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THE MOVE TOWARDS A M3/MB BUSINESS MODEL

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Abstract

The rapid technological changes taking place is impacting business practice across all business sectors. E-commerce has become the norm and business models have slowly evolved to take account of the electronic business world. The electronic infrastructure and channels of e-commerce are particularly suited to information based goods and services, after these services are just pushing electronic information around. Consequently, the industries that have or will have some of the more significant changes are those that are based on electronic information or goods, such as the music, publishing, news, multimedia, (information) service industries and related industries. This theoretical paper examines some of these changes and argues for a more radical take on business models: It is argued the old business models don't meet the needs of customers or digital based goods providers within the new electronic business world. The paper also highlights where key support is needed to fully reach the potential of a digital economy.

Keywords: Micro payments/value systems, M3 /MB business models .

1 INTRODUCTION

The rapid technological changes taking place is impacting business practice across all business sectors. E-commerce has become the norm and business models have slowly evolved to take account of the electronic business world. The electronic infrastructure and channels of e-commerce are particularly suited to information based goods and services, after all these services are just pushing electronic information around. Consequently, the industries that have or will have some of the more significant changes are those that are based on electronic information or goods, such as the music, publishing, news, multimedia, service industries and related industries. This theoretical paper examines some of these changes and argues for a more radical take on business models: It is argued the old business models don't meet the needs of customers or digital based goods providers within the new electronic business world. The paper also highlights where key support is needed to fully reach the potential of a digital economy.

The service industry is a good example of these changes since the industry is based on providing mostly information based services as apposed to 'producing things'. There are many examples of information based services including: Financial services, Brokering (or agent based) services Travel and tourism services, Housing (real-estate in the American e-commerce books), Careers, employment services, Commercial services (consultancies, data processing, facilities management), Mobile services, and others. Some argue that much of the 'West' or the richer technologically advanced societies are based on a service lead economy, and consequently, it will be these nations that will be most affected by the e-commerce led changes.

2 E-COMMERCE IN THE RETAIL SECTOR: FROM TRADITIONAL TO M³/BM

The distribution channels for a wide range of goods and services have been profoundly altered by the introduction and use of ICT (Clemons and Lang 2003). This is impacting the traditional business models, for instance Turban (et al 2008) classifies the e-tailing business models in to the following:-

- Transaction based
- Subscription based
- Advertising based
- Sponsoring and other based (eg 'free' services to support other business activity)

There may well be other business models that can be developed in the evolving e-commerce arena, indeed it is an area calling for innovation. Many nascent e-commerce businesses seem to be based on the 'Advertising model'. In really an e-retailing business cannot survive on advertising revenues unless it attracts a very large user base. Google is probably one of the most successful advertising based corporations attracting many billions of Dollars/Pounds in advertising revenues each year (about 80-90% of their revenues come from advertising via their search engine), however, they are continually trying to diversify into other areas: For instance Google has brought a variety of companies from mobile operators, Social Networking, to electronic payment systems, as well as developing their own set of mobile devices and operating system/Internet browsers. (See the latest listing on Wikipedia for a list of the range of companies - http://en.wikipedia.org/wiki/List_of_acquisitions_by_Google, accessd May 2010.)

These changes are impacting supply chain management, demand chains, outsourcing and the move towards more automated services. However, more fundamentally e-commerce is impacting the very structures within industries.

The move to e-tailing has also seen a change in focus for tradition business models. Activity in the electronic business world is characterised by large user-numbers, a global presence and increased

speed. It is also a domain of small or micro items of value. The characteristics of a significant part of e-tailing, particularly focusing on the information services and digital products, is evolving that of Micro payments/value and Multi-Millions of users (MMM or M^3) or even Micro payments/value and Billions of users (MB).

It appears that corporate, digital and social innovation has provided the basis for fundamental change to the traditional sectors. In addition, much of the *real* economy has moved towards a digital operating space, based on social innovations and digital products and services.

Production activity has moved towards mass-customisation, supported by mobile, ad-hoc and virtual working teams using seamless access to information resources over the Internet. Companies can conduct business solely within the virtual operating environments – and increasingly are. Indeed, some of the biggest and fastest growing companies are based on virtual operating activity and simply moving electronic data (such as Amazon, e-bay and Google). The main new structure that has emerged is the information *superhighway* (both fixed-line and mobile), and from this variety further structures have emerged. One significant current example is the evolving social networking infrastructure. Social networking has always been a part of human activity however, the emergence of Web 2.0 technologies, in the wider sense, has enabling new forms of communication involving unprecedented number of people interacting in a rich communication environment. Facebook, for instance, has some impressive statistics:

- 400+ million active users (i.e. who have returned to the site in the last 30 days),
- 3+ billion photos uploaded to the site each month
- 5+ billion pieces of content (such as web links, news stories, blogs) are shared each week and,
- 100 million users access Facebook via a mobile device

(from <http://www.facebook.com/press/info.php?statistics>, accessed 14/04/10).

This has all taken place in a very few years. Similar impressive figures abound with Twitter and ebay. On the back of such large commercial infrastructures other companies have been able to rapidly reach a vast user base. For instance, there are many companies using ebay as the main channel to provide products and services to customers. Even on the social network sites new business have emerged, such as Zynga's Fish Ville and Farm Ville social networking games that have active users in the 10+millions each month (e.g. see <http://www.facebook.com/apps/application.php?id=102452128776>).

The '100 Million Views Club' maintained by Visual Measures (as of April 2010) had 65 entries of downloads exceeding 100 million (see <http://www.visiblemeasures.com/hundred>). We are even seeing the emergence of the 'one billion club'. For instance, in March 2010, the comparative newcomer to the music industry, Lady Gaga, was the first person to reach 1 Billion downloads – from just three records ("Poker Face", "Bad Romance" and "Just Dance"). Apple, the manufacturer of computers, ipods and iphones, reached over 1 billion downloads from its store in nine months (<http://www.apple.com/itunes/billion-app-countdown/> accessed 14/4/2010).

We are clearly in the domain of Micro value commodities, that require some form of micro-payment mechanisms, and the domain of Multi-Millions of users (MMM or M^3) or even Micro payments/value and Billions of users (MB). For many smaller businesses, self employed people or up-and-coming artists that want to make a living within the information revolution then business model based on small value items used by multi-thousand to millions of users could provide a conformable living standard.

3 PAYING FOR INFORMATION: NEW BUSINESS MODELS AND OPPORTUNITIES

There is a growing need for a micro-payment and/or micro-IPR system to emerge within the M³ / MB business model mindset. There is a lot of free¹ information and content available on the Internet. Some of this is of questionable quality, however, there is also a lot which is useful or of value to people. The amount of freely available information and content on the Internet represents a huge amount of human capital and time. Much of this is provided freely from a philanthropist perspective – people want to make a contribution to knowledge, want to be recognised or participate in a worthwhile community spirited activity (such as wikipedia or GalaxyZoo) – all of which is to be commended and encouraged. However, there is certainly opportunity for many information and content providers to make some financial gain for their hard work, innovation or intellectual property.

For instance, there are many items that are freely available on Youtube, the online video community, that reach millions and hundreds of millions of plays/downloads (such as ‘Charlie bit my finger’ or the ‘Sneezing Baby Panda’). There are many, many more items that have tens of thousands of downloads/plays. These are created by a whole range of people of all ages from all walks of life. In most areas of society when people provide entertainment to large numbers of people it is usually paid for. The main challenge is finding the right level of payments for the content provided, along with the right payment mechanism. The more expensive the content is then fewer people will pay for it. Given the potential large numbers of people accessing content then a micro payment for such content becomes attractive.

Consider Youtube type websites. The success of sites like Youtube has been that it is free to users to play short videos from the general public or companies that want to provide the content. The content provision is moderated to ensure that it is legal and non-offensive. Youtube, like any other business needs to make a profit to survive and they do this by operating an advertising model, like the search engines. A user-pay-for-information/content (U-PFI/C) model could be very attractive to Youtube and similar providers by sharing some of the U-PFI/C fees. It would certainly be attractive to content providers as they have access to a potential revenue stream. It would be attractive to users if it increases the range and quality of entertainment provision. The smaller the fees then the more people will want to play the items.

Consider a ten thousand play/download clip from Youtube. At 0.1 to 0.5 pence/cent per play would provide an income of £10/\$10 to £50/\$50. For a million plays this would be a respectable £1,000/\$1,000 to £5,000/\$5,000. Regular contributors could make a living from providing entertainment over the Internet. The most popular played items could provide a comfortable living for their contributors. One could consider getting the pricing to match performances at say at live gigs, concerts or events, based on similar returns for the amount of minutes per person watched.

Charging for downloads/plays on sites like Youtube is likely to have some impact on the willingness for people to download/play entertainment items. However, sub penny/cent levels for downloads/plays may be viewed as ‘virtually free’ by most users and so may not significantly decrease the volume of downloads/plays. In addition as with the searching example, it is possible to accommodate multiple models – a ‘free’ advertising model, a U-PFC model and a utility model.

¹ Here we are referring to legally free content and information. There are of course examples of people accessing non-free material without paying the due fees.

A U-PFI/C model for Youtube type organizations could stimulate innovation and creativity in the contributions as well as increasing the quality of the contributions. Budding filmmakers, musicians, performing artists, comedians etc. could hone their skills and at the same time generate an income stream. Indeed, successful artists and entertainers could make a successful living just by providing material via Youtube type organizations within a U-PFI/C model. There may be opportunity to develop new genre based on short-medium length entertainment provision over the Internet. New technology helped film and television emerge from the music hall and theatre. They similarly went through issues of finding the right funding models in the early years. Similarly the introduction of videos and DVDs, as well as the introduction of digital TV (such as through Sky), changed the market space for entertainment. Also note that the cinema did not kill off theatre, that television did not kill off film, and that videos did not kill off cinemas or TV. Competition has been healthy for the entertainment industry. All varieties of entertainment (theatre, TV, cinema, video/DVDs, Digital TV) flourish together. Indeed, video/DVD film releases are orchestrated to fit in with cinema releases – as too are plays/replays of prequels on TV; TV stars are used in theatre and pantomime to bring in audiences.

Other industries could make use of this infrastructure, such as education, current news and entertainment items or providing specialist information or advice. There is certainly demand from news and media industries, for instance The Times news paper in the UK in June 2010 started the Time Plus provision of online news trying to get customer to pay for online content (see <http://www.timesplus.co.uk>).

Account based systems offer the opportunity for very low transaction costs since it is just ‘moving data items within a database’. Youtube already operates an account based system where users can login and get their personalized Youtube presence - and also a login is need for access to the more adult content. Most of the infrastructure is in place to move towards a U-PFI/C model. True micro payment mechanisms, of say less than a penny/cent, or even less than a 10th of a cent/penny, would be needed to pay for some of the more micro-value content in order for it to be viewed as virtually free for customers.

A further challenge of moving towards a U-PFI model would be how to keep the philanthropist contributions from people who want to make a worthwhile to the wider community. A U-PFI model may commercialize voluntary activity which may have a negative effect on society. Conversely, it may encourage people to provide free information and content as samplers for paid for content.

Within the current information revolution, commodities are based on information, but much of the information provision (in its wider form from search information, specialist information and entertainment) are not well met by the existing financial and payment mechanisms. The current information revolution is characterized by very large numbers of people accessing very small value items of information. Some form of micro payment system is called for to appreciate the full economic potential of the information revolution. This is an area calling for innovation.

4 THE WRONG ‘VIRTUAL’ BUSINESS MODEL FOR INFORMATION COMMODITIES: FINANCIAL SECTOR

Banks have been *virtualizing* their traditional business space, particularly with new financial services, commodities and exchange systems (such as currencies, stocks, bonds). There has also been an increased level of abstraction of financial products with items such as derivatives (in the form of futures/forwards, options and swaps), commodity futures markets and short-selling (where credit

monies are leveraged for speculative purposes). Other examples include the collating together of virtual financial components to form new financial securities – possibly the most prominent example of this was the manner US sub-prime mortgages were combined with AAA rated approval that heralded the financial upheaval in 2008/2009. Financial components can be interlinked between different types of products and different banks. A loan for a mortgage could have input from several banks and the different collateralized parts of the mortgage may be traded between different banks.

The financial sector has seen much innovation. It is a competitive environment with the potential for very high returns. However, their focus has been on the large-scale transactions, the big money flows and the quick returns. There has been innovation with the retail banking sector covering electronic payment mechanisms, as covered in previous chapters, but again the focus has been on the small to medium size transactions, and accommodating relatively high transaction costs. In addition, most of the innovation in the electronic payment activity has come from the non-bank entities, or when it has come from banks it has often involved non-bank, usually technology based, partners. There has been little interest in micro payment systems and activity from the traditional banking and financial sector.

In addition, the banks do not have the technical capabilities to fully develop and innovate into micro payment activity. Their existing infrastructure - which is big, expensive and secure - is aimed at interaction between defined banking and financial sector entities and a well structured and effectively vetted customer base. It is an expensive infrastructure tied into many physical entities such as ATM machines and the credit and debit card machines operating in retail outlets. The banking infrastructure is not aimed at the mass market of millions, even hundreds of millions of users – users that can be transient

Banks really do not have the expertise or mindset to fully move into the business space of micropayment systems required of the information economy. However, technology companies do. Many of the large international technology companies already operate ‘micro value’ account based systems. Companies such as Microsoft, Google, Youtube, Yahoo, Facebook, Bebo, RenRen, Twitter and ebay, all deal with many millions of users and handle a variety of interactions with the users that can be classed as micro value interactions. Similarly the telecommunications companies also handle micro transactions and interactions with their large user base.

Several of these technology companies already successfully operate some form of payment mechanism, for instance Apple, Google, Amazon, Paypal and the telecommunications companies such as Vodafone. A lot of the success is related to the existing provision of services offered by the company or related partner. For instance Apple’s micropayment system is successful because of the very successful iTunes, Paypal is very successful because of the peer-to-peer auction market of ebay. This symbiotic relationship and support is important because it means that the technology company payment mechanisms have a solid foundation; the payment mechanism is backed by the solidity of the technology companies and the critical mass of the user base.

However, as seen in previous chapters with the example of Simpay from the European telecommunication companies, electronic payment systems (even with big backers) are not guaranteed success. What is missing in the array of existing offerings is some further coordination and collaboration. In short, there needs to be more standardization between the various offerings from the technology companies. However, *technically* that is not really a problem: Technology companies are good at developing and using standards, indeed the whole complex workings of the Internet is based on many interlocking standards. The big challenge is getting collaboration from the technology companies – a significant challenge where many of the technology companies are fierce competitors of each other. This, of course, is a common problem in the capitalist mode of production.

However, the prize of collaboration is access to a market space that will rival and potentially exceed their existing business space. Moving into financial activity-based on micropayment systems, particularly where there is standardizations and inter-operability between the different providers, is set to be a very lucrative and growing market. The critical mass effect of inter operable systems is a really key ingredient in order for companies and persons to reach their full potential: The more people involved in the system then the more useful the system will be, and consequently the more people will want to be involved in the system. Monetary collaboration is beginning to happen. Social networking organisations, for instance, are adopting a standard micropayment system – SpareChange (see sparechangeinc.com). However, there are many hurdles to overcome in developing the standards (such as which standard to use, Microsoft or Google or someone else's?) and getting buy-in from relevant partners.

5 M³/MB BUSINESS MODELS: THE MUSIC INDUSTRY

The music industry is perhaps on of the most visible transformation for the traditional business models of retailing to e-tailing based on the MMM (M³) or MB business models. This is a fast changing industry and some of the key players in the industry are going through some painful structural changes. To get an idea of the type of changes taking place consider the following few questions: How do people buy / use music today and how is it different from two, five, ten or fifty years ago? What effect has Napster, Kazaa and iTunes had on the music industry? How has and is the music industry reacting to these changes?

The music industry has been going through a dynamic stage over last few decades, though there have considerable changes to the music industry since the latter part of the 17th century with the advent of music technology: Huygens *et al* 's (2001) work shows the dynamic and interrelated activity within the music industry: “rival firms not only search for new capabilities within their organization, but also for those that rest in their competitive environment ... that search behaviour drives co-evolution through competitive dynamics among new entrants and incumbent firms and manifests itself in the simultaneous emergence of new business models and new organizational forms” (p971).

There has been concern with the growth of ‘mega corporations’, the big and powerful record labels/major record companies (such as Soni and EMI) with their influence on directing the music industry and producing safe homogenised music. For instance Peterson and Berger's (1975) analysis of the ‘popular’ music industry to the 1970’s and identified the potential of market concentration by large major record companies that could lead to standardization and homogeneity, effectively stifling music innovation. Lopes’ (1992) follow-on analysis of the popular music industry to 1990’s found a different result and that innovation and diversity in popular music with high market concentration of the record companies depends on the system of development and production used by major record companies. However, Lopes’ work really shows that there is innovation and diversity – and competition - but this is mainly between the large record companies; and also that the competition is based largely on the development and production systems used. Lopes’ work also confirms that the record companies apply their own strategies to maintain control of the market. Peterson and Berger’s (1996) later work also shows the potential for innovation where there is competition between large record labels.

However, the powerful record labels/major record companies still dominate the music industry. To see how this state of affairs arose consider what the main function of the Record Labels was: The 'record labels' function was as a 'middle man', to produce the physical records (music by the artists) and distribute these to the final customer. The record labels had expertise and knowledge of the industry, they had recording facilities and expertise, they had distribution channels and they were able to provide very valuable support to musicians and bands in bringing their music to the paying customer. For doing this the record labels would take a significant cut of the sale of the records, with the artist and retailer having their cuts as well. Typically to be successful an artist or band would need to sign up with one of the big record labels – and in signing up the intellectual property would be transferred to the record label. The record labels grew to be very big and powerful entities. Their influence and dominance increased as the market increased – they became more than record labels, becoming large international multimedia companies controlling the selection of artists and the influencing the whole of the distribution channels. They were able to influence the music markets by marketing, promoting and controlling the supply of artists so that they could effectively manipulate the charts.

Now consider the current state and capabilities with ICT: Now artists can produce their own recordings, say in MP3 file or video file using their high quality personal recording devices (digital video recorders, audio recorders, or even mobile phone) and edit and enhance it on their own PC, and then distribute it to customers through many channels such as personal web sites, Social Networking sites such as YouTube, or a music portal. Musicians can sell the music at cheaper prices than in a record store, and produce fairly high quality and original material. Given this it begs the question "What is the role of the record labels or large multinational multimedia companies now"? The base for their core business has changed. They are losing, and in many cases have lost, significant power and control over their industry. There is much activity within the industry to address things like music piracy and to protect the intellectual property of the record companies. But this does not address some of the real issues facing the music industry, particularly the large multinational multimedia companies: They are going through a considerable period of technological change where both the consumer and the musicians/bands practices are changing – effectively squeezing out the traditional 'middle man' record labels. (Of course for the musicians that do sell directly to customers there are still issues of how to stop people copying the music and of course reaching or attracting the final customers and of handling the transactions for the individual artists and bands.)

Clemons and Lang (2003) use case studies of the music and news sectors as examples of industries with different information goods and services, and show that power structures also evolve and change along with changes in the distribution channels: "Star acts no longer need their record labels to certify their music to their fans, and digital production and distribution have reduced or eliminated the value of other assets owned by the record companies." (Clemons and Lang 2003, p259)

Consider now the introduction of MP3 on the music industry. MP3 – or MPEG-1 Audio Layer 3, is a standard for digitally compressing and coding audio information. (MPEG - pronounced M-peg - stands for Moving Picture Experts Group, is the name of a family of standards used for coding audio-visual information (e.g., movies, video, music) in a digital compressed format." – see www.mpeg.org) There are important aspects here, namely that it is an 'open' standard that can be used to represent audio data (such as music) digitally; also that it compresses the audio data, so effectively it loses some of the original quality. The open standard means that it can be used on any device that adheres to the standard, which there were many – so makes it widely usable. The compressing and coding enabled it to be transmitted quickly over the Internet, an important issue before the wide spread adoption of Broadband. The loss of quality was an important factor in initial acceptance (or not) from the existing music industry (namely the main record companies) since it was seen as a less of a threat to their main business (which was focussed on higher quality of music). The emergence of the MP3 and other codec's (compression-decompression) made a big difference to the music industry and made possible much of the capabilities for artists to produce and distribute their own recordings (as discussed above).

This is the realm of M³ / MB business models. Musicians and artists can generate their own market space – with many thousands and even millions of users - without the expensive infrastructure of the traditional large and powerful middlemen of the music industry (e.g. record labels, transnational multimedia corporations). There is yet some what to go to realise this transformation, and indeed there may well be a mix of traditional and M³ / MB business models in operation, but the trend is in that direction. The phenomenal rise success of Lady Gaga and other members of the 100 million downloads club show how the traditional business models really can't compete with the mindset of M³ / MB.

The music industry is one of many that are being affected by the ICT capabilities and corresponding evolving user and producer practices Each of these industries is at different stages in the change process with some more advanced than others. They are all going through some restructuring, such as changes in power structures. A further aspect is when industries converge, which is covered next.

6 CONCLUSION: CONVERGED INDUSTRY SPACES AND M3/MB

Convergence of industries is often at the forefront of e-commerce activity. Convergence (as covered in the session on mobile commerce) results in the cross over of industries, and eventually the development of new industries. In these converged industry spaces there is much potential for innovation gearing (innovations can come from any of the industry areas) and evolving user practices, products and services and corresponding business models. Industry convergence also results in clashes and conflicts of the emerging industries and the market leaders within those. Effectively the converged industry space is made up of new entrants to the market (Porter 1980). While the traditional and established businesses are fighting a rear-guard action to protect their existing business space, new entrants are emerging and shaking up the whole business sector.

In the long term industries and whole sectors change and evolve and even disappear. The now extinct Telegraph industry and its related industries evolved into the telephone, broadcasting, communications and radio industries. Change continually takes place and some times this can be quite radical. Technological and social innovations has been the driver for much of the previous changes in society and is set to be the main driving forces for changes to come. This new global electronic operating world is changing the common sense business models. The traditional business models and mindsets do not meet the needs of customers or suppliers of digital based goods and services. A significant, and even dominant, set of activity is based around micro value items. The converged business space provides vastly increased capabilities, and a very different mindset that can accommodate many millions of users and micro value items. This is resulting in the need for a more radical shake up of the existing business models. The operating environment is really based on M³/MB concepts, however, the existing infrastructures are lacking – they are still based on the traditional mindset of larger value items, few customers and expensive infrastructure. There is clear need to develop cheaper and micro based infrastructure. Indeed, some of that infrastructure is already here but it is provided by the new entrants – though the new entrants (and customers) have an uphill battle to achieve critical mass sufficient to compete with the existing infrastructure. However, the pronominal success from the likes of iTunes and Farm Ville show there is much potential

when the infrastructure is in place. To fully realise the full potential of the evolving M³/MB market space then further infrastructure will be needed, such as compatibility between micro payment systems, as well as the development of micro-value or micro-IPR systems.

The examples of user-pay-for-information/content (U-PFI/C) models described earlier show the potential to develop significant new economic activity. This activity is already taking place but it is mostly not attracting appropriate reward to service providers or taxes. This highlights a big gap between the actual activity and the formal economic activity. Within the current climate of high levels of debt and corresponding significant cuts to front line government services for possibly a generation to come, then the need to fully recognise the economic potential of the current electronic operating environment becomes paramount. Some radical thinking is needed. As Einstein quotes "We can't solve problems by using the same kind of thinking we used when we created them." (from <http://rescomp.stanford.edu/~cheshire/EinsteinQuotes.html>).

Further References

- Adams, C & Ramos I. (2009). Crowdsourcing: a Social Networking Approach to Outsourcing, *Cutter IT Journal*, 22(10)
- Clemons E.C. and Lang K.R. (2003) The Decoupling of Value Creation from Revenue: A Strategic Analysis of the Markets for Pure Information Goods. *Information Technology and Management*, vol., Iss. 2-3, 259 – 287.
- Huygens M., Van Den Bosch F.A.J., Volberda H.W and Baden-Fuller C. (2001) Co-Evolution of Firm Capabilities and Industry Competition: Investigating the Music Industry, 1877-1997 . *Organization Studies*, Vol. 22, No. 6, pp.971-1011.
- Lopes P.D (1992) Innovation and Diversity in the Popular Music Industry, 1969 to 1990. *American Sociological Association*, vol. 57, pp56-71.
- Peterson R.A and Berger D.G. (1996) Measuring Industry Concentration, Diversity, and Innovation in Popular Music. *American Sociological Association*, Vol. 61, No. 1, pp. 175-178.
- Porter M. (2003) Creating tomorrows advantages. In Gibson R. (2003) *Rethinking the future*. Nicholas Brealey Publishing, London, pp 48-61.
- Turban, King, Lee and Viehland (2008) *'Electronic commerce, A managerial perspective' (2008)*, Prentice Hall.