

# Instructor's Manual

## E-Business & E-Commerce Management

**Fourth edition**

**Dave Chaffey**

**For further lecturer material  
please visit:  
[www.pearsoned.co.uk/chaffey](http://www.pearsoned.co.uk/chaffey)**

**ISBN: 978-0-273-71962-5**

© Marketing Insights Limited 2009

Lecturers adopting the main text are permitted to download the manual as required.

**Financial Times  
Prentice Hall**  
is an imprint of

**PEARSON**

Harlow, England • London • New York • Boston • San Francisco • Toronto • Sydney • Singapore • Hong Kong  
Tokyo • Seoul • Taipei • New Delhi • Cape Town • Madrid • Mexico City • Amsterdam • Munich • Paris • Milan

**Pearson Education Limited**

Edinburgh Gate  
Harlow  
Essex CM20 2JE  
England

and Associated Companies around the world

*Visit us on the World Wide Web at:*  
[www.pearsoned.co.uk](http://www.pearsoned.co.uk)

-----

**This edition published 2009**

© Marketing Insights Limited 2009

The right of Dave Chaffey to be identified as author of this work has been asserted by him in accordance with the Copyright, Designs and Patents Act 1988.

ISBN: 978-0-273-71962-5

All rights reserved. Permission is hereby given for the material in this publication to be reproduced for OHP transparencies and student handouts, without express permission of the Publishers, for educational purposes only. In all other cases, no part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise without either the prior written permission of the Publishers or a licence permitting restricted copying in the United Kingdom issued by the Copyright Licensing Agency Ltd, Saffron House, 6-10 Kirby Street, London EC1N 8TS. This book may not be lent, resold, hired out or otherwise disposed of by way of trade in any form of binding or cover other than that in which it is published, without the prior consent of the Publishers.

## Contents

Chapters	Pages
1. Introduction to e-business and e-commerce	5
2. E-commerce fundamentals	29
3. E-business infrastructure	48
4. E-environment	66
5. E-business strategy	79
6. Supply chain management	96
7. E-procurement	112
8. E-marketing	129
9. Customer relationship management	147
10. Change management	162
11. Analysis and design	182
12. Implementation and maintenance	200

## Supporting resources

Visit **[www.pearsoned.co.uk/chaffey](http://www.pearsoned.co.uk/chaffey)** to find valuable online resources

### Companion Website for students

- A study guide to reinforce key ideas and topics
- Multiple choice questions to test your learning
- Links to relevant sites on the web
- An online glossary to explain key terms
- Flashcards to test your understanding of key terms
- A smarter online searching guide
- Link to Dave Chaffey's blog with a collection of articles and links
- Link to Dave Chaffey's Twitter feed

### For instructors

- Complete, downloadable Instructor's Manual
- PowerPoint slides that can be downloaded and used for presentations
- Testbank of question material

**Also:** The Companion Website provides the following features:

- Search tool to help locate specific items of content
- E-mail results and profile tools to send results of quizzes to instructors
- Online help and support to assist with website usage and troubleshooting

For more information please contact your local Pearson Education sales representative or visit **[www.pearsoned.co.uk/chaffey](http://www.pearsoned.co.uk/chaffey)**

# Introduction to e-business and e-commerce

## Table of contents

Learning outcomes	5
Management issues	5
Chapter at a glance	6
Suggested teaching and learning approaches	6
Case studies	9
Additional case study	12
Questions for debate	16
Exercises	18
Activity answers	22
Exercises	26

## Learning outcomes

After completing this chapter the reader should be able to:

- Define the meaning and scope of e-business and e-commerce and their different elements
- Summarize the main reasons for adoption of e-commerce and e-business and barriers that may restrict adoption
- Outline the ongoing business challenges of introducing e-business and e-commerce to an organization.

## Management issues

The issues for managers raised in this chapter include:

- How do we explain the scope and implications of e-business and e-commerce to staff?
- What is the full range of benefits of introducing e-business and what are the risks?
- How do we evaluate our current e-business capabilities?

## Chapter at a glance

### ***Main topics***

- The impact of the electronic communications on traditional businesses
- What is the difference between e-commerce and e-business?
- E-business opportunities
- How significant are e-commerce and e-business?
- E-business risks and barriers to business adoption
- Business adoption of digital technologies for e-commerce and e-business
- Management responses to e-commerce and e-business

## Suggested teaching and learning approaches

Please reference the slides prepared for each chapter when reading this section.

### ***The opportunities of e-business innovation***

Start by generating interest in the innovation made possible by the web through familiar consumer facing examples in Figure 1.1 and Table 1.1. Ask students about other innovative businesses that have been launched online which aren't on the list.

### ***The challenges of managing e-business innovation***

These can be discussed by asking students to read the 'Real-world E-Business experiences. The e-consultancy interview'. All of these interviews are available at [www.econsultancy.com](http://www.econsultancy.com), if you need to print or ask students to reference them from e-learning facility – use the search facility to find them. The main challenges this introduces are:

- The rate of innovation – techniques like social media and search engine marketing evolve daily
- Managing across multiple sites and with different partners
- Reviewing the return on investment of new initiatives
- Specialist skills to manage these facilities

Can also review transactional risks using a 'blank slide':

- Poor site availability or performance

- Products unavailable although advertised
- Poor experience or service – negative reviews

### ***Introducing the terms and defining the scope of e-business and e-commerce***

Use Activity 1.2 to highlight the range of terms introduced to describe the application of electronic communications to solve business problems.

Use Figures 1.2–1.4 to agree differences between e-commerce and e-business with students. This works well to highlight the misconception that e-business refers only to sell-side e-commerce. A show-of-hands for how many agree with Figure 1.3 a, b and c works well.

Use Activity 1.2 as a web-based activity to look at how the terms are used by a range of commentators.

It is also useful to ask different groups to identify the different types of sites defined in Activity 1.4:

Visit each of the sites below and then place them into one of the four categories of online presence according to their primary focus:

1. Transactional e-commerce site.
2. Services-oriented relationship-building web site.
3. Brand building site.
4. Portal or media site.

Of course, these aren't mutually exclusive – most sites will have elements of all of these.

### ***Digital marketing***

This section introduces some of the more recent Web 2.0 approaches. Students can be asked for definitions or examples of different approaches in Figure 1.7. They can be asked which are most important for consumers and site owners.

### ***Business or consumer models of e-commerce transactions***

Figure 1.8 is the classic categorization of sites by audiences with examples. The Betfair case study (Mini-case study 1.2) gives an example of the popularity of the peer-to-peer (or C2C) model.

### ***E-business opportunities***

Box 1.2 introduces the Reach-Richness-Affiliation model for success.

### ***Business adoption of digital technologies for e-commerce and e-business***

Tables 1.3 and 1.4 highlight the business benefits while Figure 1.10 highlights the actual adoption levels across Europe. Relative adoption of different services can be discussed.

Consumer adoption (listing drivers and barriers to adoption) should also be discussed, perhaps through taking an example such as grocery e-retail and relating this to students' adoption.

- Case study 1.2 highlights benefits for SME organizations.

### ***Barriers to e-business adoption***

- Figure 1.12 illustrates these barriers and Figure 1.13 shows how companies can evaluate their capabilities – how advanced they are on the adoption ladder.

### ***Drivers of consumer Internet adoption***

Consumer adoption (listing drivers and barriers to adoption) should also be discussed, perhaps through taking an example such as grocery e-retail and relating this to students' adoption.

Two tables are provided in the slide deck showing how drivers and barriers can be listed and then marketing approaches to overcome these are discussed.

### ***The running case studies – the B2B and B2C companies***

These have been removed to make space for the shorter 'real-world e-business experiences' at the start of each chapter which are for real companies.

### ***Management responses to e-business***

Activity 1.5 The McKinsey 7S model is used to prompt students to reflect on how much is changed by approaches to e-business – many of the elements of this 20-year-old model are still valid. It is a useful discussion point for change management that ties in with Chapter 10.



## Case studies

### Case study 1.1. A short history of Facebook

Note. Updates to this case study are provided at: <http://www.davechaffey.com/E-commerce-Internet-marketing-case-studies/facebook-case-study>

#### Questions

1. *As an investor in a social network such as Facebook, which financial and customer-related metrics would you use to assess and benchmark the current business success and future growth potential of the company?*

From comments in the case study, the main revenue model is ad-based advertising (CPC and CPM). Facebook has said it will not sell customer data and there is no indication of affiliate-related models.

Customer-related metrics are related to engagement which indicates capability to sell ad space – not simply users, but active returning users and the number of pages viewed per day. The proportion of ad inventory sold is also important.

A basic answer will provide

- Understanding of financial metrics. Revenue, Costs, Growth.
- Clear framework of different metrics types – efficiency vs effectiveness.
- Audience Engagement and satisfaction metrics such as those mentioned in the case.

A more competent answer will reference elements of profitability (e.g. ad revenue, alternative models, e.g. subscription (although clear data not sold) costs (e.g. R&D, Development) Operational costs of managing business (on a per active user basis).

2. *Complete a situation analysis for Facebook focusing on an assessment of the main business risks which could damage the future growth potential of the social network.*

Typical risks are:

- Ad revenue limited because of difficulty of engaging audience in ads.
- Major privacy problem as with Beacon.
- Intellectual Property Rights.
- Technical problems with scalability leading to performance problems and increased technical costs.
- New entrant or alternative company offers superior experience – what is the likelihood of this?

Students could be encouraged to create a SWOT analysis. The likely probability and impact of each risk should also be reviewed.

3. *For the main business risks to Facebook identified in Question 2, suggest approaches the company could use to minimize these risks.*
- Ad Revenue – review different forms of advertising. Test with users and advertisers.
  - Privacy. Explain clearly at signup. Test changes to use of data with user-group of trusted users. Explain reason for future changes clearly.
  - Technical problems. Testing programme focusing on load testing.
  - New entrants – developing proposition to lock-in existing users, forming partnerships to approach new audiences.

### **Case study 1.2 North West Supplies extends its reach online**

North West Supplies are featured as a small business retail example:  
<http://www.northwestsupplies.co.uk/>.

#### **Question**

1. *Discuss the new opportunities and risks that need to be managed by North West Supplies with the increased importance of its online channel to market.*

#### **Opportunities referred to in case study:**

- Increase reach – nationally and internationally and reach new types of audiences through the search engines.
- Increase average order value – increase cross-selling.
- Sell products to existing customers – increase cross-selling.
- Increase range of stock sold.

#### **Risks:**

- High cost of advertising online and dependence on this – subject to changes in online advertising made by search engines.
- Managing demand.
- Managing fulfillment – quality of experience and service is important to repeat business.
- Fraud – the business needs to authenticate purchasers to make sure that they do pay for products.

### **Case study 1.3 eBay – the world's largest e-business**

Updates to the eBay case study are available at: <http://www.davechaffey.com/E-commerce-Internet-marketing-case-studies/eBay-case-study-e-commerce>

#### **Question**

*Assess how the characteristics of the digital media and the Internet together with strategic decisions taken by its management team have supported eBay's continued growth.*

Students should be guided as to whether they review the whole eBay business or the core business (The Marketplace).

It is best to divide this question into two parts.

#### *1. How the characteristics of digital media have supported eBay's growth.*

The particular characteristics of digital media compared to traditional media that are important to eBay are straightforward:

- Change from a one-to-many communication model to one-to-one or many-to-many communication model.
- The ability to create user-generated content listing products is also related to the one-to-one aspect. This is important as well.
- From Push to Pull – eBay offerings are often visible within search engines.
- From monologue to dialogue (a two-way information exchange for enquiries about products facilitated by e-mail).
- Ratings for sellers are important to generate trust (although there are methods of falsifying these).
- Community – the sense that users are part of a community and additionally are bypassing traditional retail channels will be important from some users.

See section starting on p443 for more details on these characteristics

#### *2. How strategic decisions have supported growth.*

As with other cases based on SEC filings that is, United States Securities And Exchange Commission submission, this case is useful for showing how growth is dependent not only on exploiting the right opportunities, but also is about managing risks successfully.

Students may structure strategic decisions in different ways according to the level of course they are following, but since the case is early on in the book, they could be advised to simply look for success factors. Alternatively, if they have completed Chapter 5 on Strategy and Chapter 8 on the Marketing mix (p448), then these provide alternative frameworks.

Strategic success factors students may mention include the following:

- Branding – a distinctive brand – the earlier brand name was perhaps less appropriate although more direct.
- First mover advantage – gaining a critical mass through the foresight of the owner.
- Security and fraud – realizing that this is important to its reputation eBay has developed 'Trust and Safety Programs' to manage this thereby investing in managing this and controlling PR related to this.
- Partnerships and acquisitions, which fit relate well to the service, that is, PayPal and Skype.
- Communication of customer value proposition – the case describes how eBay explains this.
- Revenue model – the market has judged that this gives a good balance for sellers, purchasers and eBay. Setting fees at the right level has enabled eBay to scale for some time.
- Process Efficiency – the case describes how eBay measures and then seeks to improve the key areas of Acquisition, Activation and Activity.
- Growth strategies – these are covered in Chapter 4 and include market development (geographic) and product development (new categories for consumers and businesses).
- Technology scalability – not referred to in the article, but eBay has been successful in deploying technology that has supported the company's rapid growth.

## Additional case study



### ***Encouraging SME adoption of sell-side e-commerce***

This case explores the usage of the Internet by small and medium Enterprises (SMEs) of less than 250 employees. This case can be used for taking a retrospective look at the problems of encouraging SMEs to use online services.

The Internet has given small companies the same reach to global marketplaces as larger rivals, which have invested millions in building an international presence.

Eighteen months ago, Cooksons Tools, a builders' merchant in Cheshire, north-west England, was contemplating joining the ranks of small companies that have given in to the muscle of the Do-It-Yourself (DIY) multiples, and shutting up shop for good.

'We were battling hard just to hold our own, rather than being able to grow the business', says Stuart Armstrong, managing director. 'To stay in business, we had to change the way we operated'.

The company then decided to try selling via the Internet, and since then it has gone from serving customers in a seven-mile radius of its depot in Stockport, to serving customers worldwide. Cooksons.com has even sold Korean tools back to customers in Korea.

Turnover from the traditional business, established more than 40 years ago, now stands at £1million a year. The web site, which went live in March 1999, rapidly attracted orders worth £1600 a day. Turnover doubled every 2½ months in the first year of operation.

Cooksons managed to do this without cannibalizing its existing business – less than 1 per cent of orders on the web site come from existing customers.

Mr Armstrong says that the margin on Internet sales is lower, but because sales volume is higher and the costs of selling are lower, the company can afford to sell goods 15 per cent cheaper.

Such is the power of the Internet to deliver world markets to parochial businesses. And the evidence is that small companies do recognize that electronic channels can vastly extend their range.

Research carried out by the market research organization MORI shows that more than 50 per cent of SMEs would like to sell more online, and are looking for a simple way to do it.

However, SMEs are lagging behind larger competitors in their use of the Internet, according to a survey of 2,500 SMEs across Europe by IDC, the IT research organization.

Overall, 66 per cent SMEs had access to the Internet, compared to 76 per cent of larger companies. Of the 66 per cent, far fewer were using the Internet to generate sales, with 30 per cent of retailers and wholesalers, but only 17 per cent of manufacturers and 9.2 per cent of business services SMEs, were selling via the net.

Only 6.6 per cent of the SMEs surveyed had web sites that could carry out online transactions.

The research, carried out on behalf of the network equipment company Cisco Systems, identified a number of 'fast tracker' SMEs that, like Cooksons, have used the Internet to transform their business. Examples include Sarl Noraude, a French mail order clothing company with 30 employees, which has rapidly expanded sales of made-to-measure shirts with a web site that allows customers to input measurements, select the style and fabric and purchase made-to-measure shirts online.

Another is Paper One, a Swedish producer of fine papers, which has gone from start-up to £3.8 million turnover in 2 years by enabling customers to order via the web site at any time, 365 days a year.

These examples show how the Internet has changed the rules that have governed business for centuries, according to Robert Lloyd, vice-president of Enterprise and Small-Medium lines of business at Cisco.

He says: 'A four-fold increase in turnover, for example, can now be accommodated through technology in a matter of days, if not hours, instead of having to wait weeks or months to recruit and train staff, increase production, and so on'.

And it is not just existing small companies that have seized the opportunity to compete outside their traditional range.

Large, established multinationals are probably more discomforted by the rise of a brand new breed of SMEs, the dotcoms. These companies may be small in terms of physical assets, but they are becoming the giants of the Internet, expanding their customer bases rapidly, and taking significant market share from traditional businesses.

The early focus of e-commerce development in SMEs has been in using the Internet to target new retail customers, but now a range of business-to-business e-commerce services is developing. The MORI research was commissioned by Mondus.com, a recently established electronic marketplace dedicated to the needs of SMEs.

Rouzbeh Pirouz, founder and chief executive, says: 'We set up this business because research shows that to date services have been oriented to bigger businesses and the benefits of e-procurement have passed over SMEs'.

Mondus allows SMEs to get multiple quotes for goods and services via the Internet, rather than having to ring round or write to suppliers.

'SMEs get access to suppliers outside their immediate geography. From June, we will have a global database of suppliers'.

The site, which includes foreign language translation and credit checking services, began operating eight months ago. After six months there were 50,000 SMEs on the system, 90 per cent of them buyers. 'We have gone from two quotes per order posted on the system to five quotes per order', says Mr Pirouz. 'It is unlikely that companies would gather more than that using traditional methods'.

There is no charge for signing up to the site but Mondus takes a small percentage on each deal concluded.

Another example of an e-commerce site dedicated to SMEs is B2B.com, set up by Barclays Bank. As well as providing online banking, this site is a portal for a range of products and services used by SMEs and provides secure purchase-to-payment procurement.

Chris Lendrum, chief executive of Barclays corporate banking, says the site will cover all essential services, 'From the purchase of stationery and raw materials through to the administration of human resources'.

This site is targeted at companies with a turnover between £5 million and £250 million. However, Barclays has 450,000 SME customers with a lower turnover, which are serviced by its retail banking operations. It has set up a 40:60 joint venture company with the Internet provider Freeserve to provide e-commerce services for these customers.

The point is that the Internet makes it cheaper to market and sell to SMEs, spurring the development of e-services dedicated to this sector. A good example of this is the way in which Application Service Providers, which deliver and maintain software applications via the web, are targeting SMEs.

Western Europe has 16 million companies that are classified as SMEs. While they already represent a significant chunk of the economy, the Internet is giving them the ability to punch beyond their weight.

'Nowhere has the effect of the Internet been felt so much as in its ability to give SMEs the strength to compete and beat multinational companies', says Mr Lloyd.

*Source:* Internet enables SMEs to punch above their weight, by Nuala Moran, May 3rd 2000, FT Information Technology supplement ([www.ft.com/ftit](http://www.ft.com/ftit)) © Financial Times

## Questions

1. *Explain how Cooksons Tools used the Internet to support their business.*

The Internet has enabled the company to increase sales by the acquisition of new customers from international markets.

2. *What are the differences in business model used for Internet sales?*

The company sells at a lower price on the Internet, resulting in a smaller margin. It is able to do this since the cost of sales is lower and it results in greater sales volume.

3. *Visit the Cooksons Tools web site and assess the range of services it offers in relation to Table 1.3.*

The facilities are standard for an online retailer or e-tailer, but the online customer support and internal support facilities are more limited. This may be so because it is relatively costly to set these up and traditional phone support methods are preferred.

4. *What is Mondus? How does it facilitate trade amongst SMEs?*

Mondus is an example of a new intermediary (no longer active) that was created as a marketplace to bring together buyers and sellers. It is an online marketplace that failed because its business model was not-sustainable.

## Introduction to how to use Questions for Debate in classes

The text below shows how the debate can be introduced for students. This example is taken from an approach we developed at the University of Derby. Students were assessed on their presentations and contribution.

Two debates each week will take place during normal tutorial sessions. Each debate will be argued between two groups of two or three students.

For each debate, the format will be as follows:

- (a) an initial vote will be taken amongst the non-presenting members of the tutorial group for an initial benchmark
- (b) the team presenting the case FOR the statement will make a 10-minute presentation supporting the topic statement
- (c) each team in the opening part of their presentation should take care to define terms used in the topic in question

- (d) the team presenting the case AGAINST the statement will then make an appropriate 10-minute presentation
- (e) the teams presenting each side of the case question the other in turn for 5 minutes each
- (f) questions and discussions involving the whole tutorial group will follow for 10 minutes
- (g) FOR followed by AGAINST, each to make a short summary of their key points and observations
- (h) final vote to take place FOR and AGAINST the statement – this will reflect the success of the various arguments presented
- (i) remember tutors do not play a role here and students must take ownership of classroom management etc.

## **Assessment**

Assessment will be made by the tutor of each presenter's performance. Criteria will include the following:

- strength of argument
- use of current Information System (IS) industry examples
- use of academic references
- quality of presentation (visual and verbal)
- response to questions and counter arguments
- accuracy of observations and conclusions
- discretionary mark for involvement in other debates

The voting will not influence the marks awarded unless it is clearly the result of a poorly presented case. A 'difficult' case well presented and defended will not be penalized even if no-one agrees with it!

## **Questions for debate**

### **Debate 1.1 How new is the e-business concept?**

**'E-business is just a new label – there is no distinction between the role of e-business and traditional Information systems management.'**

Summary of arguments for are as follows:

- The tools are the same – hardware, software and communications technology are not new – witness use of EDI (Chapter 3)



- IS strategies have always looked at portfolio of applications across the business and links with third parties and how they can be utilized for competitive advantage (Chapter 4)
- Control of e-business usually resides with the IT department
- Only the largest companies tend to have specific responsibilities and departments for e-business – typically part of IS function

Summary of arguments against are as follows:

- The emphasis is different – away from technology to how information can support business
- The expenditure on e-business has exceeded traditional IS expenditure
- New organizational structures and new processes have been introduced (see Chapter 4)
- E-business is seen as a board-level issue with board-level responsibility

**Debate 1.2 Limited SME adoption of e-business** 'Adoption of e-business by established SMEs is generally less than that in larger businesses. This is principally a consequence of the negative attitude of managing directors and CEOs to the business benefits of information and communication technology.'

Summary of arguments for are as follows:

- Refer to the International Benchmarking study data in Chapters 4 and 6 which shows that SME adoption is lower than larger businesses.
- Look at the arguments presented in benchmarking data in Chapter 1 – many of these arguments show that the benefits on investment are not clear.

Summary of arguments against are as follows:

- More a matter of resources – would like to invest, but there are other priorities; not enough time.
- Depends on the type and age of business and market – technology startups and innovators are active adopters.
- Many customers of SMEs are themselves SMEs and adoption rates for these groups are lower (Chapter 3).

## Exercises

### Essay and discussion questions

1. *Discuss the following question with reference to how an organization should react to the Internet. 'Is the Internet a typhoon force, a ten times force, or is it a bit of wind? Or is it a force that fundamentally alters our business?' (Andy Grove, Chairman of Intel)*

Suggested approach:

This statement is useful in that it indicates the impact of the Internet will vary according to the type of business that an organization is in. Students should look at a range of industries from those where the impact is high, for example, media and information services to low, for example, retailer. The ES test in Chapter 8 (p435) can be used for consumer industries. Examples can be taken from those that have reacted, for example, easyJet or General Electric in comparison to those that have not. The analogy may also be apt since the Internet phenomenon may be transitory. This can also be considered.

2. *Suggest how an organization can evaluate the impact of the Internet on its business. Is it a passing fad or does it have a significant impact?*

Suggested approach:

This is covered by the situation analysis in Chapters 5 (p269) and 8 (p420).

Situation analysis should concentrate on the micro-environment (Figure 2.1) including demand for online services from customers. Services should be considered across the buying cycle from pre-purchase (supplier and product selection), purchase and post-purchase support. Demand levels can be assessed by reviewing figures of percentage of customers with access and those who are prepared to use it for information gathering and purchase. Competitor activity can also be benchmarked. Macro-environment SLEPT factors should also be reviewed, but they are not the main thrust of the question.

Assessment of whether the impact is transitory or permanent can be done through developing projections of the online revenue and promotion contribution (Chapter 8, p430).

3. *'Similar benefits and barriers exist for the adoption of sell-side e-commerce for both B2B and B2C organizations'. Discuss.*

Suggested approach:

More research is available for B2C, so it is best to start with benefits and barriers for this and then look at similarities for B2B. Main benefits can be checked using the 6Cs:

- Cost reduction – less use of physical resources and staff.
- New Capability – for example, to sell into an overseas market.
- Improved communication – internal and external.
- Control – better visibility/information for managers of trading relationships.

- Customer service – more detailed information, faster response can be provided 24 hours, and 7 days a week.
- Competitive advantage – any of the above factors may provide this, but it is likely to be short-lived.

A case study approach using a particular company for example, Cisco, easyJet to highlight these factors would be an improvement. Barriers include: lack of recognition of need, cost of access, security and privacy. Consumer opinion surveys such as those published by Which? ([www.which.net](http://www.which.net)) can be used to support these.

Differences between B2B and B2C can be compared by reviewing the level of use of e-commerce for a sector that is common for each, for example, office stationery. Generally B2B usage is greater because companies can make greater savings through economy of scale and the risk is perceived as lower since it is not the purchaser's own money that is at risk.

4. *'In most countries the Internet will never be used by more than 50 per cent of the population, so its impact on businesses will be limited'. Discuss.*

Suggested approach:

This question has two assertions that should be dealt with separately. Firstly, it is the level of access. Data in Chapter 4 (Figure 4.2, p201) shows that only in developed countries will the level of access be high, for example, The International Telecommunications Union (ITU) (<http://www.itu.int/ti/industryoverview/index.htm>). In most countries for the foreseeable future it appears that access levels will be less than 50 per cent in terms of PC access. Further into the future, access through digital TV via satellite may increase this figure.

However, the access figure is now approaching 50 per cent in some developed countries although PC access saturation is approaching.

Second, 'impact to businesses will be limited'. This assertion follows on from the first for B2C, but for B2B impact will be greater since businesses may have access even when individuals do not.

5. *'Confusion over the meaning of the terms e-commerce and e-business will limit the adoption of e-business in many businesses'. Discuss.*

Suggested approach:

Confusion centres over the distinction between e-commerce and e-business implied by different interpretations of Figure 1.2. The implication is that if e-business and e-commerce are interpreted as referring to 'selling over the Internet' then opportunities may be missed for:

- Supporting the whole buying process online including pre-sales and post-sales.
- Using the Internet for procurement (buy-side e-commerce).
- Using web-enabled technologies to *support internal process efficiencies*.

6. *Analyse Figure 1.4, commenting on (this refers to the third edition – it is an error):*
- the overall percentage of sales for e-commerce predicted for 2004 across all markets;
  - the variation in percentage of sales for e-commerce predicted for 2004 in different markets;
  - the growth rates indicated over the four years of predictions;
  - the implications for the developing world.

This question is intended to prompt students to assess the value of analyst forecasts.

Suggested approach:

1. *Use a source such as Cyberatlas ([www.cyberatlas.com](http://www.cyberatlas.com)) to update on actual levels in current year relative to forecast.*
2. *Summarize the discrepancies.*
3. *Suggest reasons for discrepancies including errors in the analyst forecast and changes to adoption and the economy.*

### **Examination questions**

1. *Explain the relationship between the concepts of e-commerce and e-business.*

E-commerce is generally understood to be a sub-set of e-business. E-commerce refers to financial and non-financial transactions between organizations. These transactions are often considered in the context of a supplier organization distributing and selling its product to consumers. E-business includes transactions from a buy-side and sell-side e-commerce perspective and also the use of communications technology to improve internal process efficiencies.

2. *Distinguish between buy-side and sell-side e-commerce and give an example of the application of each.*

Buy-side e-commerce refers to electronic transactions concerned with the purchase and inbound logistics of goods such as a supermarket coordinating purchases from its suppliers. Sell-side e-commerce concerns transactions related to the sale and distribution of goods such as a supermarket selling direct to its customers.

3. *Summarize three reasons why a company may wish to introduce e-commerce.*
- Cost reduction in purchasing or selling through less human involvement and lower resource costs.
  - Increased efficiency enabling faster cycle times for purchasing or sale of goods.
  - Capability to sell to overseas markets or previously untargeted markets.

4. *Describe three of the main barriers to adoption of e-commerce by consumers and suggest how a company could counter these.*

- Security fears – fraudulent use of credit cards.
- Privacy fears – personal data held by companies or criminals.
- Cost of access devices and online costs.
- Lack of perceived need.

Education and reassurance via the web site and offline communications can counter these.

5. *Outline the internal changes a company may need to make when introducing e-business.*

Refer 7S's for a framework:

- Strategy – new strategic responses are required.
- Structure – new structures and responsibilities may be required.
- Systems – new information systems and new processes will be required.
- Style – less likely to change, but some organizational styles are more responsive to change.
- Staff – new responsibilities.
- Skills – new skills.

6. *Summarize the differences between adoption of Internet access for consumers and businesses and give reasons for these differences.*

Business adoption is higher since there is a greater potential for cost savings through comparing suppliers and buying online and the risks may be perceived as lower.

7. *Name three risks to a company that introduces buy-side e-commerce.*

- Payback period may be long due to cost of implementation.
- Maverick purchasing (Chapter 7).
- Some purchasing staff may need to be redeployed or made redundant.
- Security risks of outside organizations accessing company data.

8. *Name three risks to a company that introduces sell-side e-commerce.*

- Payback period may be long due to cost of implementation
- High cost of sales due to fraudulent use of credit cards.
- Security risks of outside organizations accessing company data.

## Activity answers

### Activity 1.1 Innovative e-businesses

1. *Think about the innovation that you have witnessed during the time you have used the Internet and World Wide Web. What would you say are the main sites used in your country that have been created which have changed the way we spend our time or buy online. In Table 1.1 are the sites that we believe have had the biggest influence on online business models in the US and Europe, with more emphasis on the most recent ones.*

Answer : Not applicable – depends on student opinion and country.

2. *We talk about these businesses being 'successful', but what is success for a new e-business?*

For established businesses, success is stable or growing profitability, but startups will rarely be able to achieve this. What becomes important are:

- Unique visitors – number of individuals per month.
- Engagement or stickiness – page views per visitor (useful for advertising) and percentage of active or returning visitors (essential for a social network such as Facebook).
- Monetization – is it possible gain revenue, for example, Ad Revenue from visitors.
- Growth.
- Publicity – this will help fuel the other success measures given above.

3. *What do these sites have in common that you think has made them successful?*

- All these sites are American, so the funding and publicity they can achieve is significant.
- You will notice that many of these sites (other than Joost, Last.fm and Skype which were founded in Europe) were originally developed in the United States, with the majority now used around the world. But in each country, similar types of businesses have evolved, for example, the search engines Baidu in China and Yandex in Russia.
- Meet a fundamental consumer need.
- Clear revenue model.
- Memorable branding and experience.
- Initially they had a straightforward proposition – offering one service.
- Generally they were first-movers.
- Notable that many have taken several years before becoming widely known and used.

## **Activity 1.2 What's in a term – what do we call this 'e-thing' Web?**

### **Question**

One simple, but revealing, method of assessing how commonly these terms are used, is to use the Google syntax which returns the number of pages which contain a particular phrase in their body or title.

Type into Google the following phrases in double quotes or use intitle: 'phrase' for these phrases and note the number of pages (at the top right of the results page):

Phrase

- (i) 'E-business'
- (ii) 'E-commerce'
- (iii) 'Internet marketing'
- (iv) 'E-marketing'
- (v) 'Digital marketing'

At the time of writing, the following table shows that of the marketing-related terms, 'Internet marketing' is the most popular but this may change, as it is a misleading term, which omits other electronic communication techniques. Companies that promote their services online will often use keywords on the page, which reflect the words that are being searched for.

In the United Kingdom, specialist e-marketing agencies and the new media publications tend to refer to digital marketing and their usage of the term will eventually have an influence.

Phrase	Pages containing phrase	Pages containing title
'Digital marketing'	2,640,000	119,000
'E-marketing'	7,750,000	360,000
'Internet marketing'	40,100,000	2,590,000
'E-business'	32,000,000	909,000
'E-commerce'	93,600,000	5,090,000

Figures collected in December 2008 using Google syntax 'phrase' and intitle and then reviewing the numbers top right in the top right of the Google Search results page.

Additional terms for comparison:

Phrase	Pages containing phrase	Pages containing title
SEO	263,000,000	13,800,000
PPC	49,500,000	3,260,000
'E-mail marketing'	14,800,000	582,000
'Viral marketing'	4,650,000	173,000
'Social media'	147,000	949,000

### **Activity 1.3 Understanding e-commerce and e-business**

1. *Identify the different components of e-business described in this speech and assess their relative impact on the organization.*

The article identifies selling to customers using the Internet ('e-Sell') and purchasing from its suppliers using the Internet and reverse auctions ('e-Buy'). The Internet is also used for managing internal process ('e-Make').

Although now dated, in 2001, online sales of \$20 billion are estimated on a turnover of \$130 billion (15.4 per cent). \$12 billion in online auctions is also significant, given that other purchases will also be made online that are not auction-related.

2. *Where do other 'e' terms such as e-CRM, e-marketing, e-logistics, e-procurement, e-tail and e-government fit within this description?*

You will have noted that the terms tend to describe a range of business activities within an organization. They typically refer to business processes that form part of the value chain from inbound logistics and purchasing (e-procurement) to outbound logistics (e-fulfilment) and managing the customer relationship through e-marketing and e-CRM. E-government is discussed later in the chapter, essentially it is online provision of government services. It also refers to government departments adopting e-business.

For a fuller definition of the main terms see the section *E-commerce defined*.

### **Activity 1.4 Understanding e-commerce and e-business**

#### **Question**

*Visit each of the sites below and then place them into one of the four categories of online presence according to their primary focus:*

1. *Transactional e-commerce site.*
2. *Services-oriented relationship-building web site.*
3. *Brand-building site.*
4. *Portal or media site.*



*You should also indicate their secondary focus in terms of these four site types.*

**1. Transactional e-commerce site.**

Bank, for example, HSBC ([www.hsbc.com](http://www.hsbc.com)), secondary purpose is relationship-building or brand-building.

Travel company, Thomas Cook ([www.thomascook.com](http://www.thomascook.com)), secondary purpose as for HSBC online retailer such as Amazon ([www.amazon.com](http://www.amazon.com)). Secondary objectives are to be a portal?

**2. Services-oriented relationship-building web site.**

Management consultants such as PricewaterhouseCooper ([www.pwcglobal.com](http://www.pwcglobal.com)) and Accenture ([www.accenture.com](http://www.accenture.com)). Secondary aim – brand-building

A end-product manufacturer such as Vauxhall ([www.vauxhall.co.uk](http://www.vauxhall.co.uk)). Secondary objectives are building brand and referring leads or transactions to offline sources.

**3. Brand-building site.**

Lingerie manufacturer, for example, Gossard ([www.gossard.com](http://www.gossard.com)). Secondary objectives are linking to transactional sites.

Beverage manufacturers, for example, Tango ([www.tango.com](http://www.tango.com)), Guinness ([www.guinness.com](http://www.guinness.com)). Secondary objectives are supporting relationship-building.

**4. Portal or media site.**

- Business site: Silicon ([www.silicon.com](http://www.silicon.com)) (secondary transactional site for subscriptions)
- Consumer site Yahoo! ([www.yahoo.com](http://www.yahoo.com)). Yahoo! is more than a search engine – it is an online portal. Secondary objectives are encouraging transactions.

**Activity 1.5 Applying the 7S framework to e-business initiatives**

*Take an organization you are familiar with and consider organizational changes that may be required for each of the 7 Ss. Which factors do you feel are ignored by the 7 Ss?*

- Structure – how will the e-business change be managed? Is a separate division required or can the change be matrix-managed (Chapter 10)?
- Systems – do new operating procedures or business processes need to be introduced? Can existing IS be used to implement change or will new systems be required?
- Style – is the current, possibly conservative, style of the company consistent with the way the company wants to project its image? Will decisions be made fast enough? Will risks be taken to trial new business models and new technology?
- Staff – is the appropriate mix of staff available?

- Skills – are the correct skills available internally? What training is required? Do we need to outsource some services?
- Superordinate goals – this refers to the higher goals of the company that may be encapsulated in the mission statement. In modern parlance, do the senior managers 'get' the significance of the Internet and will they act?

A possible criticism of the 7S model is that it is internally focused. How well the company forms and leverages partnerships with suppliers and customers is now seen as a key element of strategy. Related to this is how well the company responds to the industry restructuring that has occurred as part of e-commerce. Can it take advantage of disintermediation and reintermediation within the industry (Chapter 2)?

## Exercises

### ***Self-assessment questions***

1. *Distinguish between e-commerce and e-business.*

This can best be explained by referring to different elements shown in Figure 1.1 that is,

- sell-side e-commerce
- buy-side e-commerce
- internal use of electronic communications to support business processes.

E-business is generally understood to include all three elements. E-commerce is commonly used to refer to either the first one or first two of these elements, but less commonly the third. E-business is broader in scope than e-commerce.

2. *Explain what is meant by buy-side and sell-side e-commerce.*

Again refer to Figure 1.1. Buy-side e-commerce is using communications technology to support the upstream supply chain from procurement to inbound logistics. Sell-side refers to selling and distributing products and services from an organization to its customers.

3. *Describe the different services that can be offered to customers via a web presence.*

This is covered in more detail in Chapter 5 where stage models are referred to (p270):

- outline information services on company and products;
- detailed information services on products, for example, technical infosheets;
- transactional e-commerce – purchases can be made online;
- transactional customer service – questions can be asked and answers supplied online.

4. *Summarize the consumer and business adoption levels in your country. What seem to be the main barriers to adoption?*

Clickz ([www.clickz.com/stats](http://www.clickz.com/stats)) is a good source of country information. For business, the main barriers are highlighted by the DTI (2000) survey:

- lack of imperative;
- security risks.

For consumers, the Which report highlights fears about security and privacy as well as the lack of a perceived need.

5. *Outline the reasons why a business may wish to adopt e-commerce.*

The 6Cs are a good framework here:

- Cost reduction – less use of physical resources and staff.
- New Capability – for example, to sell into an overseas market.
- Improved communication – internal and external.
- Control – better visibility/information for managers of trading relationships.
- Customer service – more detailed information, faster response can be provided 24 hours, and 7 days a week.
- Competitive advantage – any of the above
- factors may provide this, but it is likely to be short-lived.

6. *What are the main differences between business-to-business and business-to-consumer e-commerce?*

Please refer to the table below for a summary of the differences. Note that this table was originally included in earlier editions of the book.

**Table Differences in characteristics of B2C and B2B trading**

Characteristic	B2C	B2B
Proportion of adopters with access	Low to medium	High to very high
Complexity of buying decisions	Relatively simple – individual and influencers	More complex – buying process involves users, specifiers, buyers, etc.
Channel	Relatively simple – direct or from retailer	More complex, direct or via wholesaler, agent or distributor

Purchasing characteristics	Low value, high volume or high value, low volume. May be high involvement	Similar volume/value. May be high Involvement. Repeat orders (rebuys) more common
Product characteristic	Often standardized items	Standardized items or bespoke for Sale

7. *Summarize the impact of the introduction of e-business on different aspects of an organization.*

The McKinsey 7S model is a useful framework for looking at the different aspects of a business that may be affected by the move to e-business.

- Strategy – new strategic responses are required.
- Structure – new structures and responsibilities may be required.
- Systems – new information systems and new processes will be required.
- Style – less likely to change, but some organizational styles are more responsive to change.
- Staff – new responsibilities.
- Skills – new skills.
- Superordinate goals – higher level aims may be updated depending on the business.

8. *What is the relevance of intermediary sites such as Kelkoo ([www.kelkoo.com](http://www.kelkoo.com)) to the B2C company?*

Companies must think about whether they are represented on such intermediaries. If they are not, they may lose potential business. They also need to consider the positioning of their products relative to competitors who also use the intermediary.

Note that Mondus wound down operations in 2002. Another example is Clearly Business, a joint venture between Barclays and Freeserve.

# E-commerce fundamentals

## Table of contents

Learning outcomes	29
Management issues	29
Chapter at a glance	30
Suggested teaching and learning approaches	30
Case studies	31
Additional case study	35
Questions for debate	37
Exercises	38
Activity answers	42
Exercises	45

## Learning outcomes

After completing this chapter the reader should be able to:

- Complete an online marketplace analysis to assess competitor, customer, and intermediary and competitor use of the Internet as part of strategy development
- Identify the main business and marketplace models for electronic communications and trading
- Evaluate the effectiveness of business and revenue models for online businesses

## Management issues

The fundamentals of e-commerce imply these questions for managers:

- What are the implications of changes in marketplace structures for how we trade with customers and other partners?
- Which business models and revenue models should we consider to exploit the Internet?
- What will be the importance of online intermediaries and marketplace hubs to our business and what actions should we take to partner these intermediaries?

## Chapter at a glance

### **Main topics**

- The e-commerce environment
- Location of trading in the marketplace
- Business models for e-commerce

### **Focus on ...**

- Auction business models
- Internet start-up companies

### **Case studies**

- 2.1 The impact of B2B reverse auctions
- 2.2 Lastminute.com – an international dot-com survivor
- 2.3 Zopa launches a new lending model

## Suggested teaching and learning approaches

To highlight changes introduced in the e-marketplace, the following topics can be covered:

- Why are environment influences important? Activity 2.1 (based on Figure 2.1) gives a structured approach to highlighting changes in the macro- and micro-environment. Can use the strategic agility video(s) featured in Mini-case study 2.1. Maybe difficult to find on FT.com – a Google search may reveal it in 'Truveo'.
- Online marketplace analysis. This is an important section since it provides students with a technique/tools they can use to evaluate a company within its online marketplace for assignments or in the workplace. Workthrough an example, for example, for a retailer or a bank for Figure 2.3. Use examples of research sources shown in Table 2.2. to illustrate data available on customer demand for products through search engines (Google Keyword Tool, Figure 2.12) and comparing site popularity (Google Trends for Websites).
- Channel changes – disintermediation and reintermediation. Use diagrams such as Figure 2.5–2.7 for a particular industry such as the car industry to explain these terms. Talk about these as strategic responses. What are the penalties for ignoring these?
- Location of trading in the marketplace. Tables 2.3 and 2.4 and examples shown in Figure 2.8 should be understood by students. Understanding customer journeys across online and offline channels through using channel chains (Figure 2.10) should also be covered.

- Different types of online intermediary. The different types of intermediary shown in Table 2.5 and their relative importance through the buying process should be discussed with students. As a group activity, intermediaries important in different sectors such as retail, banking, financial services and travel can be identified.
- Business and revenue models. Ask students to consider different models in the context of Figure 2.13 or by reviewing different revenue models of different companies such as those introduced in Table 1.1. Different advertising revenue models such as CPM, CPC and CPA should be reviewed and the example in Figure 2.15 can be reviewed or used as an activity. A spreadsheet version of this model is available from [www.davechaffey.com/Spreadsheets](http://www.davechaffey.com/Spreadsheets).

## Case studies

### **Case study 2.1 The impact of B2B reverse auctions**

This case explains the process of a reverse auction and the types of products suitable for purchase by this method. The benefits of reverse auctions are explored through many examples from different sectors including purchases by government departments.

#### Questions

1. *Summarize the operation of a B2B reverse auction from both the buyer's and seller's perspective.*

Buyer's perspective:

The buying company posts an invitation to bid for the product they want to purchase.

According to the article:

'The process works by the purchaser spelling out precisely what is needed, advertising the requirement and then drawing up an approved list of those who can meet it. Potentially, Mr Dempsey says, that opens up the market to small and medium-sized companies that might not normally see the government as a customer. The parameters of the auction are then set, the suppliers trained – and battle commences. Usually auctions are set to last 30 minutes but are extended for 10 minutes each time a bid comes in during the last five minutes. An average auction runs for about 90 minutes, although some have lasted for several hours'.

Seller's perspective:

The seller bids to supply at a particular price. They then monitor the prices posted by competitors and reduce their prices as appropriate.

2. *Which type of products are suitable for purchase by reverse auction?*

This is highlighted by this paragraph:

'More than 125 different commodities have been bought and sold this way, including fork lift trucks, coffee, foil, fuel, filters, pallets, pipes and structural steel. Auctions have also included services, such as temporary staff and contracts for earth removal'.

The characteristics of such products are that they are standard commodities that can readily be compared. They also need to be in sufficiently large volumes to warrant the overhead of sale by this method.

3. *Explain the benefits of the reverse auctions to purchasers.*

As well as the obvious ability to achieve lower prices through competition with a greater number of suppliers who the purchaser may have been previously unaware of, it also enables a more rapid procurement cycle.

As the article puts it:

‘The reason, Mr Dempsey argues, is twofold: the field of suppliers can be widened from those who traditionally do business with government; and the auction takes place in real time, increasing the competition on suppliers to find their lowest price’.

4. *What are the implications to selling companies of reverse auction?*

Reverse auctions are a threat since selling prices tend to be reduced through the bidding process. However, it does enable smaller companies to compete more effectively with larger organizations. The process will benefit efficient selling-organizations.

*Source: INSIDE TRACK: A bid to save money for the government By Nicholas Timmins, Financial Times; 29 Jan 2003, © Financial Times.*

## **Case study 2.2 lastminute.com an international dot-com survivor**

### **Questions**

1. *Explain the business and revenue model for lastminute.com and assess the potential for profitability.*

The business model of lastminute is an intermediary that is used to help unite ‘distressed inventory’ with consumers looking to make ‘last minute bookings’. The revenue model is based on lastminute taking a percentage of ticket price. One of the difficulties is that since this percentage is small, it is difficult to build substantial revenues without high sales volumes.

2. *Summarize the measures which are used to assess the effectiveness of an e-business such as lastminute.com (such as subscribers, conversion rate and total transaction value). How do they relate to each other?*

Students should be advised that measures can be logically grouped. For example:

Financial metrics and value:

- Turnover (Total transaction value)
- Profit
- Average commission (not supplied)



Customer metrics:

- Number of customers
- Number of active customers
- Average order value
- Email subscribers

Turnover is dependent on the number of active customers, the number of transactions in a period (not given) and average order value

3. *Explain the relative success of lastminute.com and Thomson travel using the six criteria listed below.*

- Concept – Since Lastminute is an intermediary with revenue based on transactions it has very low profit margins compared to Thomson. Differentiation is perhaps more difficult for Lastminute and it is subject to competition from other intermediaries.
- Innovation – although innovative at the time, the comparison model has been copied. Perhaps more important is the capability to form links with other companies.
- Execution – although Lastminute had early problems with this, this has been refined to ensure its success.
- Traffic. As a more nimble entrant into online, Lastminute could drive visitors using innovative techniques such as viral marketing, search engine marketing and PR. However, it is expensive for new brands to publicise themselves through traditional advertising. Existing brands will generate traffic naturally since they are well known brands within their market.
- Financing. Lastminute was subject to Venture Capitalists.
- Profile. This was excellent for Lastminute in the early dot-com days, particularly with two visually appealing directors! This is more difficult for an existing brand.

4. *What action do you consider the founders of the company should take to ensure the future success of www.lastminute.com?*

From Moreover.com you may have read some of the actions that they have taken. These include the following:

- Forming more partnerships with different market sectors;
- Increasing customer service and site quality by a redesign with enhanced personalization offering better matching between offers and customer needs;
- Increasing access to the service by opening high street branches.

Lastminute.com has had to face competition from its suppliers such as the airlines joining forces to offer a rival service.

### **Case study 2.3 Zopa launches a new lending model**

#### **Question**

*Imagine you are a member of the team at the investors reviewing the viability of the Zopa business.*

*On which criteria would you assess the future potential of the business and the returns in your investment based on Zopa's position in the marketplace and its internal capabilities.*

Students should be given guidance on the extent to which you require an analytic answer based on a detailed revenue model or a consideration of the strategic issues.

If a detailed revenue model is required, then some additional information will be required or students will need to state their assumptions. The relevant section to point students to is Conversion marketing in Chapter 9 on p491.

Essentially this question is about revenue models and costs, so it requires the students to consider total costs of driving visitors to the site and converting them to sale in comparison with revenue sources. Profitability will also be dependent on the long-term capability of the company to gain revenue customers.

Students should mention these elements of a conversion based revenue model including:

- Total market size for these products based on the size of existing loans markets. Sub-set of market who would meet Zopas lending criteria.
- Cost of customer acquisition – this is a competitive market and it may be difficult to attract visitors to the site, for example, using search engine marketing or offline advertising.
- Cost of servicing sales – to what extent are phone contacts needed to facilitate sales?
- Conversion rate from visitor to lead to sale.
- Average revenue earned from each new borrowers that is based on charging borrowers one per cent of their loan as a fee, and from commission on any repayment protection insurance that the borrower selects.
- Lifetime value from customers based on attrition rates – will borrowers continue to use Zopa or will they use it as a one-off?
- Flexibility on revenue model – for example, after launch, Zopa has gained additional revenue from lenders.

From a strategic perspective, the issues that students should consider are a follows:

- Proportion of total loans market that this service will appeal to.
- Proportion of savings and investments market this model will appeal to. It is a lot of effort compared to other savings and investments methods for a limited differential. As a result it will only appeal to a limited number of investors.

- Will the number of lenders balance the number of borrowers depending on the appeal of the proposition as noted above?
- Business model scalability – can it be applied in other countries and to other financial products or beyond?
- Technology costs and scalability.

## Additional case study



### ***Dynamic pricing at SmithKline Beecham***

When the healthcare company SmithKline Beecham bought supplies of a basic solvent recently, the price was 15 per cent lower than the day's spot price in the commodity market. On other purchases, also of highly specified solvents and chemicals, SmithKline Beecham is regularly beating its own historic pricing by between 7 and 25 per cent.

The reason is that SmithKline Beecham is using the Internet to hold downward or 'reverse' auctions in which suppliers bid against each other for pre-specified contracts. FreeMarkets, the company that manages the SmithKline Beecham auctions, quotes examples of savings achieved by other clients in these virtual marketplaces: 42 per cent on orders for printed circuit boards, 41 per cent on labels, 24 per cent on commercial machinings and so on.

As well as production items, the process also works well for many services, such as car hire contracts.

This pricing free-for-all sounds a little shocking at first. After all, successful companies are supposed to buy on quality, nurture critical supplier relationships and think strategically. And, of course, they still do.

Guy Allen, director of purchasing at SmithKline Beecham emphasizes that the auction itself is a new part of a still rigorous buying process. 'It's just one tool in our toolbox', he says. 'The process only works if you put good purchasing management up front'. This includes issuing a particularly detailed request for proposals (RFP) to which hopeful suppliers respond as usual, but without quoting a price.

Based on the RFPs, selected suppliers are invited to take part in the auction.

Training in using the software is available. Once the bidding starts, the participants see every bid, but not the names of the bidders. In the final stages of the auction, each last bid extends the bidding time by one more minute. One auction scheduled for 2 hours ran for 4 hours and 20 minutes and attracted more than 700 bids.

A buyer need not necessarily accept the lowest bid, but may still prefer to use a tried and tested supplier at a slightly higher price. But the reverse auction offers buyers a number of benefits: it shortens the time spent negotiating separately with each supplier; the inclusion of non-incumbent suppliers can help bring pricing down and, according to Mr Allen, 'It makes the process a little more transparent, since everyone can see the lowest price on offer. In general, non-incumbent suppliers like the process, though some incumbent suppliers are a little less happy'.

SmithKline Beecham is using private online auctions for global procurement of highly specified items at a spend that is attractive to the market. In contrast, Andrew Biggs, managing director of Bidbusiness.co.uk, is providing public reverse auction facilities for what he describes as 'low touch' products – construction bricks and sand and gravel, for example, – as well as haulage services and builders' skips. Buyers can post their tenders on his specialist sites and sellers can bid for the work using a pseudonym.

Mirroring the need for liquidity in successful financial markets, auctions need a competitive environment and public auction sites seek to attract more buyers and sellers through features such as Category Watch from OpenSite, the company that supplies software for Bidbusiness. This feature will notify registered users by e-mail when an item of interest to them is posted.

Now companies that provide auction facilities are looking to factor other variables into their software as well, to let buyers and sellers take account of differences in transport costs, lead times, duration of warranty periods and so on.

The strength of the auction is that it allows prices to fluctuate according to demand and factors in the value of opportunity. But, arguably, its weakness is the fixed nature of the event. The auction format demands the simultaneous attention of everyone interested in that particular contract or item.

Airlines try to match availability to demand and reward early bookers by creating fare classes where some seats on a particular flight cost more than others. The problem is that fare classes are determined in advance and fare differentials can be rigid, creating a blunt tool, according to Sharookh Cambata, president of Greaves Travel USA, an airline ticket wholesaler.

Greaves has teamed up with Equant to develop a dynamic pricing engine to automatically adjust the price of airline tickets according to demand. First, the airline needs to be able to track all bookings into one point, so the pricing engine can view the current request against other's demands. The pricing engine must then work rapidly. Customers booking through a web site, for example, are not going to wait minutes for lengthy number crunching; they want an instant price.

Greaves will soon start trials of the new system, called 'Web-fares', but Mr Cambata believes that it also has potential for other pre-booked travel services, such as hotel accommodation. Using the system, a web site user would quickly get the price for the flight or service they wanted, but could also be directed to a cheaper alternative at a different time.

Online auctions are no longer just for surplus goods or unwanted gifts, and the advent of 'e-commerce' is more than marketing hype. The concept of dynamic pricing is gathering interest very quickly. For example, Transco, the UK provider of gas piping infrastructure, has recently introduced web-based auctions to sell capacity in its pipelines, since demand for gas fluctuates according to weather and other conditions.

Dynamic pricing is a convincing example of the way in which the Internet will fundamentally change the way we do business.

Source: Bidding Process is opening doors to newcomers, by Anne Queree, 1 March 2000 Financial Times Technology Supplement. © Financial Times.

## Questions

1. *Explain how SmithKline Beecham is achieving lower prices than traditionally through e-commerce.*

Reverse auctions are used to drive down prices from a range of suppliers. Note that the decision to purchase may not be made on price alone – a traditional supplier may still be chosen, but their price will have been decreased through competition!

2. *To what extent do you think this approach would work for companies smaller than SmithKline Beecham?*

Such an approach can clearly yield major benefits to a large company that can attract a range of suppliers to its auctions to compete for its businesses. This is less likely to happen for smaller companies, so alternatives may need to be evaluated such as aggregated buying with other smaller companies.

3. *What are the implications for a dynamic pricing engine referred to a supplier and its customers.*

In theory such an engine could benefit both supplier and customer since supply and demand are better matched.

## Questions for debate

### Debate 2.1. Countermediation

**The advent of e-commerce means that marketers cannot rely on the online presence of existing intermediaries, instead they must create their own online intermediaries.**

Examples from particular industries should be used to demonstrate this.

Summary of arguments for are as follows:

- Intermediaries are important online because of service and product comparison online – missed opportunity to communicate.
- Cost of paying referrals to third party.
- Company can use intermediary to explore new concepts and markets while minimizing damage to core brand.

Summary of arguments against are as follows:

- Cost of setting up independent intermediaries
- Risk that intermediaries will not appear as independent and may not be used
- Risk of failure in already crowded marketplace
- Can form partnerships instead at lower risk.

## **Debate 2.2. Innovative business models**

**The new business models associated with the dot-com era were, in fact, existing models in an online context. Business models and revenue models have not changed.**

Summary of arguments for are as follows:

- Look at online business model proposed by Timmers in the section on business models – few have changed.
- Look at online revenue mechanisms – similar to previous, for example, sale, commission, subscription.
- Look at payment mechanisms – again similar to before.

Summary of arguments against are as follows:

- New business models such as C2B
- Change in emphasis –for example, more reverse auctions
- Look at examples of companies that have changed sectors, for example, eBay auctions, Lastminute travel

## **Exercises**

### ***Essay and discussion questions***

1. *Disintermediation and reintermediation occur simultaneously within any given market. Discuss.*

Suggested approach:

- Research intermediaries in market by using a directory such as Yahoo!
- Research disintermediation by online services offered by existing players.
- Evaluate whether existing players are making use of the new intermediaries to promote their services through advertising or listing on a trade directory.
- Define the terms with reference to this market.
- Demonstrate that both do occur simultaneously.
- Explain that this is a consequence of companies simultaneously following a disintermediation and reintermediation strategy.

2. *For an organization you are familiar with, examine the alternative business and revenue models afforded by the Internet and assess the options for the type and location of e-commerce transitions.*

Suggested approach:

Research this question by referring to Figures 2.9 and 2.11.

3. *For a manufacturer or retailer of your choice, analyse the balance between partnering with portals and providing equivalent services from your web site.*

An example of this approach is Boots The Chemist that have produced their own portal Handbag.com ([www.handbag.com](http://www.handbag.com))

Suggested approach:

Review the benefits of creating a separate independent portal (new market, new positioning, perceived independence) against the negatives (cost of building traffic, maintaining content – becoming a publisher, establishing brand, lack of credibility).

4. *Contrast the market potential for B2B and B2C auctions.*

Suggested approach:

- Research current and sales history of major B2C players such as eBay.
  - Research current and future trading of commodities in different B2B marketplaces that could be possible through auctions, e.g steel at eSteel.
  - Review buyer behaviour – what are the barriers to purchasing in this way, for example, trust, authenticating purchase?
  - Explain difference in magnitude: B2B much greater than B2C.
5. *Select an intermediary site and assess how well it makes use of the range of business models and revenue models available to it through the Internet.*

Suggested approach:

- Make sure these type of revenue models are included
- Subscription: per-month payment
- Pay per view: pay for each article, or articles up to a value
- Advertising revenue – for advertising space on site or listing in directory
- Affiliate revenue – for referral to other sites leading to sale
- Transaction revenue – proportion of all transactions completed

## **Examination questions**

1. *Explain disintermediation and reintermediation using examples.*

### **Disintermediation**

The removal of intermediaries such as distributors or brokers that formerly linked a company to its customers

### **Reintermediation**

The creation of new intermediaries between customers and suppliers providing services such as supplier search and product evaluation

2. *Describe three different revenue models for a portal such as Yahoo!*

- Advertising revenue
- Affiliate revenue
- Content subscription revenue

3. *What is meant by buy-side, sell-side and marketplace-based e-commerce?*

- Buy-side – suppliers visit customer's web site to bid and win business
- Sell-side – customers visit supplier's web site to make purchase
- Marketplace-based – suppliers meet customers in neutral marketplace to agree sales

4. *What are the different mechanisms for online auctions?*

1. Forward, upward or English auction (initiated by seller). These are the type of auctions available on consumer sites such as eBay. Increasing bids are placed within a certain time limit and the highest bid will succeed provided the reserve (minimum) price is exceeded. According to Commerce One, companies may use online forward auctions to sell slow moving, excess or obsolete inventory items. The forward auction could also potentially be used to perform price discovery in a market.
2. Reverse or downward auction (initiated by buyer). These are more common on business-to-business sites such as Commerce One. Here, the buyer places a request for tender or quotation (RFQ) and many suppliers compete, decreasing the price, with the supplier with the lowest price getting the contract. According to Commerce One, companies may use reverse auctions to:
  - Rationalize suppliers in a particular spending category
  - Source new components in an area they are unfamiliar with



5. *Describe two alternative approaches for using e-business to change a company's value chain.*

### **Disintermediation**

The removal of intermediaries such as distributors or brokers that formerly linked a company to its customers

### **Reintermediation**

The creation of new intermediaries between customers and suppliers providing services such as supplier search and product evaluation

6. *Explain what a business model is and relate it to an Internet pure-play of your choice.*

### **Business model**

A summary of how a company will generate revenue identifying its product offering, value-added services, revenue sources and target customers

Revenue sources for the pure-play, for example, lastminute.com include:

- Subscription: per-month payment
- Pay per view: pay for each article, or articles up to a value
- Advertising revenue – for advertising space on site or listing in directory
- Affiliate revenue – for referral to other sites leading to sale
- Transaction revenue – proportion of all transactions completed

7. *Outline the elements of the e-business environment for an organization and explain its relevance to the organization.*

Micro-environment – customers, competitors and intermediaries

Macro-environment – social, legal, economical, political and technological constraints

Organizations need to audit these influences when developing strategies and monitor them continuously to respond to changes.

8. *Give three different transaction types that an industry marketplace could offer to facilitate trade between buyers and suppliers.*

- Straight fixed-price transaction
- Auction to lowest bidder – reverse auction
- Barter

## Activity answers

### Activity 2.1 Why are environmental influences important?

Q. For each of the environmental influences shown in Figure 2.1, give examples of why it is important to monitor and respond in an e-business context. For example, the personalization mentioned in the text is part of why it is important to respond to technological innovation.

#### Immediate micro-environment

- Customers – which services are they offering via their web site that your organization could support them in?
- Competitors – need to be benchmarked as described in Chapter 5 To review the online services they are offering – do they have a competitive advantage?
- Intermediaries – are new or existing intermediaries offering products or services from your competitors while you are not represented?
- Suppliers – are suppliers offering different methods of procurement to competitors that give them a competitive advantage?

#### Macro-environment

- Society – what is the ethical and moral consensus on holding personal information?
- Country-specific, international legal – what are the local and global legal constraints, for example, on holding personal information, or taxation rules on sale of goods?
- Country-specific, international economic – what are the economic constraints of operating within a country or global constraints?
- Technology – what new technologies are emerging by which to deliver online services such as interactive digital TV and mobile phone-based access?

### Activity 2.2 Exploring business models

Q. Identify overlap between the different business models identified by Timmers (1999). Can you group the different business models into different types of services? Do you think these business models operate in isolation?

An immediate distinction can be made between the operation of individual companies (*e-shop*) using the web to sell direct to the customer and deal with suppliers (*e-procurement*) and intermediary services such as e-auctions and *third-party marketplaces* that make up most of the remaining services. For some business models such as *virtual communities* and *e-auctions* it could be argued that these services could be provided by intermediaries or businesses, but they are often best provided by neutral intermediaries.

Overlap can be identified between e-auctions, e-malls, third-party marketplaces and business communities since they all facilitate the exchange of products between sellers and buyers. It can

be argued that the business model is similar, but the mechanism for exchange is different. It can also be argued that some of the business models referred to are simply instances of the mechanism of exchange, for example, e-auctions as distinct from fixed-price sales (e-shop). Auctions could potentially occur for the e-shop and third-party marketplace as well as e-auction.

### **Activity 2.3 Portal services and revenue models – the Yahoo! example**

Q. Visit the Yahoo! site relevant to your country (from [www.yahoo.com](http://www.yahoo.com)) and identify the range of services offered. Which are pure services, and which are basically providing information from other sources? You can update on the level of revenue from these services at the Yahoo! Investor Relations portal (<http://yahoo.client.shareholder.com>).

The answer is provided in Table 2.9 of the international site ([www.yahoo.com](http://www.yahoo.com)).

**Table .1 Range of services available from Yahoo!**

Name	Revenue source
Directory and search engine facilities	General and keyword related banner ads. Affiliate revenue from other sites for example, Amazon
Connect: e-mail, Chat, Messenger, mobile	Banner ads. Mainly added by acquisition
Media: News, general and specific for example, sports, finance	Banner ads, sponsorship. Provided by partners
Personal tools – address book, calendar, tasks, links	Banner ads. Mainly added by acquisition
Shopping for cars, property and jobs	Commission on sales, banner adverts
Auctions	Commission on sales, revenue generator
Classifieds	Free apart from banner ads

### **Activity 2.4 Revenue models at e-business portals**

1. Summarize the revenue models which are used for each site by looking at the information for advertisers and affiliates.

**Econsultancy** ([www.econsultancy.com](http://www.econsultancy.com))

- Online revenue models include annual subscription and pay per view access to articles. The site has limited advertising on a fixed monthly term basis.
- Traditional revenue models include training courses and conferences related to e-business.

**Marketing Sherpa** ([www.marketingsherpa.com](http://www.marketingsherpa.com))

- This mainly offers a pay per view model for articles and reports. Surprisingly, it has limited advertising, so as not to annoy site visitors. Some of its reports are syndicated from other online sources, so this is a commission-based model.
2. *What are the advantages and disadvantages of the different revenue models for the site audience and the site owner?*

This answer can be broken down by the different revenue models as shown in the table given below. Given the advantages and disadvantages of each, it makes sense to have several models to maximize monetization of site visitors.

Revenue model	Advantage	Disadvantage
Online subscription	Continuous revenue stream	Difficult to get visitors to commit to an ongoing agreement
Pay per view	Instant fulfilment likely to appeal if article or reports meets someone's immediate need. Reports are often more specialized and more immediate than books.	Difficult to provide sufficiently compelling unique content that is not already freely available on the web.
Advertising	Relatively easy to setup, particularly if an established programme like Google AdSense where no advertisers have to be recruited.	Advertisers have to be recruited and payments managed. If this fails, then online ad inventory may be unsold and so wasted.
Affiliate	Individual transactions can be significant value.	Difficult to recruit affiliates and work best with high volume consumer markets rather than business markets. Revenue only generated if sale is made. A cost per click arrangement is better for publisher.

3. *Given an equivalent audience, which of these sites do you think would generate the most revenue? You could develop a simple spreadsheet model based on the following figures:*
- *Monthly site visitors:* 100,000, 0.5 per cent of these visitors clickthrough to affiliate sites where 2 per cent go on to buy business reports or services at an average order value of €100;
  - *Monthly page views:* 1,000,000, average of three ads displayed for different advertisers at €20 CPM (we are assuming all ad inventory is sold, which is rarely true in reality);
  - *Subscribers to weekly newsletter:* 50,000. Each newsletter broadcast four times per month has four advertisers each paying at a rate of €10 CPM.

A commission percentage is required to calculate this. Assume 25 per cent of average order value.

You can also download the spreadsheet of Figure 2.16 from [www.davechaffey.com/Spreadsheets](http://www.davechaffey.com/Spreadsheets).

**Calculation:**

Visitors	Clickthrough rate	Affiliate site visits	Conversion rate	Sales	Average order value (Euros)	Revenue at 25% commission
100,000	0.50%	500	2%	10	100	250

- *Monthly page views*: 1,000,000, average of three ads for displayed for different advertisers at €20 CPM (we are assuming all ad inventory is sold, this is rarely true in reality)

**Calculation:**

Monthly page views	Ad units per page	Inventory sold	Total ads served	Cost per 1000 (Euros)	Total revenue
1,000,000	3	100%	3,000,000	20	60,000

You can see that this model is more appealing for the publisher in terms of revenue earned.

- *Subscribers to weekly newsletter*: 50,000. Each newsletter broadcast four times per month has four advertisers each paying at a rate of €10 CPM.

Newsletter subscribers	Newsletters per month	Advertisers	Inventory sold	Total ads served	Cost per 1000 (Euros)	Total revenue
50,000	3	4	100%	600,000	10	6000

## Exercises

### Self-assessment questions

1. *Outline the main options for trading between businesses and consumers.*

These are:

- B2C – retail to consumers
- B2B – interorganizational

- C2C – consumer interactions for example, auctions
- C2B – customer make offers to businesses, for example, Priceline
- 2. *Explain the concept of disintermediation and reintermediation with reference to a particular industry; what are the implications for a company operating in this industry?*

Example air travel. A carrier has the option of:

- disintermediation – selling direct from its web site
  - reintermediation – selling via new online intermediaries with new pricing models such as Priceline, Lastminute or Expedia
3. *Describe the three main alternative locations for trading within the electronic marketplace.*
- From company's own web site
  - From an intermediary web site or marketplace
  - By making bids after reviewing customers' web sites
4. *What are the main types of commercial transactions that can occur through the Internet or in traditional commerce?*

See Table 2.4:

Commercial (trading) mechanism

1. Negotiated deal
  2. Brokered deal
  3. Auction
  4. Fixed-price sale
  5. Pure markets
  6. Barter
5. *E-business involves re-evaluating value-chain activities. What types of changes can be introduced to the value chain through e-business?*
- Improve speed of information flow between primary activities of value chain
  - Increase depth of information shared between activities
  - Reduce costs of information processing

Dave Chaffey, *E-Business and E-Commerce Management*, 4<sup>th</sup> Edition, Instructor's Manual

6. *List the different business models identified by Timmers (1999).*

Timmers (1999) identifies no less than 11 different types of business models that can be facilitated by the web as follows:

1. E-shop – marketing of a company or shop via web.
2. E-procurement – electronic tendering and procurement of goods and services.
3. E-malls – a collection of e-shops such as Barclays Square ([www.barclays-square.com](http://www.barclays-square.com)).
4. E-auctions – these can be both for B2C and B2B as is the case with eBay.
5. Virtual communities – these can be B2C communities such as Xoom ([www.xoom.com](http://www.xoom.com)) or B2B communities such as Vertical Net ([www.vertical.net](http://www.vertical.net)); these are important for their potential in e-marketing and are described in the Focus on Online Communities section in Chapter 9.
6. Collaboration platforms – these enable collaboration between businesses or individuals for example, E-groups ([www.egroups.com](http://www.egroups.com)), now part of Yahoo! ([www.yahoo.com](http://www.yahoo.com)) services.
7. Third-party marketplaces – Marketplaces are described in the Focus On section of Chapter 7.
8. Value-chain integrators – offer a range of services across the value chain.
9. Value-chain service providers – specialize in providing functions for a specific part of the value chain such as the logistics company UPS ([www.ups.com](http://www.ups.com)).
10. Information brokerage – providing information for consumers and businesses, often to assist in making the buying decision or for business operations or leisure.
11. Trust and other services – examples of trust services include Which Web Trader ([www.which.net/webtrader](http://www.which.net/webtrader)) or TRUSTE ([www.truste.org](http://www.truste.org)) that authenticate the quality of service provided by companies trading on the web.

Timmers, P. (1999) *Electronic commerce strategies and models for business-to-business trading* John Wiley series in information systems. Chichester, England.

See Fig 2.13 (alternative perspectives on business models) and Table 2.5.

7. *Describe some alternative revenue models for a web site from a magazine publisher.*

See Fig 2.13 (alternative perspectives on business models).

Subscription: per-month payment

Pay per view: pay for each article, or articles up to a value

Advertising revenue – for advertising space on site

Affiliate revenue – for referral to other sites leading to sale

8. *Draw a diagram summarizing the different types of online marketplace.*

Refer to Figure 2.9.