DYNAMIC INTEGRATION OF QUALITY PRACTICES INTO THE STRATEGIC MANAGEMENT PROCESS OF ORGANISATIONS IN THE PRINTING AND PACKAGING INDUSTRY

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ABSTRACT

Over the past ten years, intense global competition, changing customer needs and the changing business environment has forced many organisations to examine their organisational goals and to re-evaluate how to meet these challenges. This extreme global competition has forced many organisations to develop action plans to respond to an increasingly competitive market. One such action plan identified was the integration of quality practices and principles with strategic planning of the organisation. The research investigated the importance and usefulness of integrating quality practices in the strategic management process of organisations in the Printing and Packaging industry in the eThekwini Municipality. The main objective of the research was to explore and present the dynamic integration of quality practices into the strategic management process of organisations in the Printing and Packaging industry in the eThekwini Municipality, Durban. Selected quality practices such as TQM, SQM, ISO 9001:2000, Hoshin Kanri and Six Sigma were identified. These practices were integrated with the strategic management processes of the organisations and empirically tested. The empirical data was obtained from a combination of qualitative and quantitative research methods. The review of literature acknowledged the importance and advantages of integrating quality practices with the strategic management process. It also identified selected quality practices that can improve the strategic planning process. The study consisted of questionnaires administered to 30 organisations. The study indicated that although the majority of the organisations integrated the two practices, 97% of the organisations found that this integration was difficult initially, but with some perseverance achieved success, while 3% of the organisations did not implement the integration. The results of the study reveal a positive correlation between quality practices and strategic management. Hence, it can be accepted that the integration of quality practices within the strategic management process has directed the organisation toward continuous improvement, a competitive advantage, a greater market share and sustainability, greater customer satisfaction and increased profitability and sales.

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1 INTRODUCTION

Many organisations fail because they do not take cognisance of the long term benefits of quality practices. They do not realise the value of integrating these quality practices into their daily operations. The study endeavoured to highlight the usefulness of incorporating quality practices in an organisation's strategic management process. According to Cleveland (2006) successful organisations consistently use quality practices as a tool to formulate, enhance strategies and set goals and objectives. He stated that many organisations may have overlooked the importance of quality practices in developing relevant strategies.

Lakhal, Pasin and Limam, (2006) expressed that quality practices follow a structured, systematic process involving all employees of the organisation in its planning and implementation efforts. To support this, quality experts have introduced a number of quality tools such as Total Quality Management (TQM) and Strategic Quality Management (SQM) to improve processes in order to enhance the quality of a product or service in an organisation. Leonard and McAdam (2002) contended that SQM is a useful tool to develop a comprehensive framework for developing business objectives and to improve quality efforts. Godfrey (2006) stated that over the past few years there has been an increase in the emphasis on SQM. In addition, quality tools such as Hoshin Kanri, SWOT Analysis, Continuous Improvement and the Six Sigma can be applied to solve problems and to improve quality within organisations. Brown (2005) stated that not only should quality practices be linked with the strategic planning process but it should receive organisation-wide commitment.

2 LITERATURE ON THE INTEGRATION OF QUALITY PRACTICES INTO THE STRATEGIC MANAGEMENT PROCESS

Raghunathan, Rao and Solis (1997) imparted the knowledge that the demand for quality is emerging as one of the most critical factors for organisations to survive in the expanding and competitive marketplace. Juran (1989) states that “just as the twentieth century was the century for productivity, the twenty-first century will be the quality century.” Evans (2000) found that the most consistent factor among organisations is an obsession with some form of quality. Managing the quality dimensions of an organisation is not different from any other aspect of management. It involves the formulation of strategies, setting goals and objectives, developing action plans, implementing plans and using control systems for monitoring and taking corrective action. Over the years there has been an increasing global emphasis on quality management. Quality management in organisations involves strong leadership and strategic planning, which is subsequently supported by a management system.

Hence, it is anticipated that quality practices be integrated with strategic management processes. This is supported by Lakhal, Pasin and Limam (2006) that the integration of quality practices and strategic management provides a synergistic combination that is far more powerful than either of them being operated separately. Grant (2005) suggests that even when organisations follow sound management practices, they are still exposed to events and problems that can cause strategic failure. In addition, David (1997) is of the opinion that the low success rate of organisations is further fuelled by poor quality management practices. DeFoe and Janssen (2001) are of the view that by integrating quality practices into the strategic management process, it becomes part of a foundation that is essential in supporting the management of quality in an organisation.

Cleveland (2006) is of the opinion that successful organisations consistently use quality practices to formulate strategies and to set goals and objectives. Bossink (2002) is in agreement with Cleveland (2006) and finds that quality practices support the management of
strategically important innovation processes. In addition, Parast and Digman (2007) suggest that their studies have shown that quality practices have a strong effect on organisational and operational performance. They also add that many studies have investigated the effects of various quality management practices on operational and organisational performances and this is shown in the following section on the advantages of using quality tools and practices in the strategic management process.

Tan, Kannan, Handfield and Ghosh (2000) confirmed that quality management practices have played an increasingly prominent role in the strategic planning process. Furthermore, Ittner and Larcker (1997) believe that a key assumption in the strategic planning process is a need to align specific quality practices with the organisation’s chosen strategy. This process of integration works best when quality goals, organisational strategies and other quality tools are completely included in the organisation’s strategic plan. The advantages of this integration will reflect the importance and the impact of quality practices in strategic management.

2.1 The advantages of Quality Practices in the strategic management process

The following advantages will indicate the usefulness of the integration of the various quality practices such as TQM, Hoshin Kanri, ISO 9001:2000, SQM and Six Sigma approach into the strategic management processes of an organisation.

2.1.1 The advantages of Total Quality Management (TQM)

Total Quality Management is a world renowned practice. McCell (2000) expressed the opinion that many organisations have overlooked the importance of TQM in developing relevant strategies to gain a competitive advantage. Kenyon (1997) exclaimed that TQM represents a core aspect of selected Japanese organisation’s management system and is stated as the means by which the overall control system and TQM are deployed. This was further adopted by Xerox Copiers through benchmarking. They identified the success of other organisations and realised their deficiencies by their lack of integrating TQM with their strategic initiatives.

It can be inferred that TQM plays a crucial and significant role in the strategic management process of an organisation. Mehra, Hoffman and Sirias (2001) proposed that TQM concepts be applied to implement sustainable strategic initiatives which provide a competitive advantage.

They have even argued that without sustainability, TQM initiatives are usually doomed to fail, since the essence of TQM is a continuous improvement and includes the integration of quality practices into daily organisational and operational strategies. Therefore, it is evident that it is advantageous to integrate selected quality practices into the strategic management process in order to gain a competitive advantage, continuous improvement and sustainability in the market.

2.1.2 The advantages of Hoshin Kanri

Zairi (2006) describes a technique for strategic planning, known as Hoshin Kanri, which has been in operation in many organisations since the 1960s. Zairi and Erskine (2004) further defined Hoshin Kanri, as a systematic quality approach to planning, auditing and managing corporate visions and organisational strategies. Tennant and Roberts (2000) promulgate the theory that Hoshin Kanri does not replace other management strategies. It is a type of strategic planning system that orchestrates continuous improvement and breakthroughs. It selects areas that need improvement, makes certain that the right people get involved and that the improvement is implemented.
There are 5 elements of Hoshin Kanri Planning. They are as follows:

1. focus for the organisation in the form of a few breakthrough goals that are vital to the organisation’s success
2. commitment to customers, meeting the needs and expectations that customers rank as most important
3. deployment of the organisation’s focus so that employees understand specific contributions to it
4. tools and techniques that are helpful and easy to implement such as quality tools
5. ongoing evaluation of progress to facilitate learning and continuous improvement

Hoshin Kanri acts as a management compass that steers all employees in the organisation, in the same direction, toward a common goal. Therefore it can be concluded that the Hoshin Kanri system contributes to continuous improvement in strategic management.

2.1.3 Advantages of ISO 9001:2000 Certification

The ISO 9001:2000 code of practice provides another quality tool which can be used in the strategic management process. Allen and Kilmann (2001) identify five key areas related to quality which can be included into the strategic management process.

1. the development of a continuous improvement culture throughout the organisation and strategic integration
2. the deployment of quality practices in functional levels of the organisation
3. customer focused strategic planning
4. gaining a strategic advantage
5. a level of priority given to continuous improvement

In addition, these characteristics are consistent with the principles of ISO 9001:2000. Terziovski and Samson (1999) found that high performing organisations focus on quality practices such as breaking down barriers between functional levels, continuous improvement and ISO 9001 certification. They contended that an integrated quality strategy involving TQM and ISO 9001 certification is the most effective competitive strategy for sustaining organisational performance.

2.1.4 The advantages of Strategic Quality Management (SQM)

Strategic Quality Management can also be regarded as a useful tool during the integration of quality practices and strategic management. Brown (2005) introduced the framework of SQM emphasising that quality must be defined from the customer’s point of view. He elaborated that quality practices should be integrated with the strategic planning process. Furthermore, this integration requires organisation wide commitment. Calingo (2000) defines SQM as the formulation and deployment of quality management within the overall framework of strategic planning. Under this framework, each strategic change is evaluated in terms of how compatible it is with the process, the organisation and the environment. Cost of quality, quality function deployment, target analysis and other quality management mechanisms are presented under this framework. The use of these mechanisms is a practical way of deploying SQM, thereby making quality management practices more effective and successful.

Aravindan, Devadasan and Selladurai (2001) assert that SQM consists of three phases which can be included in the integration of quality management and strategic management. The three phases of SQM are:

1. the quality concepts are integrated into the vision and goals of the organisation
2. the formulation of the policies and actions required for managing change
3. the deployment of the strategy
It is evident that the strategic aspects of quality are recognised and embraced by top management in the strategic planning process. As a result, Tummala and Tang (1996) concluded that quality needs to be defined from the perspective of the market competition and the customer’s expectation, instead of in terms of predetermined, internal standards or design specifications. They add that in order to reach this step in the move toward quality, the organisation requires a change in corporate culture and an organisational commitment to continuous improvement.

The literature shows that quality needs to be redefined in terms of satisfying the requirement of the customer and be made a part of the strategic planning process. The need for speedy response to the customer, for flexibility in operations and for increasing awareness and skill on the part of employees have perhaps also made the empowerment of the employees in the workplace a necessity. Quality of the workplace has therefore become a strategic requirement for future survival.

2.1.5 The advantages of Six Sigma (6σ)

The Six Sigma model is a highly disciplined approach that helps organisations focus on developing and delivering “near perfect” products and services. The word Sigma is a Greek letter used for a statistical term that measures how far a given process deviates from perfection. The higher the Sigma number, the closer the perfection. The central aim of Six Sigma is that it can measure how many defects there are in a process and determine how to eliminate those defects in order to get as close to zero defects as possible (Harrold, 1999).

Evidence from an aircraft manufacturer shows that the current average organisation operates on Four Sigma which corresponds to 6210 defects per million. This can be interpreted as 6 defective aircrafts out of 1000 aircrafts. When implementing Six Sigma, fewer than 3,4 defects per million can be achieved. It can be inferred as 0,00034 defects out of every 1000 aircrafts. To obtain these results, processes were optimised, process capability improved and the defects per million dropped to 0,00034. This indicates that the quest for zero defects led to superior quality products and, hence, it can be deduced that zero defects is a strategic goal that can lead to continuous improvement and customer satisfaction.

In addition, Friday-Stroud and Sutterfield (2007) explained that the basic principle of the Six-Sigma approach as a managerial decision making tool and includes the following:

1. aligning key business processes and customer requirements with the organisation’s strategic goals
2. identifying corporate sponsors to champion projects, supporting the team, obtaining necessary resources, and helping organisational members to overcome the resistance to change
3. instituting a standard measurement system to be used throughout the organisation
4. identifying appropriate measures that focus on organisational results and accountability
5. providing extensive six-sigma and project management training
6. deploying appropriately trained teams to improve quality and profitability while reducing time and waste
7. setting improvement goals

DeFoe and Janssen (2001) stated that by incorporating an initiative like Six Sigma into strategic management, it will enable an organisation to plan and execute breakthroughs. Over the long term, the effect is to achieve competitive advantages. Six Sigma is a powerful approach to achieve breakthrough improvements in manufacturing, engineering and organisational processes. The approach relies heavily on advanced statistical methods that
complement the process and product knowledge to reduce variation in processes. It is a new way of operating a business that would eliminate the existing defects efficiently and would prevent defects from occurring in the future. Different strategies are used by organisations to introduce and deploy Six Sigma approaches. Each of these strategies has advantages and potential failure modes that must be addressed and avoided.

It is evident from the advantages of integrating quality practices into the strategic management processes of an organisation that the aim of the integration is the sustainability of an organisation, gaining a competitive advantage and most importantly, the need for continuous improvement is encouraged. It has been established that the synergy between the quality practices mentioned in the literature and strategic management have been identified and does exist. This synergy has led to continuous improvement, customer satisfaction, sustainability of the organisation in the market, an improved competitive advantage, increased organisation wide commitment and greater profitability. It also shows that quality management continues to be an enormous part of an organisation. It underpins all that the organisation is trying to achieve. In a progressively competitive environment, quality is the key to an organisation’s success and survival. To compete effectively, organisations should embrace the principles of the various quality principles and integrate them into their strategic initiatives. Thus, organisations that are planning for the future survival will be flexible and able to embrace any circumstance.

Evans (2000) stated that there is a fairly universal agreement among quality experts that effective organisations will incorporate quality into their strategic planning process as a vital element. He cautions that when quality is neglected, it cannot be built later into the organisation. It must be built around quality planning.

3  RESEARCH METHODOLOGY

3.1 Survey instrument and design
Quantitative research consisted of the administration of questionnaires. The purpose of administering questionnaires pertaining to the study, was to establish whether quality practices are integrated with strategic management processes in organisation. A questionnaire was used to determine if organisations adhered to quality practices and strategic practices as independent tools or whether they in fact integrated them. The questionnaire was designed using the Likert Scale.

3.2 Target population
The target population identified was the Printing and Packaging organisations in the Ethekwini Municipality, Durban. This industry comprised of medium and large organisations which manufacture and print on cardboard boxes, paper bags, plastic bags, serviettes, plastic buckets, notebooks and labels. A total of 30 organisations were investigated. The population was divided by geographical location. The geographical location consisted of the Pinetown region, Phoenix Industrial Park, Jacobs/Mobeni, Umgeni Business Park, Umbilo, Springfield Park, Glen Anil and the Central Business District (CBD) because the population of the Printing and Packaging Industry were concentrated in these areas.

4  RESULTS AND FINDINGS
The research work was planned with the objective of accomplishing the following tasks:

1. Conducting literature reviews to study thoroughly the teachings of various quality management experts.
2. Conducting surveys to study the implementation and use of quality practices and to identify the importance of integrating quality practices into strategic management.
3. Analysing the findings of the above investigations using the Statistical Package for the Social Sciences (SPSS).

4.1 To identify the various types of quality practices that was implemented by the organisations in this industry

The results in Figure 1 illustrates that 80% of the organisations implement SQM, 20% implemented Hoshin Kanri, 30% implement the Six Sigma approach and 37% implement other practices that have improved their strategic plans. It is evident that a large percentage of the organisations implement SQM, which has been identified by Brown (2005) as the origin of integrating quality practices in strategic planning.

4.2 The success of the organisation after the implementation of quality practices

The results in Figure 2 illustrates that the implementation of quality practices is vital to the success of the organisation. 66.7% of the organisations expressed that their success rate was very good. According to Raghunathan, Rao and Solis (1997) the importance of quality practices to an organisation’s long-term success has been acknowledged over the last two decades.
4.3 Identifying the synergy between Quality Practices and Strategic Management

The results in Figure 3 specify that 100% of the organisation integrate quality practice in their strategic planning process.
Figure 4: Improvements and Difficulties Experienced

It is evident from the results in Figure 4, that 97% of the organisations have experienced some form of improvements through this integration. The following improvements were documented:

1. The integration has led to a cultural change in the organisations; quality is built into every operational process.
2. Greater customer satisfaction
3. Customer service and quality levels have improved
4. The integration has increased the organisation’s competitive advantage
5. Productivity increased and defects were eliminated
6. The training of employees has improved the culture of quality in the organisation

Based on the results above, 3% of the organisations have experienced difficulties and problems. Therefore the following difficulties were experienced:

1. Lack of employee involvement because employees do not want to adapt to change
2. The older staff do not want to adapt to change because they are set in their routine processes and procedures
3. The extensive cost involved with integrating processes and the cost of training those employees that are willing to undergo such a change.
4. Senior management is in charge of the integration and have not effectively communicated this to other levels in the organisation
5. The cost of new technology is very high

It can be concluded that organisations who integrate quality practices and strategic management processes have experienced improvements in their employee morale, achieved high customer satisfaction, minimised defects and have increased productivity which eventually led to increased sales and greater profits. Therefore, the high percentage of organisations have maintained a greater market share and have established themselves as market leaders in the Printing and Packaging industry.
4.4 The importance of integrating quality practices and strategic management

The results in Figure 5 illustrate that there is a high degree of importance (70%) between quality practices and strategic management. According to Lakhal, Pasim and Limam (2006) the integration of quality practices and strategic management provides a synergistic combination that is far more powerful than either of them operated separately. Defoe and Janssen (2001) support Lakhal, Pasim and Limam (2006) and expressed the contention that the integration of quality practices in the strategic management process becomes a part of a foundation that is essential in supporting the management of quality in an organisation.

![Importance of the integration of QP and strategic management](image)

**Figure 5: Importance of the integration of quality practices and strategic management**

The organisations have expressed positive views that the integration would lead to better strategies and improvements in the strategic planning processes, which will in turn lead to high quality in every operation and department in the organisation. Senior management has acknowledged the following reasons and supports the integration of quality practices in strategic management:

1. the integration can lead to better strategic planning and continuous improvement
2. the organisation can achieve greater customer satisfaction and improved profitability
3. the correct implementation of this integration could increase productivity and improve operations
4. it can improve communication from senior management and other levels in the organisation
5. the organisation can supply products and services of superior quality that is consistent with customer needs
6. it can enhance relationships with customers
7. the integration has allowed organisations to compete in global markets and become world class manufacturers
8. has increased market share, reducing operational costs, reducing defects and scrap
9. would enhance the progression of the organisation
4.5 The principles of quality practices can help improve an organisation’s strategic planning process and therefore lead to better strategies

All 30 organisations have expressed that the integration would lead to better strategies and improvement in strategic planning processes, which will lead to high quality in every operation and department in the organisation.

Senior management has acknowledged the following reasons for the integration:

1. The integration can lead to better strategic planning and continuous improvement
2. The organisation can achieve greater customer satisfaction and improved profitability
3. Correct implementation of this integration would increase productivity and operating procedures
4. Improved communication from senior management and other levels in the organisation
5. The organisation can supply products and services of superior quality that is consistent with customer needs
6. Enhanced relationships with customers
7. The integration has allowed organisations compete in global markets and become world class manufacturers
8. Increased market share, reducing operational costs, reducing defects and scrap
9. It would enhance the progression of the organisation

Global trends of markets and increased competition have led to focusing on the satisfaction of customers’ needs as a means of obtaining a competitive advantage and ensuring the survival of an organisation. One of the major strategic changes that have occurred in recent years in many organisations is their striving to satisfy customers’ needs with the emphasis on quality and the adoption of quality practices in strategic management. The results have identified the importance and effectiveness of integrating quality practices in the strategic planning process. The integration has encouraged most of the organisations in this industry to achieve great success and leadership in an immensely competitive industry.

5 CONCLUSION

In a fast moving, rapidly changing environment, an organisation continues to set goals and objectives and formulate strategies to achieve them. However, due to the constantly changing industry and competition, further action needs to be implemented. Therefore it has been identified that there is a need for an intervention like the integration of quality practices into the strategic planning process.

This integration is a rigorous and evolutionary process. Several political and economic changes have occurred in the world during the past few years and have revolutionised every sector of the global economy including the manufacturing sector. At the same time, the manufacturing industries become more quality conscious. This was mainly due to a demand for overall higher quality of products, as well as services, by customers. The Printing and Packaging Industry which formed the basis of this study has also experienced these changes.

The following benefits from adhering to the integration of quality practices in strategic management were established:

1. Senior management’s commitment and support to the integration
2. A quality culture was created
3. More emphasis on employee training
4. Greater employee participation
5. Increased customer focus and customer satisfaction
6. Quality systems and strategic processes improved
7. senior management’s decision to fully commit to quality practices
8. the inclusion of quality practices and principles in the mission statement
9. management must actively communicate a quality commitment to employees
10. a programme for continuous reduction in defects
11. a plan to reduce scrap drastically
12. increasing the organisation’s direct relationship with customers
13. using customer requirements as the foundation for quality

Therefore after observing the significant contributions of quality practices on strategic management processes, the integration can be defined as a comprehensive framework that enhances customer satisfaction, greater sales volume, more employee involvement, continuous improvement, an increased market share and a competitive advantage. As organisations strive to compete in a progressively changing environment, it is evident that strategic goals have to change in accordance to the environment. Consequently, it is advantageous to integrate quality practices with strategic management processes. It has been identified that this integration includes aligning organisational objectives to achieve higher quality, the involvement of all employees and commitment of senior management and leads to enhanced formulation and implementation of strategies. This resulted in improved performance of the organisation and a superior competitive position.

6  REFERENCE


176-13


## APPENDIX A

### 7.1 SPSS results for Figure 1

#### Strategic Quality Management (SQM)

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7.3 SPSS results for Figure 3 and Figure 4

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7.4 SPSS results for Figure 5

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7.5 Reliability test

**Case Processing Summary**

<table>
<thead>
<tr>
<th></th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cases</td>
<td>30</td>
</tr>
<tr>
<td>Excluded*</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>30</td>
</tr>
</tbody>
</table>

*Listwise deletion based on all variables in the procedure

**Reliability Statistics**

<table>
<thead>
<tr>
<th>Cronbach’s Alpha</th>
<th>N of Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>.880</td>
<td>16</td>
</tr>
</tbody>
</table>