## Dynamics of Diversification: Developing and Testing Resource-Based Theories of Diversification

Shayne Gary, London Business School, May 1997 email: sgary@lbs.lon.ac.uk

## Abstract

A fundamental part of corporate strategy is the choice of what portfolio of businesses to compete in. Despite many years of academic research, there is still considerable disagreement about precisely how and when diversification can build long-run competitive advantage. The last 30 years of research on the issue has focused primarily on the superiority of related diversification over unrelated diversification. In this "relatedness" line of research, related diversification allows the corporate center to exploit interrelationships among different Strategic Business Units (SBU's) to achieve cost or differentiation advantages over rivals. The paradigm embraced in this view is one of static exploitation of economies of scope (i.e. traditional economic efficiencies). In contrast, the emerging dynamic resource-based view stream of research focuses primarily on dynamically changing portfolios of strategic resources within a diversifying firm. From this perspective, related strategic resources accelerate the continual expansion of existing strategic resources stocks and stimulate the creation of new strategic resources. This paper discusses the application of system dynamics to develop and test dynamic resource-based diversification theories in an ongoing research project exploring the dynamics of diversification.

## Relatedness

The primary impediment to progress in research on diversification has been the inability to precisely define relatedness and identify the type of relatedness that is important for superior economic performance. Traditional resource-based studies are based, either explicitly or implicitly, on one type of relatedness that can be best characterised as static resource relatedness. This type of relatedness focuses on explaining how firms build long-run competitive advantage by investing in idiosyncratic firm resources that are valuable, rare, and inimitable (Barney, 1986 and 1991; Rumelt, 1974; Wernerfelt, 1984). Competitive advantage, in this perspective, focuses on leveraging related resource portfolios capable of exploiting economies of scope. Empirical tests of the link between static resource relatedness and economic performance have been inconclusive.

Alternatively, emerging dynamics of strategy research is based on another type of relatedness that can be characterised as dynamic resource relatedness. In this type of relatedness, the processes by which strategic resources are expanded or created are more important than the static similarities

which are the outcome of the processes. In contrast to traditional resource sharing relatedness, this perspective suggests that the continual accumulation/creation of strategic resources gives rise to a competitive advantage which is eroding away even as rivals invest to close the competitive gap (Amit and Shoemocker, 1993; Dierickx and Kool, 1989; Markides and Williamson, 1994; Penrose, 1959). The paradigm embraced in this dynamic resource perspective is one of continuously changing portfolios of strategic resources, which result in repeated short term appropriation of economic rents. Sustaining competitive advantage is a matter of continually expanding stocks of strategic resources or creating new ones, more rapidly and at lower cost than rivals. Although the arguments are persuasive, albeit incomplete, this dynamic theory of related diversification has proven difficult to operationalize and test using traditional economic models. Given the nature of the issue under study, system dynamics can clearly provide a framework for advancing the debate. Figure 1 illustrates a portion of the conceptual model discussed above.

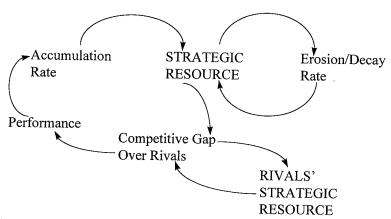


Figure 1. Causal loop diagram of the general strategic resource accumulation process.

The causal loop diagram in Figure 1 represents the process of resource accumulation for one strategic resource within one SBU. As shown, an SBU with more of a strategic resource than its rivals has a competitive advantage that can be leveraged for superior economic performance. Using this conceptual model as a foundation, we now move towards operationalizing dynamic relatedness between SBU's.

As a concrete example of dynamic resource relatedness, the U.K. electricity industry provides an excellent opportunity to study related diversification. The industry was privatized in 1990 and has become increasingly competitive as both electricity generation and electricity supply "markets" have been liberalised. In response, electricity utilities have embarked on a range of diversification strategies to fuel revenue and profit growth. The shift from exploitation of monopoly rents to the quest for Ricardian and Schumpeterian rents has driven firms in this industry to seek competitive advantage over rivals by attempting to realize synergy between various SBU's. The following diagram extends the conceptual model in Figure 1 to two SBU's of a UK electricity company which has diversified into telecommunications.

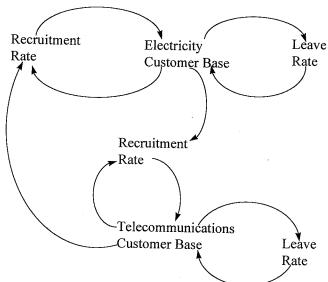


Figure 2. Causal loop diagram of dynamic relatedness between two SBU's.

The causal loop diagram in Figure 2 explicitly represents the customer base within each of two SBU's- the core electricity supply business and a non-core telecommunications business. As explained previously, dynamic relatedness refers to the rate at which stocks of strategic resources are built or decay. The specific inter-relationships in the loop diagram depict an electricity business unit and a telecommunications business unit that together can bundle services offered by the businesses to accelerate customer recruitment for both SBU's. The detailed process whereby they would realize this recruitment synergy has not been shown in the interests of diagram clarity,

but would include assumptions about consumer behaviour, increased selling channel access, cost efficiencies for price attractiveness, etc.

This "clean" conceptualization of dynamic relatedness between resource stocks allows us to operationalize dynamic models of related diversification and attempt to unravel the puzzling questions surrounding this phenomenon. Such questions include: 1) Which strategic resources have significant time compression diseconomies?, 2) How does the interconnectedness of resource stocks affect the accumulation of strategic resources among different resource portfolios?, 3) What resources are most vulnerable to natural decay or erosion and how can companies increase their retention of these strategic resources? These are just a sample of the questions on the agenda in our research project exploring the dynamics of diversification.

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