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Assessment of strategy formulation: how to ensure quality in process and outcome

Assessment of
strategy
formulation

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Abstract

Purpose – Today, industrial firms need to cope with competitive challenges related to innovation, dynamic responses, knowledge sharing, etc. by means of effective and dynamic strategy formulation. In light of these challenges, the purpose of the paper is to present and evaluate an assessment tool for strategy formulation processes that ensures high quality in process and outcome.

Design/methodology/approach – A literature review was conducted to identify success criteria for strategy formulation processes. Then, a simple questionnaire and assessment tool was developed and used to test the validity of the success criteria through face-to-face interviews with 46 managers, workshops involving 40 managers, and two in-depth case studies. The success criteria have been slightly modified due to the empirical results, to yield the assessment tool.

Findings – The resulting assessment tool integrates three generic approaches to strategy assessment, namely the goal-centred, comparative and improvement approaches, as found in the literature. Furthermore, it encompasses three phases of strategy formulation processes: strategic thinking, strategic planning and embedding of strategy. The tool reflects that the different approaches to assessment are relevant in all phases of strategy formulation, but weighted differently. Managerial perceptions expressed in particular that learning from experience should be accommodated in strategic thinking. The strategic planning stage is mainly assessed based on the goal-centred approach, but cases and managerial perceptions indicate that the need for accurate and detailed plans might be overrated in the literature, as implementation relies heavily on continuous improvement and empowerment. Concerning embedding, key aspects relate both to the goal-centred and improvement approaches, while the comparative approach appears to play a more modest role, related to monitoring external changes and enabling the organization to respond adaptively.

Research limitations/implications – The proposed assessment tool is general in the sense that it does not take into account relationships between the strategic context and the assessment of strategy formulation processes. The investigated cases indicate that contingencies matter, and call for further investigation of particular applications. The present research maintained a focus on formal and relatively top-down-oriented strategy formulation processes.

Practical implications – The integration of three different strategy assessment approaches has been made to obtain a holistic, multi-perspective reflection on strategy formulation. Such reflection is assumed to enable managers to proactively evaluate the potential outcome and performance of their chosen strategy.

Originality/value – The originality of the paper lies in the combination and compilation of multiple approaches to strategy assessment, which draws on a wide range of literature, and in the proactive perspective on strategy assessment. Furthermore, the validity of the proposed assessment tool or checklist is based on multiple sources of empirical evidence.

Keywords Strategy management, Assessment, Strategic planning, Change management

Paper type Research paper



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Introduction

The environmental conditions facing many firms have changed rapidly. Today's global competitive environment is complex, dynamic, and largely unpredictable. To deal with this unprecedented level of change, a lot of thinking has gone into the issue of how strategies are best formulated. Strategic management is about managing the future, and effective strategy formulation is crucial, as it directs the attention and actions of an organisation, even if in some cases actual implemented strategy can be very different from what was initially intended, planned or thought. The assessment of strategy formulation processes becomes crucial for practitioners and researchers alike in order to conduct and evaluate different formulation processes.

Judging from the literature, formulation of a particular strategy can only be examined reactively, i.e. by examining the strategy outcome after a period of time (Eden and Ackerman, 1993; Ramanujam *et al.*, 1986). However, practitioners need greater confidence that their chosen strategic management decisions are going to lead to successful results. The proactive assessment of strategic management remains a valid problem for both researchers and practitioners. In the light of this discussion, the purpose of this paper is to build and demonstrate a tool for the proactive assessment of strategy formulation processes that ensures high quality in process and outcome.

The paper is structured as follows: following this introduction, the research question is underpinned by reviewing existing contributions concerning strategic management and particularly strategy assessment approaches. Four generic approaches to strategy assessment are identified, namely a goal-centred, a comparative, a normative and an improvement approach. Then, the methodology is outlined. An assessment tool is proposed based on further literature review, where we identify and apply three dimensions of strategy formulation processes: strategic planning, strategic thinking and embedding. The assessment tool is then validated and refined on the basis of empirical evidence.

Strategic management assessment

Strategic management has been an area of sustained interest amongst industrial practitioners and researchers. Rumelt (1982) and Andrews (1987) have proposed criteria for evaluating overall company strategy. Hayes and Wheelwright (1984) and Slack (1991) suggest more specific criteria for evaluating functional strategy (i.e. operations strategy). A number of studies provide complete reviews and critique of this literature (Ramanujam *et al.*, 1986; Raghunathan and Raghunathan, 1994; Segars *et al.*, 1998; Segars and Grover, 1999). The general conclusion of these studies allocates the assessment of strategic management into four generic approaches, which are the:

- (1) goal-centred approach;
- (2) comparative approach;
- (3) normative approach; and
- (4) improvement approach.

Table I provides a critical comparison of the four different approaches to assessment of strategic management.

Many researchers have focused on only one approach, while just a few have combined approaches. Ramanujam *et al.* (1986) used a combination of the goal-centred, comparative and improvement approaches to develop a planning system success

	Aim	Answers
Goal-centred approach	Assess the degree of attainment in relation to targets	To what extent are the multiple objectives of planning fulfilled?
Comparative approach	Compares the effectiveness of a particular company with other companies	How does our company performance compare against similar companies?
Normative approach	Compares to "standards of the field" rather than the unique planning goals of the organisation	How does our company's performance compare against that of a theoretically ideal system?
Improvement approach	Assess how the strategy has evolved or adapted over time	How has the strategy adapted to changing circumstances?

Table I.
Strategic management
assessment tools

Source: Compiled from Raghunathan and Raghunathan (1994) and Seager *et al.* (1999)

model. Development of this planning system was the first systematic effort to construct a valid measurement method for strategy assessment. The criteria included for evaluating the effectiveness of strategic management were:

- Fulfilment of key planning objectives (goal-centred approach) – predicting future trends, evaluating alternatives, facilitating learning, enhancing management development and improving short- and long-term performance.
- Performance relative to competition (comparative approach) – growth in sales, growth in earnings, changes in market share and return on investment.
- Satisfaction with planning systems (improvement approach).

Platts *et al.* (1996) applied similar criteria on a functional (manufacturing) level, using a goal-centred and improvement approach. Platts *et al.* (1996), aimed to evaluate the process rather than the outcome, in order to remove as many extraneous effects as possible. They demonstrated a way of testing and assessing manufacturing strategy formulation processes based on action research in which the researchers acted as facilitators, applying a specific strategy formulation process in a number of companies. In each case, the process was assessed in retrospect. Three overall success criteria were used, namely feasibility, usability and utility.

Based on this review of assessment approaches, we find a need for an integrated and proactive approach to strategy assessment. We find that the approaches listed in Table I are reactive in the sense that they evaluate strategic management in retrospect. They evaluate the performance of a company in order to determine the appropriateness of current strategies. While this is certainly valuable, we propose to supplement this with a proactive approach, assessing strategy formulation processes rather than the resulting performance. We assume, basically, that an effective strategy formulation process leads to a good strategy. The target of this paper is, therefore, to outline indicators of an effective strategy formulation process, see Figure 1.

It is assumed that an effective assessment process should accommodate all four approaches as listed in Table I, and that a positive assessment of the formulation process should correspond with a positive performance assessment after the strategy is realised. Business performance is the ultimate goal, and the indicators of a good strategy formulation process should increase the likelihood of strategic success. Even

though we find that all four approaches should be accommodated, the normative and comparative approaches will be perceived as one perspective in the following, as they both rely on comparative measures.

Briefly, the above discussion leads to the conclusion that a particular assessment of the value of strategy formulation processes should recognise their multidimensional nature and plurality of approaches that can be used to assess their worth. Therefore, the present paper focuses on the following research questions:

RQ1. How can the different approaches to strategic assessment be used and integrated into an assessment tool for proactive assessment of the success (or effectiveness) of strategy formulation processes?

RQ2. To what extent do the different approaches contribute to different phases of strategy formulation processes, and to strategic performance?

Research design

To answer the above research questions, analysis and empirical investigations have been conducted as follows.

Literature review

An in-depth review of the literature covering strategic management, including strategic thinking, strategic planning, operations strategy, information system strategy performance, strategy formulation processes and assessment of strategy formulation processes was conducted. This review led to the selection of key conclusions which were grouped and reformulated as success criteria. This consolidation formed the prototype of the assessment tool. The review was conducted so as to represent the three main approaches to assessment discussed above.

Managerial perceptions

To validate and refine the first prototype, two empirically-based tests were carried out.

First, a structured, closed-ended questionnaire was devised to validate the significance of each success criterion of the assessment tool. The questionnaire reflected the prototype tool and asked around 65 managers from medium to large size (more than 100 employees) manufacturing companies from different industries (including metal, electronic, labelling, machinery and so on) to indicate the extent to which they agreed with the significance of each point. Most of the managers were the managing director of the company or responsible from the operations (operations director). We used a judgement sampling (purposive sampling) method, sample respondents were selected based on the underlying assumption that the opinions of a group of managers from manufacturing companies are representative of the target

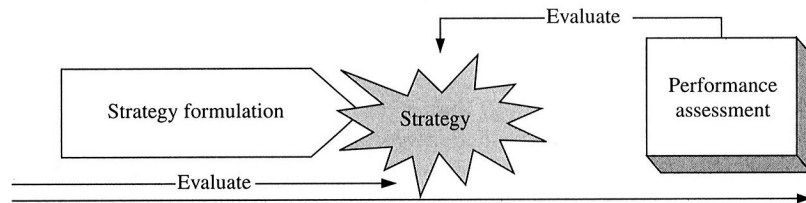


Figure 1.
Proactive and reactive
assessment of strategy

group. The questionnaire was completed in detailed face-to-face interviews with 30 managers from different British companies and 16 managers from the workshop company. The questionnaire asked the respondents to select one of three options: agree, disagree and unsure. In Tables II and III, the percentage of respondents who agreed with each success criterion has been indicated.

Second, three workshops involving a total of 40 managers from a British subsidiary of an international company were held. This international company is the world's second largest producer of primary aluminium, a global producer of value-added engineered products and composites. Participant managers in the workshops were responsible for different functions/business units (e.g. sales, marketing, operations, supply chain, business, etc.) in the company. The objective of the workshops was to get these managers to use selected strategic management process approaches (e.g. PROPHECY which was developed by Acur and Bititci (2003, 2004)) in a controlled (i.e. classroom) environment and measure the potential value of the approaches with respect to criteria they deemed important. PROPHECY was developed to facilitate the development of better understanding of the effect of managing strategy through business processes. In the workshops, managers attempted to apply the strategy formulation processes in their own organisations, and they were subsequently asked how they thought the processes should be evaluated. In this paper, we do not aim to facilitate the strategy development process in a company. Rather we aim to assess the strategy formulation process and also develop and refine our assessment tool. Therefore, as opposed to the guided closed-ended questionnaire, these managers were to use their own wording, and the content was matched with the assessment tool afterwards. Not surprisingly, a lot of the requirements specified by managers were closely related to the statements in the assessment tool, which had been culled from the literature. The managers' requirements are summarised in Tables II and III.

Case evaluation

Finally, the assessment tool was evaluated through in-depth case studies. The case study was based on a detailed case protocol. The case study methodology was chosen in order to:

- gain a broad evaluation of strategy formulation process assessment (effectiveness) by collecting and triangulating necessary qualitative data (Mentzer and Flint, 1997; Naslund, 2002); and
- obtain an in-depth understanding of the success (or effectiveness) of the strategy formulation processes (Yin, 1994).

We believe that two case descriptions serve to illustrate and exemplify the criteria, and to show how the assessment tool leads to a holistic evaluation of strategy formulation processes.

Two strategy formulation processes were observed through participant observation, and it was evaluated whether the assessment tool would have foreseen the difficulties related to each process. The case studies were carried out in two independent companies with different cultural and market characteristics. Researchers have been involved in the strategy formulation process for a period of 8 months (in the Scottish firm) and one year (in the Danish firm). The convenience sampling method was used in which companies are selected based on the convenience of access of the researchers. Detailed case notes were kept to ensure that all relevant observations, discussions and

Table II.
Success criteria for
strategy formulation
processes (strategic
thinking and planning)

The strategy formulation could be judged a success if it facilitates	References	Goal-centred	Comparative Improvement	Questionnaire level of agreement (per cent)	Workshops statement
<i>Strategic thinking</i>					
1.1...development of awareness, not only of the industry in which you operate, but also of competitors	Markides (1999), Feurer <i>et al.</i> (1995), Kaplan and Norton (2001) and Goodman and Lewless (1994)	✓		76	Awareness, comfort
1.2...self-criticism, i.e. strengths, weaknesses, opportunities and threats	Rumelt (1982), Porter (1996), Heracleous (1998) and Mintzberg <i>et al.</i> (1999)	✓		77	Benchmark and review
1.3...awareness of strengths & opportunities to exploit them	Rumelt (1982), Porter (1996), Heracleous (1998) and Mintzberg <i>et al.</i> (1999)	✓		88	Awareness, comfort
1.4...awareness of key problem areas	Sabherwal and King (1995) and Leaderer and Sethi (1996)	✓		88	Awareness, comfort
1.5...decision-making through effective and adaptive process	Segars <i>et al.</i> (1998), Sabherwal and King (1995) and Leaderer and Sethi (1996)		✓	69	Flexible
1.6...the maintenance and understanding of changing organisational processes and procedures	Schroeder <i>et al.</i> (1986), Horte <i>et al.</i> (1987), Digman (1990) and Hull and Wu (1997)		✓	74	Focus on processes
1.7... understanding of the strategic priorities of top management	Digman (1990) and Feurer <i>et al.</i> (1995)	✓		42	

(continued)

The strategy formulation could be judged a success if it facilitates	References	Goal-centred	Comparative Improvement	Questionnaire level of agreement (per cent)	Workshops statement
1.8... learning from experience	Reich and Benbasat (1996), Leaderer and Sethi (1996), Platts <i>et al.</i> (1998) and Babich (1999)		✓	96	Monitorable, testable and review
1.9... confidence that the business is more successful as a result	Pearce and Robinson (1988), Ramanujam <i>et al.</i> (1986), Goodman and Lewless (1994) and Kaplan and Norton (2001)		✓	72	Achievable and realistic
<i>Strategic planning</i>					
2.1... redesign of the goal of the company	Segars <i>et al.</i> (1998), Feurer <i>et al.</i> (1995) and Acur <i>et al.</i> (2003)	✓		80	Clear and specific
2.2... development of a good document, e.g. accurate, simple to understand	Andrews (1987), Pearce and Robinson (1988), Feurer <i>et al.</i> (1995), Babich (1999) and Acur <i>et al.</i> (2003)	✓		76	Understandable
2.3... development of a clear plan with clear responsibilities	Andrews (1987), Segars <i>et al.</i> (1998), Chakravarthy (1987), Earl (1993) and Dutton and Duncan (1987)	✓		84	Clear and specific
2.4... development of the detailed plan	Andrews (1987), Segars <i>et al.</i> (1998), Chakravarthy (1987) and Earl (1993)	✓		62	Measurable, clear and specific

Table II.

Table III.
Success criteria for
strategy formulation
processes (embedding)

The strategy formulation could be judged a success if it facilitates	References	Goal-centred	Comparative	Improvement	Questionnaire level of agreement (per cent)	Workshops statement
<i>Embedding</i>						
3.1... a shared understanding of strategic objectives and priorities for all levels	Digman (1990) and Pearce and Robinson (1988)	✓			96	Clear direction
3.2... education of all people on the importance of company strategy	Feaurer (1995), Flood and Jackson (1981) and Acur and Bititci (2003)	✓		✓	68	
3.3... co-ordination and flow of objectives, measures and actions from high level to low	Feaurer (1995), Flood and Jackson (1981) and Bititci <i>et al.</i> (1999)	✓			96	Consider all levels of the organisation, deploy business objectives to business processes
3.4... achieving a general level of agreement	Huber and Power (1985), Ramanujam <i>et al.</i> (1986), Platts <i>et al.</i> (1996), Fahey (1998), Godet (1998) and Segars <i>et al.</i> (1998)	✓			81	Commitment from different levels, ownership at all levels
3.5... open lines of communications	Huber and Power (1985), Ramanujam <i>et al.</i> (1986), Platts <i>et al.</i> (1996), Fahey (1998), Godet (1998) and Segars <i>et al.</i> (1998)			✓	96	Communicate to workforce
3.6... Involvement of staff in decision-making, taking into account their ideas to let them feel they have a say in their own future	Ramanujam <i>et al.</i> (1986), Platts <i>et al.</i> (1996), Fahey (1998), Godet (1998) and Segars and Grover (1998, 1999)	✓		✓	96	Commitment from different levels, ownership at all levels

(continued)

The strategy formulation could be judged a success if it facilitates	References	Goal-centred	Comparative Improvement	Questionnaire level of agreement (per cent)	Workshops statement
3.7 ... change by motivating people	Huber and Power (1985), Ramanujam <i>et al.</i> (1986), Fahey (1998), Godet (1998) and Segars and Grover (1998, 1999)		✓	92	Communicate to workforce, commitment from different levels
3.8 ... adaptation of technology to help strategic change	Corbett and Van Wassenhove's (1993), Leaderer and Sethi (1996) and Das and Warkentin (1991)	✓	✓	80	
3.9 ... trading-off of strategic choices to optimise business performance	Platts <i>et al.</i> (1996), Feurer <i>et al.</i> (1995), Digman (1990) and Acur and Bititci (2003)	✓	✓	84	Efficiency and effectiveness
3.10 ... effective change management avoiding overlapping and conflicted development	Platts <i>et al.</i> (1996), Feurer <i>et al.</i> (1995) and Digman (1990)		✓	84	

Table III.

comments were recorded. Post intervention analysis, using the case data contained during the strategy formulation and implementation stage, allowed the researchers to draw out the learning points pertinent to each case.

An assessment tool

Taking the previous assessment tools and research approaches into account, the literature review indicates that aspects of both strategic thinking, planning and embedding should be included in a strategy formulation process (Deephouse, 1999; Heracleous, 1998; Segars *et al.*, 1998; Segars and Grover, 1999), and thus also feature in an assessment tool.

Many strategic management approaches at different levels (i.e. business, functional) have been developed using a variety of existing frameworks: Skinner (1969), Mintzberg *et al.* (1999), Hayes and Wheelwright (1984), Hill (1993) and Porter (1980). These existing frameworks are mostly oriented towards strategic planning in the sense that they describe a programmatic, analytical thought process. However, some alternatives to strategic planning have been devised. Often rooted in the work of Mintzberg *et al.* (1999) and others (Quinn, 1977), these have proposed that the innovative characteristics of strategic management make a linear, rational planning process unrealistic and unsuitable for strategy formulation. They advocate strategic thinking, characterised by a creative, divergent thought process.

Strategic thinking and strategic planning are not mutually exclusive approaches to strategy formulation, though that postulate was debated within the strategy community during the 1990s (Mintzberg *et al.*, 1999; Ansoff, 1990). In practice, strategic planning and strategic thinking supplement each other in a number of ways and should be combined to yield a more successful strategy formulation process than either one could do alone (Heracleous, 1998). In addition to these planning and thinking aspects, we find a need to include also what we call embedding of strategy. Embedding concerns the building of a shared understanding, the acceptance of strategic choice throughout the organisation, and thus the establishment of a basis for change. Embedding is described in relation to strategic change and change management in the literature, as it is not content oriented, but has an organisational focus. We have integrated such implementation issues, finding that they too largely affect the success of strategies. In conclusion, we consider strategy formulation processes under three headings: strategic planning, strategic thinking, and embedding (Figure 2).

Under these three headings – thinking, planning, and embedding – an assessment tool consisting of proactive success criteria has been formulated. Implicit in this assessment tool is the assumption that a good process leads to a good outcome and good performance.

Strategic thinking

In looking to shape the future for their businesses, management can no longer create strategy by focusing internally (Markides, 1999; Feurer *et al.*, 1995; Kaplan and Norton, 2001). It is necessary to ensure that changes in the external environment are monitored (so changes in the external environment – the market, technology – are understood) and reflected in the strategy of the organisation (see success criterion 1.1 in Table II).

As mentioned above, Heracleous (1998) concluded that strategic thinking and planning are not alternatives, but supplementary approaches to strategy formulation. In extension of this argument, Heracleous (1998) pointed out that “whereas Mintzberg’s

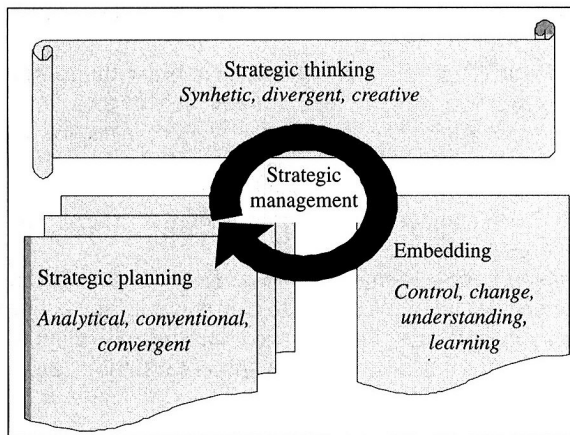


Figure 2.
Phases of strategy
formulation processes

view of strategy is more process focused (how strategies are arrived at in organisations), Porter's (1996) view of strategy is more positioning focused (what constitutes a sustainable strategic positioning in terms of particular organisational arrangements)". These two different perspectives suggest correspondingly different thinking modes: Mintzberg *et al.* (1999) emphasising the creative and synthetic, Porter (1996) emphasising the convergent and analytical. This argument makes the essential point that creative strategies resulting from strategic thinking still have to be discovered through convergent and analytical thought (strategic planning). Therefore, the strategy formulation process should encourage the creation and/or maintenance of a competitive advantage in the domain of strategy formulation (Rumelt, 1982). It can be concluded that the strategy formulation process should encourage innovation by identifying business opportunities, strengths and weaknesses for managers, thereby making them creative (see success criteria 1.2, 1.3 in Table II) (Rumelt, 1982; Porter, 1980; Heracleous, 1998; Mintzberg *et al.*, 1999).

Available approaches to strategy formulation (Kaplan and Norton, 2001) consider strategy as a driver of internal performance. They state that managers whose organisations are confronting strategy must first evaluate their internal competencies and then seek to apply these competencies successfully in the external environment. Some researchers (Schroeder *et al.*, 1986; Horte *et al.*, 1987; Digman, 1990; Hull and Wu, 1997) emphasise the importance of understanding organisational processes and procedures and determining what to maintain and what to change (see success criterion 1.6 in Table II).

In the strategy formulation process, decision-making should be done in an effective and adaptive manner, thus allowing the decision makers to learn throughout the process (Segars *et al.*, 1998; Sabherwal and King, 1995; Leaderer and Sethi, 1996) (see success criterion 1.5 in Table II). The planning process begins with ideas, key problem areas (see success criterion 1.6), environment changes and proposals, etc. submitted by operational and functional managers as input to the overall plan. Segars *et al.* (1998) define the role of top management as "that of overseer or gatekeeper, reconciling the proposals of various organisational subunits into an overall plan for the organisation". Some researchers (Reich and Benbasat, 1996; Leaderer and Sethi, 1996) also indicate

that top management should use their experience in a learning loop extending throughout the organisation. This learning process helps to optimise the company's financial status, competitive criteria and operations in order that it may be successful in the future (Platts *et al.*, 1996; Babich, 1999; Kaplan and Norton, 2001). Therefore, the strategy formulation process should ensure that previous experiences are captured and used to formulate future strategies (see success criterion 1.8). In other words, strategic thinking should be carried out with the strategic priorities of top management in mind (see success criterion 1.7) if managers are to become more confident that the business is more successful as a result.

Pearce and Robinson (1988), Ramanujam *et al.* (1986) and Goodman and Lewless (1994) observed that people can only commit to a strategy if they believe in it. In order to believe in a strategy, people must be convinced that they will achieve their business goals as a result of pursuing this strategy (see success criterion 1.9).

Strategic planning

The strategy formulation process should gather necessary information and, if necessary, also redesign the company's goals and reconsider strategic issues (Segars *et al.*, 1998) (see success criterion 2.1 in Table II). Strategic planning concerns delegation of responsibilities and authority for strategy implementation; i.e. the roles played by the managers (Segars *et al.*, 1998; Chakravarthy, 1987; Earl, 1993; Dutton and Duncan, 1987) (see success criterion 2.5). Highly formalised strategy is characterised by written action plans, objectives, and procedures. Different approaches (Andrews, 1987; Pearce and Robinson, 1988; Feurer *et al.*, 1995; Babich, 1999) to the creation of strategy performance highlight the importance of a clear and documented plan (see success criteria 2.5 and 2.4). Written documents help to structure strategic direction and implementation, formalising tools and techniques for the initiation of change (Segars *et al.*, 1998). Hence, to achieve acceptance and commitment it is critical that the resultant strategy document is unambiguous and that it contains detailed plans and responsibility delegation for the action it describes (see success criteria 2.3 and 2.4 in Table II).

In the business strategy literature, researchers have devoted considerable energy to explaining how the formalisation of strategies affects companies' strategic actions and decisions. The importance of companies having a clear, unambiguous strategy backed up by sufficiently detailed action plans is widely acknowledged. However, very few empirical studies have addressed formalisation of manufacturing strategy. We found only four studies of the content of manufacturing strategy, which addressed the formality of action plans specifically. Anderson *et al.* (1991) compared the degree of formality in the business and manufacturing strategies of 53 executives. Their conclusion was that manufacturing strategy was generally less formalised than business strategies. Schroeder *et al.* (1986) studied how manufacturing strategy is defined in practice, touching on methods by which to identify strategies and on the content elements of manufacturing strategies. Although there is evidence in the form of concrete objectives and formally stated policies that manufacturing strategies are more formally developed than had been previously indicated in the literature, there is still room for more research on the degree to which strategies are understood and documented. Tunalv (1990) concluded that companies with a formalised manufacturing strategy tend to have a more decentralised structure, which enables them to effectively communicate goals to all organisational levels and allows for the

planning of longer-term goals as compared to organisations with informal manufacturing strategy (see success criteria 2.2, 2.3 in Table II).

Embedding

Digman (1990) and Pearce and Robinson (1988) showed that as the competitive environment becomes more turbulent, firms can be expected to rely not only on their corporate strategies but also on their financial, R&D, and manufacturing strategies; i.e. to consider their different markets and resources and capabilities, etc. Being aware of relationships like these can help managers to manipulate operational and market attributes as well as lead all levels to a shared understanding of strategic objectives and priorities (see success criterion 3.1 in Table III). This relationship gives a complete picture of the status and direction of the company in terms of business – profitability, growth, market and operational – objectives. In addition, it provides appropriate information for each level of the organisation (see success criterion 3.3). In order to view a whole organisation as a single proactive system, the business objectives and actions should be deployed to all levels (Feurer *et al.*, 1995; Flood and Jackson, 1991; Acur and Bititci, 2003). In addition, each personnel level in the company (e.g. supervisors, managers, etc.) should be educated about the importance of company strategy (see success criterion 3.2 in Table III). Successful strategy formulation should lead key actors to act as a team, which is prepared, committed and motivated to do the job of implementing new strategy (Godet, 1998) (see success criterion 3.7). Staff involvement and open lines of communication are key prerequisites for achieving such commitment (Huber and Power, 1985; Ramanujam *et al.*, 1986; Platts *et al.*, 1996; Fahey, 1998; Godet, 1998; Segars *et al.*, 1998; Segars and Grover, 1999) (see success criteria 3.4, 3.5, 3.6 in Table III).

Corbett and Van Wassenhove (1993) found that as environmental dynamism increased, successful firms reacted by focusing on fewer dimensions of competence and competitiveness for their business. The strategy planning process should include formulating characteristics that will alert managers to changing organisational and environmental conditions (e.g. technology changes) which may require changes in strategy (see success criterion 3.8 in Table III). Other writings on strategy (Platts *et al.*, 1996; Feuerer *et al.*, 1995; Digman, 1990) have revolved around these trade-offs between the various dimensions. As the firm might use the same employees, resources and capabilities for planning strategies and changes, it is necessary to have effective change management. The change management should identify and eliminate (if possible) any conflicts between the company's objectives/strategies to optimise business performance and avoid overlapping and conflicting development (see success criteria 3.9 and 3.10 in Table III).

Results: analysis of empirical evidence

In this section, the empirical evidence is analysed; i.e. the managerial perceptions and cases are evaluated. The initial part of this section (managerial perceptions) answers our first research question, "How can three approaches to strategic management assessment be used and integrated into an assessment tool for proactive assessment of the success (or effectiveness) of strategy formulation processes". To answer this research question, we formulated the assessment tool which was presented in Tables II and III. Here, the three strategic assessment approaches were integrated by identifying criteria in detail based on

a literature review and the workshops. It was found useful to assess strategy formulation under three headings, namely strategic thinking, strategic planning and embedding. The second part of the results tries to illustrate how the assessment tool can be used in a company during the strategy formulation process. As such, the data presented in Tables II and III partly provide an answer to the second research question: "To what extent do the three approaches contribute to different phases of strategy formulation processes?" Two cases illustrate the linkages to the phases of the strategy formulation process.

Managerial perceptions

Tables II and III present the results from the questionnaire and from the three workshops. In general, respondents agreed with most success criteria; only five success criteria were agreed upon by less than 70 per cent of respondents, and ten were agreed upon by less than 80 per cent. The highest-ranking success criteria from a managerial point of view appear to be whether:

- the proposed strategic decisions are practical, experience based and acceptable to all levels of the organisation (criterion 1.8, Table II, criterion 3.1, Table III, 96 per cent agreement);
- co-ordination and flow of objectives, measures and actions are sufficiently structured to realise the proposed strategy (criterion 3.3, Table III, 96 per cent agreement); and
- there is involvement of staff in decision-making and open lines of communication between different levels, also to give ownership to the proposed strategy to be implemented (criteria 3.5, 3.6, Table III, 96 per cent agreement).

Surprisingly, only 42 per cent of respondents agreed to the significance of understanding the strategic priorities of top management, and only 62 per cent agreed that development of a detailed plan is a significant success criterion. Also, only 68 per cent of respondents found it necessary to educate people about the importance of company strategy. The present research has not been aimed at an in-depth understanding of these responses, but the following case investigations indicate that responses might very well be related to contextual issues such as business culture.

Cases

Below, two cases of strategy formulation are described utilising the criteria of the assessment tool. Actual company names have been substituted with the acronyms Scotfirm and Danfirm. In both cases, we find that the experienced difficulties would be identified by the assessment tool.

Scotfirm

Scotfirm Ltd is an international manufacturer with 16 manufacturing and sales support locations worldwide. It offers innovative, cost effective labelling and product identification solutions to the global electronics industry. In November 1999, the company was the subject of the largest ever management buyout in Scotland, involving two venture capital groups and management teams attracted by the company's outstanding business performance. The strategy formulation process accounted for in the following concerned corporate business strategy in general and

operations strategy in particular. These two aspects were integrated, in a process stretching over a period of six months in 2001/2002.

Strategic thinking. In 1997, Scotfirm launched a continuous improvement (CI) program which was to ensure that the company's business processes were capable of consistently meeting customer requirements. CI concepts were integrated into corporate strategy, and formed the basis for strategic thinking. Through CI, ideas were generated, and the process had very high commitment from all levels including top management.

At Scotfirm, the interests of sales personnel and production units played an important role in strategy discussions, but in retrospect, the management team involved in the project felt that it would have been beneficial to go even further and incorporate these interests in an integrated supply chain strategy. Furthermore, organisational processes and procedures were mapped out so they might be understood and discussed. In this way, the effect of changes on various processes could be understood, and it was determined what should be maintained and developed, and what should be changed. Management's strategic priorities were clearly communicated: first, minimising risk and maintaining current service levels (delivery time and reliability), and second, reducing costs.

Strategic planning. The planning stage was initially concerned with the collection of relevant information to facilitate strategy formulation. Throughout this stage, information was collected on corporate profile, products and market profiles to define the appropriate business units and corresponding competitive criteria. Information (profit and loss accounts) on the past and present financial profile of the business was also collected. This company-wide financial information was then broken down into business unit-specific profit and loss accounts. At this stage, management visualised what they desired from future profit and loss accounts as well as specifying measurable business objectives that would help the company post these numbers. Then, all the key business unit data were consolidated into a business unit fact sheet. This allowed managers to assess and compare the past, current and potential future performance of each business unit together with its competitive position, product life-cycle positions and its strengths and weaknesses.

Before it was implemented, the selected strategy was tested for compatibility with the profit and loss account status visualised by the managers as their ideal for the future by linking operational performance measurements to financial results. This resulted in a simple and accurate document, which was easy to understand as it related directly to financial results. This was done by asking questions such as, if we improve delivery performance from 73 to 98 per cent, what per cent increase in market share can we expect as a result. As a result of this analysis, the chosen strategy was accepted as the desired level of business performance appeared to be achieved.

Embedding. Embedding in Scotfirm was mainly concerned with the monitoring of operational and financial performance and the impact of the chosen strategy on selected performance measurements. Leading indicators were used to provide early feedback on the effect of the chosen strategy and allowed the strategy process to restart if intervention was deemed necessary. Often multidisciplinary project teams or full time task forces were assigned to tackle business problems traced from the performance measurement system. Being part of the CI teams, employees as well as managers were able to suggest why, where and how strategy/tactics should be

evaluated or improved. Also, the relatively open communication lines between different levels appeared to be important to tackle business problems and assess the success of the chosen strategy.

A shared understanding of strategic objectives and priorities was created at all levels in Scotfirm, but during the strategy formulation process, there were problems with prioritising projects and trading off strategic implementation, deciding which actions to take first and how to allocate resources. The flow of objectives, measurements and actions from high level to low was co-ordinated through the CI programme. A generally satisfactory level of agreement was achieved amongst the management and shop floor people in Scotfirm, but some functional representatives argued that they should have been more involved.

Danfirm

Danfirm produces and markets disposable medical devices, and is a multinational company with origin and headquarters in Denmark. The company is divisionalised, it operates in relatively stable markets and is a mature, medium-sized company. The company is managed through a shared mission and set of values combined with performance control. Empowerment and CI are strong cultural features. The strategy formulation process described below stretched over a few months of the year 2001 and concerned corporate downstream logistics; it involved all business units but only a single functional area.

Strategic thinking. As a part of Danfirm's strategy formulation process, a partial investigation of competitor practices was conducted, creating an awareness of differences according to the comparative approach to strategy formulation. Self-criticism was one of the drivers in the process, as the company found its warehouse and distribution structure to be unreasonably costly. This self-criticism is remarkable considering the fact that Danfirm received the European Award for Supply Chain Excellence in the midst of the process. Market strengths were taken into account, and opportunities related to the overall company strategy of forward integration were considered. Awareness of key problem areas was mainly market related, and trends in transportation density and costs across Europe were also discussed and incorporated.

The decision-making process was facilitated by the use of cost models based on cost driver functions and business projections for the upcoming ten years. Each business projection was discussed, and the cost models modified accordingly. This approach was relatively adaptive and very effective for decision-making. As in Scotfirm, organisational processes and procedures were sketched so they might be understood and discussed. Logistical processes, communication processes involved in sales procedures, quality procedures and manufacturing processes were elucidated to create an understanding of upcoming changes. Top management's strategic priorities were clearly communicated, and finally, the group involved in the process included experienced and knowledgeable persons from different functions as well as external consultants to facilitate learning from experience. Even if everyone did not agree that the solution was the best for the company, there was general agreement and confidence that the resulting strategy would represent an improvement for the company.

Strategic planning. In the Danfirm case, the goal of the company was not redesigned, but a new mission for the distribution system was formulated. An

accurate, simple and understandable report was made and communicated (in different ways) to various managerial and employee groups, and to the stock exchange. A clear plan with a clear designation of responsibilities was somewhat lacking, although some aspects of organisation and responsibilities of implementation and operation had been taken into consideration. Moreover, though a rough implementation plan had been sketched out, no detailed plan was made at this time. Nevertheless, the strategic management team gave no indication that it lacked clear, detailed plans, as changes seemed relatively straightforward.

Embedding. A range of different persons participated in the strategy formulation, but not everyone felt that they had been sufficiently involved. Some logistics managers were motivated to change beforehand, but those who were not, did not become motivated in the process. A satisfactory level of agreement was achieved in the project group and steering committee, and relevant managers, agreeing with the overall idea, accepted the strategy. However, both production and sales managers were somewhat reluctant to get involved in the strategy.

A shared understanding of strategic objectives and priorities was not created at all levels in Danfirm, and after the strategy formulation process was concluded, there were problems with prioritising the strategy in relation to other initiatives. Also, the co-ordination and flow of objectives, measures and actions from high level to low was insufficient. For example, the various European warehouses received a relatively clear indication of how and when they would have to adjust to the new strategy, but the future was more uncertain for the various packaging units. Similarly, it was not quite clear what the strategy would mean for product development, purchasing, shipping and production technology departments. While the strategic management team did not immediately perceive this as a problem, it did appear to instigate corporate-political battles after the formulation process.

Overlapping and conflicting development was avoided as the process ensured dialogue with other initiatives. There was found no reason to educate people about the importance of strategy in general, as this was already well understood. However, it was discussed that it would have been beneficial if functional areas outside logistics had acknowledged the significance of a supply chain strategy.

Discussion

Integration of three approaches (RQ1)

The first research question was: "How can the three approaches to strategic assessment be used and integrated into an assessment tool for proactive assessment of the success (or effectiveness) of strategy formulation processes?" To answer this research question, the assessment tool was developed based on a literature review and workshops. The assessment tool aimed at integrating the three strategic assessment approaches. In this section, we discuss the applicability and usefulness of the assessment tool, and the frequency with which it should be applied.

The primary purpose of the tool is to ensure an effective process leading to an effective strategy and consequently better performance of the company. We find that the assessment tool is relatively easy to use, as it is relatively detailed, while at the same time expressed in a common managerial terminology, which accommodates a range of contextual applications.

It is the authors' belief that the assessment tool is applicable in many strategy formulation settings, whether concerning one or more functional areas, business units, and/or organisation processes. This has been indicated by the cases, representing various levels of strategy. The most significant factor determining whether or not the tool may be applied is whether the strategy formulation process in question is well defined. An emerging or unstructured process would be very difficult to assess, and the tool is probably better suited for strategy formulation processes defined as projects with a limited timeframe. The tool is a compilation including criteria of relevance for a multitude of settings. This means, also, that the individual company should prioritise the different criteria according to contingency factors of their industrial context. For example, Scotfirm operates in a fast clockspeed industry, which means that open lines of communication and a fast implementation were emphasised. Danfirm, on the other hand, operates in a medium clockspeed industry, where a slower rate of implementation might be tolerated, even if stressed somewhat due to the high growth rate of the company. In this context, confidentiality was largely stressed during the process. Internal context might also play a role. For example, Scotfirm and Danfirm both have CI programmes in place, and perhaps, therefore, they did not find an extensive need for detailed planning.

It has been emphasised that the assessment tool may be used proactively; i.e. for evaluating a planned process before it is actually initiated. In this way, a process planner (or project manager, facilitator) may use the tool as a checklist, before and during strategy formulation as well as for evaluation and learning purposes after the completion of a strategy formulation process. The consistency with which the assessment tool is applied should be correlated to the frequency with which strategy formulation processes are conducted and strategic choices are evaluated (Segars *et al.*, 1998; Chakravarthy, 1987; Eisenhardt, 1989). If an organisation changes its strategy continuously or even just frequently, it is not necessarily rational for it to apply the assessment tool rigidly every time, but rather to assess the continuous process at regular intervals. If on the other hand, in a more stable market situation, strategy formulation is carried out in well-defined periods with a long time in between – say 3-5 years or more – it would be advisable to use the tool each time before and during the strategy formulation. Here, a post-evaluation can be a small investment to identify areas of attention and improvement in the forthcoming change process.

Linkages to phases of strategy formulation (RQ2)

The data presented in Tables II and III partly provide an answer to the second research question: "To what extent do the three approaches contribute to different phases of strategy formulation processes?"

Looking at various literature on top-down strategy formulation (Acur and Bititci, 2003; Platts *et al.*, 1996), formulation processes are generally prescribed as sequential stages. First, assessment of the strategic situation is done as part of strategic thinking, leaning very much on the comparative approach to strategy assessment. However, in our research we found that the stage of strategic thinking should also be evaluated on the basis of the goal-centred approach, and even on improvement aspects. This was indicated by the literature review and further supported by managerial perceptions, which expressed in particular that learning from experience should be accommodated in strategic thinking.

The strategic planning stage is generally seen to follow strategic thinking, and is mainly based on the goal-centred approach, prescribed to lead to detailed and accurate plans. This approach is based on a presumption of companies operating in relatively stable environments, which is hardly the case for the majority of companies faced with global competition. The cases from two different environments supported the argument that the need for accurate and detailed plans might be overrated in the literature. Also, while managers recognized a need for clear and specific plans, this was not rated very highly. In both cases described above, implementation relied heavily on improvement and empowerment, meaning that the planning was linked to the CI programs of the companies. Therefore, it seems that the improvement approach became important in addition to the goal-centred orientation.

As for embedding, involvement, shared understanding, communication and coordination between different levels seem particularly important from a managerial point of view. These aspects relate both to the goal-centred and improvement approaches, while the comparative approach appears to play a very modest role in the evaluation of good embedding of strategy in the organization. This very modest role is related to monitoring external changes and enabling the organization to respond adaptively. Again, in market-driven companies, this role of the comparative approach might be emphasized more.

Conclusions

The work presented in this paper identified the determinants of strategy performance and translated these into success criteria for strategy formulation processes. A simple questionnaire was developed and used to test the validity of the success criteria through interviews, workshops and two in-depth case studies. The success criteria have been slightly modified on the basis of the empirical results, to yield the assessment tool presented above. This resulting tool integrates three generic approaches to strategy assessment, as found in the literature, and encompasses three phases of strategy formulation. The integration of three different strategy assessment approaches, namely the goal-centred, comparative, and improvement approaches, has yielded a holistic, multi-perspective guide for reflection on strategy formulation. Such reflection is assumed to enable managers to proactively evaluate the potential outcome and performance of their chosen strategy.

The research indicates that different strategy formulation phases require different levels of integration between goal-centred, comparative and improvement assessment approaches (Tables II and III). The three phases identified in strategy formulation are strategic thinking, strategic planning, and embedding of strategy. The embedding phase initially emerged from the literature review, as an add-on to the conceptually widely acknowledged phases of strategic thinking and planning. However, the significance of this embedding phase was confirmed empirically, as the success criteria which managers ranked highest were mostly associated with embedding.

Simplistically, one might assume that strategic thinking is followed by strategic planning and then embedding in the organisation. Rather than this sequential perception, however, we recommend that the phases are managed as interrelated in parallel over the course of a strategy formulation process. Furthermore, it appears that the phases should be managed with different basic approaches. The following patterns emerged:

- The underpinning assumption of the goal-centred approach is that current business objectives, direction and plans are the basis upon which assessment of strategy can be built and that subsequently, clear business goals, future prediction and planning should drive the success of strategy. We found that the goal-centred approach should be integrated in all phases of strategy formulation, even if dominant particularly in the phase of strategic planning.
- The operating environment of many companies is becoming increasingly more dynamic; technological, organisational, cultural, social, political and commercial change is the only constant. To create the future for their businesses, management cannot create strategy by focusing internally, and the comparative approach becomes perhaps increasingly important during strategy formulation. The comparative approach is most significantly applied in strategic thinking and embedding, and less so, if at all, in the planning phase.
- The aim of the improvement approach is to assess how the strategy evolves over time and how the strategic management process ensures motivation of staff, effective communication lines, staff development and effective change management. The improvement approach is mainly associated with the embedding phase of strategy formulation, but is also found to be largely relevant in strategic thinking.

We would like to conclude by summarising the success criteria proposed for actively assessing strategy formulation processes, and thus indirectly assessing the assumed success of formulated strategies. In summary, a successful strategy formulation process should meet the following success criteria (for details please see Tables II and III):

- Develop awareness, draw on self-criticism and, not least, incorporate learning from experience, and facilitate decision-making through an adaptive process.
- State goals, achieve a general level of agreement and establish motivation and confidence that the business will be more successful as a result of realising specified plans.
- Assign responsibilities, establish a shared understanding of strategic objectives and priorities at all levels, and co-ordinate the flow of objectives, measures and actions from high level to low.
- Use open lines of communication, involve staff in decision-making, avoid overlapping and conflicted development, and trade off strategic choices to optimise business performance.

Further research

Although an in-depth review of the literature on assessment of strategic management led to the selection of key conclusions which were grouped and reformulated as success criteria, we cannot exclude the possibility that there are some other factors, which might reasonably be included in the assessment of strategy formulation process and strategy outcome. A direction of future research would lie in the development and exploration of success criteria, particularly in a contingency perspective. The assessment tool and analysis presented in this paper is general and averaging, and does not point to relationships between the strategy context (the organisational, industry and international context) and the assessment of strategy formulation

processes. The investigated cases indicate that contingencies matter, and it would be interesting to explore the relationships between the assessment of strategy formulation process and the strategy context.

Another further investigation concerns emergent strategy and the management and assessment of bottom-up and informal strategy formulation or formation processes. Realised strategies are rarely purely deliberate or emergent, but rather a combination, but this research did not produce any definite insight into this issue, as we maintained a focus on formal and relatively top-down oriented strategy formulation processes. Thus, an important issue to address is how strategy formulation processes can be assessed if the companies have different perspectives on their phases of strategy formulation process; either logical vs creative (strategic thinking), intended vs emerged (strategic planning) and, revolutionary vs evolutionary (embedding).

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