

MANAGEMENT CONTROL and INFORMATION MANAGEMENT

Dr Niels Dechow

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Introduction

"Management control and information management is a must in any organization where decentralization exists. Leaders who don't understand fundamentals of control techniques and their underlying technologies will be at a strategic disadvantage. Increasingly management control is about technology management.

Traditionally, it has often been supposed that control systems must "fit" the firm's strategy; that strategy is developed through a formal and rational process, and last but not least that the firm's management systems follow from the underlying rationales of strategy. Increasingly, however, the situation is that new technologies influence significantly how firms enact their strategies. In parallel, more and more technologies for management control are offered to corporate leaders who therefore need tools and ways to think about corporate 'information management'. The overall course objective is to familiarize class participants with this task.

This elective builds on the core course in 'financial management'. This course enables you to approach and manage information systems from an information management & control perspective both in a practice setting and in the context of projects. In contrast to the core course that focused mostly on techniques and calculations, this course focuses on the nature of management control problems that arise in organizations that rely on information systems. Most organizations do.

Learning Outcomes

Most of you will soon be in positions where you will be directly responsible for line or staff. You will either have to manage others within a certain management control system; you will become a key decision taker or even designer of such systems or you will be the "sufferer" of management control systems that don't report on the things you want to know about. Either way, the materials covered in this course will be highly relevant to your immediate job situations as they will contribute to your understanding of the role and impact of management control systems on the ways 'how' organizations manage (lecture 1-4 in particular) and vice versa help you impact on the design of management control systems and thus 'what' it is that your organization manages (lecture 5-8 in particular).

My role in Class

In class, my role is to help facilitate discussion. In part, I serve as a recording secretary, clarifier and intensive questioner in order to help the class develop its ideas. My primary role is to manage the class



process and to ensure the class achieves an understanding of the theme of the lecture. Lectures are structured in three parts.

During the first hour of a lecture I will provide an overview to a theme and introduce some theoretical foundations by which to conceptualize the problems and/or dilemmas.

During the second hour of the lecture we will analyze a case on class. If groups or individuals have been assigned to analyze the case, they may be asked to introduce the case and co-facilitate the discussion. Usually, there is no single correct solution to any of the cases. There are, however, solutions that are inadequately supported with analysis, and there are solutions and analyses that are ineffective because they are not presented in an orderly and persuasive fashion. My role is to help the class develop an effective analysis but we should work together to see to it that each class session is a lively, stimulating, and intellectually rewarding venture in group learning.

During the third hour I will offer my view on the theoretical implications of the case for the theme, and the theoretical foundations discussed during the first two hours and the purpose of this presentation is to offer a summary on the basis of which the role of the class finally is to synthesize practical implications, including ways to conceptualize problems, ways to evaluate organizations, ways to structure investment proposals etc.

Essential Purchase / Reading Materials

The course employs both a course compilation and a subset of chapters from:

Simons, R. (2000) <u>Performance measurement and control systems for implementing strategy, Prentice</u> Hall.

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The majority of the other text materials have been sourced predominantly from management journals such as Harvard Business Review and the Sloan Management Review.

Participants can expect that most readings necessarily will be referred to explicitly in class. However, the main purpose of the readings in class is not to regurgitate the literature but to use it to develop frameworks for analysis. The readings per lecture including case studies have been limited to approximately 65 pages, and it is expected that every participant has familiarized themselves with the literature in advance of the lecture and read the case studies in detail. Participants are not expected to have read in advance of the lectures the papers that in the following pages appear underneath the heading 'to be presented in class'. Participants may but are not expected to read literature listed as 'supplementary readings'. In general 'primary readings', on the following pages, have been listed in the order by which they will be used in the lectures.

As a word of caution on case studies; do not approach a case as you would a book chapter or magazine article. You are a participant, not an observer. Therefore you must put yourself in the shoes of the decision maker and aim to understand the nature of the problem and not only the outlines of a solution. The main purpose of the case study is to allow the class to develop and exercise frameworks that allows you to evaluate various situations on their own merits. In other words, do not automatically assume a case represents a good or a bad system. It is expected that the frameworks we develop will draw broadly on the disciplines from your other core courses – explicitly the inclusion of insights from



organization, strategy and finance is encouraged in addition to your base knowledge of financial management. Below follows a very brief introduction to each of the lectures including the specific learning objectives for each of the eight lectures.

Assessment

The final grade will be based on the submission of two case studies during the course and the successful completion of a final exam

Office Hours

Niels Dechow, Room 30.027. For appointment please email: niels.dechow@sbs.ox.ac.uk

Quality Council Meetings will be organized each fortnight, if desired. Details to be discussed at the beginning of the course.



Week 1: Valuation of IT investments

Introduction

Worldwide corporations spend trillions of pounds on new IT investments. Rarely are these investments made subject to formal valuation. This lecture focuses on the problems and challenges in applying financial valuation tools to modern information technology. The case study illustrates the struggle a manufacturing firm experiences in assessing the costs and benefits of a major IT investment.

Learning Objectives

To understand and/or develop:

- o Complementarity as main (economic) contribution of IT investments
- o Characteristics of methodologies and their use for valuation of IT investments
- o Limitations of valuation tools to capture and represent business value propositions
- o Comprehensive valuation approach to IT investments

Primary Readings for Lecture

Simons, R. (2000) Designing asset allocation systems. Ch. 7 in <u>Performance measurement & control systems for implementing strategy</u>. Prentice Hall. pp. 137-158

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Cronk, M.C. & Fitzgerald, E.P. (1999): Understanding "IS business value: derivation of dimensions. <u>Logistics Information Management</u>, 12 (1/2), pp. 40-49.

Article available on ProQuest. For full text click here

Case: Whirlpool Europe. Harvard Business School. 9-202-017
IN COURSE PACK

Bannister, F. & Remenyi, D. (Sept 2000): Acts of faith: instinct, value and IT investment decisions. <u>Journal of Strategic Information Systems</u>, 15 (3), pp. 231-241.

Article available on Business Source Premier. For full text click here and follow pdf link

Supplementary Readings

Brynjolfsson, E. & Hitt, L.M. (Fall 2000): Beyond computation: information technology, organizational transformation and business performance. <u>Journal of Economic Perspectives</u>, 14 (4), pp. 23-48

Article available on Business Source Premier. For full text click here

Irani, Z. & Love, P.E.D. (Mar 2002): Developing a frame of reference for ex-ante IT/IS investment evaluation. <u>European Journal of Information Systems</u>. 11 (1), pp. 74-82

Article available on ProQuest. For full text click here and follow pdf link



Simons, R. (2000) Building a profit plan. Ch. 5 in <u>Performance measurement & control systems for implementing strategy</u>. Prentice Hall. pp. 75-110

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Week 2: Strategic Agility & IT Infrastructure Design

Introduction

This lecture explores how strategic business agility is often determined (and often limited) by the design of IT infrastructure. In continuation of the valuation lecture the purpose of this lecture is to illustrate how managers need a certain level of technical understanding in order to decide on the pro's and con's of a major IT implementation. The case study explores how for a medical firm the decision on the technical system architecture involves a revision of the firm's strategic business model.

Learning Objectives

To understand and/or develop:

- o Factors that influences managers choice of control tools
- o How strategic business agility relates to IT infrastructure agility
- o How modern IT questions the automation of management
- o Management parameters that make IT valuable
- o Limitations in purposes that technology can support at the same time
- o Criteria to clarify capabilities, impediments & risk profile of IT

Primary Readings for Lecture

Weill, P., Subramani, M. & Broadbent, M. (Fall 2002): Building IT infrastructure for strategic agility. Sloan Management Review. 44 (1), pp. 57-65.

Article available on Business Source Premier. For full text click here

Hagel, J. III, & Brown, J.S. (Oct 2001): Your next IT strategy. <u>Harvard Business Review</u>., 79 (9) pp. 105-113

Article available on Business Source Premier. For full text click here

Case: Moore Medical Corporation. Harvard Business School. 9-601-142 IN COURSE PACK

Hagel, J. III, & Singer, M. (Mar-Apr 1999) Unbundling the corporation. McKinsey Quarterly. (3), pp. 148-161.

Article available on Business Source Premier. For full text click here

Prahalad, C.K. & Krishnan, M.S. (Summer 2002): The dynamic synchronization of strategy and information technology. Sloan Management Review. 43 (4), pp. 24-33.

Article available on Business Source Premier. For full text click here

To be Presented in Class

Dechow, N., Granlund, M. & Mouritsen, J. (2006): Interactions between modern information technology and management control. Chapter in Hopper, T., Northcott, D. & Scapens, R. (eds.) <u>Issues in management accounting</u> 10/e (forthcoming)

Article available online. For full text click here



Supplementary Readings

Simons, R. (2000) Using diagnostic and interactive control systems. Ch. 10 in <u>Performance measurement & control systems for implementing strategy</u>. Prentice Hall. pp. 207-229

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Week 3: Parameters of the MCS Business Case

Introduction

Once the valuation has been made and the business model has been revisited in the light of new technologies corporations need to build the business case for the IT investment. This lecture focuses on the properties of the business case for an IT investment and in doing so builds together components from lecture 5 and 6 with an organizational risk assessment. The case study focuses on the lessons learned in a manufacturing firm that has recently finished its implementation of an enterprisewide system.

Learning Objectives

To understand and/or develop:

- o Tensions between demand for business flexibility and demand for control
- o Strategic risks that cause incomplete information management
- o Technological, Numerical & Narrative Properties of a business model
- o Components & Structure of management control systems business case

Primary Readings for Lecture

Hartman, F.G.H. & Vaassen, E.H.J. (2003): The changing role of management accounting and control systems - accounting for knowledge across control domains. Ch. 6 in Bhimani, A. (ed.): <u>Management accounting in the digital economy</u>. Oxford University Press: pp. 112-132.

IN COURSE PACK

Simons, R. (2000) Identifying strategic risk. Ch. 12 in Performance measurement & control systems for implementing strategy. Prentice Hall. pp. 255-274

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Case: Tektronix, Inc: Global ERP Implementation. Harvard Business School. 9-699-043
IN COURSE PACK

Applegate, L., Austin, R. & McFarlan, W.F. (2007): Making the case for IT. Ch. 4 in Applegate, L., Austin, R. & McFarlan, W.F. (2007): <u>Corporate information strategy and management.</u> Harvard Business School, pp. 115-136.

Article available online. For full text click here

Supplementary Readings

Magretta, J. (May 2002): Why business models matter. <u>Harvard Business Review</u>, 80 (5), pp. 86-92. Article available on Business Source Premier. For full text click here

Week 4: Management Control Systems & Strategic Transformation

Introduction

More and more tools for management control offer themselves to corporate leaders. One of them is the Balanced Scorecard. This lecture studies how this management control system promotes organizational transformation. The case study used in this lecture focuses on the ways an implementation of a balanced scorecard project in a financial services firm affects the ways it measures organizational success.

Learning Objectives

To understand and/or develop:

- o Performance management as a strategy mapping exercise
- o Different uses of performance management for accounting, budgeting & strategy
- o Organizational transformation in the context both of projects and practice
- Criteria for using management controls in projects and practice for organizational transformation

Primary Readings for Lecture

Kaplan, R.S. & Norton, D.P. (2002): <u>Mapping strategy - a BSR reader</u>. Harvard Business School Press. 990x. 38 pages

IN COURSE PACK

Shostack, K. & Eddy, C. (Nov-Dec 1971): Management by computer graphics. <u>Harvard Business</u> Review, 49 (6), pp. 52-63.

Article available on Business Source Premier. For full text click here and follow pdf link

Case: Part I: Wells Fargo Online Financial Services (A). Harvard Business School. 9-198-146
IN COURSE PACK

Case: Part II: Wells Fargo Online Financial Services (B). Harvard Business School. 9-199-019
IN COURSE PACK

Mouritsen, J. (2005): Beyond accounting change: design and mobilisation of management control systems. <u>Journal of Accounting and Organisational Change</u>. 1 (1), pp. 97-113.

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To be Presented in Class

Dechow, N. (2005): Forgotten but not forgiven: on the balanced scorecard as strategic practice. Working Paper. Mimeo

Article available online. For full text click here

Supplementary Readings

Janson, R.L. (Nov-Dec 1980): Graphic indicators of operations. <u>Harvard Business Review</u>, 58 (6), pp. 164-170.

Article available on Business Source Premier. For full text click here and follow pdf link



Week 5: Management, Reporting & Control & Strategic Alignment

Introduction

This lecture focuses on the idea of 'strategic alignment'. Within the domains of information systems and financial management it is often assumed that superior information management results from rational alignment of domains, intentions and information. In practice this is rarely the case. The case study focuses on the alignment challenges that follow from introducing customer relationships management along with measures of customer profitability in a financial service sector firm

Learning Objectives

To understand and/or develop:

- o Conceptual Framework and Key Principles of Business Process Reengineering
- o Foundations of 'Alignment Theory' (strategic fit & functional integration)
- o Principal & practical limitations of strategic alignment theory
- o Ways to create 'strategic alignment' through the use of control systems

Primary Readings for Lecture

Henderson, J.C. & Venkatraman, N. (1999): Strategic alignment: leveraging information technology for transforming organizations. <u>IBM Systems Journal</u>, 38 (2-3), pp. 472-484.

Article available on Business Source Premier. For full text click here

Simons, R. (2000) Levers of control for implementing strategy. Ch. 14 in <u>Performance measurement & control systems for implementing strategy</u>. Prentice Hall. pp. 301-316

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Sabherwal, R., Hirschheim, R. & Goles, T. (Mar-Apr 2001): The dynamics of alignment: insights from a punctuated equilibrium model. <u>Organization Science</u>, 12 (2), pp. 179-197.

Article available on Business Source Premier. For full text click here and follow pdf link

Case: Customer Profitability and Customer Relationship Management at RBC Financial Group (Abridged). Harvard Business School. 9-102-072

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To be Presented in Class

Lockamy, A. III & Smith, W.I. (Jun 1997): A strategic alignment approach for effective business process reengineering: linking strategy, processes and customers for competitive advantage. <u>International Journal of Production Economics</u>, 50 (2-3), pp. 141-153.

Article available on Science Direct. For full text click here and follow pdf link



Supplementary Readings

Simons, R. (2000) Aligning performance goals and incentives. Ch. 11 in in <u>Performance measurement & control systems for implementing strategy</u>. Prentice Hall. pp. 230-254

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Week 6: Information Management Practice

Introduction

Enterprise Resource Planning systems – or simply ERPs – promise firms to integrate data and realize accuracy and availability in real-time. Yet, many firms continue to struggle with this technology. This lecture studies information management practice in firms that use ERP systems and uses a case study to illustrate how technical considerations in relation to the IT infrastructure have implications for the business model in practice.

Learning Objectives

To understand and/or develop:

- o Common myths Enterprise Resource Planning Systems in organizations
- o How IT infrastructure conditions control and business models in use
- o Evolutionary View of what is Quality in Management Control
- o Difference in new and old criteria for effective information management

Primary Readings for Lecture

Davenport, T.H. (Jul-Aug 1998): Putting the enterprise into the enterprise system. <u>Harvard Business</u> Review, 76 (4), pp. 121-131.

Article available on Business Source Premier. For full text click here

Mabert, V.A., Soni, A. & Venkataramanan, M.A. (May-Jun 2001) Enterprise resource planning: common myths versus evolving reality. Business Horizons, 44 (3), pp. 69-76.

Article available on Business Source Premier. For full text click here

Cooper, R. & Kaplan, R.S (Jul-Aug 1998) The promise - and peril - of integrated cost systems. Harvard Business Review, 76 (4), pp. 109-119.

Article available on Business Source Premier. For full text click here

Case: Zara: IT for fast fashion. Harvard Business School. 9-604-081
IN COURSE PACK

Ross, J.W. & Weil, P. (Nov 2002): Six IT decisions your IT people shouldn't make. <u>Harvard Business</u> <u>Review</u>, 80 (11), pp. 1-8.

Article available on Business Source Premier. For full text click here

Alter, S.L. (Nov-Dec 1976): How effective managers use information systems. <u>Harvard Business</u> <u>Review</u>, 54 (6), pp. 97-104

Article available on Business Source Premier. For full text click here and follow pdf link

To be Presented in Class

Dechow, N. & Mouritsen, J. (Oct-Nov 2005) Enterprise resource planning systems, management control and the quest for integration. <u>Accounting, Organizations and Society</u>, 30 (7-8), pp. 691-733 Article available on Science Direct. For full text click here



Supplementary Readings

Feld, C.S & Stoddard, D.B (Feb 2004): Getting IT right. <u>Harvard Business Review</u>, 82 (2), pp. 72-79 Article available on Business Source Premier. For full text click here

Prahalad, C.K. & Krishnan, M.S. (Sep-Oct 1999) The new meaning of quality in the information age. Harvard Business Review, 77 (5), pp.109-118.

Article available on Business Source Premier. For full text click here



Week 7: IT, Management Control & The Production of Organizations

Introduction

This lecture introduces the significance of control technologies for organizations. Traditionally, it was assumed that control systems follow strategy. Increasingly, it is evident that a range of issues from strategy to organizational design are co-dependent upon the capabilities of the firm to manage information. The case study focuses on the ways a manufacturing firm can grow through the development of superior information capabilities.

Learning Objectives

To understand:

- The traditional axiom that management control follows strategy
- o The (origins) of IT in modern organizations
- o How modern technologies are implicated in the way organizations are designed
- o Identify principal control levers for information management

Primary Readings for Lecture

Simons, R. (2000) Organizing for performance. Ch. 3 in <u>Performance measurement & control systems for implementing strategy</u>. Prentice Hall, pp. 38-56.

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Leavitt, H.J. & Whisler, T.L (Nov-Dec 1958): Management in the 1980's. <u>Harvard Business Review</u>, 36 (6), pp. 41-48.

Article available on Business Source Premier. For full text click here and follow pdf link

Case: CEMEX: Global Growth through Superior Information Capabilities (Abridged). IMD-International. IMD084 02/07/2003.

IN COURSE PACK

Applegate, L.M., Cash, J.I. jr. & Quinn Mills, D. (Nov-Dec 1988): Information technology and tomorrow's manager. Harvard Business Review, 66 (6), pp.128-136

Article available on Business Source Premier. For full text click here and follow pdf link

Galbraith, J (1973): Information processing model. Ch. 2 in <u>Designing complex organizations</u>. Addison-Wesley Publishing Company. pp. 8-21

IN COURSE PACK

Simons, R. (2000) Using information for performance measurement and control. Ch. 4. in <u>Performance measurement & control systems for implementing strategy</u>. Prentice Hall, pp. 57-72

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To be Presented in Class

Dechow, N. (2006): Beyond 'firm' boundaries: interfirm accounting & the production of organization. Working Paper.

Article available online. For full text click here



Week 8: IT & Corporate Governance

Introduction

The final lecture focuses on the new ways that modern control technologies — on the one hand - demand management to be involved with corporate governance and on the other hand can assist management towards this task. The case study in this lecture studies a firm considering to shut down a recently implemented IT system. The purpose of the final lecture is last but not least to summarize the foundations, the implications and the synthesis produced across the lectures of the course.

Learning Objectives

To understand and/or develop:

- The significance of IT for the information processing capabilities of the firm
- o The flaws in IT management traditions as developed over past 40-50 years
- Change of focus in the control of IT resources from past to present

Primary Readings for Lecture

Child, J. (Fall 1987): Information technology, organization, and the response to strategic challenges. <u>California Management Review</u>, 30 (1), pp. 33-50

Article available on Business Source Premier. For full text click here

Bensaou, M. & Earl, M. (Sep-Oct 1998): The right mind-set for managing information technology. <u>Harvard Business Review</u>, 78 (5), pp. 119-28.

Article available on Business Source Premier. For full text click here

Case: Rich-Con Steel. Harvard Business School. 9-699-133
IN COURSE PACK

Dearden, J. & Nolan, R.L. (Nov-Dec 1973): How to control the computer resource. <u>Harvard Business</u> <u>Review</u>, 51 (6), pp. 68-78

Article available on Business Source Premier. For full text click here and follow pdf link

Nolan, R. & McFarlan, F.W. (Oct 2005): Information technology and the Board of Directors. <u>Harvard</u> Business Review, 83 (10), pp. 96-106.

Article available on Business Source Premier. For full text click here

Supplementary Readings

Carr, N.G (May 2003): IT doesn't matter. <u>Harvard Business Review</u>. 81 (5), pp. 41-49. Article available on Business Source Premier. For full text click here

+ Letters to the editors on the question: does IT matter? an HBR debate - pp.1-17 + Letters to the editors on the question: does IT matter? an HBR debate - pp.1-17 in relation to paper: Carr, N.G (May 2003): IT doesn't matter. <u>Harvard Business Review</u>, pp. 3-10.

Article available on Business Source Premier. For full text click here Article available on Business Source Premier. For full text click here Article available on Business Source Premier. For full text click here