

An integrated approach for TQM implementation in SMEs

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Abstract

This paper tackles the broad issue of TQM implementation in SMEs. It includes a review of two models aimed at improving organisational performance, the EFQM Excellence Model and the Balanced Scorecard, which have been widely used in large organisations. Both models are examined as to their suitability and applicability to small and medium sized enterprises. The findings indicate that SMEs can benefit from the adoption of an integrated approach that combines both models if some critical factors are considered in the implementation process. A theoretical framework is proposed, which considers such integration and leads to a gradual implementation of TQM principles and methods in SMEs.

Introduction

Total quality management (TQM) has been adopted mainly by large multinational corporations as a way to improve competitiveness. However, with the globalisation of markets, improving competitiveness is now an imperative both for small and large businesses. As quality has become the basis of this global competition, small and medium sized enterprises (SMEs) are being compelled to use models developed in the context of large organisations. These models need to be modified, adapted or revised to fit the SMEs' needs and characteristics (Yusof and Aspinwall, 2000a) because differences exist in structure, policy making procedures and utilisation of resources (Ghobadian and Gallear, 1997).

A few studies (e.g. Ghobadian and Gallear, 1997; Hewitt, 1997; Yusof and Aspinwall, 2000b; Temtime, 2003) have attempted to identify the advantages and disadvantages encountered by SMEs when it comes to the implementation of TQM. The inflexibility and rigidity of the owner or manager, the focus on short-term objectives and activities, the lack of technical expertise, managerial time and financial resources are major obstacles for TQM implementation in SMEs. However, they also have their own strengths. The natural visibility of leadership, the proximity to the customer and the flexibility are characteristics on which SMEs can capitalise when introducing TQM. Employees are versatile and usually have a good understanding of the overall profitability of the organisation, thus they are committed to business improvement (Ghobadian and Gallear, 1997). Furthermore, the decision-making process is simpler and less bureaucracy exists in SMEs than in large organisations.

This paper looks at two models developed in the context of large organisations, namely the Business Excellence Model (BEM) developed by EFQM (European Foundation for Quality Management) and the Balanced Scorecard (BSC), and discusses their implementation from a critical perspective in an SME context. The main objective is the development of a framework that not only combines the two models, but also provides the guidance the SMEs need for a gradual and consistent TQM implementation.

The Business Excellence Model (BEM)

The BEM, on which the European Quality Award is based, was launched in 1991 and has its roots in the TQM philosophy. The BEM is comprehensively described in the literature (e.g. Nuland et al., 1999). The model consists of nine criteria divided in two parts - enablers and results - and is built on the premise that Excellent results related to Performance, Customers, People and Society are achieved through Leadership driving Policy and Strategy, People, Partnerships and Resources, and Processes. It is widely used as a self-assessment tool, through which the organisations can identify their own strengths and areas for improvement and perform benchmark comparisons.

Ghobadian and Woo (1996) reviewed the models underlying four major quality awards, including the BEM, and concluded they provide a framework for the implementation of total quality, presenting the corresponding principles in a clear, accessible and updated fashion. This is particularly useful for smaller companies as they "lack knowledge of how to implement total quality and cannot afford to engage expensive consultants". Another relevant issue for SMEs is that the BEM is prescriptive in terms of the philosophy and values it expounds but not in terms of particular tools to implement total quality, leaving to each organisation the choice of the initiatives that best suit its specific needs and available resources. The BEM is also considered to have a positive impact on the difficulty the SMEs experience in coping with the ever-increasing market turbulence, as they do not have the large organisations' ability to shape the market change. Ghobadian and Woo (1996) argue that "meeting the awards criteria enhances management's control over internal factors and makes the organisation more robust in dealing with pressures brought about by changes in the external circumstances".

However, before considering the BEM implementation, an organisation must "buy into" the ideals and values that underlie the model, which may represent a complete cultural change for the majority of small business (Hewitt, 1997). In one of the case studies of BEM implementation in SMEs reported by Armitage (2002), it was found that senior management had to be sold the model despite the fact that further down in the organisation its acceptance was taken on board more readily. It is sometimes difficult to persuade the manager/owner of the advantages of self-assessment as results may force a change in the leadership style.

Other major problem when attempting to adopt the BEM is to identify a starting point because, as an all-embracing model, it emphasises "what can be done" and not "how to do it", providing little guidance on the development of a TQM implementation plan. The model's language may also be difficult to interpret (Armitage, 2002).

Another obstacle is that the process of self-assessment can involve a significant number of people from all levels and is found to consume a large amount of time; in SMEs every employee has a key role and usually several (McAdam, 2000). Some authors argue that the awards-based models are "too process oriented and place too much emphasis on TQM as a 'check the box activity' and not as a path to sustainable results" (Ghobadian and Woo, 1996), failing to present clear causal relations between the enablers and the business results. Hewitt (1997) mentions that, as small companies tend to have short time horizons, they are just not interested unless they see a link between self-assessment and weekly goals achievement. Armitage (2002) noticed in one case study that some people revealed difficulty in identifying tangible benefits from the BEM. McAdam (2000) considers the BEM rather complicated and formalised, being often viewed as increasing bureaucracy within SMEs.

For a successful BEM implementation in SMEs a cascading strategy is advisable, which should start by instilling into the top management the ownership of the model. The implementation process must also allow different types of activities, some with specific and short-term goals in order to enhance motivation and others aimed at creating the appropriate cultural climate to eliminate any existing resistance. Another important issue is the establishment of an appropriate performance measurement system to provide a steer for TQM introduction.

The Balanced Scorecard (BSC)

Kaplan and Norton (1992) devised the BSC as a "set of measures that gives top managers a fast but comprehensive view of the business" in an attempt to overcome the shortcomings of the traditional measurement systems based on financial measures. The model is comprehensively described in literature (e.g. Kaplan and Norton, 1996b). Lamotte and Carter (2000) present the BSC as "a system of linked objectives, measures, targets and initiatives that collectively describe the strategy of an organisation and how that strategy can be achieved". Gautreau and Kleiner (2001) view the BSC as "a tool for focusing the organisation, improving communication, setting organisational objectives, and providing feedback on strategy". The BSC looks simultaneously at four important perspectives, namely the financial, customer, internal processes, and learning and growth issues. It generally groups the strategic measures into one of the following: outcome or driver measures, financial or non-financial measures, and internal or external measures.

McAdam (2000) conducted a research study into 20 SMEs applying the BSC and reported several key benefits:

- The BSC was seen as helpful in setting the strategy since it provides a much wider perspective, linking the strategy to realistic operational improvement plans and being flexible enough to assess it in an iterative and timely manner.
- The BSC was found to provide better organisational alignment with customer needs. Usually SMEs rely on personal relations and close proximity to understand and satisfy the customers; when used in parallel, the BSC helps them to set meaningful targets related to customers and markets.
- The BSC was considered helpful in focusing SME efforts towards the alignment of their processes and measures with their business strategy. As "the BSC forces managers to focus on the handful of measures that are most critical" (Kaplan and Norton, 1992) it fights sub-optimisation, which is particularly important for SMEs due to the scarcity of resources.

Other important features of the BSC that fit the SME context may be listed:

- Kaplan and Norton (1992) argue that the BSC "establishes goals but assumes that people will adopt whatever behaviours and take whatever actions are necessary to arrive at those goals". This allows the recognition of people as a source of innovation and is compatible with the human resources versatility, which is an SME characteristic.
- Yusof and Aspinwall (2000b) point out that "many organisations seem trapped with the notion that TQM is something that is added on to their existing system". As the BSC is driven off an organisation's strategy and vision, every BSC is unique in its objectives and measurement; this may facilitate the adoption of the BSC as a tool and make the organisation conscious that TQM is a new management approach.
- The BSC fosters strategic learning by sharing the vision, translating the strategy into a set of hypotheses about cause-and-effect relationships and facilitating the strategy review (Kaplan and Norton, 1996a). This helps SMEs to build their own management paradigms.

However, McAdam (2000) also reported a number of problems encountered by SMEs when implementing the BSC:

- There was an expectation that the BSC would have an immediate significant effect on strategic financial indicators which led to disappointment in most cases.
- A number of concerns were expressed that the employees could be constrained by the measurement system.
- Many SMEs remained unconvinced of the value of long term goals to support the BSC implementation.
- Some SMEs were concerned that the BSC would result in too much time "measuring" rather than "doing".

Other problems that can be anticipated relate to the difficulty the SMEs top managers experience

in assimilating two core concepts: clarification and communication of strategy, and management by fact. In SMEs, it is not unusual to find out that the strategy only exists in the top manager/owner's mind. Some of the possible reasons are: the manager believes the strategy must be kept secret; the manager considers the strategy formulation is to be done exclusively by him/her; not clearly communicating the strategy is a way to avoid exposure to failure. Therefore, it may be a formidable task to persuade the manager to engage in a process of formalising the strategy with the participation of other levels of management, so that it can become clear to everyone in the organisation. Also, in SMEs, personal perceptions are very valued and it may be difficult to recognise the need to collect and analyse information, to develop the right measures and then to act upon the data. Another shortcoming of the BSC in the SMEs context is the fact that it does not provide guidelines on how to manage the processes. For instance, with regard to strategy, it outlines the final result but says nothing about the process of defining the strategy.

Some of the critical factors pointed out by McAdam (2000) for a successful BSC implementation in SMEs are:

- Development of approaches that are ready adaptable.
- Combination of adequate short term benefits in addition to long term potential.
- Preservation of close and informal relationships with the customers.
- Fostering careful communication to employees.
- Continuous alignment of processes and measures with the strategy.

Benefits of an integrated approach

Lamotte and Carter (2000) compared the BSC and the BEM and suggest that whilst both models address the broad subject of performance improvement and rely on similar principles of management, they take different routes and deliver different outcomes and benefits. One of the most striking similarities is that "long term success in implementing either model depends on management's on-going commitment to improving an organisation's performance". Both models are based on principles of measurement, of on-going review, communication, learning and feedback; both refer cause and effect relationships, enablers and results.

The fundamental difference is that the BSC is designed to communicate and assess strategic performance, whereas the BEM focuses on encouraging the adoption of good practices across all management activities of the organisation. A second critical distinction is that the BEM provides a thorough assessment of a company's current strengths and areas for improvement against a comprehensive and objective set of criteria, while the BSC identifies performance objectives, which an organisation needs to reach its vision. Lengyel (2000) found that the BSC covers most criteria of the BEM and, conversely, the content of each BSC perspective tends to be widespread by several BEM criteria.

The differences between the two models and their common performance in improving objectives are the main arguments to advocate a combination of both. Lengyel (2000) emphasises that the integration of the two models makes synergic unity: the BSC is a useful strategic communicating tool and provides strategic learning and the BEM takes "all organisation-crucial perspectives into consideration in its uniform, standard system which makes the benchmarking of the indicators easier". According to McAdam and O'Neil (1999) and Kaplan and Lamotte (2001), there are several benefits derived from the concurrent application of the BEM and the BSC to support TQM (Table I). The listed TQM principles are based on the synthesis provided by Jamal as presented by McAdam and O'Neil (1999).

Table 1. Advantages of an integrated approach to TQM using BEM and BSC

TQM principles	BEM	BSC
TQM is strategically linked to business goals	Ensures a rigorous strategic planning process and gives useful inputs by showing the existing strengths and areas for improvement	Includes aspects relating to both business efficiency and business effectiveness; provides explicit causal linkages through strategy maps and cascaded objectives; establishes targets for breakthrough performance not merely existing best practice
Customer understanding and satisfaction is vital	Helps to identify key areas for improvement and emphasises the importance of perceptive customer data to complement the internally collected customer data	Provides a more cohesive link between the overall business strategy and the improvement initiatives with impact on customer service by devolving customer measures and objectives from the strategic BSC
Employee understanding and participation is required at all levels	Provides a wider view of the business; identifies areas for improvement suited to wide ranging cross functional improvement teams	The strategic level can be readily devolved to individual and team scorecards which in turn can be reinforced by linking it to performance review; the very process of building a strategy map fosters consensus, clarity and commitment to strategy
Need for management commitment and consistency of purpose	Encourages a coaching/mentoring leadership style as well as an involvement and participation style	Acts as a linking mechanism between overall company strategy and individual leader's objectives and measures
The organisation is perceived as a series of processes	Enforces a rigorous process management and change approach	Often identifies entirely new processes that are critical for achieving strategic objectives; sets strategic priorities for process enhancements; integrates budgeting, resource allocation, target-setting, reporting and feedback on performance into ongoing management processes

Figure 1 summarises the advantages of working with the BEM and the BSC together.



Figure 1. BEM and BSC: complementary action Source: Lamotte and Carter (2000)

Each organisation should decide how to use the two models in combination. As Lamotte and Carter (2000) stress, what is important is that organisations know why they are using the models and "recognise where pulling the two models together stops being insightful and where the differences are best addressed separately". The authors believe that "there may be benefit in drawing parallels and similarities between the two models to speak a common language and establish a commonly understood context" instead of trying to amalgamate the two models. This could undermine the end goal and compromise the total benefits to be gained from using the models as they were designed.

A discussion of the implementation of an integrated approach in an SME context is needed. An obstacle that readily emerges is its inherent complexity: if implementing one of the models in isolation is already seen as an arduous task in SMEs then implementing the two in combination may seem absurd. However, some of the probable advantages may overcome the difficulties the SMEs experience when implementing TQM. In fact, the integrated approach provides simultaneously:

- A focus on the critical issues for business sustainability (BSC) and also inspiration for initiatives that help the organisation to achieve the desired results (BEM).
- A tool that can be tailored to the organisation's culture and environment (BSC) as well as a way to compare organisation's performance with benchmarks (BEM).
- A way to progressively improve TQM by implementing initiatives which have an impact on achieving business' strategy (BSC) without losing sight of the global concept of TQM (BEM).

Proposal of an implementation framework

Yusof and Aspinwall (2000b) argue that the implementation of TQM is one of the most complex activities particularly for SMEs because it involves "trying to change from a culture in which fire fighting prevails to a new culture in which constant plans are made, improvement is the norm and the attitude is proactive rather than waiting for problems to occur".

Yusof and Aspinwall (2000a) developed a conceptual framework for TQM implementation in SMEs broken down into three key elements: quality tools, general methodology and co-ordinating body. This framework is consistent with the one Gallear and Ghobadian (2000) derived from the broad implementation plans of a sample of organisations regarded as leading exponents of TQM. From their findings, they suggest a framework consisting of three stages: pre-implementation, planned implementation and evolutionary implementation and development. The relevant features of the two frameworks are synthesised as follows:

- TQM implementation is presented as an evolutionary process, starting with key activities to

help top management in providing guidance to the rest of the organisation and evolving to the appropriate activities to expand ownership for the change process to the whole organisation.

- In the early stages of the TQM implementation process it is important to:
 - identify the expectations and implications of introducing TQM;
 - establish a co-ordinating team to lead the process;
 - educate top management and co-ordinating team members on total quality principles and philosophy;
 - develop a clear mission, vision, strategy, business processes and quality goals and objectives;
 - produce a structured but flexible and realistic TQM implementation "action" plan customised to the specific needs of the organisation.
- The selection of the improvement projects and the quality initiatives or quality tools to be adopted is based on their suitability for effecting the necessary changes in management and employees' behaviour and attitudes.

The frameworks developed by Yusof and Aspinwall (2000a) and Gallear and Ghobadian (2000) are general enough to assist the implementation of any TQM model. Therefore, the framework proposed in this piece of work (Figure 2) incorporates their principles along with the specifics of the BEM and the BSC, and can be defined as an "outcome-driven" approach to implement TQM in a consistent way. It uses the BSC to provide guidance and the BEM to instil the new culture into the organisation.

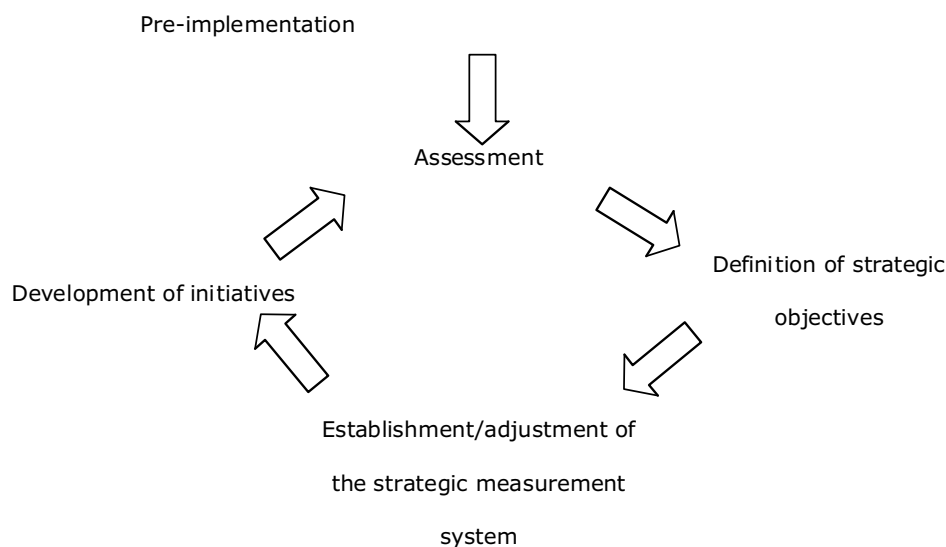


Figure 2. Framework for TQM implementation in SMEs

As can be seen in Figure 2, the proposed framework includes six stages:

1. *Pre-implementation*: The purpose of this phase is to "sell" the TQM's philosophy to the top managers and to generate realistic expectations about its adoption. Ghobadian and Gallear (1997) state that in small companies the owner or chief executive may be either the main stumbling block or the main catalyst to change. Therefore, top management must be provided with an overview of the TQM principles, benefits, and the main obstacles to implementation, especially those related to the organisation's culture and to the management style. At this stage it is also important to establish a team to lead the TQM introduction and to initiate the appropriate training for the implementation of the selected model: BSC and BEM in combination. The final objective of this phase is to outline a TQM implementation plan

customised to the specific needs of the organisation, particularly the ones related to human resources. Basic training on teamwork and information technologies may be required; some initiatives to ensure human resources availability to the project may also be considered.

2. *Initial assessment:* The aim of this stage is to provide a simple picture of "where we are". What is important is to gather some information about business results, considering the different perspectives suggested by the BSC and the BEM. Not all SMEs have data collection systems in place but the information exists and, at this stage where accurate measures are not possible to obtain, estimates can be made. It is also advisable to examine the organisation's performance against some external references, which may be obtained from associations and/or public institutes. Another important task is to get information about the external environment in which the organisation operates (trends, opportunities, threats). For the organisations that already use a systematic approach such as ISO 9001, it may be appropriate to organise a workshop of self-assessment using the BEM, eventually without scoring, just listing under each main criterion what the company already does and what is lacking.
3. *Definition of strategic objectives:* This phase must be led by the general manager with the co-operation of the management team, with the purpose of defining the broad strategic objectives for the organisation. First, where not clearly defined, clarification/development of a vision and mission is needed. Then, the data gathered in the previous phase must be examined against the vision and a reflection about how to achieve the vision has to be fostered. What is important is to define a small set of priorities that must be reviewed in a regular basis.
4. *Establishment/adjustment of the strategic measurement system:* The initial purpose of this phase is to set up a top level BSC. It involves refining the strategic objectives that emerged from the previous stage and linking them with cause-and-effect relationships in order to build a strategy map. It also involves defining measures and targets and establishing a system to capture those measures on an ongoing basis. It is important to stress that the BSC structure may be adapted. As Letza (1996) points out, "the quadripartite model Kaplan and Norton present is not necessarily suited to all business situations, and the culture within each organisation has to be of prime consideration in the construction of every case". When the management team is comfortable with the strategic approach, the scorecard may be disseminated to the entire organisation, linking top-level objectives to departmental and individual objectives and to reward schemes.
5. *Development of initiatives:* The initiatives must be linked to the strategic objectives and have to be planned. As SMEs usually rely on informal systems and have a short-term orientation, both the plans and budgets must be kept simple, yet useful, and readily changeable. The first plans and budgets must help people in their daily work and stimulate the need for more detailed planning. As regards the planned initiatives, it is important to note that the ISO 9001 certification may be one of them. Another important issue related to the initiatives is that the BEM can be a source of inspiration. However, it is vital a detachment from the practices usually adopted by large companies; an effort must be done in finding the "rational" of those practices and then in building innovative approaches that effectively suit the SME context.
6. *Periodical assessment:* The purpose is to facilitate organisational learning for which the BSC and the BEM provide different contributions. The BSC allows managers to validate the hypothesised cause-and-effect relationships in the strategy map. The result of this review may be to reaffirm their belief in the current strategy or to adjust the quantitative relationship among the strategic measures or even to formulate a different strategy in light of new knowledge about market conditions and internal capabilities (Kaplan and Norton, 1996a). A self-assessment cycle using the BEM will provide the organisation with a good and broad understanding of its own strengths and weaknesses at the process level (Lamotte and Carter, 2000). By using both models the organisation can ensure that resources will be primarily allocated to weak areas that are strategically important. However, that does not mean that the assessment iterations of BSC and the BEM must be juxtaposed. An appropriate timescale must be defined for each model, taking into consideration that one major concern of SMEs is to spend too much time measuring rather than doing, and that the assessment should be used to support decision making.

Conclusions

This article analysed two business improvement models, which were originally developed for large organisations and afterwards applied within SMEs. The models were found to have some features suitable for assisting TQM introduction in SMEs. Both are comprehensively described in the literature which reduces the need of expensive consultants and makes it easier to provide adequate training. In addition, both models are prescriptive in terms of the values they expound but not in terms of particular methods to achieve the desired results.

However, these models were also found to raise a number of problems when applied to SMEs, namely the increase of formalisation, which may hinder their flexibility, and the requirement of sustained management commitment and focus on long-term results. This last issue is usually difficult for the SMEs to comply with, given the managers lack of training and time.

An approach using the BSC and the BEM in combination was discussed and an implementation framework was proposed. This conceptual framework was designed to help SMEs to progressively introduce TQM principles and methods, ensuring that a selected initiative will contribute towards continuous improvement throughout the organisation. It is believed that SMEs will benefit from the implementation of such framework, although further research is still needed to validate it by conducting case studies in various types of SMEs.

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