

Identifying Innovative Capabilities

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Introduction

The resource-based view is concerned essentially with identifying and building on strengths, preferably those which, for whatever reason, are unique to the firm. Every firm is unique by virtue of its history, value chain configuration, organization culture etc. The challenge is to make the firm's uniqueness the source of its sustainable competitive advantage.

At one level the identification of competence appears to pose few difficulties. There are many cases which refer, for example, to the core competence of Honda in engines or Sony in minituarisation and which explore why and how these firms have developed and maintain these competencies. But for core competence to be a tool of strategic analysis what is also required is a means for firms to analyse rigorously, their own and their competitors' competencies. Yet, despite all the effort and attention, Coyne, Hall and Clifford (1997) writing in *The McKinsey Quarterly* in early 1997, noted how elusive core competencies remain, 'Few managers we have talked to could claim to have utilised core competence to achieve success in the marketplace, and even fewer to have built a core competence from scratch. Indeed, most were uncertain as to exactly what qualifies a core competence ... it is like a mirage: something that from a distance appears to offer hope..but turns to sand when approached' (p.41). Our own experience in working with the concept of core competence supports their view. Competencies disappear all too easily under close examination. A careful scrutiny of competence claims reveals, all too often, that they are neither firm specific nor sustainable, that they convey neither functionality to the customer nor generic qualities to the firm.

This exercise uses a technique for analysing intangible resources which is based on the identification and development of the strengths in the key product/delivery system attributes and the intangible resources which produce them. The exercise consists of three parts:

1. Identifying the key attributes of the most successful products and services offered by the organization;
2. Mapping these attributes to the resources or competencies of the organization, including tangible and intangible resources;
3. Assessing the potential for sustaining, protecting and exploiting these resources, including knowledge management.

¹ This exercise is derived from J.Tidd (ed.) *From Knowledge Management to Strategic Competence*. Imperial College Press, London, 2000. Specifically the chapters by R. Hall and D. Griffiths and M. Boisot.

1. Identifying key attributes

A pragmatic view on the nature of competitive advantage was advanced by Coyne (1986) whose argument starts with the observation that any company which is making repeat sales in a competitive market must enjoy an advantage in the eyes of the customers who are making the repeat purchases. He went on to argue that for a *sustainable* competitive advantage to exist three conditions must apply:

- Customers must perceive a consistent difference in important attributes between the producer's product/service and the attributes offered by competitors.
- This difference is the direct consequence of a capability gap between the producer and its competitors.
- Both the difference in important attributes and the capability gap can be expected to endure over time.

Coyne suggests that there are four, and only four, types of resource capability:

- **Regulatory:** the possession of legal entities, e.g. patents & trademarks.
- **Positional:** the results of previous endeavour, e.g. reputation, trust, value chain configuration.
- **Business systems:** the ability to do things well, e.g. consistent conformance to specification.
- **Organizational** characteristics, e.g. the ability to manage change.

It is now possible to ask the question 'What is the nature of the package of product/delivery system attributes which customers value?' and to go on to ask the question, 'What is responsible for producing the valued attributes?'. The product/delivery system attributes will include factors such as: price, quality, specification, image, etc.

The valued attributes

Table 1. Typical Product/Delivery System Attributes Which Define Competitive Advantage

Image What is the image of the product range? Is it important?

Price Is a low selling price a key buying criterion?

User friendliness Is it important for the product to be user friendly?

Availability Is product range availability crucial?

Rapid response to enquiry Is it important to produce designs, quotations, etc. very quickly?

Quick response to customer demand Will sales be lost to the competition if they respond more quickly than you?

Width of product range Is it important to offer a wide range of products and/or services to customers?

New product to market time How important is the product development time?

Quality - the product's fitness for purpose Does the product or service deliver exactly the benefits which the customers want?

Quality - the consistent achievement of defined specification Is constant conformance to spec. vital?

Safety Is safety in use a major concern?

Regulatory requirements Does meeting regulatory requirements earlier/better than the competition give a competitive advantage?

Degree of innovation Is it important for the product or service to represent 'state of the art'?

Ability to vary product specification Is it important to produce product or service modifications easily and quickly?

Ability to vary product volume Is it important to be able to increase, or decrease, production volume easily?

Customer service Is the quality of the overall service which customers receive a key to winning business?

Pre and after sales service Is the supply of advice, spares, etc. a key aspect of winning business?

It may be necessary to identify different rankings for different categories of customers, e.g. new as opposed to long-standing customers, retailers as opposed to end users, etc. In carrying out this analysis of attributes it is appropriate to seek consensus between the relevant executives with respect to questions such as:

- Can executives agree an importance weighting for each attribute?
- Can executives agree a benchmark score for each attribute compared with the competition?
- Can executives agree the *sustainability* of the advantage represented by each attribute?

The degree of congruence, or dissonance, in executives' perceptions of these issues can in itself be illuminating. In addition to identifying the current strengths in the marketplace, it is also appropriate at this stage to identify known deficiencies in the product offering.

2. Mapping attributes to resources & competencies

The important characteristics of strategic competencies are:

- They are responsible for delivering a significant benefit to customers.
- They are idiosyncratic to the firm.
- They take time to acquire.
- They are sustainable because they are difficult and time-consuming to imitate.
- They comprise *configurations* of resources.
- They have a strong tacit content and are socially complex – they are the product of experiential learning.

The resources which produce product/delivery system attributes can now be placed in a framework of capabilities:

Regulatory capability – resources which are legal entities.

- Tangible, on balance sheet, assets.
- Intangible, off balance sheet, assets, e.g. Patents
 - Licences
 - Trademarks
 - Contracts
 - Protectable data, etc.

Positional capability – resources which are not legal entities and which are the result of previous endeavour, i.e. with a high path dependency:

- Reputation of company.
- Reputation of product.
- Corporate networks.
- Personal networks.
- Unprotectable data.
- Distribution network.
- Supply chain network.
- Formal and informal operating systems.
- Processes.

Functional capability – resources which are either individual skills and know-how or team skills and know-how, within the company, at suppliers, or at distributors etc.

- Employee know-how & skills in:
 - Operations
 - Finance
 - Marketing
 - R&D, ec.
- Supplier know-how.
- Distributor know-how.
- Professional advisors expertise, etc.

Cultural capability – resources which are the characteristics of the organization:

- Perception of quality standards.

- Tradition of customer service.
- Ability to manage change.
- Ability to innovate.
- Team working ability.
- Ability to develop staff, suppliers and distributors.
- Automatic response mechanisms.

Whilst it is possible for a valued product/delivery system attribute to be the result of a tangible asset such as a building or a specialist manufacturing capability, research and experience suggest intangible resources such as: product reputation, employee know-ow, etc. are the factors most often responsible for producing the attributes which are valued by customers. The identification of the intangibles which are responsible for each key product attribute results in a summary such as that shown in Table 2.

Table 2. An Example of the Matrix of Attributes and Resources

	The resources which produce, or do not produce, the key attributes:			
Key product/ Delivery attributes	Regulatory capability	Positional capability	Functional capability	Cultural capability
<u>Strengths</u> 1. e.g. availability 2. e.g. quality 3. e.g. specification etc.		Value chain configuration	Forecasting skills	High perception of quality
<u>Weaknesses</u> 1. 2. Summary of the key resources	Patent 'abc'		Technology 'xyz'	

The resources which occur frequently in the body of the matrix are those which, either by themselves, or in combination with others, constitute the organization's strategic competencies.

3. Sustaining, protecting & exploiting competencies

Having identified the key resources it is appropriate to examine development scenarios in terms of protection, sustenance, enhancement, and leverage.

Table 3. Issues with Respect to the Development of Intangible Resources

*With respect to **protection***

- Do all concerned recognize the value of this intangible resource to the company?
- Can the resource be protected in law?

*With respect to **sustainability***

- How long did it take to acquire this resource? Is it unique because of all that has happened in creating it?
- How durable is the resource? Will it decline with time?
- How easily may the resource be lost?
- How easily and quickly can others identify and imitate the resource?
- Can others easily 'buy' the resource?
- Can others easily 'grow' the resource?
- How appropriable is the resource? Can it 'walk away'?
- Is the resource vulnerable to substitution?

*With respect to **enhancement***

- Is the 'stock' of this resource increasing?
- How can we ensure that the 'stock' of this resource *continues* to increase?

*With respect to **exploitation***

- Are we making the best use of this resource?
 - How else could it be used?
 - Is the scope for **synergy** identified and exploited?
 - Are we aware of the key linkages which exist between the resources?
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This approach to the analysis of intangible resources is the acquisition of a new perspective and language which enable them to codify the tacit knowledge which they have of their companies. In particular executives have welcomed the, sometimes new, emphasis placed on issues such as:

- How can the key resource of reputation be protected, enhanced and leveraged?
- How can management ensure that every employee is disposed to be both a promoter and custodian of the reputation which employs him/her?
- What are the key areas of employee know-how? Can they be codified? How long do they take to acquire?
- Is the business organized so that working and learning are the same?

C-space (culture space) is a useful conceptual framework for this analysis. It focuses on the structuring and flow of knowledge within and between organizations. It consists of two dimensions: **codification** and **diffusion** (Figure 1). Codifying knowledge involves taking information that human agents carry in their heads and find hard to articulate, and structuring it in such a way that its complexity is reduced. This enables it to be incorporated into physical objects or described on paper. Once this has occurred, it will develop a life of its own and can diffuse quite rapidly and extensively. Knowledge moves around the C-space in a cyclical fashion as shown in Figure 1.

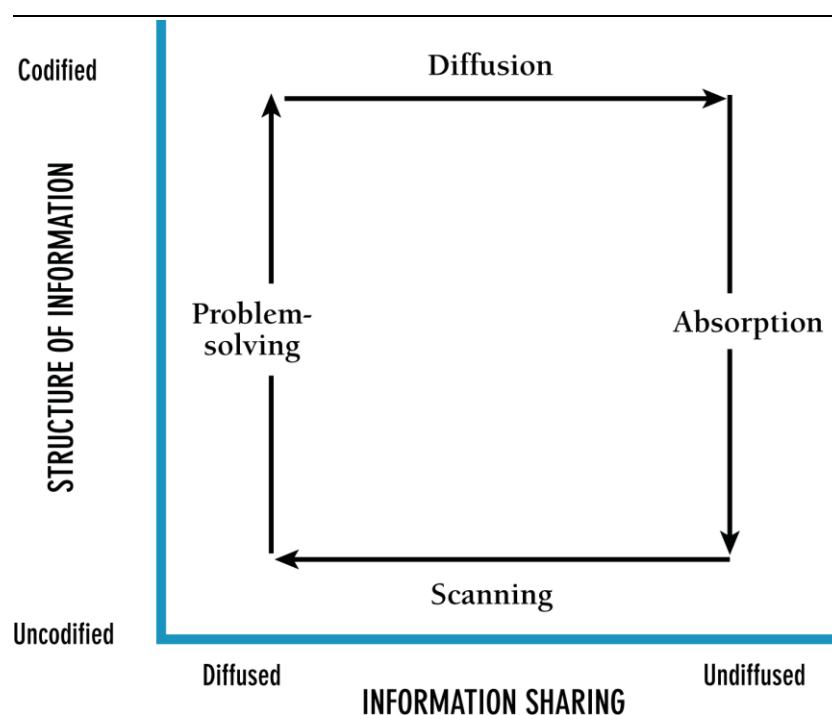


Figure 1: The C-Space

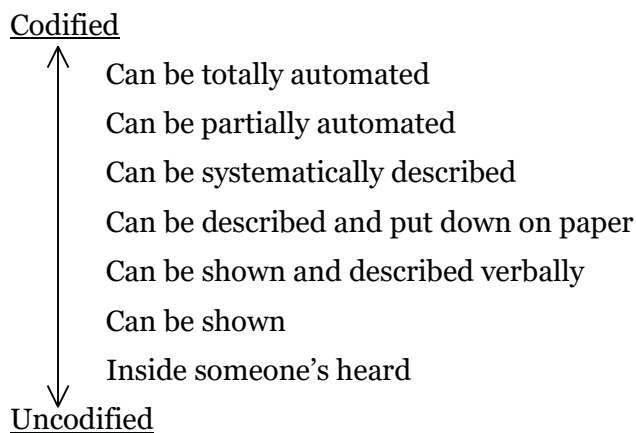
This can help define what an organization needs to do over time to maintain and renew resources and competencies. Effective management is about knowing where to locate knowledge resources and the organizational linkages that integrate them together to create competencies. Managing this process is a purposive activity. It requires resources.

The objectives of the framework are:

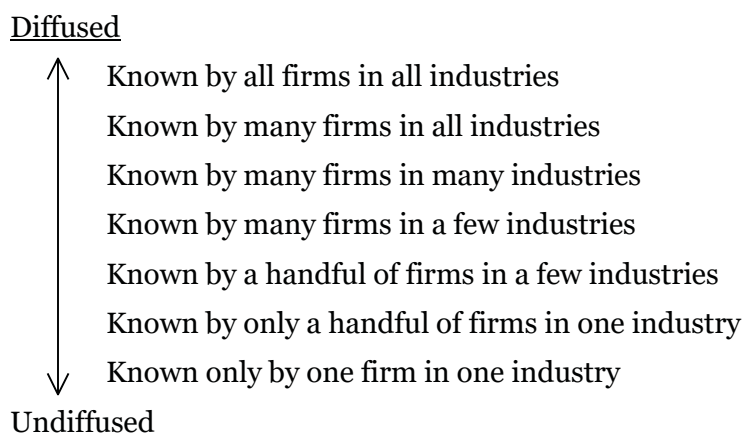
1. to enable an organization to map its resources and the key linkages between them onto the C-space;
2. to act as an elicitation device to facilitate a discussion about the meaning and action required – in terms of core competencies and knowledge resources.

First, position each of the competencies identified in Stage 2 onto the C-space by placing each of them at a point on the codification and diffusion scales. The relevant population for diffusion needs to be defined: rather different data are generated when the diffusion population is the firm as opposed to the industry, for example. For discussions about competence it is often helpful to explore how widely knowledge about technologies and linkages are shared within the firm *and* within the industry. Comparing firm and industry level diffusion patterns can help firms to recognize that, while a particular technology may not be widely diffused within the firm, it is widely diffused among other firms in the industry. In this way, participants avoid the trap of believing that because something is new to them it is also new to their competitors.

An example of a codification scale is as follows:



An example of a diffusion scale to be used at the industry level is:



Such scales may appear rather inexact but, for this purpose, they are exact enough. The C-space is an heuristic not an indicator or a measurement device.

We can use these 'maps' of competencies to help to identify the management action needed.