Part 1

Asian Management: Business Systems and Perspectives

The interdisciplinary and holistic approach to our understanding of business and management practices in Asia requires the introduction of a series of key topics in the first part of this textbook. The seven chapters in this part thus each cover a key topic.

Chapter 1 In 'The Business Systems of Asia', Gordon Redding outlines the concepts and gives an overview of business systems in Asia, emphasizing the fact that, though a single continent, Asia can be regarded as an immensely varied concept in itself, comprising a huge variety of cultures, customs and relations.

Chapter 2 Philippe Debroux devotes an entire chapter to discuss 'CSR and Sustainable Development in Asia'. The business concept of CSR (corporate social responsibility) is highly prominent in contemporary business worldwide, but the idea of social responsibility in business is not a new one and has been practised in the developed West for many years.

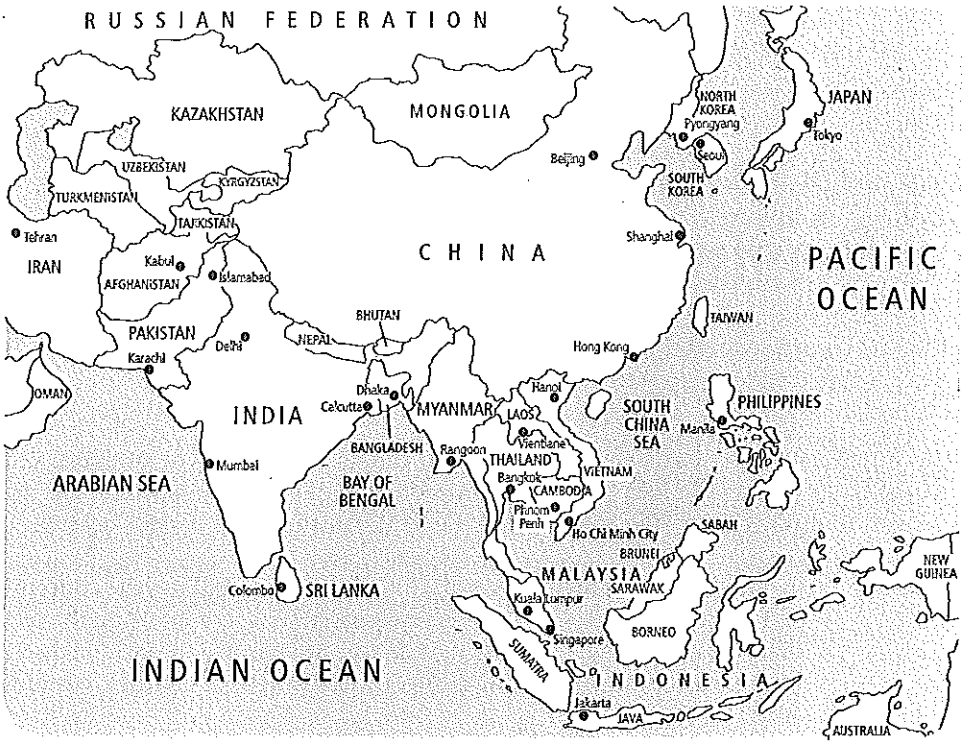
Chapter 3 A country can use technological developments to enhance its economic position in the global economy, as Leonard Lynn explains in 'Technology Development in Asia'. Although the West has been known for its technological advancement, abundant opportunities for technological development, whether in human resources or techniques, are apparent in many Asian countries, such as China, Japan and India.

Chapter 4 Andy Staples' 'Production Networks in East Asia' explains international and regional production networks from the perspective of foreign direct investment theory, and applies the concept to East Asian production networks.

Chapter 5 In 'Culture and Business in Asia', Carlos Noronha addresses the issue of culture, for in any attempt to understand business from an open and multi-disciplinary approach, the social and cultural aspects of business organizations are not to be ignored. Culture forms the building blocks of meaning in organizations.

Chapter 6 'Asian Leadership', by Philippe Byosiere and Denise J. Luethge, compares and contrasts conventional understandings of leadership from a Western perspective and the indigenous traits of Asian-style leadership.

Chapter 7 Finally, in 'The Role of Business in Asian Living and Working Conditions', Naoki Kuriyama suggests a new approach to living and working conditions in Asia, emphasizing the reciprocity between working (enterprise) and living (community) conditions in the creation of work–life balance.



Chapter outline

- Variety in the region and general features
- What is a business system?
- The business system of Japan
- The business system of China
- The business system of South Korea
- The business system of the regional ethnic Chinese
- The business system of Southeast Asia
- The business system of IndoChina

Chapter objectives

After reading this chapter you should be able to:

1. Understand the basic components of the region's variety of business systems
2. Understand how a business system works
3. Grasp the main features of the business systems of the major economies
4. Have an initial understanding of the smaller economies of the region

Chapter 1

The business systems of Asia

Gordon Redding

INTRODUCTION

The first thing to understand about business systems in Pacific Asia is their variety. This is not ordinary variety, but immense variety; more, for instance, than across Europe. They range from the largest country in the world, China, to some of the smallest (for example Singapore), and from some of the richest (for example Japan) to some of the poorest (for example Cambodia). The area contains a wide range of political systems, ethnic types, religions, and historical experiences. So, in order to discuss them, it is necessary to moderate the variety by placing some of them in clusters, each cluster containing some similarities within its membership. This simplifying entails missing out on some of the richness in the detail, but that may be found in the specialized chapters that follow.

The main subdivisions are as follows:

- Japan
- China
- South Korea
- The regional ethnic Chinese
- Southeast Asia
- Indochina

The distinct nature of the Indian subcontinent, and its base in quite different traditions of civilization from those of Pacific Asia, means that it is better for it to be treated in its own right, and this will be done in a chapter devoted to that theme. Otherwise the constant making of exceptions from the patterns further east will interrupt the flow of what is already a complex story.

VARIETY IN THE REGIONAL AND GENERAL FEATURES

A number of regional features of geography and history need to be considered first as they have an impact in several countries. Over millennia the populating of the region tended to be in waves, with people coming in from the north-west and eventually pushing south and eastwards. The result is a layering of different ethnic types, seen very simply as:

- essentially Malay (that is, in ethnic terms) to the eastern and southern edges of the region in countries such as Malaysia, the Philippines and Indonesia
- Sinic (or Chinese) in China itself and penetrating Indochina
- a distinct Japanese ethnic stock, and
- a very mixed set of ethnic groups in the Indochina peninsula, most notably the Thai and Vietnamese.

The region extends from the equator to the cold regions of northern China and encompasses all types of natural environment. In terms of human geography and history it contains the active heritages of several great religious and civilizational traditions. Dominant among these is that of China, whose influence lies deep in the formative processes that made Japan, Korea, and Vietnam. Within this is the Confucian tradition that brings much order to societies, but contains also the balancing influences of Taoism and Buddhism, each also visible in the make-up of both Japanese and Korean society. Elsewhere, and especially in Malaysia and Indonesia, Islam penetrates deep. Thailand is an example of a predominantly Buddhist society and the Philippines has retained the dominance of Catholicism, established during four hundred years of Spanish rule.

External influences have historically overlain these traditions in many countries. The British in what was Malaya, Singapore and Hong Kong, the French in Indochina, the Dutch in Indonesia, the US Americans in the Philippines (after the Spanish) and the Japanese in the 20th century in Taiwan, Korea, and Manchuria, have all left behind institutions and connections that have marked those countries. Less by way of invasion and colonization, but equally significant has been the influence of India established through trading connections, especially in Southeast Asia. A final wave of influence, similar to that of India, has been the impact of the regional ethnic Chinese who left China in the past 150 years and settled as business people in the countries around the rim of the South China Sea. In more recent decades the influences of multinational corporations on the region have been very strong, not only on management practices, but also on government policies, the importing of technology, and the creation of alliances to link with the markets of the rest of the world. The only country that has remained free from direct foreign influence has been Thailand, protected as it always has been by the strength of its monarchy.

In the period from the end of World War II, the region went through three distinct phases of evolution as various societal experiments took place to meet the challenges of modernization. The first of these, lasting roughly from 1945 to 1975 was a period of turbulence as countries tried to establish their new identities and independent political structures after the retreat of the colonial powers. The wider world, it must be remembered, was still in tension as the communist ideal and the liberal market democratic ideal faced each other across the cold war divide. Wars broke out: the Korean War; the American War in Vietnam; a long guerrilla war in Malaya; a bitter civil war in Indonesia; struggles for independence; and a period of *confrontasi* in Southeast Asia. Other

more localized outbreaks of hostility were widespread. In the same period China went through the damaging chaos of the Maoist experiments: the Great Leap Forward; and the Cultural Revolution.

A second period of relative calm then followed, between 1975 and 1997, as the region settled down to the more peaceful pursuits of doing business, and in particular of exporting to developed country markets. This saw a rise in foreign direct investment into the region and also the moving of many factories out of Japan into regional countries with lower labour costs. After Mao's death China went through a major reappraisal of its economic philosophy, and came to terms with the stark facts of the collapse of communism elsewhere, striking out with its own formula of a 'socialist market economy'. This was the period of the Japanese miracle, and saw also the impressive growth of the South Korean economy.

This long period of stable growth and accumulating success contained within it the seeds of its own destruction as it began to run out of phase with the systems of the advanced world. Not at that time clearly visible in China, but suddenly obvious elsewhere, the problem of what had earlier been termed ersatz capitalism had lain hidden. This means that inefficient use of capital was covered up by the availability of easy money, either from governments, or from over-optimistic foreigners enchanted by the lure of emerging markets. And the system could not keep up the pretence forever as it became increasingly sensitive to a downturn in the economic cycle. That downturn hit the region in 1997, and the Asian Crisis signalled the end of the easy money and the beginning of reforms.

China had been largely insulated from these effects (although its own form of financial weakness would be later revealed in non-performing loans) and so too, to a degree were Malaysia, Hong Kong, Taiwan and Singapore. But everywhere else became an industrial bloodbath, and many companies disappeared. Japan suffered from the huge bubble created in its economy by the inflation of asset values, especially in property, and is still in recovery from that. Korea was hit badly by the logics that flow from borrowing short and investing long. The economies of most ASEAN countries saw heavy losses, currency devaluation, and the closing of many firms.

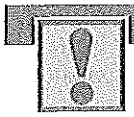
As a result of the crisis the region entered a third phase, a period of reform. Since 1997 this has moved at a different pace in different countries, and recovery has therefore been slow in some cases, notably Japan and Indonesia. Even so the direction of movement has been consistent and has displayed the following broad features:

1. Improvements to accountability and disclosure in the financing of industry.
2. The reduction of favouritism and corruption caused when officials control access to licences and capital.
3. The opening of markets to foreign competition.
4. The adoption of international standards in accounting, trading, and intellectual property rights, often via bodies such as WTO.
5. A general rise in professionalism, in both management and administration.
6. The adoption of democratic processes in politics.

Part of this same raft of 'reforms' was the notion of corporate social responsibility (CSR), an idea that forced firms to be accountable publicly for the ethics of their behaviour. It is not possible to argue that one society is more ethical than another, and the various forms of enterprise in Asia display the same variety from bad to good as do firms in the Western world, from where this specification came. But at least one might argue that the open accountability and disclosure that accompany the ethical wave are

likely to assist in making firms more legitimate in their societal settings. At the same time, it should be stated that the West has as much to learn from the East as vice versa in this field, and the rise of consciousness about the issue should lead to a two-way flow of advice and borrowings, in which the 'bad' universally may become less so.

An important point here is that such trends do not necessarily mean that these countries are converging on a Western formula for organizing their societies and economies. They will still find ways of interpreting the core principles in ways that fit local cultures. In other words, they will converge to some degree but then remain distinct, and 'true to themselves'. Because of that we need to account for the continuing variety of the region's business systems.



SUMMARY POINT

The region is one of great variety, not just in people, culture, and geography but also in terms of history and stage of development. As a result it contains extreme contrasts.

REFLECTIVE QUESTION

Compare Pacific Asia with Europe or Latin America and consider which contains the most variety and what is the basis of that variety.

WHAT IS A BUSINESS SYSTEM?

A business system is a complex adaptive system in which the business component of a society is analysed against the context of that society, thus 'the American business system' compared with the 'Japanese business system'. Complex adaptive systems theory is relatively new when applied this way, and the reason it is used is that it allows for the complexity of reality to be considered, whereas some disciplines attempt to reduce that complexity to a simple framework and in the process perhaps miss out things that matter. The core idea is that an economy is a process affected by the logics of economic behaviour, but also by culture, history, and specific societal events and experiences. It is also affected by external influences such as world markets, technology, and changes of values. All these forces, economic, technical, and social interact in complex ways, and the system evolves to take on a distinct flavour, society by society.

The analysis proposed for use here can be seen in Figure 1.1. The culture is seen as the base layer of *meaning*. Here we analyse how each society constructs its own way of making sense of its surrounding context, and it does so in three main fields. First is that of *rationale*, or the basic reasons adopted by people to explain the way they have chosen to make the economy work: why do they act and in what ways do they prefer to conduct exchange, employment, financing, control, and so on? Next comes *identity*, or the core ideas in the society about the place of the person in the social structure: is it an individualist or a collectivist system, and in what ways are such ideals interpreted? Next is *authority*, or the way in which power is typically exercised in the society and its organizations. These three aspects of culture have long-lasting and subtle effects.

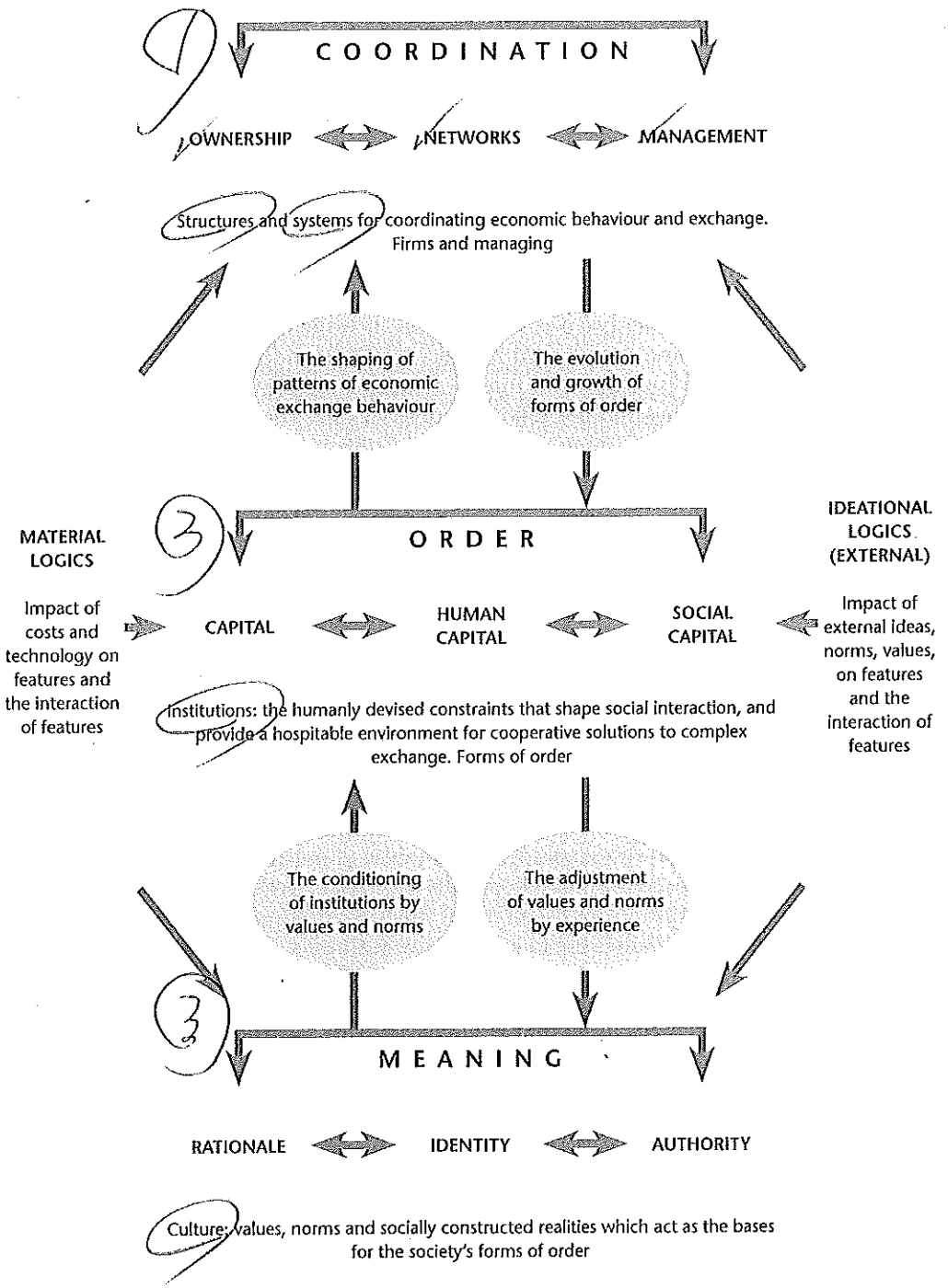


Figure 1.1 The elements of a businesss system

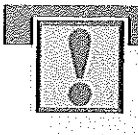
The middle layer of the model is that of the society's institutions. This is the realm of *order*, and the job of institutions is to standardize and regulate conduct so that it

becomes predictable. People can then learn how to act, and can better predict the behaviour of others. The society's economic system can expand and intensify if there is a widespread understanding of the rules of the game and if compliance with those rules is ensured. The main areas in which such order is needed are the fields where the society's main assets are found and allocated into the system for use. These are its finance *capital*, its *human capital*, and its forms of trust or *social capital*. Capital is about where money is sourced, and how it is allocated for use. Human capital is about where talents and skills are found or encouraged, and how the labour market structures work. Trust is about the relative uses of personal trust (as with personal networks) as against trust in 'the system' (as with reliance on law or bureaucratic process).

The business system itself is at the top of the picture and emerges over time in interaction with the other two sets of influences. It is the field of *coordination*, the pulling together of the resources needed to make economic processes efficient and capable of expansion. This is achieved in three ways: firms come into existence under forms of *ownership*, and these do not follow a universal rule. The Japanese are biased towards *keiretsu*, the Koreans towards *chaebol*, the Chinese tend to favour *smaller personally dominated* firms. These are different ways of holding together sets of assets and controlling their use. Secondly there are different ways of arranging the *relations between firms* in the economy, with a preference in some cases for alliances, cartels, and oligopolies, and in other cases for purer competition. Lastly, within each firm there are societal preferences for ways of *managing* the cooperation needed to bring together efficiently the human, technical and financial assets. In some societies firms are run with strong top-down discipline. In other societies they are run with much more participation and fair process. Although these responses differ between firms, there is nonetheless much evidence that a societal pattern makes itself felt and produces recognizable differences between national economies. Each society becomes distinct.

The history of a society will also have an effect. Taiwan bears the imprint of its half-century of Japanese occupation, and the Philippines its US American and Spanish heritages. So too will government policies have an impact on the end result. You cannot understand China without studying the waves of policy change it has gone through. Nor can you understand South Korea (also referred to as Korea) without acknowledging the series of five year plans begun under the Park government in the 1960s.

I shall use this framework to describe the business systems of Asia, but before doing so need to advise the reader that much simplification is inevitable in doing so, and that it is not intended to substitute for detailed studies of each society. The pictures given are outlines only. It will not be possible to go into every aspect of the model in every case, as this is intended to be an introductory chapter, not a final statement. It serves to make two main points: each society does things its own way; and although societies may appear to be drifting closer in some ways, they never meet to make a perfect convergence. The fact that they do not finally converge is what presents international business with its interest and its dilemmas, in both theory and practice.



SUMMARY POINTS

- A business system is a way of looking at a country's economy so as to compare with other countries.
- It also allows us to deal with emerging and evolving socio-economic systems and to understand their complex dynamics.

REFLECTIVE QUESTION

What do you think should be included in the description of a country's way of doing business, if someone asks you to explain one?

THE BUSINESS SYSTEM OF JAPAN

The Japanese business system developed as one of the world's most powerful, and especially in industries requiring:

- high levels of technical skill in manufacturing
- the building of globally significant brands
- complex organizational coordination at high levels of efficiency, and
- an ability to engage workers in product improvement and quality assurance.

Typical fields of dominance in global competition are automobiles, machine tools, consumer electronics, and communications equipment. How did this dominance come into being? Why is performance in certain other fields such as the service sector less dramatically competitive globally? Why is it taking so long to recover the high rates of growth typical of the 1980s? And what is it about the Japanese business system that allows it to deliver wealth per capita at one of the highest levels in the world, and organizations of immense scale and dramatic efficiency?

History and Politics

Japan went through a key societal revolution in the early years of the 17th century when the Shogun Tokugawa imposed his design on a newly unified nation, in the interests of achieving peace and stability. Key in this were two elements: first, the decentralization of much decision making into local hands along with an encouragement of participation and the seeking of consensus; and second, the development of a highly effective administrative bureaucracy responsible for strict rules of order, and for keeping the Centre informed about what happened locally. Tokugawa's influence on Japan was massive and lasted for two and a half centuries, only coming to an end when the outside world forced an entry and showed Japan that other countries had left it behind in industry, science, technology, and weaponry. The stability had come at the cost of conservatism. The subsequent overthrow of the old regime in 1868 led to the modernization of the state, and the deliberate searching for external models to adopt and adapt.

The subsequent industrialization of Japan happened twice. Between the 1880s and the 1980s Japan built huge conglomerate organizations – the *zaibatsu* – and relied upon their owning families to control and direct them. Government worked in close collaboration with such firms. World War II destroyed them all and in 1946 Japan began again, but this time under conditions of democracy imposed by the conquering US. Public ownership took over from private, and professional management took over from that of personal and family networks. Recovery was fast, especially as the markets of the advanced economies were open. New industrial conglomerates grew and began to make a global impact. By the end of the 1980s 'Japanese management' had become the world's most respected form, and its economy the most formidable. Deep competencies in the managing of technical and organizational complexity, in cooperation

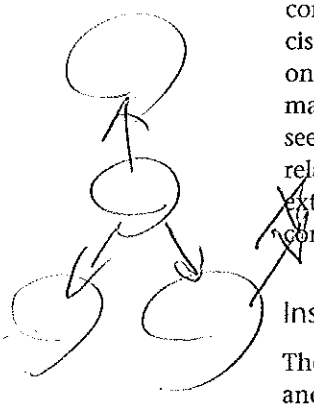
within the overall system, and in control of global activities, had made the Japanese company the envy of the world.

But keeping a business system in perfect balance is never easy and Japan was no exception. Through the 1980s a large bubble in asset prices had blown up, inflated by years of success and weak financial rationality, and added to by administrative corruption favouring the construction industry. The bubble collapsed in a downturn, and Japan entered a period of relative stagnation that lasted through the 1990s and into the new millennium, its capital market never recovering to the crazy peaks of the unreal asset prices that brought it down. The lost decade is extending to two decades and the reforms attempted by various governments have not taken hold to the extent needed to return Japan to its dominant position. Certain industries have remained unscathed as they were capable of radical adaptation, and they are the ones listed above. Others are victims of the rigidities of a highly inflexible structure, in which ministries, industries, labour unions, banks, and systems of distribution are all intertwined in bonds of reciprocity, and unable to orchestrate serious change. The absence of flexibility in both labour and capital markets is a handicap in such circumstances, when at earlier periods it was a strength.

It would be wrong to exaggerate the weakness of Japan, as much of its strength was retained, but its slowness in growth in recent years has been marked, and so too its apparent inability to adapt. How did this combination of power and inhibition evolve?

Culture

At the centre of Japan's economic culture is the idea that the firm exists to keep people employed, and that return on capital for the advantage of shareholders is not a primary rationale for economic action. Affecting this is the cultural tradition traceable to the Tokugawa period in which identity for the individual was centred on the *ie*, the traditional place of work and of belonging. The assertion of individual views remains constrained by the instincts for conformity to group norms. Authority came to be exercised under the conditions that subordinate dependence provided reliable workers but only if leadership took responsibility for their care. The underlying moral framework made sense of this mutual vertical bonding. It led also to a tendency for the firm to be seen as a vertical entity, separate from other entities, and in rivalry with them. A further related cultural legacy was the tradition of decentralized decision making that fostered extensive consensus seeking, and that released high levels of group creativity and commitment in the workforce.



Institutions

The institutions of finance in Japan – principally the banks, the insurance companies, and the stock markets – are providers of patient capital to industry. They have typically existed in close alliance with the major business groups and acted as clearing houses for the flows of capital needed in a relatively stable system pursuing long-term goals for growth. They have not been designed to achieve the highest rates of allocative efficiency in the short term. The system has resisted the incursion of outside influences to pursue this, doubtless judging that the short-termism that would result challenges a crucial principle of the overall design, as it actually does.

A similar rigidity occurs in the labour market. The core of the employment system is a set of permanently employed workers – perhaps 40 per cent of the total workforce –

and firms invest substantially in their training over years. This solid and reliable group is supplemented by two other groups – those employed on temporary contracts and those employed part time – and these two groups provide the necessary flexibility to the system. Compared with other societies, the technical skills derive more from the firm than from the education system and the latter is usually seen as being conservative and centralized, even though standards are high.

Social capital – or forms of trust – is at a higher level in Japan than in any other Asian society, and it engenders an unusually high level of cooperativeness between firms, firms and government agencies, subcontractors and supply chain members, unions and management, and members of the elaborate business networks and 'industry clubs' that tie the economy together. The origins of this capacity to cooperate and to trust lie most probably in the centuries-old tradition of high-quality professional administration typical of Japan. It will also have some connection with the high quality of information, in terms of both quantity and reliability that the economy is accustomed to.

The Business System

The coordination of economic exchange and control is done in Japan through the medium of two main types of firm. The heights of the economy are commanded by the very large business groups, known generally as either *keiretsu* or *sogo-shosha* depending on whether they are in manufacturing or trading. The rest of the economy is dominated by small and medium enterprises, often privately owned, and often connected to the large firms through networks of sourcing or distribution. The networking between firms is elaborate and extensive, and industry associations flourish. Within firms 'Japanese management' continues to create high levels of employment stability, and to operate with strong mutual dependence between management and workers. The relative stability and long-term nature of employment relations match the equivalent long-term nature of 'patient' capital. In these conditions firms are able to make long-term plans, to invest heavily in technology and training, and to build their strategies around product quality based on deep labour skills and incremental product improvements as opposed to constant product–market change. The ability of Japanese firms to handle complex coordination is a distinct strength in global markets and remains a primary reason for the nation's competitiveness. Few societies can handle the mixture of quality, brand building, and adaptiveness to market, at global scale, that the Japanese firms have mastered.

SUMMARY POINTS

- Japan has a distinct and very advanced industrial economy, based on its unique history, and its special combination of features.
- Its ability to handle very complex industry derives from its high levels of trust, its stable sources of patient capital, the professionalism of its management and the high skills of its workforce.

THE BUSINESS SYSTEM OF CHINA

The story of China is very different from that of Japan, and although there are some common features of heritage, notably language form and religion, their divergent trajectories over the past thousand years mean that the differences between the two societies are now profound. In brief terms Japan built itself into one of the world's greatest industrial powers following its opening up in 1868, whereas China suffered relative decline for most of the 19th and 20th centuries, and only recovered following the reforms begun by Deng Xiaoping in 1980. China's recovery has been quite simply miraculous and high respect is due for the political and economic skills exhibited in the recent transformation of its economy into 'the workshop of the world'.

History and Politics

China was a great civilization long before any other now surviving in the world. It achieved prosperity well ahead of other regions, flowering especially in the Tang and the Sung periods over a thousand years ago. Although it subsequently achieved much in science and inventions, and in statecraft, these were pre-modern achievements, and the industrial revolution passed it by in later centuries, leaving it stranded and isolated by its own wishes. Its system of government has always been highly centralized and has continually displayed the same three components, adapting them to changing surroundings:

- reliance on a powerful emperor-like figure providing direction
- use of an administrative apparatus to extend the will of the central figure into the entire society, and
- reliance on the family unit as the primary focus of belonging, duty and welfare; this unit also providing the pride that underpins compliance to the rules of proper conduct, and the vehicle for the carrying of achieved status.

This basic architecture has not changed except in two ways. During the Mao experiments the family was temporarily destroyed and the emperor role vastly expanded. And in recent years that emperor role has diffused across a group of technocrats, as the family role expanded again to its traditional significance.

The 20th century for China was a period of high turbulence, with a revolutionary end to the Ching dynasty, civil war, invasion by Japan, World War II, the Mao years, and the post-Mao experiments. The Mao period, although giving China back its pride in a reasserted independence, led also to mass destruction of assets and lives. Emerging from the turbulence that followed, a series of controlled experiments posed a radical challenge to earlier orthodoxies, but their instigator, Deng Xiaoping, is likely to be judged by history as the true revolutionary saviour of China in its search for a modern condition. He created the special economic zones, tried various formulae for the revival of agriculture and industry, and permitted the return of the private entrepreneur.

The period since 1980 has seen dramatic shifts in the fortunes of three sectors. The state-owned enterprises (SOEs), originally accounting for 75 per cent of the economy, have been reduced to about 15 per cent and left with mainly the strategic industries that the state needs to control. The firms that remain in this category are now under the control of a state commission and are required to meet international standards of efficiency. The sector earlier known as 'the collectives', that once accounted for 36 per cent of the economy, has been partially eroded by the emerging private sector, but remains robust in many cases, having acquired great stimulus in recent years from new

opportunities, local support and alliances bringing in new talent, technology, and capital. The state retains a significant interest in many of these organizations. Known now as the local corporates, this sector accounts for about 20 per cent of the economy. The private sector, of mainly small and medium enterprises (SMEs), now accounts for about 65 per cent of the economy, and has grown spectacularly from a condition of being illegal in 1980.

A modern society is one in which power has been dispersed throughout the society to a point where people can be engaged in decisions affecting their lives without the political structure being destabilized. In contrast to this it is still common to think of China as a totalitarian state. And yet, a most remarkable political process – a form of quiet revolution – has in recent years seen economic decision-making power pass from the Centre to the provinces and cities in a way that leaves them largely autonomous. The OECD's 2005 report on China showed that revenues and expenditures are decided locally to a degree higher than in any OECD country. China's structure is now one in which the local administrations collect the taxes, and spend the major part of them. They are also set up to compete with other local administrations for investment, and to be judged by Beijing on their performance in doing so. To counterbalance this looseness the Party retains tight control of the key positions in the local hierarchies. The effects on the economy are to increase entrepreneurship, and to intensify competition. The central government, allocating development targets and rewarding local officials against their delivery, remains fully aware, and in control.

Culture

The culture of China was for centuries a product of the ideals of Confucius. Two and a half thousand years ago, he wrote his recommendations for the running of a stable state and a harmonious society, and because of their fundamental good sense and humane nature, they have remained the principles on which Chinese people have guided their lives ever since. The design was attacked under Mao, in his attempt at moving China into the modern world, but the attack was ill-judged, presented no viable alternative, and is now irrelevant. The Confucian ideal has returned, and so too the centrality of family in the consciousness of people.

The Confucian ideal was one in which each family took care of its own members, and was responsible for their social conduct. The role of the state was to ensure that this happened. Compliance with five principles was the basis of order, and these were essentially hierarchies of rights and duties: emperor and subject, father and child, husband and wife, siblings, friends. The emperor's role was that of father to the state, and he was subject to the mandate of heaven. Dynasties were overturned when that mandate was lost through bad administration.

Confucianism is not a religion; it is a code of conduct with much advice, but no deity and no notion of heaven. It concerns itself with this world. As a counterweight to that, other more spiritual religions came in and provided the missing component: Buddhism and Taoism, in each of which there is strong emphasis on achieving a balanced relation with nature. Chinese people tend to hold several such belief systems at the same time. The values that matter most then become respect for authority, reciprocity in relations beyond the family, and identity with family. These are interpreted in daily life through heavy socialization into appropriate role behaviour. The end result is a society in which behaviour is highly predictable, and fundamentally stable. The society is also capable of high levels of peaceful interaction.

The cultural features with most impact on economic behaviour are hierarchy and mistrust, and they operate as follows. In this society leadership positions are imbued with moral value: the boss looks after the subordinates in exchange for their loyalty. This means that power is not so much reached by performance-based merit, but by other means such as ownership or connections. Power may be abused, as it is in factories where workers are dependent. And communications tend to flow downwards only. Where the boss is an effective entrepreneur this can have positive results in certain industries, but only up to a certain scale of size or complexity. The problem of mistrust comes from dependence on personal connections in networking outside the family, so that the rules of reciprocity may be brought into play, and the absence of any means of dealing with strangers on trusting terms.

Institutions

Institutions designed to provide order in China tend still to be legacies of a state with high central control, but low participation by citizens in adding spontaneously created forms of order. Examples of the latter might be civil society institutions such as free-standing professions, independent control bodies – as for example over a stock market, or societies like chambers of commerce able to lobby government. Instead – and in line with centuries of tradition – it is widely assumed that order is the job of government and the hope is for a benevolent form of it. This results in a wide net of regulatory bodies, but a thin covering. It is one of the reasons why the growth of trust has been limited. Without a rich fabric of institutions providing reliable forms of information and conduct, in addition to government control and law, it is not possible to trust those not known (and bonded) personally. An invisible but significant outcome is the high level of competitiveness between the family-based units for scarce resources.

Capital has until recently been allocated inefficiently in China, as the state banking system had a virtual monopoly on the huge savings of the people and the rights to use them in industrial investment. Foreign banks are recent arrivals and are struggling to obtain a position against a background of changing regulations. The banking system is now under close scrutiny and its efficiency increasing, as is that in the state sector more widely. Much finance for industry is taken from retained earnings, and at the smaller scale (still significant in the larger picture) often from informal lending, with start-up capital from friends and relatives.

Human capital is available in colossal quantity as relatively unskilled but trainable labour, and it is this that gives China its competitive edge in basic manufacturing. But value-added is greater in higher technology industries, and here China struggles to catch up with the demand for higher skills, and for professional competencies in engineering, accounting, and management. Educational infrastructure is expanding at high speed in consequence, but quality of output remains – with some exceptions – below global standards. The organizing of labour markets is still weak, but new legislation has been increasing worker rights, and adding welfare provisions. The most critical determinant of labour costs, however, is location, with ChongQing in the interior offering labour at half the price of Guangzhou on the coast.

Social capital, that is trust, as earlier noted, is weak in China but with the important exception of that available inside the networks of 'clan capitalism' that so typify much industry. Clusters of cooperating firms make up the formula for handling the OEM (original equipment manufacturing) that delivers the workshop of the world. High

trust, flexibility, efficient transaction costs, and market responsiveness are characteristic features of these networks, which also absorb the necessary external contributions of design, technology, brand and market knowledge, and delivery logistics. The resulting economic instrument is China's most powerful weapon in world competition at present and largely explains the power of the private sector SMEs.

The Business System

China has three business systems inside its complex economy, each a legacy of a distinct history. The state sector dates from the communist era of central planning and totalitarian control. Most of it has been sold off in recent years and its remaining industries are those seen as crucial to the national interest. Either that or, in rare cases, they have become efficient at global standards. They now operate under very close scrutiny, and account for about 15 per cent of GDP.

The second sector is known as the local corporates and it derives its nature from two events. The first was the building of extensive industry at the local level in the 1950s and onwards when the communes of the Mao era were forced to act as autonomous mini economies. This required the construction of factories to meet all local needs, although some trading took place across the society within the government plan. The second event was the decision, as reform took hold in the 1980s and speeded up in the 1990s, to permit the disposal of these assets to entrepreneurs – often in coalition with local administrators. Many such assets were acquired on very favourable terms, as people decided to 'jump into the sea' and seek wealth. Many of China's new billionaires got their start in what they term now the 'golden years' when such acquisitions were possible.

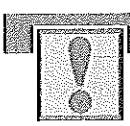
The third sector is that of private business and it has received increasing encouragement from government as the primary vehicle for the country's economic growth. China has always had entrepreneurs and a tradition of commerce, and it has also always had a tendency to grow small or medium enterprises under personal control and often connected with a family. Such enterprises would normally have a short lifespan and rarely lasted beyond three generations, as family disputes would eventually break them up, or make them inefficient by the time the power of the founder had evaporated among the successors. This is partly because of the inheritance tradition that left equal wealth to all children, a feature in strong contrast with that of Japan and northern Europe, where the assets were passed intact to the principal heir, through succeeding generations, often for centuries.

The revival of privately owned companies in China dates only from the 1980s, their having been illegal under communism. Since then the sector has received increasing legal and political support and legitimacy, and now accounts for about 65 per cent of the economy. This phenomenal growth must also be seen against the fact that the funding of such enterprises has been almost entirely by retained earnings or borrowing from friends and relatives. Only now is it feasible for such companies to switch on the extra advantage of bank support for working or investment capital. It is predictable that the arrival of foreign banks as lenders to this sector will inject new efficiencies into the processes of capital use.

Ninety-nine per cent of Chinese industrial firms are small and medium in size, and the response they make to the opportunities is most easily visible in the exporting phenomenon known as the workshop of the world. Here the role of the private company is usually to take part in the network behaviour of the OEM system described

earlier. No discussion of this system is complete without reference to the role of the regional ethnic Chinese in places such as Hong Kong, Taiwan and the ASEAN countries, because their injections of capital have accounted for the majority of foreign direct investment (FDI) into China since it opened up. As well as capital, however, this same group has brought knowledge of world markets, technology, branding, and logistics, and their influence on China's growth has been high.

China's industrial future will be heavily influenced by the growth of its internal market, by the extent to which it prevents outsiders from taking large slices of the cake, and by the organizational challenges of reaching scale and scope while retaining essentially charismatic leadership in many enterprises. Innovation and adaptiveness do not flourish at global standards under conditions of centralized control.



SUMMARY POINTS

- China has emerged from a long and turbulent history to find for itself a set of successful industrial formulae.
- These are a reformed state sector, a local corporate sector, and a private sector.
- The latter has grown unusually fast and now dominates, being largely responsible for China's position as 'the workshop of the world'.

REFLECTIVE QUESTIONS

- Why does Japan have an income per capita of around US$40,000 and China around US$4,000?
- Do you think that China on its own will be able to produce the equivalent of a Lexus?
- List all the global brand names you can think of from Japan and China. What does it tell you about the nature of industry in the two societies?

THE BUSINESS SYSTEM OF SOUTH KOREA

The Korean peninsula was for centuries an autonomous state, but in a tributary relationship with its giant northern neighbour China. It absorbed from China a number of key features of its culture and societal fabric. The principal one of these was Confucianism, with all that it implied for stable hierarchies and social order built around families. It also used a form of administration similar to that of the Chinese mandarin system, including a dynastic central figure. It also closed itself from the outside world, coming to be known at the end of the 19th century as the 'hermit kingdom'. That period ended in 1905 when newly expanding Japan invaded and took over the peninsula as an extension of its modernizing economy. Much about Korea in later years can be explained by its decades under Japanese rule. It had become another tributary state, this time with foreign ownership of its industry – mainly in the north – and with its agriculture serving the needs of Japan.

The sense of independence among Korean people was not to come into full expression until the 1960s but an early sign of it was the creation in 1443 of a distinct form

of writing, and that rare feature in the region – an alphabet. The Korean War in the early 1950s destroyed the country and divided it, and South Korea began after it with minimal assets except the drive and skills of its people, and the willingness of the international community to provide it with financial and technical help. The post-war period was marked by a series of five-year plans in which the government took control of the shaping of the economy, and determined upon a strategy of developing the country as a base for manufacturing exports. To achieve this, its plans were constructed to provide the ingredients needed, such as human skills, infrastructure, capital, and technology. The other key ingredients – entrepreneurship and management – were found among the business people at the time, by encouraging them with licences and loans and allowing them to prove themselves. If they produced the exports they got more support, and they were allowed to keep the ownership of the companies they had founded at the early stage.

The planning system has remained in place for decades and saw South Korea's rise from nowhere to being the world's 12th largest economy. In this the role of the entrepreneurs has been crucial, as they built the key instrument of the economy – the *chaebol* – the large conglomerate firm under tight control. There is a large sector of the economy made up of SMEs, many connected by supply chains into the *chaebol*, but the grip of the latter is firm. Many of them suffered severely in the 1997 financial crisis, as their tendency to borrow short and invest long turned against them. A number of spectacular bankruptcies followed. In the decade since there has been much realignment, rationalizing, and opening up, and many of the controlling families have retired into the background, giving way to professional managers.

Culture

As earlier noted, Korea is a deeply Confucian country and this is evident in the hierarchical nature of many of its organizations, and of its management style. There is also a strong tendency to build personalistic relations horizontally, often with school groups or place-of-origin networks. An instinct for discipline is perhaps rooted in the experience of military service by many workers and executives, and the constant sense of anxiety about a possible invasion from the unpredictable regime of North Korea. A shared ideal running through the culture, and possibly attributable to the nation's experiences of subjection, and current threat, is a fierce national pride. Firms exist, in the perceptions of many, to strengthen the nation.

Institutions

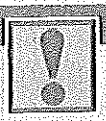
Several historical legacies have left their mark on the main institutions available for the economy. First is the respect for the professionalism of the civil service, and the power assigned to it in consequence. This has deep roots in Confucian ideals and structures of statecraft, although the more recent contribution of Christian ideals has added much to the Korean elite. Second is the derivation of much administrative routine and character from the days of the Japanese occupation, during which many society leaders were educated in Japanese. The two features flow together to facilitate what political scientists call a strong state.

In addition, a great deal of new institutional structure, such as law, financial administration and accounting, organizational techniques, and technology itself, has flowed in as Korean companies have successfully interacted with the markets of the developed

world, and as those sent abroad for education have returned to apply their learning. A new injection of such ideas and techniques happened as a cost of solving the financial crisis of 1997. Along with many other societies in Asia, South Korea was given its dose of 'reform', and was moved forcibly towards the market-driven rationality of the Washington consensus.

The Business System

It could be argued that the great strength of the *chaebol* has come from the ambition and the vision of the owners who ran them, and the availability of government investment to back them, and that as these elements become diluted they will be hard to replace. Such centralization of power does bring great capacity to inspire creativity and to respond to change. As these organizations evolve into a new form, many of the earlier ways will be carried with them, and the newly rising professionals and foreigners will be able to perpetuate much of the social psychology of the past, while eliminating its negative effects. It is as yet too early to read clearly these trends but if the recent ascendance of Samsung and LG is anything to go by, the future seems to lie in that direction.



SUMMARY POINTS

- South Korea has become a major world economy with its main form of enterprise being the *chaebol*.
- These were originally family-dominated conglomerates built with government support from 1960 onwards.
- They are now turning to professional management to continue new growth in world markets.

REFLECTIVE QUESTION

In how many ways is Korea halfway between China and Japan?

THE BUSINESS SYSTEM OF THE REGIONAL ETHNIC CHINESE

China had a thriving economy of small businesses for centuries. In the 19th century the society went through periods of intense strife, with overpopulation, famine, unemployment, civil war, invasion, all exacerbated by a decadent government. In the worst periods people left to find work elsewhere, and to support the families who stayed behind. They left mainly from the south, were mainly young men, and they went to the countries around the South China Sea, the *Nanyang*. They usually joined their compatriots from specific regions of China, and they found work in the new agriculture and extractive industries being established under colonial rule. Hundreds of thousands went, and after some decades a similar exodus of females took place, and the Overseas Chinese settled down and became part of the fabric of their host societies. After several generations they usually think of themselves as Malaysian, Indonesian

and so on. Their number now in the region is about 30 million, with a further population in Taiwan of around 22 million.

The normal pattern was for an emigrant to work as a labourer initially, but to save and then move into self-employment on a modest scale. Over decades this trade or business might be built up and expanded over several product fields, so as to hedge risk and take opportunity. The organizational pattern was highly consistent. Ownership was tightly held, in either a partnership or a family group. One person would be the big boss and would take all key decisions and often many non-key decisions also. Personal networks of connection with key suppliers, financiers, customers, and sources of information, would be built as a form of social capital held by individuals. Employees would be treated paternalistically, but discipline maintained. These enterprises had a number of distinct virtues: they were highly efficient in terms of managerial control, and in terms of transaction costs between units in the economy. By concentrating decision power and resources into very few hands they were also able to take opportunities quickly, to adapt as need be, and to keep key employees loyal. For the colonial powers, they made excellent 'middlemen' in the developing economies, being perceived as diligent, reliable, and non-political.

Over time, surviving the turbulence of the first half of the 20th century they emerged into a key position to take advantage of the growth opportunities that followed the end of colonialism and the beginning of access to world markets for goods made in the region. They came to dominate the economies of Southeast Asia, and at the same time to build up the formidable industrial and financial bases of Taiwan, Hong Kong, and Singapore. Their bamboo network in the region tied them together as a powerful force and facilitated their taking of opportunities as they unfolded country by country, the most recent aspect of that process being their massive investments in recent years in China, they being the source of around 60 per cent of its FDI to date. In the light of this the phrase 'The China Circle' is commonly used to indicate the reciprocal nature of the ties now established with the homeland and its southern ocean.

Within the category of the regional ethnic Chinese, as noted above, are the three great 'tiger' economies of Taiwan, Hong Kong, and Singapore, and although their shared cultural heritage means that many organizational patterns are consistent across the three – especially that of personally owned and dominated SMEs – the differences between them are still obvious. These are due to quite different histories and development policies in the last half of the 20th century.

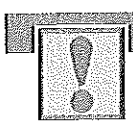
Taiwan was developed by the Kuomintang elite who fled from China having lost the struggle against communism for dominance. Its longer term future awaits a working out of the tensions left over from that, and in the meantime it acts as an autonomous state, while China awaits its return to the motherland. Its development was achieved by a state system of managing the economy, and especially by controlling the major sectors such as banking, steel, transport and so on, and then encouraging the growth of entrepreneurship. Especially significant has been the encouragement of technical education and of close ties with the hi-tech industries and research facilities of the US. This has produced one of the world's most vibrant manufacturing industries in the general field of hi-tech, making components especially for the world's brand names in computing, telecoms, electronics, electrical, and machine making.

Hong Kong, now part of China but retaining much autonomy as a Special Administrative Region until 2047, is the core city of a huge region of south China containing upwards of 150 million people. It hosts much of the ownership, management, finance, design skill, market access skill, and logistics competence needed in its hinterland, and

to do so carries forward the skills acquired from its earlier existence as an outpost of the British Empire. For 50 years before the transition in 1997, it developed as one of the world's purest examples of laissez-faire economic policy. This gave it an unusual dynamism as the fierce logics of competition, combined with high-quality infrastructure, brought it to developed-country levels of wealth.

Singapore, also earlier British, became autonomous in 1959, and set about building a modern economy by attracting foreign investment, and especially pulling in industry able to respond to the opportunities of both resources and markets in the surrounding region, for which Singapore had traditionally been an entrepôt. With very strong government since, it has continued on that path, extending further into industries based in science and high technology, and supporting sectors such as banking.

As the business system of the regional ethnic Chinese overlaps extensively with that for the Chinese private sector it will not be described again here.



SUMMARY POINTS

- The regional ethnic Chinese emigrated from China to find work in the countries to the south, and they have become prosperous because of their business skills.
- They now play a very important part in many Southeast Asian economies and their links with China grow in significance.

THE BUSINESS SYSTEM OF SOUTHEAST ASIA

The countries covered here are Indonesia, Malaysia, and the Philippines (Thailand will be included in the final section on IndoChina). The three countries share two features: they were all colonized and bear the traces of that history in their present institutions; and they have all struggled with development during the past fifty years, and been outpaced by their Confucian neighbours. Their current GDP per capita is Indonesia US$730, Malaysia US$3,850, and the Philippines US$990. In Indonesia and the Philippines this is partly a reflection of huge populations, with 215 million in Indonesia and 77 million in the Philippines. In a famous early critique, by Kunio Yoshihara, they were described as having a form of ersatz capitalism (that is, an imperfect form, just about able to stay intact). His main concerns were with the quality of the administrations in terms of policy and planning, and the difficulty those societies had in blending in new technology to their systems of production and business. Two other features need to be noted also. Indonesia and the Philippines especially have displayed unusually high levels of corruption, worsening the administrative weakness. So too were they very badly hit by the Asian financial crisis of 1997. As emerging markets they had been the recipients of vast amounts of loose and adventurous money flowing in from Western investors. The money rushed out again at the first signs of trouble and they were left to carry the blame and to see their finances laid waste by excessive valuations and debt. The years of 'reform' that have followed have seen them move clearly in the direction of greater openness, more rational resource allocation, greater professionalism, and more market-based competitive discipline, all sharpened by the arrival of more foreign competition in their own markets.

Much has been achieved in the post-crisis decade to bring order to the financial systems, and to bring corruption under control, but the building of an economy able to attract outside investment, and able to compete in world markets – especially now

against China – takes time, and their ratings do not inspire confidence yet. In terms of the quality of the business environment for doing business, they are rated 123rd (Indonesia) and 133rd (Philippines) in the world. By contrast on the same scale Malaysia is rated 34th.

The Philippines was for centuries a Spanish colony, and the main legacy of that period for the economy is a land-holding 'aristocracy' of a semi-feudal character, that has retained a strong grip on political power, and frustrated many attempts at land reform and the redistribution of wealth. It has been joined by a parallel elite of ethnic Chinese business owners, capable of skilled management, and capable also of co-opting the political support needed in an essentially patrimonial state. These two groups dominate the business scene, and the only other significant players are the foreign companies seeking stable sources of labour skill for manufacturing. The fluency in English of many local people has often attracted many firms from the West. Significant also have been the strong ties with the US stemming from the period of American protection in the first half of the 20th century, with its legacies of democracy, law and education.

In Indonesia the legacy was of Dutch colonial control, in place from the early 17th century until the end of World War II, and still visible in many systems such as law and administration. After independence the state was for several decades in the hands of two powerful leaders with military backing – Soekarno and Suharto – and it was not until the fall of the latter, under charges of corruption, that new forms of government could be introduced. Eventually full democracy was reached for the first time and the country has remained stable since. In the economy the ethnic Chinese have played a major part for a long time, and have displayed great political skill in maintaining or reconstructing their positions as the various patronage networks have been reshaped. As in the Philippines ethnic Chinese population numbers are small (about four per cent in Indonesia and about one per cent in the Philippines), but economic strength is great, amounting to more than half of the ownership of the major local conglomerates in both countries.

In Malaysia, the case is different. It is a much smaller country in population terms, with around 22 million people, although its GDP stands at about 60 per cent of Indonesia's. This stems from its success in developing further the industries taken over after the colonial period, and in attracting large amounts of foreign investment. The latter has come in because of the government's willingness to create effective infrastructure and to invest in education. The end result is a powerful set of manufacturing industries bringing in new technology, and management, and making use of not just the relatively low-cost local labour, but also lower cost labour imported from Indonesia. Malaysia is an Islamic country, but unlike Indonesia which is very consciously secular in the political sphere, Malaysia takes religion – or at least ethnicity – into policy-making. In business this is clear in the attempts to protect Malay business against the intense pressures of competition from ethnic Chinese business.

THE BUSINESS SYSTEM OF INDOCHINA

For our purposes, although this region contains Myanmar (formerly Burma), Cambodia, and Laos, our attention will be given to the larger economies of Thailand and Vietnam, countries of respectively 63 million and 78 million people. Their different histories have resulted in Thailand being now about four times the weight of Vietnam in economic terms, although the latter is growing now very fast.

Thailand is distinguished among most Asian countries for its long history of independence from colonial domination. It is a constitutional monarchy, and the role of the king has long been crucial in holding the country together in the face of shifting political alliances and manoeuvres. One of the king's ancestors, King Rama IV, was instrumental in the late 19th century, in opening up the country to modern ideas and technology. This process ran parallel to the opening of Japan in the Meiji era, the more hesitant opening of China in the late Ching dynasty, and the slow dismantling of the barriers around Korea in the same period. Many of Thailand's institutions, such as law, education and administration, are traceable to that period, and they have had time since to become Thai in their workings.

In recent years industry has poured in from abroad attracted by a favourable business environment, and manufacturing industry is well established, especially in zones along the east coast and around Bangkok. Again, as in several other regional countries, the ethnic Chinese Thai have established a powerful dominance in local business, and operate on the 'bamboo network' across the region and into China. The first outside company to be registered in China after the communist era was the CP group, a family-owned firm that began in Bangkok selling animal feedstock and seeds.

The other large economy in the IndoChina peninsula is Vietnam and its story is again different. For about a thousand years it was a tributary state of China, until it gained independence in 938. This millennium left an indelible mark in the form of Confucian ideals and centralized government using a mandarin-type system. But for the subsequent thousand years Vietnam was a country under its own government until the interests of France destroyed its autonomy and led to colonial control from 1887. This built upon a long history of French interest, dating back to 1651 when a Jesuit priest adapted the language into a romanized alphabet still in use as standard today. French colonial policy was even more exploitative than the average around the region and – in the views of some – left the country worse off than when they started. There was however a residual legacy of strong administration and law, and an education system that could be later extended to more of the population. A series of uprisings in favour of independence marked the 20th century, including the expulsion of the French after Dien Bien Phu in 1954. Such movements culminated in what US Americans call the Vietnam War (and locals the American War), after which the Vietnamese regained their country. For the next ten years it was in the grip of hardliners and dogmatists, but after 1986, an opening up began that has not stopped and in fact gains continuing momentum.

Under the opening up known as *doi moi*, the state sector has declined and the private sector has grown fast. It is like watching a rerun of the China miracle but in slower motion (at least so far). The dismantling of a strong state, with a tradition of central planning and interference in the economy, cannot be achieved overnight, but the direction of movement is clear. At present it is ranked the 138th country in the world for business freedom, much of this handicap stemming from weak property rights and from corruption. The one-party state is no longer regarded as heavily interfering. Three forms of organization are emerging. The state sector companies, as in China, are succumbing to the forces of the market and being forced to reform their management. The private sector is booming and expanding entrepreneurially using SMEs. These are flexible enough, as in China, to cope with the uncertainties of their surroundings. The third form is that of foreign investors, attracted especially by the large reserves of low-cost and easily trained labour.

CONCLUSION

The variety of business systems on display here reflects the underlying contrasts in religions, in political preferences, in histories and the injections of ideas they often brought with them, and in ethnicity and culture. But at the same time many continuities are visible across the variety: the Confucian family ideal runs through many countries; the strong state is found widely; paternalism in authority systems is widespread; personal systems of trust are widely relied upon; and a powerful work ethic is widespread. But the separating out of these distinct business systems, resulting in virtually every society having its own formula, is due to the rich set of ingredients that goes into each recipe. The variety comes from the combination, and that is why there are so few replications, and why each of these societies needs to be seen in its own right, and with its own reasons for being as it is.

CHAPTER SUMMARY

- Asia is a region of immense variety and contrasts in terms of people, geography, culture, religion, history and so on.
- A business system is a way of looking at a country's economy, a way of understanding how the economy is affected by the unique social and cultural environment thus shaping the type of business system in question.
- Japan's business system and management style are highly influenced by its cultural heritage, strong social trust and the ability to deal with complex coordination.
- China's business system model has evolved after many years of turbulence and changes. Today China's private sector is developing at an astonishing speed and has taken the role of 'the workshop of the world'.
- South Korea's originally family-oriented conglomerates have in the past developed into very successful business groups or *chaebol*, which are famous worldwide.
- It is also possible to trace the development of the business systems of the ethnic Chinese who have, due to historical reasons, settled all over Southeast Asia.
- In fact it can be seen that many Asian business systems are commonly influenced by similar cultural elements such as Confucianism. Nevertheless each Asian business system has its own salient characteristics and features.

KEY CONCEPTS

Asian variety: Since Asia is a region of immense varieties, it is impossible to generalize Asia. In order to simplify our discussion, we can categorize the varieties into clusters based on geographical or cultural differences.

Business system: A complex adaptive system in which the business component of a society is analysed against the context of that society.

Culture: The base layer of 'meaning', that is how a society constructs its own way of making sense of its surrounding context.

Institutions: The middle layer of 'order', that is, the instruments through which a

Business – Context

society standardizes and regulates conduct so that it becomes predictable.

Varieties of capitalism: Different forms of capitalism such as 'ersatz capitalism' referring to the inefficient use of capital covered up by the availability of easy money, and 'clan capitalism' which is largely based on social trust.

REVIEW QUESTIONS

1. What are the main business systems of the region?
2. What are the principal components of a business system?
3. Give examples of how culture (that is, meaning) affects institutions (that is, forms of order) in different societies.
4. What are the most representative forms of enterprise in Japan, China and South Korea?
5. What explains the slower growth of Indonesia and the Philippines, compared with Korea, China, and Singapore?

LEARNING ACTIVITIES

1. Draw a picture like Figure 1.1 and fill in the boxes with one example in each box to show what is meant, describing one society in the region.
2. Draw lines between the boxes to show the complexity of the connections.
3. Add to the diagrams the key facts of the society's history, showing their effects.
4. Consider what kind of firm is likely to be successful in that environment and explain why you think so.

THE BIG PICTURE: CHINESE BRANDS

TCL wants to become China's Samsung[1]

Perhaps it was predestined. When France's Thomson announced on November 3 that it was in effect shedding its TV manufacturing business to a partner called TCL, few people had heard of the other firm. Was it a surprise? Not to TCL's chairman Li Dongsheng. His Western name is Thomson.

For the French company, this is a neat exit from a business in which it lost around €60 million (US$56 million) last year. Thomson gets a 33 per cent stake in the joint venture with TCL International – the mainland group's Hong Kong-listed subsidiary.

For TCL, however, the deal is bigger still. With revenues in excess of €1 billion and producing more than 18 million TV and DVD sets a year, the joint venture is being trumpeted as the industry's next global leader. So watch out Sony, Philips, Toshiba and Samsung.

Mr Li believes he is creating something new: 'the first Chinese consumer multinational with significant presence in all major markets'. And he promises confidently that the joint venture will make a profit in its first year.

このケースの論文を見つける

This is not all hubris. The deal marries TCL's low costs with Thomson's brands, distribution and research in Europe and America. And TCL, founded only in 1981 by a group of ambitious entrepreneurs in Guangdong – the province that is China's manufacturing heartland – is aggressively commercial even though it is controlled by a city government. It survived a bruising consolidation process among Chinese TV makers to emerge as one of the two leading groups, with an 18 per cent market share.

After attempts at diversification – a common affliction among Chinese businessmen – into white goods, computers and mobile phones (with mixed results), the Thomson deal suggests a laudable focus on the core business. Comparing TCL to Haier, China's leading home-appliance maker which is also trying to build a global brand, Arthur Kroeber, managing editor of the *China Economic Quarterly*, says: 'Buying an existing brand and a sales force makes more sense. Haier is trying to build a global name from scratch, but most Chinese companies don't understand branding.'

Whether this deal will turn TCL into another Samsung is doubtful. Both Thomson in Europe and its RCA brand in America are rather tired names 'on the sort of TVs you find in drab motel rooms', says one banker. TCL will need fat margins to match Samsung or Sony at brand building and marketing. And while China's vast pool of cheap labour gives it a massive cost advantage, it is not inherently as efficient as, say, many Taiwanese contract-manufacturers, or as dedicated to process engineering as its Japanese rivals.

Even so, this deal is a warning. TCL may not turn into quite the multinational Mr Li envisions, at least not immediately. But as more mainland companies start to foster ambitions beyond their home market, it will not take long for China's first global champion to emerge.

QUESTIONS

1. What is the mixture of organizational strengths that makes the Thompson/TCL alliance viable?
2. What differences are likely to exist between this new form of China-based organization and its Korean competitors?
3. How can this new venture compete with the strong Japanese presence in the global market?
4. Will the plans succeed in your view? If so, why?

INTERESTING WEB LINKS

Organization for Economic Cooperation and Development: www.oecd.org
The World Bank: www.worldbank.org
Central Intelligence Agency: www.cia.gov/library/publications/the-world-factbook
The Asia Society: www.asiasource.org
Asian Development Bank: www.adbi.org
Asian Studies Monitor: www.coombs.anu.edu.au

Note

1 *Source: The Economist* (US) 369.8349 (8 November 2003), p. 60.

REFERENCES AND FURTHER READING

Ahn, S. and Lee, J.W. (2007). Integration and growth in East Asia. Bank of Japan Institute for Monetary and Economic Studies Discussion Paper 2007-E-14.

Backman, M. and Butler, C. (2006). *Big in Asia.* London: Palgrave Macmillan.

Chan, S., Clark, C. and Lam, D. (eds) (1998). *Beyond the Developmental State.* London: Macmillan – now Palgrave Macmillan.

Hosono, A. and Saavedra-Riveno, N. (eds) (1998). *Development Strategies in East Asia and Latin America.* London: Macmillan – now Palgrave Macmillan.

Huang, Y. (2003). FDI in China: Why surging levels of FDI in China may indicate serious economic problems. Public lecture. Washington, DC: Carnegie Endowment for International Peace.

Mathews, J.A. (2006). Dragon multinationals: New players in 21st century globalization. *Asia Pacific Journal of Management,* **23**: 5–27.

Orru, M., Biggart, N.W. and Hamilton, G.G. (1997). *The Economic Organization of East Asian Capitalism.* London: Macmillan – now Palgrave Macmillan.

Peng, M.W. and Delios, A. (2006). Conglomerates and business groups in the Asia Pacific. *Asia Pacific Journal of Management,* **23**(4).

Redding, S.G. (1993). *The Spirit of Chinese Capitalism.* New York: de Gruyter.

Redding, S.G. and Witt, M. (2007). *The Future of Chinese Capitalism.* Oxford: Oxford University Press.

Tu, W.M. (ed.) (1996). *Confucian Traditions in East Asian Modernity.* Cambridge, MA: Harvard University Press.

Wade, R. (1990). *Governing the Market.* Princeton, NJ: Princeton University Press.

Whitley, R. (1992). *Business Systems in East Asia.* London: Sage.

Yeung, H.W.C. (2006). Change and continuity in Southeast Asian Chinese business. *Asia Pacific Journal of Management,* **23**(3): 229–54.

Yeung, H.W.C. (ed.) (2007). *Handbook of Research on Asian Business.* Cheltenham: Edward Elgar.

Chapter outline

- Corporate social responsibility (CSR) and sustainable development – Concept and phenomenon
- Asia positioning in the pursuit of sustainable development and CSR policies
- Adjustments required by the adoption of CSR concepts
- A pragmatic approach for implementing CSR policies
- The challenges ahead

Chapter objectives

After reading this chapter, you should be able to:

1. Understand the meaning of the CSR and sustainable development concepts in Asia
2. Identify the environmental and social problems in Asia that require a CSR solution
3. Understand the US and European positioning of CSR in their societies
4. Understand the different policies followed by the private and public actors in applying the concept of CSR and sustainable development

Chapter 2

Corporate social responsibility and sustainable development in Asia

Philippe Debroux

INTRODUCTION: CORPORATE SOCIAL RESPONSIBILITY AND SUSTAINABLE DEVELOPMENT – CONCEPT AND PHENOMENON

The Growing Importance of CSR and Sustainable Development in Asia

Asian countries face a number of social and environmental problems that are usually tackled by public authorities. But in Western countries, private business organizations play an active role to solve them. Corporate social responsibility (CSR) and the thought that corporations ought to care about the long-term sustainability of their business activities and growth pattern beyond mere compliance with the law is a concept born in the West. Nevertheless, during the past decade a growing involvement has been observed in Asian public authorities in the elaboration of policies and instruments serving to operate CSR and sustainable development strategies.

For the time being, the focus on environment-related CSR issues is dominant but a growing number of Asian companies are starting to adopt CSR practices and reporting standards embedding a broader definition of CSR including responsibility vis-à-vis workers and human rights. In a still small but growing number of them CSR activities are now internalized in the companies' organizational mechanisms. They also engage actively with their stakeholders on increasingly complex projects related to disease, biodiversity, or other issues requesting broad and diversified knowledge and experience. In doing so, they increase their social contribution and gradually acquire a valuable expertise in the field. So far, CSR-related management tools and principles have been largely elaborated in settings where Asian organizations have played a minor role. Western multinational corporations (MNCs) are still the dominant actors in Asia in terms of scope and sophistication of CSR activities. Although these organizations may have Asian members, most CSR internationally recognized norms and standards are established by organizations in which Western interests are dominant.

Both Asian governments and companies are increasingly aware of the political and economic importance of CSR and sustainable development. The concept of CSR is maturing and it is no longer considered as a merely defensive tool serving to protect companies' reputations. Besides the ethical concern, perception exists that in the future CSR and sustainable development may become the source of key business competitive advantages. This will lead to formal and informal rules that are likely to play a key role in business practices. Therefore, being late in proactively participating in the elaboration of the rules and optimizing their CSR activities may put Asian businesses at a disadvantage vis-à-vis the most advanced Western companies not only in their own markets but also worldwide.

Origin and Development of CSR and Sustainable Development

CSR has the explicit sense of voluntary, self-interest driven policies, programmes and strategies by corporations addressing issues perceived as being part of their social responsibility by the companies and/or their stakeholders. CSR was closely associated from the start with the idea of sustainable development, as identified at the United Nations Rio Earth Summit in 1992, namely, as development that 'meets the needs of the present without compromising the ability of future generations to meet their own needs'. An attempt to apprehend operationally the concept of sustainable development is found in the Three Dimensional Model presented by von Stokar (2004). Sustainable development comprises three 'bottom lines': environmental, economic and societal. All three dimensions can be measured and added to the two dimensions of time and North–South socio-economic situation. The idea is that economic development must be achieved with environmental preservation while promoting social equity in a long-term perspective taking into account the interest of the future generations.

CSR comes originally from philanthropy, with which it still shares a number of attributes. It could also be considered as an extension to social and environmental matters of the concept of corporate governance, putting emphasis on corporate economic and financial accountability factors. CSR is a product of a business environment where a combination of market and clear ownership laws is considered essential to manage a modern and economically efficient democratic society. So, the first task of CSR is to ensure that honesty, transparency and accountability are respected in business activities. But CSR goes beyond that in acknowledging that business responsibility should go not only to the market but also to all those affected by its activities, the stakeholders, that is, those who are affected, in any way, by its activities. Business may cause social and environmental problems in behaving without considering sustainability in its activity but it can also bring solutions to existing problems and prevent new ones from emerging. Respect of market principles is not incompatible, quite the contrary, with concern about the natural environment, social inequality, poverty and marginalization. CSR activities are not reserved to MNCs. On the contrary, it is recognized that solutions to sustainable development issues requires business involvement down to the lowest level of informal labour markets and local communities.

Integration of CSR in Business Policy

One important driver of CSR is the idea that there is a business case for responsibility, that is, responsible behaviour can be financially sound. However, CSR may consist in

peripheral activities loosely or not at all linked with core businesses. What distinguishes today's understanding of CSR and sustainable development from the business social initiatives of the past is the attempt to manage them as part of the organization's internal activities in a business-like manner and to develop instruments for this. For instance, Toyota's participation in reforestation projects in China is outside its main activities but involves a number of the company's employees, requires managerial decisions, implies technological transfers, may lead to the development of specific techniques to achieve results, and have an impact on the level of skills and knowledge of employees and locally involved manpower. Therefore, it can be considered as CSR activity (Toyota, 2006) although a number of companies would still call it philanthropy or a 'philanthropic type' of CSR linked to market development.

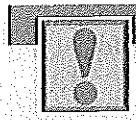
Development in corporate governance, according to which not only the financial performance can be objectively measured, but the non-financial ones can also be analysed, reported and even audited and certified, led to triple bottom line reporting. This idea drew on the inspiration of the three-dimensional sustainable development concept, which links companies' financial, environmental and social performances. The response to negative publicity related to the exploitation and abusive labour practices by subcontractors of famous brands also led to the launching of codes of conduct, adopted by companies and meant to be applied to the labour practices of their subcontractors and also to their relations with the other stakeholders, such as customers and employees. These codes are important to the evolution of CSR because they address questions of business responsibility by two significant and long-term developments. The first are the new forms of business organization due to outsourcing and subcontracting practices. The second aspect is related to the increased importance of intangible assets, such as brand names and reputation, in determining the worth of a company.

The US and European Approaches of CSR and Sustainable Development

In the US approach companies must respond to the new societal norms of corporate responsibility and accountability to all stakeholders. There is no statutory requirement for CSR, but its voluntary nature is the very source of its dynamism and innovative characteristics. CSR activities are expected to enhance the motivation of the employees and evoke a positive perception of the company on the part of the stakeholders. This will induce a spontaneous and self-sustaining pattern of diffusion of the best practices from large companies down to small ones, from rich to poor countries, leading to effective market economy, liberal democracy and active civil society. The majority of US companies do not give trade unions a central role in their CSR strategy. Commitment of employees and defence of their interests is thought to be better assured through flexible human resource management (HRM) policies fitting with companies' global strategies. Private norms such as the SA8000 or initiatives such as the Global Reporting Initiative (2007) and Global Compact are favoured over those forwarded by international bodies such as the International Labour Organization (ILO). Based on flexible principles and self-regulation of their behaviour by companies they do not impose rigid constraints perceived as liable to impede business activities.

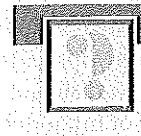
European CSR concepts are crafted on a tripartite system institutionalizing relationships between public authorities, companies and trade unions. Business input is considered as essential to solve specific issues such as unemployment, regional development and education. But the role of private initiatives is limited because CSR linked to standards privatization can weaken workers' rights in substituting for legitimate standard-

setting functions of the ILO and governments. The solution promoted by the European Union is to reinforce understanding between the key stakeholders to create clear norms and standards of CSR practices complementing public regulations. CSR should remain a freely developed activity. But, the question is no longer 'why CSR' but 'how CSR'. Companies have a legal obligation to behave responsibly to society. The best example of this is the legal requirement imposed on publicly listed companies in France, the UK, Norway, and Sweden for reporting social and environmental performances.



SUMMARY POINTS

- CSR and sustainable development are concepts associating companies' and other institutions' responsibilities to economic, social and societal development in a long-term perspective.
- CSR is a voluntary activity that goes beyond mere compliance with the law but does not substitute it.
- CSR activities can be reactive and largely unrelated to business policy or proactive and integrated into the strategy of a corporation.



REFLECTIVE QUESTION

Do you think the concepts of CSR and sustainable development are conducive to fundamental changes in the manner companies are managed, the development of original corporate cultures and, eventually, to significant changes in the priority of companies' objectives?

ASIA POSITIONING IN THE PURSUIT OF SUSTAINABLE DEVELOPMENT AND CSR POLICIES

Environmental Challenges Facing Asia

As a recent report from the Asian Development Bank (ADB) indicates, a number of Asian countries have made progress in reaching a number of the United Nations' Millennium Development Goals (ADB, 2007). However, environmental and social problems are such that unless more drastic and sustained actions are taken on a large scale, they are bound to lead to major social, economic and political crises (ADB, 2007). Five hundred million out of the 850 million of the chronically food-insecure people in the world live in Asia. In developing Asia at least 500 million people are unemployed or underemployed. Another 250 million will enter the workforce over the next decade (ADB, 2007). Asian economies must grow but current growth patterns are unsustainable due to their high level of resource inefficiency and dependence on a fast growth in fossil fuel consumption. The need for oil in the next 10 years will increase by 3.4 per cent a year in China, 2.9 per cent in India and 3 per cent in other developing Asian countries (IGES, 2005). In the past 25 years, Asia has lost 50 per cent of its forests and one-third of its agricultural land has been degraded. Asia's rivers contain a much higher level of pollutants than the world average. Of the world's 15 most polluted cities, 13 are in Asia. A considerable number of Asian urban inhabitants live in slums devoid of

basic facilities. About one-third of Asian people have no access to safe drinking water, and 50 per cent of them have no access to sanitation services. It is projected that 2.4 billion Asian people will suffer from water stress by 2025. At least one-third of a billion tons of solid waste across Asia remains uncollected each year (ADB, 2006).

Social Challenges Facing Asian Societies

Literacy, especially for women, has still not been achieved in many Asian countries, resulting in massive social and economic losses (Welford, 2007). The AIDS crisis is still serious despite some recent progress (ADB, 2007). It is estimated that 180 million children below 14 years old are working in Asia. Gender discrimination, exploitation of migrant labour, uncontrollable human trafficking, and child prostitution are all over the region. Unequal distribution of the fruit of growth threatens the stability of the socio-economic and political fabric, even in high growth countries such as China, India, Vietnam and Cambodia. But developed Asia from Singapore to South Korea and Japan also suffers from growing labour instability, and social and economic alienation of some part of their population. As Table 2.1 indicates, a high level of risk of social rights violations is noticeable in many countries in the region with only slow improvement if any in some of them.

Table 2.1 Comparison between Asian countries concerning the main risks of violation of social rights

Country	Forced labour	Child labour	Wages and overtime work	Discriminations	Freedom of association and collective bargaining	Other abuses
China	***	**	***	**	***	***
India	***	***	**	***	*	*
Bangladesh	*	***	***	**	***	**
Cambodia	**	**	***	**	***	*
Indonesia	**	***	***	**	**	***
Malaysia	*	***	***	***	**	**
Philippines	*	***	***	**	***	**
Sri Lanka	*	*	***	*	***	***
Thailand	**	**	***		***	**
Vietnam	*	**	***	**	***	**

Note: *** High risk ** Medium risk * Low risk
Source: IMPACTT Ltd (2004).

The Limited Resources of Developing Asia

With regard to Asia and the Pacific, the ADB estimated the annual investment costs required to achieve environmentally sound development based on two scenarios. Under the first one, implying no major changes in environment and development policies, the cost would be US$12.9 billion a year. Under a more ambitious scenario with the goal for developing countries in Asia to achieve the best practices of OECD countries by 2030, the cost would be US$70 billion per year. In addition, it is estimated that repairing the damage done to the land, water, air and living biotope in Asia would require US$25 billion a year (ADB, 2006). From climate change to international rivers, marine ecosystem and air pollution, the problems have almost always both an inter-

national dimension and a local one. This calls for collaboration between Asian states at sub-regional and regional levels to provide the necessary institutional framework. In the case of child labour, work hardship, human trafficking and prostitution, intervention is required at levels lower than those that are reached by public authorities because long-term solutions require the involvement and acceptance of the actions by local people at grass-roots level.

Table 2.2 Ratification of the core conventions on human rights in Asia

Countries	Freedom of association and collective bargaining		Elimination of compulsory and forced labour		Elimination of employment discrimination		Abolition of child labour	
	Convention 87	Convention 98	Convention 29	Convention 105	Convention 100	Convention 111	Convention 138	Convention 182
France	1951	1951	1937	1969	1953	1981	1990	2001
United States				1991				1999
China					1990		1999	2002
Afghanistan				1963	1969	1969		
Bangladesh	1972	1972	1972	1972	1998	1972		2001
Cambodia	1999	1999	1969	1999	1999	1999	1999	
South Korea					1997	1998	1999	2001
India			1954	2000	1958	1960		
Indonesia	1998	1957	1950	1999	1958	1999	1999	2000
Japan	1965	1953	1932		1967		2000	2001
Laos			1964				2005	2005
Malaysia		1961	1957	1958 den* 1990	1997		1997	2000
Mongolia	1969	1969	2005	2005	1969	1969	2002	2001
Myanmar	1955		1955					
Nepal		1996	2002		1976	1974	1997	2002
Pakistan	1951	1952	1957	1960	2001	1961		2001
Philippines	1953	1953		1960	1953	1960	1998	2000
Singapore		1965	1965	1960 den* 1979	2002			2001
Sri Lanka	1995	1972	1950	2003	1993	1998	2000	2001
Thailand			1969	1969	1999		2004	2001
Vietnam					1997	1997	2003	2000

Note: * Denounced by those two countries, respectively in 1990 and 1979
Source: Huchet (2007).

To make a multi-stakeholders' engagement approach successful is not possible without the right framework of norms and standards, something that requires institu-

tional strengthening and capacity development. As indicated in Table 2.2 most Asian countries have ratified the core conventions on human rights.

But, as pointed out by the ADB, the predicament is that governments of developing countries in Asia have a problem with implementation of regulations, due to factors such as the lack of regulatory resources to enforce standards, uncertain laws with few penalties for non-compliance, corruption and inadequate infrastructure and human resources to collect evidence for non-respect of the law by companies (ADB, 2005). They suffer from a shortage of technology, governance and management skills to cope with those issues. Moreover, the high level of indebtedness of many of them makes it difficult to divert significantly higher financial resources to environmental facilities and infrastructure, and to ensure the monitoring of the laws that would solve the social issues (IGES, 2005).

A Long Tradition of Philanthropic Type of CSR

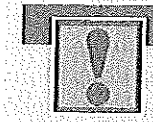
In Asia, it is pointed out that less codification of social relations was observed traditionally in business activities with more reliance on cultural mechanisms and guiding principles (Tanimoto, 2004). Asian corporations were never oblivious to their social responsibilities, though. But they were fulfilled as implicit obligations embedded in business practices and institutional frameworks. Responsibility was most often that of the owner of the corporation and it did not imply the creation of organizational mechanisms.

For instance, both in Chinese and Japanese traditional social hierarchy, the positions of the merchant and entrepreneur have been traditionally low (Dana, 2007). Their roles in society had to be legitimized by their responsible attitude to compensate for their inherently low status. This led to business cultures where companies were (and still are) expected to bear a benevolent responsibility towards those with whom they had direct relations: employees, business partners and customers, and the community surrounding the workplace, that is, the 'stakeholders' in modern CSR language. Emphasis was put on honesty, integrity and respect of ethical values by businessmen (Ho, 2006). The core values in Japanese and Chinese societies were 'faith' and 'trust' drawn from Buddhism and Confucianism (Ho, 2006). Doing something 'good' for society was regarded as a symbol of being 'successful persons', deserving respect, different from the contempt reserved for the mere 'money-seekers'. From Buddhist to Islamic influences, to minority groups such as the *Parsi* who founded the Indian Tata Group, or the Christian entrepreneurs over the whole region who have been active social reformers, all over Asia philosophical and religious doctrines have traditionally had an impact on social responsibilities. This is true as well today. It is pointed out that there is an overlap between the tenets of Islam and the concept of CSR as represented by the principles of the UN Global Compact (Zinkin, 2007). Likewise, the revival of Confucianism in China and in Hong Kong is typical of the perceived necessity of giving a moral legitimacy to the social and economic order (Ho, 2006).

Following such tradition, the Indian Tata conglomerate, the software house Infosys, and other companies indulge in community development, health, safety, and philanthropic activities. The Infosys Foundation runs orphanages, hostels, hospitals, libraries, relief shelters and homes for destitute and mentally retarded women, and invests in tribal welfare (Raja, 2004). This implies large investments that have a significant economic and social impact. Most of the activities may remain externalized as in the case of Infosys. But, in the Tata Group for example, they have acquired

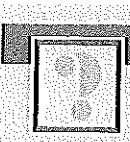
characteristics that are close to a systematic strategic pattern implying changes in the internal dynamics in the organization. In that sense, the Tata Group's interpretation of the concept of CSR is close to that of Western companies (Hindu BusinessLine, 2007).

Japanese (The Economist Intelligence Unit, 2005) and Korean companies (Ki-Hoon Lee, 2005) also promote partnerships with local communities in educational projects, infrastructure building and/or poverty alleviation. The nature of the CSR activities is often unrelated to their core business, although these forms of involvement tend to institutionalize CSR in company management not integrated into the core business strategy (Keizai Doyukai, 2003). However, this does not preclude stakeholder engagement as exemplified by projects of Japanese companies and some Korean ones (Ki-Hoon Lee, 2005) with NGOs and international organizations. This level of engagement is just starting in some large Chinese companies such as Lenovo and TCL. In Southeast Asia, CSR retains a paternalistic overtone, close to the former patterns found in Japan and China, that is, that of personal responsibility of top leaders, rather than organizational responsibility of a corporation.



SUMMARY POINTS

- Asian countries face a number of environmental and social problems whose resolution requires efforts from both public and private concerns.
- Solutions suppose collaboration at local, national and regional levels.
- Asian countries have a long tradition of corporate philanthropy based on philosophical and religious principles, on which the current debate on CSR and sustainable development is based.



REFLECTIVE QUESTIONS

- Is the environmental performance of our products limited by our existing technology base?
- Is there potential to realize major improvements through new technology and could technology allow us to solve environmental problems without changing the basis of the consumer-driven society in which we live and work?

ADJUSTMENTS REQUIRED BY THE ADOPTION OF CSR CONCEPTS

The Role of the State in CSR and Sustainable Policy

As the British example indicates (Lyon, 2007a), in the most progressive legal systems there is an increasing appreciation of the emerging field of sustainable development law. For the time being, there is no indication that Asian governments intend to follow European countries and impose a legal requirement for reporting social and environmental performances for publicly listed companies. But, at national level, policy documents have been developed for pursuing sustainable development in accordance with the Agenda 21 adopted at the Rio Summit in 1992. An increasing number of Asian countries are enacting laws that require environmental impact assessment (EIA) for all major projects. Some of them have applied EIA to existing and planned industrial

activities as a part of industrial environmental pollution control methods. Japanese and South Korean companies are very supply-oriented in their sustainable development strategy. They believe that technological solutions are preferable to regulatory constraints. But the Japanese government is taking a proactive stance. The Ministry of Environment has developed a set of guidelines for SMEs and formulated a registration and certification programme called Eco-action 21. At the regional level, the ADB has suggested a 'greening' of the supply chain strategy, based on the establishment of environmental objectives and a programme of regular monitoring.

In China, social instability and environmental damage must be dealt with rapidly lest the whole development objective should derail. The promotion of a 'harmonious society' (Leng, 2006) is accompanied by a flurry of CSR-related activities, from laws on labour and environment, to condemnations for corruption, labour exploitation or environmental damage. CSR is thought to enhance the Chinese companies' image and improve their governance standards. The development of Chinese CSR-standards is crucial to avoid dependence on Western norms that could have negative commercial and political consequences (Ho, 2005), and to make Chinese companies competitive on the markets that emerge, based on CSR and sustainable development-related technologies.

In macroeconomic terms, the Indonesian economy has recovered after the financial crisis in the 1990s. But in creating wide social imbalance liable to create political instability as in China, Indonesia also faces major environmental challenges and is considered as one of the most corrupted countries in the world (World Bank, 2007). So, CSR laws are imposed from the top as a means of restoring a legitimate societal governance system mixed with the willingness of reinforcing economic competitiveness (Lyon, 2007b). CSR policies are likely to continue to be largely driven by the state in those two countries but it will also be the case in Singapore and in Vietnam. At first glance, the approach of CSR in those countries shares similarities with the European one of codifying rules or laws defining corporate responsibility. However, there are also differences, notably with regard to trade unions.

The Weak Involvement of Organized Labour in CSR Policy

Vietnam and China have no independent unions as in communist states. In Singapore, the tripartite system is tightly controlled by the state (Singapore Compact, 2006). In Japan, companies work with the unions on CSR activities. But the relationships between management and unions do not seem to be as close as in Europe in terms of international collaboration. A growing number of European companies have concluded so-called frame agreements with their trade unions. But, so far, no Japanese company has concluded a similar one on shared principles between international trade union organizations and MNCs, something that can be seen as the start of international collective bargaining (ICFTU, 2004). In Malaysia and Indonesia, freedom of association has long been curtailed in the export-oriented industries (Caspersz, 2006). Active labour unions have emerged in Indonesia, the Philippines and Taiwan during the past 15 years. But these countries are still characterized by anti-union behaviour in their political and business environment. In Korea, trade union movements also re-emerged as part of political liberalization and economic development but the relationships with companies remain adversarial (Lansbury et al., 2006). Admittedly, there were successful attempts in developing tripartite types of relationships in Malaysia and, more recently, in South Korea to resolve specific problems. In this latter country, a Tripartite Commission, created in 1998, produced a Tripartite Social Accord, the substance of which was

almost immediately translated into law (ILO, 2008). But in view of the very different historical legacy of employment relations in Asia, and of the impact of globalization on business systems, out of Japan, it is unlikely that CSR will develop based on a tripartite system with trade unions considered as a social partner alongside management and government as in Europe. What could be expected is likely to be based more on ad hoc pragmatic attempts by management and organized labour, supported by the state in some cases, to build up profitable employment relationships, avoiding damaging labour-related disputes that companies cannot afford in a globalized world where competitive advantages can be easily lost.

A Priority Given to Environment

Asian companies disclose more detailed non-financial information related to social and environmental issues than before. In adopting the triple bottom concept, they recognize the necessity to protect their intangible assets. They are also aware of the emergence of shared workplace values appearing in the codes of conduct arena where multi-stakeholder efforts such as the Ethical Trading Initiative and SA 8000 are gathering ground (Roche, 2005). There is mounting pressure from the EU and the US to raise the CSR and environmental standards of the products imported to their markets as ethical consumption is gaining ground. But while CSR social dimensions are still often viewed as the necessary cost of doing business without fear of ostracism, environment-related CSR policies are considered easier to manage. They have less effect on companies' internal dynamics and are more potentially rewarding because they respond directly to market demand.

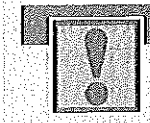
Western companies such as HSBC, Marks & Spencer, Tesco and Wal-Mart have either pledged to become carbon neutral or at least to substantially reduce their carbon emissions. This is bound to have a strong impact on their Asian suppliers (Crow, 2007). A few Asian countries have introduced government policies to encourage the purchase of environment-friendly products. Japan enacted the Law on Promoting Green Purchasing in 2000, requiring the national government, its affiliated organizations and local governments to purchase more environmentally sound products. South Korea followed suit in enacting a 'Green Purchase Act'. Consumers' awareness of environmental issues does seem to be growing in Asia, especially in Japan. A Green Purchasing Network (GPN) was established in 1996 in Japan. It consists of corporations, local governments and consumer organizations, and provides information on environmentally friendly products through printed materials and a web database. Local GPNs are now emerging in Japan. South Korea formed a GPN in 1999, Malaysia in 2003, and Taiwan and Thailand in 2005. Networking of national GPNs such as the international GPN is underway, which is expected to accelerate further the GPN movement in Asia (IGES, 2005).

Social labelling is almost unknown in Japan, South Korea, and Thailand but eco-labelling applies to various products, including organic food. Environmental management systems (EMS), such as life-cycle assessment (LCA), environmental reporting, environmental accounting, and the application of ISO 14001, have also grown in other Asian countries. National organizations to certify these standards have been established in Malaysia, Singapore and Thailand. Japan is well ahead in terms of ISO 14001 certificates issued, followed by China and South Korea. All three countries rank the top ten countries worldwide in the number of ISO certificates issued. Taiwan, India and Thailand have also increased their number of certified companies and the growth rate in Asia tends to be higher than elsewhere (ISO, 2007).

The Pressure from Change in Corporate Governance

In most Asian countries, stable shareholding ownership remains in place but offers companies less protection from the presence of shareholders asking for a higher return on their investments (Roche, 2005). Since the 1980s, demand for accountability and transparency spurred a shareholder activism in the US and, thereafter, in Europe, which was unknown in Asian countries until very recently. While having the objective of defending shareholders' interests, it has also been utilized to foster social and human rights-related causes. Such activism has yet to blossom in Asia but it is likely to emerge with the changes in corporate governance. The decision of the California Public Employees' Retirement System (Calpers), one of the biggest pension funds in the world, to not invest in China a few years ago and to withdraw from countries such as Thailand and Indonesia is a case in point (Association for Sustainable and Responsible Investment in Asia, 2002). The pressure exerted by Free Tibet on British Petroleum to get out of a pipeline project to Tibet in collaboration with PetroChina is another example (Dodd, 2004).

Asian companies are told that optimizing shareholders' value is the priority, but they are also expected to show more concern for other stakeholders. Protection of shareholders' rights is still an important issue in the region (Welford, 2005). Lack of transparency impedes access to information and participation in decision making for small shareholders. As a consequence, they are often deprived of their legitimate rights as investors (Welford, 2005). Asian companies must also respond to the rise of the Socially Responsible Investment Funds (SRI). It is estimated that there are about 150 SRI-related funds in Asia, draining US$20 to 30 billion. Japan has been the forefront runner of such initiatives: since the end of the 1990s, around 50 funds have been established. SRI funds still account for a negligible part of the Japanese market (2–3 per cent), though. This compares to 15 per cent in the US and 12 per cent in the UK (SiRi, 2004). In the rest of Asia, the number of SRI funds also remains small. This seems to reflect the limited interest and cautiousness so far of Asian companies to being listed on the socially responsible financial market indexes developed to measure corporate sustainability such as the Dow Jones Sustainability Index (DJSI) and the FTSE4Good. Except Japan, only a few Asian companies have this far been included in these evaluations (Van Heeswijk, 2004). It must be added that the decision of FTSE4Good to delete Toyota and Honda from its index as having failed one of its criteria (human rights in those cases) is likely to increase the cautiousness of Asian companies (Business Respect, 2007). Toyota and Honda are well known for their many initiatives linked to CSR and sustainable development and their being dropped may raise doubts about the objectivity of the evaluation criteria.



SUMMARY POINTS

- Companies in Asia must respond to the growing concern of Western and Asian consumers for environmental issues.
- The position of trade unions is weak all over Asia, preventing organized labour from playing a key role in the development of CSR activities.
- Changes in corporate governance force Asian companies to reinforce their engagement with key stakeholders.
- Companies give priority to environmental issues over social ones in their CSR policy.

REFLECTIVE QUESTIONS

- What do you think should be done in order to make the multi-stakeholders' approach workable in an Asian environment?
- In what sense and to what extent may the multi-stakeholders' framework be different in Asia from those developed in Europe and the US?

A PRAGMATIC APPROACH FOR IMPLEMENTING CSR POLICIES

Beyond the Codes of Conduct

Most CSR initiatives in Asia related to supply chain management focus on large suppliers, despite much of business in Asia falling outside the first tier of the supply chains (Welford and Frost, 2006). Moreover, the initiatives do not cover primary industries, such as mining, agriculture, forestry and fishing, where the majority of children and informal workers are occupied. Because of the cost and more importantly because of the difficulties in developing relationships with very small concerns, companies tend to narrow the number of suppliers with whom they work on CSR policy implementation. The intention is to create a critical mass of suppliers offering good wages and working conditions, and to engineer ripple effects reaching the levels below. In this respect, the sophistication of the external and internal monitoring systems that Nike (Lim and Phillips, 2007) has put in place shows that it is possible to successfully transform a competitive, arms-length market structure into an economically securer relationship with the buyer in the global value chain. The Nike approach goes beyond the mere request of applying a code of conduct. It requires the search of innovative solutions using diffusion of information, incentives and knowledge transfer in order to obtain a superior compliance of the code of conduct and, eventually, have key suppliers develop an independent ethical commitment to CSR (Lim and Phillips, 2007).

To reach levels below the first layers in the supply chains, the use or co-opting of traditional community sources of power with the help of non-governmental organizations (NGOs) may be more effective than a top-down policy. In most developing Asian countries, the development of NGOs as grass-roots organizations may offer an alternative response to the need for community level contacts. For instance, in Indonesia and the Philippines, NGOs play an important role in the rebuilding of the labour movement. But beyond purely labour-related issues they have shown the ability to develop broader local issues into international campaigns and to collaborate with multinational corporations (Ford, 2006).

For example, one of the most pressing problems in Asia is the protection of forests and the people whose livelihoods depend on them. The development of large-scale monocrop plantations in countries such as Indonesia and Malaysia has most often resulted in the rights and concerns of local people being neglected by owners and government. They are also the source of major environmental damage because of intensive irrigation and the use of pesticides detrimental to the surrounding ecosystems. The sustainable development model supposes the development of more socially acceptable large plantations coexisting with smaller locally managed plantation models. For community forestry to succeed, individual schemes must be finely tuned to reflect local circumstances. Land tenure, a voice for marginalized groups in decision making and strong institutional

support are also required. It can only be done with the help of NGOs included into a multi-stakeholders structure. To cover the cost, local companies and MNCs could assist SMEs by providing hardware, such as pollution abatement technologies, specific guidance on moving up the value chain and other professional services (IGES, 2005).

A Multi-pronged Implementation of CSR and Sustainable Development Policies

Common economic instruments applied in Asia are various environmental taxes, subsidies, emission charges, user fees, custom exemptions and duties to promote clean technology. Despite their advantages, economic instruments are applied in a very uneven and limited manner (IGES, 2005). Public–private partnership has developed considerably, especially in the water and sanitation sectors. In some cases at least, positive outcomes have been reported in the form of better services and lower prices. Some failures have been registered, however. So, it is difficult at this stage to judge the extent of those partnerships' effectiveness (ICFTU, 2004).

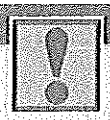
Thailand, the Philippines and China have undertaken major reform in water management. They have strengthened their water ministry in creating an apex body set up for coordination. It sits alongside decentralization because the key success factor is the delegation of management responsibility to local communities and the strong commitment generated among local water managers by an incentive system. Other environmental issues such as haze pollution, climate change and forest management pose a set of challenges to environmental governance. Some are local in terms of the source of the harm and its impact while others are local in source but international in impact; still others are international in source and impact. That is why Asian countries are placing greater emphasis on regional participatory approaches.

A 'Regional Action Program for Environmentally Sound and Sustainable Development' was adopted at the Ministerial Conference on Environment and Development in Asia and the Pacific, in Seoul, in 2005. It provides a framework for regional cooperation on sustainable development from 2006–2010. A similar commitment to collaboration has been obtained for the sharing of information on the environment through the UNEP (2005) Regional Resource Centre for Asia and the Pacific. Specific action plans and policy integration have been formulated on biological diversity, to combat desertification and mitigate drought. At the sub-regional level, agreements have been achieved to combat acid rain, sandstorms and haze in Southeast Asia. In this latest case a legally binding policy instrument has been signed by the parties (IGES, 2005).

The creation of the Mekong River basin ecosystem-based intergovernmental body is another important regional initiative. It has set a prototype for effective ecosystem-based, natural resource management and an alternative sustainable livelihood development, in a region where few rivers and water bodies have been governed by legally binding agreements. The challenge to create a sustainable channel of commerce and prosperity in the Mekong River basin, which contains 70 million people and encompasses the 230 million people of Cambodia, China's southern province of Yunnan, Myanmar (Burma), Laos, Thailand, and Vietnam, represents the 'last frontier' in the region. Balanced, sustainable development is pitted against purely economic objectives.

In Asia, regional cooperation has traditionally relied on an informal approach with frameworks amalgamating the organizations and countries with different policy preoccupations and varying socio-economic conditions. The Roundtable on Sustainable Palm Oil is a good example of what is developing in Asia in this regard and of the limi-

tations of the approach. It has been set up to bring the commercial sector together and involves the producers, civil society groups, governments and other stakeholders. So far only principles and criteria for sustainable palm oil production have been discussed and loosely agreed upon. It allows flexibility and pushes for consensual decision making. However, it has the disadvantage of not usually having sufficient permanent institutional support mechanisms or appropriate financing mechanisms for implementing policy measures and activities that are collectively supported by the countries concerned in the region (Crow, 2006). In that sense, the Mekong project faces an important test. It needs to be envisioned from broad perspectives recognizing the symbolic and pragmatic dimensions of the river development from being more than a transportation route or source of commodity water, to seeing it as an ecosystem worthy of preservation and protection for future generations.



SUMMARY POINTS

- There is a growing recognition that solutions to CSR and sustainable-related problems require the involvement of people and organizations down to the local level.
- Asian countries develop problem resolution mechanisms at national, sub-regional and regional levels involving private and public organizations.

CONCLUSIONS: THE CHALLENGES AHEAD

As in Western countries it seems that there is a consensus in many Asian countries on the point that CSR should be both voluntary and regulated. In that sense, the position in Asia is not very different from that of the European Union. Trade-offs between industrial development and environmental conservation will always be essential, as there are limits to the availability of win–win scenarios. The eradication of monopolies, corruption and preserve subsidies will remain difficult and politically challenging. This is all the more true where a long period of authoritarian regimes has created deeply rooted vested interests in some Asian countries.

The problem is that for the time being, the incentive not to comply often outweighs the incentive to do it in an environment of regulatory failure. As pointed out by the ADB (2006), sustainable results cannot be expected without more stringent enforcement of the existing laws and regulations to ensure that companies become minimally responsible and to avoid free riding. Conversely, however, doubts remain about the impact of 'CSR' from the top that China and Indonesia intend to develop. Any long-term solution requires an understanding of the problems of all actors at all levels and that no single strategy can encompass all types of policy. Admittedly, while things may become relatively easier for first tier suppliers to follow a consistent code of conduct, the situation gets far harder for those companies operating at lower levels. Only the use of a mix of regulatory measures, market-based measures, voluntary agreements, education and information measures can give results over time. CSR does not figure yet as a key source of competitive advantage on Asian markets. In the future, though, Asian consumers are bound to give more importance to the CSR issues in their purchasing behaviour beyond environmental concern. This likely growing assertiveness to CSR can play in favour of Western MNCs eager to penetrate Asian markets. They have developed sophisticated CSR management skills that they have already put to use in Asia. This

represents a major challenge for Asian companies in their own markets. The fear of being dictated to in terms of social and economic norms is present. Recent initiatives have begun in China as well as in Indonesia, Singapore, Japan, and India to prevent Western MNCs and institutions from controlling the fields of CSR and sustainable development. The traditional fear of falling victim to non-tariff barriers that could be erected easily for alleged non-conformity to CSR rules is present (Zheng and Chen, 2006). But, countries such as China and Japan (and certainly India in the future) have a more ambitious agenda: they intend to be more assertive in the development of their own norms, participate more actively in the elaboration of international CSR standards and become 'rule makers' instead of 'rule takers' as has been the case so far.

CHAPTER SUMMARY

- The concepts of corporate social responsibility (CSR) and sustainable development have a growing impact on socio-economic modes of development in Asia. In many respects the current pattern of economic growth creates such strain in both developed and developing countries that it is unsustainable from environmental and social points of view.
- Long-term, sustainable solutions to the serious social and economic problems confronting Asian countries require the active involvement of private business beyond mere compliance with the law. There is a consensus that CSR activities must remain of a voluntary nature. However, a deeper involvement of business in the rule-making process related to environmental and social issues is expected in collaboration with the other stakeholders.
- The Asian business environment is increasingly involved in a maze of public and private initiatives whose objectives are to provide guidelines on CSR. A number of those initiatives are becoming de facto norms on corporate conduct for a growing range of issues such as labour relations, environment protection, human rights, corporate governance and consumers' protection.
- Western multinational companies have developed the most proactive, sophisticated and wide-ranging CSR policy. In the most advanced companies CSR is now incorporated into business policy. CSR is considered as a potential source of competitive advantage and not merely as a business cost necessary to preserve the company's reputation.
- So far, most Asian companies remain reluctant to develop CSR activities implying an active engagement with stakeholders who are not directly involved in the companies' activities, such as NGOs and other pressure groups. This reluctance explains why CSR activities most often focus on environmental matters and neglect the social issues.
- Nevertheless, the growing awareness of Asian public opinion to environmental and social issues, added to the pressure from Western markets, has led to a gradual change of attitude in this respect. So, CSR can be expected to play a bigger role in Asian companies' business strategies in the near future.
- At the same time Asian public authorities are becoming aware of the importance of CSR in terms of trade and autonomy vis-à-vis Western powers. This is driving them to develop their own norms and standards in order to keep local companies competitive on the world markets and become able to negotiate on equal footing with Western organizations.

KEY CONCEPTS

Business case: The concept of having a non-technical reason for a project or task. In CSR language it means that responsible behaviour can be financially sound.

Code of conduct: A set of rules outlining the responsibilities of or proper practices for an individual or organization.

Corporate social responsibility: A concept whereby organizations consider the interests of society by taking responsibility for the impact of their activities on customers, employees, shareholders, communities and the environment in all aspects of their operations.

Eco-labelling: A labelling system for consumer products (including foods) designed to avoid detrimental effects on the environment. All eco-labelling is voluntary.

Ethical Trading Initiative (ETI): An alliance of companies, non-governmental organizations (NGOs) and trade union organizations promoting ethical consumerism.

Global Compact: An initiative from the UN to encourage businesses worldwide to adopt sustainable and socially responsible policies, and to report on them.

Global Reporting Initiative: The world's de facto standard in sustainability reporting guidelines.

Philanthropy: The act of donating money, goods, time, or effort to support a charitable cause, usually over an extended period of time and with regard to a defined objective.

SA 8000: A global social accountability standard for decent working conditions, developed and overseen by Social Accountability International (SAI).

Social labelling: Labelling put on a number of products indicating that they have been produced in accordance with social and labour international norms.

Socially responsible investment: An investment strategy that combines the intentions to maximize both financial return and social good.

Sustainable development: A socio-ecological and economic process characterized by the fulfilment of human needs while maintaining the quality of the natural environment indefinitely.

Multi-stakeholders' engagement: Voluntary relationships between stakeholders in order to facilitate the achievement of objectives related to CSR and sustainable development.

Tripartite system: A system under which government, management and labour are considered as equal social partners discussing and negotiating social, business and labour relationships respectful of all the parties' interest.

Triple bottom line: Reporting of companies measuring organizational (and societal) success: economic, environmental and social.

REVIEW QUESTIONS

1. What are the main elements of the concepts of corporate social responsibility and sustainable development? In what ways are they linked to each other?
2. What differences and common points are there between the interpretation of the CSR concept in Asia, the US and Europe? What are the pros and cons of each approach?

3. How do you explain the different degree of importance given by Asian, US and European companies to the role of trade unions in CSR policy? What consequences do you think it entails in terms of protection of labour rights in Asia?
4. What do you think should be the priority of companies in terms of CSR and sustainability in Asia?
5. What roles should NGOs play in CSR? What are the pros and cons of stakeholders' engagement of companies with NGOs?
6. What roles should public authorities play in CSR at the local, national and regional levels?

LEARNING ACTIVITIES AND DISCUSSIONS

1. Gather information on concrete cases related to the subject of child labour. It could be about Pakistani soccer balls, Indian and Moroccan rugs, children working in toy factories in China, or others that you deem appropriate. Discuss the multiple facets of the issue with your colleagues. Is it a 'black and white' problem leading to the conclusion that child labour is inherently bad and should never be acceptable practice in any circumstance? If banned, what would be the likely socio-economic consequences for the country and for the children and their families? What do you think would be the most sensible policies to deal with the issue?
2. Try to find concrete examples in the developed and developing world about private–public agreements to solve social and environmental issues. Discuss the pros and cons of this type of approach. What are the key success factors and what are the elements that could cause problems?

DEVELOPMENT OF THE 'BOTTOM OF THE PYRAMID' (BOP) MARKETS

Consumerism, deceptive practices or responsible behaviour fitting with the 'business case' concept?

Until recently, most companies interested in market development in developing countries concentrated their efforts on the nascent middle class with enough disposable income to afford products coming from the developed world. In doing so, they were writing off in terms of market potential the large majority of the population in those countries. But, times are changing. More and more companies show interest in the development of the so-called 'bottom of the pyramid' (BOP) markets, that is, those of people with a very low purchasing power (Prahalad, 2007).

The example of Hindustan Lever is well known. After catering for a long time to India's middle and upper classes, the company (a subsidiary of Unilever) decided to start selling to low-income people products adapted to their needs and low purchasing power. In order to do so, it had to change its business model, make smaller packaging, and distribute the products in a maze of thousands of extremely small shops spread over the rural areas. The company had to decentralize the production, marketing and distribution to take advantage of India's large pool of cheap labour, and

change its price structure. The result was positive financially. Margins were lower but this was compensated for by higher unit sales. At the same time consumers had access for the first time to high-quality products that improved their standards of living. In the 1990s, during the crisis in Southeast Asia, Unilever was able to replicate the same business model and put successfully on the Southeast Asian markets smaller quantity products fitting with the market needs. In doing so, Unilever and its rival P&G are also playing a key role in the fulfilment of one of the most important objectives of the United Nations, that is, the empowerment of women in the developing world. They train tens of thousands of women to become the distributors of their products, providing additional income to the family while encouraging women's entrepreneurial spirit. In the mind of these companies, once again, this is a win–win case beneficial to both parties. Many of those women are likely to become the harbingers of change in their communities. The management knowledge they acquire will spread over to other people and enrich the potential of economic and social development (NHK, 2008).

Unilever and P&G are not isolated cases and many companies are entering the fray: from Bristol-Myers Squibb selling its AIDS drugs in Africa at a below-cost price, to Shell Solar bringing affordable solar power to poor people in Sri Lanka, India and the Philippines, with the ambition of developing the mass markets of China and Indonesia in the near future. To cope with malnutrition rampant in the developing world, Coca-Cola, Danone and Procter & Gamble are evolving similar policies. They develop innovative food products especially for poor developing countries. To avoid any misinterpretation of their activities, they take care not to repeat the mistakes committed by companies that neglected the necessary explanations about the use of the products and what could be expected or not from their consumption. To solve the difficult issue of product prices they work actively with local governments and international organizations in order to receive better treatment for the products on the markets, for instance, favourable tariffs and tax rates, speedier regulatory review of the products and subsidies from foundations.

Companies targeting the BOP markets are sometimes criticized for pushing very poor people to consume products that may not be absolutely necessary. Local substitute products often exist that are discarded although they provide similar benefits. The resources poor families spend on new products resources would be more usefully utilized for other purposes. Conversely, it is argued that those companies are of course acting from enlightened self-interest, providing early market 'pull' for new ideas. They see the developing world as an incubator for new products and sustainable technologies of the future, ranging from micronutrient-enriched food and drinks to micropower technologies such as fuel cells, microturbines and solar power. Admittedly, poverty will not be completely alleviated through their initiatives but neither should they be condemned either for exploitation of poor people. Thanks to their efforts, many children will have at least enough stamina to follow classes and become better educated. The sanitary situation has improved significantly thanks to the use of shampoo, soap and detergents. Likewise, villages in developing countries will soon have access to solar powered multimedia modems that will enable them to access the internet.

QUESTIONS

1. Do you think that BOP market development raises ethical issues? If yes, which ones and what can you propose as solutions?

2. What are the pros and cons in social and economic terms of the activities and strategies of companies attempting to develop BOP markets?
3. Which criticisms, if any, of consumerism's impact on society as a whole are found in the BOP market development? And what are the specificities you perceive in the BOP markets in this regard?

Sources: Grant, J. (2005). Check the depth of the pocket. *Financial Times*, November 16; Slavin, T. (2007). The potential in poverty. *Japan Times*, December 11; *Nippon Hoso Kosha* (NHK), India Special Issue, June 2008; Prahalad, C.K. (2007). *Fortune at the Bottom of the Pyramid: Eradicating Poverty through Profits*. Kindle Edition. Wharton School Publishing.

INTERESTING WEB LINKS

On CSR

Business for Social Responsibility: www.bsr.org
International Labor Organization: www.ilo.org
OECD: www.oecd.org
Transparency International: www.transparency.org
Global Reporting Initiative: http://www.globalreporting.org
CSR Asia: http://www.csr-asia.com

On sustainable development

Greenpeace: http://www.greenpeace.org
World Wide Fund: http://panda.org
UNESCO: http://www.webworld.unesco.org
World Health Organization: http://www.who.org

REFERENCES

Asian Development Bank (ADB) (2005). *Asian Economic Outlook 2005*. Manila: ADB.

Asian Development Bank (ADB) (2006). *Asian Environment Outlook Report*. Manila: ADB.

Asian Development Bank (ADB) (2007). *Asian Economic Outlook 2007*. Manila: ADB.

Association for Sustainable and Responsible Investment in Asia (ASrIA) (2002). *SRI and Pensions in Asia*. Hong Kong: ASrIA.

Business Respect (2007). FTSE4Good deletes Toyota, Honda, Agilent and others from index. 30 September, *Business Respect*.

Caspersz, D. (2006). The 'talk' versus the 'walk': High performance work systems, labour market flexibility and lessons from Asian workers. *Asia Pacific Business Review*, 12(2): 149–61.

Crow, L. (2006). Business and NGOs – a force for change? *CSR Asia Weekly*, 2(20): 1–3.

Crow, L. (2007). Global sustainability targets: Will they have an impact in Asia? *CSR Asia Weekly*, 3(28): 17.

Dana, L. (2007). *Asian Models of Entrepreneurship*. Singapore: World Scientific.

Dodd, M. (2004). *BP in Vietnam: Social Involvement, an Evolution*. Dôshisha Business School Case. Dôshisha Business School.

Economist Intelligence Unit (2005). *The Way of the Merchant, Corporate Social Responsibility in Japan.* London: Economist Intelligence Unit.

Ford, M. (2006). Labour NGOs: An alternative form of labour organizing in Indonesia, 1991–1998. *Asia Pacific Business Review,* 12(2): 175–91.

Global Reporting Initiative (2007). http://www.globalreporting.org/ (20 October).

Grant, J. (2005). Check the depth of the pocket. *Financial Times,* 16 November.

Hindu BusinessLine (2007). Tata Group and CSR. http://www.thehindubusiness;line.com/businessline/2007/08/26 (26 August).

Ho, B. (2005). A CSR standard for China?. *CSR Asia Weekly,* 1(44).

Ho, B. (2006). Confucian businessmen. *CSR Asia Weekly,* 2(43): 1–3.

Huchet, J.F. (2007). *La Responsabilité Sociale des Entreprises Étrangères en Chine.* Louvain: Institut de Recherches Economiques et Sociales (IRES).

IMPACTT Ltd (2004). *Fifth Anniversary Report,* London: IMPACTT Ltd.

Institute for Global Environmental Strategies (IGES) (2005). *Sustainable Asia 2005 and Beyond: In the Pursuit of Innovative Policies.* Kanagawa: IGES.

International Confederation of Free Trade Unions (ICFTU) (2004). *A Trade Union Guide to Globalization.* Brussels: ICFTU.

International Labour Organization (ILO) (2008), *Towards Full Employment,* Geneva: ILO.

International Standards Organization (ISO) (2007). *World-Wide Number of ISO 14001.* Geneva: ISO.

Keizai Doyukai (2003). *Corporate Social Responsibility in Japan, Selected Summary.* Tokyo: Keizai Doyukai.

Lansbury, R.D., Kwon, S.H. and Suh, C.S. (2006), Globalization and employment relations in the Korean auto industry: The case of Hyundai Motor Company in Korea. *Asia Pacific Business Review,* 12(2): 131–47.

Lee, K.-H. (2005). Strategic CSR as stakeholder management: The business case for corporate social responsibility in Korean electronic industry. The Graduate School of Corporate Environmental Management, University of Kwang Woon.

Leng, J. (2006). The emerging discourse of CSR in China. *CSR Asia Weekly,* 2(37): 8–9.

Lim, S.J. and Phillips, J. (2007). Embedding CSR values: The global footwear industry's evolving governance. *Journal of Business Ethics,* 56: 43–53.

Lyon, E. (2007a). British companies in Asia: CSR is a legal requirement. *CSR Asia Weekly,* 3(44): 1–3.

Lyon, E. (2007b). CSR law in Indonesia. *CSR Asia Weekly,* 3(30): 1–3.

Nippon Hoso Kosha (NHK) (2008). India Special Issue, June.

Prahalad, C.K. (2007). *Fortune at the Bottom of the Pyramid: Eradicating Poverty through Profits.* Kindle Edition. Wharton School Publishing.

Raja, M. (2004). Profiting from a social conscience. *Asia Times,* http://www.atimes.com/atimes/Asian_Economy/FI30Dk01.html (30 September).

Roche, J. (2005). *Corporate Governance in Asia.* London: Routledge.

Singapore Compact (2006). *Annual Report 2006.* Singapore: Singapore Compact.

SiRi Group (2004). *Green, Social and Ethical Funds in Europe 2003.* Milan: SiRi Group.

Slavin, T. (2007). The potential in poverty. *Japan Times,* 11 December.

Tanimoto, K. (2004). *CSR Keiei.* Tokyo: Chuo Keizaisha.

Toyota Jidosha Kabushiki Gaisha (2006). *Sustainability Report 2006.* Tokyo: Toyota Jidosha Kabushiki Gaisha.

UNEP (2005). Asia-Pacific outlook http://www.rrcap.unep.org (5 November).

Van Heeswijk, J. (2004). Corporate responsibility for environmental performance. Keynote speech to the Greening of Industry Network Conference, Hong Kong, 8 November.

Von Stokar, T. and Steinemann, M. (2004). *Sustainable Development in Switzerland: Methodological Foundations.* Bern: Swiss Agency for Development and Cooperation.

Welford, R. (2005). Corporate governance in Asia. *CSR Asia Weekly,* **1**(37): 1, 8–9.

Welford, R. (2007). Gender inequality causes economic losses. *CSR Asia Weekly,* **3**(18): 1–2.

Welford, R. and Frost, S. (2006). Corporate social responsibility in Asian supply chains. *Corporate Social Responsibility and Environmental Management,* **13**: 166–76.

World Bank (2007). Environmental issues in Indonesia. www.worldbank.org/id/environment (10 October).

Zheng Y. and Chen, M. (2006). China attempts to enhance CSR in multinational companies. China Policy Institute Briefing Series Issue 11, Nottingham University.

Zinkin, J. (2007). Islam and CSR: A study of the compatibility between the tenets of Islam, the UN Global Compact and the development of social and natural capital. *Corporate Social Responsibility and Environmental Management,* **14**: 206–18.

Chapter outline

- The opportunities and challenges posed by Asian technology
- National technology systems
- Asian legacies in science and technology
- Asian responses to the Western technological challenge
- Creating national innovation systems after World War II
- The current situation

Chapter objectives

After reading this chapter you will gain an understanding of:

1. The relationship between a nation's technology development systems and various aspects of its national well-being
2. How these relationships have specifically impacted the major Asian civilizations
3. The rich technological heritage of some of the major Asian societies
4. The technological challenges facing the major Asian societies
5. The strengths and weaknesses of the Asian national technological systems

Chapter 3

Technology development in Asia

Leonard Lynn

INTRODUCTION: THE OPPORTUNITIES AND CHALLENGES POSED BY ASIAN TECHNOLOGY

In the closing decades of the 20th century and first years of the 21st century Singapore, Malaysia, Thailand and, most notably, the giant nations China and India were joining Japan, South Korea and Taiwan as major centres of technological strength. By 2003 China trailed only the US and Japan in spending on R&D (see Tables 3.1 and 3.2 for data on R&D expenditures). Overall, Asia accounted for nearly a third of the world's expenditures on R&D. India was rapidly becoming a centre of global excellence in the knowledge-intensive service sectors and in biotechnology. The Asian economies were gaining market share in high technology exports at the expense of the European Union, US, and Japan (the first modern great Asian high technology centre).

The current rise in technological strength in Asia poses both major opportunities and challenges for business people, policymakers, and citizens of other countries. Let us begin by discussing some of the opportunities.

For multinational enterprises (MNEs) there are growing new opportunities to draw on rich stocks of human resources in science and engineering in China, India, Thailand, Indonesia and other parts of Asia. Sometimes the lower costs of wages in these countries allow firms to apply more brainpower to technical problems than would otherwise be feasible. Sometimes those trained in different societies offer different perspectives or have different interests, enriching approaches to the development of technology. A pharmaceutical company, for example, may find more people with expertise and interest in infectious diseases in India than in North America or Europe. For a variety of reasons different countries may develop particular strengths in one field of science or technology. At different times in the 20th century, for example, Germany was strong in chemical technology, the US and UK in aeronautics and the

Different Reasons

development of computers, and Japan led in industrial robotics and manufacturing technology.

Table 3.1 Gross expenditures on R&D by region/country 1993, 1998, 2003 (millions of purchasing power parity US dollars)

	1993	1998	2003
Asia	95.7	143.1	229.6
US	166.1	228.1	292.4
EU-25	123.7	152.5	210.2
China	16.7	27.9	76.9
Japan	69.1	90.5	112.7
South Korea	9.9	14.8	24.3
Taiwan	NA	8.5	13.5

Note: Purchasing power parity exchange rates are calculated based on the relative costs of a fixed 'basket' of goods and services in different countries. In China official exchange rates would result in considerably lower R&D expenditures.
Source: Adapted from Table 7 in National Science Foundation (2007: 15). Original data from OECD, *Main Science and Technology Indicators* (2006/1).

Table 3.2 R&D performed in selected Asian countries by US multinationals (millions of current US dollars)

Country	1994	1998	2002
China	7	52	646
India	5	23	80
South Korea	17	29	167
Singapore	167	62	589
Taiwan	110	55	70
Thailand	3	4	22

Note: Declines in several Asian countries in 1998 over 1994 were related to Asian financial crisis.
Source: Adapted from Table 8 in National Science Foundation (2007: 19). Based on data gathered by US Department of Commerce.

Consumers around the world benefit from the enhanced ability of multinational corporations to draw on technical resources from around the world. We get new products, or products with new features. More generally, the growing technological strengths of Asia allow a far greater application of human brainpower to human problems such as disease, poverty, and environmental degradation. There are signs, for example, that major advances in alternative sources of energy may be coming from Asia's emerging economies: India has moved into a position of leadership in aspects of biotechnology and software engineering.

And yet, the rise of technological strength in India, China and some other Asian countries has also caused uneasiness among the citizens, and thus the policymakers, of Western countries (as well as Japan). Some of this unease is based on the close relationship between technological capability and military strength. Three of the large Asian countries, China, India, and Pakistan, are nuclear powers. By the end of the first decade of the 21st century the major Asian powers appeared to be beginning a space race among themselves. Overall, it seemed likely that the two-century long ability of the

West to more or less unilaterally shape the global political environment through its overwhelming military technology was coming to an end. Nor were those in certain Asian economies, and some of those in all the Asian economies, sure that they were benefiting from the emerging global technology system.

Aside from the potential military threat, some in the West see the rise of Asian technology as posing an economic challenge. In one widely circulated report, for example, a committee of the National Academies of Science in the United States said it was 'deeply concerned that the scientific and technological building blocks critical to our [US] leadership are eroding at a time when many other nations are gathering strength ... we fear the abruptness with which a lead in science and technology can be lost ... It doesn't matter whether you're a lion or a gazelle – when the sun comes up, you'd better be running' (National Academies of Science, 2007). Concerns were expressed that China and India were graduating more science and engineering students than the US and EU (see Table 3.3), and that the cost of science and engineering labour was lower in these and other Asia countries (threatening job prospects for US and European students), leading to fears that the rise of Asian technology would result in the loss of well-paid jobs, innovative capacity, and threaten continued productivity growth. Although the evolution of economies has always led to the loss of some jobs (in the early 20th century about 40 per cent of US Americans worked on farms – by the early 21st century almost all those jobs were gone), the growing concern was that the current globalization of technology and economic activities is different. In the past the twin forces of technological progress and globalization resulted in the destruction of low-paid relatively unattractive jobs in the rich countries, but also resulted in the creation of at least as many highly paid and otherwise attractive jobs. In most of the closing decades of the 20th century workers in Europe and North America may have lost mind-numbingly monotonous and dangerous jobs on automobile assembly lines and steel mills, but these job losses were more than offset by the creation of new jobs in engineering, software programming, research and development and medical technology. As the emerging economies of Asia and other parts of the world eagerly took up the less attractive jobs, attractive new jobs were created in the West. Now the situation may be different.

Two factors primarily accounted for the privileged position enjoyed by European and North American workers in the 19th and 20th centuries: they were better educated and they were backed by vastly greater levels of investment in technology. By the early 21st century these advantages were rapidly disappearing – the education gap was closing and globalization meant that capital and technology flowed freely to the Asian economies. In the memorable title of Thomas L. Friedman's best seller, today 'the world is flat.' Today it is not just blue-collar workers with a high school education or less who are worried about the loss of jobs to Asia, it is also university graduates in fields such as computer science, medical technology, and engineering. Meanwhile the reduction in international barriers to trade often puts the unskilled in emerging economies into increased competition with one another, further driving down their wages.

As far as multinational corporations are concerned, the opportunities mentioned above are partially offset by the potential threat of powerful new competitors. Just as the earlier rise of Japan, Taiwan, South Korea and Singapore presented new competitors in the automotive (Toyota, Nissan, Hyundai), home appliance (Sony, Panasonic, LG), and electronics industries (Samsung, Hyundai), firms in the newly emerging Asian economies of India, China and others are generating firms in biotechnology (Ranbaxy, SiBiono Gene Tech), personal computers (Lenovo), and software (Wipro, Infosys).

Table 3.3 Science and engineering bachelor's degrees by country (1990 or closest year and 2002 or most recent year available)

Country	1990	2002
China	268,400	533,600
India	205,000	Not available
Japan	187,900	351,300
South Korea	79,300	113,100
Indonesia	30,700	97,100
Taiwan	24,400	72,500
Thailand	24,200	31,200
US	329,100	415,600
EU (15)	284,300	506,100

Notes: 1. More recent information was not reported for India. 2. EU data are for 15 countries that were members of the EU in 1990.
Source: Table 2 in National Science Foundation (2007: 3).

To develop a better understanding of these challenges and opportunities, it is important to develop a sense of how the institutions involved in creating and using technology form a system.

REFLECTIVE QUESTIONS

- What are the situations where it might matter in which country a technological breakthrough takes place?
- What are the situations where it would not matter very much? Why?
- What benefits have you received from technological developments from other countries?
- In what ways are you worse off because of technological advances in other countries?

NATIONAL TECHNOLOGY SYSTEMS

The obvious importance of technology for a nation's economy and for its military security led to considerable discussion in the 19th century of what was needed for a country to gain a technological edge over its rivals. In the UK, the country that pioneered the industrial revolution, the concern was how to maintain leadership, and efforts were made to restrict technology exports. In Germany, Japan and China the concern was with how to catch up with and pass the leading nations.

National Innovation Systems

In the 1980s the national innovation systems framework attracted considerable attention as a way of thinking about the factors contributing to the technological strength of nations.[1] A national innovation system was defined as the network of interconnected institutions within a country that created, stored, disseminated and exploited

technology. These institutions included universities, government laboratories, think tanks, corporate research laboratories, professional associations and other organizations. They sometimes were taken as also including such things as management practices and patterns of inter-firm relationship.

Japan was seen as having created a particularly effective national innovation system – one that had allowed the country to catch up with the West in a relatively short time, and that in the 1980s, seemed poised to put Japan ahead of the West in most economically important technologies. Governments in Europe and international organizations such as the Organisation for Economic Co-operation and Development (OECD) closely studied the Japanese system in an effort to find lessons that would lead to more effective systems for the creation and utilization of technology. The US and European national innovation systems were also critically examined with many calling for the incorporation of lessons from Japan. In time other Asian countries began explicitly to model some of their institutions to resemble those in Japan or the US.

Table 3.4 summarizes some of the elements attributed to the Japanese system. This model has implications that go beyond Japan, because the Japanese system of technology was seen as a model for other East Asian countries at various points, including South Korea, Taiwan, Singapore and Malaysia.

The Japanese government – most notably the Ministry of International Trade and Industry (reorganized into the Ministry of Economy, Trade and Industry in 2001), but also the Ministry of Finance, Ministry of Education, Science and Culture, and the Science and Technology Agency – was seen as playing a primary coordinating role in the Japanese system of technology. The government issued a series of visions and plans incorporating projections of technological trajectories. The technologies seen as strategic in underlying economic success in the coming decades were to be targeted. The projections were widely seen as allowing an efficient mobilization of technological resources. Firms organized into research consortia, for example, to allow them to avoid costly redundancies of efforts, and to bring complementary strengths together to leapfrog foreign competitors. The Japanese government also pressured foreign firms to share technology as a condition of entering the Japanese market. Government also worked through the financial system to assure that firms had money to invest in R&D, and in new plant and equipment (thus supporting Japan's high technology industries).

Table 3.4 A stylized model of the Japanese technology system

Role of government	Bring together industry and other leaders to reach informed consensus on future industrial and technological trends
	Support coordinated efforts to efficiently move Japan to the vanguard in these trends
	Support education system that provides good basic education in maths and science for factory workers and trains large numbers of engineers
Corporate system	Firms form *keiretsu* groups with members in finance, trade, and industrial supply chains
	Firms supported by various forms of 'patient capital'
Employment practices	Long-term employment – many scientists and engineers spend most of career at one company
	Centrally controlled career paths
	Large investment in employees

Source: Summary of the literature by the author.

A distinctive feature of Japanese capitalism was the *keiretsu*, a grouping of firms. These groups, some of which traced their origins to the pre World War II *zaibatsu*, centred on banks and other financial institutions (such as insurance companies), general trading companies, large manufacturing companies based in most key industries, and networks of smaller firms that supplied the manufacturing companies with components and services. The *keiretsu* could support each other and engage in collective long-term planning, including investment in large-scale technology projects. Because firms relied on loans from affiliated financial institutions for their capital, rather than equity and debt markets, they did not need to worry excessively about short-term results that might drive down stock or bond prices. They could plan for the long term, investing in technology.

Finally, it was often argued that Japanese employment practices contributed greatly to Japan's technological success. Since university graduates working at major firms typically spent their careers at a single firm, the firm could invest more in the technological knowledge and skills of their employees. In a system with greater inter-firm mobility, that investment would be lost as soon as a scientist or engineer left. Indeed, Japanese firms typically undertook the advanced education of their engineers rather than relying on universities for this. The personnel offices of major Japanese firms typically exercised far more control over the positions to which employees were assigned than was true at most Western firms. They used this control to rotate engineers among key positions. Most engineers would have experience in R&D, manufacturing and customer services, giving them a most holistic view of technology and customer needs. This was thought to greatly enhance the ability of Japanese firms to commercialize technology.

National Competitive Frameworks

In a more general analysis of national competitiveness Michael Porter (1998) argues that the relative strength of nations in certain industries is based on four sets of determinants supported by government. The four determinants are demand conditions, related and supporting industries, firm structure, strategy and rivalry and factor conditions (cost of raw materials, labour, and so on.). These are often represented in what is called Porter's Diamond (see Figure 3.1). In an example of a hi-tech industry Porter makes arguments similar to those using the national innovation system framework. Again, he gives a Japanese example, that of industrial robotics. Robotics technology was initially developed in the US in the 1950s and 1960s, and US firms created the industrial robotics industry. By the late 20th century, however, the industry (and the technologies it was based on) was dominated by Japanese firms. Japanese government policies supporting development of the industry included joint research projects, tax incentives, and leasing programmes that made it easier for smaller firms to lease Japanese industrial robots. The structure of firms in Japan was also well suited to this industry. The industrial groups allowed a vertical integration that encompassed electronics and mechanical technology. The fact that there were several such groups also ensured a high level of competition. Demand conditions in Japan were also very favourable for the industry. Labour was in short supply and industrial robots were highly suitable for the industries that were growing fastest in Japan at the time, automobile production and electronics. Japan was also strong in the industries needed to support robotics, such as machine tools and electronics.

The Japanese national innovation system was widely credited with helping Japan reach the frontier in industrial technology, and move beyond it in some areas. As the Japanese economy faltered in the 1990s, however, many observers began pointing to the shortcomings of the Japanese system.

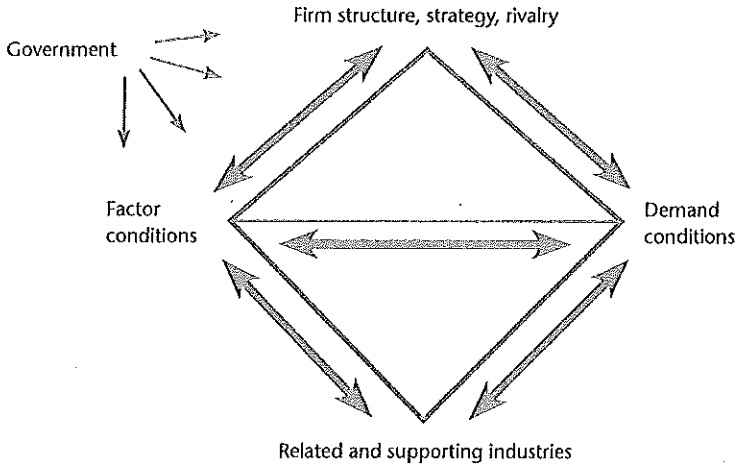


Figure 3.1 Porter's Diamond
Source: Based on Porter (1998).

While it might sometimes be possible for government coordinated groups to effectively identify technologies of the future, more often it is difficult to identify where breakthroughs may occur. Who, for example, anticipated the importance of the internet, MP3 player, and cellular (mobile) phone industries? While the Japanese forms of finance allowed firms to plan for the long term, they also allowed firms to continue performing badly over time, sometimes continuing long-term bets on technology that did not succeed. Japan's technologically powerful companies such as Fujitsu, Hitachi and Sony might have fared better in competition with fast rising firms like Samsung if they had been pressured by shareholders to move out of less promising businesses. Further, to the extent *keiretsu* firms *might* be more open to joint technology development projects with each other, they would also be *less* open to working with potential partners from other *keiretsu*.

While the Japanese employment system might allow firms to invest more in the technological expertise of their employees, it also can result in a poor allocation of science and technology human resources. Some Japanese firms, for example, appear to have 'stockpiled' electrical and electronics engineers in the 1980s, and then found they did not need them.

Finally, in Japan (and later in South Korea) the emphasis on supporting large firms entailed a de facto discrimination against small and medium sized enterprises (SMEs). Often these firms were unable to obtain the capital they needed to develop, entrepreneurship was stunted, and small-company employees were relegated to a kind of second-class citizenship.

Lack of entrepreneurship

Other Frameworks of National Technology Systems

Some observers have criticized the national innovation systems and national competitiveness frameworks for being static and simplistic – doing little more than inventory institutions and actions involved in the development of technology. One effort to add a more dynamic element is provided by the triple helix model, which conceives of evolving systems of university-led partnerships with government and industry.[2] This model allows room for the consideration of university spin-off firms, bi-lateral initiatives, and strategic alliances encompassing groups of firms, government organizations and academic research groups. Indeed this captures some of what critics see as a dynamism lacking in the Japanese system (such as the ability for technologists to start new businesses). Another question is whether in a world of increasing globalization it makes sense to focus on *national* innovation systems. Firms and intellectual property flow freely across national boundaries.

A focus on national innovation systems can lead to technonationalism, a sense that nations are in a zero sum competition with each other in which technological successes in one country are taken as threatening other countries, rather than providing a potential resource for them.[3]

Finally, scholars have struggled with the issue of how a nation's technological strength might be measured. The measures that have been used include number of patents granted, the number of scientific publications, R&D spending, the number of science and technology personnel (or the number graduating), and high technology exports. Each of these measures has its problems. Firms in some countries may be inclined to acquire large numbers of patents for strategic purposes (for example to block other firms from controlling key technologies), so the number of patents it holds may not reflect the actual creation of new technology. Some technological advances are difficult to patent, or may be more easily protected by secrecy rather than the disclosures required by patents. English language technical and scientific journals are dominant, giving an advantage to English-speaking scientists. R&D spending reflects the effort to create new technology more than the actual creation of new technology. And, in any case, different accounting practices in different countries may result in some things being counted as R&D expenses in one country that would not be in another (is the salary paid to a janitor who cleans a lab a research expense?). As we will see in the case of China a country may have a large share of high technology exports, but the value added in the country to the high technology exports may not be large. A country may train large numbers of engineers and scientists, but not be effectively using them. A related issue concerns the broader ability of a country to use new technology. A country may not be particularly strong in creating technology, but may have what some scholars call absorptive capacity, the ability to identify and commercialize new technologies wherever they might come from.

SUMMARY POINTS

An understanding of national innovation systems is important for business leaders because it can:

- Guide the strategic location of a firm's R&D and other facilities
- Help in an assessment of international competitors
- Help in evaluating the further economic potential of different countries.

REFLECTIVE QUESTIONS

- In what ways do the institutions involved in the development of science and technology within a country form a 'system?'
- In what ways might it be desirable and in what ways might it be harmful for policymakers to think in terms of 'national science and technology systems'?

ASIAN LEGACIES IN SCIENCE AND TECHNOLOGY

Until the European Renaissance, and, in some areas, until the Industrial Revolution of the late 18th century, the civilizations of China and India led the world in science and technology. Japan and Korea were also quite advanced in many sectors of science and technology, as were some of the civilizations of Southeast Asia. The first Chinese mechanical clock appeared early in the 8th century CE,[5] some 600 years before its European counterpart. Chinese technologists were especially advanced in studies of optics, acoustics and magnetism. Iron and steelmaking technology was far ahead of that in the West. Gunpowder first appeared in the 9th century CE, and explosive weapons were developed in China some 300 years before they appeared in Europe. Rockets enclosed in bamboo tubes were used in China at the beginning of the 12th century CE, perhaps serving as the ancestor of guns and cannons. The development and use of silk in China may have led to the development of the drive-belt and chain-drive. The Chinese are also credited with inventing paper, block-printing and movable type, as well as porcelain, and may also have been the first to use biological means to control insect pests. Vaccinations were in use in China from the beginning of the 16th century CE, and possibly several centuries earlier.[6]

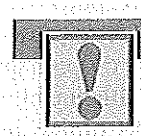
Ancient India also was highly advanced in science and mathematics, indeed many of the advances in Chinese astronomy, medicine and mathematics were based on knowledge transmitted to China by Buddhist monks from India. Indian scholars developed heliocentric models of the solar system before the Greeks, and India is often credited with originating a number of mathematical concepts including zero, the decimal system, the algorithm, and the square root. An Indian mathematician conceived of differential calculus in the 12th century CE.

European observers in the late 16th century considered Japan to be no more than slightly behind Europe technologically. In Korea during the early 15th century movable type was first put to extensive use, perhaps earlier than anywhere else in the world. The 'turtle ships' used by Koreans, most notably in fighting against a Japanese invasion in the late 16th century, were among the world's first iron-clad warships.

At one time a standard academic question in the West was why the advance of Chinese and Indian science and technology had halted, causing these civilizations to fall behind the West. In time, however, the question shifted to what might lie behind the acceleration of technological development in Europe. The conventional view is that there was a Scientific Revolution in Europe around 1600 CE that led to the discovery of ways to discover, which resulted in the acceleration of technical and scientific progress. This entailed the statement of hypotheses in mathematical terms and the use of controlled experiments. In a famous letter Albert Einstein said 'Development of Western Science is based on two great achievements, the invention of the formal logical system (in Euclidian geometry) by the Greek philosophers, and the discovery of the

possibility to find out causal relationship by systematic observation (Renaissance). In my opinion one has not to be astonished that the Chinese sages have not made these steps. The astonishing thing is that these discoveries were made at all' (cited in Graham, 1973: 51).

During the Renaissance, Europe began importing scientific and technical knowledge from the Islamic civilizations. Some of this knowledge had been developed by the Greek and Roman civilizations, then lost to Europe and preserved by Arabs, Turks and Persians. Some had been created by the Islamic civilizations, and some transmitted by them from India, China and other civilizations. This infusion of knowledge coupled with the development of experimental science led to an accelerated development of science and technology in Europe. The Industrial Revolution, beginning in the 18th century in England, combined important technological changes including the use of new basic materials (especially iron and steel), sources of energy (coal, steam engines, electricity, petroleum), machines (such as the power loom and spinning jenny), transportation equipment (steam locomotives and ships, automobiles, aircraft), and communications equipment (telegraph, radio). The effective use of these new technologies helped enable the West to achieve economic and military dominance over much of the world, including the great civilizations of Asia.



SUMMARY POINTS

- The great civilizations of Asia led the world technologically until recent centuries – suggesting that they can again move to a position of leadership.
- It is not entirely clear why they lost this lead, whether because technological progress slowed in Asia, or because it accelerated so rapidly in the West.

ASIAN RESPONSES TO THE WESTERN TECHNOLOGICAL CHALLENGE

The initial responses of the Asian civilizations to the new technological challenges from the West were sometimes complacent. This is exemplified in a famous letter written by the Emperor of China to the King of England in 1793. The King had requested permission to expand trade between the two countries. The Emperor refused. He said: 'As your Ambassador can see for himself, we possess all things. I see no value on objects strange or ingenious, and have no use for your country's manufactures.' In a follow-up communication the Emperor added: 'Our Celestial Empire possesses all things in prolific abundance and lacks no product within its own borders. There was therefore no need to import the manufacturings of outside barbarians in exchange for our own produce' (Blackhouse and Bland, 1914).

Concerned about the 'subversive' activities of foreign missionaries, the Japanese government refused to allow Westerners to enter Japan – except for a small Dutch trading post in Nagasaki harbour. Korea was similarly isolated from the West. India, divided and weak, did not have the option of isolation, and after a century of gradual incursions by the British East Indian Company and various French, Dutch and Portuguese companies from the beginning of the 17th century became an English colony.

In the 19th century leaders in both China and Japan became increasingly alarmed by the Western incursions in Asia. In both countries there were moves to introduce Western technology as a means of maintaining independence from the West. Japan's

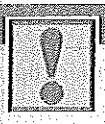
greater political unity and stronger tradition of learning from other civilizations allowed these efforts to take consequential form much more quickly than was the case in China.

Concerns about a technological threat from the West reached a crisis in Japan in 1853 and 1854 with the arrival of Commodore Perry of the US Navy. When Perry's flotilla first arrived near Edo (modern Tokyo) in 1853, Perry demanded permission to deliver a letter from the US president. The clear military superiority of Perry's black ships convinced the Japanese to allow Perry to deliver the letter and to return a year later to sign a trade treaty. Perry's crew members demonstrated such achievements of Western technology as the steam engine and telegraph to the Japanese. The military implications of this technological superiority were clear to the Japanese.

The Japanese government sent young Japanese abroad to study both Western technology and the institutions involved in creating and disseminating technology. The Japanese hoped to establish a strong national technology system, but one based on Asian values. A new government drawing on the traditional authority of imperial power, but dominated by military leaders seeking a technologically strong military, was established in 1868. Thousands of foreign technical experts were brought to Japan. By the early 20th century Japan was able militarily to challenge Russia, a major European power.

Industrial technology was brought in through joint ventures and other forms of technical tie-ups involving European and US companies. In the years before World War II, Japan also successfully developed some world-class technologies of its own.

Over these decades the creation of institutions and arrangements to foster technological development was much spottier in the other Asian nations. China was torn apart by foreign powers supporting various regional war lords into the 1930s, then by civil war and the Japanese invasion in the 1930s and 1940s. Virtually all the other East, Southeast and South Asian countries were colonies until the late 1940s. Given the lack of opportunity at home, many of the brightest young Asian engineers and scientists moved to the West to build their careers.



SUMMARY POINTS

- Initially the great Asian civilizations did not feel threatened by Western technology.
- As the military and navigational advantages of Western technology become clear the Asian civilizations reacted differently: Western incursions in India prevented a coherent reaction; internal divisions in China also made mobilization difficult; the Japanese, however, responded with a high degree of success.

CREATING NATIONAL INNOVATION SYSTEMS AFTER WORLD WAR II

After World War II Japan struggled to rebuild its national technology and innovation system. Initially handicapped by widespread destruction at home, a lack of foreign exchange and a lack of access to flows of scientific and technical information, these efforts faced formidable barriers. With the end of fighting in the Chinese civil war in 1949 and India's Independence in 1947, these countries too struggled to create powerful national technology systems.

In all these countries there were strong debates about the best way to achieve technological strength. Some thought it was best to foster the development of domestic capabilities by keeping out foreign companies and refusing to pay seemingly exorbitant fees for foreign intellectual property. It was widely believed that opening the doors to foreigners would result in the Asian countries falling into a quasi colonial status. This technological protectionism slowed progress throughout the region.

Japan

After its defeat in World War II Japan found it had lost ground in its efforts to catch up with the West in technology. Sources of technology had been cut off. The country had undergone widespread destruction. Some of its best industrial plants had been bombed, others that had been built in mainland Asia were lost as Japan was forced to relinquish control of Korea and large sections of mainland China. Under the terms of its surrender Japan was not allowed to be active in certain strategic industries such as aviation and nuclear energy. Japan's devastation and the collapse of international trade also meant that Japan had few resources to acquire needed food and raw materials, let alone advanced industrial equipment and technology.[7]

To husband scarce domestic resources Japanese policymakers concentrated on the development of certain industries such as electric power generation, steelmaking and shipbuilding that were seen as key to the development of other industries. State of the art technologies were imported for these industries. Because Japan was poor in foreign exchange reserves the government implemented tight controls on expenditures for the acquisition of foreign technology. Japanese firms were constrained from bidding up the price for foreign technology and dissuaded from purchasing technology that was not seen as critical to Japan's economic development. Barriers were erected to keep large foreign firms from moving into Japan, even in cases where they might have brought technology with them. Over the years Japan became increasingly open to the import of foreign technology. Japan's technological advance was supported by a strong education system and a favourable global political and economic environment (including strong US support to build up Japanese industry during the Korean War and later during the cold war, and the liberalization of international trade). By the 1980s Japanese technology was seen by many as about to assume global leadership in a number of key sectors.

China

Once the Chinese civil war was effectively ended in 1949, the Chinese government sought to promote the advance of science and technology. Initially, China relied on its communist ally, the USSR, in its efforts to build a modern technology system. Soviet technology, know-how, and technical experts were imported on a large scale. The Soviet system also provided a model for the Chinese during this period.

The former Academia Sinica was re-established as the Chinese Academy of Sciences (CAS) and new institutions for R&D were set up. The emphasis of the new system was on the integration of research and production, with research intended to have immediate practical applications. In 1956 the government announced a twelve-year science and technology plan aimed at giving China a position of industrial leadership. Twelve areas were targeted. The basic research institutes were under the CAS, the applied and military research institutes were under the industrial ministries, and training was the responsi-

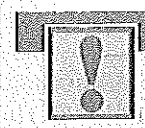
bility of the universities. In 1960 the Soviet Union withdrew its support for China, increasing China's isolation and its attempt to move to technological autonomy.

Two decades later, under Deng Xiaoping, China initiated a series of reforms, increasingly opening the economy to foreign investment (and actively seeking it in some areas), and shifting activities to the private sector.

India

After India gained its independence in 1947, its spending on scientific research was only 0.1 per cent of gross national product (GNP). A decade later this had increased to 0.5 per cent (still far below the 2–3 per cent common in most developed nations). A system of national research laboratories was established based on the French model. Under the Council for Scientific and Industrial Research there were some two dozen institutes with scientists encouraged to develop new products for Indians. New engineering schools were established, including some of the now-famous Indian Institutes of Technology (IIT) (five were established between 1954 and 1964).

The emphasis of early Indian technology policy was on indigenous technical capability. Prime Minister Jawaharlal Nehru and Homi Bhabha (1909–1966), a nuclear physicist who is considered to be the father of nuclear physics in India) reportedly believed that 'if an item of equipment was imported from abroad, all one got was that particular instrument. But if one built it oneself, an all-important lesson in expertise was learnt as well.'[8] India's Scientific Policy Resolution of 1958 announced that one of the aims of its policy was to ensure an adequate supply within India of research scientists of the highest quality. The emphasis was on sustainable and equitable development. In a Technology Policy Statement in 1983 the Indian government reaffirmed its belief that science and technology are the basis of economic progress and declared that the country now had an impressive scientific manpower. The statement indicated such aims as to make the maximum use of indigenous resources and achieve self-reliance, making use of traditional skills and capabilities, to ensure maximum development with minimum capital outlay. It said, for example, 'We must aim at major technological breakthroughs in the shortest possible time for the development of indigenous technology appropriate to national priorities and resources.' Furthermore, India policy stated that: 'Fullest support will be given to the development of indigenous technology to achieve technological self-reliance and reduce the dependence on foreign inputs ... In view of the cost of technology development and the time necessary for successful marketing of a new or improved product, indigenously developed items are invariably at a disadvantage compared to imported products or those based on imported technologies and brands names. Support must therefore be provided through fiscal and other measures, for a limited period, in favour of products made through indigenously developed technologies, care being taken to ensure quality.'[9] Proposed technology imports were critically evaluated, and often discouraged, as was the establishment of R&D facilities by foreign firms. Many of the country's best scientists and engineers left for more attractive career opportunities in the US or Europe.



SUMMARY POINTS

- After World War II Japan quickly recovered its momentum in catching up with the West technologically. The activities of foreign firms were tightly restricted however to prevent a loss of control.

- China and India both became free to act in a united and independent way to develop their technology systems. Both attempted to create centralized protected technology systems.

THE CURRENT SITUATION

Despite the impressive achievements of many of the major Asian countries in developing effective technology innovation systems mentioned in the introduction to this chapter, the problems still facing them should not be ignored.

Japan

In Japan the central challenge facing policymakers in the late 20th and early 21st century was how to make the country a leader, as opposed to simply being a very fast following and incremental improver of technology. Other Asian economies increasingly seemed as skilled as the Japanese at being fast followers and incremental improvers. Moreover their costs were lower. At the same time there was little evidence that Japan was closing the gap with the US in reaching the frontiers of technology development.

Wide-ranging criticisms were made of the Japanese system: its education system was said to overemphasize memorization rather than creativity, bureaucratic barriers kept its universities from contributing new technologies as effectively as their counterparts in the US, its employment and industrial systems made it difficult for entrepreneurial firms to be established and to thrive, its technological resources were overly concentrated in Tokyo and in large companies, and there was not enough diversity.

In the late 1990s and early 2000s a series of reforms were initiated to address these problems. Reforms were made in the education system, university professors were given greater freedom to work on technology development projects with companies, efforts were made to create 'Silicon Valleys' throughout the country, and changes were made in financial markets to provide more venture capital. It is not yet clear how successful these reforms will be in enhancing the creativity of Japanese technology. Still, as Tables 3.1, 3.3 and 3.5 show, Japan is a world leader in its technological capabilities.

Japan, however, has still not entirely opened itself up to potentially beneficial foreign inputs of technology. It continues to have the lowest levels of import penetration, inward foreign direct investment and foreign workers of any member of the OECD (the organization of richer countries).[10]

China

In the 1980s China began a series of innovation system reforms. The reforms were intended to be consistent with China's shift to a market-based economy. Thus in 1985 the Chinese government enacted a Resolution of the Central Committee of the Communist Party under which science and technology at public research institutes were separated from the production activities of state-owned enterprises.[11]

In 2006 the Chinese State Council released its 'National Guidelines for Medium- and Long-term Plans for Science and Technology' to cover the period until 2020. The plans identified key technologies that were to be promoted. They also announced the

intention to increase China's R&D spending to 2.5 per cent of the country's GDP by 2020, around the level of the advanced economies, and to move China into the top rank of countries in terms of patents and highly cited scientific papers. China's R&D spending had already grown from just 0.60 per cent of GDP in 1996 to 1.23 per cent by 2003, and China was already the fifth leading nation in its share of publications in scientific publications, following the US, Japan, Germany and UK. Only seven years earlier it had ranked tenth in the world by this measure.

One source of China's increasing technological strength was the large number of scientists and engineers returning from the US, Europe and other technologically advanced countries. Some 81 per cent of the members of the Chinese Academy of Sciences and 54 per cent of the members of the Chinese Academy of Engineering were returned scholars during the early 2000s.

China still faces a number of challenges on its way to becoming a technology superpower. While the education system has improved greatly, the percentage of its young people receiving higher education is still relatively low, and only a relatively small number of its universities are of high quality. The Chinese system of intellectual property rights protection has been hotly criticized and may be a barrier to R&D in China. On the one hand it makes foreign firms reluctant to conduct high-level technology development activities in China. On the other it reduces the incentive for Chinese to invest in the creation of new technology. Chinese firms still must rely heavily on foreign firms for technology. This has sometimes posed problems. The Chinese DVD manufacturers, for example, were able to obtain licences for the core DVD technology only after prolonged negotiations (Sull, 2005: 5). The systems for funding R&D, compared with the US and other technologically advanced countries, are much more concentrated in public-sector research, a legacy of the pre-Deng system.

India

Reforms in the early 1990s substantially opened up the Indian economy, and since then the country has successfully built hi-tech and knowledge-intensive industries. Through the 1990s the Indian economy grew at an average rate of 8.1 per cent a year, with some of the growth attributed to the software industry – revenues of which grew from US$197 million to US$8 billion. Software exports over this period increased from US$100 million to US$6.3 billion.[12]

Government policies shifted to an encouragement of foreign R&D activities in India. Indeed, about one fourth of the *Fortune* five hundred companies have opened R&D centres in India. GE invested more than US$80 million in the John F. Welch Technology Center in Bangalore. The centre features state-of-the art-laboratories and more than 2,500 engineers and scientists. Senior officials at GE and other multinationals describe their facilities in India as equalling those in the US (National Research Council, 2007: 15). As Indian technology has globalized, official policy statements have shifted from concerns about foreign control of technology to the need for India to strengthen its protection of intellectual property rights. India's national laboratories are highly regarded, and the IITs are among the best technical universities in the world.

The Indian technology system, too, however, is faced with daunting challenges. The country's basic education system and most of its higher education system are still weak. One study found that a quarter of the teachers in public elementary schools were absent, and half of those present were not actually teaching at any given time. The percentage of India's workers with a higher education is somewhat lower than China's, and R&D

spending is much lower.[13] Critics also point out that only a small percentage of the Indian population has so far benefited from the advance of Indian high technology.

Table 3.5 Workers in selected countries with higher education: 1990 and 2000 (millions)

Country	1990	2000	(% of population)
China	11.7	20.1	.017
India	9.2	15.0	.014
Japan	9.2	12.5	.125
South Korea	2.0	4.4	
Indonesia	.2	.7	
Taiwan	.7	1.2	.04
Thailand	1.7	3.2	
US	42.7	52.8	.176
EU (15)	13.5	22.4	

Notes: 1. EU data are for 15 countries that were members of the EU in 1990. 2. 'Higher education' is education at least at level of associate degree in the US.
Source: Table 4 in National Science Foundation (2007: 8).

Other Asian Countries

Other Asian countries are also struggling to find roles in the emergent global technology system. Pakistan has felt the need to invest heavily in the development of nuclear weapons to counter the technological advance of India. The Southeast Asian states have, in a variety of ways, become integrated into the global technology value chains of multinational firms. In part this is driven by the intensification of globalization through the World Trade Organization and other international bodies that have made it increasingly difficult for countries to maintain autonomous technology policies. In part it is driven by countries seeking opportunities for economic development through cooperation with foreign multinationals. The smaller economies, however, lack the bargaining power of China, India, and Japan and doubts have been raised about the degree to which globalization is helping them to increase their indigenous technological capabilities and the degree to which they can distribute the benefits of technological globalization to their citizens. Some research suggests that Singapore, for example, has done well in this regard, while Malaysia, Thailand and other countries have been less successful.[14]

SUMMARY POINTS

- In the last decades of the 20th century the technology systems of the major Asian countries benefited by becoming more open to the activities of foreign firms, though issues still remain with protectionism in Japan and weak intellectual property rights protection systems in China and India.
- China has made great progress in establishing basic education for its people, but aside from a few outstanding universities has a weak system for the education of scientists and engineers.