order to be able to analyse it with some minimum statistical significance (Hair et al., 1992).

As a result of his research, Hall (1992) found out that the intangible resources that most influence the potential capability of firms to generate competitive advantages are: company reputation, product reputation, human capital and organisational culture; in keeping with this research, our proposed model considers these four resources as the independent variables that can explain organisational performance. These four constructs were measured with multiple-item 7-point Likert scales. However, these variables are latent and, therefore, they cannot be directly observed, and, as its measurement is essential, it will be calculated through factorial analysis.

In the "company reputation" variable, the conceptualisation made by Weigelt and Camerer (1988) is used to measure the three descriptive factors; quality of the management team, financial position and social responsibility. For its part, the quality of the management team is measured through the four items following Doppler and Lauterburg (1998). The item used by Weigelt and Camerer (1988) is proposed to assess the dimension of social responsibility. Also, the only item suggested by Weigelt and Camerer (1988) is taken into account in order to assess the dimension of the financial position of firms.

Hypothesis of company reputation.

H_1: The better the assessment assigned to the company reputation by a manager, the higher the organisational performance achieved will be.

The "product reputation" variable depends on the perception of quality, according to Weigelt and Camerer (1988); consequently, and assuming this perspective, evaluating this dimension would require studies directed at assessing users' opinion on the quality of products of different firms or, failing that, researching the association between quality and brand for different organisations. Both alternatives are rejected, since they were difficult to adopt, and managers' opinions on the impact that owning a superior quality product would have was analysed instead.

Hypothesis of product reputation.

H_2: The better the assessment assigned to the product reputation by a manager, the higher the organisational performance achieved will be.

The "human capital" variable is composed of three items adopted from Grant (1991b): focus on training, adaptability of employees and social-collaborative skills of employees.

Hypothesis of human capital.
H_3: The better the assessment assigned to the human capital by a manager, the higher the organisational performance achieved will be.

For the last explanatory variable, "organisational culture", we follow Hall (1993: 617). He identified five attributes of organisational culture that lead the firms possessing those attributes to achieve sustainable competitive advantages: 1) ability to innovate, 2) perception of high quality standards, 3) perception of high standards of customer service, 4) team working ability and 5) participative management style. With regard to the second dimension, "perception of high quality standards", Juran's (1990) contributions are followed to design it. He places the responsibility for quality on the board of directors and points out three requirements (aspects, or even phases) related to the process: quality planning, quality control and quality improvement. The "ability to manage change" dimension is assessed by means of six items suggested in Doppler and Lauterburg (1998); in the last one, Barney's (1986) anthropological perspective is followed. The fourth dimension that integrates the latent variable organisational culture, team work, is referred to a specific item suggested in Hall's research. Finally, we follow Likert (1961) in order to classify the dimension "participative management style" and use three specific items.

Hypothesis of organisational culture.
H_4: The better the assessment assigned to the organisational culture by a manager, the higher the organisational performance achieved will be.

The sample selected to test the model was taken out from Ardán's database, which comprised 166 firms holding the ISO 9000:1994 certificate of quality. A total of 72 executives responded, giving a response rate of 43 per cent. The evaluation of the proposed theoretical model was carried out by means of four simple linear regressions (RLS) and one multiple linear regression (RLM) in which the Return on Assets (RECOMED) was adopted as a dependent variable and Company Reputation (drawn up as a factorial variable: REPUEM), Product or Service Reputation (generated from only one item: REPUPOSE), Human Capital (designed as a factorial variable: CAPIHUMA) and Organisational Culture (factorial as well: CULTORGA) were adopted as predictor or independent variables.

The size of the firm is frequently recognised in the literature as a control variable which influences performance (Huselid, 1995; Vicente-Lorente, 2001). In order to decide to include it or not in the MRL model, we first performed an ANOVA to explore if the size should be included as a control variable in the regression. Firm size was measured by total employment (Huselid, 1995) and

converted into five categories to test its influence on our dependent variable (RECOMED). We did not find significant differences of firm size categories on return on assets, thus we decided not to incorporate it in the model (MRL) as a control variable, keeping the model simple and clear.

Following Hair et al. (1999), those items that negatively affected Cronbach's Alpha coefficient of the latent variable (REPUEM, CAPIHUMA and CULTORGA) were eliminated for each construct. Also, for the three unobservable latent variables (REPUEM, CAPIHUMA and CULTORGA) to be used in the regressions, a Principal Component Analysis (PCA) with varimax rotation was carried out with the purpose of obtaining a factorial structure for each one. The total variance explained for the three constructs is shown on Table 10.1.

Table 10.1: Total Variance Explained (PCA)

Latent Variables	Total Variance Explained (%)
Factorial REPUEMP	49.104
Factorial CAPIHUMA	58.967
Factorial CULTORGA	33.886

Before estimating the function specified in the model of regression, a study of the relationships among all the variables was carried out by using a non-parametric statistic Spearman's Rho (Hair et al., 1999). Thus, as we can see in Table 10.2, the results confirm that there exists a significant statistical correlation among the dependent variable and each of the four independent variables considered (REPUEM, REPUPOSE, CAPIHUMA and CULTORGA).

Table 10.2: Correlations between Dependent and Independent Variables

VARIABLES	RECOMED
Factorial REPUEMP	.777**
REPUPOSE	.525**
Factorial CAPIHUMA	.569**
Factorial CULTORGA	.805**

** Significant at 10% level.

The results of the MLR indicate an acceptable goodness of fit of the model evaluated by means of the adjusted $R_{\_}$ (0.529). The regression coefficients analysis estimated (MRL) and its significance levels show the acceptance of H_1,

H_2 and H_4 (Factorial REPUEMP, Factorial CAPIHUMA, and Factorial CULTORGA achieved a p-value < 0.05). On the other hand, H_2 (the variable REPUPOSE presented a p-value = 0.255) must be rejected if we consider the same 0.05 significance level. Statistical results are shown in Table 10.3.

Table 10.3: Standardised Coefficients (SLR, MLR)

VARIABLES	Parameters SLR	p-value	Parameters MLR	p-value
Factorial REPUEMP	0.754	0.000	0.283	0.038
Variable REPUPOSE	0.463	0.000	0.103	0.255
Factorial CAPIHUMA	0.574	0.000	0.251	0.008
Factorial CULTORGA	0.784	0.000	0.642	0.000

Conclusion

The literature review carried out in this paper suggests the importance of some "invisible" resources as rent generators to those firms holding or controlling them. All those resources having a more intangible nature or more strongly dependent on people turn out to be specially efficient for those firms that "supposedly" have a strong focus on their development.

The results of the empirical study through the regressions reveal the statistical importance of some resources to explain levels of company performance. In the RLS analysis, the four intangible resources achieved statistical significance but in the MLR analysis, only three of the hypotheses, company reputation, human capital and organisational culture with company performance, were confirmed.

Our research methodology has been different from that of the authors previously mentioned, considering that neither Aaker (1989) nor Hall (1992) used regression analysis; they only elaborate a ranking of resources as drivers of competitive advantages. Also, our study has been carried out in a different competitive environment, working with a sample of Spanish manufacturing firms, whose size is lower than the ones considered by Aaker (1989) and Hall (1992). Despite these differences in methodology and firm characteristics, we reached similar conclusions to other authors. These general conclusions highlighted the role played by some intangible resources as generators of competitive advantages and also the ability of these resources to explain variances in firm performance.

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DEC is Dead, Long Live DEC

by *Edgar H. Schein*
San Francisco: Berrett-Koehler, 2003

The opening sentence of this book sets the scene:

> The story of Digital Equipment Corporation (DEC) is fundamentally a forty-year saga encompassing the creation of a new technology, the building of a company that became the number two computer company in the United States with $14 billion sales at its peak, the decline and ultimate sale of that company to Compaq Corporation in 1998, and the preservation in its many alumni of the values that were the essence of the culture of that company. (Schein, 2003: 1)

The second page lists nine questions as to why the story of DEC is worth studying, questions relating to entrepreneurial leadership, the dynamics of organisational culture that survived long after the company had disappeared, a knowledge company before its time, values-based management and the contribution to technological innovation among others. The structure of the book is based on chronological history, technological evolution and culture, and the multiple viewpoints of former managers and authors. Three interdependent developmental streams are presented as frames for analysis: the technology stream (the post Second World War computing coming into its own), the organisation development stream and the organisational culture stream. In Schein's view, the complex dynamics between these three streams are important as they represent how what can be managed and controlled (structural components) are deeply influenced by the technological and cultural forces that are less controllable, and so we need to understand how these influences work. Schein's well-known framework of organisational culture provides the basis for the study of the cultural stream. Schein was consultant to Digital for over 25 years and his experience with the company contributed significantly to the development of his cultural framework. Running through the book is evidence of the co-operation and enthusiastic support the key actors gave him in this study.

Part One explores how the technology, organisation and culture streams are one and the same. It comprises six chapters, the first three of which tell the story

of Ken Olsen, the founder and CEO of DEC as scientist-engineer, leader-manager and salesman-marketer respectively. His beliefs with respect to technology and engineering, to managing people and to meeting customer needs are described. The fourth chapter in this part shows how the organisational culture developed from Olsen's beliefs and how they became embedded in the organisation's cultural paradigm its DNA, as Schein puts it. The next chapter examines the legacy that DEC left to leadership development, noting how leadership talent was nurtured so that when managers left the company they frequently ended up in senior positions in other companies. Finally, Schein reflects on Digital's contribution to organisation development (OD) and specifically notes how his consulting work with Digital contributed to the formulation of his notion of process consultation and contributed to the development of surveys as intervention.

Part Two comprises five chapters, the first of which, by Paul Kampas, tells the technology story by tracing the evolution of computer design and manufacturing from the early 1950s to the present. Kampas shows how Digital thrived in the late 1960s and through the 1970s but then lost when the client server paradigm came, as Digital's competitive advantage was undermined by the emergence of the "killer category" (those vendors that specialise in one or a few closely related products categories, such as Intel, Microsoft, Oracle etc.). In the subsequent chapters, Schein resumes the story, exploring organisational life cycles. Stage 1 is where Digital was a small, young, cohesive extended family, where functional familiarity enabled people to know each other and work well together. Olsen had a style of sitting back at senior management meetings and encouraging the emergence of consensus through open debate and internal competition. As the company moved to a larger and more differentiated system, the style that had served the small, cohesive organisation well was less effective. The internal competition among individuals who knew each other well became inter-group power plays. Yet Olsen did not change his style. In Digital's mid-life, the culture was strong in engineering with the emphasis on products. Customers loved DEC products as engineers tinkered with creative and innovation products. Through the 1980s, the company was peaking but weakening. Internal strife led to animosities and accusations of cheating, lying and misusing resources. Digital's end was long drawn out over several years, with mixes of success and organisational crises and efforts to find new ways of managing. Olsen resigned in 1992 and his successor, Palmer, spent several years selling off units and changing elements of the culture by bringing in outsiders as senior managers. The company was sold to Compaq in 1998.

In Part Three, Schein reflects on the lessons and legacies. He notes that the DEC story teaches two things. Firstly, the lessons of history can be viewed on various levels, so that there are obvious lessons and subtle lessons. Secondly, events of history are highly interactive, so a search for a root cause may be flawed because it implies that there is a root cause when in fact events may have occurred for a multiplicity of reasons. He lists fourteen lessons, which draw together the themes of the company's story. He concludes by saying, "When all

is said and done, the basic reason why DEC ended up where it did was that the evolution of the technology required formations in the organisation that the culture did not encourage or allow" (Schein, 2003: 254).

With regard to the lasting legacy, he notes that while the organisation ceased to exist, the culture continues to live on, as the DEC Alumni Association publishes a directory and organises meetings. Digital changed the nature of computing. It pioneered human resources structures such as affirmative action, diversity and a philosophy of "doing the right thing". Its former employees have populated the computing industry and contributed to the development of many of the current major players in the industry. Its intellectual output lies in books on Digital and by Digital authors and has contributed to organisation studies through Schein's seminal works on organisational culture and process consultation.

There are five appendices, one of which was contributed by former Digital engineers and describes Digital's technical contributions and the other four are reflections by former employees.

This review has attempted to provide a flavour of what is in this most interesting and exciting book. There are so many points that one could stop and focus on. Both academic and business readers will find that *DEC is Dead, Long Live DEC* is a deep book, grounded in scholarship and explicitly aiming to challenge readers to reflect on and understand the complex story of his interesting company. The story of the inter-connectedness of technology, organisation and culture is reinforced throughout and Schein regularly shares his own puzzles as he tried to make sense of what was happening at various times. Schein is part of the story and his personal narrative both provides points for reflection and contributes to the easy writing style. Students of organisational culture will find the book provides a detailed case study of how a founder created a culture and how that culture sustained the success of the organisation through some stages of its life cycle and contributed to its decline as the market and technology changed. The field needs such detailed culture studies that cover several decades and show how the study of a culture is a complex exercise and not one that can be done merely by opinion surveys and facile deduction. It is a case study of entrepreneurial leadership and the effects of leadership style at different stages of an organisation's life cycle. It is a most important contribution to the field of organisation studies and one to be an essential part of courses at all levels and a challenging read for executives.

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Changing Healthcare Organisations

by *David Coghlan and Eilish Mc Auliffe*
Dublin: Blackhall Publishing, 2003

In a national context, the effective management of health services and the delivery of quality systems in healthcare institutions have increased in significance in recent years. The recent Health Strategy (2001) points to the serious challenges facing staff and managers in the heath system at present, including difficulties in retaining qualified staff, stressful working conditions, high turnover rates and poor morale. Patients are expecting more of healthcare providers and are demanding higher standards of care and service. Simultaneously, those paying for health services have become more concerned about rising health costs and possible inefficiencies. As a result there is widespread interest in understanding what makes for an effective health service and in unearthing better practices to improve existing approaches to healthcare management and delivery.

Changing Healthcare Organisations addresses the leadership and management of change within the healthcare sector. The book is divided into ten chapters around which key aspects of organisational change are explored. As the title suggests, the book provides an introduction to the core issues in organisation development and change management in healthcare systems and aims to stimulate greater dialogue between researchers, policy makers and healthcare professionals in the critical area of changing healthcare organisations.

Chapter 1 reviews the case for change within the healthcare sector and the challenges inherent in addressing the culture of "deference and inertia" within the current system. The authors emphasise the importance of dealing with both the formal and informal organisation or as they put it, the "two organisational lives" when addressing change in healthcare organisations. Within the chapter, organisation development is presented as an approach to change management with particular relevance to healthcare organisations. The OD approach, which emphasises collaboration and facilitation, helps individuals to "learn to solve their own problems and manage their own change so that they can learn to do so in the future" (2003: 7).

In Chapter 2 the authors define the notion of organisation development (OD), again emphasising the process-based approach where values, social systems, attitudes and feelings are key to understanding and managing the complexities of change. The characteristics of OD are outlined and the context for the emergence of OD is presented. The authors note the importance of "organisational language" and suggest that in most cases change takes place and

evolves out of conversation in firms. The emergence of OD in the Irish healthcare context is also addressed where more emphasis is now placed on participation and consultation in the change process. This has arisen, it is argued, because of the overall greater concern for employees in the system and increasing complexity created as a result of structural change.

Chapter 3 introduces the concept of action research emphasising that it has developed to become a "family of approaches each with its own particular emphasis". Examples of such approaches, namely clinical inquiry, appreciative inquiry, reflective practice, action learning and co-operative inquiry, are defined and explained. The authors suggest that OD and action research are intertwined in that both approaches are participative and members engage as participants in soliciting ideas, planning, taking action, reviewing outcomes and learning. This contrasts with more prescriptive approaches, which set out pre-designed steps to achieving necessary changes.

Chapters 4 and 5 constitute Part II of the text where frameworks for understanding organisational systems and change are presented. Chapter 4 examines the idea of organisations as systems and distinguishes the "positivist-oriented" approach to organisational change and improvement with that of systems thinking. The key difference it is contended is that the systems perspective ensures that the firm looks inwards as well as outwards in effecting necessary change. The authors usefully draw on the Burke-Litwin model as a systems framework to examine the factors that enable change in organisations. Chapter 5 considers organisational levels – individual, face-face team, interdepartmental and organisational – and the relationships between each level. The central message being organisational change is a multi-level activity given that systemic change requires behavioural change at all four levels.

The final part of the text (Part III) considers organisation development in action. Chapter 6 examines the application of multiple perspectives to data collection given the difficulties involved in researching the many aspects of organisational life. In particular, the authors address the use of data for OD purposes and how the many realities of organisational life need to be considered in OD exercises. The use of multiple methods is emphasised and the notion of evaluation as a form of learning is highlighted.

Chapter 7 addresses large system change and learning in organisations. The chapter opens with a discussion of failed transformation efforts and an examination of large-scale organisational and managerial change in the healthcare context. Drawing from a wide array of literature the authors propose a five-phase change process cycle as a means of enacting large system organisational change. In presenting their "change map", they further develop the earlier discussion of interlevel processes and dynamics, ensuring continuity between the various sections of the text.

Chapters 8 and 9 examine the notion of resistance to change and the leader's role in managing change. Resistance to change is considered at both the individual and group level. Drawing on their earlier discussion of interlevel dynamics, the authors suggest that the "moving of the organisation from the stage

of disconfirming information to a renewed state" comprises movements at the various levels to allow the firm to adapt to external markets. The barriers to change in healthcare are also addressed and the chapter concludes with a focus on resistance as something to be worked with as opposed to something that needs to be overcome. Developing the discussion further, Chapter 9 examines the leadership of change and warns of the dangers of focusing on the leader alone in change efforts propagating the notion of "leader as hero". The writers also allude to the changing images of leadership where traditional emphasis on command and control have given way to approaches based on empowerment, alignment and path-finding. Drawing on their framework for large system change, the authors highlight the leader's role in navigating change and in creating the momentum for learning both during and after the implementation phase.

The final chapter considers the role and function of organisational consultants. The authors consider different consultation models and distinguish between external and internal consultants. The issue of organisational politics is also addressed in this chapter. In particular, the authors emphasise the political nature of OD interventions, arguing the requirement for facilitators to become "political entrepreneurs" in carrying out their role. In their view, this involves both a public performance role of being active in the change process and a backstage role in influencing, negotiating and generally defeating any opposition to planned change.

In the current climate of change and uncertainty in the healthcare sector, there is a requirement for a greater understanding of the processes that give rise to effective large system change in organisations. This text, with its emphasis on organisation development as an approach to planned change, makes an important contribution in that regard. The focus on teams and learning in effecting change is highly relevant to healthcare organisations. Recent research, for example by Professor Mike West at Aston Business School, has revealed a link between good team working, appraisal and reduced patient mortality. In his research examining the link between patient care and people management practices in hospitals, he found that human resource management accounted for 33 per cent of hospital variance in mortality. Hence effective and innovative teams help to reduce patient mortality and increase productivity.

This book will be of value to those undertaking programmes of study in healthcare management and also to healthcare professionals involved in change initiatives. The accessible style and the use of case exhibits and examples also make the text appropriate for use by those engaged in training interventions within the healthcare sector. More generally, the book will appeal to students of change management who will value the innovative style and approach adopted as well as the vast amount of literature sourced to support key arguments presented.

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