



Journal of Theoretical and Applied Electronic
Commerce Research

E-ISSN: 0718-1876

ncerpa@utalca.cl

Universidad de Talca
Chile

Gani, Zoohan; Toleman, Mark

Success factors and barriers to telework adoption in ebusiness in australia and singapore: the
influence of culture and organizational culture

Journal of Theoretical and Applied Electronic Commerce Research, vol. 1, núm. 3, december, 2006,
pp. 81-92

Universidad de Talca
Curicó, Chile

Available in: <http://www.redalyc.org/articulo.oa?id=96510308>

- How to cite
- Complete issue
- More information about this article
- Journal's homepage in redalyc.org

redalyc.org

Scientific Information System

Network of Scientific Journals from Latin America, the Caribbean, Spain and Portugal

Non-profit academic project, developed under the open access initiative

Success factors and barriers to telework adoption in e-business in Australia and Singapore: the influence of culture and organizational culture

Zoohan Gani and Mark Toleman

University of Southern Queensland, Department of Information Systems, d1013421@mail.connect.usq.edu.au
University of Southern Queensland, Department of Information Systems, markt@usq.edu.au

Received 25 April 2006; received in revised form 23 October 2006; accepted 15 November 2006

Abstract

This paper presents research on the influence that organisational behaviour and workplace culture have on the success of and barriers faced by adopting telework within the B2C e-business context among organisations in Australia, Singapore and American based organisations in Singapore. This qualitative study used interview methods to determine success factors and barriers in adopting telework. A total of 16 participants were interviewed in the study and the outcomes highlight differences in the work-related values according to the respective cultural backgrounds of managers and employees. These findings create new possibilities for research on how telework success and barriers to success are perceived since a major existing limitation of the telework literature is that organisational theory has been largely ignored.

Key words: Telework, cultural differences, organisational theory, success factors, barriers to success

1 Introduction

1.1 Outline of the paper

This paper discusses the impact of cultural differences in Australia, Singapore and American based companies in Singapore on the perceptions that managers and employees have towards success factors and the barriers that they face in adopting telework in the business-to-consumer (B2C) e-business application. The rationale for this paper is that there has been little concentration in telework studies on the influence of differences in organisational behaviour and working culture on employee and management issues [28], [4]. This study examines various organisational theories, discussed in the next section as part of the literature review, in order to relate them to employees and management perception towards telework success and barriers faced, and to understand the difference and/or similarity in the contribution of success factors.

This paper has five sections namely introduction, research method, results, analysis and discussion, and conclusion. This *Introduction* briefly outlines the paper and gives an overview of organisational behaviour theories, how employees and management view success and failure, and the success factors as seen by managers and employees. *Research Method* addresses the research paradigm used in this study, the scientific realism paradigm, and describes how the case study research methodology used in this study enables the success of telework and the barriers to its success to be studied in depth, and discusses the techniques used to analyse the collected data.

Results indicates that culture and management attitudes, customer comfort and employee expectation are seen as perceived barriers for adopting telework, and reports on how Australian employees and managers differ from Singaporean employees and managers in perceiving success factors. *Analysis and Discussion* interprets the results and discusses and explains how the differences in work-related values and organisational culture plays an important role in perceiving success factors and barriers, while *Conclusion* explains the significance of understanding the work-related values and organisational culture for future telework studies.

1.2 Literature review

In this study telework is defined as 'a work arrangement where organisational employees work at home instead of their offices' part of their work time [23]. Telework was extensively researched in the early 1990's but circumstances have changed since then that require further research about this work style. One factor is the global economy. It was once dominated by the exchange of goods but now it is information dominated. Another major factor in this change process is the 'unparalleled rate of development of information and communication technology' [25]. The continual improvement of microchips, fibre optics, telecommunications systems, communications satellites, and other elements of these technologies and the ability of humans to process and communicate information has been transformed. In principle, an information worker can work at a distant location with any other person where either sunlight or an electrical power supply is available [25]. These changes suggest changes for success factors of telework since the formative period of telework in the 1970's, 1980's and early 1990's [31]. Current success factors of telework ascertained from the 1970's until the late 1990's are reported next.

In the 1970's the objective of telecommuting was to avoid traffic, that is, it was closely associated with transportation [32]. During this era the term telecommuting was used but this was later named 'telework'. In 1970 the idea of 'telecommuting' was proposed by Jack Nilles who later expanded the concept in the 1980's. The practice of telecommuting was developed in Southern California during the 1970's as a way to decrease congestion on the state's freeways [1]. Companies that were able to avoid such traffic and save expenditure on transportation claimed success in adopting telecommuting.

One such company was Mom and Pop Information Services Company, which telecommuted as far back as the late 1970's. The company owners commenced telecommuting by visiting clients on-site and doing the majority of administration work from home using bookkeeping tools available for taxes and invoicing applications. The success factors highlighted by the company owners included the introduction of software available in the late 1970's and PC tools. In the late 1970's, Hodson-Blackstone Franks commenced operation of a firm of auditors and accountants. Telecommuting enabled them to allow their accountants to do home auditing and to recruit and manage 1,500 clients and 45 staff and partners [18]. They indicated that factors such as the introduction of accounting software and computers were the primary reason for its flourishing success in telecommuting.

In the 1980's telecommuting programs were developed as a way of employing the disabled as home-based transcribers and/or word processor operators [32]. Initiatives were undertaken by the USA government to use telecommuting as a natural approach to increasing employment possibilities for the disabled or functionally challenged [5]. One such pioneer that adopted telecommuting as a way to assist disabled workers, or workers with domestic situations requiring them to remain in the home, was IBM [7]. Companies, that initiated telework in the 1980's for these reasons considered themselves successful in their objectives.

Another pioneer that started telework in the 1980's was AT&T. Even though it was only pilot projects, AT&T was able to legitimize the concept of telework based on the Clean Air Act, which was part of the objective of introducing

telework in the 1970's to sustain low traffic and less pollution [30]. Since, it is a telecommunications company, infrastructure such as network lines and computer databases were in existence as early as 1977. These facilities acted as a strong support for adopting telework into the 1980's. Other factors that acted, as a strong support for their telework success were the constant publicity on telework in all employee publications, which helped in gaining strong team support [2].

Title of the research	Citation	Industry	Success technology factors
Managerial Issues for Telecommuting	Anthony R. Hendrickson & Troy J. Strader, 1999, Iowa State University [16]	Software engineering company, Trade Reporting and Data Exchange (T.R.A.D.E)	<ul style="list-style-type: none"> • Telecommuter hardware e.g.: ISDN router • Telecommuter software e.g.: Lotus Notes • Telecommunications e.g.: ISDN line
The Telecommuting life: Managing Issues of Work, Home and Technology	Gigi G. Kelly & Karen Locke, 1999, College of William and Mary, USA [9]	American Bank Corporation (ABC)	<ul style="list-style-type: none"> • E-mail system and fast access to the organisation's local area network (Intranet) • Possessing a computer, modem and Internet access
The Business Benefits of the Virtual Organisation	David J. Grimshaw & Sandy Kwok, 1998, University of Leeds [13]	Rank Hovis Ltd, business activities include food manufacturing, processing and grain transaction.	<ul style="list-style-type: none"> • Collaboration tools e.g.: Chalkboard and Excel, desktop video-conferencing and using Lotus Notes
The Business Benefits of the Virtual Organisation	David J. Grimshaw & Sandy Kwok, 1998, University of Leeds [13]	Reuter Holdings plc, world's largest news agency.	<ul style="list-style-type: none"> • Collaboration tools e.g.: computer-based conferencing, video-conferencing • Software functionalities e.g.: management file system, data analysis and document developing
The Business Benefits of the Virtual Organisation	David J. Grimshaw & Sandy Kwok, 1998, University of Leeds [13]	Sonicon Ltd, graphic design company	<ul style="list-style-type: none"> • Collaboration tools e.g.: GroupWare Lotus Notes, API (application programming interfaces)
The Business Benefits of the Virtual Organisation	David J. Grimshaw & Sandy Kwok, 1998, University of Leeds [13]	Triangle Computer Services Ltd, business activities include retailing and installing local area network. Major business is in installing local area networks for clients.	<ul style="list-style-type: none"> • Compatibility of hardware and software technology with clients • Telecommunications e.g.: ISDN links with shared applications • Collaboration tools e.g.: shared application tools such as Forecast

Table 1: Summary table of case studies of teleworking in a virtual environment

Back in the 1970's and 1980's telework started off as a social statement in order to make societal changes. The objectives from the 1970's and 1980's still exist now but in the 1990's telework took a commercialized stand and began to be more profit oriented. In turn, the perceived success of organisations that adopted telework has changed [8]. In addition concepts such as the virtual organisation were also introduced due to the advancement of technology and hence contribute to the emerging of new factors in reporting success factors in the 1990's.

A virtual environment means, for example, the use of corporate intranets and/or extranets, e-mail systems, and forming an alliance through the use of ICTs in the production of a joint product [13]. Here factors are examined that have led to telework in a virtual environment. Grimshaw and Kwok [13] examined six case studies, which included a software engineering company, a news agency, a bank, a food manufacturer, a graphic design company, and an IT company. Of the factors considered, job function and cost reduction (cutting overhead costs) were the most commonly reported ones [13]. These factors show that telework adoption was indeed seen as a profit oriented outcome in these virtual organisations.

The case study in [13] of Reuter Holdings Plc, the world's largest news agency, shows that the important success factors were overcoming cultural barriers, using computer-based and video conferencing, and using adequate software functionality with capabilities such as file management systems, data analysis and document developing. The case study in [16] of a software engineering company indicated hardware, software functionality and telecommunications links as the important success factors. On the other hand [9] indicated Internet, intranet and the e-mail system as important success factors in their case study of banks. The study in [13] of Sonicon Ltd, a graphic design company, and Triangle Computer Services Ltd, a computer company, indicated the importance of collaboration tools as a success factor for teleworking in a virtual organisation (see table 1).

Based on these six case studies, the success factors studied in the virtual organisation were primarily technological factors and some of these technological factors were new and not in existence back in the 1970's and in the 1980's.

The prevalence of Internet usage in the business world in the late 1990's also saw the emergence of e-business. Telework as a work practice applied in the e-business context has different success factors to those of traditional organisations, because of the differences in organisational structure, organisation culture and management within the e-business infrastructure as compared to the traditional environment [3]. Therefore, this suggests that it is important to study telework taking the differences in circumstances into consideration.

On the other hand it will be interesting to note the barriers that have emerged over the years, which require further research. Cultural barriers lack consideration in telework research. Traditional business culture regulates the rate of diffusion of telework in a workplace [25]. In other words, organisations that are primarily based on an industrial model, that is with centralization of resources and employees, have less success in telework adoption compared to contemporary organisational cultures. If they adopt 'a network structure, or a small number of hierarchical levels, and promotes free interchange among its employees, then the chance of success of telework in the organisation is relatively high' [25].

In the organisational behaviour discipline, there are several theories that assist in understanding the various aspects of organisational behaviour, and as this research examines aspects of organisations and individual perspectives within it, it is necessary to incorporate these theories. Factors that influence the study of an individual in an organisation and the implications of the effects of those factors are made explicit. Personal and situational factors are presented in this paper as the two major types of telework success factors drawn out in this study. Personal factors include individual attitude, habits, personalities and employee aptitude. Situational factors include supervision, training, technological resources (hardware and software), and non-technological resources (finance and location) provided by the management.

Research indicates that individuals as 'actors' in a successful situation attribute success to personal factors whereas an 'observer' in such a situation would attribute situational factors as causes of the success [19], [12]. However, in a failed situation, as an 'actor' the individual would attribute situational factors as causes for the failure while an 'observer' would attribute personal factors as causes for the failure [19], [20], [12].

Research also suggests that individuals (employees) gain satisfaction when the way they work meets their needs [12], [29]. Individual needs are seen as a factor that would influence how an employee perceives success in the way they work and also assists in understanding individual behaviour.

Organisational culture plays an important role in developing performance criteria in order to judge how well an employee has performed in his or her area of work [22], [11], [15], [12]. Organisational culture also shapes the way the employees of the organisation make sense of events, and it assists in understanding how the organisation works [15], [29]. Organisational cultures that are adaptable and effective have a positive impact on organisational goals and performance [22].

In [29] it is argued that perceived success for management is based largely on organisation goals and performance dimensions, which are correlated to and have positive impact on, the organisational culture [22]. Consequentially, management tends to recognize success factors that fulfil those organisational goals and performance dimensions [12], [29]. Based on the existing literature, organisational culture is a factor that influences how management perceives success and assists in understanding the organisational goals and values.

This study considered the organisational theories discussed above in the context of attitudes and behaviour of employees and management towards telework and by doing so was able to demonstrate understanding of the idiosyncrasies of employees and management, and their perceptions of success and barriers faced in adopting

telework. This research will contribute to a managerial understanding of employee views on telework and potentially facilitate an increased number of employees to telework. In addition, the research outcomes can be used as performance indicators by management to monitor telework in their organisations.

2 Research Method

The research paradigm used in this study is scientific realism (*post positivism*). Scientific realists believe in scrutinizing the real world as closely as possible. Due to the complexity of the world, reality can only be imperfectly and probabilistically apprehended [14], [10]. This research involves the study of complex issues (e.g. people, relationships, work structure), and scientific realism is a suitable paradigm for this type of research.

In the existing telework literature, the heavy dependence on perception surveys, poses a problem for research because of the significant gap between popular perception and actual behaviour [28]. This problem is overcome in the scientific realism paradigm by using case study research through in-depth interviews, which allows for the study of both observable and unobservable factors [14], such as idiosyncratic behaviour and attitudes, which may contribute to the success and barriers faced in adopting of telework in the e-business application.

In the study, 16 interviews were conducted. Six of them were conducted in Australia, another six were conducted in Singaporean organisations and a further four were conducted in American based companies in Singapore. Case A, is an Australian international management consultancy company in telecommunications that provides expert advice and project management expertise involving detailed design activities. This organisation conducts telework among the consultants. The interviewees included two consultants and a senior manager. These interviewees are addressed as *respondents T1, T2 and M1* respectively. Case B is an Australian company that manufactures and sells fishing lures. The company conducts telework among its sales representatives. The interviewees included two sales representatives and a manager (sales). These interviewees are addressed as *respondents T3, T4 and M2* respectively.

Case C, is a large Singaporean insurance company that conducts telework among its insurance advisors. The interviewees included two insurance advisors and a manager in-charge of the telework program. These interviewees are addressed as *respondents T5, T6 and M3* respectively. Case D, is a large multinational insurance company based in Singapore that likewise conducts telework among its insurance brokers. The interviewees included two insurance brokers and a manager in-charge of the telework program. These interviewees are addressed as *respondents T7, T8 and M4* respectively.

Case E, is an American based insurance company in Singapore that conducts telework among its insurance advisors and some of its managers. The interviewees included three insurance brokers and a manager in-charge of the telework program. These interviewees are addressed as *respondents T9, T10, T11 and M5*.

The questions that were asked of the employees (teleworkers) for this study are listed in the appendix to give the reader an example of the type of questions that were asked during all the interviews.

The questionnaires for this research were developed based on the research issues discussed to investigate on how employees and management view success and failure, and the success factors as seen by managers and employees. This interview protocol was reviewed by a research supervisor and then tested in pilot case studies. The interview protocol is divided into three parts. The first part introduces the research project and contains questions about demographic details of the organisations and respondents. The second part has the opening questions to build rapport with the teleworkers and managers. The questions in part 3 relate to the research issues. Some of the scaled responses were triangulated with discussions and altered where necessary to provide a more accurate picture of the importance.

Next, a brief overview of the various techniques used for analysing the data in this case study research is given. First, all the collected data, which was primarily in audio form, was transcribed verbatim. Then, the analysis of the transcription began by organising the data into themes, quotes and passages with the developed notes displayed as data in matrices and tables for further examination. Prior to the fieldwork a provisional list of codes was created. This list was derived from the literature review, research questions and problem areas related to this study. These codes were then displayed visually for systematic comprehension in order to draw conclusions about them and the quotes from interviewees. One way of displaying the codes is through the use of tabulation. In this study, the codes are represented as columns and the rows represent the respondents labeled by their case letter and respondent number. For instance, C: M3 identifies the respondent, the manager, interviewed within Case C. In the crossing space between the rows and columns, comments made in relation to each of these codes are noted. An example of such tabulation is seen in tables 2 and 3.

	Individual culture	Factors contributing to today's success	Initial barrier faced
C: M3	'we decided to do this hoping it may save costs for us, for employees if you tell them the benefits of this programme employees will surely support...'	'technology is definitely there..., we also give them training....'	'I must say employee was expecting so much...then when they cant get what they wanted they start complaining...'
A: M1	'as far as I'm concern the whole work arrangement was justified so decided to push it through...'	'yeah..high speed link plays important part in this type of work...'	I guess im personally not so comfortable with supervising my staff couple of kilometers away from me...im conservative in that sense...'

Table 2: Management Cluster

	Working culture	Factors contributing to today's success	Initial barrier faced
C: T4	'the boss want me to do what...i just thought ok just do it... its nice to work from home no need to travel so much...'	'i think is money.. i mean c'mon the company has so much of money invested in this telework and also can setup a home office for us...'	'for me it was trying to tell my boss the problem im facing personally cause this is my first time to work from home....ah..yes..miscommunication'
A: T1	'we saw lots of benefits in it..its easier on us considering the nature of our work and all...'	'time management i guess..i mean u must know how to manage your time effectively or you end up working endlessly..'	'my clients...they were asking so many questions..yeah it was though on me to get my clients understand why we were doing this...'

Table 3: Teleworkers Cluster

This approach is known as *cross-cluster analysis* [26], [33]. The use of cross-cluster analysis is discussed in [24] including activities such as tabulating the frequency of different events and ordering the information chronologically. For this research, cross-case analysis was undertaken. The cluster of cases was compared and contrasted to determine if there were any variations or similarities in the data by highlighting the variables and concepts relevant to the research questions and the research problem [6]. Relevant documents obtained from the respondents were also consulted for triangulation purposes.

3 Results

The data gathered from all five organisations examined the success factors and the barriers faced in adopting telework based on management and employee perspectives. All five cases faced barriers at the initial stage of adopting telework. However, the same cases are now successfully conducting their telework program among their employees so the same cases were used to study the success factors.

All cases agreed that organisational culture was a barrier, which was seen as a hindrance in fully accepting telework as an option to work in the B2C e-business application. For example, with Case C, the employees who telework found themselves being envied by other colleagues in the organisation. The employees who telework were told that they could relax at home while the others had to work late in the office. In this organisation employees typically worked in the office; that was the part of the organisational culture they have known for many years. However, introducing a change to this organisational culture in the form of telework caused resistance among other colleagues. The introduction of telework not only led to resistance among other employees but it also caused office politics to emerge as an issue.

Employees (T1-T4) added that culture and management attitudes, not technology, presented the largest barrier to adopting telework in the B2C e-business. Apparently it was difficult to convince management of this because the

management (*M1-M2*) had concerns about monitoring and supervision. Since the management had been used to 'looking over the shoulder' micro-management, supervision and monitoring, they were reluctant to allow employees to work from home. Hence there was a lack of trust in the employees' discipline in getting work done at home. Similar views were also identified among the employees (*T9-T11*) in Case E.

However, respondents *M3* and *M4* from Singaporean Cases C and D considered the expectations of the employees who telework acted as a barrier to the achievement of adopting telework successfully. In Cases C and D when telework was a pilot project, the employees who performed telework had various complaints about how they expected this mode of work would allow them sufficient time with their family. These incidents have caused some resistance and disharmony among the teleworkers and the management.

Respondents T1-T4 from Australian Cases A and B also considered customer comfort as an initial barrier to adopting telework in these organisations. The clients of these cases raised issues and concerns over their projects being serviced by advisors who worked the majority of their time from home. These issues arose because these clients had been in business with these organisations for many years and they were fearful that they would not be cared for appropriately where few visits were made to the office by the teleworkers. Concerns, such as the quality of handling of projects as compared to when their advisers work in their office, were one of the barriers management had to examine.

In addition to organisational culture and expectations of employees, both Singaporean Cases C and D identified the fear of lack of progression and promotion within the organisation as another barrier to adopting telework in the early days. *Respondents T5-T8* were asked whether 'the fear of not getting promoted' could be seen as an expectation of employees. They responded by saying that for them this expectation affects them on a personal level but not their professional career.

Respondents M3 and *M4* indicated that employees' have raised concern that if they stay at home the majority of the time they were afraid that people who work in the office could lobby the management for promotion. They were afraid that they may miss out on communication with their management. Similar fear was also present in Case E, where the employees (*T9-T11*) said that when they initially teleworked, the management apparently had difficulty in explaining how they would be treated equally for promotion. Such lack of clarity led some teleworkers to spend more time in the office in the initial stages, defeating the whole purpose of telework.

All the respondents of Singaporean Cases C and D (*T5-T8*, *M3* and *M4*) and the American based company in Singapore, Case E (*T9-T11* and *M5*), indicated not having the right technology package could act as a barrier when it comes to adopting telework. They claimed that many organisations believed that having an ebusiness infrastructure, meant telework could be conducted with ease. Ebusiness infrastructure provides appropriate tools such as intranet/extranet and web servers but having the right personal technological tools such as PDAs, webcam and microphones, added to the ease of teleworking. *Respondents (T9-T11)* of Case E indicated that to communicate with their clients in the U.S for example, having webcams, microphone and chat programs had given them easy access to maintain communication with their clients overseas as opposed to just having to work within the tools associated with e-business infrastructure.

The managers from Singaporean Cases C and E (*M3-M5*) provided situational factors, such as the provision of training provided by the management, as success factors. Australian managers from Cases A and B (*M1* and *M2*) provided situational factors and personal factors such as employees' capability in managing time, as success factors. Australian employees from Cases A and B (*T1-T4*) mostly provided personal factors and rarely provided situational factors when asked to draw out the success factors. The findings also show that the Singaporean employees from Cases C, D and E (*respondents T5-T11*) apart from providing personal factors, also identified situational factors such as IT resources provided by the management, as equally important in drawing out the success factors.

4 Analysis and Discussion

Two issues emerge from this study: the difference in perceived barriers is due to the differences in work-related values; the difference in perceived success factors is due to the idiosyncrasies of the respective organisational cultures. These two issues are discussed in further detail in the following sections

4.1 Differences in barriers faced in adopting telework

Initially the manager from the Australian Case A (*M1*) was not keen on deploying telework in their organisation. The employees made the individual choice to promote telework, which was a hot topic then, among the employees. The senior employees prepared a proposal and delivered it to the management. In addition, the management stated that it assumed that the current employees who were teleworking were doing this because they wanted to and they were satisfied with the work style.

The initial fear of management was that the employees might not be able to meet deadlines since there would be no traditional way of supervision. The employees (*T3* and *T4*), however, thought this fear was not reasonable as the

majority of their work was done offsite at their clients' premises, and they believed it would only help in work productivity if they did not spend so much time traveling to and from their office. Hence in this Case A, participative management practice had indeed allowed the management to take into consideration the employees point of view in adopting telework.

The employees (*respondents T1 and T2*) from the Australian Case A felt that their management mistrust was not as challenging as their client's attitude towards this new way of work. As explained earlier, these clients had been in business with the organisation for many years and moving to a new work interaction structure caused them concern. This was also due to the clients having to deal with their consultants working from home. For these clients, the idea of these consultants working from home meant not being able to get their work done on time as the teleworkers were "lazing around" at home getting little work done. This contrasts with Singaporean cases where there were no complaints from the clients or the customers as to how the insurance advisors worked.

This difference could be due to the nature of the business conducted; the Australian case was a telecommunication consultancy company and the Singaporean cases were insurances companies. The other difference could be due to the individualistic culture in Australian management where everyone has the right to voice their opinion. The Singaporean autocratic culture could have played a part in accepting the changes as their insurance advisors were viewed to be the experts in this area of business.

The management (*respondents M3 and M4*) from the Singaporean Cases C and D felt that the employees were teleworking because the management promoted teleworking to them. They felt responsible if their employees were not able to enjoy telework as they thought they would. Here the management selected for teleworking those employees with many years of experience selling insurance, as they believed that they would be more disciplined and trustworthy. The management then provided training to these workers before they began teleworking on their own. The way they promoted telework to them was by stating that they wanted to implement telework because it provided the organisation with various benefits. The aims of the organisation were promoted to them through brochures and seminars.

The irony is that it would be expected that organisations that impose telework on employees would not care about the employees' feelings but in these cases, the management to some extent at least, felt that if the chosen employees do not gain anything at a personal level, then success would be questionable even if organisational goals were met. This is why when the employees' personal expectations were not met in the initial days of teleworking, the management did pay attention to their needs as they felt that they were responsible for their well-being as they selected the employees for telework.

Respondents T5 and T6 of Case C had to face envious colleagues; they were looked upon as though they were not doing 'real' work. This is partly due to the management choosing the employees whom they wanted to telework. Some employees might have felt this choice was not fair and therefore they showed resentment towards their colleagues who were chosen to telework. On the other hand in Case A, such resentment were not faced and this could be because the management had little say on who teleworked; the choice was left to each individual employee as they initiated the telework program. Differences as such in work related values are significant in considering the barriers faced in adopting telework.

Countries and areas such as the USA, Canada, UK, northern Europe and Australia are examples of individualistic cultures [27], [17]. 'In individualistic society, managers seek input from others, but individual decisions are seen as better' [17]. This could explain why management felt that individual employees had choices in the matter of telework and that if the employee was not satisfied with telework they could choose to discontinue teleworking. This also explains why management preferred individual employees to solve their own problems.

However in Case A this individualistic stand taken by management caused the employees to believe that management was not giving sufficient support for the problems they may or may not face throughout their telework experience. In an individualistic society, there is more emotional independence from the company [17], which explains why the employees from the Australian cases promoted telework so strongly. They believed it would improve their productivity, and believed it was their right and did not consider how their work style would cause disturbances for management.

On the other hand countries such as Hong Kong, China and Singapore are influenced by a Confucian cultural dimension [27]. Individuals in Confucian-based organisations adhere to rigid, informal group norms and values [27] and subordinates are passive, preferring a "big boss" to make decisions for them [17]. Confucian virtues of loyalty and obedience to authority [27] could explain why the employees from the Singaporean cases considered teleworking when their management wanted them to; it was deemed as the more important priority.

The management from the Singaporean cases did not consider individual employee views or interest in the choice of teleworking and likewise the employees believed that their management knew what was best for business growth. This pattern of behaviour conforms to the pattern found in Confucian-based organisations where the central authority figure looks out for the subordinates, that is, the employees in Confucian-based organisations expect the central authority figure to make decisions for them.

4.2 Differences in perceiving success factors

The managers from Singaporean Cases C and D (*M3* and *M4*) recognized many situational factors as success factors. The employees from the Singaporean Cases C and D (*T5-T8*) recognized some of the resources provided by the management and personal factors as important. The managers from the Australian Cases A and B (*M1* and *M2*) recognize both situational and personal factors. It was found in the Australian cases that the employees (*T1-T4*) affirmed that the management did provide them with resources, but that it was the employees themselves who utilised these properly to perform their work efficiently. They were quite reluctant to give credit to the management, as the management expected the employees to manage the problems themselves. Similar management attitude was found in Case E where employees were entrusted to solve their own problems and according to respondent *M5*, it is a way of saying that we trust our employees' decisions, which is quite important in the teleworking environment.

These differences are due to the organisational culture, where in countries such as Hong Kong, China and Singapore, the practice is autocratic and centralised power structures predominate. The subordinates respect the leaders and do what they say. They are reluctant to openly give ideas and opinions for fear of disagreeing with their seniors and possibly appearing disloyal to organisational authority [21]. This could explain why the employees from Singaporean companies also recognized the resources provided by the management and the situational factors when drawing out the success factors, using such recognition as an opportunity to demonstrate their loyalty towards their management.

Management based on this style of leadership would also see itself taking a paternalistic influence over its subordinates [21]. This explains why the management in the Singaporean cases fails to identify employees' contributions instead concentrating on the resources it has provided for its subordinates. This is except for Case E; respondent *M5* recognized the fact that it was an American based organisation, and management practices in America were different from the practices among Singaporean management. Therefore in Case E, the management did recognize the contributions made by the employees. However, unlike the Australian cases, Case E employees (*T9-T11*) recognized the contribution made by the management. One explanation would be that all employees who are working as teleworkers are Singaporeans and hence the Confucian virtues of loyalty and obedience are still present among these employees.

Participative management practices are far more common in countries such as Australia. As a result, belief in the importance of cooperation and teamwork between employees and management is widely held, and employees are often free to contribute their own ideas [21]. In the Australian cases such as Case A, even though there was an element of individualism, a participative environment existed. This would explain why the management from the Australian cases acknowledged the employees' contributions, as they might have perceived the whole business process as teamwork.

5 Conclusion

This paper has shown that the knowledge of work-related values and organisational culture plays an important role in understanding the organisational consequences of telework. Since telework is an organisational phenomenon, the success of telework or the barriers faced will be influenced by the attitude of the management and employees. In order to properly study these attitudes, an understanding of the work-related values and organisational culture is necessary. Using organisational theory to study the success of telework and the barriers faced facilitates a comprehensive understanding of how telework programs fit into an organisation's culture and work-value system.

Future research within the business to consumer e-business environment can compare Asian companies based in Australia with their local Australian companies in adopting telework. This will provide an interesting perspective on how local Australians working in Asian companies based in Australia view telework success and barriers compared with Australians working in local companies. Future research may also explore and investigate telework within the business-to-business environment. One such study can compare teleworking among Australian companies doing businesses with local Australian businesses and the other with Asian businesses based in Australia. To study the factors relating to success and barriers faced from this perspective would give a different scope of study for future research.

Acknowledgements

The authors wish to thank all the organisations that participated in this research and assisted us in our findings. The authors also wish to thank Mr. Giovanni Callea for his support and appreciate the comments he made on an earlier draft of the article.

References

- [1] Albany Colony Chamber of Commerce. (1995). Telecommuting Bring Changes to Work Place. [Online]. Available: www.ac-chamber.org/visions/visions1/feature/article_2.html.
- [2] AT&T. (2006). AT&T Telework Webguide. [Online]. Available: www.att.com/telework.
- [3] C. L. Cooper and R. J. Burke, *The New World of Work*. UK: Blackwell, 2002.
- [4] D. Chaffey, *E-business and E-commerce Management*. London: Prentice Hall, 2002.
- [5] Department of Transportation, USA. (1992). Transportation Implication of Telecommuting. [Online]. Available: www.dot.gov.
- [6] K. M. Eisenhardt, Building theories from case study research, *Academy of Management Review*, vol. 14, no. 4, pp. 532-550, 1989.
- [7] Ester Project. (2003, May). Company Telework. [Online]. Available: www.ester-project.net/it/docs.htm.
- [8] European Telework Online. (1997). Telework Outlook- 1997 and Beyond. [Online]. Available: www.eto.org.uk.
- [9] G. Gigi, Kelly Locke and Karen Locke, *The Telecommuting life: Managing Issues of Work*, College of William and Mary, USA: Home and Technology, 1999.
- [10] P. C. Godfrey, C.W.I. Hill, The Problem of Unobservables in Strategic Management Research, *Strategic Management Journal*, vol. 16, pp. 519-533, 1995.
- [11] G. G. Gordon, Industry determinants of organisational culture, *Academy of Management Review*, vol. 16, no. 2, pp. 396-415, 1991.
- [12] J. R. Gordon, *Organisational Behaviour: A Diagnostic Approach*. New Jersey: Prentice Hall, 1996.
- [13] J. D. Grimshaw and S. Kwok, *The business benefits of the virtual organisations*. USA: Idea Group Publishing, 1998.
- [14] E. G. Guba and Y. S. Lincoln, Competing paradigms in qualitative research. *Handbook of Qualitative Research*, 105-17, 1994.
- [15] M. Harris, Pearl's lustre lures our industry, *Sydney Morning Herald*, 7, 1997.
- [16] R. Hendrickson and J. Strader, Managerial Issues for Telecommuting. Success and Pitfalls of Information Technology Management, 210-216, 1999.
- [17] P. Herbig and A. Genestre, International motivational differences, *Management Decision*, vol. 35, no. 7, pp. 562-567, 1997.
- [18] N. Hodson. (2003). SW 2000 Telework Studies. [Online]. Available: www.noelhodson.com.
- [19] E. E. Jones and R. E. Nisbett, *The Actor and the Observer, Divergent Perceptions of the Causes of Behaviour*. New Jersey: General Learning Press, 1971.
- [20] H. H. Kelley and J. L. Michela, Attribution theory and research, *Annual Review of Psychology*, vol. 31, no. 3, pp. 457-501, 1980.
- [21] J. Kivela and F. Go, *Total quality management transfer: a case for Hong Kong hotels*. Neutral Bay, Australia: Australian Resource Institute, 1996.
- [22] J. B. Kotter and J.C. Heskett, *Corporate Culture and Performance*. New York: Free Press, 1993.
- [23] K. G. Lim, S. H. Thompson and W. Sook Hat, Working at home- Myth or reality: An empirical study of factors affecting attitudes towards teleworking. Research Paper Series, Faculty of Business Administration, National University of Singapore, 1997.
- [24] M. B. Miles and A. M. Huberman, *Qualitative Data Analysis: An Expanded Sourcebook*. Thousand Oaks: Sage, 1994.
- [25] J. Nilles, What does telework really do to us?, *World Transport Policy and Practice*, vol. 15, no. 2, pp. 1-2, 1999.
- [26] M. Q. Patton, *Qualitative Evaluation and Research Methods*. Newbury Park, CA: Sage, 1990.
- [27] C. A. Rodrigues, Headquarters-foreign subsidy control relationships: Three conceptual frameworks, *Empowerment in Organisations*, vol. 3, no. 3, pp. 25-34, 1995.
- [28] B. Shin, L. Sheng, and K. Higa, Telework: Existing Research and Future Directions, *Journal of Organisational Computing and Electronic Commerce*, vol. 10, no. 2, pp. 85-101, 2000.
- [29] C. Speechley and R. Wheatley, *Developing a culture for Diversity*. London: Hodder & Stoughton Educational, 2001.
- [30] Tools of Change. (2006). [Online]. Available: www.toolsofchange.com.
- [31] V. Venkatesh, Creating an effective training environment for enhancing telework, *International Journal Human-Computer Studies*, vol. 52, pp. 991-1005, 2000.
- [32] L. Whiten. (1996). Information Technology Let Workers Stay at Home. [Online]. Available: www.ddirectory.com/telecomm.htm.
- [33] R. K. Yin, *Case study research: Design and methods*. Newbury Park, CA: Sage, 1994.

Appendix

Organisational Demographics

Interviewee's position in organisation _____

Organisation's name _____

Organisation's address _____

Main function performed by your organisation: _____

Number of employees _____

Head office/ Branches _____

Now I have some general questions to ask in order to understand your function and main role in this organisation

Please tell me about the main business function in your organisation.

Years of experience in this industry _____

Years with the firm _____

Could you tell me about the hierarchical structure in your organisations e.g. whom do you report to about your work?

Do you have any documentation available that outlines this structure?

You conduct business transactions with clients electronically from home part of your workdays, correct?

How often do you perform this?

Are you not afraid that this might affect your future job promotions? Please explain your answer.

How do you handle your fear of resulting in loss of over time or pay for choosing to telework?

Based on your experiences, describe your typical workday at home, where you conduct business entirely on-line with your clients.

Can you share your experiences with me of how telework has been specifically useful in the area of conducting your B2C e-business transactions?

Research issues

Did the management choose you or did you volunteer to work from home part of your work time, i.e. telework?

Why? Is it something to do with the nature of your personality e.g. creative person, self-disciplined and an introvert?

What personal goals/aims do you expect for yourself through performing telework in this B2C e-business work setting?

So can I also interpret them as reasons for you to telework in this B2C e-business setting?

Are there any barriers faced in choosing to telework? What were the barriers?

Do you think this new style of work (i.e. working from home) fits into the current organisational culture?

If yes, please explain your choice of answer in detail.

If no, then do you think that the management is trying to transform its cultural scope to fit into this new work style?

If yes, then tell me how telework fits into the new cultural scope. Please explain in detail.

Do any of these personal goals/aims that you have mentioned reflect this organisational culture?

If yes, can you tell me which ones are they?

Would you say that if you were able to achieve these personal goals/ aims would you consider yourself successful in conducting your e-business transactions from home?

Do your achieved personal goals act as a proof of success in teleworking? If yes, please explain why.

If no, please explain why.

Are there any other factors that may act as a proof of success in teleworking in this e-business setting?

Were you able to achieve these personal goals/aims that you have just stated?

If yes, generally what factors assisted you in achieving each individual aim? If no, explain why.

Is there anything the management might have contributed in achieving these individual goals/aims of yours? (E.g. IT resources, management style/ supervisory technique, training and establishment of goals with the employees).

Are there any other issues, or any other factors you could think of?

What role does your management expect telework (work from home programme) to play in conducting e-business today and in the future?

Can I interpret them as the management goals that you need to achieve through teleworking in your e- business work setting?

Do you share these management goals with your organisation?

If yes, does this mean these management goals are also part of the reasons why you telework? Explain why.

If no, can I say that these management goals are only part of your management's reasons for you to telework in this e-business setting? Explain why.

Which management goals do you think reflects the organisational values/culture?

Am I right to say that achieving these management goals will make the management feel successful in allowing the employees to conduct e-business transactions with clients from home for part of their work days? Please explain your answer.

Do the achieved management goals act as a proof of success for the management in conducting telework among its employees?

Would you perceive the same success when you achieve these management goals in addition to the personal aims mentioned above?

If yes, would you consider it correct to say that you perceive proof of success in terms of the personal aims that you have mentioned, and the management goals? Please explain your answer.

If no, please explain your answer.

Were you able to achieve these management goals?

If yes, generally what factors assisted you in achieving each individual management goal? If no, please explain why.

What are the other factors you have contributed personally to achieve each individual management goal? (E.g. individual attitude, having knowledge in web design and e-marketing, better control over time and developing good rapport with clients on-line).

Is there anything the management might have contributed in achieving these individual management goals? (E.g. IT resources, management style/ supervisory technique, training and establishment of goals with the employees)

Is there anything else or are there any other factors you could think of?