Economic Transition and Management Skills: The Case of China

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Abstract

A secondary effect of China's economic transition will be increased demand for management personnel, particularly those with a strong appreciation of managing in a market-based economy. Traditional Chinese management approaches have been primarily shaped by experience under a centrally planned economy. We argue this has led to a lack of understanding of market-oriented management approaches. As the Chinese economy has evolved and developed, the shortage of management personnel able to understand and master Western management skills in marketing, financial management, inventory control, human resources, and international business rules has become increasingly evident. This paper presents an assessment of likely skill deficiencies within four key sectors: the SOE sector; the private sector; foreign-owned and joint venture firms; and the emerging 'high technology' sector. The assessment identifies the most deficient skills as effective HRM, financial management, intellectual property management, marketing and strategic planning. Potential sources of the supply of management skills are discussed. The paper concludes with some implications of the analysis for international business educators.

I Introduction

For any economy to grow and develop, key resources and capabilities are essential. Research over many years has highlighted the importance of land, labor, capital and entrepreneurship. A modern complex economy places increasing demand on the key factors of information and skilled labor. Since such economies depend critically on market processes, current development emphasizes the creation of appropriate market institutions (including legal, financial, and regulatory) and high levels of organizational ability. Indeed, there is growing recognition of the importance of so-called 'soft' technologies, organizational and management skills, over traditional hard technologies such as scientific and engineering know-how. A high level of technological know-how is of very little value if it cannot be translated into commercial value.

Since the start of economic reform in 1978, the Chinese economy has enjoyed dramatic growth. In 1993, China's economy was the worlds third largest and if recent growth rates are sustained, China is expected to surpass the USA and Japan to become the world's largest economy within this decade (Child & Lu 1996). An important by-product of economic reform is the growing demand for management personnel to manage an increasingly diverse, sophisticated and complex economy.

International competition has forced transition for many economies while others are trying to catch up in the process of structural adjustment to open-type market policies. China chose a "pragmatic" transition approach to economic reform from its centrally planned economy to a market economy, nevertheless an accelerated one compared with economic evolution in the West. China's specific "socialist market economy" is a capitalist economic system and an autocratic, communist political system.

As the Chinese economy has evolved and developed as a market system, the shortage of management personnel able to relate to Western management skills in marketing, financial management, inventory control, human resources, and international business rules has become increasingly evident. Furthermore, this shortage is intensified with China's accession to the World Trade Organization (WTO) at the end of 2001.

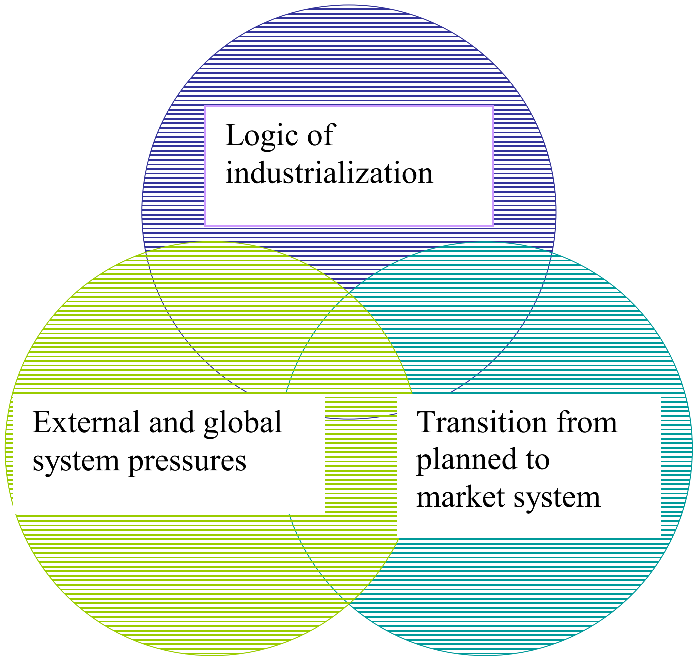
For anyone involved in the study and teaching of international business, meeting the management needs of China is both a significant conceptual and practical issue. The aim of this paper is to explore these issues and to develop implications for the field of international business.

The paper presents a conceptually based assessment of emerging management needs and skill deficiencies in China drawing upon three key concepts. These are illustrated in Figure 1. As Figure 1 shows, there are three sets of inter-related forces driving change in the Chinese economy. The first set of factors is those linked to the process of industrialization. This concept draws on the so-called 'convergence hypothesis' (Kerr et al 1973) which suggests that industrialization brings inevitable changes in economic and social life as industrialization proceeds. The alleged 'convergence' refers to increasing similarity between industrialized societies. For Kerr et. al. and for Bell (1973) the primary driver of change is technology and the growth in economic and social differentiation that this brings. Changes in the structure of industries (growth of larger, more complex organizations) necessitate a more elaborate division of labour, including the growing professionalism and specialization of management. This, in turn, creates increased pressures for skill development and a rational allocation of skilled labour.

The second part of Figure 1 highlights the reality of industrialization within China is occurring within the context of a global economy. This means that economic development is not occurring in isolation – China is significantly impacted by international considerations. Key among these are the forces of liberalization and globalization as well as policy and regulatory prescriptions emanating from international institutions. The key influences on China in the near future are likely to result from membership of the WTO.

At the same time, the third component of Figure 1 illustrates that China is also involved in transition from a planned to a more market-based economy. As the role of market agents and institutions increases, the demand for specialist professional personnel also increases. This part of Figure 1 incorporates the unique transition path that China has adopted and the influence of cultural factors on the industrialization process.

Figure 1 Conceptualization of Forces Driving Economic Change in China



It is important to clarify the methodology which underpins this assessment. Using the above conceptual framework we hypothesize the likely areas of skill deficiency through a comparative assessment of the expected demands of an increasingly sophisticated and complex Chinese economy placing greater reliance on market forces and processes, and the stock of skills likely to exist under a centrally planned system. Two limitations follow from this approach. The first is that, at this stage, these are potential, not actual deficiencies. Empirical work is required to substantiate these expectations. Our contribution is to provide a foundation for subsequent work. Second, our discussion is limited to the area of skills. We do not consider knowledge, abilities and other characteristics that are germane to successful management practice. It is also important to note that we are not advocating the uncritical adoption of Western style management approaches within China. Rather we suggest that the changing nature of the Chinese economy will make such approaches increasingly necessary and that China's integration within the global economy means that their influence, albeit limited in some areas, is inevitable. We accept that the most beneficial outcome may be some adaptation of these approaches to local conditions and culture.

The paper is organized around five substantive sections. We begin in section II by providing a comparison of management skills likely to exist in a former planned economy such as China and those necessary in a modern Western-style market economy. Section III surveys the evolution of the Chinese economy and the implications of this for changing management needs. An important contribution of the discussion is the recognition of differences in likely existing management skills and emerging needs in four distinct sectors: the state-owned enterprise (SOE) sector; private firms; foreign-owned and joint-venture businesses; and the emerging high-technology and 'new economy' sector. This section also provides a skill assessment by sector. Given the gaps in management skills, section IV outlines the main ways in which skill deficiencies can be overcome and the relative contribution of these to the Chinese transition. The final section develops some important implications of the preceding discussion for international business practitioners as well as offering concluding thoughts.

II Chinese and Western Management Systems and Skills

This section describes the main characteristics of a centrally planned economy such as China and identifies the main differences between a centrally planned economy and a market economy.

Management in a Centrally Planned Chinese Economy

In 1953 China introduced its First Five-Year Plan and created a centrally planned economy in that the State Planning Commission allotted productive resources (including the human resource) and controlled the production, distribution, and consumption of all goods. In the Chinese centrally planned economy, the planning authority (a group of economic planners) controlled all physical productive resources, including land, machinery, and other capital goods (Chan 1996). It controlled all sources of supply of inputs and assigned production targets for each factory and farm (Chow 1985). So, directly and indirectly, the planning authority controlled all factories, farms, and firms. The supplies of all consumer goods were under the control of the planning authority. On the human resource side, the worker's job was assigned by a government labor bureau and a farmer could be assigned to work in a different farm. It is obvious that the need for market-oriented management personnel was virtually non-existent in China's centrally planned economy because the planning authority controlled nearly all flows and decisions.

By contrast, in a market economy all flows go through markets. In a market economy, consumers decide what to buy. Enterprises in different fields compete to satisfy consumers' demands. The government does not directly participate in the majority of economic activities (Chow 1985). Child and Lu (1996) demonstrate the key differences between the Chinese management approaches under a centrally planned economy and typical Western management approaches under a market economy (Table 1). In their description, Chinese management is mainly shaped by the pre-reform centrally planned economy, even though Chinese cultural values do influence management approaches.

It is apparent from Table 1 that there are marked differences between the two systems. This is clear from areas such as managerial autonomy, procedural formalization, information flows and reward policies. It is also clear that as the Chinese business environment has changed, existing practices have become increasingly less appropriate. In a turbulent and changing environment, managers must be given greater autonomy, it is not clear that they can be expected to simultaneously meet economic, political and social obligations. Similarly, vertical information flows and the absence of performance-related incentives may be acceptable in a stable or incrementally evolving environment, but this is no longer the case in China.

Table 1 also highlights the interrelationships between these practices. If one wishes to emphasize improved performance then organizational performance goals need to be carefully formulated, procedures need to reflect this new reality and appropriate management incentives be devised. Partial change involving one or two concepts is unlikely to bring success.

Table 1 A Comparison of Chinese and Western Approaches to Management

Concepts and practices	**Chinese management under a centrally planned economy**	**Western management under a market economy**
Decision-making authority	Industrial bureaus or ministries	Boards of directors and CEOs
Managerial autonomy	Little before the reform, much improved now	CEO enjoys autonomy under the board
Organizational performance criteria	Multiple rationality- economic, political and social obligations	Economic rationality, tempered by social responsibility
Degree of procedural formalization	Low formalization but highly personalized process	Highly formalized and relatively impersonal
Information communication	Mainly vertical; little horizontal flow	Multi-directional
Management training and development	Not emphasized before mid-1980s	Highly emphasized
Reward policies and incentives systems	Rewards dependent on age and long service; incentives not closely related to performance	Performance-related

Source: Child and Lu (1996), p. 3.

Chinese management approaches have been primarily shaped by experience under a centrally planned economy. This has led to a lack of understanding of market-oriented management approaches. However, Chinese cultural values also influence traditional Chinese management skills. Cultural values such as high power distance, high uncertainty avoidance, and low individualism, that are dramatically different to

Western values such as low power distance, low uncertainty avoidance, low masculinity, and medium individualism, are consistent with a hierarchical planned economic system. As a result, we would expect traditional Chinese management to display a number of distinct traits:

- Top-down decision-making: Workers simply follow orders from the upper levels. Workers lack creative thinking on feedback, because the reward system in a centrally planned economy depends on age and service time, not performance. This results in a considerable separation of manual and intellectual labor.

- Vertical communication: There is lack of flexible communication between different layers. In addition, the feed back from the bottom takes a long time as the vertical organizational structure has many layers. Vertical communication is not only present in SOEs; it is firmly entrenched in the whole Chinese economic system.

- Focus on production: In order to achieve production targets allocated by the planning authority, managers focus on production. Achieving production targets is a primary criterion for evaluation of managers' performance in the Chinese centrally planned economy. As a result, managers focus on production and have limited understanding of many aspects of 'soft' knowledge (management skills) such as advertising, HRM, inventory control, accounting, and financing.

The traditional management skills required within a largely administratively planned economy suggest a number of hypotheses. We would hypothesise that Chinese managers are unlikely to have much experience in:

- The appreciation and management of risk. The nature of a planned economy is to encourage risk averse attitudes since it is unlikely that risk takers will participate in rewards. In contrast, risk taking attitudes and experience are of critical importance in the development of private sector firms;

- The linking of pay and performance. In most Chinese enterprises, managers are political appointees, they are not selected for their potential performance, nor does their employment security depend on performance. For these reasons there are few incentives to link pay and performance. Such arrangements are far more common in the private sector and, in particular, in new high technology ventures;

- Financial management skills. Most Chinese managers operate along budgeting lines; there are few incentives to adhere to such budgets ('soft budget constraints') or to innovate in financial management. Chinese enterprise managers are likely to have little experience with sophisticated financial tools such as derivatives or concepts such as financial gearing. Similar weaknesses exist in related areas including dividend policy, foreign exchange management and hedging.

- Marketing activities. The underlying rationale of a planned economy is production or a supply focus. The disposal of output is an issue for planners not the individual enterprise. For this reason, managers invest little in the way of marketing resources such as marketing research, branding, and distribution networks or after sales servicing. In a competitive market economy, particularly one that permits overseas competition, marketing becomes a fundamental locus of competition.

- Investment in the creation and maintenance of competitive advantage. Again, where the company focus is on supply not demand and competition is deliberately restricted, there are few incentives to understand and create competitive advantage. However, in a competitive market economy, differentiation may become an essential means of survival and successful managers will be those that have experience with the wide range of advantages that can be developed;

- Corporate governance and leadership skills. In a planned economy, plans replace governance and political acumen substitutes for corporate leadership. If Chinese managers are to build and lead internationally competitive businesses, they will need to develop the appropriate higher level skills;

- Cross-functional integrative skills. SOEs tend to operate with high levels of functional fragmentation and separation, often with a 'silo' mentality. Levels of cross-functional or holistic skills are likely to be low.

As a result of these differences generated by a centrally planned economy we would expect to see Chinese managers as both less well qualified and less focused than their western counterparts. Available evidence, while limited, seems to support these expectations. A survey of 3,000 Chinese executives nationwide showed that only 23.9 percent of the respondents had a university degree. One-third of the executives came from production workers (Sun 2000). Lack of managerial competence in a market-oriented competitive environment may be one of the major reasons that cause many Chinese managers to avoid taking personal responsibility. Child and Lu (1996) argue that the majority of Chinese managers were political appointees, highly dependent on the continuing patronage of officials. Maintaining these relationships diverts attention from the more traditional tasks of management (Sun 2000, p.385). Typically, Chinese managers have to take account of multiple criteria that include social, political, and economic considerations in their decision-making.

III Evolution of the Chinese Economy and Changing Skill Needs

Like any successful growing economy, China has experienced structural economic change. The pace and precise form of such change depends on a range of influences, the most significant of which are likely to be external factors and domestic policy choices. Externally, China's reintegration into the world economy and increasing participation within international institutions such as the WTO suggest that changes in the world economy will be rapidly transmitted to the Chinese economy. Furthermore, such involvement is likely to accelerate the rate of structural change that might have been expected to occur anyway. This suggests that China's transition from a planned, predominantly agriculturally-based economy will be rapid from a comparative or historical perspective. This expectation is supported by domestic policy that has emphasised the dynamic and diverse nature of change in China. A willingness to focus limited resources into a small number of high growth clusters (EPZs, the coastal cities and more recently, science parks) coupled with a propensity to experiment (to 'let a hundred flowers bloom'), means that economic change and upgrading is recognised as a legitimate developmental goal by Chinese policy-makers.

The broad parameters of economic change are similar for most developing economies, including China. As modernisation occurs, resources are shifted from predominantly low productivity agricultural activities into higher value manufacturing production. This transition involves the movement of labour and a commitment to high levels of productive investment. Both of these features are apparent in China today. The human exodus from the Chinese countryside to the factories of the cities is one of the largest human movements ever recorded. At the same time, a high rate of domestic savings coupled with the ability to attract more than half of the all-foreign direct investment destined for Asia means that a very high rate of capital formation has been possible.

Growth of the manufacturing sector brings change not just to the broad sectoral composition of an economy (between the primary, secondary and tertiary sectors), but also within sectors. For example, within manufacturing a gradual process of upgrading may be expected to occur. This manifests itself in three key ways. First, firms acquire and develop their production capability through an increase in scale, experience and quality. Increased engineering and production know-how are the drivers of this stage. As scale and experience increase, it is expected that cost will fall and quality improve. The second stage involves the development of improved marketing capability to ensure that increased production is moved into markets and sold. During this stage, firms invest heavily in market research, distribution and brand building. The third stage sees a geographical diversification of manufacturing activity out of increasingly costly high growth centres and in the pursuit of lower costs. This process has begun in China, with industry spreading out of the coastal cities into related regions but is attenuated by the plentiful supply of cheap transient labour. Chinese firms are heavily concentrated within the first stage of upgrading and often produce under contract or for overseas markets. Thus, at this time there are relatively few widely known Chinese consumer brands, the best known of which include Legend and Haier.

As the market economy of China has grown it has become both more complex and specialised. As the market has deepened there has occurred a growth in specialist organisations and services. Examples include the provision of market research or management consultancy services, specialist financial instruments and merger and acquisition advisory services. As with any market-based economy, markets do not operate in isolation. They must be supported by a range of non-economic institutions that support economic processes. Rodrik (2000) identifies five key institutions. These relate to property rights and regulation, as well as institutions encompassing macroeconomic stability, social insurance, and conflict management.

We suggest that the development of these institutional mechanisms has important implications for management know-how in China. First, policy makers must have an understanding of the operation of a market economy if they are to design and create appropriate institutions. Second, these institutions must be staffed by bureaucrats with commensurate knowledge and experience to ensure that they play an effective role in facilitating the development of a productive economy. Third, for enterprise managers the growth of institutional regulation suggests that they must develop an understanding of the implications of this for the development of corporate strategy. Furthermore, such institutions may be expected to substitute for the pervasive personal relationships (guanxi) characteristic of the Chinese economy. Over time, we might expect to see an increase in rules based as opposed to relationship based constraints impacting on managerial decision-making although Child and Tse (2001) recognise the inherently political nature of institutional development in China and the likelihood that institutions may substitute political for efficiency goals.

At the same time that the Chinese economy is becoming more complex and extensive, a fragmentation of ownership and operating forms is also occurring. The state's effective monopoly of the means of production has given way to a variety of new ownership structures. According to Child and Tse, pre-reform China was dominated by state-owned enterprises (SOEs) that produced three-quarters of industrial value. Reform has brought a much more diverse productive structure. In 1998, state-owned enterprises accounted for only 28 percent of industrial output with urban and collective enterprises accounting for approximately 38 percent, foreign investors 15 percent and private firms 17 percent.

The future importance of state-owned enterprises depends in part on their ability to restructure and respond to changing conditions. Reform, while slow, is already underway. More than 12,500 SOEs had been converted into joint stock companies by 1997. Collective enterprises, the Town and Village Enterprises, have benefited from the decentralisation of industrial development and now constitute a significant sector. Because they suffer from problems such as uncertainty over property rights and poor levels of managerial capability, they are found in lower technology activities. Foreign-owned firms have brought a range of important resources to the Chinese economy and now enjoy greater freedom in their ownership forms as wholly owned subsidiaries (WOS) were permitted in 1986 and now exceed joint ventures. The most dynamic sector has been private enterprise that now employs more than 13 million (Child and Tse 2001). In the future we would expect to see strong growth of high technology firms forming part of the so-called 'New Economy'. While at the present time the number and importance of such firms is limited, and their operations are largely confined to industrial or scientific parks, they are likely to become more important in the future as China seeks to upgrade into specialist high-value activities.

With the fundamental changes of economic structure, human resources face new demands in providing the quality workforce needed for development of a new knowledge-driven and technology-intensive economy. Moreover, a by-product of economic reform is the growing demand for management personnel to manage in a series of positions that have emerged with the process of economic restructuring such as the new phenomenon of privatization, the bankruptcy and merger of SOEs, the increasing number of joint ventures with foreign companies, and the expansion on foreign trade and international business. All these have created a huge need for a new generation of managers who can understand the principles of marketing, advertising, finance, accounting, inventory control, human resource, and international business rules, in order to compete in the global economy.

A series of market-oriented reforms in China, for example, the introduction of stock markets and bankruptcy laws, the establishment of social security systems and free labor markets, have already put pressure on traditional management skills. Table 2 shows the main changes in China's economy and the relevant implications for management skills.

Table 2 Changes in the Chinese Economy and Implications for Management Skills

Changes in China's Economy	**Implications for Management skills**
Greater reliance on market forces	Market positioning; quality, reputation, and advertising of products; determinants of supply, demand, pricing.
Greater international influences	Intensive competition; new competitors; new technologies and ideas; international rulers and regulations; Organizational structure; and international communication (language).
Workforce / HRM	Performance reward system, recruit system, training and staff development.
Financial Sector	Financial budget; corporate governance. Management of risk. Familiarity with sophisticated financial instruments.
Welfare and social safety net	Lay-offs and corporate restructuring (breaking of 'iron rice bowl' policy). Need to maintain social stability, labor mobility and opportunities for re-training
Creativity and innovation	R & D, patent protection and knowledge management. Shortening of the PLC. Growth of the new economy has increased the demand for knowledgeable skilled labor with creativity and innovation characteristics.
Consumer laws and protection	Customer services such as post-purchase service; and public relations. Role and value of branding.
Competition levels necessitate competitive advantage	Need to identify, create, maintain and utilise distinctive forms of competitive advantage. Need to understand and effectively manage the underlying sources of such advantage e.g. skilled labor
Shift from a production to a marketing orientation	Need to recognise the growing importance of the marketing function. Investments in the stages of marketing and appreciation of the elements of the marketing mix. Appreciation of the integration between marketing and other functions eg production, R&D.
Development of market supporting institutions	Recognition of the operating constraints provided by such institutions. Shift from relationship-based to rules-based management.

Based on Table 2 as the result of reform, growing international integration and increased competition, we hypothesize that Chinese management will need to change in ways that increasingly incorporate an awareness of non-traditional management skills.

However, the implications for management skills vary with different sectors. We focus on four different sectors: SOEs; the private sector; foreign and Chinese joint-venture firms; and the new economy.

SOEs

The more than 305,000 SOEs are the backbone of China's industrial sector; they now face more intense competition and the challenges that result from SOE reform. Organizational theory and managerial wisdom suggest that organizations must be compatible with their environments in order to flourish. The operating environment of SOEs has changed dramatically in recent years and as a result the implications for management in the SOEs sector are broader and deeper than for other sectors, because the SOEs management inherited all the traditional Chinese management characteristics from the centrally planned economy.

Official statistics show that in 1996 and the first half-year of 1997, Chinese SOEs laid-off nearly 2 million workers (Sun 2000). The 'lay offs' are not an occasional phenomenon because market competition is forcing firms to adopt a more flexible employment and wage system. In a labor surplus economy, with an estimated one-fifth to one-third redundant workforce (World Bank 1999), the system of lifetime employment cannot be sustained. With China's bankruptcy law and company law taking effect, "a total of 6,232 firms declared bankruptcy in 1996" (Sun 2000, p 380). Since the mid 1990s, the slow transformation of the operating system of the state-owned economy has become more evident. The state-owned economy has experienced a considerable drop in growth. According to the World Bank, about half of all industrial SOEs made a loss in 1996, up from one-third just two years earlier. Official Chinese estimates are even more pessimistic, that 43 per cent of SOEs make losses, and another 30 percent only make a profit by false accounting (Sun 2000).

Compared with the non-state sectors, the most significant problems that the SOEs face include:

- The SOEs have fixed production and prices, the non-state sector is capable of responding to high demand with higher prices

- The SOEs have employment and social welfare function, the non-state sector could take advantage of the unlimited labor supply from rural areas at lower wages

- The SOEs are guided in their investment towards strategic and comprehensive production; the non-state sector can selectively invest in the most profitable market sectors.

- The SOEs tend towards traditional management and old technologies; the non-state sector is more responsive to modern management and new technologies.

- The long-term protection from the government means that SOEs lack experience of the competitive environment.

- The managers of SOEs are still assigned by government officials.

- The increasing turnover of skilled personnel from the SOE sector seeking higher salaries and more attractive conditions.

SOEs are the sector most urgently requiring a change of management approaches if they are to survive in the competitive market-oriented environment. However, SOEs are also the most difficult sector to reform. The recruitment system for SOE managers is an example of the continuing problems. Government still plays a critical role in assigning managers and determining the fate of business leaders.

The Private Sector

China's market-oriented reforms have resulted in a rapid growth of privately owned enterprises as well as township and village enterprises (Sun 2000). The private economy has overtaken the state-owned economy to become the most active, the fastest developing and the largest contributor to economic growth. The growth of private businesses has been significant, from almost none in the mid-1970s to l.04 million registered private firms in 1999 (Lawrence 1999). Private firms should have a better understanding of the market position, pricing system, recruitment system, and a more flexible organizational structure than SOEs. However, the private sector still faces several problems. The major form of private firms in China is family business. As a result, the limitations of Chinese family business inevitably appear within these firms (Redding 1994). Chinese family firms are characterized by:

- Highly centralized decision-making processes
- Attempts to reduce transactions costs by doing business within Chinese networks
- Arranging financing within Chinese networks (capital is raised through accumulated profits from operations and from successful business deals)
- Low margin and high volume in order to penetrate markets
- A rigorous control of inventory in order to maintain a low capital investment and high rate of stock turnover
- Simple organizational structures which may be inappropriate when firm size increases.

Foreign Owned and Joint Venture Businesses

The demand for skilled management labor has increased significantly as a result of the growing internationalisation of China's economy. "A total of 19 out of 20 of the largest industrial firms in the USA; 19 out of 20 of the largest industrial firms of Japan; and nine out of ten of the largest industrial firms in Germany have already invested in China"(Sun 2000, p. 380). "General Motors (GM) had invested $2 billion by the end of 1998 and has four joint ventures. More than 120,000 foreign-funded enterprises with 18 million employees were already in operation across China." (Sun 2000, p.380). Foreign investors are normally associated with the importation of management skills. Indeed, such skills are identified as one of the principal benefits of inward investment. The impact of such investors on the skill base depends, in large part, on the nature of the operations and ownership structure of the foreign venture. Where an affiliate performs a highly specialised task, is closely integrated into a regional or global production system, depends on proprietary technology and expatriate managers, the spill over effect is likely to be low. A wholly owned subsidiary is less likely than a joint venture, to encourage the diffusion of skills. Similarly, where foreign investors enjoy a strong bargaining advantage, they are less likely to make provision for the transfer of management knowledge.

At the same time it must be acknowledged that foreign investors are also major users of skilled labour. Where they localise their management, this can result in fewer skills being available to local firms or even the loss of such skills if outstanding management talent is shifted overseas within the corporate network. Because of cultural differences, Western investors are most likely to seek those with strong cross-cultural abilities and experience of living and working overseas. These are just the type of employee most in demand by domestic firms.

On the other hand, Chinese domestic companies such as Legend and Haier are beginning the process of internationalization. By expanding economic cooperation with other countries, China faces the need for a generation of management personnel who understand management principles, management styles and management practice in the West.

High Technology and the New Economy Sector

The 'New Economy' is built on the wealth created from know-how by selling it, exchanging it for something else of value, or leveraging it to create added value. By comparison, the traditional economy relies on raw resources and primary processing to generate income and wealth. As the result, competitive advantages from the old sources are becoming less important. In the knowledge economy, individuals and firms must focus on maintaining and enhancing their biggest asset: their knowledge capital. The knowledge economy places great importance on the diffusion and use of information and knowledge as well as its creation. The determinants of success of enterprises, and of national economies as a whole, is ever more reliant on their effectiveness in gathering and utilizing knowledge. It is clear that the demand for education and training will increase in the knowledge economy, particularly management training and education.

Economic and social changes are creating new market standards (productivity, quality, variety, customization, convenience, timeliness). Meeting these standards requires great changes in organizational structures, and skill needs. The new competitive framework requires a broader set of skills, both 'hard' skills (technical know-how) and 'soft' skills (managerial skills). It is suggested "to compete and prosper in this new environment, China has to move away from factor- intensive growth toward knowledge-based growth, become more open, and harness the forces shaping the global economy" (World Bank 2001). Now, 22 university-based scientific parks and six university-based centers for commercializing technological findings have sprung up in China. These parks and centers will be further developed to help reinforce technological innovation and fuel the development of information technology and other high-technology industries (Cui 2002).

Skill Assessment

Examination of the problems of a centrally planning economy highlights that planning from the top (planning authority) is not an efficient way of managing the economy. With the process of institutional structure reform in China, the decentralization of decision-making not only transferred authority from central government to local governments, but also transferred authority from ministries to firms (Chan 1996). This empowerment of decision-making has increased the demand for management personnel with market-oriented management skills, because firms are responsible for buying and sourcing input materials as well as selling the products to the market and to their customers. So, management personnel must be responsible for strategic planning, production and marketing for a firm to maintain efficient operations and profitability. However, existing skills are not in adequate supply. Different economic sectors have particular skill needs. Table 3 provides a hypothesized comparison between likely existing skills and deficiencies by principal sector.

Overall, the state-owned sector reveals the most serious shortage of management skills for a market-oriented economy. SOEs are likely to possess skills in production, technical and engineering, and relationships, but skills in marketing, creativity, innovation, effective HRM, financial management, strategic planning, and international markets are likely to be deficient. Two factors probably explain this shortage; one is the composition of management personnel, the other is the low emphasis on management education and training.

However, a problem of skills shortages is also apparent in the other three sectors of Table 3. Overall, the most deficient skills (occurring twice or more in different sectors) are effective HRM, financial management, intellectual property management, marketing and strategic planning. Those skills are hard to acquire without training, particularly during a transition period that has no blueprint to follow.

Table 3 Skill Assessment by Sector in the Chinese Economy

Economic Sector	**Likely Existing Skills**	**Likely Deficient Skills**
State-owned sector	Production Technical, Engineering Administrative Budgeting Supply chain Multi-plant management Large scale operations Social welfare provision Political and personal relationships	Research, innovation Marketing Distribution Quality management Effective cost management Effective HRM Competitor intelligence Market intelligence Competitive advantage Financial management Strategic planning Flexibility Change management Leadership and governance skills Rules based competition International markets Risk management Holistic management Competing for resources
Private sector	Product or service idea Holistic management Project management Flexibility/small scale Niche or limited markets Family and personal relationships Competitive advantage Risk management Market intelligence	Effective HRM Financial management Strategic planning Stakeholder interests Large scale operations Political skills Market development International markets IP management
Foreign-owned and JV	Range of functional skills Access to world class capabilities Financial management Brands, Experience, Scale	Market knowledge Competitor intelligence Cultural understanding Risk assessment Communication Political relationships
High technology, New Economy	Small scale, limited experience Working with limited resources Partnerships with universities, government institutions Highly skilled employees Technical risk management	Market making Commercialisation skills IP management Commercial risk management Effective HRM Knowledge management

IV Meeting Future Skill Needs

The apparent shortfall between the available supply of skilled managers and China's likely future needs is very significant.

In 1998, the Chinese Vice-Minister for Education, Lu Fuyuan, noted that China has about 400,000 state-owned enterprises, 300,000 joint ventures and 200,000 township enterprises. If each of these enterprises needed three trained managers then the total requirement would be 2.7 million. The demand for trained managers accelerated with China's access to WTO. However, management education was not emphasized before 1978, which led to a critical shortage of management resources in the whole country (Sun 2000). We can identify three main processes by which the supply of management skills can be increased. Directly, it could be done through increased investment in management training within China, by domestic universities, the entry of foreign business schools or through exchange programs. Indirectly, the number of suitable managers could be enhanced through spillover effects from foreign firms that have entered the Chinese market. Thirdly, there may be a 'demonstration' effect as Western consultants increasingly influence management practice through their business in China.

Two points are worth noting here. First, these different sources of skills are complements not substitutes. At the same time that additional resources are provided within the formal education system, skill diffusion from consultants or overseas investors can also occur. Second, China is likely to benefit from a diversity of sources. This is because the different sources provide different types of skills from the theoretical and conceptual tools emphasized by tertiary management training to the more applied training offered by consultants.

Chinese University Education

Management courses were reduced or cancelled and smaller colleges offering management education were closed or merged with bigger universities as the need for management personnel was nearly non-existent in the centrally planned economy.

The education system was even further retarded during the ten-year period of the Cultural Revolution (1966-76), resulting in many universities and colleges closing.

The first year that students registered for management studies in tertiary education in China was 1976 when 2,453 students enrolled (Chan 1996). Since 1980 over 150,000 students have been enrolled in under-graduate programs in management education (Chan 1996). For undergraduate management education, “there are over 270 universities and colleges offering undergraduate degree programs” (Chan 1996, p. 244). At the master’s level, there were 78 universities offering master’s degrees in management in 1992 (Chan 1996). Around 1996, only 20 universities and colleges offered doctoral degrees in management, due to the lack of qualified supervisors.

Chinese universities have offered a Western style MBA from the autumn of 1990. By the end of 2000, 66 universities and colleges were offering MBA programs with a total recruitment of about 35,000 students (Song 2001). Since the beginning of 1992, there has been a tremendous push to introduce management education to senior managers in SOEs. In 1996, a nationwide three-month MBA-type of short training program was launched for managers from SOEs. By the end of 1998, 288,000 managers had participated in this program. Since then, about 5,000 managers each year have passed national MBA entrance examinations and entered into on-the-job MBA programs with a target of 200,000 managers to go through MBA training. This will greatly enhance the quality of management personnel in China’s SOEs.

Joint Venture Business Schools

By 1998, it was estimated that there were 50 indigenous management schools in China. However, some of them fall short of international standards (Southworth 1999) in terms of faculty, textbook use and facilities. The most obvious solution was to establish links with foreign business schools forming educational “joint ventures” (Southworth 1999). About 30 Chinese universities have joint ventures with top foreign institutions, such as the MIT Sloan School of Management, mostly offering MBA courses (McGregor 2001).

China's enormous population and immense potential market attracts educational investment from overseas. Joint ventures business school can profit both sides. China obtains the management skills and develops a management skills labor pool to meet increasing demand. Universities and institutions from overseas get the profits and valuable experience of the Chinese market (Anderson 2002).

Spillovers from FDI

The attraction of FDI to any developing economy is the bundle of resources that it brings. In addition to capital inflows, foreign investors often undertake technology transfer and management development as well as providing access to overseas markets. In such a case Chinese managers can gain access to valuable technical, marketing and more general managerial skills. The likelihood of such spillover is higher in joint ventures where the provision of such resources may form an explicit part of the agreement.

With the process of FDI, both 'hard' technologies and 'soft' technologies have passed to China. In the spillover process China has learned the management skills and foreign investors get the experience of Chinese culture and build up cross-cultural management skills.

Chinese Students Overseas

The overseas placement of Chinese students has grown very rapidly in recent years. Able technical and management students are now studying at a range of universities and research centers around the world. Many of these students will return to China upon completion of their studies. They will have gained access to leading edge scholarship and research as well as becoming increasingly familiar with other cultures. They represent a considerable source of future management talent for China.

Consultancy Firms

Consultancy firms, like other multinational corporations, are attracted to the opportunities offered by China, particularly since China joined the World Trade Organization. Following in the footsteps of the Boston Consulting Group in 1992, Bain & Co., McKinsey & Co. (1993), and Ronald Berger (1994) have moved into the Chinese market. Several of the world's leading consultancy firms have greatly increased their presence in China, because they see huge opportunities for their business in the future. According to Saywell, "China's vast market means that consultants, even when they aren't making money, feel they must be there now to position themselves for the long term" (Saywell 2002, p. 29). McKinsey & Co. has 80 consultants based in mainland China (Dolven 2002). Germany's Roland Berger, Europe's largest consultant company, has put together a new financial group and set up in Shanghai in the past six months (Dolven 2002). Boston Consulting Group, with 70 consultants based in Shanghai and Hong Kong, recently set up a Beijing office (Dolven 2002). Other American companies, such as PWC Consulting, Deloitte Consulting, KPMG Consulting and Bain & Co., are in the country too (Dolven 2002). At first, the consultancy firms mostly focused on helping multinational firms trying to enter Chinese markets. But now, most are dealing primarily with Chinese companies trying to restructure or cope with the competitive pressures of deregulation (breaking up monopolies), privatization (ownership diversification), liberalization, and China's WTO membership. (Dolven 2002).

As China integrates further into the international economy and companies operating there face more sophisticated problems, company managers will increasingly need to consider using consulting services. Consultancy firms' involvement ranges from technical assistance at the level of the individual firm to high-level regulatory reform and institutional development at the national policy level. Such firms often combine a range of related competencies including accounting, auditing and general consultancy. Some of the largest firms already have experience of the Chinese market through their work with large MNEs investing in China. They are now keen to move into the lucrative business of privatization and SOE reform where they have experience from working in other transitional economies. While their rates mean that they are only likely to be engaged by the largest organizations, their principal impact may be in the design and implementation of institutional infrastructure that underpins any successful market-based economy.

V Implications and Conclusions

The discussion presented here has important implications for all those involved in teaching international business.

First, our discussion has suggested considerable management needs deficiencies faced by China. This is true in both quantitative and qualitative terms. Like any transitional economy, China carries a huge burden in the form of the legacy of central planning. We suggest that the skill set of managers who operated under the centrally planned model is totally inadequate for the emerging market oriented economy. The need to expand and upgrade market oriented management skills is pressing. We would not expect to see this process occurring through the widespread provision of in-company training. This is because of a lack of resources within many Chinese organizations, and in particular, the absence of a sufficient critical mass in the necessary skills upon which training programs could be based. This suggests that an external stimulus or intervention will be required. While a competitive stimulus is provided by China's transition to an open market-driven economy and, more recently, its accession to the WTO, the supply of suitable managerial talent is still deficient. Government intervention in the form of increased provision for management education, whether through the expansion of Chinese based programs or the increased utilization of foreign training courses, will be necessary. The contribution of foreign investors, consultants or visiting scholars is likely to complement this process.

Second, it is likely that many international business teachers have been, or will be, involved in helping to try to overcome these skill deficiencies. Many Western universities now teach in China, through satellite campuses, articulation agreements or visiting positions. Many others experience Chinese management students on exchange or overseas placement programs. China's decision to require leading universities to teach in the medium of English within seven years will create huge opportunities for visiting scholars.

For foreign universities and scholars, involvement in the Chinese education market will require resolution of important strategic decisions. While the focus of the present discussion has been on the likely quantitative deficiency of desirable skills, there is an equally important qualitative dimension. It is not just curriculum content that must be considered, but also the ways in which the material is presented. Traditional Chinese learning styles, which focus on rote learning and the attainment of minimum standards, are of limited value in a dynamic, transitional economy which provides little in the way of a development blueprint. What becomes critical is a desire for ongoing learning and the ability to foster creativity and the management of ambiguity. These are traits which are rarely encountered in Chinese organizations, particularly SOEs. A weakness of traditional Chinese teaching methods is that they are quite passive, with one-way delivery of lectures and test-paper examinations. The majority of instructors lack business and practical experience. Their lectures are based on information from textbooks with limited practical value (Newell 1999).

Third, our discussion enables management teachers to more carefully focus on the likely critical areas of deficiency. As identified in Table 3 the most widespread weaknesses are in effective HRM, financial management, intellectual property management, marketing and strategic planning. Furthermore, our discussion highlights the variation in needs across the principal sectors of China's industrial economy. While we have identified a number of functional areas of management where further training is desirable, it does not follow that these subjects should be taught in isolation. Rather, there is a strong case for integrative approaches which highlight the many interdependencies between, for example, marketing and finance or strategic planning and human resource management. This would suggest the value of case-based approaches. Such cases would be of benefit to not just Chinese participants, but also to Western students who are increasingly likely to find themselves involved with the Chinese market in years to come.

The next stage is for empirical analysis of the tentative deficiencies discussed in this paper. What we provide is a starting point for a more detailed and substantive assessment of Chinese management skill requirements. This stage is likely to take the form of an audit rather than simply an assessment. Furthermore, to the management skills identified here, knowledge, abilities and other relevant characteristics may be added. Such an analysis would also enable a clearer understanding of the possible generalizability of our discussion. For example, it is not clear to what extent the same skill deficiencies are apparent in Eastern European economies. To some extent generalizability may be limited more as a result of the transition plans followed by different countries. Many Eastern European economies appear to be following a process of transition based on economic compatibility with the European Union. China, in pursuing its unique development path, may be just that, unique.

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