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Designing a strategic management system using the third-generation balanced scorecard

A case study

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Abstract *This paper describes a project to design and implement a strategic performance management system within Zamil Air Conditioners (ZAC). In 2001 ZAC had developed its first ever strategic plan using traditional rationalist methods, but with little effect. In 2002, they began a project to introduce a system to help it manage the implementation of its strategy based on an advanced version of the balanced scorecard framework referred to as third-generation balanced scorecard. This paper describes this project and offers some insights into the application of strategic performance management methods and systems derived from this and prior experiences. This paper examines closely the methodologies employed in the formulation and implementation of strategy and begins by reviewing the literature surrounding the variety of methodologies observed by management authors. The paper then uses this literature to examine the ZAC operating practices prior to the new strategic management system, the choices made during the design process and how the new system changed the organisation. The paper concludes by offering some insights and recommendations about the design process and the physical outputs relating to the balanced scorecard and demonstrating in a practical situation why third-generation balanced scorecard offers enhanced utility and practicality over previous designs. These benefits and recommendations are drawn from the viewpoints of both the consultants who facilitated the design process and the management team who developed the content of the management system. Although the design process for third-generation balanced scorecard has been used numerous times in practice, this is the first case study on the specific assessment of the new process.*



Introduction

This paper describes a project that led to the design and implementation of a strategic performance management system at Zamil Air Conditioners (ZAC), a Saudi Arabian manufacturer of commercial and industrial air conditioning systems. ZAC's aim was to improve its ability to develop and implement strategic plans. We describe the organisational context that led to the decision to implement the new system and the key components of the project; and using our own observations and direct feedback from the organisation, we evaluate the extent to which the project achieved its aims. To determine the extent to which insights arising from our observations can be justified, we also review the relevant literature.

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Literature review

Although it is accepted that organisations use a wide variety of methods to manage the formation and implementation of strategic plans (Segal-Horn, 2003), no commonly accepted classification of these methods has emerged. However, several attempts have been made to draw a clear separation between rationalist and other approaches (e.g. Whittington, 1993).

Rationalism

The rationalist approach (or as other authors have called it “classical” (Whittington, 1993) or “linear” (Chaffee, 1985) emerged during the 1960s building upon pioneering work to make sense of management behaviour and development in large organisations in the USA (e.g. Chandler, 1962). The basic premise was that effective management of large organisations required the introduction of hierarchies, and that meaningful control of these required “military” style direction from the top i.e. strategic plans. Chandler’s ideas were further developed during the 1970s by many, including Andrews (1971), Chandler (1977), and Porter (1980). Key conceptual features of the rationalist approach include the beliefs that:

- strategy formation and implementation are distinct and separable (Mintzberg, 1990);
- organisations behave predictably and rationally (Johnson and Scholes, 2002);
- strategy formation and implementation activities can be both deliberate and rational (Segal-Horn, 2003); and
- strategy formation and planning is the remit of top management (Harfield, 1989).

Viable long-range strategic plans, based on systematic thinking and reasoning, can be developed for organisations and using rational analysis tools and techniques (Platts and Gregory, 1990).

Rationalist methods are central to modern management education, and widely deployed: surveys in 2000 and 2002 each identified strategic planning as the most popular of management tools, being used in 90 per cent of organisations (Rigby, 2001, 2003). However, the utility of the rationalist approach has been contested on several grounds:

- That the low cost, timely and accurate data upon which rational approaches rely is usually either not available and or not accessible (e.g. Simon, 1982; Mintzberg, 1990). Also, Pidd (2003) argues that even where the necessary data is available, the simplifications implicit in rationalist tools are difficult to get right, especially in complex situations.
- That the separation of strategy formation from implementation can lead to inflexible and inappropriate activity within organisations, in part due to problems of communication and control (Mintzberg, 1990; Bungay and Goold, 1991; Muralidharan, 1997).
- That rationalist methods are poor at accommodating unexpected events and inevitable environmental change, and this failing may explain why planned strategies are rarely realised as intended (Quinn, 1980). Clearly, as Mintzberg and Waters (1985) argue, there is a need for strategic plans to be responsive to internal and external change.

To add further weight to the identified weaknesses, rational approaches have been shown on occasion to fail completely to deliver tangible benefits: Swissair (Knorr and Arndt, 2003), Eurotunnel (Times Online, 2004), Freddie Laker (Banks, 1982), Ford Edsel (Ervin, 2002) are all examples of organisations' pursuit of rationalist strategies has led to harmful economic consequences, including bankruptcy. In summary, rational approaches and analysis, while useful, do not represent a complete solution. Strategy is too complex.

Alternatives to rationalism

Attempts to collate common views about the alternatives to rationalist approaches to strategy have been made by several authors, including Chaffee (1985), Whittington (1993), Genus (1995) and Johnson and Scholes (2002). This paper builds on Chaffee's (1985) categorisation of adaptive and interpretive strategy, in which he describes adaptive strategy as a continuous process of strategy formation and implementation that is reactive, emergent, and constantly adjusting to the environment. As an alternative to Rationalism, the adaptive element of Chaffee's categorisation has similar characteristics to the alternatives advanced by others for example Mintzberg's (1987) "crafting" of strategy or Quinn's (1980) logical incrementalism. Common features of adaptive strategy formation include:

- The active monitoring the environment with a view to triggering strategic changes continuously and simultaneously (Williamson, 1991).
- Strategy viewed as emergent, rather than deliberate and rational (Mintzberg, 1987).
- The belief that although strategy is less centralised, "top management" still need to assume overall responsibility for guiding development (Chaffee, 1985).
- The view that traditional planning is seen as less relevant due to the complexity of the environment. Organisations learn and respond in real time rather than undertake excessive formal planning (Johnson and Scholes, 2002; Segal-Horn, 2003).

Interpretive strategy formation and implementation assumes that reality is socially constructed, strategy developing through a series of social contracts between individuals (Keeley, 1980). The interpretive model also emphasises the importance of symbolism and culture (Chaffee, 1985). The main differences in the interpretive and rational approaches are that:

- organisational reality is incoherent (Chaffee, 1985);
- strategy is not solely a top management concern (Mintzberg, 1990); and
- motivation, not information, is the critical factor in achieving adequate strategic behaviour (Chaffee, 1985).

Although categorised as being distinct, in reality neither approach exists in isolation. Despite the limitations, management teams are unlikely to make strategic decisions without any information or analysis. However, management teams using rational methods are likely to try to mitigate these limitations in an effort to gain confidence in the results so obtained. Unsurprisingly, hybrid approaches have evolved in the light of practical experience (Mintzberg, 1987). Performance management methods represent another hybrid of rational and other approaches. In their original paper, Kaplan and Norton describe the need for what they perceive to be rationally determined strategic

plans to be monitored on a continuous basis, in order to facilitate timely (possibly continuous) intervention by top management, while also improving the clarity of communication about the nature of strategic plans and promoting wider engagement (and so motivation to deliver) with the strategy (Kaplan and Norton, 1996). It is argued that development of strategic performance management systems has been driven primarily by the need to better accommodate adaptive and interpretive characteristics of strategy formation and implementation (Cobbold and Lawrie, 2002).

In this case study, an organisation first approaches the formation and implementation of strategy using strongly rationalist tools, and then subsequently overlays methods with strong adaptive and interpretive attributes: the evaluation of the case aims to find evidence that might illuminate the need for balance between rational and other methods.

Methodology

The paper describes the application of third-generation balanced scorecard design methods within a private sector organisation, using case study methodology. The use of the case study method is appropriate here, as the paper considers the extent to which a “real life context” confirms a theoretical hypothesis (Yin, 2003). This type of method is particularly relevant for the area of performance management research – where there are material challenges involved in creating credible formally controlled experimental tests (Silverman, 2001). In this research, the case method is used to evaluate the relative utility of rational and social decision-making methods used by a management team, through consideration of the impact each method had on managerial behaviour. In evaluating the case, therefore, the main research question considered is the extent to which the characteristic strengths and weaknesses of rational and social decision-making methods can be observed and/or confirmed within the case, and in the light of this finding, what general implications this might have for performance management theory or practice.

Case study

Founded in 1974, Zamil Air Conditioners (ZAC) is a leading manufacturer of air conditioning and air handling systems. ZAC supplies customers in 55 countries through a network of distributors, dealers and regional offices. In 2001, it had turnover of \$182 million. ZAC is owned by Zamil Industrial Investment Company (ZIIC). Within ZIIC, ZAC is an autonomous organisation reporting to ZIIC but responsible for its own strategic direction and choices.

During the 1970s and 1980s ZAC had developed a strong position in its local markets – both in terms of market share and brand strength. Through out this period it faced competition from international rivals such as Carrier (USA) and LG (Korea) and in some countries from small local players. Initially this had not affected its valuable market leading position in the domestic Saudi Arabian market, but by the 1990s this too was threatened. In early 1998, it responded by introduced a new organisational structure based strategic business units (SBUs).

Each SBU has a general manager responsible for all aspects of the unit’s business – including sales, manufacturing, and support functions. A new unit, ZAC business development, has responsibility for pan-organisational planning. In this new structure, overall control resides with the company’s vice president, Abdulla Al-Zamil.

In 2001, ZAC set about developing its first formal strategic plan. The process adopted was designed to reflect “best practice” strategic planning methods, and was

founded upon the development of strongly rational SBU level plans. Each SBU was asked to develop strategic documents outlining its medium to long-term manufacturing and sales plans, linked to a three-year business plan/forecast. The annual targets for sales volumes in these business plans would form the basis of the overall business plan/forecast for ZAC. Likewise, functional directors developed strategies and business plans/forecasts for ZAC internal functions. The vice president personally reviewed each plan with the relevant director. The directors intended to review progress against these plans during their monthly meetings, but in practice the plans were not used: the focus being on the overall financial position of ZAC.

During 2001, the competition in the local air-conditioning market intensified: the business plans were not delivering the competitive response required. The directors agreed that ZAC needed to think and manage more strategically at a corporate level, and in late 2001 the business development director developed a first ever corporate strategic plan for ZAC. His 25-page document, comprising a classical strategic analysis of opportunities and threats facing ZAC and identified several possible strategic alternatives. Key components of the strategy were to improve operational efficiency and quality, source globally, enhance customer relationships, focus on being innovative and to grow the organisation, as shown in the following excerpt from the original ZAC strategy document:

Fundamentally and strategically hone down on the process of developing a successful value stream and functions to uniquely compete in the market place.

1. Improve product offering through quality/reliability measures and continuous-improvement measures.
2. Increase market share through partnering, M&A and strategic alliances.
3. Reduce cost of operation through outsourcing and increased volume.
4. Consolidate and strengthen brand equity through consolidation with massive re-positioning and communication efforts.

The business development director and the vice president agreed that there was also a need to strengthen ZAC's ability to manage the implementation of the strategy. But before this further development could occur, a more basic issue needed to be addressed: the business development director's plan contained robust goals and was based on rational analysis of the available market and product data, but it was rejected by the other ZAC directors. To resolve this, ZAC's thought to appoint external consultants to assess ZAC's operations and markets, and confirm the validity of the strategic plan. The same consultants would then also develop of a corporate balanced scorecard to address the strategy implementation issue. At the end of 2001, ZAC started the process of securing proposals from external consultancies about how they might carry out this work.

One of the proposals received, written by 2GC Active Management (2GC), raised doubts over the likely success of the externally driven approach called for by ZAC. The 2GC proposal highlighted the need for the management team need to reach an informed consensus concerning strategic choices, something unlikely to happen as a direct consequence an externally driven repeat of the strategic analysis already carried out by ZAC, or how this alone would trigger agreement between the directors on strategic direction. 2GC argued that this agreement could only be realised following a structured process of discussion, debate, negotiation and resolution. Third-generation balanced-scorecard techniques had emerged previously (see Cobbold and Lawrie,

2002; Shulver and Antarkar, 2001) in part to address the need to forge consensus during balanced scorecard system design, and so 2GC proposed a single project based on third-generation balanced scorecard design techniques to validate the strategy and facilitate the building of a corporate balanced scorecard.

In September 2002 ZAC awarded a contract for external support to 2GC, with the aim of:

- validating of the 2001 vision and strategy;
- facilitating a consensus within the senior management team concerning ZAC strategic priorities and the actions needed to achieve them;
- developing of a balanced scorecard for the directors group that could be used to monitor progress made toward the achievement of the selected strategic goals, and inform top management of areas of interest or concern that arise; and
- creating a “roadmap” outlining how the ZAC organisation could align itself with the newly adopted strategy.

Description of the ZAC balanced-scorecard project

The project had two phases. The first concerned the development of consensus among the directors and senior managers of ZAC concerning its strategic goals, the actions needed to deliver these goals, and the design of the balanced scorecard that would subsequently be used to report on corporate progress against these goals. The second concerned the communication of the content of this consensus within ZAC, and the physical instantiation of the balanced scorecard as a working tool to be used by ZAC's management. This paper concentrates primarily on describing the design phase of the project.

The design phase occurred between October and December 2002, and involved the creation of four tangible elements, based on the previously described characteristic components of a third-generation balanced scorecard (Cobbold and Lawrie, 2002). These elements comprised:

- (1) *A destination statement.* A textual description of the organisation at some future date, assuming the current strategic goals adopted by the management team were successfully achieved. In ZAC's case, the destination statement consisted of about sixty distinct descriptive statements grouped four headings: financial and market characteristics, external relationships, activities and processes and organisation and culture. The document described how the organisation would look in 2008 (i.e. five years ahead), and contained a mixture of qualitative and quantitative statements.
- (2) *A strategic linkage model.* A set of short and medium term objectives organised in a cause and effect diagram known as a strategic linkage model. A draft is shown in Figure 1. The objectives were grouped according to whether they related to activities to be carried out by ZAC (activity objectives), or hoped for consequences of these (or other) action (outcome objectives). The definition of each objective was recorded in some detail using a common form that captured attributes such as name, description, owner, and likely measures of achievement.
- (3) *Measures and targets.* For each objective ZAC chose performance measures that would inform the management team whether or not the objective was being achieved. As with objectives, each measure was described in some detail using

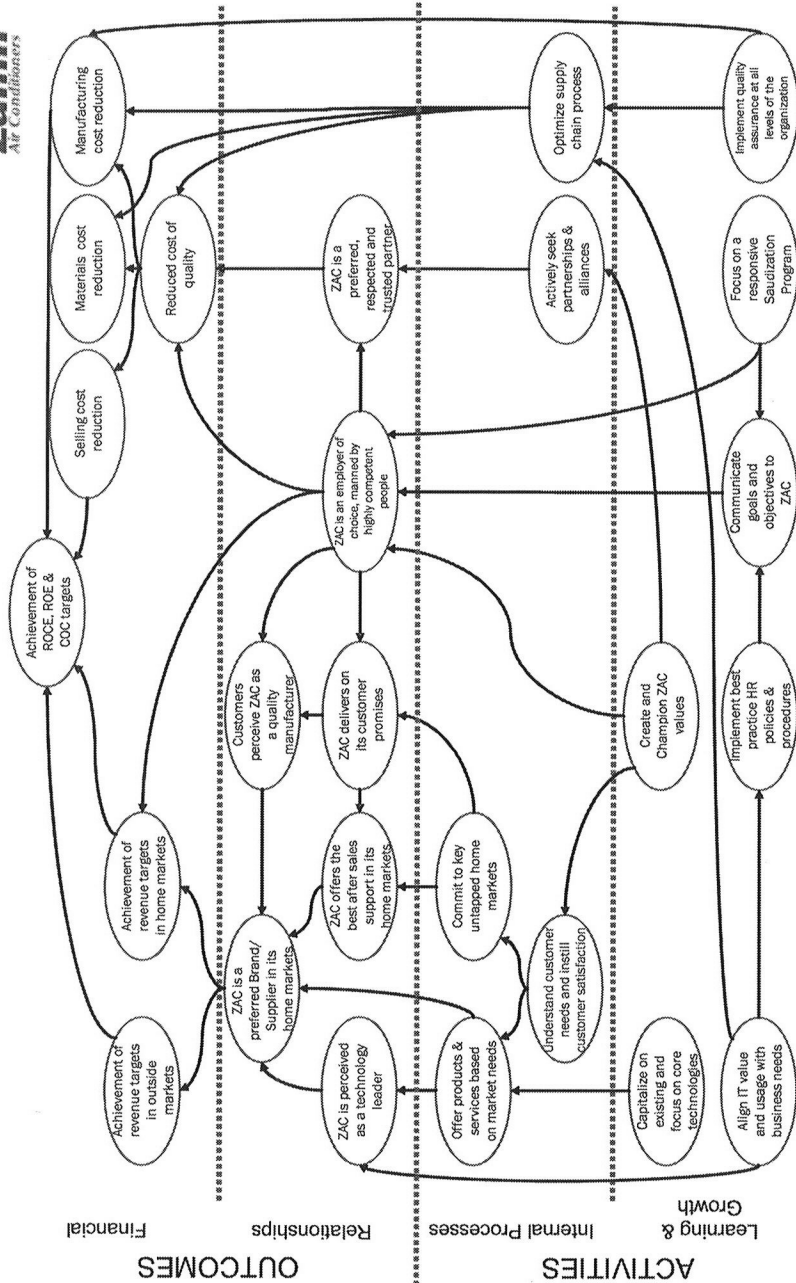


Figure 1. ZAC strategic linkage model (draft)

a standard form that captured a range of information about the measure. A key requirement was for a targets value to be defined concurrent with the selection of the measure that would be used to assess the degree of achievement of the underlying objective.

- (4) *Initiatives.* A number of projects were already running with ZAC at the time this work was carried out, and during the design process the need for several more was noted. The management team chose the most important for the achievement of the agreed strategic goals, formally described these projects (and their required outcomes) and mapped each to one or more of the strategic objectives chosen earlier.

Within the design phase of the project, three types of activity occurred, in this sequence:

- (1) The consultant team worked to understand better the current position of ZAC, and the starting viewpoints of the various members of the management team.
- (2) The management team met to build consensus around a common view of ZAC's strategic priorities, which was then articulated in the Destination Statement document.
- (3) During a series of long decision workshops/working sessions, the management team agreed on the remaining components of the ZAC balanced scorecard – defining objectives, measures and targets, and making choices about priority initiatives.

Throughout this work, a strong emphasis was placed on dialogue and interaction. In part this was to ensure transparency; the design phase used methods designed to ensure that all those who participated were clear about how the end-point described had been reached. This type of interactive workshop method, during which the management team itself created the ZAC balanced scorecard, also engendered strong levels of ownership of the finished work. The workshop methods were purposefully chosen to be “low tech” – usually nothing more complex than a room to work in equipped with empty walls, pens, and paper. This approach ensured both that the risk of the necessary equipment failing to work was small, while ensuring that the workshop participants would likely understand how the workshop methods “worked”. In total, the management team attended seven working sessions across the course of the design phase, with approximately half this time being used to reach consensus on the overall strategic direction for ZAC, and the majority of the remainder was used up deciding upon the objectives, measures and targets. In total, the management team spent about 60 hours working together on the balanced scorecard: about half a day a week on average. Once the project was complete, the senior management team changed the executive calendar to provide for quarterly reviews of the balanced scorecard, and set in motion actions to collect and report the required data on a timely basis. These meetings successfully shifted the focus of attention to progress against strategic priorities.

Discussion

The need for ZAC to invest in a specific project to confirm the validity of the original rationalist strategy with the directors of ZAC itself appears to confirm some of the concerns cited by critics of the rationalist approach. Nevertheless, it is appropriate to look more closely at the case evidence to evaluate the research question under

consideration, i.e. the extent to which the characteristic strengths and weaknesses of rational and social decision-making methods can be observed and/or confirmed within the case.

It is interesting to note is the extent to which the outputs of this process align with the strategic goals set out in the original plan developed by the business development director. Operational efficiency and quality, global sourcing, customer relationships and organisational growth, all elements of the original strategy were still very much part of the central themes of the new strategy. Efficiency, quality and customer focus are the central themes of the SLM and growth is the underpinning requirement in the destination statement. The process of consensus building did not appear to introduce different strategies to those identified during the rational analysis process. But there was a noticeable difference in attitude toward the strategy before and after the balanced scorecard design project:

Involving colleagues in decisions within my area of responsibility generated useful contributions and new ideas that I wouldn't have thought about myself (Moeen Hassan, SBU GM).

ZAC has solved problems during only three workshops, which they had discussed and argued over for the past three years (Robert Link, SBU GM).

But perhaps the most tangible evidence is the clear change in management behaviour that resulted from the second project, and the strong suggestion from those involved that policy changes resulting from the more strategically focused management meetings that occur now:

The type of thinking and the business language has developed and become more strategic. Rather than talking about just financial performance and adhoc agenda items we are using a more systematic process of plan-do-check-act (Khalil Issa, ZAC business development director).

The case shows that while it is possible to create a technically "accurate" strategic plan using traditional rationalist methods, other processes are needed to encourage the understanding and acceptance of this plan. But while the case illustrates that in this instance, methods consistent with adaptive and interpretive theories of strategy formation can be used to trigger this understanding and acceptance, the case does not provide useful evidence concerning which elements of these theories were the most important in achieving this outcome.

In terms of wider observations in the light of this case report, it is clear that the availability of additional case studies of this type will make generalisation easier: something 2GC is addressing through current research. But also, we observe that more work could usefully be applied to better characterise which attributes of interpretive or adaptive strategy approaches are most important in creating conditions of confidence within management teams.

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