



## Course information 2015–16

# IS3167 Management and innovation of e-business

This course presents an up-to-date analysis of the management, innovation and information systems aspects of the use of e-business technology. It combines transaction cost economics with a decade's experience of e-business development to discuss e-business trends and strategies. This is a management information systems course and not a technical course. It considers the organisational, managerial, technological and theoretical aspects of e-business and how these elements can be combined to produce innovation in business models, processes and products.

### Prerequisites and exclusions

None apply.

### Aims and objectives

The objectives of the course are to:

- explain the growth of e-business to date, both business-to-consumer and business-to-business, using relevant theories from business, management and the social sciences
- examine the interaction between technological trends and the business and social context of e-business, including the diffusion of social networks and web 2.0 developments
- identify innovations within the domain of e-business by presenting cases of the innovative use of e-business technologies
- present relevant theories from business, management and the social sciences that help to explain the development and growth of e-business
- discuss different e-business (business) models and strategies, including global supply chain management and electronic markets
- introduce the notion of new organisational forms, such as virtual organisations, electronic markets and open source production, which depend upon e-business technology.

### Learning outcomes

At the end of the course and having completed the essential reading and activities students should be able to:

- ✓ explain the history of e-business from the dot.com boom to the present day
- ✓ critically discuss successful and failed e-business ventures
- ✓ assess the role of innovation in e-business
- ✓ explain the key elements of e-business technology including websites, inter-organisational networks, and social networks
- ✓ describe the social and legal context within which e-business has prospered
- ✓ explain the growth of social networks and their impact on e-business
- ✓ analyse and criticise the business models underlying e-business proposals and existing e-business systems
- ✓ discuss the changing structure of business-to-business e-business and the shifting role of intermediation
- ✓ apply economic theories, such as transaction cost analysis, to explain the economics of e-business
- ✓ explain the interaction between the needs of business and the potential of e-business technology to produce new organisational structures and different ways of working (e.g. outsourcing, mobile working and teleworking)
- ✓ discuss the key innovations in business models, products and processes and how e-business contributes to innovation through, for example, open source development and open innovation.

## Syllabus

This is a description of the material to be examined, as published in the *Programme handbook*. On registration, students will receive a detailed subject guide which provides a framework for covering the topics in the syllabus and directions to the essential reading

This course covers a broad spectrum of today's management opportunities and risks in virtual markets, including:

- History and foundations of online business.
- The use of transaction cost theory to explain the economics of e-business.
- E-business models: Business-to-Business (B2B) and Business-to-Consumer (B2C) business models and strategies for e-business – global supply chain management, electronic markets.
- B2B systems, intermediation, e-procurement and IT in supply chain management.
- B2C strategies – online consumer behaviour, regional and cultural differences and e-marketing.
- E-business environment – legal, ethical and security issues. Lessons from the dot.com boom and bust.
- New organisational forms – virtual organisations, electronic markets and hierarchies.
- Social networks and web 2.0 developments.
- Innovations involving e-business technologies; the role of open innovation in product and process development.

## Assessment

This course is assessed by a three hour unseen written examination (100%)

## Essential reading

For full details please refer to the reading list.

The main text is:

Chaffey, D. *E-Business and E-Commerce Management* (Financial Times Prentice Hall)

Additional references to:

Farhoomand, A. *Managing (E)Business Transformation*. (Palgrave)

Schneider, G. *Electronic Commerce*. (Thomson).

Turban, E., J. Lee, D. King and H. M. Chung  
*Electronic Commerce: A Managerial Perspective* (Prentice Hall)

Various journal articles

Students should consult the *Programme Regulations for degrees and diplomas in Economics, Management, Finance and the Social Sciences* that are reviewed annually. Notice is also given in the *Regulations* of any courses which are being phased out and students are advised to check course availability.

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# Examiners' commentaries 2015

## IS3167 Management and innovation of e-business – Zone A

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### Important note

This commentary reflects the examination and assessment arrangements for this course in the academic year 2014–15. The format and structure of the examination may change in future years, and any such changes will be publicised on the virtual learning environment (VLE).

#### Information about the subject guide and the Essential reading references

Unless otherwise stated, all cross-references will be to the latest version of the subject guide (2011). You should always attempt to use the most recent edition of any Essential reading textbook, even if the commentary and/or online reading list and/or subject guide refers to an earlier edition. If different editions of Essential reading are listed, please check the VLE for reading supplements – if none are available, please use the contents list and index of the new edition to find the relevant section.

Candidates should answer **three** of the following **six** questions. All questions carry equal marks.

#### Question 1

**Discuss why consumers are increasingly buying physical goods online and discuss how conventional shops are responding to this threat to their business. Make use of examples in your answer.**

#### Reading for this question

Chapter 4 of the subject guide.

#### Approaching the question

This question concerns a familiar area of everyday life that you probably have considerable experience with. However, it is not asking about your personal shopping habits and beliefs and you need to consider the population of consumers as a whole. The online value proposition from the subject guide provides a good basis for the first part of the question and most candidates used this to good effect.

However, the second part of the question proved to be slightly trickier and required candidates to reflect on what was happening in their own towns and cities. Some candidates assumed that all that was required was a discussion of multi-channel retailing and the problems of cannibalisation. Certainly many conventional retailers have adopted a clicks 'n' mortar approach and this was part of the answer but it's not the only strategy. Appealing to consumers' love of the shopping experience in conventional stores is equally important, as are the issues of personal service, 'high touch' goods and instant gratification. Although some conventional retailers (especially for digital goods) have closed down as a result of online competition, there is no sign of the wholesale destruction of city shopping centres. This is what the question was about.

An acceptable answer discussed the online value proposition and picked out a couple of the responses. An excellent answer gave a much more comprehensive treatment of the second part of the question, highlighting the ability of conventional shops to leverage footfall and emphasising the skills inherent in conventional retail. Marks were given for specific examples of the strategies of both online and conventional retailers.

## Question 2

**Uncertainty is often regarded as the key problem in supply chain management. Discuss how companies are making use of computer-based technologies in the redesign of supply chains to address the various types of uncertainty.**

### **Reading for this question**

Chapter 7 of the subject guide.

### **Approaching the question**

Uncertainty and its implications for supply chain management is an important issue in the literature and there is a lot that candidates could write in answer to this question. However, because the question also asked about how computer-based technologies are used to combat uncertainty, it meant that candidates needed to be able to summarise the literature on uncertainty before examining the solutions. Thus a good answer needed to address the nature of uncertainty, why it's problematical, the different forms of uncertainty, strategies to combat uncertainty and the technologies employed (EDI and RFID primarily). This required judgement and confidence on the part of the candidate as to how deep to go into the various parts.

An excellent answer would have given sufficient weight to each part (including the Bullwhip Effect) but without including too much detail, such that the overall argument becomes lost. Thus, excellent answers were able to demonstrate the candidates' familiarity and knowledge of the material, as well as their ability to express a reasoned argument that featured good examples of products and companies that experience the various forms of uncertainty.

An acceptable answer covered the various issues, including the Lee matrix, but lacked the strength of argument and expression of the excellent answers.

## Question 3

**In the face of ever-changing threats and attacks, the limits of technical solutions to e-business security have become apparent and e-business security has become more of a management problem than a technical problem. Discuss this statement, using examples of threats and e-business security policies.**

### **Reading for this question**

Chapter 10 of the subject guide.

### **Approaching the question**

This is a fairly general, high level question on e-business security but with an underlying proposition that the nature of security has changed over the years, such that it is more of a management problem, rather than a technical one. A good introduction to an answer would be to discuss the importance of security and the repercussions of security breaches before moving on to discuss the various threats – human and non-human. These threats include both intentional attempts at criminality as well as employee carelessness and lack of awareness.

Such a discussion should fairly quickly arrive at the conclusion that complete security is impossible and so some form of prioritising the risks (and hence the controls) is needed, which is very much a management problem of allocating scarce resources. The widespread application of IT and the growing dependence of organisations on their IT systems suggest that the problem extends throughout the organisation and all staff need to be made aware of the issues. This calls for education and training, as well as policies to allocate responsibilities and resources – these are all management issues. Furthermore, the problem of second-order dangers of excessive security needs to be discussed – another management problem.

An acceptable answer would give a reasonable coverage of the main issues while an excellent answer would go into much more depth, constantly referring to the way that e-business security has changed over the years, so that it is now much more a management problem than a technical one. Some answers argued for a balance between management and technological treatments of the problem and this was acceptable. Clearly the problem is not exclusively a management one.

#### Question 4

**Electronic markets are more competitive than traditional markets. Discuss under which conditions this statement is true and provide one example to support your claim. Justify your answer theoretically.**

##### **Reading for this question**

Chapters 3 and 11 of the subject guide.

##### **Approaching the question**

This question asks you to discuss the effect of e-business on the organisation of markets. You should have understood that the deployment of digital markets either favours competition or reduces it.

To address this specific question candidates are expected to highlight that e-business reduces transaction costs and hence makes markets more open and competitive. Providing one example, you are expected to show how this is happening. A good example is the case of online computer retailers. Since computers are quite standardised, e-business allows for a more transparent market. A more transparent market is by definition more competitive since it is easier (reduced transaction costs) for customers to compare goods and reduce price discriminations.

A good answer will make this argument clearly. An excellent one will provide a sound theoretical justification and will clearly outline the conditions under which e-business generates more competitive markets.

To fulfil this goal you must make clear how companies can differentiate in a more competitive market and hence make the market less transparent and competitive.

#### Question 5

**Control costs can either increase or decrease in B2B (business-to-business) markets with the introduction of IT. Compare two B2B cases that show how control costs can increase or decrease, referring to the relevant theory.**

##### **Reading for this question**

Chapters 3 and 6 of the subject guide.

From the texts in Essential reading:

Cordella, A. 'Transaction costs and information systems: does it add up?', *Journal of Information Technology* 21(3) 2006, pp.195–202.

Picot, A., C. Bortenlanger and H. Rohrl 'The organization of electronic markets: contributions from the new institutional economics', *Information Society* 13(1) 1997, pp.107–23.

### **Approaching the question**

This is a straightforward question aimed at testing your understanding of the transaction costs theory and its implications in the context of B2B e-business.

The answer needs to discuss what control costs are and explain the effects that different B2B configurations might have on these costs.

Control costs are the costs that agents face to monitor that the agreed terms of the exchange are actually fulfilled when the exchange takes place. Control costs mainly exist because of uncertainty, bounded rationality and opportunistic behaviour. These factors make it difficult to know if what was agreed when the contract of exchange was settled will actually be maintained when the contract is executed.

To address the question you have to discuss how the different B2B configurations affect the control costs of the exchange.

Both buyer- and supplier-oriented marketplaces are more open and uncertain. They are however more exposed to the growth of control costs if specific investments are not made, by both parties, to mitigate these effects.

B2B intermediary-oriented marketplaces can however have a positive effect on the reduction of transaction costs because a fundamental strategy of intermediary-oriented marketplaces is to certify the trustworthiness of the parties to justify their existence.

To fully address the question you need to provide one example where you explain how control costs increase in B2B and a second where you show the opposite.

A good answer will discuss control costs and will provide sound examples of the two cases. An excellent answer will offer a sound and deep theoretical discussion of the reasons why B2B can both increase and decrease control costs.

## **Question 6**

**Discuss how ICTs (information and communication technologies) have changed the nature of marketing activities. Explain what are the new challenges faced in marketing in the digital economy. Justify your argument theoretically.**

### **Reading for this question**

Chapter 5 of the subject guide.

Chaffey, D. *E-business and e-commerce management*. (Harlow: Financial Times/Prentice Hall, 2009) fourth edition [ISBN 9780273719601] Chapters 8 and 9.

### **Approaching the question**

This question asks you to discuss how the digitisation of data affects marketing practices. A good answer will discuss how marketing companies use ICTs, social networks and web 2.0 to support their businesses. An excellent answer will also articulate the challenges that are associated with the adoption of these innovative tools to support marketing activities. Big data and data analytics challenge the concentration of power in a few big marketing companies, and the increased role played by marketing companies is the right beginning to address the question.

Discussing the effect of ICT on competition and the role that ICTs have in creating barriers to entry in markets affected by network economics, you should be able to theoretically support the discussion of the changes in the configuration of the marketing industry and marketing in the digital economy.

To frame the answer it is useful to recognise that ICT can offer great support to marketing activities, processes and procedures. E-business and information technology can offer great support to marketing and the transformation to what is called e-marketing: the use of ICT and online channels to support and re-design marketing strategies. Building on this background you are expected to frame the above-mentioned challenges as a consequence of the digitalisation of marketing activities.