# Avoiding the fate of the dotbombs: lessons from three surviving dotcom start-ups

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**Keywords**

Small to medium-sized enterprises, Internet, Electronic commerce, Communication, Technology led strategy

**Abstract**

This paper reports on research that investigates how three start-up dotcoms, founded at the height of the Internet boom avoided joining the many dotbombs of the subsequent crash of the Internet economy. The paper describes how the companies made use of Internet-based information and communication technologies (ICTs) in their business operations. It draws lessons from their experiences that might be applied more generally to other dotcom start-ups. These centre on the need to use the technology to manage business processes to meet the clearly definable needs of a targeted niche of customers. The desirability of suitable in-house ICT expertise is stressed.

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## Managerial and policy implications

- Small business dotcom start-ups should identify a distinctive market niche of customers with clearly definable needs that they can serve.
- To achieve a competitive advantage a small e-business needs to use Internet-based ICTs to manage its business processes in such a way that will enable it to meet the needs of customers in a targeted market niche.
- Small e-businesses need to be aware of the learning opportunities available from their on-line business practice and be prepared to experiment and change in response to lessons learnt.
- Even if a small business outsources its ICT (which may well be desirable or unavoidable), it is essential to have access to enough in-house expertise to facilitate appropriate initial technology choices and the on-going management and development of the technology.
- Like traditional start-ups, dotcoms seem likely to experience difficulties in dealing with suppliers and bankers. Similarly, like traditional start-ups, dotcoms would benefit from access to adequate funds and the backing of a large and sophisticated managerial team and advisers.

## Introduction

In the late 1990s, the growth opportunities on offer to businesses that could capitalise on the use of Internet seemed clear. The use of the Internet-based ICTs (information and communication technologies) for business is generally referred to as e-commerce, but other terms such as e-business, Internet commerce and web commerce are also often used (Holsapple and Singh, 2000). E-commerce should not be thought of as just the buying and selling of goods and services via the Internet but more broadly as "the sharing of business information, maintaining business relationships, and conducting business transactions by means of Internet-based technology" (Poon and Swatman, 1999, p. 9). As the millennium drew to a close, many people seemed to believe that commercial success could be guaranteed simply by incorporating e-commerce into a firm's operations. Consequently, many entrepreneurs were attracted to set up new businesses based on the use of e-commerce. Thus, the worlds of e-business and SMEs (small and medium sized enterprises) became intertwined as the ranks of more traditional business start-ups were swelled by the addition of innumerable dotcoms. Despite the

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initial hopes for, and expectations of these new businesses, many dotcoms found initial trading just as difficult as more conventional start-ups. Some were able to secure funds for initial capital investment and working capital to cover early trading from buoyant stock markets. However, in many cases this left them vulnerable as stock prices fell sharply, especially in technology related businesses. High profile failures such as Boo.com (clothing) and Clickmango.com (beauty products) were amongst the many casualties of the shake-out in the e-commerce sector that started in mid-2000. Figures on the extent of dotcom failures are hard to come by. However, *Fortune* magazine noted 135 bankruptcies amongst US-quoted e-commerce companies in 2000 (Lovelock, 2001). By 2002 the worse seemed to be over, with Internet stocks like Lastminute.com and Ebookers being amongst the best stock market performers (Beard, 2002). Many lower profile dotcoms have also survived the bursting of the dotcom bubble. Apart from rare cases of immediate success and rapid growth such as Amazon.com, it is clear that the overwhelming majority of surviving dotcom start-ups are, and will remain SMEs. It seems likely that there may be much to learn from the study of dotcoms that have managed to avoid the fate that befell so many "dotbombs".

This paper reports on research that investigates how three start-up dotcoms made use of Internet-based ICTs in their business operations. A case study methodology is used to examine how the three companies, operating in quite different markets, have survived the worst ravages that have affected the e-commerce sector. The paper opens by discussing relevant literature that examines the role and importance of SMEs in the Internet economy, the opportunities for SMEs offered by use of Internet, and the challenges posed to fledgling e-businesses. The paper proceeds to describe the start-up and early lives of three dotcom SMEs founded at the height of the Internet boom at the turn of the millennium. The survival of these businesses during the well-publicised difficulties experienced within the Internet economy in the subsequent two years is considered, focusing on the management of business operations. The paper closes by considering what more general lessons might be drawn for start up dotcom SMEs from the findings from the cases.

## Background

The rise in the use of the Internet, since it first emerged as a commercial technology in the mid-1990s, has been little short of spectacular. Internet usage, already at around 350 million users worldwide in 2000 (eMarketer, 2001a), had grown to around 730 million by March 2004 and was forecast to rise to 940 million by year end (Global Reach, 2004a), with over 220 million European users (eMarketer, 2001b). Forrester Research predicts that by 2004, e-commerce including business-to-business and business-to-consumer transactions will be worth over $6.8 trillion, with North America having 50.9 per cent, Asia/Pacific 24.3 per cent and Europe 22.6 per cent of world revenues (Global Reach, 2004b). Latest UK figures show on-line sales in the non-financial sector at £18.4 billion for 2001 (Office for National Statistics, 2002). However, it is important to put e-commerce transactions into context as they typically account for between only 0.3 per cent and 2 per cent of total sales in most advanced countries (OECD, 2002).

By their very nature, most dotcom start-ups can be categorised as small businesses. The SME sector is vitally important to most advanced economies. For example in the UK, small firms (with less than 50 employees) account for 99 per cent of all companies, 43 per cent of non-government employment, and 31 per cent of sales (Small Business Service, 2002). Despite its importance as a sector, many aspects of the SME experience are often under-researched. The impact of e-commerce seems to fall into this is category. Martin and Matlay (2001, p. 401) bemoan "an obvious lack of empirically rigorous data and focused research on this topic … The noticeable paucity of relevant literature is particularly frustrating".

Hsieh and Lin (1998) point to the theoretical benefits for SMEs offered by use of Internet. These include the ability to compete on equal terms much larger rivals, lower operating costs, the capability of offering promotional information and customer service, and the opportunity to establish effective inter-business collaborations. However, it is by no means clear that SMEs are enthusiastic about adopting Internet-based technologies. Analysis of official UK statistics indicates that small businesses are much less likely to be active users of e-commerce (Clayton and Criscuolo, 2002). A survey by Quayle (2000) indicated that e-commerce is not considered to be important by many UK SMEs, with only a third of respondents trading electronically. However, those that are, perceive the benefits to include "benefits to their own organisation, better customer service, attaining a competitive advantage and improved accountability" (Quayle, 2000, p. 1155). In another UK-based survey, Daniel and Grimshaw (2002) also reported that SME users of e-commerce believed that they had achieved great benefits from its use. They found that smaller SMEs were more likely to use e-commerce for responding to competitors, providing enhanced customer services and improving relations with suppliers compared to larger businesses who tended to use e-commerce to improve operational efficiency.

There is some empirically based research pointing to the benefits available from e-commerce for SMEs, for example Poon's (2000) survey of Australian SMEs. Chaston *et al.* (2002) in a survey of small accountancy firms in the UK found that those who were exploiting the Internet had a more proactive approach to the provision of services. Hence they could gain a competitive advantage by enhancing their service provision and could expect to achieve a higher sales growth rate. Many authors point to the ability of the Internet to facilitate access to wider, even global markets (e.g. Tetteh and Burn, 2001; Tiessen *et al.*, 2001). Poon and Joseph (2000) argue that e-commerce can offer benefits to all SMEs irrespective of their product offering. In a survey of Australian SMEs, they found no evidence to support the commonly held view that the Internet is more suited to trade in services rather than physical goods.

What then are the important issues that SMEs need to consider when adopting e-commerce? In their study of fast growth e-commerce SMEs, Feindt *et al.* (2002) identify four critical success factors for e-commerce start-ups over and above those required in any start-up venture. These are the content of the website and its convenience (i.e. the ease of use), the control the company can exercise over its e-business processes, and the quality of the interaction between the company and its customer (before, during and after the sales transaction). Jeffcoate *et al.* (2000) point to the need to use e-commerce to improve business processes, to integrate IT systems and to develop business partnerships. Caskey *et al.* (2001, p. 549) emphasise that "some of the main issues for [SMEs] wishing to implement e-business ... are not primarily technology orientated ... The key issue is the change of culture that must take place in order to use information which is released by the technology". Poon (2000) also highlights the successful use of e-commerce in SMEs is linked to a company's ability to make use of ICT to gain a competitive advantage. Poon and Swatman (1997, p. 400) offer "evidence that the most crucial issues affecting on-going Internet use within small businesses are management commitment and perceived benefits". These factors can arguably be condensed into three inter-relating factors (Barnes *et al.*, 2002):

(1) the business processes operating within the company and with its supply chain partners and customers;
(2) the supporting information systems (based on the use of Internet-based ICTs);
(3) the business context, including the company's culture and its approach to the management of e-commerce.

In short, the key issue seems to be the way that the company makes use of the technology to manage its business processes in order to achieve a competitive advantage.

## Research method

The research uses a qualitative case study methodology based on interviews with company executives. This approach is entirely suitable for research that investigates "a contemporary phenomenon within some real-life context" (Yin, 1994). Furthermore as Meredith *et al.* (1989) point out "this approach is particularly good for ... descriptive or exploratory ... research. It has the advantage that the issues are framed by the participants", which enables this type of in-depth case study research to offer meaningful insights. Its concentration on the depth and quality of data makes the case study potentially very strong in terms of both construct and internal validity. However, it is often criticised for lacking in external validity due to the limited number of sites that can be studied. Quantitative research can use statistical inference to generalise from a sample to a larger population. However, qualitative research relies on logical inference whereby "case studies are generalisable to theoretical propositions and not populations" (Yin, 1994). The three companies studied were from amongst contacts that the researchers had made during a larger research project investigating the impact of the adoption of e-commerce on the internal business processes in a wide range of UK organisations. They were to some degree self-selected due to their willingness to participate in the study. All three companies fall into most categorisations of small businesses, the largest having 25 employees. Two might arguably be classified as micro-enterprises, as they have less than 10 employees. Nonetheless, it is difficult to characterise them as in any way "typical" of the small business sector, which as Martin and Matlay (2001) point out, is inherently diverse rather than homogeneous, especially in its adoption of ICT.

Data collection was undertaken via semi-structured interviews with company executives. Open-ended questioning was used in the initial interviews based on the application of the framework developed by Barnes *et al.* (2002) for investigating the impact of e-commerce on the management of internal business processes. This ensured that information was sought about the business processes and the information systems

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operating within the company and with its supply chain partners and customers, and the business context within which e-commerce activities are taking place. With the permission of the subjects, all interviews were tape-recorded for subsequent transcription to facilitate data analysis. Initial face-to-face interviews were conducted in late 2001; about 12-18 months after the businesses were started. The progress of the companies over the subsequent 12 months was charted via personal and email contacts. Data from the transcribed interviews was coded and analysed using Atlas.ti qualitative data analysis software. This is very similar to NUD-IST software. Once coded, the principal approach to data analysis was to identify the main points and themes emerging from each interview. These were identified and articulated in a descriptive narrative under a set of broad topic headings. Cross case analysis was undertaken as a final stage to "deepen understanding and explanation" (Miles and Huberman, 1994).

## The cases

This section considers each company in turn. The companies have been given pseudonyms and some case information has been masked to maintain company confidentiality. Some details of the companies are presented in Table I.

### Clothing.com

Clothing.com was started by a farmer's wife, who was seeking to take the family's business away from its reliance on the hard-pressed agricultural sector. The company sells specialist clothing mainly to older consumers, as well as those who may have difficulty finding what they require elsewhere. Located in a remote rural area, Clothing.com was originally conceived as a mail order business in 1999 but quickly determined to offer its products online. The company continues to produce a printed catalogue, running the supporting business processes alongside its online operations. It is happy for customers to order online, by telephone or by post. Placing its product catalogue on a website has enabled the company to dramatically reduce the number of printed catalogues it needs. Clothing.com aims to offer a highly personalised service, guiding the customers in the direction of product that is likely to be of interest to them and meet their needs. It offers a telephone advice service and uses various web and e-mail marketing initiatives to steer customers towards products most likely to be of interest. It believes that it has identified a small but significant gap in the market for its products that are not being catered for by existing high street retailers. It believes that the Internet can be an effective sales channel to meet this need.

Setting up the company was not trouble free. On top of the usual start-up problems, there was difficulty in raising capital from local bankers, who seem still to have very conservative ideas about the viability of a small e-business venture of this type. The company's suppliers are similarly conservative in their business dealings. Some continue to limit the availability Clothing.com's credit, whilst others are not interested in doing business with a small company. Operating as it does from some of the farm's building, Clothing.com's working capital requirements have been modest, but these have certainly been cross-subsidised from agricultural activities.

Since going online the company has experienced a significant increase in sales. As a result it has had to expand its physical premises, in particular, its stockholding area which was not large enough. Although one advantage of the Internet is that it is easier to keep track of stock that does not have to be on display, tidied and re-sorted at the end of each business day. Automated processes have been implemented to cope with the volume of sales. This was not trouble-free and technology remains a key concern for the company. During the start-up phase getting the right software and hardware was very much an issue and the company did not feel that its requirements were being taken seriously. It remains reliant on technical intermediaries, outsourcing its website design and computer maintenance operations. It feels that some of the advice it received on hardware and software was not always the best. As a result, its information systems cannot always handle information processing in the way the company would like. For example, when orders are received they have to be re-keyed into the company's main system. They would like a much more integrated system. The company is also keenly aware that without suitably qualified staff, it may not be able to implement

**Table I** Some details of the three cases companies

| | Clothing.com | Financial-manager.com | Legal.com |
|---|---|---|---|
| **Products/services** | Specialist clothing | Financial management | Legal services |
| **Location** | Rural England | S.E. England | Central London |
| **Full-time employees** | 5 | 5 | 25 |
| **Year of foundation** | 1999 | 2000 | 2000 |

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technology as effectively or as rapidly as it would like, and finding enough technically qualified staff in a rural location remains difficult.

The main impact of the dotcom fallout on the business was its bank's withdrawal of support, with the result that new bankers had to be found. This was not difficult. The company also feels that the online environment makes it easier to keep track of its dealings with customers and it aims to respond to every e-mail it receives. The company does feel that online customers are more demanding, and expect to receive their order the next day, although those who have very specific or exacting requirements are generally prepared to wait. The company finds that some customers are nervous about ordering and paying online, and that these customers require reassurance. To try to combat this the company has decided to try to establish a stronger brand name for itself through marketing efforts.

The company has no Internet links with its suppliers, as they will only accept faxed or telephoned orders. The company's suppliers are unwilling to implement web-based ordering systems. The absence of web-based communications also makes it impossible for Clothing.com to check suppliers' stock positions quickly and accurately. This has proved problematic as sometimes suppliers have not delivered as promised. Clothing.com's suppliers deliver to the premises, whilst the company uses a specialist carrier offering a daily collection service to deliver to its customers.

Clothing.com would like to improve its own technological capability. Although it has upgraded its systems, it would like to achieve greater internal integration of the information processes that support the order, payment and delivery operations, but at present is not able to do this. For example the system for dealing with online orders cannot, in its present form, be integrated with the telephone ordering system – such orders have to be re-keyed. This is a legacy of the bad computer advice it received at start-up. Clothing.com is anxious to make use of customer information to better market its products, target customers and to gain information about customer purchase habits. However, there are constraints. Like many small businesses, it has limited resources to spend on new systems and software. Improving its website to ensure that customers will choose it in preference to others remains a key issue for the company.

**Financial-manager.com**

Financial-manager.com was set up in 2000 at the height of the dotcom boom by an experienced "big five" accountant. The company provides an online financial management service to SMEs who want to outsource their finance function. In essence Financial-manager.com provides the expertise of a financial director. The basis of the service is that companies submit their data online and have around-the-clock access to their accounts. Clients key in financial data (e.g. accounts payable and receivable), which is then transferred to a secure site. Financial-manager.com can then access this data to produce reports and accounts and return these to the client via the secure site.

The company believes that the market for financial outsourcing is very polarised. The market for large businesses is well established but the SME market is under-developed. Financial-manager.com was developed to offer a way of addressing that market. Although it does not do auditing itself, Financial-manager.com produces everything required for a company audit. It can also provide credit control where clients require this facility. The company also provides some financial consultancy services.

The original motivation in setting up the company was to exploit the benefits of Internet based ICTs within a highly informationalised environment of finance and accounts. The idea was to offer a completely online service and the original business model was predicated on the assumption that clients would be equally enthusiastic about, and have the necessary capabilities to be able to use the Internet. Many of the companies that Financial-manager.com does business with tend to be technology companies (telecoms, software companies), which are themselves actively involved in using the Internet. For companies that do not have fully computer-based accounting systems, Financial-manager.com can offer an online, subscription accounting package. Where clients already have accounting software (e.g. Sage) Financial-manager.com does not require them to use its own online package, but adapts its own system to enable it to work with the existing package. However, this can sometimes lead to a dilemma, as Financial-manager.com must determine whether or not to update their own systems to something that some clients do not need.

One of the main issues at start-up was that the company now had to perform IT services for itself where previously it might have called on an IT specialist. It felt exposed by not having someone in the team with a good understanding of technology. The company had problems with suppliers who were reluctant to deal with a start-up small businesses. Another issue was finding suppliers who, while willing, may not themselves have been able to provide online services.

Since start-up, the company has had to adjust its business model, partly in response to post-crash skepticism about dotcoms, but more specifically because it found some prospective clients very

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wary of supplying accounting information online, and/or lacking the necessary technology and software to support online processes. Financial-manager.com found itself trying to develop and grow what was a new market, one that was not entirely ready for a 100 per cent online business model. Thus, continuing to offer an exclusively online model was not viable and the company temporarily stepped back from its pure dotcom aspirations to provide more traditionally delivered services. Yet, gradually over time, the company has built up a client base who have learnt to trust the technology and are now realizing the benefits of Financial-manager.com's online service. Financial-manager.com has had to learn to be flexible to accommodate clients with as much, or as little, online delivery as they wanted. Some of its clients remain unwilling, or unable, to use a fully online accounting. Consequently, Financial-manager.com has become a "clicks and mortar" company providing a mix of traditional and Internet-based services. As well as overcoming resistance to online relationships, Financial-manager.com has also had to persuade SMEs of the benefits of outsourcing their finance function. This has proved to be a slow process. However, there are benefits for Financial-manager.com where it has face-to-face dealings with its clients, as this can often lead to more financial consultancy work.

One of the principal issues that Financial-manager.com continues to grapple with is that of a finding an accounting software package to serve all of its and its clients' needs. The company is concerned about committing itself to a package that will rapidly become obsolete. It is having difficulty in getting software suppliers to take adequate account of its needs. In the future, the company would like to develop an online solution that can be used with much larger clients. At the moment it feels that the accounting package it provides is adequate for SMEs, but not for larger clients. Additionally, external integration is often dependent on the extent to which clients' banks support online methods. The issue is not one of client confidentiality, but rather, of the necessary software and technology platform to accomplish the business processes between Financial-manager.com, its clients and their bankers. Financial-manager.com makes extensive use of outsourcing (e.g. payroll, pensions, taxation, website development) both in an effort to keep its cost-base flexible and to live the philosophy of outsourcing. The company occupies a serviced office, its third office in less than a year because of its growth. This also keeps fixed costs to a minimum while retaining flexibility. The way forward now appears to lie both in finding the right technological solution, and making the investment commitment to that solution.

### Legal.com

Legal.com was founded in 2000 at the height of the Internet boom by a group of London based lawyers who saw that there were ways in which legal services, which are all essentially informational in character, could be very compatible with a dotcom business model. They were able to secure substantial financial backing for the start-up from some high profile individuals from the legal and banking professions. There are about 25 employees, mostly lawyers, based at one site in Central London.

Legal.com acts an umbrella for a number of web-based businesses that provide access to both online and off-line legal advice. The website enables clients, whether individuals or companies to access a range of free, low and fixed cost legal services. It also acts as a conduit to other face-to-face legal service providers.

Although the company was founded with the aim of making money (all of the directors are substantial shareholders), the company's longer-term aim is to reshape the legal industry, making the law more accessible and offering better value for money. The company saw its target market as the many people who are worried or anxious about the law or who need advice during non-working hours. For them the web has the advantage of initially offering relative anonymity, before connecting on a face-to-face basis with legal service providers. In establishing set fees for legal services, Legal.com also believes that it is helping to create a new model for which a market has long existed. Many people are also fearful about the costs of legal services, and the Legal.com model has been designed both to work with, and to allay these fears.

Legal.com sees its website primarily as a marketing vehicle. It may have been possible to establish its business model without the Internet, but much more difficult. They were able to use the publicity that their dotcom legal model generated to gain customers and to build a high profile for their company. The main operational advantage of the dotcom model is that legal documents can be delivered electronically.

Legal.com's website is linked to a number of other websites. One posts free basic legal information. One enables customers to buy legal services and advice at fixed prices. Another is the company's B2B site, which operates in the settlement of personal injury claims. Another offers annual subscriptions to a legal advice service and insurance cover for any legal problems that may arise during the period. It also offers fixed-price packages services such as conveyancing and will writing. Another provides legal advice and documents services to small businesses.

Legal.com contracts block purchases of legal services from a range of providers. It packages legal services into bundles of off-the-shelf standardised products. The company block purchases such commodities as will writing, conveyancing and divorce processing from lawyers around the country. These packages might also contain an element of legal expenses insurance. Legal.com's main role is to check the reliability and quality of its suppliers so that its clients can purchase with confidence. Bulk purchasing also means that prices can be kept low. All of the bought-in services are provided in the traditional way of face-to-face contact. The website establishes the initial customer contact which paves the way for the subsequent sustained individual contact. However, not all customer contact is via the websites, as customers can also call in at Legal.com's offices, and phone calls are directed to a help desk operated within its offices.

The company says that it has very good technical staff and has not experienced any significant problems of functionality. As a start-up company, they were able to set up created bespoke systems and technology for the company thereby avoiding integration problems between old and new internal systems, and with external systems. Most of the company's systems have been developed as proprietary software and Legal.com owns the intellectual property rights to them.

The company has been modifying its operations since the day it started, seeing the dotcom model as a learning process. In this vein it has been able to extend its fixed-price packages to cover some litigation cases, for example repossession of a landlord's property and defending a motoring prosecution. At one stage the website generated revenue through links to a law firm directory where customers could be referred on the basis of the service required and their geographic proximity to a suitable lawyer. This has subsequently been withdrawn. The company has also developed new services covering aspects of consumer, family, employment, motoring, housing and personal injury law.

The company acknowledges that it could improve its internal efficiency, as it is not yet operating at full capacity. Also some internal processes could be made more efficient. Its approach is to tackle these on a quasi-experimental basis, to establish what might work best. The company feels that there may be issues as it moves from being a young and flexible start-up, to a more established company, where there may be conflicts between people, procedures and systems. As such it feels that it is important to remain open to possibilities for redefining and developing its processes, and to be receptive to new ideas.

## Cross-case analysis and discussion

The focus of this research is the use of technology in the management of business operations. As such, the findings from each case can be compared with respect to how technology is used to manage the business processes between the company and its customers, the company and its suppliers, and internally within the company, taking due regard of their respective business contexts.

### The company and its customers

In each case, the company has identified a niche market of clearly identified customers that it believes it is well placed to service using e-commerce. In each case the company has recognised the need to personalise and tailor its service as much as possible in order to meet the individual needs of its customers. Each company believes it can use Internet-based ICTs to do this, and has designed its business processes to make appropriate use of the technology. Each company has had to address customer concerns about use of the e-commerce. These concerns seem to centre on the issue of trust, which interestingly pervades both the business markets of Financial-manager.com and the consumer markets of Clothing.com and Legal.com. To address these concerns, Financial-manager.com has had to abandon its original concept of an entirely on-line operation, and join Clothing.com and Legal.com in offering a multi-channel service to customers. It is possible to speculate that the ability to offer customers the means of communicating via non-electronic means increases their confidence in dealing with a virtual company. All three companies have had to exhibit some degree of flexibility and be prepared to change in response to customer demands and concerns. In addition to Financial-manager.com's move away from an entirely on-line model, both Clothing.com and Legal.com have experimented with their respective product and service offerings. It seems clear that as yet there is no single recipe for on-line success and dotcom entrepreneurs need to be aware of the need to learn from practice.

### The company and its suppliers

Both Clothing.com and Financial-manager.com experienced problems of securing trade credit from suppliers that are common to many business start-ups. It is not immediately clear why Legal.com seemed to avoid such problems. It may be that its bulk purchasing model made it a more

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attractive purchaser to what are likely to have been quite small legal practices who constitute its suppliers. Clothing.com and Financial-manager.com were more likely to be dealing with much larger suppliers for whom their business would represent only small income. Clothing.com and Financial-manager.com both experienced problems with suppliers' inability to trade on-line. If their suppliers were large businesses, this was surprising. The fact that Legal.com did not report such problems seems more likely to be due to the fact that there was no real need for on-line capability rather than an indication of a high degree of ICT sophistication in the legal profession.

**Internal**

All three companies have tried to automate their internal processes as much as possible using ICT. This was also accompanied by strategies of outsourcing as much of the non-core activities as possible. Both approaches seem entirely sensible and not uncommon in small start-up ventures. However, an interesting difference emerges with regard to the approach to the management of ICT within the companies. Neither Clothing.com nor Financial-manager.com had significant in-house ICT expertise and instead relied extensively on sub-contract support. Both these companies complained about the inadequacy of their ICT, particularly the problems caused by the shortcomings of their software. This had created integration problems internally which, in the case of Financial-manager.com also impacted on external integration with the information systems of their clients and their banks. Clothing.com felt particularly badly let down by the advice they had received from ICT suppliers when setting up the business. Both companies spoke of the problems caused by not having at least one ICT expert and of the difficulty of recruiting suitably qualified staff. Legal.com seem to suffer from none of these problems. Although they did make extensive external ICT sub-contractors, they seemed to have considerable in-house expertise. This had enabled them to set up bespoke systems using their own proprietary software which had been designed to overcome any integration problems internally and externally. It seems clear that the presence of this expertise put the company in a much better position making ICT purchasing decisions and in the on-going management and development of its systems, and particularly in its dealings with its software designers than was the case for the other two case companies. It is possible to speculate that this capability is linked to the high level of financial backing enjoyed by Legal.com and in the sophistication of its founding entrepreneurial team was which much larger than that of the other two companies. Although Financial-manager.com had an experienced and well qualified accountant as its head, it had restricted funding and a very small team. Clothing.com suffered from both a lack of funding and its founding team was very small and relatively unsophisticated.

## Conclusions

These three cases are all small business dotcoms, founded at the height of the dotcom boom, that have survived the bursting of the dotcom bubble when so many other similar ventures were failing. This section will summarise what factors join and what separates them and thence assess what more general lessons might be drawn from their experiences:

- All three companies have learnt how to use e-commerce to serve an identified market niche. They designed their customer facing business processes to make effective use of the technology to meet the particular needs of these customers.
- Online customers, whether business or consumer, have concerns about trust which must be addressed. It seems that offering multi-channel (telephone, post, face-to-face, etc.) interaction with customers may help with this.
- All three companies have had to exhibit some degree of flexibility and be prepared to vary their business model and practices in response to customer concerns and demands. As such they have been able to change their businesses in response to the lessons that they take from their continuing experiences of this relatively new form of business.
- All three companies made extensive use of outsourcing in order to concentrate on core business activities. Clothing.com and Financial-manager.com had little in-house ICT expertise and instead relied extensively on external support. This proved to be a weakness both in initial technology choices and on-going management and development. They also had difficulties in obtaining suitably ICT qualified staff. Legal.com, on the other hand, had considerable in-house ICT expertise and suffered none of these problems. Although they too relied heavily on external ICT expertise, it seemed that the presence of in-house expertise enabled the company to manage its technology much more effectively.
- In common with many traditional start-ups, Clothing.com and Financial-manager.com had problems securing credit from suppliers. Legal.com's bulk purchasing model from

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small suppliers may have helped overcome this problem.

- Legal.com had access to considerable start-up funds and the backing of a large and sophisticated team of managers and advisers. This seemed to help them avoid some of the problems experienced by Clothing.com and Financial-manager.com.

As discussed above, results from only three cases can be generalised only with extreme caution, especially into such a diverse sector as SMEs. However, it seems possible that these findings might be extended, even if somewhat speculatively, as lessons that might be applied to SME dotcom start-ups more generally. These lessons are summarised in the "Managerial and Policy Implications" section at the head of this paper.

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