Centre for Business and
Development Studies
Porcelænshaven 18
DK-2000 Frederiksberg
Denmark
Email: cbds@cbs.dk
www.cbs.dk/cbds

Human Resource Development in the Knowledge Economy

A Model for Analysing the Progress of Knowledge Development in Developing Country Firms

Sanne Lehmann

CBDS Working Paper Series
Working Paper Nr. 2, 2007

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A Model for Analysing the Progress of Knowledge Development in Developing Country Firms[1]

Sanne Lehmann, Post Doc
CBDS, Copenhagen Business School
slj.ikl@cbs.dk

Abstract:

This paper addresses the crucial call for upgrading to more value-added production in developing country firms in the light of increased global competition and suggests that such upgrading demands a shift in focus from investment in technology to investment in people, knowledge and learning. In this line of thinking, the aim is to propose a model for analysing the progress of knowledge improvements in developing countries as an outcome of the management of human, social and organisational capital. In this regard, the paper considers relevant practices and strategies in the context of developing country firms, the challenges that effect firms and institutions in this process, and the appropriate level and method of the analysis.

Keywords: *Knowledge Development, HRM, Developing Countries*

[1] A first draft of the paper was presented in a workshop in November 2006 at Copenhagen Business School with participation of scholars from Centre for Business and Development Studies and Centre for Strategy and Globalisation. The purpose of the paper is develop a theoretical model in order to carry out an empirical analysis of human resource development in Thai and Malaysian Service firms on the brink of the knowledge economy.

CBDS Working Paper Series
Working Paper Nr. 2, 2007 ©
March 2007

ISBN 978-87-92111-01-2

Editor: Henrik Schaumberg-Müller

Introduction

We are now living in a 'knowledge based' economy (Nonaka et al. 2000a), the engine of which is the increased pace of transformational forces due to a process of economic globalisation implying functional integration and inter-territorial dependence. Internationalisation of production have been facilitated by the rapid development of information, computer and telecommunication technologies and the greater mobility of capital and improvements in transportation, which made foreign investment easier, quicker and cheaper (Amin & Thrift 1994). The outcome of these developments is that competition between firms now has a more global character, meaning that it cuts across national boundaries and industrial sectors, forcing firms to compete simultaneously in all major markets (Ernst & Lundvall 1997). Thus, the long period of stable economic growth based on state governance and fordist production systems has been replaced by increased mobilisation of production and greater global competition.

This paper sets out to reveal the consequences that the transformation toward a more knowledge intensive economy and the increased pace of globalisation have for developing country firms and suggests human resource development as a constructive strategy to cope with the challenges. The intent is to develop a theoretical framework for analysing the progress of human resource management in developing countries taking into account the difficulties that might be encountered in the process given by the organisational and institutional context. The paper begins by arguing that firms and countries at the brink of the knowledge economy might benefit from an increased focus on human resources as an upgrading strategy. The focus in this paper will be on Southeast Asian firms, which due to increased globalisation now face different barriers in relation to the learning process than the East Asian countries did. Secondly, human resource management is conceptualised in relation to the shift to a more knowledge intensive economy. Considering the social and organisational context, a model for analysing firm level knowledge development and the derived human resource management objectives is proposed. The third section reflects upon the challenges facing firms and institutions in developing countries due to increased global turbulence and on the barriers in this regard. The last section proposes some guidelines concerning the appropriate level and method of the empirical analysis. Finally, in the conclusion avenues for empirical research on the progress of human resource management in developing countries is given. The aim is to use the analytical framework to develop concrete data that will highlight the creation, content and result of the process of implementing human resource management practices in developing country firms.

Human resource development. A strategy for developing countries?

The state has been perceived as the central agent in studies of development from the beginning of 'dependency' approaches to debates over the respective roles of states and markets in the East Asian 'miracle' and its recent demise, which has provided less analytical space to other actors of development. Nowhere is this relative absence more obvious than with regard to the firm in developing countries. Although work on foreign investment and development has been done, little of it has probed the organisational dynamics of the subsidiaries of the foreign firms and the impact on particular economies, and even less of it has dealt with domestic firms (Henderson et al. 2002).

This is not to say that the state and foreign investment is not important in relation to economic development.

On the contrary, several studies have proved that the role of government in terms of protecting, promoting and disciplining foreign and domestic firms in the industrialisation process has been crucial to economic development (Amsden 1989; Wade 1990). However, as Amsden notes, the performance of the East Asian development states would not have led to the outstanding achievements if the policies have not been coupled with a 'strategic shop floor' focus. The hypothesis about shop floor management is

> that leading firms in late industrializing countries, if they are to penetrate world markets, must adopt unusually proactive production and operations management policies. By pro-active we mean polices that assign high-quality managers to the shop floor and inspire initiative on the part of such managers to develop the skills of the work force and to improve process performance. Otherwise the gap in productivity levels with leading firms in advanced countries will not be bridged while the advantage in wage levels narrows (Amsden 1989 p.160).

Likewise, several authors have demonstrated that foreign investment might be a useful instrument for industrial latecomers facing disadvantages in terms of both markets (the lack of leading-edge markets and demanding users) and technologies (being dislocated from the main international sources of technology and R&D) to overcome entry barriers. Hobday (1995) shows that firms in the Newly Industrialised Countries (NICs) of South Korea, Taiwan, Hong Kong and Singapore overcame these disadvantages because linkages with foreign firms put them on a learning track:

> Within the firms, subcontracting and original equipment manufacture mechanisms acted as a training school for latecomers, enabling them to overcome entry barriers and to assimilate manufacturing and design technology. The needs of export customers drove the pace of learning and acted as a focusing device for technological assimilation, adaptation and innovation' (Hobday 1995 p.1171).

Even if state policy and foreign investment are important means of economic development in latecomers, it is evident that the skills of managers and employees on the micro-level to learn, innovate and exploit foreign market opportunities are essential to the success of macro-level government strategies and investment policies. However, the state-led and foreign investment sustained environment under which firms in the NICs transformed from original equipment producers to original design manufacturers or even brand-name manufacturers (Hobday 1995) is changing rapidly in pace with the globalisation process. First, the validity of the state-centred model of economic and social development has been undermined from below by the increased global flows of capital, labour, knowledge and power (Henderson et al. 2002) and from above by the increased negation power of supra-national organisations such as WTO and IMF (Amin & Thrift 1994), which have disciplined governments in developing countries to restrain from the use of protective measures and promotional privileges or imposing performance requirements on foreign investment that secured domestic industry a certain learning period. Second, the process of globalisation has also led to a different form of foreign direct investment based on fully foreign owned assembly facilities and free trade zone-based operations with little linkage development with domestic suppliers.

Even if linkages are formed between global lead firms and domestic subcontractors, this does not automatically leads to technology transfer and enables host country firms to achieve dynamic structural change. Foreign companies primarily invest in production activities to minimise the cost, while research and development activities remain in the home country, resulting in a stark ‘international division of knowledge’ (Felker 2003). Knowledge transferred in original equipment manufacture subcontracting, governing the relationships between Southeast Asian firms and foreign firms, first and foremost relates to the operation of the technology involved such as imposing requirements for formal quality improvements. Though this kind of knowledge is essential to upgrading of the production process, it does not contribute to value-added upgrading that can act as a source of sustainable competitive advantages. Furthermore, such arrangements entail certain restrictions in terms of the ability of the supplier to upgrade. Imported ‘turn-key’ technology, detailed product specifications of the customers and the safe and sheltered export market of the boom period in the1980s and 1990s implied that the suppliers did not experience the drive to develop essential design and products development capabilities, problem solving capabilities and marketing capabilities (Lehmann 2004). That is, in contrast to the experience of NICs, firms in Southeast Asia failed to impart durable advantages or to localise capabilities for industrial change.

As a consequence, the Southeast Asian countries now find themselves caught in a ‘structural squeeze’ between an ascendant China and more advanced NICs (Felker 2003). The financial crisis in 1997 revealed structural mismatches, outdated technologies and an economy unable to cope with increased global competition. As a result of expanded liberalisation measures in the wake of the crisis, the firms started to restructure their businesses emphasising social and organisational elements of production, and the governments began to formulate human resource development policies. Such developments mirrors the experience of western business organisations, which in the late 1970s began to engage in strategic human resource management as a response to the substantial increase in competitive pressures as a result of globalisation, deregulation and rapid technological change (Lawler 1999). Many of the same uncertainties from globalisation now face developing countries, which are at the brink of the knowledge economy. So the question is what kind of human resource strategies should be applied in support of firms and institutions in developing countries to cope with intensified global competition, which is hollowing out former competitive advantages?

There is no easy or automatic transition from latecomers to leader or follower, and no clear-cut model on how to narrow the gap. The argument here is that technology transfer does not have an independent role as problem solver. Introducing advance technologies can only take place successfully when it is accompanied by organizational change and competence-building among employees. As Hobday (1995) makes clear, the achievements of the NICs were built upon a long, difficult learning process. Learning defines the way firms build and supplement their knowledge base about technologies, products and processes and develop and improve the use of the broad skills of their work-forces. This is a qualitative, usually informal process involving upgrading of social and organisational aspects of production, reflecting the quality of personal relationships in relation to everyday practices and routines (Lundvall 2000). In the next section human resource management is conceptualised as the management of the social and organisational components of knowledge development and learning.

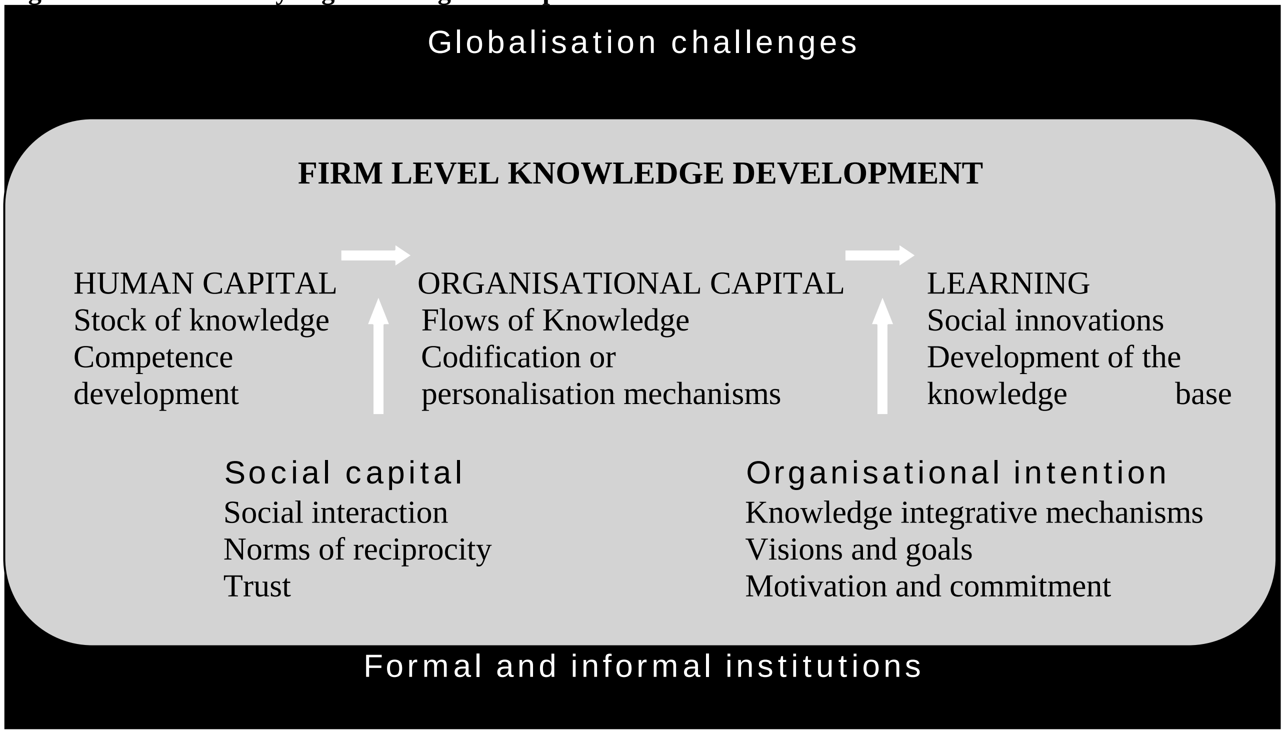
Conceptualising human resource management

The transformation from an economy mainly based on manufacturing to the knowledge economy has consequences for the firm. Knowledge has become an increasingly important element in the competitiveness of firms because other critical factors of production have been eroded by globalisation. Global accessibility of some 'ubiquified' forms of knowledge highlights the importance of localised, firm-specific and tacit knowledge as the basis of competitive advantages (Maskell & Malmberg 1999). In an era of intensified global competition, the organisational competence of the firm to learn and create knowledge and to utilise knowledge effectively has become the most important source of a firm's sustainable competitive advantage (Nonaka et al. 2000a).

Human resource management is defined in broad terms as a continuing social process, which focus on learning (what people can develop into) rather than formal qualifications (what people can do) and on organisational and motivational structures that leads to the restructuring of firms and management (Tayeb, 2005). For a better understanding of the concept of human resource management in the context of the shift to the knowledge based or learning economy, we need an adequate conceptualisation of this learning process. Nonaka et al. (2000b) have developed a sophisticated understanding of the knowledge developing process involving the tacit and codified dimensions as well as the locus and levels of knowledge. However, the aim at this point is to suggest practically ideas for effectively managing knowledge as a critical element in developing organisational competencies[2].

[2] To avoid misconception, individual explicit knowledge is referred to as qualification. Skills refer to individual tacit knowledge, which is practical oriented, and created through hands-on experience. Individual competence is the set of skills that an individual can use in doing a given task. Capabilities reside in groups of people in an organisation who can work together to do things, but is also applied more broad based to denote national competitive assets. Organisational competence is the ability of an organisation to sustain coordinated deployments of assets and capabilities in ways that help the organisation achieve its goals (see Sanchez, 2001).

Figure 1 Model for analysing knowledge development



Source: Inspired by Figure 1 in Felin & Foss 2006.

This study focuses on the process of knowledge development on the firm level, sketched out in figure 1. Knowledge development describes the inter-organisational process of identifying existing and accessible knowledge, in order to transfer and apply this knowledge to solve specific tasks better, faster and cheaper than they would otherwise have been solved (Christensen 2005). Variables that influence human resource management policies and practices can be divided into two groups: organisational factors, resulting mostly from the firm's history and its prior decisions, and contextual determinants, over which the firm has very limited control (Jolly 2005). On the level of the firm, human resource management is understood as a social process of learning involves the management of human and organisational capital (see e.g. Bontis 1999; Sanchez 2001), which is here conceptualised as the stock and flows of knowledge development. The learning process is, furthermore, influenced by 'drivers' of knowledge, which is referred to in the model as social capital and organisational intention. External variables, which are taken to influence knowledge development in the firm, are the process of economic globalisation and the institutional environment in which the firm is embedded. Economic globalisation has been explained above as the very reason and central motive for firms to make an effort to change and renew their organisations in a situation with increasing competition. In the following the remaining variables will be explained theoretically. The framework as such can be applied in all contexts. How exactly the variables influence each other, and what the determining factors are for the process of knowledge development remains to the analysed empirically.

The knowledge development process

Human capital can be considered as the stock of knowledge. An organisation does not learn. It is the members of the organisation who learn (Hildebrandt & Brandi 1998). In contrast to a traditional mass-production management perception of labour, in which a firm simply recruited workers with the necessary professional qualifications and skills on the market, the firm in the knowledge economy focuses on the creation of new knowledge and on problem solving rather than on standardised production, implying that the firm is dependent on highly educated and knowledgeable employees (Christensen 2000). Thus, the most important capital in knowledge intensive and service based firms is competences, referring to the actions and experience of the individual in relation to a certain task, situation or context (Høyrup 2002), which is defined as tacit knowledge. Such competences include the ability to recognise and value new external knowledge and maintain valuable and mutually beneficial relationships, to be conscious about one's own learning process, to be responsible and independent in the planning and performance of the work, and the ability to create new products, concepts and knowledge for the resolution of problems (Holmgren & Klokkerholm 2003). On this level of knowledge creation the managerial objective is to acquire talented people and to develop their professional, social, creative and learning competences. It is, furthermore, important that managers provoke and motivate employees to expand the boundaries of their exiting knowledge, try new approaches to problem-solving and contribute with critical know-how and know-why knowledge in this doing (Sanchez 2001). A key element in management of the learning process is to invest in absorptive capacity and prior knowledge in the firm through skill upgrading, advanced technical training and investment in research and development activities, which enhance the knowledge base and permit the individuals to make sense of and acquire new knowledge. An early lack of investment in a particular area of expertise may foreclose the future acquisition and development of knowledge (Cohen & Levinthal 2000).

Organisational capital deals with the mechanisms and procedures for knowledge sharing within the firm – or in other words focus on building the framework in an organisation to foster knowledge flows. In order to become organisational assets of the firm, the primarily concern of the firm is to develop, release and use knowledge tied to individuals effectively, and to put it into action to achieve some desired results in terms of products, processes and services. The organisational capital within the firm can be more or less constructive in terms of utilising the human resources to its fullest potential, depending on the organising principles by which relationships among individuals, within and between groups and among firms are structured (Bontis 1999). Thus, the way an organisation is structured will have a major effect on the rate of learning that takes place. Individual competence building based on daily activities as well as knowledge sharing is facilitated by decentralisation and formation of project and network types of organisation. Furthermore, autonomous employees, who are responsible for planning and performance of the work, must have access to the information required to do the job and to understand how their work becomes a part of the value-added process in the firm. The managerial focus is, thus, to co-ordinate the organisation of work, promote communication and integrate multiple competences to facilitate exchange of knowledge. In this doing a change toward flat organisations with strong focus on decentralisation and horizontal communication will improve knowledge flows and empower the firm to adapt quickly to changing opportunities (Holmgren & Klokkerholm 2003; Lundvall 2006).

Like individual knowledge, organisational knowledge can be codified as well as tacit. Codified organisational knowledge consists of public knowledge or information which has been stored in blueprints, recipes, written rules and procedures that are accessible to the entire firm. This is a mechanistic type of knowledge that tends to generate a unified and predictable pattern of behaviour and output. The abstraction of individuals' experience and knowledge into explicit organisational knowledge facilitates centralisation and control in the firm. Organisational tacit knowledge, on the other hand, resides in complex social relationships in the form of routines, practices and shared norms of a firm, which guide the behaviour, problem-solving activities and patterns of interaction of its members. It is socially constructed and interactive in nature and is based on shared beliefs and understandings, which enable the firm to function in a co-ordinated way. It is organic and dynamic, an emergent form of knowledge capable of supporting complex patterns of interaction in the absence of written rules (Lam 1998).

Hansen et al. (1999) builds on the two kinds of organisational knowledge in their depiction of two very different strategies for managing the flows of knowledge within various firms; codification and personalisation. Codification as a mechanism centres on the computer. Knowledge is carefully codified and stored in databases. It is extracted from the person who developed it, made independent of that person and reused for various purposes such as work schedules, benchmark data and market segmentation analyses, which allows many people to search for and retrieve codified knowledge. The strategy for knowledge sharing is to invest once in a knowledge asset, reuse it many times, and invest heavily in IT. In terms of human resources, the strategy is to hire new college graduates, and encourage the employees to write down what they know and to get those documents into the electronic repository. In contrast, personalisation as a mechanism focuses on knowledge sharing through direct person-to-person contacts between individuals who developed the knowledge. Knowledge that has not been codified – and probably couldn't be – is transferred in brainstorming sessions, and personal conversations. The challenge of the firm is to integrate the firm's competencies in new and flexible ways and to develop new competencies as they are required. The overall strategy is to charge high fees for highly customised solutions to unique problems. In terms of knowledge sharing and human resources the strategy is to invest heavily in building networks of people, to stimulate knowledge sharing through incentives, to invest moderately in IT and to hire MBAs who like problem solving. The choice between codification and personalisation is the central one facing all companies in the area of managing knowledge flows, reflecting the competitive strategy, and the type of social capital institutionalised in the firm.

The process perspective implies that it is impossible to evaluate the outcome of knowledge creation simply as figures on the bottom line or whether the firm has fulfilled the process of becoming a learning organisation. However, to overcome the harsh global competition, firms have to invest in long-term development of the knowledge base and competences – and not focus on short-term profit. Thus, performance should not be measured in financial terms or in terms of increased productivity. Instead, the focus is on the only irreplaceable capital and organization possesses, notably the knowledge and ability of its people. The productivity of that capital depends on how effectively people share their competence with those who can use it (Daniel et al. 2003). While knowledge is seen as an asset or stock of belief held by the individuals within an organisation, learning is a process representing flows that lead to a change in this knowledge base (Sanchez & Heene 2000). Learning is the way firms build and supplement their knowledge based about technologies, products and processes, and develop and improve the use of the broad skills of their work-force (Hobday 1995).

As the learning process of individuals is greatly affected by their interactions with other individuals in the group, the resulting change in the knowledge base of the firm might be unexpected (Sanchez, 2001). There is consequently no straightforward theory enabling scholars to predict the outcome of learning processes (Pavitt 2002). The outcome of the learning process is a broadening of the learning base, which might result in social innovations such as the development of new services and new forms of work organisation, communication or management, or it might be applied to problem solving activities, processes and products of the firm (Christensen 2000; Rasmussen 2002). All knowledge is either tacit or rooted in tacit knowledge, which cannot easily be converted into explicit knowledge (Ray 2005). It is exactly the tacit nature of knowledge that creates value, but it also makes it difficult to identify and analyse the process. Learning of the individuals in the firm is, thus difficult to observe, to accurate measure and to manage. It is, however, not the aim of the paper to evaluate the performance of the firms, but to look into the learning process itself, and to provide insights into the nature, mechanisms and determinants of social learning. Learning is not a straightforward process, and the result depends on the underlying social mechanisms or drivers, defined here as social capital and organisational intention.

The drivers of knowledge development

Social capital can be considered as the driver that supports knowledge creation – or, on the other hand, might work as a hindrance to knowledge flows (Bontis 1999). Communities with high social capital have frequent interaction, cultivates norms of reciprocity through which learners become more willing to help one another, which increase dissemination of information and knowledge sharing. Social capital highlights the central importance of networks of strong personal relationships that develop over a period of time. Social capital supports economic behaviour in providing a basis for cooperation, collective action, and decision-making (Daniel et al. 2003).

Social capital can promote better knowledge sharing due to established trust relationships, common frames of reference and shared goals. Shared norms, conventions, values, expectations and routines, which are essential to the production and sharing of knowledge, arise from shared experiences between individuals (Granovetter 1992). That is, the social context is not a once-and-for-all influence but is continually being constructed and reconstructed during interaction. The cognitive dimension is an important aspect of social capital as it is a prerequisite for meaningful communication. Efficient communication requires at least some sharing of context between the individuals involved in the exchange, for example shared codes and language.

Granovetter (1992), among many others, is especially occupied with how trust emerges in the interactive process between two parties and later on operates to regulate the relationship and facilitate co-operation in order to avoid opportunistic behaviour. Trust is generally defined as an expectation or belief concerning the likely behaviour of others. Asking why individuals act in economic transactions as they are supposed to, Granovetter answers, from an embeddedness point of view, ‘that the actors do so as a part of the regularised expectation that characterise their personal relations with their transaction partner’ (Granovetter 1992 p.42). That is, continuing social relations make behaviour predictable. This kind of trust found in social exchange is referred to as goodwill trust, which is defined as a mutual expectation of open commitment to each other. Organisational group members also need to have mutual confidence that the other part is capable of fulfilling promises made. Having confidence in that others know what to do, are motivated to do it, and are competent to do it is referred to as competence trust (Seko 1998). As tacit knowledge cannot be separated from the person or firm containing it, trust needs to be established between business partners for organisational learning and knowledge sharing to take place. Hence, centralisation of decision making authority or the existence of a dominant managerial coalition, which resist power redistribution, may block the utilisation of the full potential of the organisation’s human capital (Bontis 1999).

In short, social capital is defined as a common social resource that facilitates information exchange, knowledge sharing, and knowledge development through continuous interaction, built on trust and maintained trough shared understanding. Thus, management competencies denote a comprehensive talent to create a corporate culture to ensure a process of collective learning and internal co-ordination of the organisation (Sanchez & Heene 2000). First and foremost, the efficiency of knowledge sharing activities should be enhanced by creating a high density field of interaction across functions, such as team work, job rotation, regular meetings and training activities, which operate to create knowledge overlaps and develop code keys necessary for qualified communication. However, outstanding and trustworthy relationships only produce knowledge, if the firms have a strategy for developing the stock of knowledge and a strategy for absorbing and recognising new knowledge, assimilate it, and apply it to commercial ends. This is taken to be a function of the organisational structure of the firm, how employees are motivated, and not least the leadership and commitment of the managers (Nonaka et al. 2000a). Such ‘strategic knowledge development’ is considered the second driver, referred to as organisational intention.

Organisational intention implies that the top-managers reflect on what is meant by ‘managing’ the knowledge development process. If management has the ambition to give managers complete control of what employees learn, ‘knowledge management’ would make a lot of damage to the dynamic performance of the organisation. Little space would be left for individual and collective creativity and for the use of intuition. The alternative is to establish ‘framework conditions’ – both organisational and cultural - that promote efficient use, creation and diffusion of knowledge and then to leave the process to evolve as best as it can (Lundvall 2006). Thus, the role of the top management is not to control, but to stimulate, to provide strategic direction and encourage organisational learning.

An important element is to increase the involvement of the employees and mobilise knowledge creating activities, which require that the management delegates responsibility, motivates and inspires, and creates an incentive system. Employees must be motivated to perform in a coordinated and goal oriented way. Ostherloh and Frey (2000) argue that intrinsic kinds of motivation are more conductive to the generation and sharing of tacit knowledge than extrinsic motivation. Extrinsic motivation, such as pay-for–performance linking monetary motives to the goals of the firm, might imply that actors only focus on the rewarded aspects of the job. Control, monitoring and commands reduce the speed of learning, and have a tendency of ‘crowding out’ intrinsic motivation. Instead motivations, required in knowledge-based production should be designed to satisfy self-interested behaviour and needs of employees, including self defined goal but also emotions such as those associated with friendship, empathy, trust and loyalty. Such intrinsic motivation can be achieved through participation as a coordination mechanism and personal relationships as preconditions for establishing trust and loyalties in team based structures, for raising the perceived self-determination of employees, and to ensure agreement on common goals. Kogut and Zander (1996) also point to the role of identity in the creation of social knowledge that supports coordination and communication. The challenge for the management is to provide the right kind of motivation for specific tasks, and to balance between intrinsic and extrinsic motivation to support the long-term goals of the firm.

Goal seeking is, furthermore, emphasised as an important underlying mechanism of organisational action (Sanchez 2001). The task of the top-managers in this regard, is to integrate the knowledge of the organisation into a coherent vision of the goals the organisation could or must pursue, and to coordinate assets and capabilities in this regard. In this doing managers must lead through the power of their ideas, not the power of their positions. New knowledge creating activities often show signs of being a ‘management fashion’ and thus risk getting only rhetoric importance without affecting activities at the technical core of the organisation (Christensen 2000). Such an approach indicates that the management has not reflected on the role of knowledge as an important resource in the firm. When the environment is changing rapidly, there is a tendency to focus on short-term profits and ad-hoc planning, which provide little opportunity for long-term investments and reflection, which are core elements of the learning process. However, new value based management systems should not be applied to firms in immediate crisis, as it is very difficult to motivate employees in an uncertain environment (Ipsen 2006). This is the dilemma embedded in the learning economy (Lundvall 2000), which forces the managers to consider the benefit of short-term, ad hoc strategies or long-term knowledge development against the costs and environmental reality when planning the overall competitive strategy.

To accomplish all these objectives, it is important that the managers reflect on their own work processes, concept of knowledge and beliefs in relation to learning and develop a vision of knowledge, which synchronises the entire organisation regarding what kind of knowledge it has to create, and fosters commitment on the part of the individuals and groups involved. To establish a learning process and a learning culture requires talented managers with personal competences such as experience, wisdom and creativity. Creative competence denotes the ability of a person, given the necessary resources are available, to implement significant changes. This demands that the person has a feeling for the conditions and development of the industry, has the ability to transfer his (or hers) experience to new contexts, understands that learning is a gradual process involving failures, and is willing to invest in long-termed goals, and has the discipline and breadth of view to keep the focus in the process (Rasmussen 2002). As the core values of the firm have moved from tangible to more intangible resources, the leaders increasingly have to move their focus to the management of soft variables such as relationships, motivation and intention.

In summary, human resource management is a strategic framework for change, which focuses on the resourcing needs in the firm. That is a set of overriding assumptions, frameworks, techniques, models and assessments that leads to the restructuring of organisational structure and have a pivotal role in ensuring the efficient operation of the firm’s primary operation of production or service activities. Such elements of the social structure are, in contrast to resources such as technology and economy of scale, not easily imitated, which imply that the utilisation and development of such firm level knowledge can be a method to deal with new challenges and demands and a source of competitive advantages (Larsen 2003a). However, it is also ‘sticky’ and ‘path-dependent’, implying that its generation and application can be constrained by already established organising principles and patterns of social relations (Lam 1998). The next section considers the influence of informal and formal institutions on the process of knowledge development. The focus is on institutions with might work as barriers to knowledge development such as traditional organising principles, especially the way authority is expressed, and the role of formal institutions in a Southeast Asian context.

The institutional framework

In the shift from labour-intensive production, focusing on training, to more knowledge intensive forms of production, where focus is on knowledge development and sharing, firms in Southeast Asia face many challenges given the deep rooted hierarchical organisational principles. Very generally, the organisational configurations in Southeast Asian firms are based on Chinese business practices, which have been spread all over the region by the mass influx of overseas Chinese business groups (Hamilton 1996). Chinese business systems are largely family-owned and family-controlled firms and the patriarchal control of the family is extending to employees. Chinese cultural values also work as codes of behaviour reflected in the personal relationships (Wei-ping 2000). Asian people show a great respect for rank and are very aware of hierarchy, meaning that authority and communication are top-down affairs. In order to maintain harmonious relationships, an employee must show ‘appropriate behaviour’, ‘be polite’ and ‘lower himself’ allowing the senior manager to be the authority instead of expressing his own opinion. In general, the judgement or knowledge of a senior or higher ranking person should always be trusted. A superior is in return supposed to adopt a caring attitude towards subordinates (Dubey-Villinger 2001).

That is, the main institutionalised mechanism of knowledge sharing in Southeast Asian firms is ‘authority’ and knowledge is primarily regarded as a personal quality that can be created through hiring of new employees and training. Strategies based on top-down, one-way communication and control are generally short of feedback and reflection mechanisms, and failures are more often tabooed than seen as a possibility to learn. Knowledge centralisation and authority as the guiding mechanisms might work as the logic behind scientific management governing very mature production. However in knowledge intensive firms, the hierarchy is not an effective coordinating mechanism and should be replaced with delegation of authority and responsibility to the individual employee (Christensen 2000; 2005; Husted & Michailova 2000).

Thus, it requires a wholesale change of the way knowledge is conceptualised by the top manager or owner and a reorganisation of old structures in order change the way knowledge resources of the firm are utilised to the better. That is a change from codification as a knowledge management strategy to personalisation in the conceptualisation of Hansen, et al. (1999). It is, however, very difficult to change old successful practises influenced by informal institutions and prior decisions even if they are hindering future success. Ahlstrom et al. (2004), for example, demonstrate that the same characteristics that have promoted success in traditional, slow growth industries of overseas Chinese entrepreneurs hinder firm success in faster growth sectors of the economy. Habits and routines embedded at the individual and organisational level in the firm also make it difficult to absorb new knowledge. In general, the knowledge base is reproduced because individuals as well as organisations encounter an often unconscious resistance to changing the conceptions, habits and representations that have been conceived of as the truth (Hildebrandt & Brandi 1998). Consequently, knowledge development sometimes involves breaking with the past and creating new opportunities by deviating from traditions.

Learning is not simply a matter of the application of knowledge in productive activities, but also of transforming and adjusting societal institutions to the new global environment. Especially in the context of developing countries, formal institutions need to take a lead in the learning process to approach development challenges. For a strategy based on pursuing dynamic improvements through enhanced knowledge creation to meet the challenges of globalisation, formal institutions must emphasise inventions related to human resource development. This includes formal education and training, the labour market dynamics, and the organisation of knowledge creation and learning within firms and in networks, as well as reproduction and accumulation of valuable social capital governing trust relations and patterns of loyalties and social networks (Lundvall & Maskell 2000). Investment in the absorptive capacity and learning interface of future employees should be matched by investment in a domestic innovation processes, for the population with good technical skills not to go abroad to seek better opportunities (Wamae 2006).

Whether the market or the private sector has the main responsibility regarding formal higher level education and training has been immensely debated in relation to economic growth in Asia. In the East Asian NICs a set of government strategies and associated institutional structures in the field of education and training played a crucial role in ensuring that economic growth could proceed without employers experiencing severe skill shortage, which permitted a switch towards a high-skills growth path. Intensive dialog between professional education and training agencies, super-ministries and private firms provided the institutional mechanisms necessary to make judgements about the future skills needs and to ensure that such needs were translated into specific education and training targets. As employers depend on workers with high levels of general education and skills in team-working and problem solving, programmes were set up that targeted on-the-job and work-based training in addition to specific technical skills. Programs were also launched to ensure lifelong learning and training of low skilled and older workers. To finance such programmes and ensure a willingness of the employers to engage in the employability of the workers, Singapore introduced the Skills Development Fund, a tax levied on low paid labour to fund those programmes. In the NICs education and training policy were furthermore linked to strategic intervention allowing the economies to grow rapidly with high levels of research and development in selected industrial fields (Ashton et al. 2002).

In Southeast Asia, the private sector has been responsible for filling skill shortage and training gaps. As a result, shortage of critical skills continues to plaque the economic transition to more skill and knowledge intensive activities. Furthermore, low levels of technological development are largely the legacy of past policies that failed to provide state support for firms with potential for upgrading their technological capabilities. Rather than developing local capabilities, FDI has been the main source of technological acquisition. Private firms try to overcome shortcomings on the labour market through the creation of internal labour markets based on selection of talented candidates, career development training and development programmes from within and sponsorships to study abroad as the case with Siam Cement in Thailand (Wailerdsak & Suehiro 2004). The shortage of critical skills has also been circumvented by the practice of recruiting executive managers from abroad, going abroad to take a university degree or through trade in educational services such as distant learning programs or establishment of foreign universities. Malaysia has been particularly active in this process. Currently one of every five workers in Malaysia is a foreigner, more than 28 percent of tertiary students were studying abroad between 1989 and 1993 and a huge expansion of private higher education has taken place (Kanapathy 2000; Phillips & Stahl 2000). However, such approaches cannot guarantee to satisfy public demand in terms of quality provision and specific skill demand.

This suggests that the state should take the lead in the shift to higher value added growth sectors, including being on the forefront of economic development, developing close relationships between the private sector and state agencies, securing funding and provision of training and strengthening the capacity of decision-makers and technocrats in government agencies. In terms of industrial policy, there is furthermore a need to set up frameworks and goals to support the management in private firms in the process of developing learning organisations. Furthermore, the formal educational system should engage in developing the social capital such as the ability to learn, interact and take responsibility, which are core element in the knowledge economy. In Southeast Asia social institutions such as subordination to authority and methods of cultural control are likely to suppress values like openness, empowerment, risk taking and responsibility (Kamoche 2001). Likewise traditional styles of human resource management rooted in personalism and social relationships should be replaced by more flexible employment systems in which employment opportunities are based on merit and performance rather than connections and personal characteristics (Lawler et al. 1997). The firm does not have much influence on the formal and informal institutions in the specific society. However, it does not imply that the institutional context is determining, but negative impacts on the knowledge development process have to be circumvented by proactive policies and strategies within the firms. Shortage of high qualified labour on the formal labour market or social mechanisms such as top-down decision-making structures, for example, might be overcome by the creation of an internal labour market and by strategies of restructuring and focusing on developing firm level social capital.

Empirical analysis of knowledge development

The embeddedness of knowledge in social and institutional practices implies that it is difficult to transfer practices between various contexts. There is no best practice, but not 'anything goes' (Lundvall & Maskell 2000). Some organisational patterns and managerial objective work better than others to promote knowledge development. It is therefore important to provide a conceptual and analytical framework for understanding the impact of human resource practices on various outcomes of knowledge and identify practices that are particularly effective with respect to steering knowledge processes in desired directions within specific contexts. In this doing it is necessary to apply an individual-level, micro-foundation to explain the emergence, existence, persistence and change of organizational knowledge sharing mechanisms of the firm (Felin & Foss 2006). Thus, this paper considers the understanding, support and vision of the top-management regarding knowledge development, the strategic and operational role of the manager of human resources and the responsibility of the individual employees towards their own learning and development (Larsen 2003a). It should then be possible to identify the kind of social capital and organisational intention that either hinder or promote the knowledge development process.

First, the role of the top-management has changed in the knowledge intensive economy. The top-manager is not necessary the one who possesses the most vital knowledge. Instead, the main competence of the manager is to develop an integrative and interpretive framework to steer the knowledge development process and to inspire, motivate and supervise the employees in order to enhance knowledge sharing. The most critical managerial tasks and challenges in this regard are:

- To identify and surface the beliefs implicit of the firm's knowledge base and expose them to questioning in relation to their validity in terms of future competitiveness.
- To facilitate clear communication through the establishment of a corporate language of key terms supported by clear definitions and fully explained visions and corporate goals.
- To retain the knowledge worker and his tacit knowledge by offering interesting work and development projects, training and career opportunities.
- To evaluate and monitor the process, decision-making and results, and integrate identifiable forms of individual managerial knowledge (Sanchez 2001; Zimmer 2000).

While the top-management articulate visions and goals and take care of the structural design, it is the responsibility of the human resource manager to formulate and implement the activities that can bring the firm to the intended future. It is, thus, important that the top-management defines the role of the human resource function and specify the division of labour between them. The new mandate of the human resource manager is to take on the role as an agent of change, which ideally implies a seat on the board of directors to influence strategic decision-making as a strategic partner (Harrison & Kessels 2004). In contrast to the traditional personal management role, where the main task is to hire and fire, retain and train individuals, the human resource professionals need to take a lead in the planning and implementation of structural change. In relation to the turn a more knowledge intensive economy the vital tasks of the human resource management professionals are:

- To become ‘learning architects’. That is to manage the learning process focusing on social capital manifest in the interrelation between the firms and its members and the internal and external environment of the firm.
- To determine the kind of competencies needed to accomplish the overall strategy and to adapt the human resources of the firm to shifting external challenges.
- To identify the motivational patterns that can be used to facilitate knowledge sharing, especially providing incentives to attract the most capable knowledge workers, to engage individuals in the knowledge sharing process and to stimulate employees to acquire skills in the field of learning and problem solving, and develop their capacity for further learning.
- To ensure that new learning competencies are properly embedded within all levels and functions of the firm and all efforts are followed-up in the daily practice through explicit visions, strategies, and values and quantifiable supporting systems (Christensen 2005; Harrison & Kessels 2004; Kamoche 2001; Larsen 2003b; Rogaczewska 2003).

However, the implementation of new strategies are affected by understandings and actions of the employees or even resisted by the employees, especially where that change is imposed from outside though legislative or regulative authorities (Kamoche 2001). In order to implement new organisational practices, middle management assumes a strategic coordinating role to mediate between the top and the chaotic reality of the front line. The middle has to break down the values and visions crated by the top into concepts and images that guide the knowledge-creating process (Nonaka et al. 2000b). Moreover, as it is the experience of the individual employees that constitute the stock of knowledge, an important condition for knowledge sharing is that the potential receiver has a sufficient amount of related and prior knowledge to absorb new knowledge and that individuals with valuable competencies are ready to share their knowledge and are motivated to do it (Husted & Michailova 2000). The tasks of the knowledge workers are:

- To use their professional and personal knowledge and experience in interaction with other employees, requiring competencies such as social competence (to enter into constructive and mutual relationships), learning competence (to be aware of ones own learning process), communication competence (dialogue, transmission and the mastery of language and IT systems) and problem solving competencies.
- To be creative and able to manage their work independently in a responsible and flexible way as knowledge workers are not easily controlled.
- To set one’s sights high regarding own learning in correspondence with the requirements, information and directions for the learning process is given by the top-management (Christensen 2000; Holmgren & Klokkerholm 2003).

It is the intention to subject the knowledge development model to practice. Knowledge development is considered as the rationality behind new strategies of human resource management and organisational restructuring, as knowledge as a resource has increased in importance to retain competitive advantages (Christensen 2000). The model is intended to inspire an empirical analysis of the challenges facing firms in developing countries, the strategies and organisational changes made to meet these challenges, and the results and consequences in this regard. A qualitative research design is preferred as the focus ought to be on real-life perceptions, opinions and experiences of various managers in the field and on the actual strategies pursued. Furthermore, the impact of the institutional environment and supportive agencies on the interactive learning processes have to be taken into account, although the main analytical focus is on the micro-level.

As firms differ in their application of human resource management practices as a function of size, activities and knowledge strategies (Laursen & Mahnke 2001), it is important to reflect about what type of firm will be appropriate for an analysis of knowledge development. The firms selected have to be relatively large, as small firms tend to manage their human resources informally. Clearly, the analysis focuses on knowledge intensive firms, which is defined here as a firm operating in a competitive and turbulent environment, which demands flexibility and ability to learn and transform itself to survive. Knowledge workers who control professional and personal knowledge, which is continuously reviewed and revised, assume an important role for the competitiveness of the firm. In this regard, an important selection criterion is that the firm employs a critical mass of knowledge workers, the knowledge flows of whom need to be co-ordinated and managed. Firms in developing countries, which are part of the restructuring process toward a more knowledge intensive economy, are more likely to be engaged in service activities than industrial production. In service activities, the factors of production to ensure the provision of services acceptable to the global economy are human knowledge, social competencies, organisational and motivational measures. Furthermore, a new study indicates that foreign direct investment is increasingly shifting towards service activities in developing countries (World Investment Report 2004). Thus, an interesting perspective according to the service industry is to investigate how such new developments affect the outlook of domestic firms. The likely prospect is that some of the firms in the analysis have successfully transformed themselves and have become knowledge intensive, some will be in the process and some will fail. Such differences in the transformation process will produce data to discuss the driving forces that lead to human resource upgrading and to identify the barriers to the process.

Conclusion

Research on human resource management has received renewed interest in Southeast Asia after the economic crisis, which in many ways worked as a catalyst for corporate readjustment. This paper focuses on human resource investment in domestic firms as a strategy toward more knowledge-based organisations and renewed economic growth. Although a bulk of literature on human resource strategies and policies on the area already exist, it mainly just re-invent the concept in analysis of conventional issues such as industrial relations, labour law and trade union policy (e.g. Hutchinson & Brown 2001) or tend to focus on human resource strategies in transnational corporations (e.g. Pedersen et al. 2003). It is therefore an important imperative to study the institutional and organisational determinants that influence the upgrading of human resource practices within domestic firms in the region, which is still mostly uncharted territory.

The argument here is that the development of domestic human capabilities is a necessary constituent of enhanced competitiveness on a national scale as well as sustained foreign direct investment flows.

Human, social and organisational capital as a means of managing new global challenges confront firms in developing countries with many barriers that have to be overcome, but also provide new opportunities to tap into hitherto unacknowledged human resource pools. If development and upgrading of domestic human capabilities is achieved, the growth in Asia might be back on track, but on a more stable foundation than the 'miraculous' growth before the crisis. For the immediate future, it is therefore important to develop and test theories that explains and clarifies the process of knowledge development on the firm level, and provide empirical evidence of the progress and process of knowledge development. In particular it will be important to:

- Focus on social and organisational processes, which have not been the subject of hitherto research of human resource management in an Asian context.
- Assess how well equipped managers on various levels of the firm appear to be in relation to the tasks currently facing them.
- Identify human resource management practices that either facilitate or inhibit learning processes.
- Examine the extent to which knowledge development is an outcome of firm-internal processes entirely or relationships with external actors (institutes, customers, suppliers and consultants) too.
- Understand the specific institutional, cultural and economic context within which managers develop their chosen approach for managing people, and the specific organisational difficulties that firms in developing countries have to cope with.
- Consider the possibility of domestic firms engaged in service activities to compete with foreign firms, the presence of which increased after the crisis.

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