The dilemma of innovation management

Within virtually all organisations there is a fundamental tension between the need for stability and the need for creativity. On the one hand, companies require stability and static routines to accomplish daily tasks efficiently and quickly. This enables the organisation to compete today. For example, the processing of millions of cheques by banks every day or the delivery of food by multiples to their retail outlets all over the country, demands high levels of efficiency and control. On the other hand, companies also need to develop new ideas and new products to be competitive in the future. Hence they need to nurture a creative environment where ideas can be tested and developed. This poses one of the most fundamental problems for management today (see Figure 4.1).

Take any medium to large company and examine its operations and activities. From Mars to Ford and from P&G to Sony, these companies have to ensure that their products are carefully manufactured to precise specifications and that they are delivered for customers on time day after day. In this hectic, repetitive and highly organised environment, the need to squeeze out any **slack** or inefficiencies is crucial to ensure a firm's costs are lower than their competitors'. Without this emphasis on cost reductions, a firm's costs would simply spiral upwards and the firm's products and services would become uncompetitive. But we have already seen in the previous chapter that long-term economic growth is dependent on the ability of firms to make improvements to products and manufacturing processes. This means that

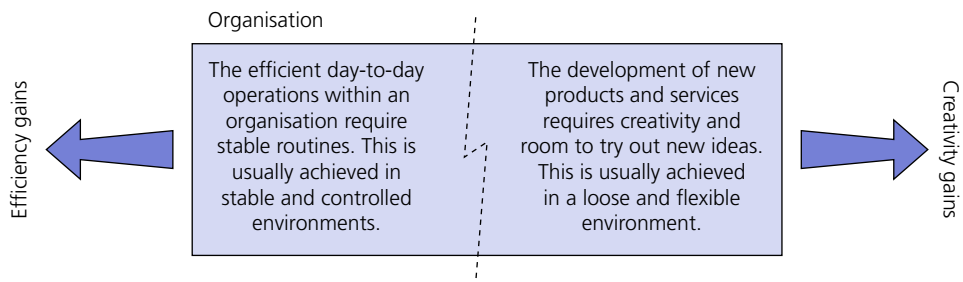

Figure 4.1 Managing the tension between the need for creativity and efficiency

firms need to somehow make room for creativity and innovation, that is, allow slack in the system.

Here, then, is the dilemma: 'The farther that any company seeks to innovate, as measured by the degrees of change from its base markets and technologies, the greater the likelihood that its innovation efforts will fail. And yet, the less that a firm seeks to innovate, across the board, the greater the likelihood that the corporation itself will fail.'

So, how do firms try to reduce costs and slack to improve competitiveness on the one hand and then try to provide slack for innovation on the other? As usual, with dilemmas, the answer is difficult and has to do with balancing activities. The firm needs to ensure there is a constant pressure to drive down costs and improve efficiency in its operations. At the same time, it needs to provide room for new product development and making improvements. The most obvious way forward is to separate production from research and development (R&D) but, whilst this usually is done, there are many improvements and innovations that arise out of the operations of the firm, as will be seen in the next chapter. Indeed, the operations of the firm provide enormous scope for innovation.

This is the fundamental tension at the heart of an enterprise's long-run survival. The basic problem confronting an organisation is to engage in sufficient exploitation to ensure its future viability. Exploitation is about efficiency, increasing productivity, control, certainty and variance reduction. Exploration is about search, discovery, autonomy, innovation and embracing variation. **Ambidexterity** is about doing both. O'Reilly and Tushman (2008) argue that efficiency and innovation need not be strategic trade-offs and highlight the substantive role of senior teams in building dynamic capabilities. In organisational terms, dynamic capabilities are at the heart of the ability of a business to be ambidextrous – to compete simultaneously in both mature and emerging markets – to explore and exploit. Ambidexterity entails not only separate structure sub-units for exploration and exploitation, but also different competencies, systems, incentives, processes and cultures – each internally aligned (O'Reilly and Tushman, 2008; Smith and Tushman, 2005). Current research is exploring how firms should dynamically reconfigure resource portfolios to leverage organisational ambidexterity for new product development (Wei et al., 2014).

Pause for thought

To resolve the innovation dilemma, why do firms not simply separate the creative side of their business from the operational side?

Innovation dilemma in low technology sectors

Research in the area of low technology intensive industries shows a dominance of incremental, mostly process-driven innovations where disruptive innovation activities are scarce. Generally, the dominant pattern of technological development in low technology intensive industries is characterised by a high path-dependency, which is continuously stabilised by incremental innovation activities. High returns

on investment are generated from continuous optimisation of processes and of the existing technologies, thereby reinforcing the development paths. Smart et al. (2010) reviewed the process innovation literature and developed a model of costs associated with adoption, this included: capital costs, development costs and switching costs. This cost-minimising orientation is particularly apparent in many mature industries, such as the food and FMCG industries, where price-based competition is high. Benner and Tushman's (2002) study within the paint and photographic industries suggests that this focus can result in a shift in the balance of innovation, towards efficiency at the expense of long-term adaptation. This, in turn, creates an emphasis on exploitative activities, crowding out more significant innovations. Whilst these activities may help firms learn and adapt quickly in the short term, they were seen to inhibit a longer-term focus and lead to inertia. This creates a pressure on R&D to improve the product and production process to lower costs over time, which can, in turn, stifle more significant innovation. Thus, arguably the innovation dilemma in low-tech sectors is even worse than high tech sectors.

Dynamic capabilities

How, then, do firms escape from the innovation dilemma? The literature on organisational capabilities offers insight into the different resources and environment necessary for developing incremental and radical innovations. Incremental innovation reinforces the capabilities of established organisations, whilst radical innovation forces them to ask a new set of questions, to draw on new technical and commercial skills, and to employ new problem-solving approaches. The impact of this on the nature of innovation activities is that, as the organisation learns and increases its efficiency, subsequent innovation is increasingly incremental. Another constraint on innovation that can arise from this is a shift to simply meeting existing customer needs.

The literature on dynamic capabilities seems to offer the most likely solution for firms. It has found that every firm has a zero-level or baseline set of routines, i.e., those that serve the purpose of producing and marketing the given products and services currently in the portfolio (how we earn a living now). Some firms have dynamic capabilities, i.e., those routines that relate to the innovation of products and services, to the innovation of the production process, or to the search and attraction of new customers, etc. – dynamic capabilities implement the change of old routines with new ones. Chapter 7 explores this issue further.