

Margret Stix

How Control Fosters Learning

The Association between Control Mechanisms and Firm Capabilities

Doctoral Thesis / Dissertation

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**How Control Fosters Learning –
The Association between Control Mechanisms and Firm Capabilities**

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„Nur wer sein Ziel kennt, findet den Weg.“

Laozi

Danksagung

Der Abschluss einer Dissertation ist nie das Werk eines Einzelnen sondern entsteht erst durch die Unterstützung (inhaltlich, finanziell, Motivations-technisch, etc.) von Familie, Freunden und Kollegen. Daher möchte ich mich ganz herzlich bei allen bedanken, die mich bei diesem Projekt unterstützt haben und ohne deren Hilfe das Erreichen des Doktor-Titels für mich nicht möglich gewesen wäre.

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Eure Margret

Abstract(s)

This dissertation brings together research on organizational control systems and research on organizational learning and organizational capabilities. In doing so, the question how control mechanisms and firm capabilities are associated with each other is examined. I acknowledge that organizational control mechanisms are organizational routines that can modify or leverage strategic capabilities of firms through the fostering of organizational learning. Analyzing the association of specific control strategies with specific organizational capabilities I argue that alternate configurations of organizational control systems differ in terms of their complementarity or fit to certain organizational capabilities and that competitive advantage can be gained when organizations achieve an appropriate match of both. My hypotheses are tested using data from a survey of 238 manufacturing firms in Austria and Germany.

Diese Dissertation verknüpft die bestehende Literatur zu den Themen Steuerungsmechanismen, Organisationales Lernen und Kompetenzen von Unternehmen. Insbesondere wird die Fragen untersucht, wie Steuerungssysteme und organisationale Fähigkeiten zusammenhängen. Im Rahmen der Arbeit wird die These aufgestellt, dass Steuerungsmechanismen, ähnlich wie organisationale Routinen wirken und die Fähigkeiten und Kompetenzen von Unternehmen beeinflussen bzw. deren Entwicklung fördern können. Im Rahmen einer empirischen Untersuchung wurden 238 Unternehmen der Maschinenbau-Branche in Deutschland und Österreich befragt. Basierend auf den Umfrageergebnissen lässt sich feststellen, dass verschiedene Konfigurationen von Steuerungsmechanismen besser zu bestimmten organisationalen Fähigkeiten passen als andere. Weiters wird argumentiert, dass Firmen durch passende Kombinationen von Steuerungssystemen und organisationalen Fähigkeiten einen langfristigen Wettbewerbsvorteil aufbauen können.

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Abbreviations

ANOVA	analysis of variance
BSC	Balanced Scorecard
CEO	Chief Executive Officer
DC	dynamic capabilities
et al.	and others
M&S framework	Miles and Snow framework
MANOVA	multivariate analysis of variance
MBV	market-based view
MCS	management control systems
ME	medium-sized enterprises
PEU	perceived environmental uncertainty
RBV	resource-based view
R&D	research and development
SCA	sustained competitive advantage
Sig.	significance
SWOT	strengths, weaknesses, opportunities, threats
VIF	variance inflation factors
VRIN	valuable, rare, inimitable, non-substitutable
VRIO	valuable, rare, inimitable, organizationally appropriate

1 Introduction

The question how firms can gain a sustained competitive advantage to outperform their competitors and survive in the long run is at the heart of strategic management research. One of the most important strategic management theories is the resource-based view (RBV). The RBV sees the source of a sustained competitive advantage in the possession of strategic capabilities. Strategic capabilities are defined as firm-specific, organizational processes that are not tradable without the organization itself and that have the potential to be the source of a sustained competitive advantage through being valuable, rare, inimitable and non-substitutable (Barney, 1991; Amit and Schoemaker, 1993; Makadok, 2001).

Lately, the RBV has been criticised for being a static concept. The main argument of the dynamic capability (DC) theory, a recent extension of the RBV, is that sustained competitive advantage cannot be gained though the simple possession of valuable, rare, inimitable and non-substitutable capabilities, as capabilities that have been very successful in the past need not be the source of sustained competitive advantage in the future because of the changing market environment. In order to stay competitive firms need the ability to change their existing capabilities and to quickly develop new organizational capabilities. (Newbert, 2007; Schreyögg and Kliesch-Eberl, 2007; Morgan et al., 2009)

These organizational processes that modify and leverage strategic capabilities of firms through the fostering of learning within the organization in order to match changing market needs are called dynamic capabilities (Teece et al., 1997; Eisenhardt and Martin, 2000; Helfat, 2007; Danneels, 2008).

Dynamic capability theory tries to shed some light on how firms alter their resource base by adding, reconfiguring, and deleting resources or competences. As Eisenhardt and Martin (2000, 1107) put it, “dynamic capabilities are the organizational and strategic routines by which firms achieve new resource configurations as market emerge, collide, split, evolve, and die”. Dynamic capability theory points out that some firms are better able than others at altering their resource base and hence enjoy superior performance, particularly in dynamic environments (Teece et al., 1997; Eisenhardt and Martin, 2000).

According to Eisenhardt and Martin (2000), the main differences between “ordinary” capabilities as defined by the RBV and dynamic capabilities are that DC are more

homogeneous and substitutable across firms. Furthermore, it is important to notice that the sustained competitive advantage gained through DC does not lie in the DC *themselves* but in *their ability to influence and leverage the strategic capabilities* of the firm in order to match the needs of quickly changing markets.

However, DC theory suffers from a lack of clear definitions, systematically conceptualized constructs, and clear empirically grounded recommendations for practitioners how dynamic capabilities should be used within organizations to gain a sustained competitive advantage and, ultimately, a higher performance (Newbert, 2007; Danneels, 2008). The notion of dynamic capabilities still seems quite abstract and intractable and hence our understanding of how dynamic capabilities are developed and how they translate into performance is quite limited.

In a recent paper, Danneels (2008) makes an important step to overcome this weakness by formalizing two important firm capabilities, the firm's ability to explore new markets and its ability to explore new technological domains, and analyzing how organizational characteristics influence these firm capabilities. He develops a theoretical rationale regarding five organizational characteristics that in his view increase the organization's ability to identify, evaluate, and implement new competences: the firm's willingness to cannibalize, the presence of constructive conflict in the organization, a climate of tolerance for failure, the extent to which the firm engages in environmental scanning, and the firm's slack resources. According to Danneels (2008), these antecedents foster organizational learning and the development of DC.

In this dissertation, I build on Danneels' (2008) work and analyze if certain configurations of management controls systems (MCS) foster organizational learning and knowledge management processes that support the development of organizational capabilities.

MCS are defined as organizational processes that ensure (1) that the employees of the firm behave in the desired way and (2) that the organization performs well (Merchant and Van der Stede, 2007; Merchant and Otley, 2007). Thus, MCS are basically used to ensure that there is a match between the activities within the firm and the external needs of the customers. Following Merchant and Van der Stede (2007), I differentiate between three archetypes of MCS derived from the Merchant and Van der Stede (2007) framework. Merchant and Van der Stede's (2007) framework builds on Ouchi's (1979, 1980) work and distinguishes controls

based on the object of control. It differentiates between (1) results controls which influence behaviour using information from measures for the outcomes of employees' work, (2) action controls which describe the actions to be taken, and (3) cultural and personnel controls which encourage mutual monitoring of employees and which clarify the organization's expectations to employees, providing them with adequate resources.

In contrast to prior research, this dissertation not only examines the link between MCS and capabilities in general as suggested by Chenhall (2003) and Henri (2006), but it contributes to the contingency-based theory on MCS by arguing that certain DC *differ in terms of their complementarity or fit* to certain MCS configurations and (2) that a sustained competitive advantage, measured as a superior performance, can be gained through the possession of *matching combinations of DC and MCS*.

In my empirical study I measure four different DC: customer orientation, competitor orientation, radical innovation capability and incremental innovation capability.

In this dissertation I argue that using results controls (defining and operationalizing strategic targets, measuring them through performance indicators, and evaluating the employees individually on their success in achieving these targets) to give individual performance feedback fosters the development of customer and competitor orientation through managing explicit, complete, and non-diverse customer and competitor knowledge and supporting of individual learning.

Furthermore, I assume that cultural controls provide group performance feedback to employees and foster the development of innovation capabilities through facilitating team learning and making goals explicit and stable, facilitating coordination among the organization, helping to sustain innovation over time through providing a generative memory, and defining the acceptable behavior for employees without suppressing the creation of new ideas.

Additionally, I want to follow a contingency approach through analyzing the interrelationship between MCS, DC and performance. I propose that firms that have MCS consistent with their DC will differ in their performance from firms that have MCS inconsistent with their DC.