

Quality management worldwide

Total quality management and the planning behavior of SMEs in developing economies

*Zelealem T. Temtime and
Getachew H. Solomon*

The authors

Zelealem T. Temtime is based at the Faculty of Business, University of Botswana, Gaborone, Botswana.
Getachew H. Solomon is based at the Faculty of Education, Addis Ababa University, Addis Ababa, Ethiopia.

Keywords

TQM, Developing countries,
Small- to medium-sized enterprises, ISO 9000

Abstract

Examines the relationship between TQM perceptions, planning behavior, and firm size in SMEs in Ethiopia. Primary data were collected from 57 SMEs through a questionnaire. However, as the study is a preliminary investigation, uses only simple descriptive statistics to analyse the sample data. The results are not significantly different from those of previous studies in SMEs. TQM perceptions vary with firm size and planning behavior. The findings also indicated that excessive emphasis on short-term profitability, lack of resources, business planning and vision, and misperception of TQM practices are among the main obstacles to the adoption of a formal TQM program. Suggests some lessons and implications for future research.

Electronic access

The research register for this journal is available at
<http://www.emeraldinsight.com/researchregisters>

The current issue and full text archive of this journal is available at
<http://www.emeraldinsight.com/0954-478X.htm>

The TQM Magazine
Volume 14 · Number 3 · 2002 · pp. 181–191
© MCB UP Limited · ISSN 0954-478X
DOI 10.1108/09544780210425900

Introduction

Total quality management (TQM) is an integrated management philosophy and set of practices that emphasize, among other things, continuous improvement, meeting customers' requirements, reducing rework, long-range thinking, increased employee involvement and teamwork, process redesign, competitive benchmarking, team-based problem solving, constant measurement of results and closer relationships with suppliers (Powell, 1995; Ahire and Golhar, 1996; Agus, 2000). TQM is a management philosophy for continuously improving quality of goods and services delivered through the participation of all organizational members; it is the process of making quality the concern of everyone in the organization. Firms, regardless of their size, industry or location, can compete in global markets on the basis of quality of goods and services. TQM seeks continuous improvement in the quality of all processes, people, products, and services of an organization. In pursuit of such improvement, it emphasizes the understanding of variation, the importance of measurement, the role of the customers, the role of suppliers, and the involvement of employees at all levels of the operations of an organization.

A plethora of studies have attempted to show the relationship between firm performance and TQM implementation (Powell, 1995; Black and Porter, 1996; Ahire *et al.*, 1996; Agus and Abdullah, 2000; Agus, 2000; Saraph *et al.*, 1989). Although there is much consensus on the existence of a positive relationship between firm size, firm performance and TQM implementation, the findings are mixed and inconclusive. The major problems are related to the use of an inconsistent measurement instrument, mixed industry, non-robust statistical methods, and lack of a proper working definition of TQM and its constituents (Agus *et al.*, 2000). Although a number of researchers and academics have extensively examined TQM implementation practices in industrialized countries such as the USA, Japan, the UK and other European countries, it is only in recent years that a few researchers have begun to examine quality practices in developing countries. Judging by the number of papers on the subject, knowledge of the impact of TQM practices in SMEs in developing countries is very limited. Since developing countries are breaking the traditional trade



barriers and opening their markets to international competitors, the demand for quality can no longer be the prerogative of the developed world. Today developing countries are beginning to see dramatic improvements in quality. At Pakistan's first international convention in quality, Crosby (1995) stated that nothing is more important to the prosperity of a developing nation than quality. The only way a developing nation can increase its trade activities and develop a sustainable basis is to improve the quality of its products and services (in Djerdjour, 2000).

TQM is therefore a solution for improving the quality of products in developing economies so that they are acceptable in a global market. However, most organizations in developing countries suffer from: lack of employee involvement and participation in quality improvement efforts; lack of management commitment and motivation; perception of quality as an optional extra; traditional belief that quality costs money; lack of cooperation between suppliers and dealers, management and trade unions; unorganized and indifferent customers; lack of political support; and lack of established standards (Lakhe and Mahanty, 1994; Djerdjour, 2000).

Materials and methods

TQM in SMEs

Many studies found that TQM could be used by SMEs with considerable success (Ghobadian and Gallea, 1996). A study by Ahire and Gohlar (1996) found that the introduction of TQM in SMEs had helped to sharpen SMEs' market focus, to become more efficient, to harness their human resources better, and to improve their competitiveness. They also concluded that TQM implementation leads to better product quality and that SMEs can implement it as effectively as larger firms. Shea and Gobeli (1995) found two major benefits of TQM to SMEs: improved customer satisfaction, primarily because of improved internal processes; and a high level of employee satisfaction based on more satisfied internal and external customers. Boon and Monder (1998) also stated that quality in its various aspects is applicable to all firms regardless of size and context. SMEs are, therefore, at the center of interest in the quality debate for several reasons. One, according to

van der Wiele and Brown (1998), is that larger organizations will not be able to improve the quality of their products, services and processes unless their suppliers or the second-tier suppliers also grow to a higher level of quality maturity. Amongst these suppliers there are many SMEs. There is evidence (e.g. McTeer and Dale, 1994) that SMEs are more concerned with quality than their larger company counterparts, but that they do not conform as easily with the formal approaches that are often advocated as part of ISO 9000 series registration, and the introduction of TQM. It could therefore be argued that many SMEs are practicing the principles of quality every day without placing such a label as TQM on it.

Critical TQM factors

There have been numerous studies examining what constitutes TQM, what the common barriers to TQM implementation are, and what factors are critical for the success of TQM (Saraph *et al.*, 1989; Black and Porter, 1996; Yosuf and Aspinwall, 2000; Powell, 1995). Although these studies have provided different results, they have identified a common set of practices considered essential to the success of a TQM program.

Saraph *et al.* (1989) derived a set of eight TQM practices mainly from the literature to develop a measurement instrument. However, they did not incorporate the perceived importance level for the factors proposed. Black and Porter (1996), and Kaldenberg and Gobeli (1995) developed TQM factors using the Malcolm Baldrige Quality Award criteria, on the basis that it is the best-established and recognized framework for quality management. But, the Malcolm Baldrige Quality Award criteria are too general and do not consider the characteristics of some sectors like SMEs. Tammi and Gershon (1995) used Deming's approach to develop an instrument to measure quality management practices. They used Deming's 14 points as TQM factors. However, it can be argued that these are essentially a list of things to do, as prescribed by Deming, and not, in themselves, critical success factors for TQM adoption (see Table I).

Ahire *et al.* (1996) proposed a set of 12 implementation constructs of TQM derived mainly from the literature. However, their instrument is tested and validated only in the manufacturing sector. Likewise, the five

Table I Popular perspective on TQM factors

Deming's 14 points	Crosby's 14 quality steps	Baldrige award criteria	Powell's 12 factors
Constancy of purpose	Management commitment	Leadership	Committed leadership
Adopt the philosophy	Quality improvement teams	Information and analysis	Adoption and communication of TQM
Do not rely on mass inspection	Quality measurement	Strategic quality planning	Closer customer relationships
Do not award business on price	Cost of quality evaluation	Human resources management	Closer supplier relationships
Constant improvement	Quality awareness	Management of process quality	Benchmarking
Training	Corrective action	Quality and operational results	Increased training
Leadership	Zero defects committee	Customer satisfaction	Open organization
Drive out fear	Supervisor training		Employee empowerment
Break down barriers	Zero defects day		Zero defects mentality
Eliminate slogans	Goal setting		Flexible manufacturing
Eliminate quotas	Error cause removal		Process improvement
Pride of workmanship	Recognition		Measurement
Education and retraining	Quality councils		
Plan of action	Do it over again		
Generic TQM factors	Saraph et al. (1998) TQM factors	Ahire et al. (1990)	
Management leadership	Role of top management	Top management commitment	
Organization	Role of quality department	Employee training	
Education and training	Training	Design quality management	
Quality in design	Product/service design	Supplier quality management	
Quality in suppliers	Supplier quality management	Internal quality information usage	
Quality in processes	Process management	Employee involvement	
Quality in management	Quality data and reporting	Employee empowerment	
Human resource management	Employee relations	Customer focus	
Customer focus		Benchmarking	
Tools and techniques		SPC usage	
Black and Porter (1996)	Yosuf and Aspinwall (1999)	Agus et al. (2000)	Agus and Abdullah (2000)
Corporate quality culture	Management leadership	Top management commitment	Top management commitment
Strategic quality management	Continuous improvement systems	Supplier relationship	Customer focus
Teamwork structures	Education and training	Training	Supplier relationships
External interface management	Supplier quality management	Employee focus	Training
Supplier partnership	Systems and processes	Customer focus	Employee focus
Operational quality planning	Measurement and feedback		Quality process
Quality improvement measurement systems	Human resources management		Measurement
Communication of improvement information	Improvement tools and techniques		Zero defects
People and customer management	Resources		
Customer satisfaction orientation	Work environment and culture		

TQM factors derived by Agus *et al.* (2000) are also tested and validated in the manufacturing sector. Powell (1995) derived 12 TQM factors from the literature, and focusses on a wide range of sectors. Agus and Abdullah (2000) developed eight TQM practices to measure the contribution of TQM to the performance of listed public manufacturing companies.

Almost all these factors are identified and developed for large firms with few exceptions. Shin *et al.* (1998) and Yosuf and Aspinwall (1999) extensively reviewed the literature of TQM practices of SMEs and studied critical success factors for TQM. This study adopted the TQM factors developed by Yosuf and

Aspinwall (1999), with minor modifications to suit the characteristics of SMEs in developing countries.

SMEs are frequently disadvantaged in terms of the financial and technical resources which they have at their disposal (van der Weile and Brown, 1998; Walley 2000; Ghobadian and Gallea, 1996) and they often lack managerial expertise. Rigidity of the outlook of the owner/managers, misconception of TQM practices, lack of strategic orientation, and lack of the necessary infrastructure for TQM implementation are also major impediments for SMEs (Lee and Oakes, 1995).

On the other hand, many SMEs have a number of inherent advantages over larger

firms such as being closer to the customer, being more flexible in their operation, being able to innovate more easily, more workforce involvement and more effective communication systems (Walley, 2000; Ahire and Golhar, 1996). Lee and Oakes (1995) argue that if top management is convinced of the need for TQM, then it is easier for managers in SMEs to inspire and motivate others. Because organizational systems and structures are simple in SMEs, the process of TQM implementation can be made visible more easily. The people dimension is easier to tackle on face-to-face relationships because of the small number of employees. Ghobadian and Gallear (1996) found that employees are closer to the products and services and thus feel more responsible for quality, and they will have a better understanding of service and the overall profitability of the organization. According to Hearts and Kanji (1998), SMEs can be characterized as easy to survey and understand having short lines of communication and being flexible in relation to the implementation of new management philosophies and approach.

Planning behavior of firms

Several studies indicated that there is a positive and strong relationship between planning behavior and firm size (Lyles *et al.*, 1989; Bracker and Pearson, 1986; Shrader *et al.*, 1989). These studies generally concluded that planning horizon and formality are positively related to firm size and firm performance. Robinson and Pearce (1983) studied 38 non-formal planners and 12 formal strategic planners and found that formal planners put more emphasis on setting goals and objectives than non-formal planners, who find formal goals and objectives of secondary importance. Shrader *et al.* (1989) concluded that formal plans are superior to informal plans because the process of writing the plan forces ideas and objectives to be thought out. Indeed, a study by Robinson and Pearce (1988) also suggests that the more sophisticated the planning process, the better the organizational performance. While SMEs usually do little planning, studies (Temtime, 2000; Mathews and Scott, 1995) show that those with formal planning outperform their counterparts, because formalized planning provides a statement of purpose, which extends throughout the firm. Miller and Cardinal (1994) reviewed 26 studies and concluded

that strategic planning positively influenced firm performance, while a similar analysis of 14 studies (Schwenk and Shrader, 1993) concluded that the relationship was significant and positive.

Measurement constructs

Two major measurement constructs were developed to study the planning behavior and TQM perception of the sample firms. Based on the work of Boyd and Reuning-Elliott (1998), and a review of existing literature on business planning, ten planning indicators have been identified to study the planning behavior of SMEs. The construct includes formal mission statement, market research, industry analysis, long-term goals, environmental scanning, planning manuals, forecasting, short-term goals, operational efficiency and functional budgets (Temtime, 2001a). Similarly, based on the work of Yosuf and Aspinwall (1999) and a review of the TQM literature, 40 TQM elements have been identified under eight critical TQM factors. These factors are discussed hereunder:

(1) *Managerial leadership and commitment.*

This consists of managerial training, quality objective setting, commitment to quality, systematic business planning and vision, and actively championing/communicating quality issues. The implementation of TQM in SMEs revolves around the role and responsibilities of the manager/owner. The success or otherwise of the implementation of TQM is often down to the owner/manager of the business who constitutes the driving force behind TQM (van der Weile and Brown, 1998; Walley 2000). Ghobadian and Gallear (1996, p. 104) concluded "it was the desire and persistence of owners/managers in SMEs that played a decisive role in TQM implementation". Thus, it is imperative for owners/managers to understand the concepts and issues associated with TQM and then be able to communicate them to employees.

(2) *Customer satisfaction.* This consists of customer survey, customer suggestion, procedure for customer complaint, looking for causes when losing a major customer, and monitoring changes in customer needs. TQM is a management approach that finds its ultimate success in the entire organization's willingness to

view satisfying customers' needs as the determinant of good decision making. This is because the success of companies depends upon how well they meet customer satisfaction. Regardless of size, industry, or location every company has customers on whom it relies for profit achievement. There is little point in producing a good quality product if it is not what the customer wants. This growing recognition of meeting customer needs is changing the direction of quality initiatives in many companies. Simply improving quality is not enough. Actually improving quality in the eyes of the customer is what matters. Quality that means little to the customer usually does not produce a return in improved sales, profits, or market share. It is wasted effort and money.

- (3) *Continuous improvement.* This consists of data collection, business process improvement, benchmarking, job analysis and an open communication system. Continuous improvement is fundamental to firm success. Customer needs are not static. They change continually. A special product feature that is considered innovative today will be considered just routine tomorrow. Continuous improvement is not about solving isolated problems as they occur. Quality improvement must be undertaken in a systematic, continuous, and step-by-step manner. It deals with making decisions based on data, looking for root causes of problems, and seeking permanent solutions instead of relying on quick fixes.
- (4) *Employee empowerment and involvement.* This consists of training and education, participation in decision making, suggestion systems, incentive mechanisms, and work autonomy. At the heart of TQM is the concept of intrinsic motivation-involvement in decision making. Employee involvement is a process of empowering organizational members to make decisions and to solve problems appropriate to their level. The logic is that the people closest to the problem or opportunity are in the best position to make decisions for improvement if they have ownership of the improvement process. Employee empowerment is equally effective in SMEs where most frequently the

customer's perception of quality stands or falls based on the action of the employee in a one-on-one relationship with the customer.

- (5) *Supplier partnership.* This consists of supplier selection, supplier evaluation, meetings and discussions, joint planning, and supplier's quality control. The period of traditional adversary relationship between buyer and suppliers is over. Today, firms focus on building long-term, competitive potential rather than short-term profitability. TQM implementation will not be complete until SMEs design effective supplier selection and evaluation procedures, and suppliers design quality improvement systems.
- (6) *Quality culture and philosophy.* This consists of quality sensitization programs, quality awards and rewards, company uniforms, company policies, and informal group formation. Instilling quality-oriented culture requires change of attitudes, value systems, and beliefs. Culture is the glue that binds the activities and efforts of people in the workplace. TQM is an educational process aiming at changing the behavior and attitudes of organizational members and then developing quality sensitive organizational culture.
- (7) *Resources and working environment.* This consists of lack of adequate capital, training facilities, working conditions, market size, and location. Investment in training and education of employees and investment in improving the working conditions are major obstacles to the implementation of TQM in SMEs in developing economies. Access to finance, working capital management, and cash flow management are important resource allocation issues affecting TQM perceptions. Availability of skilled labour and experienced managers is also an issue of concern for SMEs planning to adopt TQM.
- (8) *Measurement and feedback.* This consists of a reward system, performance evaluation systems, discussion on evaluation results, timely feedback, and a procedure to deal with employee complaints. Performance evaluation, control of deviations from the intended result, and mechanisms to correct

deviations are an integral part of TQM programs. The purpose of performance appraisal is to serve as a diagnostic tool and review processes for the development of employees, teams and the organization as a whole. They are used to determine reward levels, validate tests, aid career development, improve communication, and facilitate understanding of job duties and responsibilities. The traditional employee evaluation systems in SMEs encourage short-term goals rather than long-range planning. They undermine teamwork and encourage competition among people for the same rewards. Compensation is also a desirable component of TQM. Employees may perceive the compensation system as a reflection of the company's commitment to quality.

Research design and methodology

This study was designed to compare the perceptions of SMEs in Botswana (a middle income Southern African country) and Ethiopia (a low income East African country) about the role and importance of TQM. Examination of government policies and programmes in the two countries indicated that there are major differences in the efforts being made to promote SMEs. The government of Botswana has paved the way for entrepreneurship to flourish in the country. However, lack of entrepreneurial and business orientation, coupled with the existence of strong economic neighbours (e.g. South Africa and Zimbabwe), has made the pace of progress very slow. In contrast, the strong entrepreneurial and business orientation among the Ethiopians could not be exploited for the betterment of the people and the country due to war and political instability as well as inadequate government support for SMEs. However, the environmental, economic, and regulatory defences in the two countries have made the comparison very difficult and the authors decided to produce a separate report. This paper reports on the study on 57 SMEs in Addis Ababa, Ethiopia.

A descriptive survey research method was used to produce this paper. Based on the work of Temtime (2000), ten planning indicators were identified to study the

planning behavior of the sample firms. Then, 40 TQM elements were identified under eight critical factors on the basis of the work of Yosuf and Aspinwall (1999). These data were collected from 57 randomly selected SMEs through a questionnaire. The questionnaire was designed to have three sections. The first section deals with demographic data of sample firms. The second section examines the degree of emphasis placed by the sample firms on ten selected planning indicators. The last section asks the degree of emphasis placed by SMEs on 40 TQM elements under eight critical factors.

As most of the respondents were unable to communicate in English, the questionnaire was translated into Amharic, the official Ethiopian language. Four undergraduate students were selected and trained to help the respondents complete the questionnaire. Although 65 questionnaires were filled and returned in the 188 data collection days, only 57 were found to be useable for the study and translated back to English. Simple descriptive statistics such as statistical rankings, sample mean, standard deviations, and analysis of variance (ANOVA) were used to analyse the sample data.

Results and discussion

Demographic data of sample firms

The sample firms consisted of 22 manufacturing, 16 merchandising (wholesaling and retailing), and 19 service (banks, hotels, hospitals) firms. The sample firms were divided into small and medium sized firms based on the number of employees (small firms have 50 or less employees while medium sized firms have between 50 and 150 employees). The sample firms consisted of 39 small and 18 medium sized companies. The sample firms were also divided into strategic planners and operational planners based on their response to the ten selected strategic/operational planning indicators. The firms were asked to indicate the degree of emphasis they put on the ten selected planning indicators, using a Likert-type scale ranging from very high (5) to very low (1). SMEs with a score of high (4) and very high (5) are considered to be strategic planning oriented, while those with a score of very low (1) and low (2) are considered to be operational planning oriented firms. Although it is not easy to label firms as strategic and operational

planners, the author intended to analyse the relationship between the TQM perceptions of the sample firms and their planning behavior. Only 21 firms were found to be practicing some form of systematic/strategic planning, whereas the majority (36) of firms put more emphasis on short-term operational planning than long-term strategic planning.

The managers have, on average, 8.9 years of managerial experience in their companies and only 19 of the employed managers were female. Owners/part owners/family members or relatives head almost 69 percent of the sample firms. Employed professionals manage only less than 28 percent of the firms. The average level of education for all managers is 12+1, which is equivalent to a certificate, but employed managers, on average, have 12+1.8 education, which is slightly below two-year diploma training. All the companies (100 percent) were single, independent business units. This means that they are not branches of other firms, where managerial decisions are made centrally. This was done to maintain the assumption that each company can take initiative and implement its own TQM program. On average, the sample firms have been in business for 10.3 years. This period is generally assumed sufficient to get used to the various trends in the market and the economy.

The respondents were asked to indicate the degree of emphasis placed on 40 TQM elements using a five-point Likert-type scale, ranging from very high (5) to very low (1). Although the respondents have evaluated all the 40 TQM elements, only the grand mean for the eight categories are presented and discussed in this report.

Managerial leadership and commitment

As shown in Table I, there are statistically significant differences at $p < 0.01$ between small (mean = 38.4) and medium (mean = 48.5) sized firms in their perception of managerial leadership and commitment elements. Managers of small firms put less emphasis on the need actively to champion quality programs and the need for managerial training in quality issues than do managers of medium sized firms. Medium sized firms have relatively clearer quality objectives and more actively communicate them to important personnel in the organization than do smaller firms. This reveals that managerial leadership and expertise vary with firm size. As a firm

grows from small to medium, the need to assign more qualified, trained and experienced people will become apparent. As shown by the size of the standard deviation, there is also a statistically significant difference (at $p < 0.01$) between small (SD = 1.6) and medium sized (SD = 0.9) firms in their view of the role of managerial leadership and expertise in implementing TQM practices. The higher the standard deviation is, the greater the perceptual difference among firms in the sub-sample.

TQM is closely related with the planning behavior of firms. It seems that the more a firm develops strategic orientation, the more the understanding to implement TQM practices to achieve competitive advantages. The findings of the study support this argument. There is a statistically significant difference between strategic planning oriented firms (mean = 42.2) and those focusing largely on short-term issues (mean = 30.5). Strategic planning oriented firms put greater emphasis on such quality issues as the need for training on quality management, problem solving and teamwork, development of clear quality objectives and goals, and open communication than do operational, (short-term) planning oriented firms. The small size of the standard deviations for strategic planning oriented firms (SD = 0.9) shows the existence of relatively good understanding among strategic planning oriented firms of the role of managerial leadership and expertise in TQM implementation.

Customer satisfaction

There is no statistically significant difference (at $p < 0.01$) between small (mean = 33.5) and medium sized (mean = 35.1) firms. This reveals that firms of all sizes generally perceive customer satisfaction in the same way. But the difference between strategic planning (mean = 38.8) and operation planning (mean = 29.9) oriented firms is statistically significant. This means that perception of customer satisfaction as a quality improvement practice varies with the planning behavior of SMEs. Strategic planning oriented firms put greater emphasis on all customer satisfaction elements than do short-term planning oriented firms. It also seems that small (SD = 1.8) and operational planning firms (SD = 1.1) do not have a clear understanding of how to achieve customer satisfaction, as indicated by the standard deviations or dispersion of their responses.

Strategic planning oriented (SD = 0.8) and medium sized firms (SD = 1.2) have significantly lower standard deviations on their view of customer satisfaction than do short-term survival oriented (SD = 1.8) and small firms (SD = 1.1). Although this does not have significant implications, it gives some hint at the variation in their response to customer satisfaction elements (Table II).

Employee empowerment

There are no significant differences between small (mean = 31.4) and medium (mean = 33.8) sized firms in their perceptions of employee training, motivation, and involvement in decision making. SMEs put only average emphasis on the importance of employee empowerment and involvement in TQM implementation. However, slightly different perceptions are observed between strategic planning oriented (mean = 42.1) and operational planning (mean = 26.8) oriented firms. This difference is also seen in the size of the standard deviations. The standard deviation for strategic planning firms (SD = 0.9) is far lower than the standard deviation for operational planning oriented firms (SD = 1.4). But, the difference between small (SD = 1.2) and medium (SD = 1.0) is very narrow. From this it can be inferred that planning behavior has a stronger relationship with the perception of employee empowerment elements than does firm size.

Quality culture and philosophy

SMEs put below average emphasis on the need to develop quality sensitive organizational culture and philosophy. No significant differences are observed between small (mean = 26.3) and medium sized (mean = 28.8) firms in their emphasis on the need to

incorporate quality in their organizational culture. However, an important difference is observed in the perceptions of strategic planning oriented (mean = 38.4) and operational planning oriented (mean = 24.8) firms. This indicates that, again, strategic orientation rather than firm size plays an important role in the development of an organizational culture that facilitates quality improvement efforts.

Supplier partnership

Both small (mean = 38.2) and medium (mean = 38.7) firms put high emphasis on supplier partnerships and collaboration (see Table III). However, strategic planning oriented firms (mean = 42.9) have put slightly greater emphasis on the need to develop strong working relations with suppliers than do operational planning oriented (mean = 31.2) firms. However, all firms have similar understanding of the problems in establishing close working relationships with suppliers, as indicated by the standard deviations.

Continuous improvement

Only a very slight difference is observed between small (mean = 31.2) and medium (mean = 34.4) firms, but the difference between strategic (mean = 38.2) and operational planning oriented (30.4) firms is very important. Strategic planning oriented firms put greater emphasis on the need to improve products/processes/services continuously than do operational planning oriented firms.

Resources and work environment

There is no significant difference between small (mean = 26.8) and medium (mean = 28.8) firms in their evaluation of resource

Table II Summary of degree of emphasis placed on TQM practice/elements by firm size

Factors	Small		Medium		Total	
	Mean	SD	Mean	SD	Mean	SD
Managerial leadership	38.4*	1.6	48.5*	0.9	41.6	1.4
Supplier partnership	38.2	2.4	38.7	1.5	38.4	1.9
Customer satisfaction	33.5	1.8	35.1	1.5	34.0	1.7
Employee empowerment	31.4	1.2	33.8	1.0	32.2	1.1
Process/product quality improvement	26.2*	2.1	34.0*	1.8	28.7	1.9
Quality culture and philosophy	21.3*	2.3	28.8*	1.6	23.7	1.8
Resources and working environment	26.6	1.2	28.6	1.3	27.2	1.2
Measurement and feedback	18.9	2.4	21.1	1.7	19.6	2.0
Sample size	39		18		57	

Notes: * Statistically significant difference at $p < 0.01$



Table III Perceived degree of importance of TQM factors by planning behavior of SMEs

Factors	STOVE		OPOF		Total	
	Mean	SD	Mean	SD	Mean	SD
Managerial leadership	42.2*	0.9	30.5*	1.5	34.8	1.3
Customer satisfaction	38.8	0.8	29.9	1.1	32.8	1.0
Employee empowerment	42.1*	0.9	26.8*	1.4	32.4	1.2
Quality culture and philosophy	38.4	1.8	24.8	1.0	29.8	1.2
Supplier partnership	42.9*	1.1	31.2*	1.2	35.3	1.2
Continuous improvement	38.2	0.9	30.4	1.2	33.3	1.1
Resources and working environment	38.1*	1.1	28.2*	1.4	31.8	1.2
Measurement and feedback	34.1*	1.2	23.4*	1.6	27.3	1.4
Sample size	21		36		57	

Notes: STOF = Strategic planning oriented firms; OPOF = Operational planning oriented firms; *Statistically significant difference at $p < 0.01$. The original scale of five points multiplied by 5 for discussion simplicity

availability. Both small and medium sized firms have problems in accessing credit facilities, training facilities, improving business infrastructure, and adopting new technologies. However, the difference between strategic (mean = 38.1) and operational planning (mean = 28.2) oriented firms seems to be important. Since strategic planning oriented companies focus on building long-term, competitive potential, they put slightly greater emphasis on the efforts to improve the working environment.

Measurement and feedback

A very important difference has been observed between small (mean = 18.9) and medium (mean = 31.1) firms in the level of emphasis they put on the need for systematic and formalized performance measurement system. Strategic planning oriented firms put greater emphasis (mean = 34.1) on the need to develop formal performance evaluation systems, the need to provide employees with timely feedback, the need to relate incentives to performance, and the need to build long-term competitiveness than do operational planning (mean = 23.4) oriented firms. Smaller and operational planning oriented firms do not consider measurement and feedback related items as critically important for TQM implementation.

Perceived obstacles to TQM adoption

The last question in the questionnaire was designed to ask the respondents to rate the degree of impact exerted by ten selected problem areas. All the respondents rated low investment and lack of strategic orientation very high, followed by lack of managerial

expertise and misperception of TQM principles. Employee motivation, market size, and resistance to change are also rated as having more than average influence on TQM adoption. However, many SMEs rated the impact of lack of documentation/formalization, centralization of authority and lack of TQM implementation frameworks below average. This reveals that lack of resources, which is closely related to lack of managerial expertise and strategic planning, seriously affects the efforts of SMEs to improve the quality of their products and services. The findings also showed that SMEs perceive TQM as an optional extra, costly, and appropriate for only large, multinational, multi-product and multi-divisional companies.

Concluding remarks and implications

The main objective of this study was to analyze the perceptions of SMEs about selected TQM practices. The level of understanding of SMEs of the role and importance of these practices is very encouraging. Most SMEs are attaching some importance to all TQM practices. However, there are important differences between small and medium sized firms as well as between strategic and operational planning oriented firms. However, the demarcation between strategic and operational planning firms should be treated with greater caution. The degree of importance attached to some TQM practices varies with firm size. As a firm grows and expands, the importance that it attaches to the various TQM practices increases. As a firm moves from focusing on short-term profitability to long-term competitiveness, it puts much emphasis on TQM practices.

It can generally be concluded that SMEs should be assisted in the use of systematic business planning techniques as this will consequently lead to the consideration of TQM as a means of achieving competitive advantage in the long run. This study showed that the planning behavior of firms has a strong relationship with TQM implementation. Future research must, therefore, focus on the development and introduction of TQM implementation frameworks for SMEs in developing countries. As TQM initiatives are strongly linked with company strategic orientation, another major problem of SMEs is their excessive emphasis on short-term survival oriented issues. Thus the planning behavior of SMEs, which focuses on operational efficiency at the expense of long-term competitive advantage, must be addressed by future research, as it will have a direct relation with the adoption of TQM adoption and implementation. Firms without formal strategic planning cannot adapt TQM practices.

The implication of this study is that SMEs in developing countries must be able to learn from both the success and failures of SMEs in the developed world. They should not repeat the mistakes committed by others in their effort to implement a formal TQM program. The literature on TQM offers many lessons that can be learned from failures as well as successes for the purpose of successful implementation of TQM (Temtime, 2001b). First, SMEs must know themselves and what TQM really means for them before they start the TQM journey. They must create a culture that is conducive to and supportive of TQM implementation. They must align TQM implementation with their goals and competitive environment. They should understand the necessary time and effort. TQM implementation should be unique to each company, it should be noted that there is no "one-size-fits-all" approach in TQM. Certain quality activities may be more appropriate for some organizations than for others. SMEs must take a "holistic" approach; TQM is neither a canned program nor a simple sum of quality tools, techniques and practices. They must broadly understand the phrase "TQM", which conveys the comprehensive nature of quality improvement activities. It implies total commitment and total responsibility by all organization members at all organization levels and in all areas of business. Quality activities should be integrated not fragmented. Firms should know that TQM is not a "magic bullet" or a panacea for quality.

Many SMEs simply jump on the bandwagon without fully understanding what TQM means for them or its possible consequence. Firms should avoid wishful thinking that TQM will fix short-term problems and quickly improve business performance; TQM is not a destination but a journey requiring a long-term, unwavering commitment to the improvement of product, services and processes, a means to an end rather than end in itself (Shin *et al.*, 1998).

References

- Agus, A. (2000), "TQM practices in manufacturing companies in Malaysia an exploratory analysis", *Total Quality Management*, Vol. 11 No. 8, pp. 1041-51.
- Agus, A. and Abdullah (2000), "The mediating effect of customer satisfaction on TQM practices and financial performance", *Total Quality Management*, Vol. 22 No. 2, pp. 55-73.
- Agus, A., Krishnan, S.K., Latifals, S. and Kadir, S.A. (2000), "The structural impact of TQM on financial performance relative to competitors through customer satisfaction in Malaysian manufacturing companies", *Total Quality Management*, Vol. 11 Nos 4-6, pp. 814-23.
- Ahire, S.L. and Golhar, D.Y. (1996), "Quality management in large vs small firms", *Journal of Small Business Management*, pp. 1-3.
- Ahire, S.L., Gohlar, D.Y. and Walker, M.A. (1996), "Development and validation of TQM implementation constructs", *Decision Sciences*, Vol. 27, pp. 23-56.
- Black, S.A. and Porter, L.J. (1996), "Identification of critical factors of TQM", *Decision Sciences*, Vol. 27, pp. 1-21.
- Boon, S. and Monder, R. (1998), "Implementing quality in small firm: an action research approach", *Personnel Review*, Vol. 27 No. 1, pp. 20-40.
- Boyd, D.K. and Reuning-Elliott, E. (1998), "A measurement model of strategic planning", *Strategic Management Journal*, Vol. 19, pp. 181-92.
- Bracker, J.S. and Pearson, J.N. (1986), "Planning and financial performance of small mature firms", *Strategic Management Journal*, Vol. 7 No. 6, pp. 503-22.
- Crosby, P. (1995), "Opening address to Pakistan's first international convention on quality control", Pakistan Institute of Quality Control, unpublished paper.
- Djerdjour, M. (2000), "Implementation of quality programmes in developing countries: a Fiji Island case study", *Total Quality Management*, Vol. 11 No. 1, pp. 25-44.
- Ghobadian, A. and Gallear, D. (1996), "TQM in SMEs, Omega", *International Journal of Science*, Vol. 24 No. 1, pp. 83-106.
- Hartz, O. and Kanji, G.K. (1998), "Development of strategies for total quality management in large industrial companies and small and medium enterprises", *Journal of Total Quality Management*, Vol. 9 No. 4, pp. 112-15.
- Kaldenbeing, D.O. and Gobeli, D.H. (1995), "TQM practices and business outcomes evidence from

- dental practices", *Journal of Small Business Management*, pp. 21-33.
- Lakhe, R.R. and Mahanty, R.C. (1994), "Total quality management concepts in evolution and acceptability in developing countries", *International Journal of Quality & Reliability Management*, Vol. 11 No. 9, pp. 87-95.
- Lee, G.L. and Oakes, I. (1995), "The 'pros' and 'cons' of TQM for smaller firms in manufacturing: some experiences down the supply chain", *Total Quality Management*, Vol. 6 No. 4, pp. 413-26.
- Lyles, M.A., Baird, I.S., Orris, J.B. and Kuratko, D.F. (1993), "Formalized planning in small business: increasing strategic choices", *Journal of Small Business Management*, April, pp. 38-50.
- McTeer, M.M. and Dale, B.G. (1994), "Are the ISO 9000 series of quality management systems standards of value to small companies?", *European Journal of Purchasing and Supply Management*, Vol. 1 No. 4, pp. 227-35.
- Mathews, C.H. and Scott, S.G. (1995), "Uncertainty and planning in small and entrepreneurial firms: an empirical assessment", *Journal of Small Business Management*, October, pp. 34-52.
- Miller, C.C. and Cardinal, L.B. (1994), "Strategic planning and firm performance: a synthesis of more than two decades of research", *Academy of Management Journal*, Vol. 37, pp. 1649-65.
- Powell, T.C. (1995), "TQM as competitive advantage: a review and empirical study", *Strategic Management Journal*, Vol. 16, pp. 15-37.
- Robinson, R.B. Jr and Pearce, J. II (1983), "The impact of formalized strategic planning on financial performance in small organizations", *Strategic Management Journal*, Vol. 4 No. 3, pp. 197-207.
- Robinson, R.B. Jr and Pearce, J. II (1988), "Planned patterns of strategic behavior and their relationship to business-unit performance", *Strategic Management Journal*, Vol. 9, pp. 43-60.
- Saraph, J.V., Benson, D.G. and Schroeder, R.G. (1989), "An instrument for measuring the critical factors of quality management", *Decision Sciences*, Vol. 20, pp. 810-29.
- Schwenk, C.R. and Shrader, C.B. (1993), "Effects of formal strategic planning on financial performance in small firms, a meta analysis", *Entrepreneurship Theory and Practice*, Spring, pp. 53-64.
- Shea, J. and Gobeli, D. (1995), "TQM: the experiences of ten small businesses", *Business Horizons*, Vol. 38 No. 1, pp. 71-7.
- Shin, D., Kalinowski, J.G. and El-Enien, G.A. (1998), "Critical implementation issues in TQM", *S.A.M. Advanced Management Journal*, Vol. 63 No. 1, pp. 10-15.
- Shrader, C.B., Mulford, C.L. and Blackburn, V.L. (1989), "Strategic and operational planning, uncertainty and performance in small firms", *Journal of Small Business Management*, Vol. 27, pp. 456-60.
- Tamimi, N. and Gershon, M. (1995), "A tool for assessing industry TQM practices versus Deming philosophy", *Production and Inventory Management Journal*, Vol. 36, pp. 27-32.
- Temtime, Z.T. (2000), "The planning behavior of SME in Botswana: a preliminary investigation", 4th International Conference of African Entrepreneurship and Small Business, September, Dar Es Salaam.
- Temtime, Z.T. (2001a), "The environmental scanning behavior of SMEs, in developing economies: evidence from Botswana", *Pakistan Journal of Applied Sciences*, Vol. 1 No. 3, pp. 263-9.
- Temtime, Z.T. (2001b), "The role of microcomputers in SMEs: are they used in strategic decisions and planning", *Pakistan Journal of Applied Sciences*, Vol. 1 No. 2, pp. 87-92.
- van der Wiele, T. and Brown, A. (1998), "Venturing down with the TQM path for SMEs", *International Small Business Journal*, Vol. 16 No. 2, pp. 50-68.
- Walley, K. (2000), "TQM in non-manufacturing SMEs: evidence from the UK farming sector", *Total Quality Management*, Vol. 18 No. 4, pp. 46-61.
- Yosuf, S.M. and Aspinwall, E. (1999), "Critical success factors for TQM implementation in small and medium enterprises", *Total Quality Management*, Vol. 10 No. 4, pp. 803-9.

Further reading

- Chandler, G.N. (2000), "Human resource management TQM and firm performance and medium size enterprises", *Entrepreneurship; Theory and Practice*, Vol. 25 No. 1, pp. 43-57.
- Delery, J.E. and Dory, D.H. (1996), "Modes of theorizing in strategic human resource managements tests of universalistic contingency, and configurationally performance prediction", *Academy of Management Journal*, Vol. 39, pp. 802-35.
- Denaley, J.T. and Husel, D.M.A. (1996), "The impact of human resource management practices on perceptions of organizational performance", *Academy of Management*, Vol. 3 No. 9, pp. 949-69.
- Dishopande, S.P. and Gohlar, D.Y. (1994), "HRM practices in large and small manufacturing firms: a comparative study", *Journal of Small Business Management*, Vol. 32 No. 2, pp. 49-56.
- Douglas, A. and Glen, D. (2000), "Integrated management systems in small and medium enterprises", *Total Quality Management*, Vol. 11 Nos 4-6, pp. 686-90.
- Hornsby, J. and Kuratko, D. (1990), "Human resource management in small business critical issues for the 1990s", *Journal of Small Business Management*, Vol. 28 No. 3, pp. 9-18.
- Husband, S. and Mandal, P. (1999), "A conceptual model for quality integrated management in SMES", *International Journal of Quality & Reliability Management*, Vol. 16, pp. 699-713.
- Huselid, M.A. (1995), *The Impact of HRM Practices*, pp. 635-72.
- Kanji, G.K. and Wallace, W. (2000), "Business excellence through customer satisfaction", *Total Quality Management*, Vol. 11 No. 7, pp. 980-1000.
- Kiggundu, N.M. (1989), *Managing Organization in Developing Countries*, Kumarian Press, West Hertford, CT.
- Kunst, P. (2000), "Quality management and business performance in hospitals: a search for success parameters", *Total Quality Management*, Vol. 11 No. 8, pp. 1123-33.
- Reed, R., Lamark, D.J. and Mero, N.P. (200), "Total quality management and sustainable competitive advantage", *Journal of Total Quality Management*, Vol. 5 No. 1, pp. 5-26.

Commentary

Roll on TQM – a wonderful example of Botswana in the spotlight.