

E-Business Research Practice: Towards an Agenda

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This paper reviews recent research in the fields of e-business and strategic management. It discusses the key issues, questions and methodologies apparent in the literature to date. The paper also highlights the major research communities and centres and their interests. The overall intent is to highlight the opportunities for further work, potential approaches and future directions for inquiry.

1. Introduction

In just a few years, business use of the Internet has grown from a curiosity to a mainstream activity. Pioneers such as Amazon.com, Yahoo! E-Bay, Cisco and Dell have led the way, followed by numerous start-ups and ventures by traditional and smaller firms. Interest has not been restricted to the private sector and e-government has become a priority in many countries, including the U.K.

The hectic pace of advance in the late 1990s presented challenges and opportunities to management scholars and students. Suddenly they were faced with a living laboratory in which the subjects claimed that a wholly new set of rules had been invented for the 'new economy.' Normally serious and critical observers found themselves caught up in the rhetoric engendered by rapidly rising equity prices and a wall of new investment in IT ventures. In response to demand pressures and faculty interests, Universities and Business Schools launched numerous new programmes in e-business and e-commerce. E-everything became fashionable.

The sobering experience of numerous dot.com failures, earnings disappointments and corporate restructurings has taken the bloom off the rose. MBA graduates have now turned to the pursuit of traditional career paths in safer industries. Business Schools are re-evaluating the place of e-business in the curriculum. Nevertheless, the world is not returning to the 'business as usual' of the pre-Internet era. There is a continuing fascination with the transformational powers of new and disruptive telecommunications media. It is clear that firms in a post-recession economy will pursue further exploitation of the Internet, not only through current applications, but increasingly using mobile and other advanced technologies.

Against such historical backdrop, this paper seeks to:

- Summarise in critical fashion recent publications in e-business and e-strategy;
- Identify and classify the key issues and questions;
- Link research interests to concerns of business and management practitioners;
- Identify needs and opportunities for further investigation;
- Suggest further directions for inquiry and an agenda.

2. E-Business and business management research

This paper does not attempt to address the entire literature of Internet application and business management. Nor does it address research into the development and testing of the technologies themselves. The scope is restricted to the strategic impacts of the new information and telecommunications technologies for businesses and managers. Sub-fields of business such as e-marketing, e-operations, e-finance and supply chain management are only considered in passing. For more details readers are directed towards the growing specialist literatures in those fields.

As Clarke (2000) has noted, electronic commerce presents unusually significant obstacles to academic study and high-quality research, including:

- Its recent emergence;
- The rapid change that has always characterised the domain;
- The very substantial variation in behaviour in apparently similar contexts; and
- The enormous attention paid by media and marketing interests, with inevitable distortion of terminology and data.

To this list may be added:

- The lack of familiarity with e-commerce technologies by many management scholars;
- The lack of established instruments and research approaches.

To place these observations into context, e-businesses have been launched, progressed to IPO, grown and then collapsed in less time than a typical PhD student might take to complete the literature study and fieldwork of his or her dissertation. Major shifts in industry landscapes have also occurred in less than the usual cycle time for publication in top management research journals. It is hardly surprising that serious research has lagged significantly on practice to the extent of sometimes appearing irrelevant. Surveys and marketing-directed case studies by consulting firms have filled a void.

However, just as numerous texts on e-business and e-commerce are now listed in publishers catalogues, whereas there were next to none a few years ago, so there is now appearing a growing literature of e-business research. A number of specialist e-commerce journals have been launched (see reference section at the end of the paper).

3. Literature

A progressive maturing of the literature is evident in both practitioner oriented and scholarly publications.

Journals such as Harvard Business Review, Sloan Management Review, California Management Review, Business Horizons, Long Range Planning and the European Management Journal began to publish articles on the business use of the Web, virtual marketplaces, e-retailing and B2B commerce from about 1994.

In earlier papers (e.g. Rayport & Sviokla 1994, 1995; Hagel, 1996; Evans & Wurster, 1997) emphasis was on demonstrating what is new and different about the Web and the opportunities that it presents for businesses to innovate in radical ways and to discover new activity domains. Evidence for assertions made was typically presented in the form of anecdote, interviews or case studies.

A more considered reflection on how the Internet could be used to change competitive strategies, potentially destroying existing competencies as well as creating new sources of advantage began to appear in papers such as those by Ghosh (1998), Evans & Wurster (1999), Chen & Leteney (2000), Feeny (2001) and Rangan & Adner (2001).

Later literature more explicitly addresses the risks of Internet ventures, barriers to implementation, success factors and steps

needed to manage technology-driven change (e.g Porter, 2001). The more recent literature also presents increasing evidence of empirical study in the form of surveys and more substantial and critical case histories (e.g. Kotha et. al, 2001). Industry specific studies have also become more frequent.

Work by Rayport (1999), Mahadevean (2000) and Timmers (2000) reveals a growing interest in the concept of a business model and how the Internet has made possible types of business model previously very hard, or impossible, to implement. An example is that of priceline.com in which consumers ask firms to bid for their business in a form of reverse auction. Porter (2001) has criticised much new economy thinking, including the notion of a business model. However, it is clear that e-business presents many challenges to traditional thinking in strategy and strategic management. Notions such as that of a business model arguably fill a void between grand concepts of strategy and detailed implementation, complementing tools such as the value chain and generic competitive strategies.

A key concern is how strategy can be developed in hypercompetitive markets where the speed of change makes traditional forms of analysis impractical. Eisenhardt (1998, 1999), Yoffie and Cusumano (1999) address this issue with concepts derived from complex systems theory and emergent strategy-making. E-business has also confirmed the significance of the resource based view of the firm. Competencies, such as knowledge management and the ability to integrate complex sets of technological and business skills, are identified as success factors in a number of case studies (e.g. Kotha, 1998).

Recent special editions of publications such as the Journal of Industrial Economics, Journal of Electronic Commerce Research and the International Journal of Electronic Commerce show encouraging signs of increased attention to research rigour and appropriate methodologies.

The references cited at the end of this paper represent a substantial, if not complete, coverage of publication in e-business and management in recent years. For brevity, referencing from the more specialist e-commerce journals has not been attempted and readers should explore these journals for themselves.

4. Research centres

A number of Universities and Business Schools have established centres for research and consulting activities in e-business. Typically such centres provide a bridge between the academic and corporate communities and a mechanism for research workers to attain a critical mass of inquiry. They are also intended to provide corporate sponsors with obtain access to independent and critical advice. They may also assist with executive education and training. Section 12 provides links to some of the better-known U.S. and European centres.

The Center for Electronic Commerce at the University of Texas, Austin has conducted a number of research studies on the size and nature of the digital economy. It has acted as a focus for industry-funded research from firms such as Dell and Cisco. Leading figures are Anitesh Barua and Andrew Whinston.

The e-Lab at Vanderbilt University is led by pioneer research workers Donna Hoffmann and Thomas Novak. It claims sponsorship by over two dozen firms and performs surveys, experimental work and helps firms integrate the Internet into their business strategies.

The Center for e-Business at MIT lists an impressive array of industry sponsors and claims to perform academically rigorous work in areas such as benchmarking, best practices and case analysis. It also provides executive round tables and lecture series. Well known academic participants from MIT faculty are Erik Brynjolfsson, Michael A. Cusumano and Thomas W. Malone.

Centres at European and other non-U.S. Universities are less well funded. However interesting examples are those at Cardiff, de Montford, Nottingham, St. Gallen, Erasmus and McMaster.

A list of other academic e-commerce research centres can be found at:

<http://dmoz.org/Business/E-Commerce/Education/Centers/>

5. Critical research issues

Identification of key research issues in a new field of inquiry is a task to be approached with some care. When economic, business and political conditions are subject to rapid changes, the importance of research agendas for funding and resources can shift quickly. Therefore it is with some caution that a list of

significant issues in e-business and its strategic management is presented below. This list has been derived from apparent trends in the literature between about 1995 and 2002, as well as from the author's experience of teaching, research supervision, consultation and dialogue with practitioners.

Some issues listed are not well represented in the published literature, for example governance, ethics and aspects of organisational change. However, they are included because, in the light of experiences such as the Enron and Marconi failures and present economic conditions, they are likely to become a focus for future work. Each issue has been phrased as a question under one of ten themes, as shown in Figure 1:

1. The Importance and Implications of e-Business:
 - I. How large is the Internet economy?
 - II. What is the structure of the Internet economy?
 - III. What is the significance of cultural factors on Internet adoption and usage?
 - IV. How will e-business impact on society, lifestyles and consumer behaviour?
 - V. What will be the effects of the Internet on macroeconomic growth?
 - VI. How will e-business affect regional economic development?
 - VII. How will the Internet affect national competitive advantage?
 - VIII. How will the Internet influence international trade?
2. The Growth and Development of e-Business:
 - I. Why has e-business been slow to take off in many sectors?
 - II. What are the barriers to adoption of e-business for firms of different types?
 - III. What are the factors enabling the adoption of e-business?
 - IV. What should be the role of government in stimulating growth of e-Business?
 - V. What makes an effective business incubator?
 - VII. What are the causes for failure in dot.com firms?
3. The Economics of e-Business:
 - I. How does the Internet improve economies of scale and scope?
 - II. What are the effects of lower transaction and search costs?
 - III. How important are so-called network effects and 'lock-in'?
 - IV. Does the Internet reduce the costs of business? Raise efficiency?
 - V. How will supply chain efficiencies improve?
 - VI. How can the Internet help create new markets and customer value?

4. Opportunity Identification:

- I. Which industries and industry sectors present the most promising
- II. Opportunities for e-business?
- III. What methods should be used to identify, analyse and evaluate
- IV. e-Business opportunities?
- V. What are the major domains in which traditional businesses should
- VI. Look for opportunities to exploit new digital technologies?
- VII. How can businesses redesign their value chains and value networks
- VIII. Using new technologies?
- IX. Which new digital marketplaces will prove viable in the longer term?
- X. How should investors value new Internet business ventures?

5. Business Model Analysis:

- I. How can the concept of a business model be defined?
- II. What is the value of the business model concept?
- III. What are useful typologies and classifications of Internet business models?
- IV. What wholly new business models does the Internet help create?
- V. What are important success factors for different types of Internet business
- VI. Models?
- VII. How should traditional firms embrace Internet business models?
- VIII. What techniques are available to analyse and assess business models?
- IX. How can firms price and charge for digital content and services?
- X. How should digital content and services be bundled?

6. Strategy in New Economy Firms:

- I. What is the importance of first mover advantage?
- II. How does the Internet increase competitive rivalry?
- III. What types of new competitor does the Internet help create?
- IV. How can firms defend or build competitive advantage using the Web?
- V. How should marketing strategies be adapted to the Internet?
- VI. What strategic resources and competencies do e-business firms need?
- VII. How do generic competitive strategies differ in nature and implementation
- VIII. In an e-business environment?
- IX. What makes for a successful business alliance or partnership in the digital
- X. Economy?
- XI. What are the strategic options for traditional firms wishing to embrace e-
- XII. Business?
- XIII. What new approaches to strategic management are needed?
- XIV. How can intellectual property and personal information be protected?

7. Organisational Change and e-Business:

- I. Which leadership styles are most effective in Internet businesses?
- II. What new management competencies must be developed?
- III. What will be the impact of e-business on organisational structures?
- IV. How can the Internet support increased collaborative and team working?
- V. What are the impacts for organisational learning and knowledge
- VI. Management?
- VII. In which ways will individuals need to adapt their work styles?

8. Managing Internet Technologies

- I. How should disruptive technologies be managed?
- II. How can technology and business strategies be linked?
- III. How do electronic agents and similar software affect consumer behaviour?

9. Small and Medium Size Business:

- I. Does the Internet represent opportunity or threat to SMEs?
- II. What are the barriers to SME exploitation of the Internet?
- III. How can SMEs exploit e-business?

10. Governance and Ethics:

- I. Are issues of corporate responsibility different in Internet firms?
- II. Are there issues of environmental sustainability for e-business firms?
- III. Should B2B exchanges be regulated? If so, how?

Figure 1: Significant e-Business issues**6. Methodologies**

Since the growth of businesses that use the Internet as a core infrastructure is a very recent phenomenon, it is hardly surprising that much investigation in the literature to date is of an exploratory nature. Theory building has taken place at the intersection of:

- Case study
- Extrapolation of known characteristics of the technology to business settings (e.g. reach, interactivity)
- Extrapolation of existing theories of strategy, marketing, psychology, economics and complex systems (e.g. network effects, increasing returns)

An example is the work of Ghosh (1998), which builds on characteristics of the Internet to derive a new construct he terms 'navigation' that he presents as being central to competitive advantage and success.

Many academic empirical investigations and surveys in e-business have suffered from small

sample sizes, with consequent questions as to the meaning, validity and reliability of findings. Many case studies have also been prepared more for descriptive and teaching purposes rather than to trigger theory building or investigation. Examples have often been chosen because a firm appears frequently in the press or popular journals. There has also been a notable absence of longitudinal case study designs, or of well structured multiple case study designs. Some online case studies are presented in the reference section at the end of the paper.

As with much previous information systems research, a commercial influence on research agendas is evident. This is a double edged-sword in that corporate involvement helps provide necessary funding and access to data at the potential expense of objectivity and requirements for confidentiality.

7. Analysis

To identify gaps in the present literature and to highlight opportunities for future work the literature referenced at the end of the paper was reviewed and mapped on to the list of questions in Figure 1. The result is shown in Figure 2. Readers should note that in this Figure each reference has not only the date of the publication but reference to the sub question in small roman numerals listed in the relevant section of Figure 1. The following commentary on Figure 2 is in order:

Despite the apparent lack of publication on the importance and implication of e-business, there has been much work in this area. For example the Center for Electronic Commerce at the University of Texas has published a number of reports and books on the 'Internet Landscape.' This topic is also frequently the subject of research by government departments, agencies and international organisations such as the OECD. Web sites such as Cyberatlas.com publish regular updates as to Internet usage and uptake of e-Commerce.

The literature on organisational change and e-business also appears to be sparse. However there is a large body of related literature on technology and change, virtual organisations, organisational development and restructuring that was not addressed in this analysis. This can be found in well-known journals such as the Academy of Management Review and Journal, Organizational Dynamics and Organization Science.

There is a surprising lack of literature on governance and corporate social responsibility in e-business. This may be due to a perception that concerns of e-businesses are not unique in this area and are the same concerns as those of any other business. The Enron collapse is currently under investigation, but it is clear that many more factors than a faulty e-business model contributed to this mammoth corporate failure. It is not clear yet whether e-businesses that cause a redesign of existing supply chains and distribution systems may harm or improve the environment through their impacts on transportation systems.

1. The Importance and Implications of e-Business:
Quelch & Klein (1996, viii)
2. The Growth and Development of e-Business:
Chen & Leteney (2000, iii), Hansen (2000, v), Kotha et. al. (2001, iii), Lee & Wang (2001, ii)
3. The Economics of e-Business:
Berthon et. al. (1996, vi), Carlton (2001, v), Clay (2001, ii), Evans & Wurster (1997, i, ii, iii, iv), Garicano (2001, ii), Hoffman & Novak (2000, vi), Scott Morton (2001, iv, vi)
4. Opportunity Identification:
Alba et. al (1997, vi), Barua et. al. (2001, iv), Benjamin & Wigand (1995, v), Burke (1997, iii), Evans & Wurster (1999, iii), Feeny (2001, iii, iv), Ghosh (1998, iii), Kaplan & Sawhney (2000, v), Ordanini & Pol (2001, v), Rayport & Sviokla (1995, iv), Rayport & Sviokla (1994, iii), Rosen & Howard (2000, i), Scott Morton (2001, i), Wise & Morrison (2000, v)
5. Business Model Analysis:
Armstrong & Hagel (1996, v), Barua et. al. (2001, vi), Benjamin & Wigand (1995, iv), Dutta & Segev (1999, iv), Evans & Wurster (1999, iv), Goolsbee (2001, vi), Kaplan & Sawhney (2000, iv), Keh & Shieh (2001, v), Klein & Quelch (1997, iv, vi), Kotha (1998, iv, v), Mahadevan (2000, i, ii, iii, iv), Rayport (1999, i, ii, iii, iv), Rayport & Sviokla (1994, iv, vi), Timmers (2000, i, ii, iii, iv), Werbach (2000, v), Willcocks & Plant (2001, vi), Wise & Morrison (2000, iv)
6. Strategy in New Economy Firms:
Alba et al. (1997, v). Barua et. al. (2001, ix), Benjamin & Wigand (1995, viii), Benoy et. al. (2001, v), Daniel & Klimis (1999, ii, iii, iv), Eisenhardt (1999, ix, x), Eisenhardt (1998, iv, x), Gertner (2001, ii, iv), Ghosh (1998, iv), Goolsbee (2001, ix), Gulati & Garino (2000, ix), Harvey et. al. (1998, v), Hoffman & Novak (2000, v) Hoffman & Novak (1996, v), McWilliam (2000, v), Ordanini & Pol (2001, iv), Petersen et. al. (1997, v), Pitt et. al. (1999, v), Porter (2001), Quelch & Klein (1996, v), Rangan & Adner (2001, iv), Reichfeld & Shefter (2000, iv), Rosen & Howard (2000, ix), Venkatraman (2000, iv), Yoffie & Cusumano (1999, iv, x)

7. Organisational Change and e-Business:
Dutta & Segev (1999, iii), Eisenhardt (1999, ii)
8. Managing Internet Technologies
Day & Schoemaker (2000, i), Luftman & Brier (1999, ii), Short & Venkatraman (1992, ii), Smith (2001, iii)
9. Small and Medium Size Business:
Kleindl (2000, i, ii, iii), McDonagh & Prothero (2000, i, ii, iii), Steinfeld & Whitten (1999, i), Webb & Sayer (1998, i, ii, iii)
10. Governance and Ethics:
N/A

Figure 2: Gaps in the literature and opportunities for further research

8. Conclusions and future directions

In conclusion, there is an emerging literature on e-business, which as is to be expected, is mixed in quality and degree of academic rigour. There are many opportunities for further publication and PhD research.

There are a number of potential future research areas that can be identified from study of Figure 2:

8.1 E-Business and international management

The impacts of the Internet on trade and the importance of cultural factors appear to be areas ripe for investigation.

8.2 The impacts of the Internet on SMEs

E-business is frequently presented as an opportunity for smaller businesses to expand geographically and even to globalise. However Internet technologies also allow larger competitors to acquire the much-vaunted characteristics of smaller firms, i.e. flexibility, customer intimacy and focussed business strategies. In which sectors is the Internet an opportunity for SMEs? In which sectors is it a threat? There is also much scope for investigation of the effectiveness and management of the large number of business incubators that have been established to help grow e-business firms.

8.3 Business models

Much of the literature on business models discusses the concept of a business model in terms of a customer value proposition, pricing strategy or particular Internet technologies.

There is an opportunity for business model analysis from a more holistic perspective. The concept of a business model and its use within strategic management also needs to be refined and argued to address the criticisms raised by Porter (2001).

8.4 Evaluation of E-Business models

The topic of valuing Internet businesses is one of major concern to bankers, venture capitalists, institutional and private investors. Although there is work that has been done and published in the finance literature, there would appear to be scope for work also to be done in the e-business and strategy field linked to study of business models.

8.5 Organisational change and E-Business

There are a number of topics under this heading that appear worthy of further study. These include the leadership characteristics required to manage in hypercompetitive and 'fast' environments, use of Internet technologies for collaborative working and principles for the design of organisational structure in a networked environment.

8.6 Governance and ethics

As indicated earlier, there are likely to be issues such as environmental sustainability that will become increasingly important in future years. There is scope for multidisciplinary study.

Although this paper has taken a broad approach and attempted to address the more serious literature in e-business, it must be acknowledged that it represents to a significant degree the author's experiences and opinions.

References

Research methodologies

- Benbasat I. & Zmud R.W. 1999 'Empirical Research in Information Systems: The Practice of Relevance' *MIS Quarterly*, Vol. 23, No. 1, pp. 3-16
- Cavaye A.L.M. 1996 'Case Study Research: A Multi-faceted Research Approach for IS' *Information Systems Journal*, pp. 227-242
- Clarke, R. 2000 'Appropriate Research Methods for Electronic Commerce,' at: <http://www.anu.edu.au/people/Roger.Clarke/E/ResMeth.html> (Accessed 18/3/02)
- Eisenhardt K.M. 1989 'Building theories from case study research' *Academy of Management Review*, Vol. 14, No. 4, pp. 532-550

Galliers, R. D. (Ed.) 1992 *Information Systems Research: Issues, Methods and Practical Guidelines*, Blackwell

Remenyi D, Money A, Williams B. & Swartz E. 1998 *Doing Research in Business and Management: An Introduction to Process and Method*, Sage,

E-Business

Alba, J, Lynch, J, Weitz, B, Janiszewski, C, Lutz, R., Sawyer, L. & Wood, S. 1997 'Interactive Home Shopping: Consumer, Retailer, and Manufacturer Incentives to Participate in Electronic Markets,' *Journal of Marketing*, Vol. 61, pp. 38-53.

Armstrong, A. and Hagel, J. 1996 'The Real Value of On-Line Communities,' *Harvard Business Review*, Vol. 74, No. 3 (May-June), pp. 134-141

Barua, A, Konona, P, Whinston, A.B. and Yin, F. 2001 'Driving E-Business Excellence,' *Sloan Management Review*, Vol. 43, No. 1 (Fall), pp. 36-45

Benjamin, R. and Wigand, R. 1995 'Electronic Markets and Virtual Value Chains on the Information Superhighway,' *Sloan Management Review*, Vol. 36, No. 2 (Winter), pp. 62-72.

Benoy Joseph, W, Cook, R.W. and Javalgi R.G. 2001 'Marketing on the Web: How Executives Feel, What Businesses Do,' *Business Horizons*, Vol. 44, No. 4 (July-August), pp. 32-40

Burke, R.R. 1997 'Do You See What I See? The Future of Virtual Shopping,' *Journal of the Academy of Marketing Science*, Vol. 25, No. 4, pp. 352 – 360

Berthon, P., Pitt, L. & Watson, R.T. 1996 'Marketing Communication and the World Wide Web,' *Business Horizons*, Vol. 39, No. 5 (September – October), pp. 24 – 32

Carlton, D.W. 2001 'Free Riding and Sales Strategies for the Internet,' *The Journal of Industrial Economics*, Vol. 49, No. 4, pp. 441-462

Chen, S. & Leteney, F. 2000 'Get Real! Managing the Next Stage of Internet Retail,' *European Management Journal*, Vol n18, No. 5, pp. 519-528

Clay, K. 2001 'Prices and Price Dispersion on the Web: Evidence from the Online Book Industry,' *The Journal of Industrial Economics*, Vol. 49, No. 4; pp. 521-540

Daniel, E. & Klimis, G.M. 1999 'The Impact of Electronic Commerce on Market Structure,' *European Management Journal*, Vol. 17, No. 3, pp. 318-325

Day, G. S. & Schoemaker, P. J. H. 2000 'Avoiding the Pitfalls of Emerging

Technologies', *California Management Review*, Vol.42, No.2 (Winter), pp.8-33.

Dutta, S. and Segev, A. 1999 'Business Transformation on the Internet,' *European Management Journal*, Vol. 17, No. 5, pp. 466-476

Eisenhardt, K.M. 1999 'Patching: Restitching Business Portfolios in Dynamic Markets' *Harvard Business Review*, Vol. 77, No. 3 (May-June) pg. 72-83

Eisenhardt, K.M. 1998 'Time pacing: Competing in Markets that won't Stand Still' *Harvard Business Review*, Vol. 76, No. 2 (March-April) pp. 59-70

Evans, P. and Wurster, T.S. 1999 'Getting Real About Virtual Commerce,' *Harvard Business Review*, Vol.77, No.6 (November-December), pp. 84-95

Evans, P. and Wurster, T.S. 1997 'Strategy and the New Economics of Information,' *Harvard Business Review*, Vol. 75, No. 5 (September-October), pp. 70-83

Feeny, D. 2001 'Making Business Sense of the e-Opportunity,' *Sloan Management Review*, Vol. 42, No. 2 (Winter), pp. 41-52

Garicano, L. 2001 'The Effects of Business-to-Business e-Commerce on Transaction Costs,' *The Journal of Industrial Economics*, Vol. 49, No. 4, pp. 463-486

Gertner, R.H. 2001 'Vertical Integration and Internet Strategies in the Apparel Industry,' *The Journal of Industrial Economics*, Vol. 49, No. 4, pp. 417-440

Ghosh, S. 1998 'Making Business Sense of the Internet,' *Harvard Business Review*, Vol. 76, No. 2, pg. 126 (March-April), pp. 126-136

Goolsbee, A. 2001 'Competition in the Computer Industry: Online Versus Retail' *The Journal of Industrial Economics*, Vol. 49, No. 4, pp. 487-500

Gulati, R. & Garino, J. 2000 'Get the Right Mix of Bricks & Clicks', *Harvard Business Review*, Vol.78, No.3 (May-June), pp.107-114.

Hansen, M. 2000 'Networked Incubators: Hothouses of the New Economy,' *Harvard Business Review*, Vol. 78, No. 5 (September-October), pp. 74-84

Harvey, M, Palmer, J. & Speier, C. 1998 'Implementing Intra-Organizational Learning: A Phased-Model approach Supported by Internet Technology,' *European Management Journal*, Vol. 16, No. 3, pp. 341-354

Hoffman, D. L. & Novak, T. P. 2000 'How to Acquire Customers on the Web', *Harvard Business Review*, Vol.78, No.3 (May-June), pp.179-183.

- Hoffman, D.L. & Novak, T.P. 1996 'Marketing in Hypermedia Computer-Mediated Environments: Conceptual Foundations,' *Journal of Marketing*, Vol. 60, pp. 50 – 68
- Kaplan, S. & Sawhney, M. 2000 'E-hubs: The New B2B Marketplaces,' *Harvard Business Review*, Vol.78, No.3 (May-June), pp.97-100.
- Keh, H.T. and Shieh, E. 2001 'Online Grocery Retailing: Success Factors and Potential Pitfalls,' *Business Horizons*, Vol. 44, No. 4 (July-August), pp. 73-83
- Klein, L.R. and Quelch, J.A. 1997 'Business to Business Market Making on the Internet,' *International Marketing Review*, Vol. 14, No. 5, pp. 345-361
- Kleindl, B. 2000 'Competitive Dynamics and New Business Models for SMEs in the Virtual Marketplace,' *Journal of Developmental Entrepreneurship*, Vol. 5, No. 1, pp. 73-85
- Kotha, S, Rajgopal, S. & Rindova, V. 2001 'Reputation Building and Performance: an Empirical Analysis of the Top-50 pure Internet Firms,' *European Management Journal*, Vol. 19, No. 6, pp. 571-586
- Kotha, S. 1998 'Competing on the Internet: the Case of Amazon.com,' *European Management Journal*, Vol. 16, No. 2, pp. 212 –222
- Lee, H.L. & Wang. S. 2001 'Winning the Last Mile of E-Commerce,' *Sloan Management Review*, Vol. 42, No. 4 (Summer), pp. 54-62
- Luftman, J. & Brier, T. 1999 'Achieving and Sustaining Business-IT Alignment', *California Management Review*, Vol.42, No.1 (Fall), pp.109-122.
- Mahadevan, B, 2000 'Business models for Internet-based E-commerce: An anatomy,' *California Management Review*, Vol. 42, No. 4 (Summer), pp. 55-69
- McDonagh, P. and Prothero A. 2000 'Euroclicking and the Irish: Prepared for E-Commerce and the Single Currency,' *Irish Marketing Review*, Vol. 13, No.1, pp. 21-33
- McWilliam, G. 2000 'Building Stronger Brands through Online Communities', *Sloan Management Review*, Vol.41, No.3 (Spring), pp.43-54.
- Ordanini, A. and Pol A. 2001 'Infomediation and Competitive Advantage in B2B Digital Marketplaces,' *European Management Journal*, Vol. 19, No. 3, pp. 276-285
- Peterson, R.A., Balasubramanian, S. & Bronnenburg, B.J. 1997 'Exploring the Implications of the Internet for Consumer Marketing,' *Journal of the Academy of Marketing Science*, Vol. 25, No. 4, pp. 329 - 346
- Pitt, L., Berthon, P. and Watson, R. 1999 'Cyberservice: Taming Service Marketing Problems with the World Wide Web,' *Business Horizons*, Vol. 42, No.1 (January – February), pp. 11 – 18
- Porter, M.E. 2001 'Strategy and the Internet,' *Harvard Business Review*, Vol. 79, No. 2 (March-April), pp. 63-78
- Quelch, J.A. and Klein, L.R. 1996 'The Internet and International Marketing,' *Sloan Management Review*, pp. 60 – 75 Vol. 37, No. 3 (Spring) pp. 60-76
- Rangan, S. & Adner, R. 2001 'Profits and the Internet: Seven Misconceptions,' *Sloan Management Review*, Vol 42, No. 4 (Summer), pp. 44-53
- Rayport J. 1999 'The Truth About Internet Business Models,' *Strategy & Business*, Third Quarter
- Rayport, J.F. and Sviokla, J.J. 1995 'Exploiting the Virtual Value Chain,' *Harvard Business Review*, Vol. 73, No. 6 (November-December), pp. 75-86
- Rayport, J.F. and Sviokla, J.J. 1994 'Managing in the Marketspace,' *Harvard Business Review*, Vol. 72, No. 6 (November-December), pp. 141-151
- Reichheld, F.F. and Scheffer, P. 2000 'E-Loyalty: Secret Weapon on the Web', *Harvard Business Review*, Vol.78, No.4 (July-August). Pp. 105-114
- Rosen, K.T. & Howard, A. L. 2000 'E-Retail: Gold Rush or Fool's Gold?', *California Management Review*, Vol.42, No.3 (Spring), pp.72-100.
- Scott Morton, F. 2001 'Internet Car Retailing,' *The Journal of Industrial Economics*, Oxford, Vol. 49, No. 4, pp. 501-520
- Short J. and N. Venkatraman, N. 1992 'Beyond Business Process Redesign: Redefining Baxter's Business Network,' *Sloan Management Review* (Autumn), pp. 7-21.
- Smith, M.D. 2001 'Consumer Decision-Making at an Internet Shopbot: Brand Still Matters' *The Journal of Industrial Economics*, Vol. 49, No. 4, pp. 541-559
- Steinfeld, C. & Whitten, P. 1999 'Community Level Socio-Economic Impacts of Electronic Commerce,' *Journal of Computer Mediated Communication*, Vol. 5, No. 2 <http://www.ascusc.org/jcmc/vol5/issue2/steinfield.html> accessed 18/3/02
- Timmers, P. 2000 *Electronic Commerce* John Wiley, Chichester
- Venkatraman, N. 2000 'Five Steps to a Dot.com Strategy: How to Find your

- Footing on the Web,' *Sloan Management Review*, Vol. 15, No. 3 (Spring), pp. 15-29
- Webb, B. and Sayer, R. 1998 'Benchmarking Small Companies on the Internet,' *Long Range Planning*, Vol. 31, No. 6, pp. 815-827
- Werbach, K. 2000 'Syndication: The Emerging Model for Business in the Internet Era', *Harvard Business Review*, Vol.78, No.3 (May-June), pp.84-93.
- Willcocks, L. and Plant, R. 2001 'Pathways to E-Business Leadership: Getting from Bricks to Clicks' *Sloan Management Review*, Vol. 42, No. 3 (Spring), pp. 50-59
- Wise, R. and Morrison, D. 2000 'Beyond the Exchange: the Future of B2B,' *Harvard Business Review*, Vol. 78, No. 6 (November-December), pp. 86-96
- Yoffie, D. B. and Cusumano, M. A. 1999 'Building a Company on Internet Time: Lessons From Netscape', *California Management Review*, Vol.41, No.3 (Spring), pp.8-28.
- Yoffie, D. B. and Cusumano, M. A. 1999 'Judo Strategy: The Competitive Dynamics of Internet Time', *Harvard Business Review*, Vol.77, No.1 (January-February), pp.70-81.

E-Commerce journals

- The International Journal of Electronic Commerce http://www.mesharpe.com/jec_main.htm
- The Journal of Electronic Commerce Research <http://www.csulb.edu/web/journals/jecr/>

The Journal of Computer Mediated Communication <http://www.ascusc.org/jcmc/>

Research centres

- The Center for Electronic Commerce at University of Texas, Austin: <http://cism.bus.utexas.edu/>
- The e-Lab at Vanderbilt University: <http://ecommerce.vanderbilt.edu/>
- The e-commerce forum at MIT: <http://ecommerce.mit.edu/forum/>
- The Center for e-Business at MIT: <http://ebusiness.mit.edu/>
- The e-Business Center at Berkeley, California: <http://haas.berkeley.edu/~citm/>
- The e-commerce innovation centre at Cardiff: <http://www.ecommerce.ac.uk/netcom.html>
- The e-business research centre at McMaster University: <http://merc.mcmaster.ca/>
- The Cyber business centre at Nottingham University: <http://www.nottingham.ac.uk/cyber/>
- St. Gallen University in Switzerland: <http://www.mcm.unisg.ch/>
- Erasmus University in Holland: <http://www.euridis.fbk.eur.nl/>

E-Commerce case studies

- The Dutch Flower Auctions <http://www.stern.nyu.edu/~akambil/teaching/cases/auction/flowers.html>
- A number of case studies at the Cardiff e-Commerce centre <http://www.ecommerce.ac.uk/case.html>