

AN INTEGRATED PROCESS FOR STRATEGIC POSITIONING WITHIN THE VALUE CHAIN

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ABSTRACT

The purpose of this article is to highlight the value of 'strategic positioning' as a means of providing competitive edge, and to introduce and describe a novel method of managing this. Strategic positioning is concerned with the choice of business activities a company carries out itself, compared to those provided by suppliers, partners, distributors and even customers. It is therefore directly impacted by, and has direct impact upon, such decisions as outsourcing, off-shoring, partnering, innovation, technology acquisition and customer servicing.

keywords: Strategic positioning, Competitive space

INTRODUCTION

Strategic decisions have long-term implications and are somewhat irreversible. Within manufacturing industry, a key strategic decision concerns defining those manufacturing activities that an organisation should carry out internally and those that should remain external. This is often referred to as the strategic positioning decision, and concerns a company's internal span of process, the degree and direction of vertical integration alternatives and its links and relationships with suppliers, distributors and customers. Little appears to be known about how more successful strategic position decisions are formed by manufacturers, and there are few techniques that explicitly lead the practitioner through this difficult decision process. Therefore, the research described in this paper has set out to gain a better understanding of this decision process, and then capture leading practice in a formalised decision aid.

The paper commences by exploring current decision processes from two perspectives. First, there is a review of the mainly academic literature concerned with decisions about manufacturing supply chain issues that impact on strategic positioning. For example, there is now an extensive set of literature that presents theory, analysis and decision tools for upstream make-versus-buy decisions. Second, there is an investigation into the decision processes that are actually used in practice. Here, the paper summarises the findings from six case studies of manufacturing businesses. In each case, senior managers were interviewed and asked to describe how their company had decided on their strategic position. Cross-case analysis was then applied to reveal the differences in practice, and these are presented in detail in this paper.

The second part of the paper then presents a decision process that we have formed to help manufacturing companies structure the strategic positioning decision. This process has five stages. It commences with reviewing the market strategy of the host company, and through this identifies how any changes in supply chain position should be assessed. Then, the competitive landscape of the company is explored, and this leads to a thorough understanding of the potential opportunities and threats in the company's supply chains. Finally, the process leads the practitioner to quantify, in terms of the key assess criteria, the impact of realignment in strategic position.

The final part of the paper describes the execution of this process in two case studies. In each case a description of the company is given, along with the issues that have stimulated a review of strategic position. Then, the execution of the process is described, and the resulting strategic initiatives presented. The paper then concludes by giving a critical appraisal of decision process and opportunities for future work.

BACKGROUND AND PREVIOUS RESEARCH

The challenge of strategic positioning within a manufacturing organisation

The strategic positioning decision is concerned with the choice of activities carried out internally by the host organisation. When considering these activities, it can be useful to view a manufacturing organisation as having four principal decision or business areas. Figure 1 provides an illustration of strategic positioning decisions associated with each of the four areas.

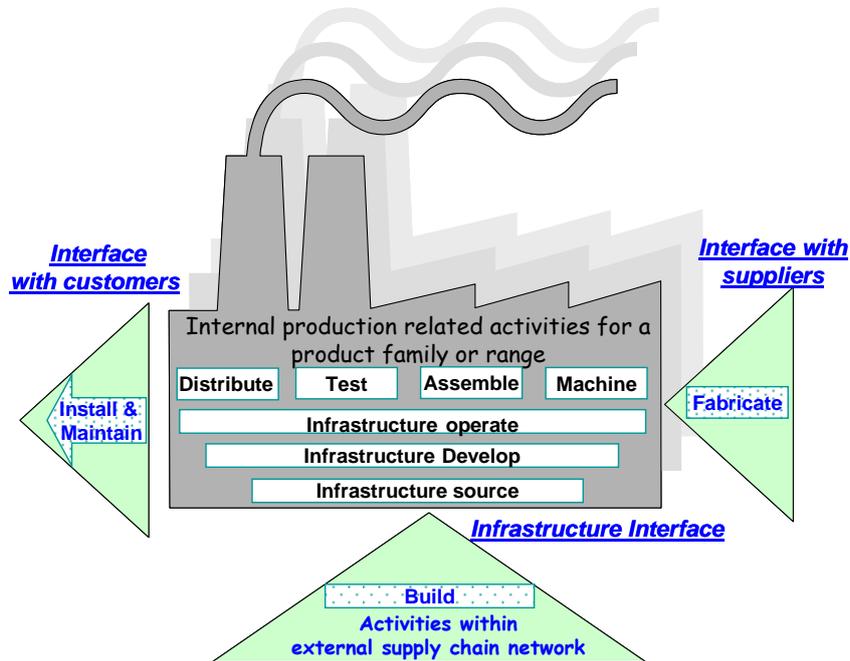


Figure 1. Strategic positioning decisions for the Key Business Areas

The material/product flow is concerned with the sequence of activities needed to convert raw materials into finished products. There are two decision areas, upstream at the boundary with suppliers, and downstream at the boundary with customers. Research on the wide range of relationship types possible with suppliers to the in-bound material supply chain is addressed directly under the umbrella of make-versus-buy by authors such as Probert (1996), Bruck (1995), Buchowicz (1991); strategic sourcing and supplier selection by writers including Greaver (1999), Quinn and Hilmer (1994), Lonsdale and Cox (1998); partnerships and relationships by Lamming (1993) and Macbeth and Ferguson (1994). The down-stream or out-bound customer interface is covered in marketing literature by such authors as Jones and Clark (1990), Christopher (1992, 1998), and to an extent by authors concerned with the design of physical distribution management channels, for example Stevens (1990) and Ballou (1998). The consequence of decisions at these two boundaries is a sequence of activities for which an organisation takes direct operational responsibility, often termed vertical integration (Hayes and Wheelwright, 1984) or span of process (Mills et al, 1996).

These vertical integration issues are replicated across the range of product families manufactured, hence product range issues must also be considered. These could be thought of as horizontal integration decisions, though this term is often used for integration across businesses rather than individual supply chains. For each product family manufactured, there are also infrastructure supply chain issues to be considered.

The infrastructure boundary deals with the capabilities, services and facilities associated with manufacture; and may for example include machinery, IT and people. An organisation must choose what

level of competence it requires in a production activity, and this competence is highly influenced by the level of integration into this infrastructure supply base. The support/technology supply decision area within manufacturing companies has been investigated directly by such researchers as Frohlich (1998) and Baines et al, (1998) writing on technology acquisition and sourcing, and generally by work on facilities management such as Henderson (1990). Other authors who have focused their attention around the management of the technology boundary include Anderson et al (1997), Chiesa and Manzini (1998), Gerwin and Kolodny (1992), Goodman and Lawless (1994), Gregory et al (1996), Hax and No (1992), Swamidass (1987), Twiss and Goodridge (1989), Durrani et al (1999) and Farrukh et al (2000).

The strategic position adopted by a manufacturing organisation appears to be important to competitiveness. Within the UK it forms a key element of the Government's strategy for manufacturers, and they state: "Our strategy is to help more manufacturers to move up the value chain and to reap the benefits of high-skilled, knowledge-intensive manufacturing operations" (Department of Trade and Industry, 2002). Such prescriptions however need to be treated cautiously, and the actual actions taken by a company need to be tailored to the organisation's context. There are however no formalised and integrated processes that have been developed to guide manufacturers through this process, and so this has been the topic of the research reported in this paper.

The Concept of Competitive Space

Leading up to the research presented in this paper, our previous work has investigated the principles on which manufacturers should form their strategic positioning decision. This was based on survey and case based research as reported in Baines and Kay (2002) and Philpott et al, (2004). This earlier research revealed three key principles that leading manufacturers apply when making these decisions. First, all four of the key business areas described earlier, should be considered simultaneously so that the interactions between these can be fully appreciated. Second, leading manufacturers understand that the strategic position of an organisation is dynamic in nature, and that opportunities and threats may appear in any aspect of their supply chains over time. Third, that the strategic position decision should be linked directly to the market conditions, and then the wider acceptability of an initiative to the host organisation.

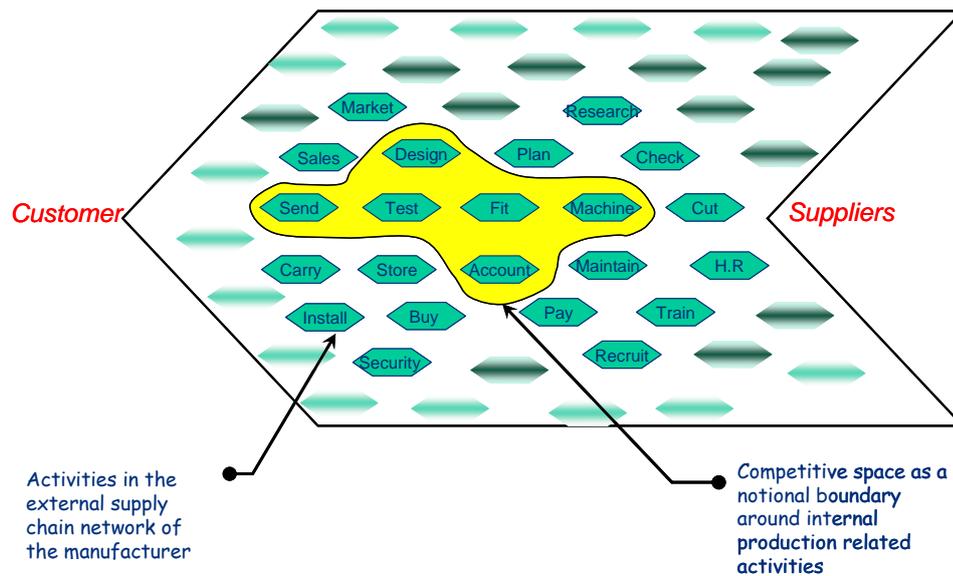


Figure 2 The competitive space of a single product family within a typical Manufacturing Company

In an attempt to encourage more wide-spread appreciation of these principles we have developed a concept we call a 'competitive space' model. Figure 2 provides a simple illustration of the competitive space for a product range within a traditional typical manufacturer. The idea is that all manufacturers exist within a landscape of activities that in some way relate to the production of a product range. Some of these activities are internal to the organisation (machine, assembly, test, etc) and some are external (fabrication, training, storage, etc). A notional boundary exists between these, and this signifies the competitive space of the organisation. Most organisations will have a unique competitive space which represents their strategic position in their supply chain networks. Hence, the competitive space of Rolls-Royce in 2004 will, for example, be very different to the Ford Motor Company of the early 1900s. We have found this concept useful in explaining strategic positioning, the challenge remains however to help practitioners through this decision process, and this has then led naturally to the research described in the remainder of this paper.

RESEARCH DESIGN OVERVIEW

The aim of the research described in this paper has been to form a complete, interlinked and reliable process to guide the strategic positioning decisions of manufacturers. The research design has evolved around taking our knowledge of strategic positioning, blending this with other ideas and theories in the literature, and then engaging industry in the co-development of a complete and interlinked decision process. This has then been validated through two in-depth case studies.

Development Of The Pilot Decision Process

The preliminary decision process provided a basis on which to engage and embrace practitioner opinion and experience in an open and collaborative manner. Our approach was to work closely with senior managers from three organisations who shared an interest in the strategic positioning decision, and who were had experience and knowledge of such decisions within manufacture. Each organisation provided a real studies associated with the manufacture of a product, and for which a decision associated with strategic positioning had recently been made. These studies were also selected to cover each of the 'key business areas' outlined in the background section. Hence, the first study concerned a decision to outsource a printed circuit board production facility; the second concerned a decision about the choice of production activities required to produce medical equipment; and the third concerned a decision to in-source outbound logistics. The decision process was then applied to each of these in-turn and taking between two and four of days to complete. These studied provided a platform on which to overcome limitations and weaknesses in the decision process. Simultaneously, many new and alternative ideas and theories from the literature were considered and where appropriate incorporated into the process. For example, the work of Treacy and Wiersema (1993, 1997) provided a valuable insight into the differing competitive priorities of organisations (the impact of other such literature is highlighted in the subsequent description of the process). Over several months of forming and refinement, the research team and practitioners co-developed a fully documented pilot process, consisting now of five stages of analysis, along with the necessary workshop materials.

Case Study Design and Execution

The final phase of the research was to assess the pilot strategic positioning decision process through industrial application. In order to obtain a reliable understanding of how well the process worked, and whether it could affect the decisions and actions in a real strategic positioning project, case-study based assessment was chosen. The case study design was formalised and based on Yin (1994), and closely followed that reported in our earlier work on technology acquisition (Baines 2004). Our preference was also for two high level studies where the decision process would be applied from start to finish by senior executives (eg: managing director, manufacturing director, marketing director, etc). During this time, the four person research team would adopt the role of facilitators, but the team would rotate their roles so to minimise as far as possible their influence on the outcomes of the case studies.

Stages	Process	Output
STAGE 1: SCOPE ISSUES	Confirm company's competitive strategy, between current and desired position and issue definition	Qualified issue statement
STAGE 2: IDENTIFY KEY DECISION CRITERIA	Conduct analysis to generate decision criteria	Key decision criteria
STAGE 3: IDENTIFY ACTIVITY LANDSCAPE	Generate activity landscape by considering each key business area in turn, and from this, identify those activities that have greatest significance in the key decision criteria	Significant activities Related activities
STAGE 4: ASSESS IMPACT	Identify those activities where a change in state will improve/sustain business performance against key decision criteria	Ranked activities identified for change
STAGE 5: CONSOLIDATE OUTCOMES	Reflect on key outcomes from earlier stages, and identify immediate associated initiatives	Project summary

Figure 3. Overview of the five stage decision process.

THE STRATEGIC POSITIONING DECISION PROCESS

The process takes the practitioner through a review of competitive market strategy; identifying key decision criteria; mapping the activity landscape; assessing the impact of making a change; and then consolidation of outcomes. The following sections describe each of these stages in more detail.

Stage 1: Scope Issues

The first stage is about understanding how a company is competing in the market. Its purpose is to confirm the company's strategy, identify gaps between current and desired position and issue definition. This stage is implemented by first identifying a set of main products and customers, then reviewing the competitive strategy, and then assessing how current performance compares with customer requirements, along with that of competitor performance. The performance gaps are reviewed and critical ones identified, and an issues statement is produced.

Stage 2: Identify Key Decision Criteria

The purpose of Stage 2 is to generate Key Decision Criteria for evaluating project initiatives. Managers are asked to identify these by applying a framework we have developed termed FACTS. This guides practitioners to take a broad consideration about the impact of initiatives. This is achieved by

forcing the selection of criteria from the categories of Financial, Attitude/Acceptability, Competence/Capability, Technological and Strategic fit. Then the managers have to determine the relative weighting of the chosen criteria. The output is a set of five balanced key decision criteria.

Stage 3: Identify Activity Landscape

These studies provided a platform on which to overcome limitations and weaknesses in the decision process. Simultaneously, many new and alternative ideas and theories from the literature were considered and where appropriate incorporated into the process. For example, the work of Treacy and Wiersema (1993, 1997) provided a valuable insight into the differing competitive priorities of organisations (the impact of other such literature is highlighted in the subsequent description of the process). Over several months of forming and refinement, the research team and practitioners co-developed a fully documented pilot process, consisting now of five stages of analysis, along with the necessary workshop materials.

Stage 4: Assess Impact

The purpose of this stage is to identify those activities where a change in state would improve/sustain business performance against Key Decision Criteria. This is largely based on a qualitative impact analysis using the Key Decision Criteria generated earlier. The final output from this stage is a ranked list of proposed activities identified for change, in order of potential effectiveness to the business performance.

Stage 5: Consolidate Outcomes

The final stage of the process is used to reflect on key outcomes from earlier stages. This provides an opportunity for a company to combine all the decisions agreed upon during the process and then provides a basis for validation and implementation.

APPLICATION OF THE PROCESS IN PRACTICE

We have applied this strategic positioning process in a number of industrial case studies within the manufacturing sectors. In particular, we applied it within a manufacturer of building materials based in the North West in March 2004. The following is a brief synopsis of the result.

The focus of the decision was on the outbound supply chain. Stage 1 of the process confirmed that the company was seeking to adopt a strategy of greater customer intimacy, and to achieve this, service customisation was identified as a key issue for an important product range called 'Roofing Systems'. Stage 2 identified that, in order to evaluate project initiatives, the company must use such key decision criteria as 'payback', 'alignment with corporate objectives', and 'resource capacity'.

The wide ranges of activities currently existing in the company, as well as in the wider business landscape, were then identified in Stage 3. As the key issue was service customisation, the activities that lay at the interface with the customer were of particular interest, for example, the marshalling and coordinating of the delivery of a complete package of materials and equipment to the end user. This was an activity currently carried out by the distributors. Another consideration was the service of offering to 'buy and lease back' a roof, which would mean the company developing a capability to design, install and maintain a roof in service.

The fourth stage of the analysis considered impact, and in this way, the company reduced the wide range of alternatives to a short list of four. Finally, Stage 5 then captured the subsequent actions and responsibilities for further validation and implementation of these four. The actual initiatives undertaken by the company are outside the scope of this article as the company now considers these to be commercially sensitive and a principal element of their strategy.

CONCLUDING REMARKS

As more and more manufacturers are encouraged to move towards system integration and a serviceable business model, the challenge is to identify the appropriate strategic position for their organisations, or in other words, to identify their optimum competitive space for manufacture. In this paper we have outlined a decision process that is intended to help practitioners through this decision. The

case studies carried out have been very valuable in building our confidence that the process is a reliable means of helping manufacturers to decide which activities they should carry out themselves, and those they should devolve to suppliers, partners, distributors and customers.

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