

The Effects of Sensing and Seizing of Market Opportunities and Reconfiguring Activities on the Organisational Resource Base

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Abstract

This study has important implications for marketing theory and practice. In an era of turbulent market environments, the organisational ability to sense and seize market opportunities and to reconfigure the resource base accordingly, has significant effects on performance. This paper uses a dynamic capability framework to explain more explicitly the intricacies of the relationship between sensing and seizing of market opportunities and reconfiguring the resource base (i.e. dynamic capabilities) and the resource base. We investigate how the attributes of dynamic capability deployment, timing, frequency and speed, influence the resource base. We test the proposed framework using survey data from 228 large organisations. Findings show that the timing and frequency of dynamic capability deployment have significant effects on the resource base.

Keywords: Dynamic capabilities, market turbulence, market sensing, marketing strategy, resources

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Introduction

The notion of organisational capabilities in market strategy has gained increasing attention from marketing scholars (Menguc and Auh, 2008). The resource-based theory of the firm (Amit and Schoemaker, 1993; Barney, 1996; Wernerfelt, 1984) has argued that a firm's resource base including marketing resources and capabilities that are valuable, inimitable, non-substitutable and rare can be the basis of superior organisational performance. Though empirical research has found a positive relationship between a firm's resource base and organisational performance (e.g. Carmeli and Tishler, 2004; Ethiraj et al., 2005), little research has dealt explicitly with how organisations create and adjust their resource base. Considered as the evolutionary extension of resource-based theory, dynamic capability theory deals with how organisations alter their resource base through dynamic capabilities in order to stay responsive to the market environment, especially in times of market turbulence such as change in technologies and consumer demand. Dynamic capability deployment is the process of 1) sensing and shaping market opportunities, 2) seizing market opportunities and 3) redeploying and reconfiguring (creating, extending and modifying) the resource base. Dynamic capabilities have mainly been subject to theoretical debate focusing on explaining the development and evolution of dynamic capabilities rather than their deployment (e.g. Eisenhardt and Martin, 2000; Teece, Pisano and Shuen, 1997; Winter, 2003; Zahra, Sapienza and Davidsson, 2006; Zott, 2003). Few studies empirically investigate the relationship between dynamic capabilities and the resource base; this gap in knowledge is exacerbated by multiple definitions, ambiguity of constructs, contradicting views and little grounding of the theory in empirical observation. Based on advancing the theoretic conceptualisation of dynamic capability deployment, this paper uses quantitative research techniques to extend the debate about dynamic capabilities. We focus on the impact of dynamic capability deployment on the resource base under different market conditions. More specifically, we investigate the effect of the attributes of dynamic capability deployment (timing, frequency and speed). This research contributes to extant knowledge on dynamic capabilities by developing and testing a theoretical framework of dynamic capability deployment and by providing a measure of dynamic capability deployment.

Research and Hypotheses

Dynamic capability deployment is defined as the process of sensing and seizing market opportunities and reconfiguring the resource base (Teece, 2007). This deployment can vary in terms of the frequency, speed and timing. In the following sections we discuss each of these three characteristics.

Zollo & Winter (2002) point out that dynamic capabilities represent a learned and stable pattern of collective activities undertaken in pursuit of improved effectiveness. This learning occurs when experiences generate a systemic change in behaviour (Miner, Bassoff and Moorman, 2001) and is closely linked to the *frequency* of dynamic capability deployment. Firms gain expertise simply by repeated activities (Arrow, 1962). The more frequently firms engage in market sensing, opportunity seizing and reconfiguring activities the more dynamic capability deployment is embedded as an element of organisational memory. Dynamic capabilities become part of the "stable set of repetitive actions" and persist until changes in

the market necessitate a response which modifies the underlying routines (George, 2005, p. 123). Consequently, frequent dynamic capability deployment improves the resource base. Organisations that more frequently engage in market sensing and more frequently seize opportunities and reconfigure the resource base will be more capable of dealing with market turbulence and be better prepared to align their resource base with the environment than organisations with less practiced skills (Teece, 2007). Frequent dynamic capability deployment is also an indicator that organisations regularly look for market opportunities and threats against which to align their resource base. This leads to the resource base being better aligned to the market place, and consequently, improves performance. Frequent deployment of dynamic capabilities may also lead to more efficient responses to major changes in the market place; firms with little experience of deploying their dynamic capabilities will find altering their substantive capabilities more difficult, more costly, and less effective (Zahra, Sapienza and Davidsson, 2006). Consequently, we conclude:

H1: Frequent dynamic capability deployment strengthens the resource base.

The *speed* of dynamic capability deployment is defined as the length of time between market sensing, seizing and reconfiguring and describes how quickly organisations identify and respond to market turbulence (Chakravarthy, 1982; McDaniel and Kolari, 1987; Oktemgil and Greenley, 1997; Zott, 2003). Previous research has found that faster dynamic capability deployment leads to better firm performance (Zott, 2003). Teece et al. (1997, p. 521) stress the speed of dynamic capability deployment and observe that it is essential for organisations to “accomplish reconfiguration and transformation ahead of competition”. Differences in the speed of dynamic capability deployment can result from management’s (un)willingness to take action (Stinchcombe, 1965).

There is little research that directly deals with the speed of the sensing-seizing-reconfiguring process. However, previous research shows that the speed of response to market turbulence is an important driver of organisational performance (Porter, 1985). Empirical studies reveal that organisations that respond quickly to market turbulence improve the alignment of their resource base with the environment (Bourgeois III and Eisenhardt, 1988; Collis, 1991; Powell, 1992). Increased alignment with its environment (also called strategic fit) is an indicator that dynamic capabilities have been deployed. Ferrier, Smith & Grimm (1999) have shown that incumbent firms are more likely to maintain their position when moving swiftly against competitive challenges and that fast acting challengers tend to increase their market share which results in increased evolutionary fitness. These findings go in line with research that shows that a quick reaction to changes in customer demand positively influences firm growth (Dess, Lumpkin and McGee, 1999; Helfat et al., 2007; Zahra, Sapienza and Davidsson, 2006). Therefore we propose:

H2: Speedy dynamic capability deployment strengthens the resource base.

The *appropriate timing* of dynamic capability deployment refers to when dynamic capabilities are deployed and is often the result of organisational decisions concerning the alignment of internal conditions with the market to promote positive outcomes of resource modification and deployment (Fahey, Liam and Naraynan, 1986). Differences in the timing of dynamic capability deployment arise from deliberate decisions to move first, or to follow the leader (Lieberman and Montgomery, 1988), or may also be the result of coincidence (Barney, 1986) or ‘randomness in competition’ (Porter, 1994). Organisations that deploy dynamic capabilities early require certain resources and capabilities to do so (Schoenecker and Cooper, 1998). Consequently, pioneering when entering a market should be more appropriate for

organisations that have strong research and development capabilities, compared to organisations with strengths in marketing and manufacturing, which might choose to enter markets at a later stage (Lieberman and Montgomery, 1988, 1998). Proactive and aggressive organisations will deploy dynamic capabilities earlier than organisations that follow a cost leadership strategy, which might wait until technological and market uncertainties have been resolved (Lieberman and Montgomery, 1998).

Therefore, we propose that the appropriate timing of dynamic capability deployment is positively related to the strength of the resource base.

H3: Appropriate timing of dynamic capability deployment strengthens the resource base.

Market turbulence refers to how predictable the environment is. It is manifested in the rate of demand, technological and competitor change and the level of uncertainty about forces outside the control of the organisation (Aldrich, 1979; Baum and Wally, 2003; Dess and Beard, 1984). Turbulent markets are closely linked to high-velocity markets which involve fast-paced changes in demand, competition and technology (Baum and Wally, 2003). The stronger impact of dynamic capability deployment in highly turbulent markets arises from the requirement of organisations to reconfigure their resource base to stay aligned with the external market and the learning inherent in this frequent deployment. That is, the readiness and capacity regarding reconfiguration of their resource base is greater which provides the underpinning for amplifying the effects of deploying dynamic capabilities.

Empirical evidence has shown that the impact of market sensing and opportunity seizing activities on enhancing organisational fit and performance vary with the degree of market turbulence (Eisenhardt and Martin, 2000). Baum & Wally (2003) found that the effect of deployment speed upon performance is greater in turbulent environments. In line with Zahra, Sapienza & Davidsson (2006) we expect that, on average, dynamic capability deployment will vary with the degree of market turbulence.

H4: Market turbulence moderates the dynamic capability deployment – resource base relationship.

Methodology

Sample and data collection

For this study, the organisation is the unit of analysis, and senior managers acted as key informants. We expect that senior managers possess knowledge about tacit organisational processes that are difficult to observe (Chen, Farh and MacMillan, 1993). The key informant approach is appropriate when researching dynamic capabilities as little archival data on tacit organisational processes is available (Kumar, Stern and Anderson, 1993). The sampling frame (4687 organisations out of which 3559 firms were successfully contacted and 2949 agreed to participate by providing their email address), drawn from Dun & Bradstreet's commercial database, included organisations from Australia with at least 150 employees and at least A\$20 million sales revenue. An online survey resulted in 228 usable survey responses, representing a response rate of 8.3%. The mean number of employees within responding organisations is 1,150. Companies in our sample have been active for 28 years on average, and sales range from A\$ 20 million to more than A\$ 1 billion. The average respondent has worked in the

respective company for five to ten years, and has an overall work-experience of more than 20 years. We ran multiple statistical procedures to test for non-response and common method biases, neither of which was found to be an issue (Armstrong and Overton, 1977; Kanuk and Berenson, 1975; Lane, Salk and Lyles, 2001; Podsakoff, MacKenzie and Lee, 2003).

Measures

Where appropriate, the survey made use of existing measurement scales; for example market turbulence (DeSarbo et al., 2005; Jaworski and Kohli, 1993). In other cases, existing scales were modified to better suit the research context (for example, resource base, Spanos and Lioukas, 2001). For variables which measurement was unique to the conceptual framework underlying this study (for example, dynamic capability deployment), scales were developed and assessed to determine their content validity based on theoretical contributions from resourced-based and dynamic capabilities scholars (Danneels, 2008; Jantunen et al., 2005; Teece, 2007). We further had extensive discussions with academics and senior managers during the pre-testing stage of the research in order to examine the face validity of the proposed scales. All reflective scales have high convergent and discriminant validity; the formative scales show no problems regarding multicollinearity and have significant weights.

Results

In order to study the effects of dynamic capability deployment on the resource base, partial least squares (PLS) path modelling was used with the software package SmartPLS (Ringle, Wende and Will, 2005). PLS has increasingly been used in marketing research and is an appropriate technique for this study as we analyse a predictive research model that is in the early stages of dynamic capability theory development (Fornell and Bookstein, 1982). PLS also allows the researcher to use both reflective and formative measurement scales, whereas covariance-based SEM has limitations when modelling in formative mode (Chin, 1998).

Assessing the direct effects model first, two attributes of dynamic capability deployment appear to have significant positive effects on the resource base. The frequency of dynamic capability deployment ($\beta=0.40$) has the strongest impact on the resource base, followed by the timing ($\beta=0.29$) of deployment. The R^2 (coefficient of determination) indicates how much of the variance of an endogenous construct is explained by the relationships in the model. For the resource base the R^2 is (reasonably) substantial (0.56) (Chin, 1998). These findings support Hypotheses 1 and 3.

Second, to analyse the moderating effects of market turbulence on the dynamic capability deployment – resource base relationship, we conducted sub-sample analyses. Using k-means cluster analyses, we created two sub-samples based on the degree of market turbulence. Comparing the results of the analysis for organisations perceiving a more stable environment versus turbulent environment, one can see that the timing and frequency of dynamic capability deployment have much stronger effects on the resource base in turbulent environments than in more stable environments (See Table 1). The speed of dynamic capability deployment on the other hand has a strong impact in stable environments, but has no significant effect in highly turbulent environments. We conclude that Hypothesis 4 is supported and that market turbulence moderates the dynamic capability deployment – resource base relationship.

Table 1: Path coefficients for sub-samples (significant paths are in boldface)

	Full data (n=228)	MarketTurb high (n=47)	MarketTurb low (n=90)
DCF -> Resource base	0.40	0.65	0.21
DCT -> Resource base	0.29	0.41	0.34
DCS -> Resource base	0.14	-0.04	0.32
Age -> Resource base	0.00	0.04	0.08
Sales -> Resource base	-0.01	0.02	-0.06
Employee No -> Resource base	0.03	-0.05	0.06

Implications for Theory and Practice

This study has important implications for marketing theory and practice. In an era of turbulent market environments, the ability of organisations to sense and seize market opportunities, and to reconfigure their resource base accordingly, is considered to have significant effects on performance (Eisenhardt and Martin, 2000; Helfat et al., 2007; Teece, Pisano and Shuen, 1997; Zahra, Sapienza and Davidsson, 2006; Zott, 2003). The key purpose of this study was to examine the relationship between the speed, frequency and timing of dynamic capability deployment and the resource base. Our results show that the frequency and the timing of dynamic capability deployment have significant effects on the resource base. The results further suggest that organisations should ensure that they are aware of the degree of market turbulence that their organisation faces, as frequency and timing have particularly strong effects in turbulent markets whereas in more stable environments all deployment attributes are relevant.

Our findings and implications should be considered in light of the limitations of the study. This research mainly used self-reported data to test the underlying model. Though we invested considerable efforts into the data and construct validation to increase data quality, as with any research of this kind, there is still room for potential survey biases. A longitudinal study might provide valuable insights into how dynamic capability deployment impacts the resource base over time. This is particularly important as dynamic capability deployment is expected to have long-term effects and consequently, changes in the strength of the resource base cannot be fully assessed instantaneously.

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