

E-COMMERCE AND HUMAN RESOURCE MANAGEMENT: THEORETICAL APPROACHES AND ISSUES FOR THE BANKING INDUSTRY

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Abstract: Electronic commerce technologies are changing the way that work tasks are conducted and thus has significant implications for the way organisations manage their human resource functions. Although the impact of IT on work and employment has been the subject of research, little attention has been paid to electronic commerce and its effect on work organisation and HR management. This paper examines existing literature on how eCommerce technologies have shaped workplace management, with particular attention to the banking industry. It proposes a conceptual framework for identifying and understanding these changes in the context of the business pressures faced by banks in the highly competitive retail banking environment.

1. INTRODUCTION

The human resource management perspectives associated with the implementation of eCommerce technologies are not well understood in the Information Systems discipline. The purpose of this paper is to identify some of the issues involved in understanding the impact of eCommerce on the way employment is organised and managed. We have focussed on the banking industry as our example because of the importance of banking to eCommerce development and its role as a leading user of eCommerce and IT applications. Lessons from the banking sector will be relevant for many other industries that are developing in similar directions (such as the

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insurance or education sectors). The current shortage of literature on the implications of eCommerce for employment suggests that further research is needed in this area, as are theoretical models which incorporate the new approaches to organising production and the inter-organisational relationships which eCommerce creates.

The banking and finance industries are significant because they face cutting-edge technological and strategic issues at an earlier stage than other industries (Dewan and Seidmann, 2001). This makes banking a key industry in which to observe the impacts of the implementation of eCommerce on the design of work and the management of employment relationships. It will contain lessons for other industries which are yet to move down the eCommerce path. Technologies such as Automatic Teller Machines (ATMs), Electronic Funds Transfer, intranets, telephone and internet banking have made banking accessible in many more formats and have assisted the industry to reduce costs in a competitive and increasingly global environment.

There has been intense interest in the implementation of IT and eCommerce in this industry sector and its contribution to the ongoing tensions between the banks and their *customers* (BRW, 2001). eCommerce and the internet have enabled major changes in the way banks deal with their retail customers. In the past, customers conducted their banking business at a branch and received highly personalised customer service which involved customers and staff in face-to-face trust relations (Wells and Wolfers, 2000; Hughes et al., 1999). New fee structures, bank closures and staff cuts have left customers with little choice but to use technology such as ATMs (Connolly and Thomas, 2000). The implementation of eCommerce in banking has been greeted by customers with a mixture of enthusiasm for the convenience it affords and concern about lower levels of traditional service provision, an issue which has caused widely-publicised conflict between banks and their customers.

Other conflicts caused by eCommerce implementation in this sector, however, have not received the same degree of attention. Tensions between management and employees in the adoption of eCommerce are as significant as the tensions between customers and their financial institution. eCommerce is changing the way people perform their jobs and the way in which they are themselves managed. Banking employees have a new working environment, which includes greater job insecurity than previously, new skill requirements, work redesign and changes in career paths (Jesse, 1997; Scott & Walsham, 1998). Managers have to deal with these issues while putting in place strategies to attract, motivate and retain proficient employees, while at the same time having to develop new competencies themselves.

This paper begins by summarising some of the key eCommerce applications in the banking industry. We then discuss three conceptual approaches for understanding the impact of IT on employment and industry changes associated with the global economy and IT. We consider the impact of eCommerce on employment in the banking industry. We propose a composite framework for further investigating the impact of eCommerce on employment and conclude by outlining a program for further research.

2. ECOMMERCE IMPLEMENTATION IN THE BANKING INDUSTRY

Banks have not only been early adopters of eCommerce, but other businesses' move to eCommerce has been highly dependent on the electronic financial infrastructure that banks provide. Awad defines eCommerce in banking as consisting of: 'procedures that support commercial activities electronically or via networking to apply to bank-to-bank, bank-to-customer or bank-to-vendor' (Awad, 2000:144). The banking sector has implemented IT and eCommerce technologies over several decades. They developed Electronic Data Processing (EDP) centres to centralise operations and were using Electronic Funds Transfer (EFT) over secure networks to communicate between themselves as early as the 1970s (Game & Pringle, 1984; Kalakota and Whinston, 1997). Since then, technologies such as Automatic Teller Machines (ATMs), electronic funds transfer and point of service banking via retail terminals, phone banking, intranets and internet banking have assisted banks and financial organisations to streamline their business processes still further.

Banks and financial institutions around the world have implemented different business strategies and models. Although some of the smaller banks, credit unions and building societies have chosen to have no Web banking and to rely on branches and ATMs, the medium to large banking organisations are encouraging customers to switch to the Web for the cost advantages this channel offers (Jordan & Katz, 1999). In the USA, large organisations such as FleetBoston, Citigroup and Wells Fargo are offering a one-stop shop, which includes real time balances, corporate research and stock trading. Although there are Internet-only banks which have no bricks and mortar branches (Jordan and Katz, 1999) they do not appear to have been successful. The most viable option for most banks is to develop on-line applications while maintaining some level of in-person service.

A Jupiter Media Metrix study in the USA found that brick-and-mortar banks with a multi-channel customer approach are thriving in the Internet

era, although online-only banks are struggling. From July 2000 to July 2001, unique visitors to online-only banking sites dropped from 1.2 to 1.1 million, an 8.1% drop. In the same timeframe unique visitors to multi-channel banks such as Chase, Wells Fargo and Citibank rose from 6.4 to 13.4 million, a 110.5% increase. The report's authors suggest that online-only banks can still carve out a niche by building some physical distribution points (including ATM's) and by targeting specific audiences. For example, Affinity Bank targets well-off retirees, the Naval Federal Credit Union has pioneered the concept of ATM's on naval ships and G&L Bank serves gays and lesbians by allowing them to pool assets to obtain loans, which other banks are reluctant to do (Koller, 2001).

Controlling costs in the banking sector is a key management objective and this industry has been keen to convert customers to online media and to utilise eCommerce, as it is significantly cheaper than face-to-face transactions and has additional benefits. According to the Australian Bureau of Statistics (Trewin, 1999-2000), the main benefits of internet use according to the banking industry were: better access to information and services, ability to facilitate business across different time zones, broader client exposure, improved customer satisfaction and reduced business costs. Chou (2000) argues that the Internet provides an excellent opportunity for business communications and transactions as it allows organisations to establish direct links with current and new customers while being able to deliver new products and services. For example, the Advance Bank in Germany decided to implement a virtual bank to stay competitive and gain access to a larger customer base without incurring the huge costs of putting in place a large branch network (Jelassi & Enders, 2000).

Awad (2000) observes that the combination of computers, the internet and information technology have become a feasible substitute for labour- and paper-intensive banking processes. In sum, the main drivers for eCommerce in the banking sector are: (1) increasing efficiency (2) improving the level of service offered (3) increasing flexibility (4) improving control over operations (5) reducing operating and labour costs (Aungles, 1992; Game and Pringle, 1984; Child, 1985) and (6) being able to respond more effectively to competition and to gain access to customers outside the organisation's geographical area in an increasingly global market (Jelassi & Enders, 2000). The industry holds a positive view of technological changes such as the ATM, phone banking and the utilisation of the internet (Awad, 2000), which do not require face-to-face interaction between customers and branch staff.

3. CONCEPTUALISING THE IMPACT OF ECOMMERCE ON EMPLOYMENT: IMPLICATIONS FOR HR STRATEGIES IN BANKING

When reviewing the literature, we found many theories and perspectives such as the technological determinist perspective (Sabel, 1982; Markus & Robey, 1988), the socio-technical approach (Mumford, 1999), the Marxist theories (Braverman, 1975) and feminist views (Wajcman, 1993; Game and Pringle, 1984) used to explain technological change (Knights & Murray, 1994). We were unable to find, however a comprehensive theoretical model that would assist us to understand the human resource issues when implementing eCommerce technologies and business processes.

We have identified three particularly useful theoretical perspectives dealing with workplace issues, which incorporate IT explicitly into their analyses. None of the three deals directly with eCommerce, but they all provide useful concepts for understanding its relevance to human resource issues – as well as for grasping the emerging principles of organisational management in a global, networked economy.

eCommerce has become an important part of the ability of financial institutions and banks to strategise and compete (Awad, 2000). The implementation of eCommerce necessitates a redesign of work tasks and consideration of how employees are managed to ensure that the investment in these technologies is realised. Each of the three perspectives discussed suggests areas for exploration and conceptual tools to analyse the relationships between eCommerce and HR management.

3.1 Child's labour process approach

Child (1985) developed his framework within a labour process model, which highlights the structure of employee-manager relations. He argued that management does not focus primarily on the labour process when investing in new technology, but that there are implications that could be seen as an unfolding of managerial strategy. 'New technology' includes information technology, microelectronics, software and communications facilities (Child, 1985: 112) and, of course, eCommerce (which he did not explicitly identify). Managers justify the changes to the labour process by reference to new technologies and response to competitive pressures (Child, 1985: 117). Child identified four interrelated management strategies which typically incorporate new technology.

These strategies consists of the **elimination of direct labour** through automation or flexible production systems, **contracting** in which the employee is re-cast as an independent contractor and paid for an agreed amount of labour time, **dissolution of traditional job demarcations** where workers perform a range of tasks that extend traditional job and skill boundaries and finally the deskilling and **degradation of jobs** in which the skill, knowledge and control is removed from the workers and vested in management (a strategy typical of Taylorism).

Several of the trends Child identified are evident in the banking industry. For example, during the last decade, banks in the US and Australia have been downsizing their organisations by closing branches and reducing their staff levels through redundancies, early retirement and natural attrition (Jesse, 1997). Many traditional banking jobs have declined or disappeared altogether, for example typists, secretaries, tellers and bookkeepers, and have been replaced by ATMs and other technologies. Employees at different levels of a bank will be affected in a different way by the eCommerce evolution. The elimination of direct labour strategy is concentrated in the middle and bottom layers of the employment hierarchy (Adler, 1991).

The employees in lower ranks, for example call centre employees and customer service representatives, have little input into the information technologies that are implemented. This layer tends to be where most of the automation and computerisation takes place (Adler, 1991). The implementation of an eCommerce strategy often means the integration of front and back office functions. Closing branches and increasing automation would suggest that many of these jobs would be replaced by computerisation of tasks requiring fewer employees to do the work. Jesse (1997) found that in the United States, fewer staff were required in both the new delivery channels, such as the internet, and those channels that were being radically altered such as retail branches. eCommerce technologies are a driver of labour reduction, often resulting in staff redundancies (Jesse, 1997).

Nor are professionals and middle managers immune to the effects of IT and eCommerce implementation. The more automated the organisation becomes, the fewer employees are needed at management level. The position of branch manager, for example, has come to involve less discretion in making decisions. For example, something as basic as approving a loan is automated by using computerised credit checking (Scott & Walsham, 1998). With greater automation and centralisation, there are also fewer branch offices, with a consequent diminution in career path offerings.

Changes in terms of employment and outsourcing have had a significant impact on the workforce in the banking industry. In Australia, employment in banking grew until 1990, after which it first declined and then levelled

off. The occupational profile from 1986 to 1994 changed significantly – the proportion of clerical workers fell, while professional and technical workers, or those in the middle of the pyramid, increased. From the mid 1980s to the late 1990s part time employment in the banking and finance sector rose from 10.2% to 17.7%, mostly filled by women (Venn & Smith, 1999). There is a developing trend away from full-time clerical positions, which are easiest to automate.

In the US Jesse (1997) found that as labour management receives more attention, there is a greater likelihood of outsourcing functions such as credit scoring, some sections of human resources, payroll, purchasing and marketing. Jesse (1997) argues that managers in the Australian banking sector will increasingly utilise outsourcing (and part time workers) to improve their management of staffing requirements, as better use is made of technological innovations. If a job is downgraded from full-time to part-time, the benefits for the employee are also downgraded. If the job is outsourced, there is often no guarantee that the job will be the same or consist of the same benefits. The labour relations issues are passed on to another party.

Some apparently non-core areas of banking such as property management and securitisation are being outsourced, which means that the banks do not need to staff these areas themselves. This trend is shown clearly by the fact that the industries engaged in communications, computing, accounting, legal, property and telecommunications as part of an enlarged finance industry (FBCS industries) have been growing by over 50 percent compared to the industry average of 20 percent in the seven years to 2000. Employment in each of the broad categories of the FBCS industries has grown while overall employment in the banking sector itself has declined (Trewin, 1999-2000).

Child's framework highlights the different interests that managers and employees have in the employment setting. Different economic forces shape their actions and they experience the impact of technology in divergent (as well as convergent) ways. However, Child does not deal with some important issues that relate to eCommerce implementation such as the role of training or how managers deal with conflicting objectives that they need to attain such as reducing costs (including the rationalization of staff), while at the same time satisfying more demanding customers.

3.2 Zuboff's theory of Informatisation

A different perspective is provided by Zuboff (1988:57) who analysed the implications of information technology for job design. She argued that

while computer-based automation is removing the human element from the business process (or deskilling workers), the “informating” (adding information and analysis to data) power of technology creates pressure for “profound re-skilling” by increasing the explicit information content of job tasks thereby reconfiguring the nature of work. Zuboff contends that even if the managerial purpose in implementing new technology was to control or deskill, managers themselves have their own pressures and issues to deal with while implementing new technology which may negate these intentions. In the “informed organisation”, she asserts, the rigid separation of mental and manual labour is dysfunctional, distinctions between white and blue collar workers no longer exist and there is an intellectualisation of work tasks which results in the organisational skill base being more equal across the enterprise (Zuboff, 1988: 393).

Ideally, the organisation becomes a learning organisation, which translates to the expansion of knowledge by each member of the enterprise. Organisational structures become more flexible, individuals are in a position to align themselves to jobs they are best suited to and managers will have to become more open and participative. In Zuboff’s ‘informed’ organisation, employees become more intellectualised as they deal with the new information technology. The intellectual skill is applied by analysing the problem, determining the data required for analysis and the application of the analysis to improve performance. That is, employees in this type of organisation need to use higher order analysis and conceptualisation with a view to improve the way in which data are assimilated, interpreted and responded to. Managers in this scenario are responsible for task related learning and educating others (Zuboff, 1988: 397). Frenkel et al. (1995) support this view and contend that as workers’ discretion increases to meet the variable requirements of customers, control by technology and bureaucratic control will be superseded by “info-normative” control (which can be described as control based on data objectification or performance indicators; and employee accommodation or commitment to performance standards). Information technology enables these trends but does not inevitably lead to the creation of a culture in which employees and citizens are empowered and fulfilled through the application of that technology.

Davidow and Malone (1992) suggest that Management Information Systems have replaced middle management’s role of providing an information channel through which senior management can obtain business information and communicate orders to more junior employees. Computer networks are able to provide information about the status of operations more efficiently and effectively than the people they replace. This has to all intents and purposes reduced the layers of management required to run an

organisation. Increasingly, employees will organise their own tasks and deal directly with customers, while computers will provide the information middle managers used to transmit. Management have a different role which consists of setting goals, measuring results, directing strategy, putting work processes in place and establishing the environment in which these processes will work effectively (Davidow & Malone, 1992:167). In a virtual organisation, managers will be in a position where they will not only have to manage traditional subordinates but also employees from other departments brought in for projects, part-time employees and other people that work for other related organisations such as suppliers (Davidow & Malone, 1992).

There is evidence of the processes that Zuboff (1988) theorised in other contexts. The skill demands of more sophisticated technical systems means that employees are generally moved from more repetitive, semi-skilled positions to ones involving more autonomy and/or skill (although if they are not able to make the transition to higher skill levels, they may lose their jobs altogether). This polarisation of outcomes (some jobs becoming more skilled while others are automated and disappear) makes training, deployment and career planning issues important ones for human resource management.

Employment changes in banking have followed the trends suggested by Zuboff in a variety of ways. In the Australian banking sector, for example, from 1979 to 1993 there was a reduction in the proportion of workers without post-school qualifications, and after 1990 workers with post-school qualifications outnumbered those without (Venn & Smith, 1999) which suggests that workers are becoming more skilled. As the banking sector moves further into the eCommerce era, workers will be expected to become still more flexible and multi-skilled. Jesse (1997) observes that the competencies or skill sets for banking roles are changing. There is greater importance given to sales in front line roles dealing directly with customers. There is also a general broadening of competencies for those in management. These skills include change management, change resilience, flexibility, technological awareness, a high level of interpersonal skills, team work skills and the commitment to continual learning (Jesse, 1997). These new skill requirements will become more pronounced as eCommerce becomes more established. Zuboff's concepts explain these trends (which Child's does not) and complements Child's framework by identifying 'informatising' aspects of job design, although the two approaches come from very different starting points.

For many employees, developing the relevant skills will pose some problems as they will require, in most cases, a significant amount of retraining. This may create tensions as management attempts to put in place the most appropriately skilled workers for the changing job positions.

Workers unable or unwilling to change will find that their positions and skills quickly become redundant.

The effects of eCommerce on employment in the banking sector raise many issues for human resource management. These include managing recruitment and retention of highly skilled employees in a competitive environment. Job decline, relocation, increased working hours and deskilling (Pinsonneault and Rivard, 1998; Adler, 1991) are serious issues but may be less challenging in the longer term than managing new skill development, including responding to customer demands, and being competitive in a global context. In this context, de-skilling strategies will not meet the challenges of managing the sector's workforce. In a case study of a French bank, management believed that low-level clerical jobs could be 'de-skilled' since with the implementation of new computer technology these workers would not require knowledge of banking procedures. This approach caused considerable difficulties with data integrity and incorrect transactions (Adler, 1991) and management had to rethink the training and cognitive skills required for people performing these functions. In the competition to recruit skilled employees for specialist positions, banks must manage their human resource functions to provide intrinsic as well as financial incentives. Designing jobs in line with the principles outlined by Zuboff will address this issue to some extent.

Zuboff's perspective offers a useful balance to Child's bleak account by identifying the positive potential of technologies for work design, increased employee autonomy and intrinsic job satisfaction. However, her account still focuses primarily on the organisation and even on the activities of individual employees. The implications of eCommerce extend beyond the boundaries of the individual worker and the bounded enterprise to incorporate networks and interorganisational working arrangements, in some cases virtual organisations. This requires a perspective that can accommodate the shifting of the boundaries of work performance.

3.3 Managing post-fordist organisations

A third perspective provides an analysis which includes changes in the ways that organisations operate in relation to trading partners and customers, arguing that there has been a major shift in systems of production to more flexible, dispersed and responsive processes. There are many interpretations of what forms of work organisation are emerging and how this is changing workplace relations (e.g., Frenkel et al 1995, Littler, 1991, Webster, 1995). We have used the work of authors who conceptualise this transition as change from a Fordist to a post-Fordist organisation of production (see

Webster, 1995; Piore & Sabel, 1984, Clegg 1990; Thompson and McHugh, 1995). Clegg (1990) argues that the modern organisation is essentially Taylorist / Fordist with the key characteristics of rigidity, technological determinism as well as differentiated and deskilled jobs. Individuals, by virtue of their office exercised authority and control to achieve productivity and efficiency. Although this control has been limited by the costs of surveillance and control, the hallmarks of the Fordist organisation are stability, control, hierarchy and formality (Thompson and McHugh, 1995: 167). By contrast, a post-fordist organisation is flexible, decentralised and participative with jobs de-differentiated and multi-skilled (Clegg, 1990). The post-Fordist mode of flexible specialisation is associated with flexibility of employees, flexibility of production and flexibility of consumption. Customers demand differentiation in the products and services they receive, i.e. flexibility of consumption, which requires organisations to produce more variety in their products to satisfy this change in consumption behaviour (Littler, 1991, Webster, 1995, Economist, 2001, Agarwal et al., 2001). Littler (1991) argues that 'flexible specialisation', from an industrial relations perspective may be associated with worker participation where management create a more consultative working environment. The 'build to replenish' production model, for example, changes the way production lines operate entirely: 'everything is brought to the worker, as if he were a surgeon' (Economist, 2001: 4).

While the term 'post-Fordism' has been useful for conceptualising new business and social relationships, not all authors have been persuaded that the post-Fordist work and the new, flexible workforce concept of post-Fordism really offers the blessings it may appear to offer in an eCommerce context (Maruyama, 1993). It may create a less secure and more fragmented job and career structure. The ability to work from home, indeed, the whole tele-working concept which was originally a somewhat unrealistic philosophy of happy mothers working at home beside their contented babies has, in fact, given way to driven executives working all hours and in all places, using their laptops and mobile phones to stay in contact, even on aeroplanes and in trains.

eCommerce, both as a set of technologies and a set of business practices, has been an integral part of the post-Fordist transition. The ability to provide 24x7 service support, help-desks, outsourcing, individualised customer profiles, and so on, are all dependent on technologies we associate with eCommerce. They also enable the removal of management layers, out of office work and the redesign of jobs. These technologies are essential for the transition from a Fordist to a post-Fordist structure by facilitating flexibility, responsiveness, customisation and new organisational structures. They also

facilitate global networks and the internationalisation of business, tying together of markets, currencies and organisations (Clegg, 1990).

This perspective provides a powerful set of concepts for understanding the issues involved in the introduction of eCommerce technology and its effects both within an employment organisation and with customers and trading partners.

If the theorists of post-Fordism are correct, then the traditional personnel management approaches will not encourage the autonomy, responsiveness and independence required of employees. This is especially the case in industries such as banking where IT has automated the more routine jobs and employees are now more educated and skilled. They are likely to resist Fordist management regimes and the very nature of their work is not likely to lend itself to those strategies. However, HR management also needs to support organisational strategies that are competitive in the post-Fordist environment. This requires a transformation in the organisational ethos as well as an evolution of specific HR practices.

Figure 1 shows how different Human Resource strategies are related within a wider context. The banking industry relies on economies of scale to stay competitive while at the same time having to become more flexible in a more customer driven environment. Economies of scale are achieved by utilising technologies such as eCommerce to automate jobs (thereby eliminating them), to move customers to a self-service delivery channels or to deskill certain jobs – a deskilling/fordist strategy. On the other hand, eCommerce technologies have allowed organisations to develop specialised and customised products and services that require employees to become more skilled in an “informed” environment – an up-skilling/post-fordist strategy.

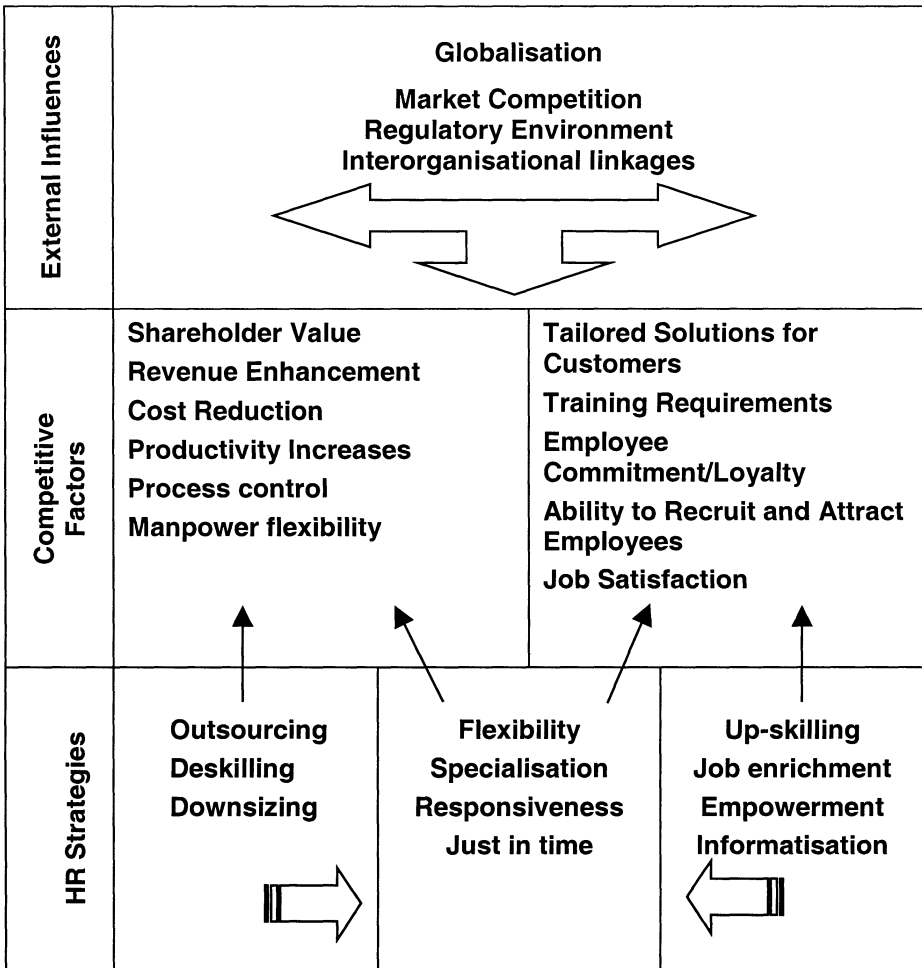


Figure 1. Human Resource Strategies in a Global Competitive Environment

Management, particularly in an industry such as banking, need to be aware of external influences such as globalisation, market competition and government policies when making decisions about the implementation of eCommerce technologies and the resultant effects this has on stakeholders. At the same time, the implementation of eCommerce technologies will have an impact on the way jobs are designed, how employees are recruited and retained, how training is conducted and how employees are supervised.

Each of the frameworks examined in this paper has limitations when used in isolation. However, drawing on the three frameworks offers us a more complete way to analyse the relationship between eCommerce and the HR issues in the banking industry. Taken together, the three frameworks suggest that banks and other enterprises face competing business goals and competing strategies for achieving them. In fact, even these perspectives may not be sufficient to explain all the factors in the industry environment. While globalisation shapes many business practices, it is not unfettered. Governments still exert their own influence on employment issues through their regulation of both labour practices and aspects of the finance market. In contrast to Australia and the US, German law prohibits the State-based banks (such as the various state-owned banks) from closing branches. Although these banks are introducing Internet-based payments (very popular in Germany) to try to reduce calls on branches, thus allowing them to reduce staff numbers, the branches themselves remain and provide a financial hub for village life across the country.

We will draw on this composite framework to investigate the HR implications of electronic commerce implementation in the banking and finance sector in the Australian context, especially as they relate to service provision to retail customers, who increasingly expect the kind of service provided in the post-Fordist context.

4. CONCLUSIONS AND A PROGRAM FOR FURTHER RESEARCH

This paper has discussed three theoretical perspectives for understanding the employment implications of eCommerce with a focus on these issues in the banking industry. Each perspective is useful for understanding the complex issues that eCommerce implementation raises for human resource management. Child's framework is helpful for understanding some implications of eCommerce for HR management strategies which entail reducing costs and increasing control, but it is limited by its focus on intra-organisational issues and traditional organisational structures. Zuboff's perspective points to the transformative potential of technology and the need for HR management to expand skills and empower employees to make better use of the technology. But her approach also concentrates on the localised context. By drawing on theories of post-fordism, the interorganisational and sector-wide issues can be addressed. This perspective highlights the increasingly global, fast-paced, flexible and customer-focused nature of competition.

A composite approach provides a good conceptual framework for understanding how the potential of eCommerce technologies for job loss and degradation can be addressed and managed to help banks remain competitive in a globalising marketplace for financial services, one in which consumers will seek a high quality of service. Banks need to find a way to manage these employee relations issues while grappling with the issue of how to gain competitive advantage and derive profit from new eCommerce business processes and technologies.

The employment impact of eCommerce in the banking industry provides a fertile area for investigation. A better understanding of the design, adoption, implementation and management of such technologies is needed.

Our research will address several specific questions suggested by the literature on organisational sociology and human resource-employee relations management.

- To what extent will eCommerce accentuate or undermine the use of a Fordist approach to business in the banking sector?
- What current HR strategies do banks use to give them competitive advantage in the consumer banking market?
- How do banks link eCommerce implementation and HR management to attract and retain retail customers?

Change management strategies are needed to deal with eCommerce implementation over the long term, not just for a given round of change. Future research should focus on the technological shapers of the labour process(es) and the dynamic relationships between eCommerce implementation, market pressures and human resource management strategies. The lessons learnt from the banking industry are relevant to a wide range of other organisational contexts.

REFERENCES

- Adler, P. (1991). 'New Technologies, New Skills', *Technology and the Organisation of Work*. Geelong, Victoria, Deakin University Press.
- Agrawal, M., Kumaresh, T.V. and Mercer, G.A. (2001) "The False Promise of Mass Customisation". *McKinsey Quarterly*. Vol 3. [Available Online] www.mckinseyquarterly.com/article_page.asp?tk=519677:1089:2&ar=1089&L2=2&L3=38 [Accessed: 23 February 2002].
- Aungles, S. B. and S. R. Parker (1992). *Work, Organisations and Change Themes and perspectives in Australia*. Sydney, Allen & Unwin.
- Australian Banking & Finance. (16 July 2001). Wingspan crashes to earth. *Australian Banking & Finance*: p20.

- Awad, E. M. (2000). The Structure of E-Commerce in the Banking Industry: An Empirical Investigation. *Proceedings of the 2000 ACM SIGCPR conference on The 2000 ACM SIGCPR conference, 2000*, Illinois USA.
- Battellino, R. (2000). 'Australian Financial Markets: Looking Back and Looking Ahead', *Reserve Bank of Australia Bulletin*: 16-25.
- Blackburn, P., R. Coombs, et al. (1991). Information Technologies, The Service Sector and the Restructuring of Consumption. Technology and the Organisation of Work. Geelong, Victoria, Deakin University Press.
- Braverman, H. (1974). Labor and monopoly capital; the degradation of work in the twentieth century. New York, Monthly Review Press.
- BRW (2001). 'Good Bank, Bad Bank', *Business Review Weekly (BRW)*, Vol. 23. Available: www.brw.com.au/stories/20010125/8618.htm (25 January 2001)
- Causser, G. and C. Jones (1996). "Management and the Control of Technical Labour." *Work, Employment & Society*, Vol. 10, (No. 1): 107-123.
- Child, J. (1985). 'Managerial Strategies, New Technology and the Labour Process', *Job Redesign Critical Perspectives on the Labour Process*. D. Knights, H. Willmott and D. Collinson. Aldershot, England, Gower Publishing Company Limited: 107-141.
- Clegg, S. R. (1990). Modern Organizations: Organization Studies in the Postmodern World. London, SAGE Publications Ltd.
- Connolly, C. and G. Thomas (2000). 'Is Your Local ATM Accessible?' *Australian Consumer Association Choice*, Available 203.166.10.91/articles/a101731p1.htm (October 2000)
- Chou, D. C. (2000). 'A Guide to the Internet Revolution in Banking', *Information Systems Management*, Vol. 17, (Issue 2): 51-58.
- Davidow, W., H. and M. S. Malone (1992). The Virtual Corporation. New York, United States of America, Harper Collins.
- Dewan, R. and A. Seidmann (2001). "Current Issues in E-Banking." *Communications of the ACM* Vol. 44(No. 6): pp31-32.
- Economist (2001). "Mass Customisation: a long march". *The Economist*. [Available Online] www.economist.com/displayStory.cfm?Story_ID=691227 [Accessed: 23 February 2002]
- Finance Sector Union. (2001). FSU Campaign Against Bank Closures, LaborNet. 2001 (www.labor.net.au/news/95.html).
- Frenkel, S., M. Korczynski, et al. (1995). "Re-constituting Work: Trends Towards Knowledge Work and Info-normative Control." *Work, Employment & Society* Vol. 9(No. 4): 773-796.
- Game, A. and R. Pringle (1984). *Gender at Work*. London, Pluto Press.
- Hughes, J., O'Brien, J. et al. (1999). 'Getting to know the 'customer in the machine'. *Proceedings of the international ACM SIGGROUP conference on supporting group work*, Phoenix, Arizona.
- Jelassi, T. and A. Enders (2000). 'Branch-less and Internet Banking: The Advance Bank in Germany'. *Proceedings of the 13th International Bled Electronic Commerce Conference*, Bled, Slovenia: 200-212
- Jesse, H. (1997). 'New Technology and Distribution Strategies - Future Impact on Workforce Planning'. *The Australian Banker*, Vol 111, No. 1: 28-33.
- Jordan, J. and J. Katz (1999). 'Banking in the Age of Information Technology', *Regional Review*, Vol. 9 (Issue. 2): 24-30.

- Kalakota, R. and A. B. Whinston (1997). *Electronic Commerce A Managers Guide*, Reading, Massachusetts, Addison-Wesley, Inc.
- Knights, D. and F. Murray (1994). *Managers Divided: Organisation Politics and Information Technology Management*. Chichester, John Wiley & Sons Ltd.
- Koller, M. (29 August 2001). Online Banks Still Struggling, Internet Week. (update.techweb.com/cgi-bin4/flo?y=eEVp0Bg8ak0H30RmX0Aj)
- Littler, C. R. (1985). Taylorism, Fordism and Job Design. Job Redesign Critical Perspectives on the Labour Process. D. Knights, H. Willmott and D. Collinson. Aldershot, England, Gower Publishing Company Limited: pp10-29.
- Littler, C. R. (1991). *Technology and the Organisation of Work*. Geelong, Victoria, Deakin University Press.
- Markus, L.M. & Robey, D. (1988) Information Technology and Organizational Change: Causal Structure in Theory and Research. *Management Science* 34, 583-598.
- Maruyama, K. (1993) "Is the Japanese Production System Post-Fordism?". Keizai Hyoron. February.
- Mumford, E. (1999). Routinisation, Re-engineering, and Socio-technical Design Changing Ideas on the Organisation of Work. Rethinking Management Information Systems An Interdisciplinary Perspective. W. Currie and B. Galliers. New York, Oxford University Press Inc.: pp28-44.
- Piore, M. J. and C. F. Sabel (1984). *The Second Industrial Divide: Possibilities for Prosperity*. New York, United States of America, Basic Books Inc.
- Pinsonneault, A. and S. Rivard (1998). 'Information Technology and the nature of managerial work: from the productivity paradox to the Icarus paradox?' *MIS Quarterly*, Vol. 22 (No. 3): 287-312.
- Reserve Bank of Australia, (1996). The Future of the Financial System. *Reserve Bank of Australia Bulletin*: 9-13.
- Scott, S. V. and G. Walsham (1998). 'Shifting boundaries and new technologies: a case study in the UK banking sector'. *Proceedings of the International Conference on Information Systems*, Helsinki, Finland.
- Venn, D. and G. Smith (1999). 'Technological Change and Employment in the Australian Finance Industry', *Australian Journal of Labour Economics*, Vol. 3 (No. 2): 113-129
- Thompson, P. and McHugh, D. (1995) *Work Organisations: A Critical Introduction* 2nd ed., Houndmills, Macmillan Press
- Trewin, D. (1999-2000). *Finance Australia*. Canberra, Australian Bureau of Statistics: 108 pages.
- Trewin, D. (2000-01). *Finance Australia*. Canberra, Australian Bureau of Statistics: 94 pages.
- Webster, F. (1995). *Theories of The Information Society*. London, Routledge.
- Wells, N. and J. Wolfers (2000). 'Finance with a Personalized Touch: The banking industry has sure benefited from new technologies, but how can we ensure customer satisfaction?', *Communications of the ACM* (Vol. 43 No. 8): 31-34.
- Wajcman, J. (1993). *The masculine mystique. Pink Collar Blues: Work, Gender & Technology*. B. Probert and B. W. Wilson. Melbourne, Melbourne University Press: pp20-40.
- Zuboff, S. (1988). *In the Age of the Smart Machine: The Future of Work and Power*. Oxford, UK, Heinemann Professional Publishing Ltd.
- Zwass, V. (1996). "Electronic Commerce: structures and issues." *International journal of electronic commerce* Vol. 1 (No. 1): pp. 3-23.