

Full Report of Research Activities and Results

Background

This research project set out with two aims. The first aim was to investigate the discursive and material production of e-commerce within the music, fashion and retail financial services industries. In particular, the objective of the research was to investigate the emerging spatialities and temporalities of e-commerce within these industries. These three industries were chosen because they were sectors frequently cited as being particularly susceptible to Internet mediated reorganisation (for example, see Evans and Wurster, 1999). In addition, these were industries in which the research team already had expertise and considerable past research experience, making it easier to identify particular effects of e-commerce. The second aim was to investigate the formation of what we described as an 'e-commerce knowledge community' that sought to give theoretical, practical and rhetorical shape to e-commerce.

During the 1990s a set of favourable global macroeconomic conditions and a boom in stock market prices, particularly for the shares of high technology companies, had encouraged a number of commentators to herald the dawning of a new economic era. The claims for e-commerce varied, ranging from it being a herald of a 'new economy', to it bringing into being a 'weightless world' (Coyle, 1997) or a 'weightless economy' (Quah, 2000), or even that we were about to witness 'the death of distance' (Cairncross, 1997). The project was particularly interested in exploring the extent to which a broader set of literatures and discourses of this kind influenced the ways in which problems, questions and what is significant about e-commerce was identified. In so doing we were influenced by an emerging interest in 'virtualism', which argues that 'the economy is increasingly forced to change itself in order to match the descriptions of abstracted models that are produced by academic economists' (Miller, 2000, page 201).

Since 2000, and a collapse in the value of 'tech stocks', the macroeconomic conditions that has fostered the 'new economy' came to an end. However, just as during the boom there was tendency to exaggerate the economic implications of the Internet, after the crash there has been a similar tendency to dismiss its continued significance. Although much of the rhetoric surrounding e-commerce was often hyperbolic (Woolgar, 2002), many of its ideas and practices have proved to be highly influential but in mundane ways that it is very difficult to 'brand' as particularly novel or particularly earth-shattering. This is because most of these practices have proved to be logistical frameworks that, by their very definition, *should* sink into the background if they are working successfully. Moreover, as our research indicates, the most conducive environment for such ideas and practices to thrive is probably not the small, 'edgy' start-up, but rather the larger, and much more staid corporation. Indeed, we would argue that the effects of e-commerce will persist and become more pervasive precisely because they are, in many ways, becoming less remarkable within the contemporary business environment.

Objectives

Objective 1: To examine the process of 'virtualism' and the formation of a knowledge community responsible for the evolution and circulation of ideas and concepts underpinning electronic markets and e-commerce.

The first objective was successfully addressed through: the mapping of the e-commerce knowledge community, and the production of a database of key actors and institutions; interviews with actors within this community; interviews with actors in the fashion, music and financial services industries; ethnographic studies of e-commerce knowledge community event spaces (for example, the Plug-In Jupiter Media Metrix 'Future of Digital Music Forum', New York, July 2002; Software & Information Industry Association 'Brown Bag Lunch: Hiring and Salary Issues in the Information Industry', New York, March 2004; London Fashion Week, March 2004); ethnographic studies of the operations of three firms utilising e-commerce, and; the discursive analysis of texts identified to be influential in the construction of an e-commerce discourse (for example e-Envoy's Office, 2001, 2003; Performance Innovation Unit, 1999; OECD, 2002; US Department of Commerce, 1998).

Objective 2: To analyse the ways in which such ideas and concepts were translated into actual practices.

This objective was addressed through the above methods, but in particular through the in-depth studies of three firms within the music, fashion and retail financial services industries.

Objective 3: To produce an audit of business schools, consultants, management gurus, conference organisers, publishers, journalists and other actors within the cultural circuit of business so as to trace out the emerging e-commerce knowledge community.

This objective was addressed through a desk-based survey using Internet and directory sources. In producing this audit we quickly realised that the e-commerce knowledge community was much wider and more diffuse than we had originally anticipated. Therefore, in addition to those actors identified above we identified the following as being particularly significant in the constitution of e-commerce: metric institutions (that is, firms and institutions that have developed conventions of measurement and calculability that are intended to gauge e-commerce operations); regulatory and governmental institutions; Internet Service Providers (for example, Yahoo and Google, as well as information aggregator sites); specialist e-commerce 'solution providers' (including, the suppliers of hardware systems, software packages, systems and web designers). However, as e-commerce has become more ubiquitous and mundane so its boundaries have constantly shifted and moved, and there has been a significant turnover of its constituents.

Objective 4: To consider the take-up rate of ideas and concepts among managers within companies in three industries – the music, fashion and retail financial services industries – over time and space.

This objective was addressed through the range of methods outlined above, but in particular interviews with members of the e-commerce knowledge community, representatives of companies conducting business over the Internet in the music, fashion and financial services industries, and associated ethnographic work. Although in the proposal we indicated that we would explore this objective through interviews with CEOs and Senior Managers, in practice we soon recognised that knowledge about e-commerce was distributed unevenly within organisations, and as a result we identified appropriate actors depending on the organisational context. In addition, our original assumption was that we would focus upon the 'take-up' rate of e-commerce ideas. However, while it was sometimes the case that ideas were conceived externally and converted into practice locally, we also discovered that many ideas about e-commerce and associated practices were co-constructed within organisations and evolving from existing technological, organisational and sectoral conventions and routines. Our approach here was thus less about 'take-up' rates and more about the complex internal and often organic refinement of embryonic extant organisational practices.

Objective 5: To map and document the material impacts of e-commerce ideas through an examination of the emergence of new temporalities and spatialities in the reworking of industrial and organisational networks in three industries.

The fifth objective was addressed through the methods outlined above. Interviews conducted in London, New York, Boston, Los Angeles, San Francisco, San Diego and Paris were significant in this regard in at least two ways. First, in providing important insights into the ways in which influential ideas about strategy and technology associated with e-commerce are produced in particular places, ideas which may then travel over space. In particular, these interviews helped us identify the different geographical origins of many e-commerce ideas and practices. Second, the interviews enabled us to undertake comparative research that shed light upon the significance of context to understanding the evolution of e-commerce. For example, despite the claims rehearsed earlier that e-commerce would bring about a 'weightless world' or the 'death of distance', in the case of retail financial services at least it was clear that attempts to transcend traditional market barriers were strongly constrained by existing regulatory

and cultural differences. The observational and shadowing research enabled us to examine the evolving networks within the value chains of the three sectors and to explore the ways in which e-commerce is bringing about (or has the potential to engender) shifts in the ways and places in which fashion, money and music are designed, produced, reproduced and consumed.

Objective 6: To consider the ways in which e-commerce has forged new kinds of relations between companies and consumers and produced new kinds of corporate and consumer behaviour through the constant monitoring and feedback of consumers.

The sixth and final objective was addressed through qualitative research with key informants in firms, where we conducted interviews and longitudinal observational research. This included research across a number of nodes within the value chains of case study firms, including marketing managers and agencies, creative directors, contact centre managers, product designers and managers, PR agents, systems developers and suppliers, producers and consumers.

Methods

A range of methods were deployed in this study. They included the following:

(i) a discursive analysis of texts and a desk-based survey using Internet and directory sources to produce an audit of an e-commerce knowledge community; the audit was supplemented with information from interviews; (ii) over 100 qualitative interviews with key informants within the e-commerce knowledge community and firms within the music, fashion and retail financial services industries; interviews were taped recorded and transcribed, and the process of analysis and coding is partially completed; (iii) in-depth observational studies of organisations within each of the three sectors; this work involved the sustained shadowing of key individuals within three particularly innovative and/or emblematic e-commerce organisations in the music, fashion and retail financial services industries (we are unable to identify these companies here due to confidentiality agreements). This included observing the daily routines within the office and retail spaces, including the work of contact centre employees; sitting in on meetings between the case study firms and their suppliers, consultants, designers, architects; attending events and conferences with the companies involved, analysing reports, minutes of director's meetings, product design meetings and so on. This method we see as being particularly significant. The close, prolonged interaction enabled us to explore the routine and mundane practices of organisational life, rather than focus on the exciting or exotic accounts that so typically characterise one-off interviews. As the project evolved, we acknowledged the potency of this ethnographic approach, which not only enables us to contextualise encounters, events and understanding, but also critically engenders significant reflexivity about the research process and our own position within it. This observation of participation acknowledges that we as researchers are part of the action space we are studying, and enabled us to both experience and observe our own and other's co-participation. Self and other can thus occupy the same narrative frame, and the ways in which we entered into dialogic relations with the groups being studied has added a potent dimension to how we think about, and do, meaningful research within corporate environments; (iv) participant observation within e-commerce event spaces.

Results

Objective 1

A major outcome of the research has been to develop a critique of the concept of 'virtualism'. In its original sense, the concept refers to a very narrow part of abstract economic theory that has only a limited purchase on economic organisation. We have sought to modify the concept to incorporate a broader set of actors beyond academic economists, which includes what has previously been described as the cultural circuit of capital. Thus, in some instances, abstractions which can be partially traced back to the field of economics have had a powerful effect within the domain of e-commerce (such as first mover advantage, for example). But in other cases other less abstract models, such as analyses within the

banking sector about the differential cost of servicing customer transactions depending on the distribution channel, which identified Internet transactions as the most cost effective, have acted as powerful agents of organisational change. (See, in addition, the results under Objective 4, below).

Objective 2

Much of the rhetorical power of e-commerce, and in particular the claims that it was bringing into being a new era of economic organisation, with novel regimes of audit and adjudication (with the use of 'metrics' such as 'hits', 'page impressions', etc.), were deflated after April 2000. Following the collapse in dot.com shares, normal standards of cost recovery were re-imposed on business models that formerly seemed to be more concerned with buying market share. Thereafter, it became impossible to extract money from the stock market via 'liquidity events', which meant that the grounds upon which dot.com start-ups were seen to be successful became the same as for other companies; that is, to generate sufficient profit to cover the cost of investment, plus a surplus for redistribution to shareholders. However, other larger companies *are* still able to run their e-commerce operations at a loss, if they are prepared to cross subsidise what they anticipate will be an important distribution system in the near future. In turn, this had led to a recognition that assessing the success of e-commerce is purely in terms of cost recovery is short-sighted, and that it is now a normative expectation that successful companies of *all* kinds will have some element of web-enablement and e-commerce capacity. In short, e-commerce has become a core competency for all businesses, to a greater or lesser extent. This has implications for the way in which organisations judge the success or otherwise of their e-commerce operations. So, for instance, the study found that many companies were acutely aware that any assessment based solely on completed transactions was inadequate. To do so, would ignore the much larger number of incomplete transactions which may not have resulted in an purchase via e-commerce, but which was often part of the process by which a customer would purchase a product from the company via a more traditional distribution channel (such as a high-street shop, branch or over the telephone, for example). Moreover, the ways in which companies are able to judge the success or otherwise of their e-commerce activities has become more mainstream as, for example, companies involved in the measurement and assessment of audiences for media and advertising purposes have increasingly developed parallel tools for measuring and assessing web sites and their use (examples include companies like ABC Electronic and Nielsen Netratings).

Objective 3

The research provided evidence to support the broad hypothesis that a discernible e-commerce knowledge community (EKC) has emerged. However, in doing so it has also encouraged us to re-evaluate our initial assumptions regarding the makeup of the e-commerce knowledge community, role and nature of knowledge therein. In terms of the makeup of the e-commerce knowledge community, two key issues emerged.

First, and most significantly, the EKC is a more diverse and broader ecology of actors than initially hypothesised. Rather than representing a subset of the cultural circuit of capital (Thrift, 1997; 1999) as we originally supposed, management gurus, consultants, business schools, media and journalists represent just one particular group – albeit a significant group – of actors within a wider ECK. The range of actors and institutions involved in interpretative work around the idea of e-commerce and the new economy additionally incorporates: regulatory and governmental institutions; website designers; systems providers (hardware and software); Internet service providers and intermediaries; institutions involved in the development and legitimation of e-commerce metrics, and so on. Therefore, while the dot.com boom, which was integral to transforming e-commerce from idea to reality, owed much to the power of abstraction and to the circulation of certain forms of propositional knowledge, the practical translation of the Internet itself into a viable space within which it is possible to do business owes at least as much to the mobilisation of various forms of prescriptive knowledge. A good example here is the transformation of the padlock symbol, which appears on the tool bar at the bottom of the web page of commercial sites to signify a 'secure page', into a ubiquitous convention. Its appearance signals to

consumers an ability to trade in confidence in the knowledge that communications with the company are encrypted to prevent identity or credit fraud. But behind this symbol lies a series of extended economic, technological, and aesthetic debates (for example, debates about the level of encryption – 40 or 128 bit – which is deemed to be sufficiently secure; the role played by certification bodies like Verisign and the British Standards Institute (BSI) and, in particular, the BS7799 Information Security accreditation in such debates; the complications thrown up by the way in which different versions of browsers interpret and present the padlock symbol, etc.) which recognised the importance of consumers being able to quickly invest trust in a site to be prepared to give up credit or debit card details.

Second, the e-commerce knowledge community is more dynamic and fluid than was first anticipated, which means that its boundaries are constantly shifting. This is in part a temporal issue. In the early days of e-commerce, such a community would have been more easily demarcated. However, as e-commerce has become ubiquitous, mundane and, as a consequence, less remarkable, defining the boundary of this community is far more difficult. For example, the degree to which particular actors identify with e-commerce and the e-commerce knowledge community has spatial dimensions. Over the course of the research it became clear that the concept of e-commerce had lost much of its rhetorical power in the United States. We noticed among many of our informants an active reluctance to be associated with a movement that for some had lost its original veneer of novelty and excitement. This was despite the fact that these actors continued to be active users and disseminators of e-commerce ideas and practices.

Objective 4

Whilst evidence has emerged of ideas being taken-up by, and influencing the form of Internet-based operations such evidence sits uncomfortably with the theory of virtualism for at least two reasons. First, there are many different types of powerful mobiles (Latour 1987), some of which bear close resemblance to formal economic ideas and concepts (such as disintermediation and first-mover advantage: see French and Leyshon, 2004) whereas others bear very little resemblance to the sorts of abstractions prioritised in the theory of virtualism. One example of the latter is what we describe as ‘organisational refrains’; that is, stories of organisations taken up as exemplars of success or failure by the cultural circuit of capital. These stories are repeated so frequently within the wider e-commerce knowledge community that they become akin to refrains (cf. Deleuze and Guattari, 1988), that circulate widely at particular times and spaces. Such organisational refrains can be rhetorically powerful, and include examples such as Napster, in terms of the music industry, Wingspan, in the case of Internet-banking in the United States, and Boo.com, in the case of the fashion industry. Organisational refrains of this magnitude are such that the very mention of the name of the organisation signifies strong ideas on the right and wrong ways to do e-commerce. Second, in tracing the genealogy of such mobiles it is apparent that a much more diverse range of actors, beyond that of formal economists, are involved in the production, circulation and interpretation of mobiles. This is reflected in the need to move beyond the cultural circuit of capital and to include other more practical actors (see results for Objective 3 above). Moreover, even in the case of undoubtedly important concepts like first-mover advantage, causal links are much more complex and causality more distributed than the concept of virtualism would imply (see Leyshon et al. 2003).

The empirical research found that *knowledge* of a more mundane, practical and incremental nature was frequently more influential in shaping the way in which the business of e-commerce is carried out than were formal concepts and ideas. It is in this respect that the actors involved in the production, management, maintenance, and repair of websites form an equally important component of the e-commerce knowledge community as do those involved in the production, circulation and interpretation of abstractions and propositional knowledge. The study identified at least four factors that act in part to determine the relative importance of propositional as opposed to practical knowledge within different organisational settings.

First, the degree to which the kinds of formal management ideas, concepts and theories, that are presented and are circulated in journals, business books and consultancy reports feature in the fields-of-learning (French 2002) of the managers of Internet-based businesses is influenced by the size of the

organisation. The study found that the management of small and medium sized enterprises (SMEs) were generally much more focused upon the acquisition and application of various types of practical 'how to' knowledges than management school theories or consultancy study findings. Conversely, management within larger organisations were more likely to actively monitor and consume the business literature and the e-commerce strategies contained therein. This had implications for sectors studied. Thus, whereas a significant number of the fashion retailers and intermediaries doing business on the Internet can be described as SMEs, firms providing financial services via the Internet tend to be much larger companies. Thus, the consumption of propositional knowledge about e-commerce is much higher within the retail financial services industry than it is within the fashion industry. Second, e-commerce start-ups who benefited from venture capital funding were more likely than self-funded start-ups to monitor and mobilise propositional knowledge. This is perhaps unsurprising given the prominent role played by Venture Capitalists in the circulation, legitimisation and, in many cases, production of theories around the idea of e-commerce and the new economy. Third, the background and career biographies of organisational actors were also found to be a determining factor in shaping firm fields-of-learning. For instance, actors schooled in the cultural circuit of capital and, in particular, those that possessed MBAs or other formal management qualifications were more likely to be active consumers of the intellectual products of business schools and management consultancies. Fourth and finally, historical shifts in the wider macroeconomic climate represent an important determining factor in the take-up rate of abstractions, formal ideas and concepts in economies and within individual firms (Leyshon et al. 2003). The very favourable macroeconomic conditions of the late 1990s which, as we are easily able to see in retrospect, were in part the result of much easier lending conditions, particularly in the United States (Brenner, 2000; 2002), which provided corporations with the cash surpluses to underwrite experimentation. This included both technological experimentation as well as experimentation in the mobilisation and application of business ideas and theories. Similarly, the period since the crash of 2000 has not only been marked by a deflation in the stock market values of high-tech companies, but also by a deflation in the take-up rate and power of propositional knowledge. This intellectual deflation has been especially marked in the United States. In New York, for example, there has been no more telling symbol of the depth of this intellectual deflation than the disappearance of *The Silicon Alley Reporter* Magazine and, most recently, in December 2003 the winding up of the totemic *New York New Media Association*.

Objective 5

During the 1990s the established convention was that the practical realisation of e-commerce ideas was best achieved within new start-ups with venture capital. The model was for employees to leave established jobs, create a new organisation from scratch, and use the venture capital investment to create a brand new company that would be unencumbered by the legacies and handicaps of existing incumbents. These 'new model companies' would quickly scale to displace established organisations. In all but a very few cases (such as Amazon, for example), this model has not proved particularly durable, and there is evidence to suggest that firms that were unable to obtain venture capital funds and were forced to grow more slowly through self-financing have shown greater persistence. Rather, our research suggests that the most successful implementation of e-commerce as a distribution network has generally been undertaken within large organisations using internal labour markets. There are a number of reasons for this. First, consumers are more likely to trust an e-commerce service that has a link to an established corporate brand (this is particularly important in retail financial services). Second, rather than sunk costs being an impediment to the development of a successful business, as was often assumed in the 1990s, e-commerce divisions within large corporations can take advantage of the ability of the parent company to defray costs, and provide inputs of labour, capital and, critically, market knowledge. Thus, in the case of the implementation of e-commerce systems, the parable of the 'tortoise' and the 'hare' seems particularly appropriate. Furthermore, the importance of organisational 'anchorage' in understanding the relative success of e-commerce subsidiaries in comparison to stand alone dot.com start ups has also played an important role in shaping the geographies of e-commerce in the three industries. Rather than

leading to the emergence of specialist clusters, the evolution of e-commerce has tended to replicate the existing geographies of the three sectors. One notable exception here would be the music industry, where the challenge posed to the value chains by new technology applications – such as Napster, Emusic, iPod, etc. – has seen a notable shift of power to locations such as Los Angeles, San Francisco and San Diego.

In addition, there were clear differences in the extent to which e-commerce had transformed the organisation and value chains of the three sectors. In retail financial services, e-commerce has been relatively unproblematically absorbed by established firms as an additional distribution network. This was due to the long experience firms in the sector have had in successfully adopting technology and the problems new start-ups had in displacing incumbents due to the importance consumers place in matters of trust, reputation and brands when it comes to personal finances. In the fashion industry, meanwhile, e-commerce has had relatively little impact beyond specialist providers, due to the continued importance of co-presence and matters of fit, feel and direct interaction with the body in the act of clothes purchase. Within the music industry, however, e-commerce has had a radical effect by completely destabilising the industry's value chains. Internet piracy pioneered a model for e-commerce within the music industry via peer-to-peer networks which has acted as a tipping point for wider restructuring within the industry which has been extensive and wide-ranging.

Finally, the study was able to identify the particular geographical origins of many e-commerce ideas and practices that had significant effects of the trajectory of the three industries on both sides of the Atlantic. For example, in the case of the banking transaction cost model mentioned above, we were able to trace this now standard trope for comparing the relative costs of different distribution models in financial services to a small study carried out by a consultancy firm in the United States. This comparison, which highlighted the economic advantages of e-commerce, circulated so widely over the course of the 1990s that it was translated into an established fact that paid no regard to its particularistic origins. For example, it was cited unproblematically within a high profile government report designed to promote e-commerce within the UK, which gave no indication that it was derived from a report based on a study of the distinctive US banking system.

Objective 6

Our ethnographic and interview work revealed that e-commerce is impacting on the relations between consumers and firms in at least six ways:

(i) Consumer *knowledges* about commodities are broadening, deepening and accelerating. The proliferation of recommendation search engines ('if you liked this, you might like that'; 'other customers who bought X also bought Y', for example), the ability to customise and personalise searches and the increasing sophistication of shopping comparison services, are transforming consumer knowledges and offer the possibility of fundamentally challenging conventional modes of consumption. Consumers have much faster access to market knowledges and lower access costs to market intelligence. They are increasingly able to act as economic navigators through and across product markets, resulting in the emergence of new constellations of consumption dispositions and aesthetic knowledges.

(ii) Commodity value is being increasingly constructed relationally through recursive links between producers and consumers. Feedback is now possible between firms and consumers in real time, which enables (the possibility at least) of *co-production*, and may dissolve the conceptual categories of 'consumer' and 'producer'. Organisations are increasingly operating under ongoing conditions of constant innovation, enabled through various forms of ambient adaptiveness and responsive creep, in part via instant electronically mediated feedback from consumers. This is shifting the relationship between

consumption and firms through, for example, reintermediation, faster response, shorter value chains, increased feedback and interaction between firms and consumers.

(iii) Consumers are increasingly able to participate with others at-a-distance within *communities* (such as discussion boards, fan sites, etc.), which raises some interesting questions about the constitution of consumption. Are consumers becoming more alike through widespread knowledge availability, or more different, as ever-greater ranges of consumption practices and dispositions are made possible? How do fan groups, hobbyists, collectors or clever consumers maintain their critical consumption edge given the democratisation of commodity knowledges?

(iv) Consumers appear to be increasingly motivated by the *intensity* of the consumption experience (fast markets, elusive commodity searches, auctions and the anticipation of the bid, watching and tracking markets, highs/lows/disappointment, etc.). Organisations are in turn increasingly trying to tap into, or harness, affect, often beginning with the fan base and building on ideas of collectivities of clever consumers.

(v) Drawing on the metaphor of the screen, we argue that its ubiquity (TV screen, computer monitor, portables, mobile phones, wearables) is generating new ways of doing consumption and that the *screen aesthetic* is becoming a significant model and motif of cultural transmission and consumption change, both shaping and calling forth behaviour. The commodity landscape is shifting so quickly that monitoring the monitor becomes a key means of keeping up to speed. Constant fluctuation in commodity markets and knowledges about those markets is no longer a contradiction or evidence of market imbalance, but is a different way of connecting to markets, a way of seeing and knowing.

(vi) Finally, and underpinning much of the above, we argue that one of the impacts of e-commerce on consumers and organisations is to enshrine speed as the ambient pace, with fast markets and short lead times resulting in the proliferation of fast markets.

Activities

The following conference papers have been presented based on the research project:

'Putting e-commerce in its place: reflections on the impact of the Internet on the cultural industries', Paper presented at the *American Association of Geographers 98th Annual Conference*, 19-23 March, 2002, Los Angeles.

'On the reproduction of the musical economy after the Internet', Paper presented at the *American Association of Geographers 99th Annual Conference*, 5-8 March, 2003, New Orleans.

'Imagination abandoned by reason produces impossible monsters': abstractions, practical knowledges and the curious history of e-commerce', Paper presented at the *American Association of Geographers 99th Annual Conference*, 5-8 March, 2003, New Orleans.

'On the reproduction of the musical economy after the Internet', Paper presented at the *RIPE Global Regulation Conference*, University of Sussex, 2-5 May, 2003

'On the reproduction of the musical economy after the Internet', Paper presented at the *RGS-IBG Conference*, 3-5 September, 2003, London.

In addition, project members have given research seminars based on the research emanating from the project at Queen Mary, University of London, University of Wales Swansea, the University of Manchester and the University of Nottingham.

Outputs

A full list of papers, chapters and books published, in press, in revision and in preparation are presented on page 9 of the End of Award Report Form

Impacts

We have conducted two User Group meetings at The British Library, London, involving individuals from the industrial and policy community. We have also attended at a number of industry conferences and meetings which involved the dissemination of the projects key ideas, and entered into a continuing dialogue with a number of non-academic actors. These include consultants, key-decision makers across the three sectors. In addition, we are organising a one-day workshop on the findings of the project that will take place on 8th September 2004 at the University of Nottingham.

Future Research Priorities

The project focused on the e-commerce from the perspective of producers. While this enabled us to understand the ways in which firms and consultants conceptualise and envisage the e-commerce consumer, there is clearly significant scope for complementary research that considers these conceptualisations from the perspective of the consumer. In addition, there is considerable scope for undertaking more detailed studies of the e-commerce knowledge community.

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