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SWOT ANALYSIS AS A TOOL FOR FORMULATING QUALITY STRATEGY

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ABSTRACT

Quality strategies more often than not focus on satisfying the customers’ needs and vow to make and implement policies aiming at fulfilling expectations of customers and other interested parties. While generally a Quality Strategy addresses all the variables of Internal Environment; the extent to which the current generic models (of making Quality Strategy) address External Environment is limited. A quality strategy that takes into account the External Environment beyond the customer and other interested parties will be much more practical as it would address quality in a broader perspective “with speed and cost” and not in isolation. A tool of situation analysis, SWOT is used in the preliminary stage of strategic decision-making where it provides the basic framework for strategic analysis. SWOT generates lists, or inventories, of strengths, weaknesses, opportunities and threats. Organizations use these inventories to generate strategies that fit their particular anticipated situation, their capabilities and objectives. These inventories can form a basis of making a Quality Strategy. This paper proposes a generic model of making the Quality Strategy of a company on the basis of a comprehensive SWOT analysis of that company.

Key words: Strategic analysis, ISO certification, Big Q, Strategic management, Strategic business planning, Production line, Human resource, Soft factors

INTRODUCTION

There is a visible feeling of “shock and awe” among the businesses in South Asia; particularly where catching up with demands of WTO regime and rapidly changing business environment has been wanting. (Peter W Robertson, Peter Gibson, John T Flanagan 2001) Pakistan is no exception and we see many sets wondering what has gone wrong with the market? There are many others who realize that paradigm changes are needed in the way they conduct business.

As companies realize that a cost centric focus is not going to be enough to ensure their survival, in South Asia particularly they are realizing the importance of some ideas that had a exclusively curricular nature for them until recent past; like the criticality of Supply Chain (Peter W Robertson, Peter Gibson John T Flanagan 2001) and the very important soft factors in production. This has paved ay for minimum wage standards and improving working conditions. One of these
new realizations is that of the Big Q concept. (Juran, 1974). Big Q was the change in attitudes of US companies about the importance of quality in 1980s.

Typical quality structures existing in companies in Pakistan have a static nature and there is little or no degree of strategic planning for the product quality.

Quality Strategy is a dynamic variable that has a potential to become the critical difference in the expanded global competition. But what exactly is quality strategy and why is it usually not found documented in companies’ quality structures, though most top executives claim they have an undocumented quality strategy, a view usually not shared by managers. How can there be a formal realization of quality strategy, and on what basis should such a strategy be formed. In the paper, we will try to devise a structure based on SWOT analysis which leads to formation of a quality strategy.

SWOT analysis is a tool of situation analysis, SWOT (strengths, weaknesses, opportunities, and threats) is used in the preliminary stage of strategic decision-making [Johnson et al 1989] where it provides the basic framework for strategic analysis.

**METHOD**

This paper will first review the general aspects of strategy, be it a situation territorial conflict or a cricket match between Pakistan and India. We will then argue that Quality Strategy deserves to be more than a mythical idea finding no formal recognition as a part of a company’s broader strategy. The arguments are based on a study of quality structures of 7 representative companies. We will then discuss the nature and strengths of the SWOT analysis. It will be followed by the proposed generic model which aims at embedding Quality Strategy in a company overall strategy.

**THE ROLE OF STRATEGY AND STRATEGIC MANAGEMENT**

Strategy is about deciding a way to move forward, analyzing the possible variables that will be encountered in that way and taking actions to tackle those variables so as to end up most advantageous. A constant review of every happening will ensure that everything is done better next time. “[Executive decisions involve] complex choices about corporate goals and the means to achieve them, choices that outline the strategic direction of the company. They define the rate at which companies grow in size and profits . . .[and] have a major impact not only on the individual corporation and the industry in which they operate but also on the ... (country’s). economy as a whole. Yet in spite of their importance to employees, investors, and the public at large, the forces that shape these decisions have not been wholly understood.” (Donaldson and Lorsch, 1983, p. 6)
Strategic management is about outperforming your competitors (Gina Grandy and Albert J. Mills, 2004) and forms the basis of difference between those who succeed and others. Strategy, assuming such great importance thus forms a very formal cornerstone of a company’s business. What sets strategy apart from planning in general is its inbuilt dynamism.

Strategic business planning is essentially a structured process for defining the broad mission and strategic goals for the company and then determining the means to be used to achieve these goals (Juran, 1974)

As discussed, the Big Q seems to be a very natural shift of attitudes on the lines of the one experienced in the early 80’s by companies in United States (Juran, 1974) as a response to the Japanese economic invasion. This time in South Asia the invader is China, not that South Asia is the only area invaded. One of the many advantages of learning from others experiences is that you can have a more critical look at the way they (companies in United States) saw the role of innovation in their economic defense; and have a chance to better their practices.

The quality structure working in different companies vary in composition. Based on a study of quality structures working in 7 representative companies, it can be generally classified to work in 3 tiers. The structure is depicted in the figure 1.

Quality Objectives are driven by a Quality Plan which in turn follows the direction specified by Quality Policy. All the three have a rather static nature, as shown by the data later in this para and unfortunately as practiced in most of our representative firms, generally do not respond to the changes in market as promptly as might be necessary in today’s markets of hyper-competition. In all the seven studied companies, Quality Policy did not change after first
installation. The changes in Quality Plans were only about company’s quest for getting ISO certification or keeping it, in 6 out of 7 companies. Similarly Quality Objectives mostly contained actions that were directed at correcting the non-conformities pointed out in last internal and external quality audits. (Mir Mohammad Rouzbeh, 2001)

Management control systems must be designed to complement management’s objectives and strategies. (Shirley J. Daniel and Wolf D. Reitsperger 2002) In an ideal corporate world, with increasing profit margins as the ultimate goal, a Quality System in a company should only be allowed to exist if it is or promises to be in future, a force complimenting the company’s continuous quest for “the ultimate goal”.

It can be argued that a quality system put in place only to satisfy an external customer’s unyielding demand for it can be that complementing force. (Kamran Moosa 2001) This approach; however has a limited capacity to yield results, and has a little life in a free market.

There is empirical evidence to believe that “Quality Strategy” does not exist, at-least formally, in the quality structures in most of the manufacturing companies in Pakistan. In a study of 7 representative manufacturing companies of different business sectors, all having ISO certification, there is no formal understanding of quality strategy. In 6 out of those 7 companies, it was revealed that the certification was acquired to satisfy the demand of Western customers. While the basic aim of such certifications is to establish a strong QA system, usually after the departure of more demanding customer, the entire system has been seen derailed in 3 companies, with the extensive documentation procedures still in place, thus causing huge productivity loss. It will be argued later that one huge disadvantage of these situation can be a feeling among executives that QA is a settled issue now. It will be argued later in the paper, companies with such certifications are now feeling extensive pressure of competition particularly from Chinese competitors, and are becoming an interesting topic for critical and scholarly work.

As discussed above, quality structures of the studied companies are invariably constructed on the lines of standard ISO certification bodies and their usual tiers consist of Quality Policy, Quality Plan(s) and Quality Objectives.

THE IMPORTANCE OF QUALITY STRATEGY IN COMPANY STRATEGY

Generally, the term strategic management has been used to symbolize the entirety of the discipline, incorporating business policy and strategy (Alvesson and Wilmott, 1995). Unfortunately quality finds little respect as a practical and doable facet of a company’s strategy. Until 1980s, strategic planning seldom included planning for quality (Juran J M, 1992).

Quality had many ups and downs in our part of the world. It was believed until very recent past that only those customers deserve quality who can pay for it as against today’s belief of quality for all at low costs. Then there have been extensive discussion on what should be the extent of quality, and thus came the concept of “right quality” settling between high quality and low quality.

What should be the basis of making these critical adjustments in quality and how would this relate to the overall company goals? Does the whole quality issue have enough in it to be a part of company strategy? We argue in this paper that the wide possibility of product variation on the basis of quality alone makes quality one of the strongest pillars of corporate strategy and that a quality Strategy must be an integral part of company’s broader strategic quests.
SWOT ANALYSIS

A brief introduction of SWOT analysis is considered worthwhile here. The role of SWOT analysis is to take the information from the environmental analysis and separate it into internal issues (strengths and weaknesses) and external issues (opportunities and threats). Once this is completed, SWOT analysis determines if the information indicates something that will assist the firm in accomplishing its objectives (a strength or opportunity), or if it indicates an obstacle that must be overcome or minimized to achieve desired results (weakness or threat) (Martin, 1998).

To analyze a situation, SWOT generates lists, or inventories, of strengths, weaknesses, opportunities and threats. Organizations use these inventories to generate sets of strategies that fit their particular anticipated situation, their capabilities and objectives. (Bourgeois 1996; David 1997; Miller and Dess 1996; Pearce and Robinson 1997; Thompson and Strickland 1998) Figure 2 depicts the synthesis of these strategies.

<table>
<thead>
<tr>
<th>Opportunities</th>
<th>Strengths</th>
<th>Weaknesses</th>
</tr>
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<tr>
<td></td>
<td>S-O strategies</td>
<td>W-O strategies</td>
</tr>
<tr>
<td>Threats</td>
<td>S-T strategies</td>
<td>W-T strategies</td>
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Figure 2: SWOT matrix (a.k.a. TOWS matrix)

For all its simplicity, SWOT is often used poorly, and for purposes different from those it has been designed for. An investigation of the relevant practice by UK companies (Hill and Westbrook 1997) showed that SWOT is very often looked upon as a basic analytical structure only, or used as a way of launching a wide-ranging group discussion about a company’s strategic position. In these cases, SWOT is usually not linked, at least formally, to any subsequent strategic planning application. While the criticism on SWOT being a back-of-the-envelope analysis (Adrian Haberberg 2000) and on other pretexts cited above is considerable, there has been extensive work on redeeming it. “There are certain misconceptions held about the nature of SWOT ….. Poor quality of input and inadequate skills ... (of strategic planners) … rather than properties of this tool ….. are to blame for most cases of its less than successful implementation”. (Adam J Koch, 2000)

The 6 rule framework proposed by Adam J Koch presents a well balanced general structure for a company’s SWOT analysis. The seminal work by Koch addresses to a fair extent the criticism of SWOT. (Baramuralikrishna and Dugger 1998; David 1997; Hill and Westbrook 1997; Johnson et al 1989; Thompson and Strickland 1998; Wheelan and Hunger 1998) (…a poorly structured, very general, hastily conducted exercise that produces unverified, vague and inconsistent inventories of factors regarded by the proposing individuals as most important components of their organization’s strategic situation).

This paper makes no attempt of proving the strength of SWOT analysis as a tool. However, by using it as a basis of making a dynamic quality strategy, we have tried to prove that, if used in a manner as to reduce ambiguity as much as possible and probing deep into every strength, weakness, opportunity and threat, it is certainly the most penetrating tool available to managers for strategic analysis and subsequent decision making.

There have been relatively few actual adoption of the concept of strategic quality planning, there has been much groping in the general direction of some how increasing the attention given to quality during the business planning process (Juran J M, 1992). As argued, management control systems should be designed to
complement management’s objectives and strategies and Quality Strategy should be no exception to this rule. With non-complimenting business structures and quality being already seem as a non-practical part of business; the formulation of quality strategy (being clearly distinct from quality policy and its subsystems) is a much more complex task than many would like to believe.

The more common practices of establishing highly ambiguous and undefined quality slogans have not helped the image of quality in general in Pakistan. Generally the phrase “We will deliver high quality products to our customers on time, every time” sits on the walls of companies with slight language and context changes. Ambiguity breeds ambiguity and the actual quality objectives set in the end seldom consider external environment. Despite its importance, costs, and risks, the variables associated with quality have been relatively under-researched in the product literature.

The model proposed in figure 4, a reculer pour mieux sauter approach based on Adam J Koch’s Model rules, are suggested to be followed to make relevant and more quantifiable inventories of Strengths, Weaknesses, Opportunities and Threats that a company possesses /faces with regards to its quality attributes. Based on these inventories, the intricate details of quality strategy need to be established. The basic idea is to present a quality strategy that is highly dynamic and responds to the changes in market, customers’ trends and technological changes. Following is a discussion on the details of and possible pitfalls in each step.

Step I  Market definition is a tricky business and it’s very often that companies drag themselves into manufacturing products (or extending production of products) that offer relatively higher profits (compared to company’s other products) but can have two possible problems. It can be either non-promising in long term or extends the production line in a manner that has a potential to reduce overall productivity of the company. The former is self explanatory whereas the latter need some argument.

Typical production lines are designed keeping in view the market demand and subsequent S&OP catering for then current situation and foreseeable future. (Quarterman Lee, 1996) Though ideally production lines and human resource should be extended or modified as the company portfolio changes, unfortunately it is very rarely the case. New products are added to company portfolio using the same production line with slight modification of machine and man utilization. (Jan Olhager, Joakim Wikner 2000) These slight modifications not completely complimenting the change have a potential to become productivity pitfalls and besides bringing more apparent “hard” reasons for low productivity, also cause many less apparent “soft” productivity problems. The most important of these soft factors can be the increasing dissatisfaction among production workforce which amplifies even small day to day problems into productivity loss. (Peter W Robertson, Peter Gibson, John T Flanagan 2001)

Our argument is that the decision of keeping or abandoning a product or the market of a product should be a very conscious decision of top management and in any case of the decision not following established rules, the reasons for keeping or abandoning a product of the market of a product should be clearly documented and as suggested in step VII, should be reviewed and refined in every cycle. Moreover, theory discerns two basic competitive patterns: that based on cost advantage, and that based on product/service differentiation. However, when one considers specific competitive structures and patterns that prevail in particular product markets and geographic areas that make up these, surely incomparably richer, and different, tapestries emerge of particular scopes, forms and patterns of competition.

Step II  Key Success Factors (KSF) underlie the performance of a product in its target and potential markets. A key success factor is regarded as a skill or a
resource that a business can invest in, which explains a major part of the observable differences in perceived value of the offer and/or relative costs of bringing that offer to the marketplace. Key success factors are potentially useful in structuring the generation of market intelligence in competitor analysis and benchmarking. (Soren Bisp, Elin Sorensen, Klaus G. Grunert 1998). The identification of key success factors enables appropriate allocation of limited resources. There must be an attempt to see these factors according to the company objectives, and a system developed to further the strength a company possesses in KSFs. These factors must be distinguished on lines of budget, schedule, and quality.

Define markets for individual products

Define the “Quality Level” as KSF for individual products

Define short and long terms anticipated changes in the markets defined in Step 1 and 2

Carry out SWOT analysis generating SO, ST, WO, WT policy inventories on the basis of Step 3

Translate anticipated long term changes into quality policy/plan and short term changes into quality policy/objectives
keeping in view SO, ST, WO, WT policy inventories

Implement Step 5 in actual production

Review results and refine Step 1-3 and repeat

**Figure 4:** Proposed model based on SWOT analysis

As argued, Quality has always been a KSF but is that nomination enough or is too vague? The right level of quality is actually the KSF and not the quality as a whole. The definition of Quality Level (QL) can assume critical importance as it would be argued later in the paper that changing QL can bring substantial changes in cost incurred in total manufacturing cycle of a product. This step requires the definition of QL. For the sake of simplicity of the generic model, this paper will consider 3 QLs i.e. Level 1 (Highest), Level 2 (Medium) and Level 3 (Average). Change in QL has a direct relationship with costs as discussed. Putting it mathematically:

\[
\Delta QL \propto \delta \Delta CL \quad 1 \leq \delta < \infty \quad (1)
\]

Where as CL is the Cost Level indicating in similar 3 levels the proportional changes in costs relative to change in QL. \(\delta\) is the factor by which cost changes with quality and can range from 1 to infinity. \(\alpha\) indicates proportionality.

QL definition must consider all the basic relevant information. Some factors defining QL can be:

*Is high quality technically required?*

*Is external finish important?*

*What are the observable and unobservable differences between the company’s definition of Quality and the customer’s perception of it?*

*What are the exact costs of changing QL for a particular product?*

Similarly all the implication of a changing QL must be considered, like:

*Will the basis raw material change with changing QL?*

*What will the costs/savings in increasing/decreasing tolerances? (Internal Finish)*
What changes will be brought to product pre-shipment testing?

What cost variation will accompany if External Finishing is varied?

Will packaging change?

Will delivery mechanism change? (Quick deliveries indicate high quality)

Step III Change anticipation should work on a defined mechanism and seek clarity. Anticipated changes should be based upon the basic factors like consumption trends, technological trends, development in raw materials etc. If, for instance, a highly successful product over last decade has been replaced by a newer technology and a considerable demand for the old version still exists, there must be an anticipation of survivor, and the company must vary the quality of both the products so as to drive the customers into liking the one that is good for the company.

Moreover, customers in general are not usually aware of upcoming technological changes in detail, and laggards would prefer old versions of products thus cause an unwanted backward extension in company’s product portfolio. These are typical cases of strategic decision making, and varying quality and/or cost of products can be helpful in avoiding unwanted extension in product portfolios.

Step IV As discussed in defining SWOT, this step must generate micro Quality Policies, one for every small detail of each product. Here, defining opportunities, threats, strengths and weaknesses for all the products in company’s portfolio is critical. Thus a very detailed investigation of competition faced by each product in every market must be carried out. For instance, referring broadly to a company as one ‘involved in telecommunication’ may be quite inadequate, while referring to it as ‘involved in facilitating transmission of [certain kind of data] to [certain categories of customers] in [certain geographic regions]’ will make it possible to ascertain, and name, all possible opportunities, threats, strengths and weaknesses. Aiming for a high level of precision in making one’s reference sufficiently specific should not come, however, at the cost of blurring the big picture of the market. One should always try and make sure that strategic analysts overlook neither trees nor woods. (Adam J K, 2001)

Changing strengths, weaknesses, opportunities and threats will redefine skill levels required. Some (skills) ignored a few months back might assume importance and others thought as company strength then might have little value to offer now. Shifts in the importance of opportunities and threats will often produce shifts in the ranking of strengths and weaknesses, compared with the initial situation. These may lead to some strengths and opportunities being dropped by an organization from that inventory, following their loss of significance for strategy generation purposes, (and addition of others). (Adam J K, 2001) Similarly, the composition of inventory may change following inclusion of new threats and dropping of some old ones. Also, ranking of inventory items will often change. The pace of these changes strengthen the case of a highly dynamic quality strategy.

4 types of strategies are made (SO, ST, WO, WT) the strengths being used to seize opportunities and situation of threats and weaknesses coupling are predicted and addressed. As an instance, a pump (product) can have a strength of being severe weather resistant, \( (QL_2 : CL_2 : \delta = 1) \) and can have an opportunity of being introduced into a market of submersible use with small variation in quality \( (QL_1 : CL_1 : \partial \approx 1) \). Similarly, high speed steel external body \( (QL_1 : CL_1 : \delta > 1) \) for use in agricultural machinery can be replaced by cast iron \( (QL_1 : CL_1 : \delta > 1) \)
Step V  Now is the time to shape the different quality tiers, with results of SWOT analysis and a picture of market in hand. The every day addition in brands means that the competition between companies changes its variables rapidly, and that the quality strategy should also change as rapidly. The likelihood of a strategist overlooking the impact of these competitive changes or the importance of individual strengths, weaknesses, opportunities and threats for the company is considerable whenever the quality of strategic analysis is wanting. (Adam J K, 2001)

Step VI  It was argued that quality has long been considered a non-practical aspect and has been kept in its curricular limits. The emphasis of this step is to ensure that the quality steps scripted above are actually performed on the production stage in every detail.

Step VII  After the quality variations are implemented so as to respond to the changes in both internal and external changes, a review of the product performance in target markets and emerging markets should be done to make corrective changes in the overall process.

As with every product, this suggested model must also be evaluated in the lights of its KSFs. One basic thing is to ensure that the result of each step has absolute clarity. As discussed, ambiguities breed ambiguities. While listing down the strengths, weaknesses, opportunities and threats for individual products. Another key factor is the elimination of information gaps. In environment having developed business information infrastructure, information needed for the entire cycle can be gathered in good time. Information gaps can be due to factors like general unavailability and/or inaccessibility to the company of some information needed to complete SWOT analysis, low status of, and a correspondingly low commitment to, strategic analysis in the company; inadequate structure and poor performance of strategic management systems in the company; and failure to recognize the significance of some areas of company performance for its strategic success. (Adam J K, 2001)

CONCLUSION

This paper has discussed the importance of quality strategy and a generic model is suggested for formulation of a quality strategy based on SWOT analysis. If applied appropriately, through people who show the necessary diligence and have the intellectual rigor to undertake their strategic management tasks, SWOT is bound to produce meaningful and valid results. This is an attempt to promote the revival of Big Q in our part of the world. Through a postmodernist review of the literature and practice of strategy and strategic management we suggest that strategy of a company must embrace quality as its most important part. We contend that formulating a realistic quality strategy based on best information can be the telling difference in today's hyper-competition. Looking at competitive strategy through an engineer's lens runs the risk of over-mechanization of a model. We have thus kept the level of engineering papers to a minimum while making our references during reviewing the literature.

The cases of less than perfect ISO certifications have made things worse. Top management having spent huge money on certification and QA infrastructure setup tend to take quality as a settled issue. We have argued that it has to be made a part of everyday business. Strategic management is to be furthered to embrace quality as its flagship.
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