10

ICTS AND ORGANIZATIONAL CONTROL ACROSS CULTURES

The Case of a UK Multinational Operating in China

Wei Liu, Chris Westrup
School of Accounting and Finance,University of Manchester, UK

Abstract: This chapter examines issues on ICT-related coordination and control between the head offices of a UK manufacturing multinational in England and Hong Kong, and one of its joint ventures in Mainland China. Giddens' theory of modernity and an anthropological view of culture are used to analyze and interpret the case. As an expert system, in Giddens' terms, partly leading to globalization (Giddens, 1990; 1991), ICTs facilitate the disembedding of information and communication transfer in different time-space domains without the limitation of place and therefore enable the head office to control its worldwide operations at a distance. However, this is not simply the 'death of distance' (Cairncross, 2001). ICT-enabled coordination is only effective when linked with other mechanisms such as expatriates and face-to-face contacts. Furthermore, the chapter shows that national culture characteristics appear to be more dynamic and less homogenous than the existing literature suggests. ICTs act as an arena where organizational culture change is often expressed.

Keywords: ICTs, MNEs, Disembed, Reembed, Expatriates, Face-to-face contacts, Culture.

1 INTRODUCTION

We live in a globalizing world where companies, consumers and governments interact in chains of association that encompass the world. One of the key components enabling these arrangements is seen as the advent of advanced information and communication technologies (ICTs) (see Castells, 2000; Gore, 2000) though clearly many other issues are of prime importance – for example world trade agreements such as GATT and now the World

Trade Organization. An investigation of ICTs within multinational enterprises (MNEs) can enable insights into one of the mechanisms of globalization.

How do these ICTs work and what needs to be in place for organizing using ICTs to take place over large distances, in different time zones and cultural milieus? This chapter seeks to give some tentative answers to these questions based on an in depth case study of a UK based MNE and one of its joint ventures (JVs) in China. This example is perhaps a limiting case in terms of using ICTs for two reasons – China, in general, remains a region where market disciplines are not well known and, for this JV, the MNE has refrained from implementing its sophisticated world wide SAP and in-house financial reporting systems preferring instead to manage through a regional office in Hong Kong. Thus, the debates around the use of ICTs in this case can illuminate issues on the conditions that promote, reduce, and are needed for ICTs to *work* in these circumstances. The chapter uses Giddens' work on modernity as a way to theorize this situation that as one expert system or disembedding mechanism ICTs disembed social relations in one place and reembed them in another place. Another candidate theory would be the work of Latour (see Latour, 1999) however Giddens' theory is chosen because it is used elsewhere in the IS literature (see Barrett et al., 2001), because it particularly addresses the dynamics of modernity leading to globalization, and because we wish to identify limits of Giddens' theorization.

A limited range of work on ICTs and MNEs exists (Roche, 1996; Torre and Moxon, 2001). King and Sethi (1999; 2001) argue that the design of information systems in MNEs is determined by their transnational strategies. However, they fail to show much more complex processes (rather than cause and effect relationships) and the social nature of MNEs' employing different mechanisms and strategies.

The literature of ICTs and culture (see Myers and Tan, 2002) tends to follow Hofstede's arguments (1991) that culture differences vary greatly between nations, and organizational culture is determined by national culture. But cross-cultural changes as well as conflicts have frequently increased during the rapid process of globalization. Nation states are facing more difficulties in restraining culture within their borders. Culture itself is not a fixed entity to explain what is happening, but the condition produced and used by people in and out of their activities. An anthropological view of culture is employed here to explain the dynamics and complexity of ICTs usage in this MNE.

The chapter begins by discussing theoretical concepts on disembedding, reembedding and culture; followed by descriptions of the research method and the case. The next step is one of analysis and finally conclusions and some implications are given.

2 MODERNITY, CULTURE AND ICTS

Giddens (1990; 1991) point out that three main dynamics of modernity are sources of 'globalizing' or 'world-embracing' modern institutions: the separation of time and space, disembedding mechanisms, and reflexivity. The separation of time and space is the primary condition of disembedding by breaking up the links between social activity and its embedding in the particularities of place. Furthermore, it enables modern organizations to control and coordinate social relations of many people physically absent from one another instead of using face-to-face interactions within one place.

Disembedding "means the 'lifting out' of social relations from local contexts of interaction and their restructuring across indefinite spans of time-space" (Giddens, 1990: p.21). Two types of disembedding mechanisms (also referred to as abstract systems) are 'symbolic tokens' and 'expert systems'. Expert systems are defined by Giddens (1990: p.27) as "systems of technical accomplishment or professional expertise that organize large areas of the material and social environments in which we live today"; he further explains that they "bracket time and space through deploying modes of technical knowledge which have validity independent of the practitioners and clients who make use of them" (1991: p.18). Expert systems therefore remove social relations from localized contexts and penetrate many aspects of social life in a continuous way. A typical example of a network of expert systems is hospitals. Doctors acquire professional expertise trained in universities. They can be allocated in various local hospitals and apply their systematized and codified knowledge to every patient. Other associated expert systems involve hospital departments and accountants.

Both types of disembedding mechanisms depend vitally on trust. Giddens asserts, "[t]he nature of modern institutions is deeply bound up with the mechanisms of trust in abstract systems" (1990: p.83, italic deleted). Trust is what derives from 'faith' in the reliability of a person or system. Trust in abstract systems needs faceless commitments, in which faith is developed and maintained in the working of knowledge, which, for laypersons, are largely unknown. Trust in persons involves facework commitments, which refer to "trust relations which are sustained by or expressed in social connections established in circumstances of copresence" (1990: p.80). "*Reembedding* refers to processes by means of which faceless commitments are sustained or transformed by facework" (1990: p.88), that is, "the reappropriation or recasting of disembedded social relations so as to pin them down (however partially or transitorily) to local conditions of time and space" (1990: pp.79-80).

In the ICT literature, Barrett and Walsham (1999), Barrett et al. (2001) are a couple of examples where Giddens' theory has been used. Hayes

(2001) and Hanseth et al. (2001) have also applied this form of theorization in a more local situation. This paper develops this literature by specifically exploring ICTs as expert systems removing social relations out of local contexts, transferring them into other time-space configurations, and facilitating organization control without presence. Meanwhile, we look at how cultural characteristics manifest themselves in processes of disembedding and reembedding in MNEs.

Culture is normally conceptualized as shared beliefs, values and concepts for individuals and groups to act and live. Hofstede's work is particularly well known as an exemplar of different types of national culture (Hofstede, 1980; cf. Myers and Tan, 2002). Our starting point is different: we look for evidence of cultural characteristics in action consciously and unconsciously made by members. Thus, we do not use culture as a resource to explain what is happening … they are doing this because they are Chinese (or English) … rather we look for the way culture is handled by people to justify actions, to argue against proposals and so on. In exploring culture this way, we find that cultural characteristics are both being reinforced (for example, national schooling develops national characteristics) and being changed (see Kuper, 1999). The implication for ICTs is that organizational members constantly (re) interpret, and (re) create culture while interacting with ICTs (Avison and Myers, 1995: p.52).

3 RESEARCH METHOD

Over one year period, one of the authors[1] conducted seventeen formal semi-structured interviews at four research sites (see Table 1): the UK head office of a UK manufacturing multinational called MAC (pseudonym), one UK factory, the regional head office in Hong Kong (HK), one Chinese joint venture named as SUB. Interviewees involved financial controllers, expatriates, general managers (GMs), IS manager, accountants, and administration/production/marketing managers. Most of interviews lasted about one hour and a half. A majority of the interviews in the UK were taped-recorded. Except for one, all the interviews in China were documented by extensive notes. Participant observation included visiting two factories in the UK and China, looking at how a financial reporting system works through an intranet, sitting at a temporary desk in the Chinese factory. Some internal documents were collected.

[1] The other author attended the initial meeting, two formal interviews and a factory visit.

Table 1. Formal interview list in MAC

Research Sites	Managers (e.g. financial controllers, expatriates, GMs)	IS manager & technician	Others (administration officer, accountant)	Total
The UK head office	3	1		4
The UK factory	2			2
The HK regional head office	1		1	2
SUB	7	1	1	9
Total	13	2	2	**17**

4 THE CASE

MAC is a large UK based multinational manufacturing automotive parts that began its investment in China in the early 1980s. At the moment it holds three JVs together with two associated undertakings in different parts of China (see Figure 1). The Chinese business only occupies two percent of MAC's worldwide business. SUB was set up in 1995. MAC owns 60% of SUB plus 30% from an associated undertaking, and 10% owned by two local partners.

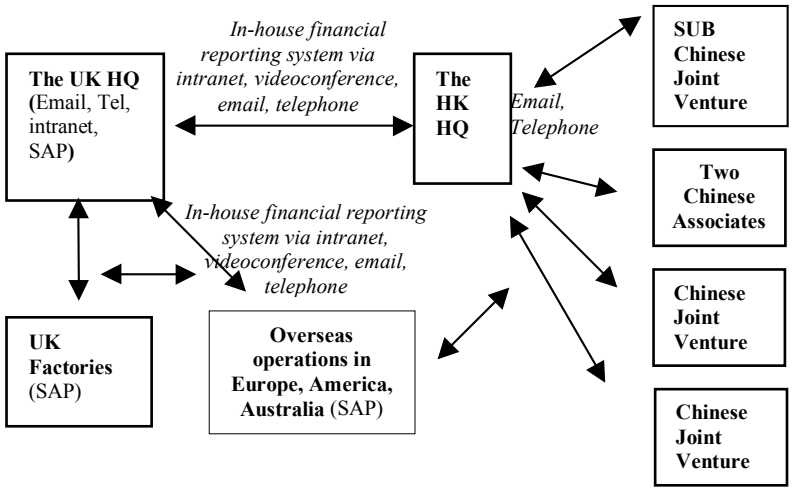

Figure 1: The organizational structure and ICTs of MAC and its relations to SUB in China

MAC's group headquarters in the UK delegates the control of the JVs to a regional head office in HK responsible for the business in China. An in-house accounting system standardizes and transfers all financial information via an intranet between the two sites. In addition, a country report is submitted by the General Manager in HK every month. Videoconferencing enables the GM to present the report in further detail. Occasionally, a few UK senior managers visited the Chinese factories. Chinese managers have not visited the group head office although they sometimes go to the UK market. The British GM and one accountant[2] based in HK, and two expatriates in Shanghai are controlling the three JVs and the associated undertakings. They are not involved in their detailed operations that are managed by local Chinese. Email, fax and telephone are major ICTs to contact and control the JVs in conjunction with the visits to each JV usually once a month.

The Chinese employees of SUB are employed directly by MAC and the local partners' influence is very limited. A strict work environment is enforced in SUB: e.g. signing one-year contracts and no factory accommodation is provided. The Chinese are eager to learn technology and management skills from expatriates and other sources, and are efficient in adapting them to the local situation. In the other two JVs, the local partners appoint the local management teams and, in these, expatriates have problems in implementing some MAC policies and transferring management skills.

SUB is still a recent undertaking. Its Western production technology is planning to continue for another six years without major renewal. Although SUB is the smallest among the three JVs, its management, production indicators, and cash flow are in good shape. SUB's factory buildings and facilities are newer and cleaner though less automated than those in the UK factory the authors visited. It supplies its products mainly to some domestic companies and partly to overseas customers in Europe and the USA.

The financial department of SUB is using domestic accounting software to prepare accounts. Parts of the accounts are manual. Final financial reports are reformatted in Excel and then emailed or faxed to the HK head office for the accountant to check them under the requirements of the group head office. The software only deals with financial accounts and has no function of calculating costs and executing management control in such areas as the material flow, purchase planning, sales and production. There is no costing information system connected with other departments notwithstanding there is an intranet in which some selective data can be shared between different departmental offices.

[2] A Hong Kong Chinese, her predecessor was a British accountant.

5 ANALYSIS AND DISCUSSION

We will focus our discussion on three areas: how ICTs act as an expert system (in Giddens' terms) between the two head offices and SUB; secondly on other conditions that need to be in place; thirdly, the desire of Chinese managers for an ERP indicating unexpectedly dynamic cultural characteristics.

5.1 ICT-Related Disembedding and Reembedding

Facilitated by ICTs, senior managers and accountants in MAC's head offices do not have to travel to their worldwide subsidiaries that might be thousands of miles away to obtain financial and non-financial information. Social relations between MAC's headquarters and subsidiaries are strongly mediated by ICTs which are the means of standardized information transfer such as financial reports, scorecards. Via an intranet, a standardized financial reporting system is used between the UK and HK offices. The system can be regarded as an expert system because it represents 'best practice' of management and financial accounting from the perspective of the head office (Jones and Dugdale, 2001: p.43). Its format includes classical profit/loss accounts, balance sheets and cash flow statements. An accounting manual is produced to guide how to use the system. At the HK end the accountant collects financial data from the JVs, revises and enters it into the blank areas of the system under fixed headings such as sales, operating profits, tangible assets. The whole procedure takes her about four or five days. After the data is inputted in the system, the people at the UK end can read the data a few minutes later through the intranet. They can recognize and consolidate the data in the same format as seen by the accountant; compare the performance of subsidiaries in different places, and the financial results with previous ones. Through the shared financial system, the activities in the JVs are accounted for the head offices over time and space, and communication between the UK and HK offices can have a common 'language'.

The intranet increases the disembedding of the financial language by further breaking down time and space links through place and can (re) combine the time-space configurations of information transfer. Email also has the same function of replacing one-to-one communication at the same time as well as at the same place, and increasing or delaying communication without the constraints of place and time. The financial controller in the UK commented:

Email, intranet systems certainly help us because we can turn around information we request over night. I can leave a request in the evening, and have an answer when I come back to work in the morning.

The intranet, the reporting system and the ERPs (SAP) used in MAC's European, American and Australian factories are not extended to the joint ventures in Mainland China. Five hindrances are seen as: the lack of Chinese employees' skills, worries about confidentiality with Chinese partners, the small size of the Chinese operation, the cost and complexity of the systems, and IT infrastructure. The small human resource in HK becomes a 'transfer center' to implement corporate strategies; monitor the performance of the JVs; and collect their information via email and fax monthly without staying there. Otherwise, for instance, it takes more than five-hour flight to one factory in Northern China from HK. On the other hand, visits are important for the GM. He explained:

Out of our five general managers [of the JVs and associates], only two speak English. So again email is not an easy way to communicate with them directly.

The disembedding and reembedding process via ICTs as expert systems cannot be impersonal and systematic totally out of local contexts. The power of their universalization and mobilization (Giddens, 1994: p.85) across time and space cannot get rid of language barriers and other influences such as human resources, local employees' abilities, confidentiality, size, and long travel journeys. Expatriates, face-to-face contacts, different interpretation and cultural values discussed later further illustrate the social and local importance of the process.

5.2 ICTs, Expatriates and Face-To-Face Contacts

In addition to ICTs and financial control, expatriates are another essential part of expert systems for the corporate head office to exert control. In the last few years, expatriates have brought their expertise developed in the UK or other Western countries to SUB employees. In particular two expatriates have lived in SUB for two years at different times since the setup of SUB. They have been an important conduit to transfer Western management and technology knowledge to those in the JV in a way that is hardly achieved through ICTs particularly when tacit knowledge is considered (Polanyi, 1967). In the JV, expatriates' working style or behavior communicates more vivid knowledge than manuals or technology itself. For instance, being easy

going with workers without giving themselves airs and encouraging Chinese employees to challenge them have impressed local employees a lot and expressed different cultural values. One manager recalled that one expatriate organized managers to play games to learn coordination and time management. Another Chinese manager was surprised that the same expatriate encouraged managers to be a coordinator rather than a professional technician who must know everything.

As mentioned before, visits are an alternative way to ICTs for the people in the HK office to control the JVs. The previous British accountant explained:

> *If I fax a question to one factory, I would generally get an answer. But unless I went there, sat down, discussed it and explained why I thought it was strange, dug into, for example, some measurements, what was included there and what was omitted.*

Business processes and work practices embedded in and through ICTs and financial control require extensive facework commitments from expatriates when they are reembedded in another different locale. It seems difficult to introduce an expert system and manual to Chinese employees without extensive coaching and socialization. The people in HK try to 'educate', as the previous British accountant said, local Chinese employees to observe the same 'game rules' or speak a similar 'management language' to ensure the trustworthiness of information that is understandable to the managers in the UK and themselves. On the other hand, it is essential for managers particularly in HK to question and investigate the source of abstract information disembedded from local contexts. Visiting the plants frequently is one major way to achieve that aim. If the people in HK failed to explain what differences lie behind common patterns, the managers in the UK would make wrong decisions while simply comparing numbers.

British senior managers, expatriates and Chinese managers have different understandings of the operation of SUB. The controller and the IT manager in the UK have never visited the JVs and their understanding is mediated by ICTs, financial reports and expatriates. The abstract information disembedded from SUB loses local meanings and contexts as discussed above. For instance, in a monthly report from the GM in HK, the British managers got two short sentences about the financial performance of SUB:

> *Return on Sales at 12%, and strong cash flow. A quality problem will have an adverse impact on profits later this year, but the result is still forecast on budget.*

The financial controller of SUB said that she and her colleagues spent a lot of time on, for example, collecting money. The three words of 'strong cash flow' do not disclose the process of that effort. In China, some customers do not want to pay money on time even if there are formal contracts. Strong personal relationships with customers could reduce the problem. The British controller and even some expatriates who have stayed in China for several years could not understand this and think that contracts (legal relationship) should be honored based on their experience in Western countries. Thus, we find that ICTs are an important part of expert systems linking the UK and HK head offices and the JV, but that the local contexts they link are themselves mediated by ICTs especially at the UK headquarters. We cannot find any pure 'social' relations that Giddens' theorization might suggest. For the ICT-enabled systems to be trusted to work they require both the presence of expatriate managers and the continuing shuttling back and forth of accountants seeking to standardize and control the ways in which data is entered into corporate systems. To explain more about the human side of this process, we move to the area of the interactions between cultural characteristics, and ICTs and other expert systems.

5.3 Chinese Cultural Characteristics and ICTs

As noted above, the collection of financial information is still made manually in SUB. The Chinese managers are very keen to have a small ERP type system for production and other functions. The major reasons to install an ERP are to control costs, improve production planning, facilitate information transfer, increase the materials and money flow, and formalize management. However, the GM in HK is not keen on the change because the system is costly and too advanced for the factory. The IT senior manager in the UK has a little knowledge of the Chinese JVs and is afraid that putting a system together with the global intranet in China would disclose MAC's technology know how to local Chinese partners although SUB should be regarded as a wholly-owned subsidiary rather than a JV. Moreover, the financial controller is worried about the abilities of local employees stating that there is no reason to put a complex system in the JVs since parts of accounting and production process are still manual, and there were a lot of difficulties in implementing SAP in the European business.

In the literature, Chinese managers are seen as preferring to low context information and hold information as a major instrument of personal power and avoiding ICT systems (see Martinsons and Westwood, 1997: p.224). In contrast, the Chinese managers in SUB are very keen on an ERP despite doubts from Western managers. The previous introduction of expensive

production technology by the Chinese side is beyond the expectation of the British side and the technology proves to be efficient in the factory. One aim of the call for an ERP is to reduce personal intervention such as information corruption by people. At the same time, the Chinese managers do not downplay the significance of relationships for business since they live in a Chinese society that does still promote relationships. They actively seek and maintain relationships with customers and government officials. But they do not want relationships to intrude on data collection and analysis within the factory. Thus, we find evidence of changing cultural characteristics that do not apply homogeneously across Chinese society, where change is in part connected with ICTs and the promise of more advanced ICTs. Equally, in the literature, there is an equating of western management with a preference for more formal and systems based approaches (*ibid*. p.217). We found evidence that some expatriates were able to recognize the importance of relationships in transacting Chinese business and were active in helping local government officials use the factory as a showcase. They were prepared to use a variety of approaches to influence Chinese workers rather than relying on standard business processes.

6 CONCLUSIONS

This chapter examined issues in cross-cultural coordination and control related to ICTs in MAC, a UK manufacturing multinational operating in China, using Giddens' theory of modernity and an anthropological view of culture. As an expert system defined by Giddens, ICTs facilitate the disembedding of communication and information transfer in different time-space domains without the limitation of place and therefore enable the head office to expand its business around the world and control its worldwide operations at a distance. However this is not simply the 'death of distance' (Cairncross, 2001). The ICT enabled co-ordinating mechanisms only 'work' when other features such as expatriates, face-to-face contacts and interpretations are present. For instance, the British accountant from Hong Kong spent considerable time going to these factories seeking to ascertain trust by making sure the figures entered into the systems follow established patterns.

Interestingly, ICTs in the form of ERPs and the in-house financial reporting system are seen not to work in China by MAC executives and so all systems between China and other parts of MAC are mediated through the Hong Kong office. Their reluctance to use ERP systems in China is based on a lack of trust of Chinese employees' ability to use these systems properly; in the costs of installing and maintaining the systems; in the difficulty in

training staff to ‘understand’ the ERPs. In short, the benefits of ICTs tend to flow from a trusted, well-trained workforce who can use these systems 'properly'.

On the other hand, Chinese managers are very keen to use an ERP system as they see it as an advanced Western technology that they would like to understand and which they believe would bring benefits to their company. This is in contradiction to many of the cultural characteristics presumed of Chinese in other analyses (cf. Martinsons and Westwood, 1997). It is interesting to compare the case of ICTs in SUB with that of the production technology being used at this site which is comparable with that in Europe, and which appears to be working without major difficulty. Therefore, ICTs act as an arena where organizational culture change is often expressed. Of course, we do not mean that cultural differences would disappear since political and local environments still require different actions.

Returning to the issue of ICTs as a mechanism of globalization set out at the start of this chapter, we would like to emphasize four features. Firstly, ways are needed to embed locally centered issues and then to disembed them: these are central to make ICTs work. This is an insight that Giddens' analysis illuminates. Secondly, that ICTs are also material artifacts continually rubbing up to issues such as upgrades, cost, infrastructure and so on. Only when these seemly mundane issues work does even the possibility of ICT-mediated interactions emerge. Thirdly, that ICTs, as expert systems in Giddens’ terms, are increasingly penetrating social relations in different locations. However, the seemingly ‘closeness’ through ICTs ‘filters out’ or misrepresents much of local culture and knowledge that occurs in different local contexts. Finally, though Giddens' argument centers on modernity originated from Western countries, we suspect that the appropriation of both technologies and management practices in domains such as China are likely to lead to reinterpretations that are far reaching and unknowable. Rather than homogeneity we will find the reassertion of locality surrounding the use of the mechanisms of globalization such as ICTs. This remains an interesting agenda for the future.

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About the Authors

Wei Liu is a third-year PhD student at the School of Accounting and Finance of the University of Manchester. He was born in China. His PhD research project looks at how the head offices of three UK multinational corporations employ ICTs and other mechanisms to control and coordinate their subsidiaries and joint ventures in China. Giddens' theory of modernity in particular is used to explore the process of globalization in the three cases. Wei has finished his extensive fieldwork at thirteen research sites in the UK and China and is at the stage of writing up his PhD thesis. He can be reached by e-mail in msryjwl2@stud.man.ac.uk

Chris Westrup is a senior lecturer at the School of Accounting and Finance. He is interested in the various aspects of development and ICTs; in the use of large scale systems ICT systems and their development. He can be reached by e-mail in msryscw@fs1.acc.man.ac.uk