

Perspectives

The strategic placement of TQM in the organisation: a grounded study

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Keywords

TQM, Quality management, Strategic management, Case studies

Abstract

The aim of this paper is to investigate the strategic dynamics of total quality management (TQM) in an organisation using a grounded theory research methodology. Inductive grounded theory research methods are used to improve understanding. The main element of the research methodology is a longitudinal case study. The key findings, first indicate, that TQM and the Business Excellence Model (BEM) are not strategically significant models in an organisational context and lack dynamic representation. Second, the majority of the corporate strategic process and the key strategic drivers are outside the TQM environment. Finally, it is concluded that TQM can act as a strategic dynamic catalyst, incorporating culture, strategy and business operations.

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Managing Service Quality
Volume 12 · Number 1 · 2002 · pp. 43-53
© MCB UP Limited · ISSN 0960-4529
DOI 10.1108/09604520210415380

Introduction

The advent of total quality management (TQM) models, such as the business excellence model (BEM – EFQM, 2001), has increased the need for methods which incorporate the strategic dynamics of TQM. The aim of this combined approach is to develop more rigorous and relevant business strategies in times of rapid market change (Bilich and Neto, 1997).

This paper investigates the strategic dynamics of TQM within an organisation. The object of the paper is not to establish hypotheses, nor to use literature as a means of determining the current position of the relationship between TQM and corporate strategy. Rather, a grounded theory research methodology approach is applied to ensure TQM-related issues are not predetermined. The key aim of the paper is to investigate the strategic dynamics of TQM within an organisation examining four key areas determined as part of the research programme.

Following a brief summary of the TQM corporate strategy literature, the research methodology is described. Next, the results and discussion and grounded models for the strategic dynamics of TQM are presented, along with grounded conclusions and recommendations.

Strategic dynamics of TQM

Forrester (1965) developed the concept of system dynamics in organisations. In this concept, organisational actions are considered as a complex and interrelated series of flows, for example, money, order, material, personnel and capital equipment. The flow of information within the organisation is seen as the integrating mechanism. These flows and their variation with time are defined as the “dynamic of an organisation”. Arbnor and Bjerke (1997) have widened the idea of systems dynamics in organisations to include the effects of TQM by referring to generalised dynamic models of organisations. These models are characterised by having a time dimension and as being applicable to structures, processes or change initiatives within the organisation and its environs. This wider conception borrows from the concepts of system dynamics but at the same time avoids the associated stricture of the methodology. This approach is also

consistent with the eclectic nature of TQM and its “resonance with other disciplines” (Grint, 1995). Similarly, as stated by McKechnie and Arnold (1994): “Rooted in systems theory, TQM invokes the inescapable inter-relationship of all parts of the organisation . . . TQM stresses the importance of cross-functional relationships”.

A theory of strategic quality management (SQM) was later developed (Madu and Kuei, 1993) as an extension of TQM which was based on a total system view of quality viewing: “quality as the driving force to the survivability and competitiveness” (Madu and Kuei, 1993, p. 122).

When this systems approach is considered it can be seen that TQM has influence in all aspects of organisational functioning from human resource management (Morrison and Rahim, 1993) to organisational politics (Wilkinson and Witcher, 1993).

Bauer *et al.* (2001) conclude that the use of dynamic models for TQM in organisations is essential for an “appreciation of a complex, dynamic system” which “enables managers in turbulent days to manage in a comprehensive way and to decide and act for long-lasting success”. Baur *et al.* (2001) conclude that Forrester’s broad concepts of linking concepts from the development of the human relations movement with dynamic enterprise models is consistent with dynamic models of TQM in organisations.

The key elements of dynamic modeling are time, recursive behaviour and complex changes relating to all aspects of an organisation (Sommerville *et al.*, 1999; Baur *et al.*, 2001). The time dimension includes longitudinal development, current changes and anticipated future direction. Recursive behaviour includes non-sequential behaviour with either forward- or backward-facing linkages (Martensen and Dahlgaard (1999). Complex change goes beyond cause and effect polarisation and includes phenomena that do not follow anticipated development with time (McCabe, 2000).

Therefore, there is a need to develop TQM models, which cover the dynamic characteristics of TQM in organisations. The business excellence model (BEM) and other evaluative TQM award models (e.g. Baldrige) are each based on a perceived definition and model of TQM. These models are applied by using self-assessment based evaluative frameworks. Although the self-assessment process takes a finite time period, dependant on organisational size, it is a static “snapshot”

evaluation of the organisation’s performance in regard the model assessment scale (Ghobadian and Woo, 1996). Thus the essential time dimension is missing from these models, giving a static or historic view of TQM in the organisation. Therefore, these models can become part of the organisations standard training and development routine, rather than representing the dynamic behaviour of TQM: “what appears to be happening with many business units in the large companies is that the CEO dictates that self-assessment will happen. This then forces business unit management to learn about self-assessment and implement” (Van der Wiele *et al.*, 1995, p. 17). Martensen and Dahlgaard (1999), in recognising the limitations of the BEM in regard to TQM dynamics modeling, have suggested incorporating new criteria in the BEM based on the dynamics of innovation and new product development. They suggest a process similar to double-loop learning, showing the dynamics between TQM at different levels in the organisation. However, their approach suffers from the use of the BEM within their learning process, resulting in limited dynamic representation. Similarly, Mehra (1998) comments on the need for “perpetual analysis” in regard to TQM measures, advocating dynamic learning loops incorporating the calculus of *kaizen* instead of static models. Gunesekaran *et al.* (1998) refers to these loops as “positive spirals” involving the dynamics of TQM as integrating all activities in an organisation towards a more effective outcome.

In dynamic modeling of TQM the dynamics of TQM across the different levels of the organisation’s activities are important, as pointed out by Gunesekaran *et al.* (1998). They consider the different levels to be strategic, tactical and operational. Often, existing quality models have a limited focus; namely that of an operational level or a tactical level (strategy implementation) but not at a strategic level (Ghobadian and Woo, 1996). This approach limits the potential of TQM within organisations: “the Baldrige criteria have trivialised the quality crusade, perhaps beyond help. One day this do-it-yourself kit may be recognised as the cause of a permanent decline in product and service quality management” (Simms, 1991, p. 127). There is a natural necessity to align quality programmes with business strategy to ensure that quality efforts reflect the long-term goals of the organisation (Livsey, 1993; Srinidi, 1998). Hiroshi (1998) states that total quality

needs to be aligned with strategic management and in particular such issues as product life cycles, business and product positions, time series analysis to predict future performance and the involvement of employees. Dew (1998) warns that those not embracing quality as a fundamental value and strategic principle are going to fail.

McAdam and O'Neill (1999) and Bester (2001) suggest that the BEM is the dominant quality model in Europe (Baldrige in the USA). This dominance sometimes leads to an unquestioning acceptance of these models as being fully representative of TQM. There is a danger that the effects of the strategic dynamics of TQM will be under-represented, leading to simplified TQM efforts with reduced organisational effectiveness. Gallar *et al.* (2000) and Orr (1999) prompt a number of questions. Can these quality models be used to model TQM at a corporate strategic formulation level and can they model the associated dynamic effects? The BEM criteria concerned with policy and strategy do not focus on corporate strategy formulation or how dynamic the strategy planning is, rather they consider how aspects of TQM have been incorporated in the strategic processes.

If an operational stance is taken resulting in TQM not being used strategically, then emergent dynamic strategies are not discovered and cannot be speedily used to advantage. Rather, strategies are reacted to, as Porter (1996) termed it, a pressure or market saturation that eventually meant that it could not be ignored. If quality models do not provide a dynamic corporate impetus or fulfil an environmental sensor they are not a corporate strategic framework nor can they predict the future.

The need for strategic dynamic TQM models

Current quality models has beneficial applications in organisations. However, they do not adequately address the strategic dynamic issues present (or are “sketchy” at best (Hermel and Bartoli, 2001)), within TQM applications in organisations. Furthermore, these dynamic issues, as manifest in strategic, tactical and operational applications of TQM, are not represented by models that primarily address operations and the implementation of strategy, as opposed to the formulation of strategy. Thus, there is a need for the development of evaluative

models of TQM, which address the dynamic effects of TQM at strategic, tactical and operational levels. As the strategic dynamics of TQM are deeply embedded in complexity within the organisation it is suggested that an inductive grounded approach should be used to derive such models, involving deep, rich data (Strauss and Corbin, 1990).

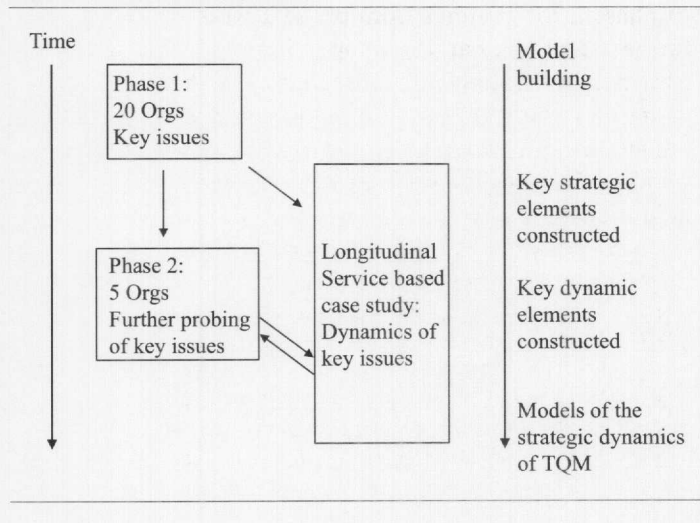
Research methodology

In many areas of the social sciences existing deductive theory testing research methods do not adequately capture the complexity and dynamism of the context of organisational settings (Perry and Coote, 1994, p. 3). Juran (1991) and Wilkinson and Willmott (1996) emphasise this point by saying there is a “paucity of systematic and rigorous evaluation” in many TQM studies. Furthermore, they state the need for more theory, grounded and contingency-based research models rather than being restricted solely to deductive approaches.

It is suggested that a methodology, which inquires more deeply into TQM and strategy-related events within the organisation, is needed to enable a coherent and firmly founded set of TQM and strategy theories to be elucidated. In this situation a phenomenological perspective is considered to be more appropriate: “appreciate the different constructions and meanings that people place upon their experience ... explain why people have different experiences, rather than search for external causes” (Easterby-Smith *et al.*, 1993). In this approach it is important to listen to practitioners (Terziowski *et al.*, 1996, Lewin and Stephens, 1993). Also, there is a need to focus on meaning and reflection of the complex issues observed: “interpretist researchers see language as the means of communication in which there may be differences and nuances of meaning” (Allan, 1998, p. 91).

One of the most developed inductive research methods is that of grounded theory (Glaser and Strauss, 1967). In this methodology (Figure 1) the researcher starts with minimalist a priori constructs (i.e. the preceding brief discussion on the strategic dynamics of TQM), inquires deeply into organisational behaviour and events and gradually tests and forms theoretical constructs and models (Leonard and McAdam, 2001).

Figure 1 Research methodology



Theory building by grounded theory capitalises on the rich practitioner-based knowledge base of TQM and strategy. Sources of data can include TQM team meetings, interviews with TQM managers, TQM case studies, etc. (Perry and Coote, 1994). Strauss and Corbin (1990) show how such data can be gathered from “streams of research”. Grounded theory is a longitudinal research methodology, unlike many deductive approaches, which intrinsically rely on questionnaire data taken at a given point in time. Wolfgramm *et al.* (1998) describe grounded theory as inquiring into the “processual pattern” of change at institutional, organisational and strategic level.

Current study

The current grounded theory model building study of the strategic dynamics of TQM was based on three phases. This resulted in two tracks of research, each running in parallel, consisting of three phases as shown in Figure 1.

Phase 1

For the current study 20 organisations were selected for in-depth study. These organisations were selected based on their involvement in TQM and strategy as evidenced by their use of the BEM (EFQM, 2001) and participation in national quality awards. These organisations all had 500+ employees and had well-developed operational and strategic plans. The research was gathered using semi-structured interviews, ethnography (over a two-year period) and organisation information and archives. The interviews consisted of several semi-structured interviews with the managing directors (or equivalent) of each organisation.

There were several interviews per organisation lasting in total between six and 20 hours per company over a two-year period. All the interviews were taped, transcribed and coded using grounded theory principles (Strauss and Corbin, 1990). The key findings were summarised under the coded main headings arising from the research (Remenyi *et al.*, 1999).

Phase 2

In this phase the critical issues arising from phase 1 were focussed upon by conducting more in-depth probing. The aim of this phase was to start to form the constructs of the grounded theory models. Five of the 20 organisations from phase 1 were selected for phase 2, based on their in-depth applications of TQM at different levels (strategic, tactical and operational) and their willingness to participate further. The same types of data gathering were used at this point, however there was a focus on the key issues raised in phase 1, as distinct from a generalist approach. Each organisation was visited several times with semi-structured interviews of between five and 15 hours per company (dependant on willingness and points of interest).

Phase 3, the longitudinal case study

Phases 1 and 2 enabled the basic constructs of the strategic aspects and some dynamic aspects of the grounded TQM models are established. However, it was necessary to further develop the dynamic aspects of the models. This was achieved by using a longitudinal case study. This constituted the third phase, which ran in parallel with the first two phases. The case study was part of a three-year university/industry learning partnership with a service-based electrical utility organisation. This organisation employed circa 2,000 people and had recently been privatised. It had applied TQM to all areas of the organisation to reduce costs in the regulated part of the organisation and to grow unregulated income in the organisation. The data gathering included ethnography (a ten-person joint university/organisation study team and two full-time PhD students), focus groups (20 staff, consisting of managers and employees from all levels), semi-structured interviews (managers and employees and key account customers and suppliers and the government regulator) and organisational information and archives.

Results and discussion – managers four points of application

Throughout the results and discussion section a number of quotes from the semi-structured interviews are used. Strauss and Corbin (1990) advocate this approach in grounded theory work to allow the voice of the practitioner to be heard. The quotes are used to enrich the discussion under the respective coded heading of the research. As grounded theory research is very recursive in nature the results and discussion apply to the research as a whole, unless otherwise stated.

Taken as a group, managers identified four key points in the business process at which TQM had initially been applied in their organisations:

- (1) as a strong focus on the customer;
- (2) as a catalyst leading to proactive change in corporate strategy;
- (3) during strategy formulation as one issue considered in decision making;
- (4) as a tool for continuous improvement in day-to-day operations.

Focus on the customer

Phase 1 findings

In phase 1 the initial findings were divergent so that all aspects of TQM application in the 20 case organisations could be included. The grounded theory methodology enabled the findings to be developed into initial constructs for initial TQM application. One of the four key constructs that emerged at this stage was that some of the organisations considered their initial intent on applying TQM were “as a strong focus on the customer”. This point of initial TQM application represents the most strategically important application of TQM. The organisations which applied TQM at this point of application were able to use it to dynamically “pull” both strategic and operational activities into line to increase competitiveness and market growth. This focus on the customer through TQM is different from a focus on the BEM, which was the limit of one the organisation’s approaches:

But it is very difficult to measure how successful you are at that and we thought that using the European Quality Model [BEM] for business improvement would give everyone something to focus on.

This description of the BEM is consistent with the auditing role of the BEM, with its reference to its co-ordinating, monitoring and measuring characteristics, as distinct from a strategic dynamic focus on the customer.

Phase 2

In phase 2 the findings from phase 1 were further researched and developed into constructs of more depth. The findings of this phase and phase 3 were used in a recursive manner to add rigour to the constructs developed. In this phase it was found that organisations which had adopted the BEM as the sole approach to their customer focus on TQM were found to be restricted:

Therefore, in everybody’s strategy there will be certain business improvements. When something like TQM or the European Quality Model [BEM] can be used as a formal process that you can use: to get the projects underway, to monitor that they are happening, to be able to show everyone that they have been successful.

This view once again reflects the characteristics of the BEM as an aid to implementation, monitoring and co-ordination. The three issues listed are of an implementation and post-strategy nature. A more developed approach was as follows:

The first thing is you have to set yourself a vision for the business that everyone thinks is right. If you believe that the strategy is right for the business then you have to communicate it, you have to live it every day.

The issue of communication here is closely linked to both leadership and strategy.

Communication was one of the key issues that created problems in the longitudinal case study organisation. Some of the managers discussed the key drivers for TQM:

We would have specific goals on, customer satisfaction, employee satisfaction and then some financial pitfalls, these would be the three key drivers.

Here, once again, the key driver is that of finance, as expressed as the ultimate aim by the managers. However, despite considering improvement to be a part of a business strategy the managing director went on to specify that TQM:

Does not drive the strategic side of the business. But when you are thinking about the business strategically then part of that should be looking at what are the objectives within, say, TQM or the BEM as objectives for the business. We believe that it can help us very much achieve some of our top-level strategic objectives.

Phase 3

In this phase the constructs were studied in the context of a dynamic situation, namely a current and longitudinal case study. The findings reflected the phase 1 and 2 results in that TQM is used to assist in achieving corporate strategy, in this case it is considered at the corporate level and matched against

relevant corporate objectives by focusing on customer-orientated initiatives. This provides a strong alignment between a customer-focussed application of TQM and the application of the BEM (in this case) to achieve with maximum efficiency and effectiveness. The corporate objectives are therefore closely aligned during the formulation of the corporate strategy and its implementation. However, TQM is found not to influence the corporate strategy, nor is it a key strategic driver. Rather, as has emerged, the strategic process is dominated by the key strategic drivers such as finance; the strategic process uses the most applicable aspects of TQM, such as customer focus, to help achieve the corporate strategy and attain the key strategic drivers. This is made more clear, a manager stated:

Using the BEM does not generate the strategy for the business. You have a strategy for the business and probably the Model can help you achieve some of those objectives but really the strategic thinking and the strategic goals of the business don't come out of the business model.

Therefore, the dynamic improvement effect of TQM is taken into consideration after the corporate strategic objectives have been determined to ensure that those objectives can be ensured and attained as effectively and efficiently as possible by aligning them with the advantages offered by TQM and the BEM.

TQM has yet to be viewed as having an impact upon the vision creation or strategic thinking aspects of the corporate world. TQM dynamics are perceived as occurring at a purely operational level. However, TQM has a philosophical dimension, this can only be applied at the corporate level.

At an operational level, TQM is a tool to improve processes, methods and focus on effectiveness and efficiencies. The reference to operational goes beyond the manufacturing concept of activities and applies to the improvement of processes. Therefore, it applies to marketing and finance in addition to service, production and design. At the tactical or management level TQM is managed or co-ordinated, planned and the logistics considered. This emphasises the divide between the strategic and operational aspects of the functioning of the organisation.

2. Proactive change: the catalyst

Phase 1

In this construct TQM is seen as a catalyst. The findings from the 20 cases revealed that

the issue of the employees' contribution and thinking was used in TQM to create proactive change as a catalyst for organisational improvement:

Under TQM basically this gives an opportunity for people to think for themselves and we have a belief that if you are trained or if you have got the capabilities and you know what needs to be done, whatever should come up they should actually do it.

The managers considered that the most strategic dynamic that TQM has given has been that of breaking down barriers. From a strategic point of view this manager also considered TQM to provide tools and techniques. This comment referred to the fact that TQM is now a part of the functioning of the company and no longer a dynamic catalyst for change.

Phase 2

The role of TQM as a catalyst was further probed in this phase. It was found that the role of TQM as a catalyst influenced a wider range of organisational factors than was initially apparent. For example, Investors in People, six-sigma and lean manufacturing were all found to have their roots in TQM within these organisations.

Although the organisations had carried out a lot of relabelling and rebranding of their change initiatives, an underlying ethos and language of TQM remained.

Phase 3

This phase revealed a need for renewal and change within TQM. This was found to take the form of retraining and creative development sessions to deliver new and fresh ideas. TQM is a long-term initiative and the longitudinal case demonstrated how a TQM programme could be re-energised and renewed by carefully inserting new methodologies and techniques to meet market challenges. Thus, TQM was found to act as a business improvement renewal catalyst by embracing new and emergent techniques such as creative problem solving and knowledge management.

3. Strategic formulation

Phase 1

Throughout phase 1 the role of TQM in strategic formulation was found to be limited, especially in organisations where the BEM was the dominant approach:

Business improvement is the term I would prefer to use rather than total quality, is absolutely crucial to the strategic direction of the company ... TQM should be scrapped and put in the bin

of history. Forget the TQM because the BEM goes beyond TQM and it does not have as many stumbling blocks in the way to its achievement’.

If TQM is replaced with the mechanised BEM, then the strategic dynamic issues of TQM will be lost. However, the application of the BEM, in many of the cases, was not seen as anything beyond assisting the process of improving the business and so represented only one element within the larger remit of strategic planning and formulation.

Phase 2

In this phase the role of TQM in strategic formulation showed an appreciation of the need for free and dedicated strategic thinking in some of the organisations and an awareness of the practical need for strategic planning to ensure that organisational visions are fulfilled. The operational day-to-day running of the organisations need to be managed, outputs, budgets and service and manufacturing specifications and deliverables need to be given. In this approach hard figures are needed to create the spreadsheets and modelling necessary today to maintain the functioning of complex organisational environments. The problem for many businesses is that this planning and functioning is so rigid that it takes precedence over all else and leaves the organisation slow to react to the business environment. It was found that the modelling that links the strategy to the operational functioning is merely there to keep the company functioning but it can be scrapped easily and numbers altered at will since the important element is the reaction to the environment. This then is a move away from what Tom Peters considered to be the creation of voluminous long-range strategic plans. Sound strategic planning is still crucial. Peters (1989) considered that strategic planning be succinct and focus on strategic skills:

... there is a serious case for destroying it – if not in practice at least in spirit. It’s value is as an assemblage of thoughts, not constraints (Peters, 1989, p. 511).

In other words it is what is created from the strategic process, namely the development of flexibility, responsiveness, attention to customers and sound thinking is important and not the document. Crosby is of the same mind. Of strategic plans he comments:

We have each thing laid out so specifically before we begin that once in a while the whole game is over before we even get out of the locker room (Crosby, 1986, p. 30).

Phase 3

The in-depth longitudinal case study analysis revealed that some managers considered that the role or impact of TQM in this strategic development process would exclusively lie in the employee feedback to establish values. These managers perceive TQM as an operational issue which, like the BEM, can improve the company operationally in regard to processes. When TQM is considered in these organisations a company is actually saying “let us set aside time to think”. For example, employees are given time off the production line in groups to think about their jobs and how they relate with other employees on the production line and improve how they work. These may be incremental improvements, but the logic of thinking about not only how work is carried out but why can lead to larger implications such as radical new ideas and ideals. At a management level TQM managers co-ordinate and have responsibility for improving processes. This may be focused in the areas of service, production, marketing or finance, but in all cases the focus is of an operational nature. They themselves do not actually fulfil these roles, therefore it could be asserted that their role is one of thinking of improvements. There is a freedom of normal everyday specific tasks that need to be managed. So in a way TQM is about allocating time to think. In this scenario, thinking about TQM at a strategic dynamic level is creating a strategic thinking environment and creating the skills and experiences to continue to do so. In this regard, then, TQM can facilitate, or act as a catalyst for strategic thinking.

4. Operational tool for continuous improvement

Phase 1

Throughout the breadth and depth of the research findings there was unanimity in regard to the effectiveness of TQM at operational level. In phase 1 it was found that managers perceive the current literature and practice of TQM as being firmly rooted in operationalism. However, some of the managers linked the importance of being open to new ideas and the need within that of continuous improvement.

... you have to have an umbrella to hang that initiative on. What we have been doing is looking at strategy and having a vision of where we want to be in the future. There are different elements of strategy from a corporate point of view and inside of that you can talk about the manufacturing elements.

Phase 2

The more in-depth probing of phase 2 revealed that although there were some examples of more developed approaches to TQM there was still an ingrained belief that TQM's primary contribution is in improving operations. This belief was reinforced by existing operational cultures, lack of inspirational leadership and limited numerical benchmarking. Thus, TQM and its importance in achieving success for the company was found to be focused at the operational aspect of the company:

I would say that the operational end of it was used as a tool for driving, not the strategic formulation, I wouldn't say it's ... marketing did not adopt TQM ... because they did not see what it was going to do for them.

Phase 3

The longitudinal case study gave a more balanced set of results. The fundamental role of TQM in business operations was confirmed. However, there were a number of examples of how senior managers and change champions had led their TQM efforts to increase creativity, innovation and strategic effectiveness in the organisation. In terms of strategic drivers and issues determining or influencing the direction or vision of the company, TQM was found to contribute through tools and techniques such as business process analysis, quality function deployment, chartermark and Investors in People. Thus TQM was considered to have helped in changing the culture of the organisation.

Research summary – phases 1-3

In summary, there is a consistent and deepening message from the three phases of the research. First, TQM was found to have a key role in creating a focus on the customer, leading to increased customer satisfaction and improvement initiatives. Second, TQM was found to act as a catalyst for a range of business improvement approaches in the organisations. The principles of TQM were found to underpin many current change programmes. Third, although the longitudinal case demonstrated some examples of TQM's role in strategic formulation, its main effect was at operational level. The danger is that such a view becomes part of the culture leading to underdeveloped TQM programmes.

Concluding grounded models

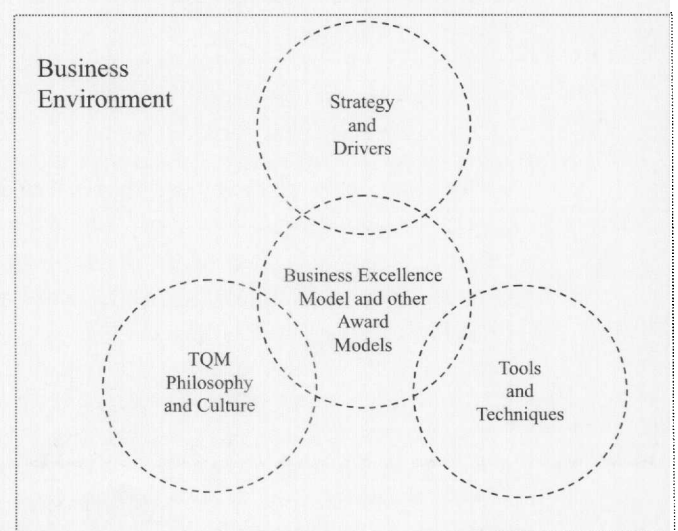
In conclusion two grounded models emerge from the three phases of the grounded theory research, namely a TQM environment model and a TQM lifecycle model.

The TQM environment model

In an attempt to interpret the TQM data and discussions in a grounded, strategic dynamics format, the TQM organisational environment model was developed (Figure 2).

It is evident from the analysis that the strategy and operational functions in the organisations are distinctly divided. It follows that the issues of TQM philosophy and culture are based at the strategic level, and TQM tools and techniques are based within the remit of operations. These are obviously linked and associated; however, they are two distinct issues – one soft the other hard and distinct. The other major issue in regard to TQM is the BEM. It has been shown that although such models have become an established part of the TQM field and business today, they are not strategically significant models. The final ingredient is that of corporate strategy and the core crucial drivers of an organisation. These issues represent the key issues in a TQM environment, each a key pillar in the functioning of the TQM field. By using grounded theory as a method to construct the relationships between these issues, a model can be formed (Figure 2). Finally, this research has highlighted that the link between TQM, the BEM and TQM-related tools and techniques is limited in practice. They are considered and applied as purely operational

Figure 2 The TQM environment



issues and so the issue of corporate strategy and the strategic dynamic process has TQM on its periphery. It is significant that the majority of the functioning of the corporate strategic process and the key strategic drivers in the organisations lie outside the TQM environment.

The TQM lifecycle model

Although TQM is represented as a sequential learning curve in academic writings this is primarily due to the dual aspect of the natural learning curve and the often illustrated sequential foundation of TQM, through quality control, SPC and ISO 9000 as the foundations leading to TQM. The dynamic recursive “lifecycle of quality” model that has emerged from this grounded theory research is shown in Figure 3.

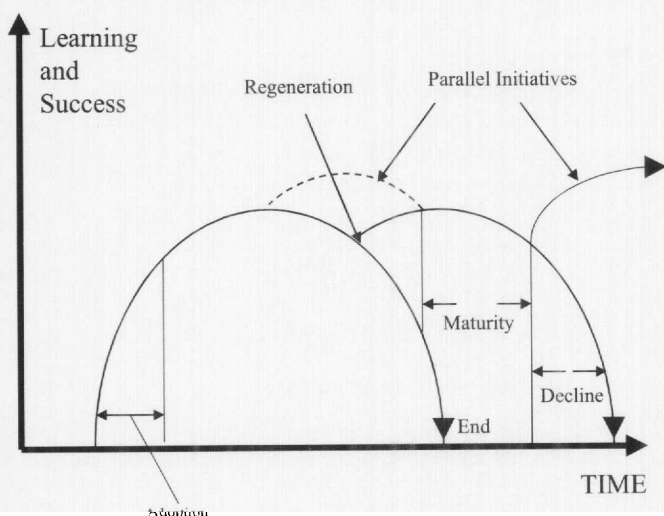
An aspect of the learning curve is that there can be no quantum leap in regard to TQM beyond fast learning and such tools as benchmarking. In the research each organisation has its own customised route to success. They use various TQM-related tools, techniques and philosophies throughout their development. Therefore, the sequence of implementation and the associated dynamics and the relative importance placed upon them depends purely upon organisational circumstance and leadership. There are many variations in this journey. Figure 3 shows a learning curve beginning at the initial awareness of quality and progressing through the structured learning and training about the particular method of achieving the organisations quality related goals. The “adoption” stage is sustained implementation and the “maturity” stage is the improvement

in knowledge and techniques. However, although often shown as such (Dale and Lascelles, 1997), the progression of TQM application and attainment is not one of a smooth, continuous, dynamic curve leading from success to success. Nor can TQM be shown as sequential in nature leading from one stage to another (Merli, 1996).

Dale and Lascelles (1997), in their levels of TQM adoption, identified characteristics of TQM adoption. First are the “uncommitted”, those who have not yet begun TQM and are relatively ignorant of it; the next “drifters”, that engaged in TQM for up to three years and are now taking stock and may have had a short term view of TQM and are now disappointed with it. Ultimately they are unable and unwilling to place TQM at a strategic level. The third are “tool pushers”, which have had TQM up to five years and have a range of tools and techniques, but tend to move from tool or initiative to initiative and are still fire fighting. The next is “improvers”, and they have had TQM up to eight years and have had important impacts, but still have a way to go. Then “award winners”, not necessarily having won an award but having achieved that level of culture, trust, employee involvement and capability to win such an award have been attained. Finally, is “world class” level; this is an achievement of total integration of continuous improvement and business strategy. However:

... perhaps 50 organisations world wide earn the world-class label ... in particular world class status is often attainable for only a few years, and it is dangerous for an organisation to become complacent and blinkered to environmental changes. It is possible for organisations to slip (Dale and Lascelles, 1997, p. 426).

Figure 3 The TQM lifecycle



Importantly, then, Dale and Lascelles (1997) point out that the stages are not sequential. The advantage of the lifecycle model (Figure 3) over Dale and Lascelles, levels of TQM adoption model is in its dynamic complexity. More than the current overall maturity of TQM can be considered. Rather, a range of initiatives that make up TQM can be simultaneously represented which allows their co-ordination, impact upon each other and individual level of maturity to be considered. In addition it articulates the dynamic lifecycle nature of all initiatives within TQM and can be used to provide multi-layered historical data on the progress of each initiative.

With the lifecycle model the learning curve drops off, as does the interest and ultimate bottom-line impact of each tool and technique at some stage. It is an inherent part

of human nature and in particular due to the nature of TQM that retraining is necessary, as is interest in its implementation. Here the initiative needs to be continually re-energised through improvement, updating and retraining.

There may also be a wish to "regenerate" and this can take the form of an aspect of TQM not previously used being adopted, which provides new drivers and perspectives. A number of the companies in the research either considered TQM to have acted as a catalyst or had, over the years, a number of "regenerations", under different names and focus. In this way TQM can continuously act as a strategic catalyst to impact both culture and strategy as well as operational aspects. In this way new methods or tools are adopted and the learning curve begins again. The dynamic of the "regeneration" stage, however, is not always introduced after a successful application. It may be that the lack of success or indeed failure of a particular initiative has necessitated a new approach. This can be a result of stagnation and is indicative of a need for continual innovation. Also, there are the additional options of progressing simply with the existing initiative, i.e. ISO 9000, without adopting other TQM-related issues such as the BEM. Ultimately there will be the "Decline" dynamic or ending of the existing initiative.

The key elements of the dynamic lifecycle model are "adoption", "maturity", "decline", "re-energise" and "regeneration" which can occur at any given stage. The shape of the curve in regard to the degree and speed of learning and the length of the periods of adoption, maturity and decline and the point of regeneration and re-energising are all company specific and therefore individualised. The lifecycle model allows TQM-related initiatives to be mapped longitudinally and in relation to one another. Importantly, this model emphasises the dynamic, non-sequential nature of TQM.

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