

**DECISION MAKING IN THE FRAGMENTED ORGANISATION: A
CHANGE MANAGEMENT PERSPECTIVE**

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Abstract

Organisations are responding to the deeper structural changes taking place in the underlying system of commercial competition by becoming agile and fragmented. In the emergence of such network organisational structures it must be clear how each unit is performing relative to each other and relative to the key market players. To manage such fragmented specialised business units, executives need effective decision making processes that are capable of measuring key indices quickly, accurately and effectively. The aim of this paper is to conduct exploratory research into management decision making in the context of change evaluation for a structurally fragmented electrical Utility organisation. The case study research highlights the benefits and shortcomings of the change evaluation approach as part of the management decision making process and shows how the findings from the study inform strategic and operational decision making within the case study organisation.

Introduction

The amount of organisational change occurring to day is unprecedented and is resulting in less organisational stability and a redefinition of organisational activity. Broader product ranges, shorter lifetimes and the ability to process orders in arbitrary lot sizes are becoming the norm (Giunipero, et al, 1998). These market characteristics have initiated structural changes in how organisations are organised to create, produce and distribute goods and services. Instead of the traditional rational, linear, hierarchical approach to managing jobs, which focused on breaking down job tasks, and isolating job functions, organisations are establishing networks of relationships. Workers will require listening, communicating and group facilitation skills in addition to core technical skills (Burgoyne and Reynolds, 1998). Many organisations, including the case study organisation under review in this paper, are moving through the transition and establishing structures that: “promote the flow of ideas, build trust and a unity of purpose, tap the energy and creativity of the workforce, and translate ideas into new products, processes and services” (Goddard, 1990:4).

In this paper the concepts of evaluation and evaluative inquiry for organisational decision making, in the current change environment, are discussed. As organisations adapt to new economic and societal requirements, becoming increasingly fragmented and network based (Peters, 1992) evaluative change inquiry can be a guiding force for individual, team and organisational growth and success. Evaluation must be increasingly responsive to the evolving information and decision making needs of the organisation. It should be ongoing and integrated into all work practices (Parkinson et al, 1999).

Thus, the aim of this paper is to establish show how management decision making is carried

out and evaluated in the context of a fragmented organisational structure, namely an electric Utility case study organisation. A secondary aim is to examine the data outputs resulting from the application of the Optionfinder System technology, to determine its role in the research informed strategic and operational decision making in the company.

Changing Organisational Forms –The Emergence of the Network Organisation

The network organisation began as a vision of futurists, became a possibility for business theorists and is now an economic necessity for corporate executives. According to Goldman et al (1995):

“Agility reflects a competitive environment that links producers and customers closely”.

Networks have emerged as the new organisational structural form and in many cases replaced the large, vertically integrated companies that dominated economies up until the mid 1980's. During the 1980's, markets around the world changed dramatically, as did the technologies available to serve those markets. Today, firms must adapt with increasing speed to market pressures and competitors' innovations, simultaneously controlling and even lowering product or service costs.

In place of the traditional rational, linear, hierarchical approach to managing organisations, there is an increasing trend towards establishing networks of relationships. According to Gunneson (1997), the structural and organisational requirements of an agile enterprise include:

“a flat, fast, flexible organisation, with continuous interaction, support, and communications among various disciplines, and no fat in the middle”.

Organisations are becoming increasingly decentralised. Employees are empowered to make appropriate decisions for the particular circumstances they face. There is increasing emphasis on motivation based on commitment to a common purpose (Burnes and Hakeem, 1995). They define their roles and increase their power by building a network of contacts both within and outside the organisation.(Gharajedaghi and Ackoff, 1984). Scholtes and Hacquebord (1988) speak of the emerging organic organisational structure, where instead of hierarchy, the organisation is conceived as a flow of interdependent processes.

A basic assumption of the organic model is that to survive, the organisation must adapt to a broad array of environmental forces. To deal with such complexity, it must develop processes for searching and learning as well as deciding (Thompson, 1967). As Burns & Stalker pointed out in 1961 and Senge reiterated almost 30 years later, the greater the rate and extent of environmental change, the less possible it is for anyone to:

“figure it all out at the top” (Senge, 1990:7).

Rather, each member of the firm must expand his or her capacity to learn and to adjust to change. Management decision evaluation tools and in particular the process of evaluative inquiry can play a vital role in continuous learning and improvement. Evaluation must be increasingly responsive to the evolving information and decision making needs of organisations. Similarly, as organisational structures are changing, the critical process of assessment and evaluation must also change to take account of the emerging needs. In line with contingency theory on evaluation (Forte, 2000), it is argued that an evaluative methodology

that is both mechanistic in its prescribed measurement criteria, and organic in its ability to promote dialogue, learning, reflection and engage participants in a process of evaluative inquiry is an appropriate approach.

Evaluating management decision making in the network organisation

The development of management decision evaluation in the past two decades has mirrored the development of organisational structure, beginning in the early 1980's with a preoccupation with mechanistic measurement systems including financial indices, ISO 9000 and other empirical scientific measurement models, built on the premise of a large hierarchical corporate structure. During the 1990's the trend has been away from these solely mechanised paradigms towards more organic measures that assist firms to make better use of given opportunities for business improvement (Metcalf et al 1997, Spencer, 1994) and increasing virtualisation of organisational structures into network patterns (Achrol, 1991).

Guba (1990) notes that there has been a tendency for management decision evaluation theory in the recent past to move away from acrimonious debates between positivists and post positivists to dialogue and accommodation between apparently conflicting paradigms. Scriven (1998) argues that evaluation is a trans-discipline similar in character to disciplines such as statistics, logic and mathematics. This development is more suited to the increasingly diverse and multi-faceted organisational structure. Nonaka and Takeuchi (1995) refer to the "wider socialisation" of knowledge and information in new network organisational structures.

Management decision evaluation along with many social sciences has experienced a 'paradigm war' involving two paradigms that can be broadly depicted as quantitative versus qualitative approaches (Caracelli and Greene, 1997). The confrontations between these paradigms have produced some insights but also have created what now appear as unnecessary conflicts (Alvesson and Willmott, 1996). Pawson & Tilley (1997) review the history of the opposing views and conclude that most evaluators reject the notion that these two approaches are mutually exclusive and cannot be performed in parallel. They go on to propose an explicit theory based on realism and adopt an open systems view, which can be applied to the complex social reality. The central core of Pawson and Tilley's realistic evaluation appears to involve the determination of what mechanisms work for whom and under what conditions, embracing the current wide diversity in network organisations.

Many evaluative management decision models proposed in the last two decades are process based systematic reviews of an organisation's activity and results against a prescribed model of business excellence. Many models, including the European Foundation for Business Excellence model and the Malcolm Baldrige Award model, are employed as diagnostic tools, often within network organisational structures involving multiple departments, where the goal is to improve planning. The self-assessment process, which is an integral part of these evaluative models, allows an organisation to discern clearly its strengths and areas for improvement, culminating in planned improvement actions, which are then monitored for progress (Dale, 1999). It adopts a rigorous, structured approach to business improvement based on facts and not on individual perception and cultivates an environment where change encourages further change, resulting in various improvement initiatives running concurrently in different parts of the network organisation (McAdam and O'Neill, 1999).

Managers should be more concerned with what is possible in the future than with what has already happened. Management decision evaluation in this context is seen as a means to promote dialogue among organisational managers in network organisational structures. Guba and Lincoln (1989) also share this view, and point out that:

“a dialogue can be compared with an academic marketplace of ideas where stakeholders discuss claims, concerns and issues...it is about criticising and defending”.

Management decision evaluation inquiry offers organisations a process for collaboration on issues that challenge success (Preskill & Torres 1999). By engaging in evaluative inquiry organisations may benefit in a number of ways. Individuals and team members may better understand how their actions affect other areas of the organisation. Schwandt (1997) contends that:

“evaluative inquiry can not only be a means of accumulating information for decision making and action, but it can equally be concerned with questioning and debating the value of what we do in organisations”.

According to Stainer and Heap (1996) performance measures should formulate the primary strategy deployment tool. Evaluation in this context is the measurement of the performance of the organisation against its strategic goals and objectives and more importantly the measurement of the effectiveness of deploying the corresponding operational plans across the organisation.

In summary, there is general agreement that the outputs of an evaluation exercise in the area of management decision making must inform strategy formulation and operational activities in a fragmented organisational structure. These areas are explored further in the case study.

Case Study Organisation: Northern Ireland Electricity

Northern Ireland Electricity plc. (NIE) is the largest listed plc in Northern Ireland and is number 4 on the top 10 by turnover and employment. It serves the largest paying customer base and has the responsibility to maintain a primary resource for all commercial, social and domestic activity. It employs 1375 people and serves 673,000 customers. Last year the electricity consumption for Northern Ireland was 6,900 GWh. This energy was transmitted and distributed over 55,000 kms of network via 66,500 transformers and related substations. This network has a net book value of £478 million.

NIE in its present form was established in 1992. In accordance with proposals set out in a White Paper of March 1991, the Government sold the four power stations of the former state owned electricity supply authority in Northern Ireland to three private sector companies. The remainder of the industry was vested in NIE in April 1992. In June 1993 NIE was privatised by a public offering of shares (floatation) and listed on the London Stock Exchange.

NIE's three main regulated businesses are:

Power Procurement Business (PPB) : All licensed generators in Northern Ireland are required to sell all of their capacity and output to the PPB and all licensed suppliers of electricity in the province are required to buy all of their electricity from the PPB. In operating the PPB, NIE is responsible for deciding in which order particular generating plant is

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used , and for controlling the transmission system, in order to meet demand for electricity on a day-to-day basis. It is also responsible for ensuring that sufficient generation capacity is available to meet future demand.

Transmission and Distribution Business (T&D) : The T&D Business is responsible for the planning , development , construction and maintenance of the T&D system which conveys electricity from the power stations to customer's premises.

Supply Business : The Supply Business comprises the acquisition of electricity from the PPB, and 'Use of System' from the T&D Business , in order to supply customers , and the billing and collection of customers' accounts.

In addition to these three core electricity businesses NIE is engaged in the following further activities:

Appliance Retailing NIE's Retail Business has a 20% stake in a chain of 34 stores which sell a range of electrical goods and act as a point of contact for the domestic and small commercial customers of the Supply Business. Prior to 1996 they were the sole owners of this business .

Profit Centres : These centres including telecommunications , information systems , training and conference facilities , transport , civil projects and warehousing were established from former service departments of the core electricity businesses

Landbank : NIE is required by the Director General to maintain a landbank of property (including the existing power stations, which are leased to their private operators) to safeguard the supply of electricity in Northern Ireland.

Interconnectors : NIE and Scottish Power plc. plan to build an interconnector between Northern Ireland and Scotland to link their respective transmission systems. The planning financing , construction and operation of this project are the responsibility of a separate business within NIE . This business is also responsible for the running of an existing interconnector with the Republic of Ireland.

In 1998 , NIE plc was floated on the stock exchange and started trading as Viridian Group. The group formerly known as NIE underwent some restructuring . Two distinct areas were established reflecting the cash generating area of the business and the growth generating area of the business. NIE lies within the cash generating area of the business . NIE has been restructured into seven business units , including Supply , Power Marketing , Customer Services , Networks , Network Services , Finance and Business Support. The Power Procurement Business has been renamed Power Marketing. Networks and Network Services falls into the category traditionally known as Transmission and Distribution . Customer Services is considered a core business and is responsible for ensuring that customer standards are met . Finance and Business Support functions provide ancillary services to the business units. The cash generating area of the business is subject to regulation by the Office for Regulation of Electricity and Gas, OFREG.

The organisation is becoming increasingly fragmented and networked as a result of changes in market competitive forces, and the relatively recent privatised status it now finds itself in. There is an ever increasing need to find new organisational and management concepts to confront the economic problems of the future. It was in facing up to this reality that

management at Viridian/NIE have chosen to change their traditionally hierarchical, rigid, mechanised organisational structure to a more fluid, dynamic and organic one, which facilitates competing successfully for business in the current economic climate.

Research Methodology

The core objective of this proposed research was to carry out an exploratory examination of the management decision making process in a fragmented network organisation. A case study research methodology was adopted to conduct an exploratory study into phenomenology perspective within the case organisation (Eisenhardt, 1989). In single case studies the theory building or exploratory research approach is adopted, however this approach does not preclude intra-case comparison (Yin, 1994). Research data was obtained from ethnography, documents, archive material, interviews, focus groups and use of the technology based Optionfinder technology. This paper is concerned with the collation and interpretation of employee perception data on key organisational indices. These key indices were distilled from a comprehensive study of the organisation which was carried out by the university/industry research team as part of a three year learning partnership. An extensive range of data collation tools were evaluated. Following tests in the university and in a number of pilot simulations the recently developed Optionfinder System was chosen to assist in the collation and evaluation of data.

The Optionfinder System is a combination of software and interactive wireless keypads used to improve group communications in face-to-face meetings. The keypads are handed out to focus group participants at the start of the meeting. It is used as an audience response tool. During the course of the meeting the researcher posed questions or statements to the participants, along with a set of response choices, all of which were projected on to a large screen. In this study a Lykert scale ranging from 1 to 5 was used, where 1 indicates total disagreement with the statement and 5 indicates total agreement with the statement. Prior to the focus groups session, the researcher compiled a series of questions based on extensive research of the literature as well as an understanding of the organisational culture. These questions were designed to assess employee's perception of the business improvement programme on going in the organisation.

In order to process the data more effectively, and carry out competent comparative analysis of specific groupings, key information relating to the status and background of respondents was compiled in the first instance using the Optionfinder software. It should be noted that all responses are anonymous using this system. understanding of employee perception of organisational change. A comprehensive set of questions was compiled to assess employee perception of business improvement/change activity in NIE under the following headings;

- Privatisation
- Regulation
- Industry Markets
- Innovation
- Learning
- Virtual Organisation
- Vision and Values

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Communication

Image

Human Resource Management

EFQM (Business Excellence) Model (EFQM, 2000)

Chartermark.

Each question was posed and participants pressed the keypad number of the responses that matched their opinion. The software took the keypad responses and instantly produced a graph of the results. This graph was projected before the group who then had a stimulus for probing discussion and dialogue from the other managers in the group.

Each focus group had 16 participants from a range of disciplines, business units and salary bands. One hundred and seventy employees participated in the study, which was completed within a one week period. As each group completed the questionnaire, their responses were added to the total set and trends began to emerge which were further discussed within the focus group environment. These key trends were used to summarise the findings under representative headings.

Key Findings from the Study and the influence on decision making in the Organisation

Culture

Those business units displaying highly mechanistic tendencies, namely the Networks business unit and to a lesser extent the Customer Services business unit scored lower in overall satisfaction terms. Employees felt constrained by the structure and hierarchies engrained in these particular units. Change was predominantly top down and met with a lot of resentment and resistance. On the other hand the more organic business units including Network Services and Supply were much more involved in the actual change initiatives. Employees were empowered to make changes and the flatter business unit structure encouraged a more challenging environment for stimulating and delivering change. Furthermore, the network structure enabled the network units to develop more meaningful bespoke applications of business improvement models (e.g. Business Excellence Model. Business Process Management), leading to more focused business improvement and a more empowered culture.

As a result of this information management were able to assess the unique cultural dispositions of the various business units and implement policies that helped to reduce tension between management and staff in the problem areas. They developed a more interactive team briefing initiative, which was designed to encourage openness and understanding and build greater trust between managers and employees.

Strategy

The overall strategy of the organisation was to split the business into two distinct entities, the regulated business and the unregulated business. This strategy, whilst it delivered on shareholder value, caused a lot of dissension among employees of the regulated business. These employees experienced the pressure of carrying a growing burden of work due to a reduction in workforce numbers through employees leaving on the voluntary severance scheme. At the same time they could see extra resources been made available to the un-

regulated businesses and, not surprisingly this created tension. The impact on employee morale within the regulated business was negative and this had a bearing on the relatively low scores recorded for specific questions relating to strategy.

Whilst managers were adamant that their strategic plans relating to generating growth from investing in the unregulated areas of the business were sound, they did accept that the disparity in resource allocation between the regulated and unregulated areas and the resulting impact on employee morale had to be addressed. They felt that the burden of work carried by employees working in the regulated business could be reduced through improvements in operational processes. Their intention therefore was to allocate extra resources for investing in new technology and training

Competition

Those business units exposed to competitive forces were far more responsive to change initiatives and business improvement activity than those working in the monopolised protected environment. Network Services competes with other maintenance and construction firms on some activity and similarly, the Supply business competes with other second tier suppliers in some markets. Thus, increased exposure to the intra-organisational pseudo market resulted in an overall increase in the effectiveness of the management decision making process. Conversely, those parts of the organisation which remained remote from the market demonstrated a more mechanistic and entrenched approach to decision making.

Importance of Customer Satisfaction

Employees working for business units who are in constant negotiations and dialogue with customers tended to actively support initiatives aimed at improving customer satisfaction levels. On the other hand employees of, for example the Power Procurement business unit who do not deal directly with domestic or commercial customers were not embracing of new procedures aimed at delivering higher levels of customer service. Many of the change initiatives aimed at improving customer satisfaction had a procedural impact on the Power Procurement Business. Customer standards stipulated by the regulatory authority also proved to be a highly motivating 'change' factor for those businesses involved directly with the customer. The consensus among managers was that competition is healthy, having to deal directly with customers is challenging and both of these parameters help keep managers and employees focused on customer requirements. The closer proximity to the customer by increased numbers of managers and employees throughout the network organisation, resulted in customer requirements being increasingly translated into operational action throughout the organisation.

Operational Activity

From the research, it became evident that some business units were operationally more astute than others. The Network business was particularly good at its core task, planning and developing the electricity network. It had a wealth of experienced personnel who were very competent at their jobs. Over time the unit had learned to build more efficiency into their procedures. This improvement was aided by the maintenance of a stable working environment. Changes brought about by the introduction of new technology have been met with some resistance, and have disrupted the stable equilibrium however the perfor-

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mance of this unit is still very high. On the other hand, the Customer Service business has experienced large scale change over the last five years, including the loss of over 40% of its employees, restructuring of the management team twice, and the relocation of the business unit head quarters. They have been operating in a very unstable environment and have spent the last number of years reviewing and developing their procedures in line with higher customer expectations. Therefore, whilst they were not particularly efficient or good at delivering the core service just after privatisation, through concerted efforts and a willingness to learn they have managed to streamline a lot of their activities and become more operationally astute. Employees have become more flexible and have lower resistance to change initiatives. In 1997, the business unit was awarded Chartermark for their ability to deliver excellent customer service.

Leadership Style

There is clearly a difference between leadership style among managers in each of the business units. From the research it became evident that business unit leaders exhibiting control and co-ordination characteristics were stifling the rate at which change took place in their part of the organisation. In an effort to introduce a stable controlled environment, where change was brought about through the implementation of a series of logical, sequential initiatives, leaders in such groups were seriously undermining the pace of change. The result is that parts of the business are been left behind.

Managers are now openly encouraged to establish direction, developing a vision of the future for their employees. They must try and align people through word and deed and influence the creation of teams and coalitions that understand the and accept the validity of the strategies. To resolve the leadership issue a number of new managers have been brought in from leading network based organisations, outside the organisation, to inspire and drive change throughout the leadership team.

Learning

Those business units who are open to cross-functional activity as well as employee involvement in quality improvement teams and focus group sessions, have in general a greater knowledge of the entire business, how it operates and the relative importance of each activity. Employees feel emancipated through learning and learning achieves deep rooted personal change in employees which is so critical to the success of any change initiative within the organisation. Professional learning networks, including customers, meet physically and virtually, have been established throughout the networked units. These groups are similar to "communities of practice" as described by Lave and Wenger, 1991).

Management devoted extra resources to training initiatives within the company. Investment in people development in 1998 was £2000 per employee. The management team committed an extra £500 per employee in 1999. Also managers openly encouraged the emergent practice of running focus group sessions as a means of facilitating learning. They offered continued support and resources to the Quality Programme Business Unit who took the lead in introducing and deploying such practices.

The key findings from the study aided managers in developing policies and strategies for the future of the organisation. The study provided insight into the general feelings and perceptions of employees from across the organisation. Results recorded using the re-

search approach were considered by managers to be more valid and had a higher integrity than previously commissioned conventional surveys. There was a greater impetus therefore to act on the findings.

Conclusions

NIE has experienced phenomenal change in recent years, which has resulted in less organisational stability and a redefinition of who they are and what they do in the workplace. Broader product ranges, faster response times, and the ability to be flexible are becoming the norm in today's markets. These market characteristics along with the economic realities brought about by privatisation have triggered structural changes in NIE. Instead of the traditional rational, linear, hierarchical approach to managing jobs, NIE has become fragmented and is involved in establishing the virtual organisation, the basis of which is the development of a strong network of relationships. They are in the words of Goddard

'establishing structures that, promote the flow of ideas, build trust and a unity of purpose, tap the energy and creativity of the workforce, and translate ideas into new products, processes and services' (Goddard, 1990:4).

In this paper the concepts of evaluation and evaluative inquiry for management decision making and described its role within the changing landscape of tomorrow's workplaces was discussed. As organisations adapt to new economic and societal requirements, evaluative inquiry can be the guiding force for individual, team and organisational growth and success. Evaluation must be increasingly responsive to the evolving information and decision making needs of the organisation. It should be ongoing and integrated into all work practices. Many theorists including Seddon (1991) Guba & Lincoln (1990), believe that measurement is more relevant to setting goals than measuring their achievement. Measurement, therefore has a key role to play in strategic planning and is a vital cog in the managerial decision making process in increasingly virtual and networked organisations.

Fundamental to the effectiveness of an on going programme of evaluative inquiry is the adaptability, flexibility and robustness of the management decision approach employed. Accepting contingent theory and the concept that qualitative and quantitative evaluation approaches are not mutually exclusive and produce a richer more informative set of data when performed in parallel, then the methodology applied in this case study is justifiable and valid.

The adoption of a more open, less mechanistic culture was shown to be a key benefit in moving the business units into the new operating environment. These units has less natural dependence on the central core. Strategic planning in the networked environment must be carefully executed in regard to resource and work allocation. Despite the differentiated structures, employees still conduct intra-organisational comparisons in these areas.

As each section of the network organisation have become increasingly exposed to external competition and less dependent on the "internal market" and "intra-organisational dependency", they have also demonstrated improved agility in regard to the management decision making process. The converse was also found. The move to a network structure resulted in larger numbers of managers and employees coming into contact with customers. The resultant dialogue ensured that the customers voice was spread more effectively internally within the organisation. The internal operational efficiency of the networked units

was increased by having more direct information from customers due to the larger number of customer-organisation interfaces. the resultant effect was more “customer pull” rather than “manufacturing/service push”.

The diversity of the networked organisation resulted in increased diversity among the organisation’s leadership style. In most cases the differing styles suited the differing networked units and therefore the imposition of a corporate leadership style was unnecessary. However, some managers who found it difficult to cope with the empowered network structure were replaced with managers from other external leading network organisations. The fragmented nature of the organisational structure has resulted in less pedagogic type learning from the organisation core. Rather, a cross functional set of “communities of practice” have developed to spread “best practice” learning throughout the organisation. The key findings of the study are primarily related to the case study organisation. However, the dominant aspect of the organisational structure, namely the network structure, would indicate that the key findings should largely apply to most large network based organisations.

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