THE AUSTRALIAN NATIONAL UNIVERSITY

AUSTRALIA–JAPAN RESEARCH CENTRE
ANU COLLEGE OF ASIA & THE PACIFIC
CRAWFORD SCHOOL OF ECONOMICS AND GOVERNMENT

COMPETITION POLICY IN ASEAN: CASE STUDIES

Johannah Branson

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Competition policy in ASEAN: Case studies*

Executive summary

Competition law comprises the sets of rules maintained by governments to outlaw or restrict anti-competitive practices. Such practices include agreements or arrangements between two or more people or enterprises that contain provisions that substantially lessen competition or increase dominance in a market, including by mergers or acquisitions, are exclusionary, in preventing or limiting dealings with a rival, or fix prices, volumes or other terms of trade amongst competitors. They also include unilateral behaviour by a person or enterprise to take advantage of market power for an anti-competitive purpose or to set the minimum price at which goods are supplied by the person or enterprise or can be sold by others.

Strong competition policy and law, with effective enforcement capacity, promotes static economic efficiency, fair and efficient markets, lower production costs and consumer prices, and consumer welfare and sovereignty. There is mounting evidence that strong competition policy also contributes substantially to the generation of dynamic efficiencies, higher productivity, greater innovation in the form of new high quality products and process technologies, and stronger economic growth and development. These benefits are of particular interest to developing countries and countries in transition, such as a number of the economies in the Association of South East Asian Nations (ASEAN).

Amongst ASEAN countries, Indonesia, Singapore, Thailand and Vietnam have and enforce competition laws. Fair trade and competition acts are in the process of being drafted in the Philippines. Malaysia is currently debating whether to introduce competition legislation. All of the 'plus six' countries have some form of competition law in place. For Malaysia, Brunei, Cambodia, Laos and Myanmar, the primary policy questions are whether to introduce competition polices and, if so, in what form. For the remaining countries of ASEAN, the main policy questions are more whether, and if so how, to

integrate competition policies across these countries.

This paper is part of research into the advantages and disadvantages of introducing the various components of competition policy into economies in transition, including how these vary as a country's level of development evolves. A companion study reviews international experience from the introduction of competition policies in other transition economies, such as in Eastern Europe, Central and South America and Asia.

In this paper, we investigate three sectors, the degree of competition in which is of particular interest internationally and in Asia — cement, telecommunications, and transport and logistics. We compare these sectors in a number ASEAN countries that have different competition policies. The main research question for these case studies is whether we can discern significant differences in market conditions and outcomes in countries that have different competition policies, including evidence of restrictive business practices in ASEAN countries that do not have competition laws and improved market outcomes in ASEAN countries that have recently introduced competition laws. The particular hypothesis we seek to test is that countries with fewer barriers to market entry have more competitive markets and more efficient market outcomes, such as more suppliers, lower market concentration, more frequent supplier entry and exit and consumer switching, higher productivity, lower margins and lower prices.

In assessing the case studies, we adopt the structure-conduct-performance framework. This framework is founded on the principle that market performance follows from the structure of the market and the conduct of its participants. Competitive structural conditions encourage competitive conduct, through efficient incentives and signals, which promotes competitive and efficient performance outcomes.

In cross-country, and indeed cross-sector, comparisons, rigorous analysis is hampered by the limited availability of accurate and comparable data. The evidence available is also somewhat circumstantial, in exploring how market structure, conduct and performance differ between countries at different stages in developing competition laws without proving a causal link. The observed differences in market conditions and outcomes might reflect influences other than competition laws, such as the quality of institutions conducive to economic activity, the government's economic development or trade policies, or characteristics or policies specific to the case study sectors. It is difficult to discern to what extent the presence or absence of competition laws may have contributed to the observed differences.

A crude comparison does, however, suggest some correlations, if not necessarily causal relationships. There are some signs of better market conditions and outcomes in countries where competition laws are more advanced.

There is quite high correlation (0.68) between competition law status and ease

of economic activity generally. In the sectors investigated in this study, the correlation between competition law status and market conditions and outcomes is most strongly positive for cement output and prices, and trade freedom. There is, however, a negative correlation in some sectors, most noticeably for market concentration and barriers to entry in the telecommunications sector, excess capacity in the cement sector, and sea freight.

In cement, excess capacity is greater and barriers to entry lower, and therefore rated as more conducive to competition, in the Philippines than in Indonesia and Thailand, both of which have more established competition laws. Market performance in terms of output and prices rates lower, however, reflecting suspected price collusion. Market concentration is high in all three countries, reflecting the characteristics of cement production. In telecommunications, Cambodia, even without competition laws, rates better in terms of market concentration, barriers to entry and prices than Thailand and Vietnam, which both have competition laws, reflecting early liberalisation and competition in its mobile sector. All three countries have seen marked increases in output, as well as improvements in service quality. In transport and logistics, there is generally greater trade freedom in countries that have implemented or are developing competition laws. In contrast, in sea freight, Malaysia, which is considering whether to introduce competition legislation, rates better than Singapore and Indonesia, both of which have competition laws in force, reflecting its less concentrated market and more room to expand capacity.

The overall conclusion for the case study sectors is as signalled for ease of economic activity more generally — that there is a high but not perfect correlation between competition laws and market conditions and outcomes. Competition laws generally make a significant positive contribution, but are not the sole determinant of how well markets behave and perform. Other influences can compensate for less developed competition laws or detract from more developed competition laws. The implication for policy makers is that developing, implementing and enforcing competition laws may not be sufficient to achieve competitive market conditions and outcomes in all sectors, nor necessary for some sectors, but can generally be expected to be significantly conducive.

***** *This report has been prepared at the New Zealand Institute of Economic Research with the assistance of Brent Layton, Deborah O'Connor and Gail Dallimore, which is gratefully acknowledged. It was originally written as for Report to the Economic Research Institute for ASEAN and East Asia (ERIA) in 2007 and has been published as an ERIA Joint Research Project Series 2007 No.4. It also formed the basis for a presentation by the author at a conference on 'Comparative Experience in Competition Policy Reform in Australia, Japan and East Asia' sponsored by the Australia-Japan Research Centre in Canberra in September 2008*

1. Competition policy

1.1 What is competition policy?

Competition policy pertains to competition law and its enforcement. Competition law refers to the sets of rules maintained by governments to outlaw or restrict anti-competitive practices. These practices generally include:

- agreements or arrangements between two or more people or enterprises that contain provisions that:
- substantially lessen competition or increase dominance in a market, including by mergers or acquisitions
- are exclusionary, in preventing or limiting dealings with a rival
- fix prices, volumes or other terms of trade amongst competitors
- unilateral behaviour by a person or enterprise that:
- takes advantage of market power for an anti-competitive purpose
- sets the minimum price at which goods are supplied by the person or enterprise or can be sold by others.

1.1 Why is it important?

Neo-classical economic theory, together with industrial organisation theory and practice, provide important foundations for competition policy and law. Strong competition policy and law, with effective enforcement capacity, promotes static economic efficiency, fair and efficient markets, lower production costs and consumer prices, and consumer welfare and sovereignty.

There is mounting evidence that strong competition policy also contributes substantially to the generation of dynamic efficiencies, higher productivity, greater innovation in the form of new high quality products and process technologies, and stronger economic growth and development. These benefits are of particular interest to developing countries and countries in transition, such as a number of the economies in the Association of South East Asian Nations (ASEAN).

In addition, a well-designed and effective competition policy complements and supports other economic policies, including trade liberalisation, industrial development, promotion of innovation, increasing domestic and foreign investment and macroeconomic stabilisation policies. Strong competition in the domestic market prepares exporters for the competitive rigors of the international marketplace. Through reducing barriers to entry, competition policy promotes the establishment of a strong and sustainable small

and medium-sized enterprise sector. In many industrialised and developing economies, small and medium-sized enterprises, which are almost always privately owned, play a major role in investment, job creation, technology development and innovation.

Research under way at the World Bank, Asian Development Bank, United Nations Conference on Trade Development and other international agencies is highlighting that cross-country differences in living standards and growth rates are significantly related to country differences in institutional capacity, the protection of property rights, and fair and efficient markets. Competition policy contributes to all three of these forces in favour of economic development.

2. Competition policy in ASEAN

2.1 Spread of competition laws

Since 1980, the number of countries with competition laws has increased rapidly. According to the World Bank's Director for the East Asia and Pacific Region, 100 countries had competition laws in 2006 and another 30 countries were in the process of drafting and debating competition laws. Countries with competition laws now account for more than 85 per cent of world trade.

Most developing and emerging market economies did not introduce competition laws until the 1990s. World Bank (2002) notes that enforcement of competition laws is much more active and effective in industrialised countries than in countries in transition. This is, however, to be expected. World Bank (2002) stresses that institution building, including effective competition law enforcement capacity, takes time and resources.

2.2 Current state in ASEAN

Amongst ASEAN countries, Indonesia, Singapore, Thailand and Vietnam have and enforce competition laws. Fair trade and competition acts are in the process of being drafted in the Philippines. Malaysia is currently debating whether to introduce competition legislation. All of the 'plus six' countries have some form of competition law in place. Table 1 below summaries the current state of competition policy and law in these countries.

Table 2 shows how these countries rank on a number of international measures of ease of, or impediments to, general economic activity. Across these countries, the correlation coefficient between the current state of competition laws and the average ranking for ease of economic activity is quite high at 0.68, shown in Figure 1.

This suggests that competition laws generally make a significant positive contribution, but are not the sole determinant of how well markets behave and perform and,

indeed, other influences can compensate for less developed competition laws or detract from more developed competition laws.

Table 1: Current state of competition laws in ASEAN plus six

	Competition laws		Competition legislation1
	In force	In development	
ASEAN countries			
Brunei Darussalam			Monopolies Act (1932)
Cambodia			Law on Marks, Trade Names and Unfair Competition (2002)
Indonesia	√		Law of the Republic of Indonesia Number 5 of the Year 1999, on the Prohibition of Monopolistic Practices and Unfair Business Competition (1999)
Laos			Decree on Trade Competition (2004)
Malaysia		√	Laws that regulate certain enterprise activities and protect consumer interests: Control of Supplies Act (1961 Companies Act (1965) Hire Purchase Act (1967) Trade Descriptions Act (1972) Weights and Measures Act (1972) Food Act (1983) Direct Sales Act (1993) Competition clauses in some sector specific laws: Electricity Supply Act (1990) Communication and Multimedia Act (1998)
Myanmar			
Philippines		√	Competition clauses in: Penal Code of the Philippines (1930) Civil Code (1949) Act to Prohibit Monopolies and Combinations in Restraint of Trade (1961) Corporation Code Batas Pambansa Blg. 68 (1980) Philippine Constitution (1987) Price Act (1992) Consumer Act (1992) Competition clauses in some sector specific laws: Securities Act (1982) General Banking Act (1948) Retail Trade Liberalization Act (2000) Executive Orders for maritime industry, civil aviation, port services, telecommunications, energy, water
Singapore	√		Competition Act (2004) Competition clauses in some sector specific laws: Telecommunications Act (1999) Electricity Act (2001) Gas Act (2001)
Thailand	√		Trade Competition Act (1999) Price of Goods and Services Act (1999) Telecommunications Business Act (2001)

Vietnam	√	Competition Law (2004)
Plus six countries		
Australia	√	Trade Practices Act (1974)
China	√	Anti-monopoly provisions in current laws and regulations: Law of the People's Republic of China for Countering Unfair Competition (1993) Regulations of the People's Republic of China Concerning Anti-dumping and Anti-subsidy (1997) Price Law of the People's Republic of China (1997) Law of the People's Republic of China for Inviting and Submitting Tender (1999) Competition clauses in some sector specific laws: Regulations Against Unfair Competition Acts in the Civil Air Transportation Market (1996) Interim Provisions on Mergers and Divisions of Foreign-Invested Enterprises (2001) Interim Provisions on Restructuring State-owned Enterprises By Utilising Foreign Investment (2002) Interim Provisions on the Mergers with and Acquisitions of Domestic Enterprises by Foreign Investors (2003)
India	√	Monopolies and Restricted Trade Practices Act (1956) Consumer Protection Act (1986) ` Competition Act (2002)
Japan	√	Act Concerning Prohibition of Private Monopolisation and Maintenance of Fair Trade (1947)
Korea	√	Price Stabilisation Act (1973) Price Stability and Fair Trade Act (1975) Monopoly Regulation and Fair Trade Act (1980) Fair Subcontract Transactions Act (1984) Adhesion Contract Regulations Act (1986) Fair Labelling and Advertising Act (1999) Door-to-Door Sales Act (1991) Instalment Transactions Act (1991) Omnibus Cartel Repeal Act (1999) Consumer Protection in Electronic Commerce Act (2002) Fair Franchise Transactions Act (2002)
New Zealand	√	Commerce Act (1986) Fair Trading Act (1986) Competition clauses in some sector specific laws: Electricity Industry Reform Act (1998) Telecommunications Act (2001)

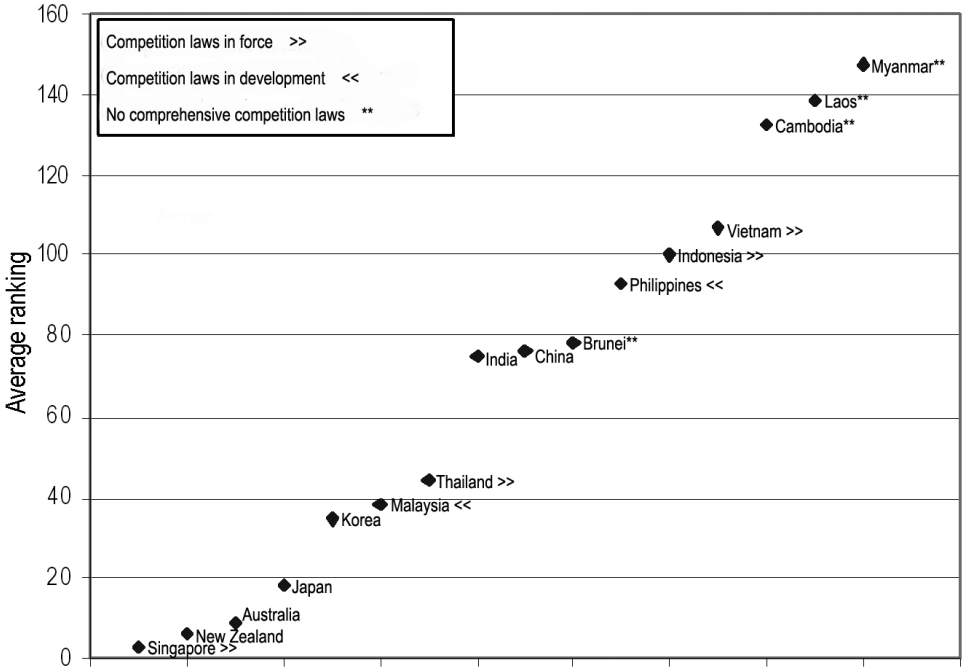
Source: APEC (2007), Global Competition Forum (2007), Japan Free Trade Commission (2007), Mehta and Pham (2007), Wada (2004)
Note: 1 Excludes amendments

Table 2: Ease of economic activity – country rankings

	Ease of Doing Business	Index of Economic Freedom	Economic Freedom of the World	Competitive ness Scoreboard	Corruption Perceptions Index	Average ranking
Competition laws in force						
Indonesia	123	110	83	54	130	100
Singapore	1	2	2	2	5	2
Thailand	15	50	60	33	63	44
Vietnam	91	138	88	n/a	111	107
Competition laws in development						
Malaysia	24	48	53	23	44	38
Philippines	133	97	68	45	121	93
No comprehensive competition laws						
Brunei Darussalam	78	n/a	n/a	n/a	n/a	78
Cambodia	145	102	n/a	n/a	151	133
Laos	164	140	n/a	n/a	111	138
Myanmar	n/a	153	129	n/a	160	147
Plus six countries						
Australia	9	3	11	12	9	9
China	83	119	95	15	70	76
India	120	104	53	27	70	75
Japan	12	18	19	24	17	18
Korea	30	36	35	29	42	34
New Zealand	2	5	3	19	1	6

Source: Fraser Institute (2006), Heritage Foundation and Wall Street Journal (2007), International Institute for Management Development (2006), Transparency International (2006), World Bank (2007)
Note: Ranked from low (fewer impediments) to high (more impediments)

Figure 1: Ease of economic activity – average ranking



Source: Fraser Institute (2006), Heritage Foundation and Wall Street Journal (2007), International Institute for Management Development (2006), Transparency International (2006), World Bank (2007)

3. Research questions

For Malaysia, Brunei, Cambodia, Laos and Myanmar, the primary policy questions are whether to introduce competition polices and, if so, in what form. For the remaining countries of ASEAN, the main policy questions are more whether and, if so, how to integrate competition policies across these countries.

We have therefore divided research to address these questions into two parts:

- part 1 — research into the advantages and disadvantages of introducing the various components of competition policy into economies in transition, including how these vary as a country's level of development evolves and
- part 2 — research into the advantages and disadvantages of the various options for integration of competition policy across ASEAN plus six countries.

3.1 Introducing competition policy

Countries that do not currently have competition laws face the following policy questions:

- Is lack of competition really a problem? Are restrictive business practices really widespread and do they give rise to serious economic inefficiencies and stymie growth and development?
- Would competition policy undermine industrial policy aimed at promoting the growth of particular local industries?
- How would competition policy impact on state-owned monopoly enterprises and enterprises that have monopolies granted by the government? These enterprises may have social goals in terms of using their monopoly position to set prices that favour some groups in society.
- Would competition policy merely favour large foreign enterprises at the expense of small domestically owned enterprises?
- Is the market large enough to sustain the number of enterprises necessary for competition?
- Is there enough expertise amongst economists, government officials and the judiciary to develop and sustain a successful competition policy at reasonable cost?

To explore these policy questions, by drawing on evidence relevant to the transition economies in ASEAN which do not currently have competition policy, we have divided the part 1 research on introducing competition policy into a further two components:

- review of international experience — from the introduction of competition policies in other transition economies, such as in Eastern Europe, Central and South America and Asia, and
- assessment of case studies in ASEAN — the subject of this report.

3.2 ASEAN case studies

In this report, we investigate three sectors where the degree of competition is of particular interest internationally and in Asia. We compare these sectors in a number ASEAN countries that have different competition policies. The main research question for these case studies is whether we can discern significant differences in market conditions and outcomes in countries that have different competition policies, including evidence of restrictive business practices in ASEAN countries that do not have competition laws and improved market outcomes in ASEAN countries that have recently introduced competition laws.

The particular hypothesis we seek to test is that countries with fewer barriers to market entry have more competitive markets and more efficient market outcomes, such as more suppliers, lower market concentration, more frequent supplier entry and exit and consumer switching, higher productivity, lower margins and lower prices.

4. Analytical framework

In assessing the case studies, we adopt the structure-conduct-performance framework. This methodology is widely used internationally by competition authorities and policy advisors, including the New Zealand Commerce Commission, to assess market competitiveness. This framework, and the dimensions of market structure, conduct and performance by which market competitiveness might be assessed, are shown in Figure 2 below.

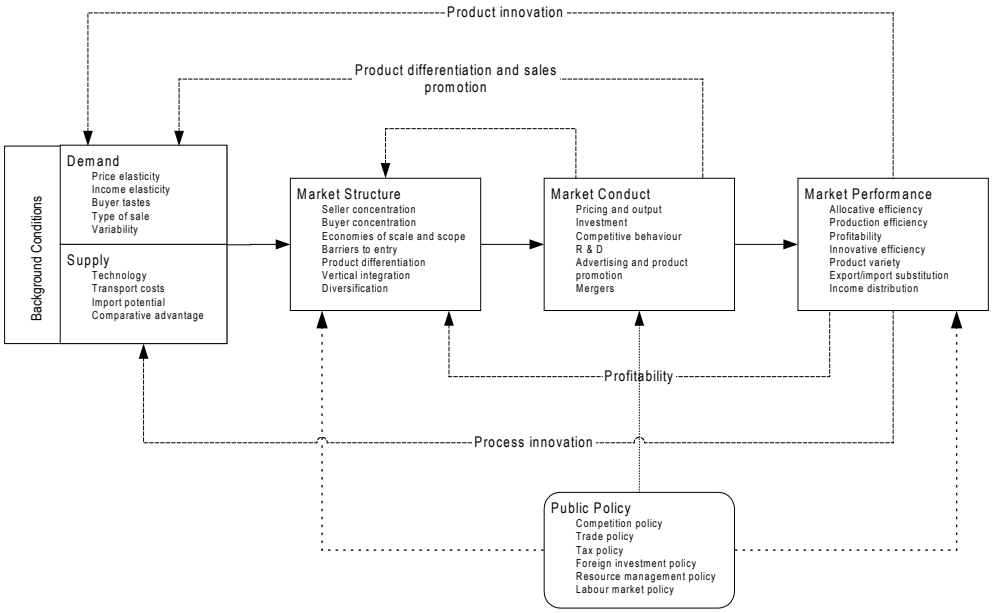
This framework is founded on the principle that market performance follows from the structure of the market and the conduct of its participants. Competitive structural conditions encourage competitive conduct, through efficient incentives and signals, which promotes competitive and efficient performance outcomes.

4.1 Structure

In terms of structural conditions, a market is likely to be more competitive where:

- sellers exist in large numbers and market concentration is low — a large number of sellers and low concentration make it less likely that any one seller can unilaterally influence prices, make it less likely for sellers to reach understandings, whether overtly or tacitly, that reduce competition, and, even if such understandings can be reached, reduce the scope for detection and retaliation to enforce agreements

Figure 2 Structure-conduct-performance framework



Source: NZIER

- consumers perceive products and services to be relatively homogeneous — in markets in which products are largely undifferentiated, competition, especially price competition, is likely to be stronger and buyers are less likely to develop brand preferences and loyalties that cause stickiness in buyers switching in the event of unilateral price movements by any one supplier
- relevant market information about the offerings of alternative suppliers is widely available at little cost — making switching by buyers more likely
- excess capacity exists — where a sector faces fixed costs and has excess capacity in the market for its output, it has greater incentive to cut price and to increase demand, volume and market share and
- barriers to entry are low — the absence of high barriers to entering a market increases the potential for new competition to enter the market in the event that any one seller accumulates market power, which it attempts to exercise by raising prices above the competitive level.

4.1.1 Barriers to entry

The latter, barriers to entry, are a particular focus of competition policy and in the case studies assessed in this report. Contestability, existing and potential, is often an important force in providing competitive discipline to market participants. Barriers to entry can be either structural or behavioural. The sources of structural barriers to entry include:

- the presence of significant economies of scale
- limited access to essential resources, facilities, services or networks
- patents or other intellectual property rights
- the presence of significant sunk costs in items such as capital, brand strength and reputation and
- high cost and/or difficulty of obtaining and complying with regulatory approvals to participate in the market.

Behavioural barriers to entry include entry-deterring strategies such as predatory pricing.

4.2 Conduct

In terms of conduct, for a market to be competitive it must be free of behaviour that would reduce the level of competition between participants and deter efficient entry. Examples include contracts, arrangements or understandings that have the purpose or effect of substantially lessening competition in a market, fixing prices, excluding market participation, maintaining resale prices or using a dominant position in a market for anti-competitive purposes. The likelihood of such conduct is influenced by the structure of the market, particularly whether there are ready opportunities for:

- collusion by participants, even tacitly
- detection of deviant behaviour breaching a collusive understanding and
- retaliation to discipline deviants.

5. Selection of case studies

International and Asian experience suggests a number of sectors in which analysis of the effects of the presence or absence of competition laws may be informative — banking and financial services, taxi services, cigarettes, beer and soft drinks, petroleum products distribution, poultry production, fertiliser sales, and building supplies particularly cement, aluminium, steel and glass. ERIA expressed particular interest in us examining the three sectors of cement, telecommunications, and transport and logistics, which span the range of production, service and infrastructure sectors. For each of these three sectors, we identified a number of countries of interest, spanning a range in the extent to which competition laws have been introduced.

Table 3 shows the sectors and countries selected for case study.

Table 3: Selection of case studies

	Sectors		
	Cement	Telecommunications	Transport and logistics
Competition laws in force			
Indonesia	√		√
Singapore			√
Thailand	√	√	√
Vietnam		√	√
Competition laws in development			
Malaysia			√
Philippines	√		√
No comprehensive competition laws			
Brunei Darussalam			√
Cambodia		√	√
Laos			√
Myanmar			

Source: NZIER

6. Cement

The cement industry is one of a few sectors that has a natural tendency towards geographically-concentrated monopoly or oligopoly, in the absence of regulation. In most countries around the world, the sector is dominated by a small number of large firms, often multinationals.

Marked economies of scale and high minimum efficient scale in production favour supplying dispersed markets from a small number of large plants. Plants run most efficiently at high capacity utilisation rates and marginal costs rise quickly as production falls below optimal levels.

The low value-to-weight ratio and high transportation costs provide a countervailing force in favour of a larger number of smaller, higher cost plants located close to markets. For example, in the United States little cement is shipped more than 200 to 300 miles (Mabry, 1998). The positive correlation between market concentration and price found in a number of studies (Allen, 1993; Jans and Rosenbaum, 1997; Koller and Weiss, 1989; McBride, 1983) becomes insignificant with inclusion of a measure of transportation cost (Newmark, 1998).

Cement production is also characterised by high fixed relative to variable costs. Industry entry and exit costs are high, given the level of capital investment required in plants. Of variable costs, the largest component, around 35 per cent, is energy input, with cement being one of the most energy intensive of industries. Competitive pressure from imports is also limited by high costs of entry — cement imported in bulk requires a bulk handling facility and shipping in bags incurs extra handling costs.

The cement industry is closely connected with the volatile construction sector and often has difficulty balancing demand and supply and avoiding under and over-capacity. Furthermore, the price elasticity of demand is low, due to the lack of substitutes, such that reducing prices would redistribute demand between producers rather than increase aggregate demand.

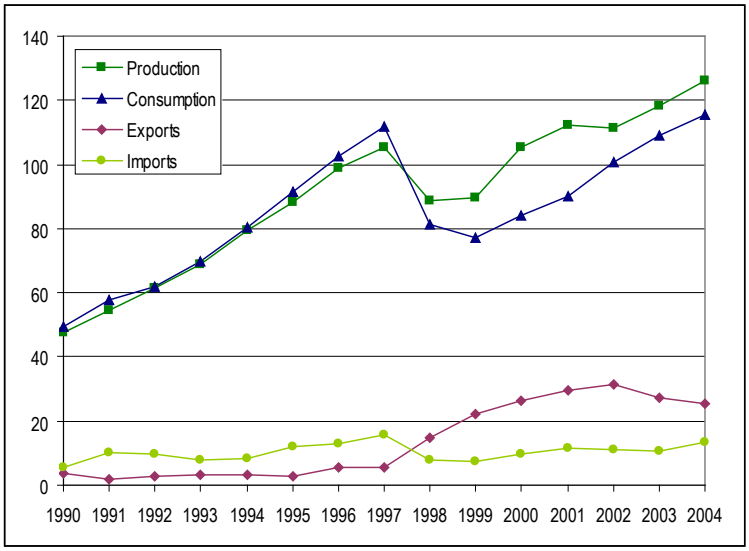
Under this combination of high fixed costs and volatile but price inelastic demand, it is not surprising that producers seek to avoid competing on price when demand enters a decline. In high fixed cost industries, competing on price to the point where, for the short run, only variable costs are covered entails a large reduction in prices, which presents a risk to the substantial capital base required.

Experience in developed countries around the world suggests that complete deregulation of the cement industry is unlikely to result in more competitive behaviour amongst producers due to the incentive for price collusion. Nor would regulatory intervention to increase competition necessarily result in better outcomes for consumers due to the large economies of scale and high capital intensity of the industry. The optimal approach appears to be to accept market concentration in a small number of large producers and to focus on constraining any abuse of their market power.

The largest producers of cement worldwide are North Asia, Western Europe, the Indian sub-continent and North America. In 2004, South East Asian countries (Brunei, Cambodia, East Timor, Indonesia, Laos, Malaysia, Philippines, Singapore, Thailand and

Vietnam) ranked fifth with six per cent of world cement production. It also accounted for five per cent of world cement consumption, 16 per cent of world cement exports and 10 per cent of world cement imports (Tradeship Publications, 2005).

Figure 3: South East Asia cement production
Million tonnes



Source: Adapted from Tradeship Publications (2005)

6.1 Indonesia

Cement is considered a strategic commodity in Indonesia due to its importance to the construction sector and its upstream and downstream linkages to many other industries (Irianto, 2004).

The industry has gradually become increasingly liberalised. Under regulations introduced in the mid-1970s, the government controlled every aspect of the cement industry, from production to distribution and pricing (LSPEU, 2001). Regulatory controls took the form of guiding prices and distribution quotas, by region and for exports. The reason for such heavy regulation was to ensure that all areas of Indonesia were supplied with cement at reasonable prices. The consequences, however, were frequent seasonal shortages, high prices, insufficient investment in new capacity, wasteful freight haulage and forgone export opportunities. This prompted calls for deregulation, but producers were also accused of cartel activity, hoarding and speculation (Plunkett and Pasinringi, 2002). These days 'Cement producers can sell and set prices freely across the country.' (Asian Development Bank, 2007, p.2).

6.1.1 Market concentration

In 2005, there were nine cement producers operating 15 cement plants with total installed production capacity of 46.1 million tonnes, as shown in Table 4 (Asian Development Bank, 2007).

The largest producer, comprising three companies in the Semen Gresik Group (which is 51 per cent state owned), served 45 per cent of the market. The combined market share of the three largest producers (CR3) was very high at 90 per cent. These producers are also geographically concentrated, with three-quarters of their production capacity located in Java, which accounts for around two-thirds of national demand. These top three producers previously competed aggressively for market share in this region, but their strategic objective seems to have shifted from maximising market share to maximising profit. The remaining four small companies each operate a single plant or a few small plants in Sumatra or other islands. Each producer has adopted a geographically focused sales and distribution network, due to the low value-to-weight ratio of cement, high transport costs and dispersed geography of Indonesia.

6.1.2 Excess capacity

Excess capacity has fallen significantly and is likely to be squeezed further over the next

Table 4: Indonesian cement industry 2005

Company	Plant location	Capacity (tonnes)	Domestic sales (tonnes)	Market share	Major shareholder
PT Semen Gresik	East Java	8,200,000	7,903,635	25.1%	Indonesian Government
PT Semen Padang	West Sumatra	5,440,000	3,876,732	12.3%	Semen Gresik
PT Semen Tonasa	South Sulawesi	3,480,000	2,496,165	7.9%	Semen Gresik
PT Indocement Tunggal Prakarsa	West Java & South Kalimantan	15,650,000	9,335,415	29.6%	Heidelberg
PT Holcim Indonesia	West Java & Central Java	9,700,000	4,793,114	15.2%	Holcim
PT Semen Andalas Indonesia1[1]	Aceh		1,124,580	3.6%	Lafarge
PT Semen Bosowa Maros	South Sulawesi	1,800,000	922,363	2.9%	Bosowa Group
PT Semen Baturaja	South Sumatra and Lampung	1,250,000	895,235	2.8%	Indonesian Government
PT Semen Kupang	East Nusa Tenggara	570,000	68,942	0.2%	Indonesian Government
Total		**46,090,000**	**31,486,181**	**100.0%**	

Source: Indonesian Cement Association, in Asian Development Bank (2007)
Note: 1Under reconstruction, supplied by imports from Lafarge group

few years. In 2005, domestic sales were 31 million tonnes and exports were five million tonnes, from production capacity of 44 to 46 million tonnes, implying around 85 per cent capacity utilisation (Tradeship Publications, 2007; Asian Development Bank, 2007). This followed a large increase in capacity before the Asian financial crisis, which lead to excess supply and low capacity utilisation of around 50 per cent in the 1990s (Asian Development Bank, 2007).

In the year to May 2007, domestic demand grew by eight per cent (Indonesia Matters, 2007) after 1.5 per cent in 2006 and four per cent in 2005 (Indonesia Investment Coordinating Board, 2007). Assuming a yearly growth in demand of seven per cent over the next five years, the limits of existing capacity would be met by 2010 (Asian Development Bank, 2007), resulting in a shortfall in supply to meet domestic demand by 2011 (Indonesia Matters, 2007). Producers are expected to respond to the rising demand by increasing their capacity through upgrading existing plants or building new plants Indeed, the Indonesian government is offering tax breaks for cement industry investors (Indonesia Matters, 2007).

6.1.3 Barriers to entry

Indonesia does not levy a tariff on imported cement. Domestic producers would therefore face competition from increased imports if prices rose. Nor are there any restrictions on foreign investors entering the cement industry, which could provide competitive pressure through either introduction of new firms or through mergers and acquisitions under which foreign investors are not willing to collude with domestic producers.

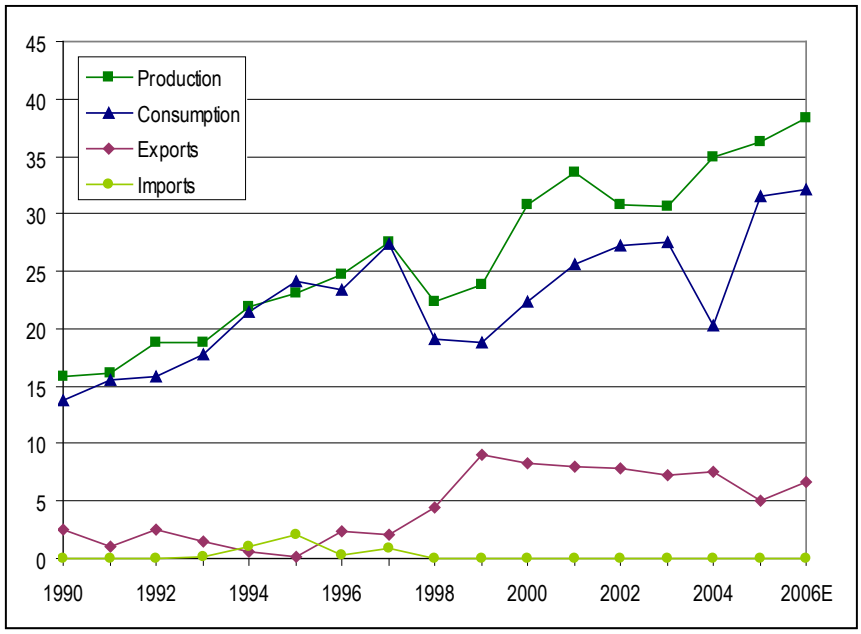
Foreign new entrants are not expected to pose a major threat to existing cement producers, however, due to the large capital investment required, the need for a well-developed distribution network and the importance of brand recognition and loyalty in Indonesia's domestic market (Asian Development Bank, 2007).

6.1.4 Output and prices

In 2005, Indonesia produced 36 million tonnes of cement, its consumption was 31 million tonnes, exports were five million tonnes (14 per cent of sales) and imports were 0.02 million tonnes (Tradeship Publications, 2007).

Domestic prices rose 35 per cent between 2004 and 2005 (Asian Development Bank, 2007), but remain lower than in the Philippines (an average of US$72 per tonne in Indonesia compared with US$88 per tonne in the Philippines; Indonesia Investment Coordinating Board, 2007).

Figure 4: Indonesia cement production and consumption
Million tonnes



Source: Tradeship Publications (2005); Tradeship Publications (2007)

6.2 Thailand

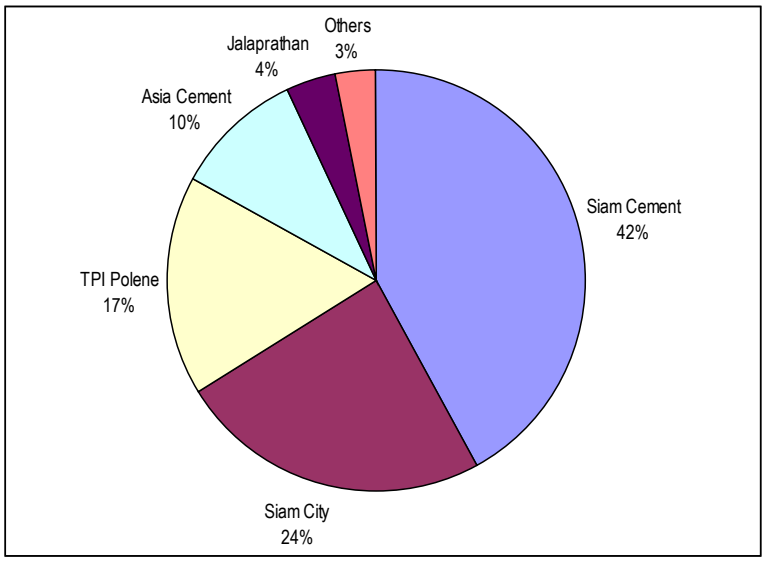
During the 1986 to 1996 boom, Thailand was the largest ASEAN producer of cement. Construction was the worst hit of Thailand's sectors in the 1997/98 Asian financial crisis. Its cement producers survived the 1997 collapse of the construction sector by tapping export markets and a few producers were taken over by foreign companies (United Nations, 2007).

There is relatively little data available in the public domain on the Thai cement industry with which to assess its structure, conduct and performance.

6.2.1 Market concentration

In 2001, Thailand had seven cement producers, operating 13 plants (Wu, 2001). Around 42 per cent of total production came from the largest producer and the second largest producer had a 24 per cent market share, as shown in Figure 5 (AFTAONLINE, 2001). CR3 was 83 per cent. In 2001, the second largest, and majority foreign owned, producer made a bid for the third largest, and locally owned, producer, which prompted concerns that the merger would lead to collusion and price increases (Asian Development Bank, 2005).

Figure 5: Thai cement industry 2001



Source: AFTAONLINE (2001)

6.2.2 Excess capacity

In 2005, total production capacity was 56 million tonnes, domestic sales were 28 million tonnes and exports were 14 million tonnes, indicating production capacity utilisation of around 75 per cent. This compares with overcapacity of around 65 per cent during the Asian financial crisis (Tradeship Publications, 2007).

6.2.3 Barriers to entry

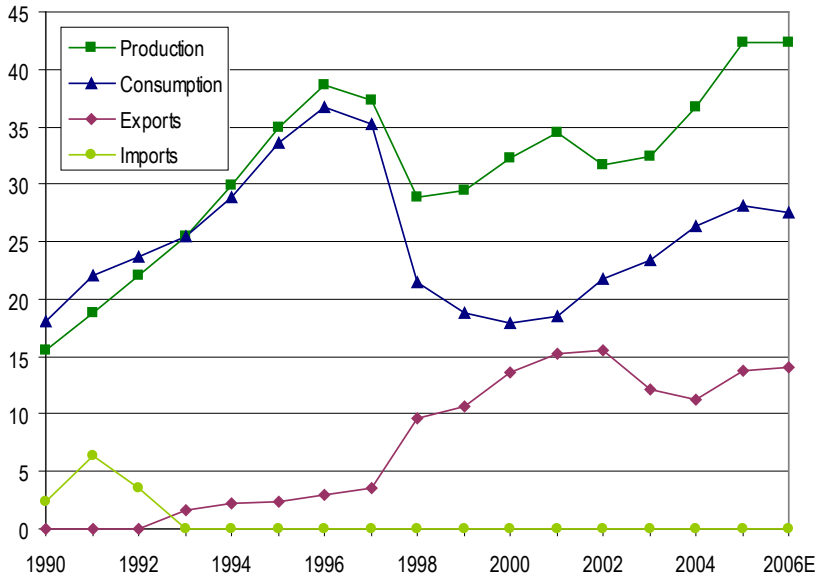
Thailand imposes a 30 per cent tax duty on non-ASEAN cement imports (Indonesia Investment Coordinating Board, 2007).

6.2.4 Output and prices

Annual cement production in Thailand rose from 25 million tonnes to 42 million tonnes over the period 2000 to 2005 (United States Geographical Survey Mineral Resources Program, 2005; Tradeship Publications, 2007). In 2006, total consumption was 27 million tonnes (CeMAP 2007). Thailand also exports significant volumes of cement, 14 million tonnes in 2005 (Tradeship Publications, 2007).

The domestic price is currently US$42/tonne. Export prices have increased over recent years to a historic high of US$35 to US$39 a tonne in mid-2006 (Tradeship Publications, 2007).

Figure 6: Thai cement production and consumption - Million tonne



Source: Tradeship Publications (2005); Tradeship Publications (2007)

6.3 Philippines

The Philippines is the third largest cement market in South East Asia after Thailand and Indonesia. Domestic production has grown under heavy government protection.

The 1970s saw government protection and promotion of the domestic cement industry through high import tariffs, import restrictions and incentives to domestic producers. In 1973, the Philippine Cement Industry Authority was established to regulate entry into the industry, to allocate supply and to control prices and cement exports. Producers colluded through informal agreement to set production quotas and to divide up geographical markets between them.

Despite a shift towards deregulation and liberalisation in the 1980s, today the market leader, which is state-owned, still sets sales volumes and locations for each producer. There remain accusations of tacit collusion on prices.

6.3.1 Market concentration

In 2006, there were 13 producers, operating 17 plants, providing total capacity of nearly 20 million tonnes. Nationally, the largest producers had a 37 per cent market share, as shown in Table 5. CR3 was 60 per cent (CeMAP, 2007). By region, however, markets are highly concentrated, with CR4 in each of the five geographic regions of the Philippines ranging from 93 to 100 per cent in 1999 (Aldaba, 2000).

The small number of producers in the industry and the very active industry association would provide ease of opportunity for collusion or co-ordination between producers.

Table 5: Philippines cement industry 2006

Company	Installed capacity (million tonnes)	Capacity share
Holcim	7.24	37.0%
Apo Cement Corporation	2.40	12.3%
Fortune Cement Corporation	2.10	10.7%
Solid Cement Corporation	1.86	9.5%
Republic Cement Corporation	1.10	5.6%
FR Cement Corporation	1.10	5.6%
Northern Cement Corporation	0.96	4.9%
Taiheiyo Cement Philippines	0.84	4.3%
Iligan Cement Corporation	0.50	2.6%
Mindanao Cement Corporation	0.50	2.6%
Rizal Cement	0.38	1.9%
Goodfound Cement	0.35	1.8%
Pacific Cement Philippines Inc.	0.25	1.3%
Total	19.57	100.0%

Source: Cement Manufacturers of the Philippines CeMAP (2007)

6.3.2 Excess capacity

The cement industry has significant excess capacity. Capacity utilisation fell from 97 per cent in 1990 to 49 per cent in 1999 (Aldaba, 2000), before rising to 60 per cent in 2006 (CeMAP, 2007).

6.3.3 Barriers to entry

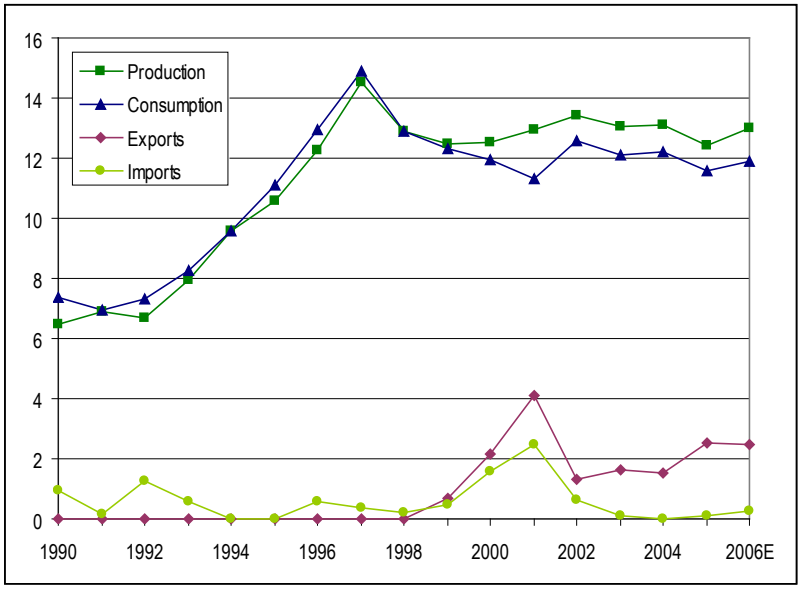
Despite its excess capacity, the Philippines has been a target for foreign cement exports due to its relatively open market. In 2002, its tariffs stood at three per cent on cement imports from ASEAN countries and five per cent on cement imports from non-ASEAN countries, whilst other Asian countries had import tariffs of between five and 100 per cent (Escolar, 2004). Imports have fluctuated, but remain a small share of total consumption. Imports peaked in 2001 at 2.2 million tonnes, mainly from Indonesia, Taiwan and Japan, before dropping to less than 10,000 tonnes in 2003 and rising again to 244,000 tonnes, two per cent of total consumption, in 2006, mainly from Japan (CeMAP, 2007; Tradeship Publications, 2005; Tradeship Publications, 2007). The Philippines has been subject to cyclical dumping, under which a foreign producer sets its export price below its domestic market price, not for predatory reasons, but due to global excess capacity and depressed demand, such as during the 1997 Asian financial crisis.

6.3.4 Output and prices

As shown in Figure 7, in recent years the Philippines has produced around 13 million

tonnes of cement each year and consumed around 12 million tonnes (Tradeship Publications, 2005; Tradeship Publications, 2007). There have been reports of poor quality cement in the domestic market because the Department of Trade and Industry does not require labelling of containers for product components and percentages.

Figure 7: Philippines cement production and consumption - Million tonnes



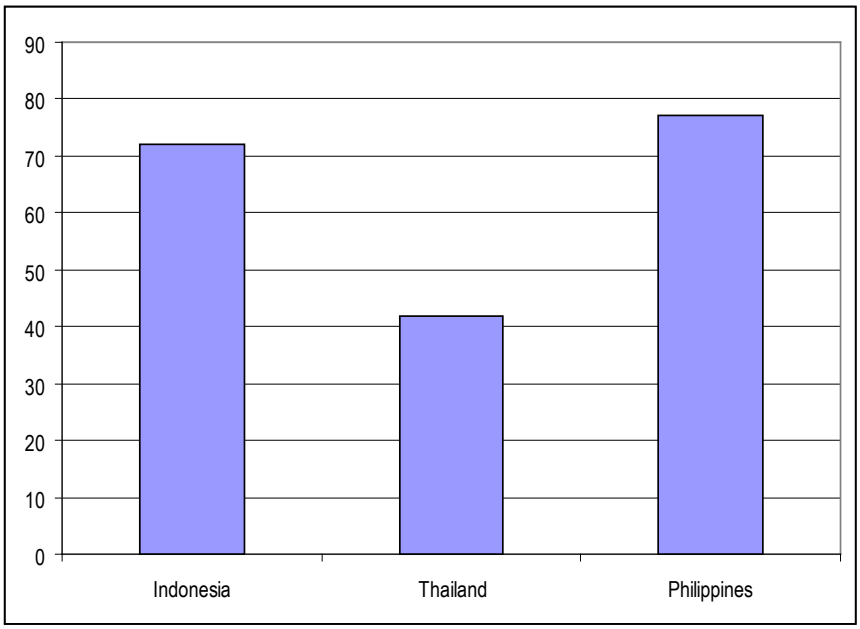
Source: Tradeship Publications (2005); Tradeship Publications (2007)

Exports peaked in 2001 at 4.1 million tonnes, mostly to Taiwan and the USA, dropping to 2.5 million tonnes in 2006, mostly to Mauritius (Tradeship Publications, 2005; Tradeship Publications, 2007; CeMAP, 2007). Poor quality can also be an obstacle to exports under non-tariff barriers pertaining to product standards and certification (e.g. certification for strength testing for the Japanese market).

Selling prices are surprisingly uniform between producers despite evidence of different cost structures (Mehta, 2007). Over the period January 1999 to May 2000, the sequence of observed price increases by producers, by almost the same amounts, was inconsistent with competitive behaviour and renewed concerns about collusion. There was very little variation between producers in ex-plant prices within each geographic market and not much variation in average prices across the country's three major geographic markets. The only possible valid explanation for this similarity in prices is similar cost structures. Based on the limited data available, Aldaba (2000) finds that producers seem to have significantly different cost structures and therefore concludes that almost identical prices and price increases at a time of excess supply and depressed demand suggest the presence of collusion and price co-ordination.

In the first quarter of 2006, prices were US$76/tonne for bulk cement and US$78/tonne for bagged cement (Tradeship Publications, 2007), the highest of the three countries investigated, as shown in Figure 8.

Figure 8: Cement prices — US dollars per tonne in 2006/07



Source: Indonesia Investment Coordinating Board (2007); Tradeship Publications (2007)

7. Telecommunications

A strong telecommunications sector is seen as fundamental to the development of the national economy. Indeed, the sector has been strategically supported by some Asian governments as a means to overcome their economic recession.

Telecommunications, as a 'network industry', is traditionally seen as a natural monopoly. The expense of reproducing the network presents a major cost barrier to new services. Historically, network and service providers have therefore tended to be integrated.

Around the world, countries are seeking to improve the effectiveness and efficiency of their telecommunications sectors by separating network and service components and promoting competition in the latter. Many have also introduced reforms to separate policy makers, regulators and operators, given the different skills required and incentives faced.

Service providers need access to, but not necessarily ownership of, networks. Operating telecommunications networks and providing telecommunications services

are very different businesses, involving very different types of investments and requiring different management skills. Network investments typically have a long life, low level of complexity, low sensitivity over confidentiality of technical information, low risk and relatively low return, making them suitable for risk-averse investors. In contrast, service investments have a relatively short product life, high level of complexity, sometimes highly confidential technical information and high risk, requiring compensation by high rates of return (David Butcher and Associates, 2006).

Separation lowers the cost of entry into the market for telecommunications services, enhancing competition between providers and enabling development of specialised customer services. Separation also removes the ability to inhibit competition by using network profits to subsidise services in markets that might otherwise attract competitors. Separation may also result in better investment decisions. It makes interconnection costs more transparent. It provides network owners with incentives to maximise utilisation regardless of signal source and to expand coverage into new areas and sources of business, but little incentive to over-invest, which is common where networks and services are bundled (David Butcher and Associates, 2006). Fink et al. (2001) even suggests that inefficiencies introduced by some duplication of networks may be small relative to operational inefficiencies resulting from a lack of competitive pressure. Separation also simplifies competition regulation, in needing to apply to network operations only.

On the downside, the 'digital divide' can widen with liberalisation, as the private sector is less willing to provide services to unprofitable rural and remote areas. The social objective of 'universal access', including in areas of low population and/or income, was in some countries the original reason for combined network and service provision, by government. In moving to competitive telecommunications sectors, countries have addressed social objectives by adopting regulatory principles to prevent or limit abuse of market power and to require compliance with minimum standards for reliability, quality and social outcomes.

Despite a move away from traditional public monopolies, most Asian governments are still reluctant to allow unrestricted entry, to eliminate limits on private and foreign ownership and to establish strong independent regulators.

Entry restrictions are becoming increasingly difficult to justify, however, in the face of technological development and mounting evidence of the positive effects of competition. Technological advances have significantly lowered network costs and vertical separation has increased competitive entry (Smith, 2005). Analysis by Fink et al. (2001) across 12 developing Asian economies finds that the implementation of comprehensive reform has led to significantly higher levels of main line availability, service quality and labour productivity. That said, it is not liberalisation or competition alone that reduces the

unit costs of telecommunications services, but reform in combination with technological development, increasing usage and maturing competitive markets (Kim, 2003).

In most countries, liberalisation to increase competition was introduced earlier and to a greater degree in mobile telecommunications services than in the fixed line sector, due to less need to protect state-owned incumbent operators. The resulting increase in competition and reduction in prices has led to mobile subscribers outnumbering fixed line subscribers in many countries. In richer countries, mobile services are likely to be complementary as most businesses and households already have access to the fixed network. In low income countries, mobile services can be a substitute for fixed line services, especially where there are long waiting lists for fixed line connections (Fink et al. 2001).

The availability of pre-payment plans has also contributed to the popularity of mobile services in Asia. In poorer countries, such as Cambodia, most people could not afford or would not qualify for a subscription telephone service. The availability of prepaid cards of low denominations and cheap second-hand handsets make mobile telecommunications more accessible. For service providers, prepayment also reduces the risk of subscriber default.

7.1 Thailand

From the early 1980s to the mid-1990s, the demand for telecommunications services grew at an annual rate of over 20 per cent as the Thai economy experienced rapid growth (Mongkolporn and Yin, 2006). This contributed to a shortage of telecommunications services and long waiting lists for installation of telephone lines. The weakness of Thailand's telecommunications infrastructure, particularly its inability to meet the needs of business users, was a clear impediment to economic development.

Telecommunications services were supplied by two state-owned enterprises, one for domestic and long distance calls, the other for international calls. To address the supply shortage, the Thai government did not pursue privatisation or liberalisation, but, in 1986, introduced the build-transfer-operate strategy. This allows private firms to construct fixed line networks, ownership of which they are required to transfer to the government or regulatory authority, but which they are entitled to operate for a set period under conditions specified in a concession agreement, which enables the firm to recoup its initial investment costs plus a profit. Alternatively, private firms may resell services they have bulk purchased from the state-owned enterprises.

By 1999, 30 concessions had been granted (Thailand Development Research Institute, 1999). These concessions have not produced a fully competitive market, as the state-owned enterprises still control prices, which prevents price competition. The Thai government controls the price of services and telephone density. No firm is free to choose

its output and price levels. To maximise profits, it therefore has to focus on minimising the cost of production at a given service level and price. Indeed, analysis by Mongkolporn and Yin (2006) finds that the 1993 concessions generated upward shifts in both the short-run and long-run cost curves of the main state-owned enterprise, attributed to a reduction in scale economies in the post-concession period. Although all call charges from fixed lines are regulated, competition has resulted in some firms offering significant reductions in installation charges, a single rate for long distance calls and free internet as incentives to increase fixed line subscriptions,

Liberalisation of the telecommunications sector is required by the new Thai constitution and for World Trade Organisation accession. In response to the Asian financial crisis, reform was propelled by the need to find more capital and to reduce the cost of doing business in Thailand. This included, as a high priority, increasing competition and providing more services and new technology in telecommunications.

From the late 1990s, the Thai government has been pursuing sector reform, liberalisation and competition. It adopted plans to corporatise and subsequently privatise the state-owned providers, to convert the private concessions granted previously and to establish an independent regulatory authority. Full liberalisation was scheduled for 2006 (Soonthonsiripong, 2004). The process of converting concessions has proved difficult (e.g. converting concessions into their equity value and resolving disputes), as has establishing an independent regulator (David Butcher and Associates, 2006). In 2006, the Thai government began processing a Telecommunications Law to implement the new regulatory regime.

Although Thailand has realised considerable benefits from the liberalisation to date of its telecommunications sector, there is still much further regulatory reform required. Whilst low charges and a competitive market have driven growth in the mobile sector, growth in the fixed line sector remains hampered by poor infrastructure. The build-transfer-operate concessions to expand fixed line infrastructure have had mixed success. Following the September 2006 coup, the prime minister announced plans to merge the two main network companies to operate a 'pool' in which providers could rent the ability to operate rather than have to apply for concessions, as a means to increase competition and consequently growth (Wikipedia, 2007). After entry of new companies, the mobile market is now in need of consolidation and regulatory changes will significantly influence its future shape (Paul Budde Communication, 2007a; 2007b).

7.1.1 Market concentration

In early 2007, there were three operators in the fixed line sector and five in the mobile sector (Ernst and Young, 2007). Under the first step of the liberalisation programme

(1998 to 2000, existing state entities license private sector competitors), the main state-owned enterprise issued 16 concession contracts, which have since taken 50 per cent of its market share (David Butcher and Associates, 2006). Rapid growth in the number of mobile subscribers followed entry into the market in 2001 of two additional companies and the launch of a cellular joint venture, which challenged the dominance of the existing duopoly and increased competition (Paul Budde Communication, 2007a). Nevertheless, the two largest private mobile phone operators have a combined market share of more than 90 per cent (David Butcher and Associates, 2006).

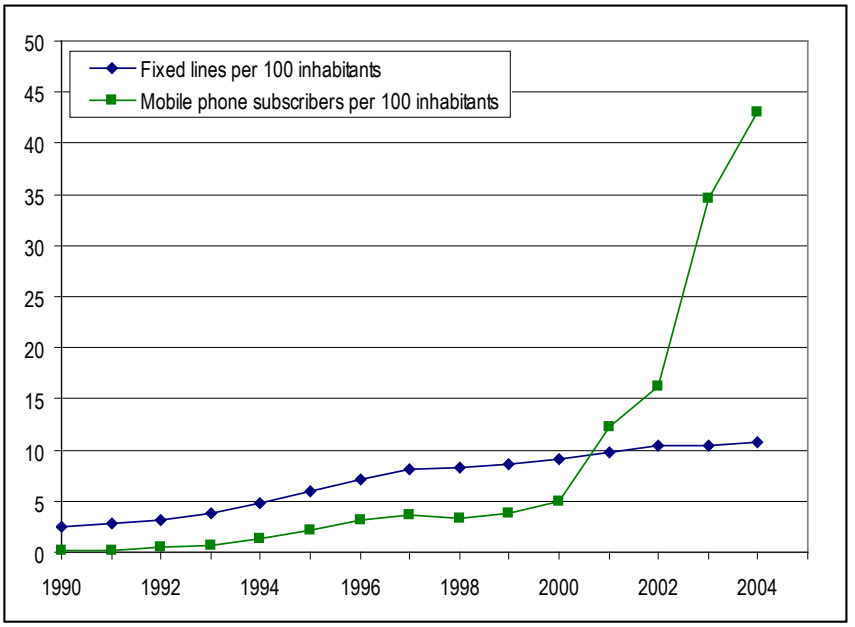
7.1.2 Barriers to entry

The Thai government does not allow foreign investors to establish their own networks, but does allow foreign direct investment, within limits that have fluctuated but ranged between a 20 per cent (Fink et al., 2001) and 40 per cent shareholding (Soonthonsiripong, 2004).

7.1.3 Output and prices

The number of fixed lines per 100 inhabitants rose steadily from 2.4 in 1990 to 10.7 in 2004. The mobile market has grown rapidly since 2000, as shown in Figure 9, to 43.0 subscribers per 100 inhabitants in 2004.

Figure 9: Thai telephone services — penetration



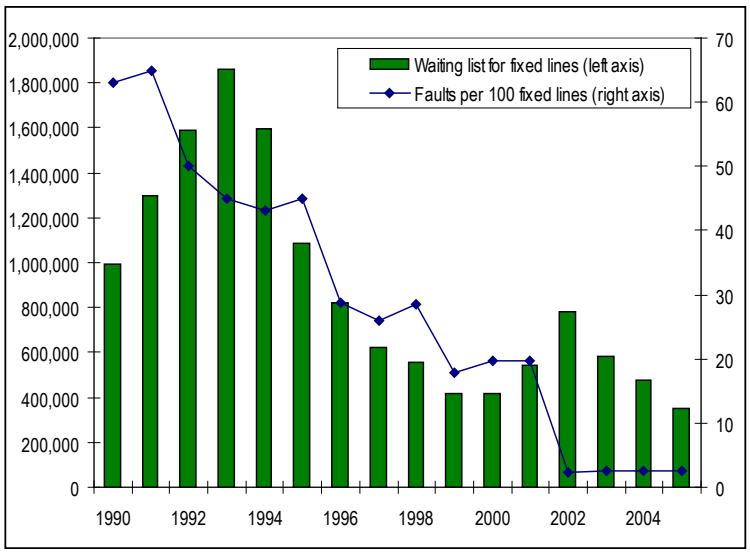
Source: International Telecommunication Union (2006)

The number of mobile phone subscribers has leapt from around two million in the late 1990s (Thailand Investor Service Center, 2004) to over 38 million by early 2007 (Paul Budde Communication, 2007a). Penetration is now 11 per cent for fixed lines and 64 per cent for mobile services (Ernst and Young, 2007). The number of mobile subscribers first exceeded fixed line subscribers in 2001 (Ernst and Young, 2007) and mobile phone services in Thailand now outnumber fixed line services by around five to one (Paul Budde Communication, 2007c), with over half the Thai population owning a mobile phone (Wikipedia, 2007).

Over the same period, service quality improved markedly, as shown in Figure 10. The waiting list for fixed line connection fell by two-thirds and the number of faults per 100 fixed lines fell by 95 per cent.

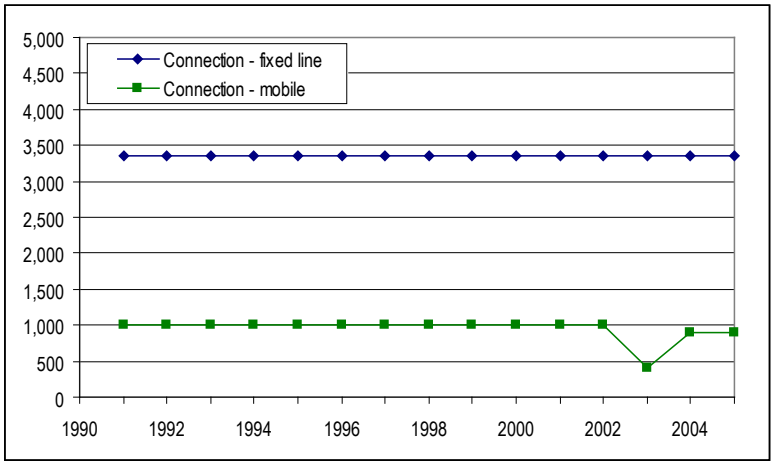
Mobile phones were introduced into Thailand in 1989. Growth in this market was slow initially, due to the high cost of handsets and calls, but vigorous competition under free market entry for the sale of handsets, has reduced the price of handsets and increased the number of subscribers (Soonthonsiripong, 2004). Under price control by the state-owned enterprises, however, there has been little movement in connection, subscription and call charges, as shown in Figure 11. These prices are shown in US dollars for cross-country comparisons, in Table 6.

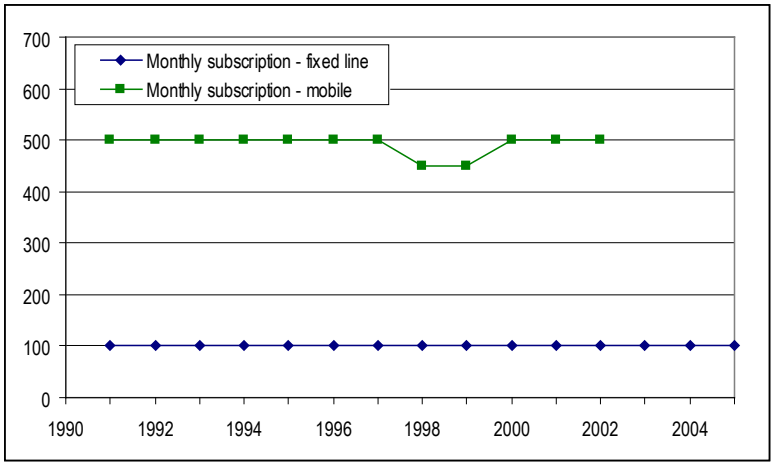
Figure 10: Thai telephone services — quality

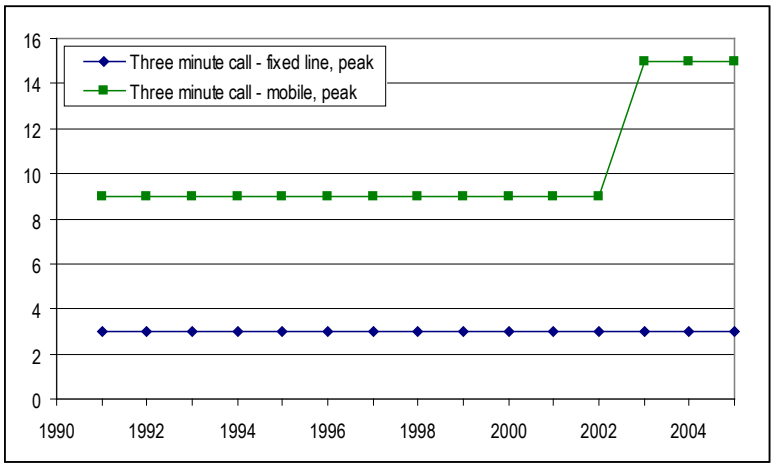


Source: International Telecommunication Union (2006)

Figure 11: Thai telephone services — prices (Thai baht)







Source: International Telecommunication Union (2006)
Note: Mobile monthly subscription – prepaid since 2003

Table 6: Thai telephone services — prices (US dollars)

		2003	2004	2005
Connection	Fixed line	80.76	83.29	81.09
	Mobile	9.64	22.08	21.50
Monthly subscription	Fixed line	2.41	2.49	2.42
	Mobile			
Three minute call	Fixed line, peak	0.07	0.07	0.07
	Mobile, peak	0.36	0.37	0.36

Source: International Telecommunication Union (2006)
Note: Mobile monthly subscription — prepaid since 2003

7.2 Vietnam

Telecommunications is one of several sectors in Vietnam reserved for largely state ownership on 'strategic' and 'security' grounds, which has prompted a gradual and cautious approach to liberalisation.

In recognition of telecommunications as a key component of the infrastructure required for national economic development, the government has made substantial investment in the sector and gradually eased control, to expand and upgrade capacity. In 1990, the sector operated under strict state control, with effectively only one service provider, which was state-owned. Since 1988, foreign companies have been allowed to establish operations to produce telecommunications equipment and material or to assist domestic local operators in the provision of services. Since 1995, new domestic companies have been allowed to provide telecommunications services in competition with the state-owned monopoly and new services have been introduced. Since 1997, service providers have been allowed greater flexibility in setting prices and authorities have sought to make regulations more transparent and streamlined. Since 1998, a number of state-owned telecommunications companies have sought to increase the role of the private sector in providing capital for further investment in the industry (Nguyen et al., 2004). In areas where there is strong competition, operators are authorised to set tariffs and service charges, whilst the state-owned provider retains control over tariffs and service charges in monopoly areas, but aims to reduce service charges until they reach the regional level (APEC, 2006).

These changes have brought about rapid growth in fixed lines and mobile phones, as well as a marked widening in the geographical and socioeconomic coverage of the expanding and multiplying networks. The average waiting time for fixed line connection has fallen, but is still relatively long. Quality of access in rural areas remains poor. Prices have fallen substantially, but remain higher than elsewhere in South East Asia. The main reason for prices not falling faster is continuing excess demand for services, with the short-

fall in supply attributed to insufficient capital investment, especially in infrastructure. The introduction of competition has encouraged some innovative marketing and promotional campaigns, such as low price calls at set times of day, which have put additional pressure on the infrastructure and resulted in congestion (Business Monitor International, 2007). To date, what capital has been forthcoming has come mostly from the state budget, but longer term the capital needed to upgrade and expand services will need to be found from the private sector, domestic and foreign. Contributing to the shortage of capital for expansion have been unclear rules for tariff setting. Foreign investors are deterred by pricing policies that reflect non-cost-based objectives, monopoly behaviour and low productivity from poorly developed accounting standards and manufacturing commitments, as well as efforts to preserve a substantial state role in the sector (David Butcher and Associates, 2006; Paul Budde Communication, 2007d).

Vietnam's Post and Telecommunications Development Strategy to 2010 aims to make this a leading sector, contributing an increasing share of the country's GDP. The Universal Service Program to 2010 aims to accelerate telephone and internet penetration to every citizen, focusing on the rural and mountainous areas and areas that have difficult socioeconomic conditions (APEC, 2006).

7.2.1 Market concentration

There are five operators in each of the fixed line and mobile sectors (Ernst and Young, 2007). The dominant operator is still the giant state-owned conglomerate of companies, which holds 94 per cent of the fixed line sector and a 72 per cent market share in the mobile phone sector (US Commercial Service, 2007). The mobile sector is dominated by the top three operators, with 30 per cent, 25 per cent and 15 per cent of mobile subscribers, totalling 70 per cent of the market between them (US Commercial Service, 2007).

7.2.2 Barriers to entry

Previously, the sector was partially opened to foreign companies, but primarily as suppliers of equipment and finance for constructing network infrastructure for operation by Vietnamese companies. With accession to the World Trade Organization, limitations on foreign companies providing telecommunications services will be relaxed, bringing in further competition (US Commercial Service, 2007).

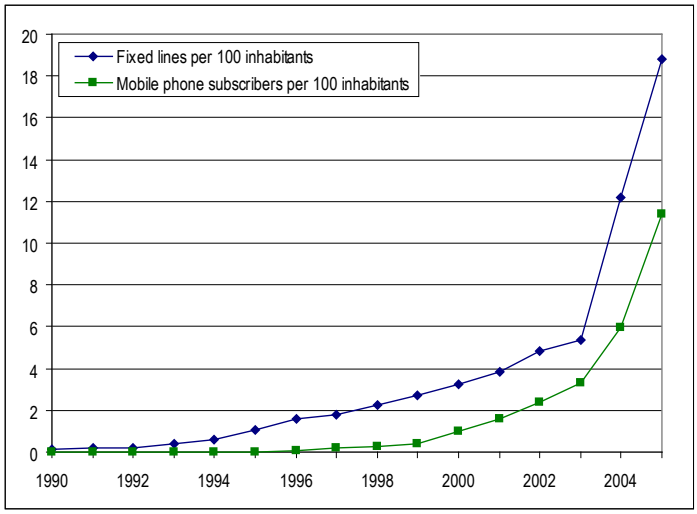
7.2.3 Output and prices

The Vietnamese telecommunications sector has been growing at a rate of around 25 per cent per year, double the average for the Asia region and triple the world average (US Commercial Service, 2007). Both fixed line and mobile services have grown strongly over

the past 15 years, as shown in Figure 12, to 18.8 fixed lines and 11.4 mobile subscribers per 100 inhabitants in 2005.

In 1990, Vietnam had only 100,000 telephone subscribers, equating to 0.14 fixed lines per 100 people, one of the lowest rates in the world. By 2000, it was approaching three million fixed lines, four per 100 people (Nguyen et al., 2004). Most recent data report penetration of 16 per 100 for fixed line services and 18 per 100 for mobile services,

Figure 12: Vietnamese telephone services — penetration



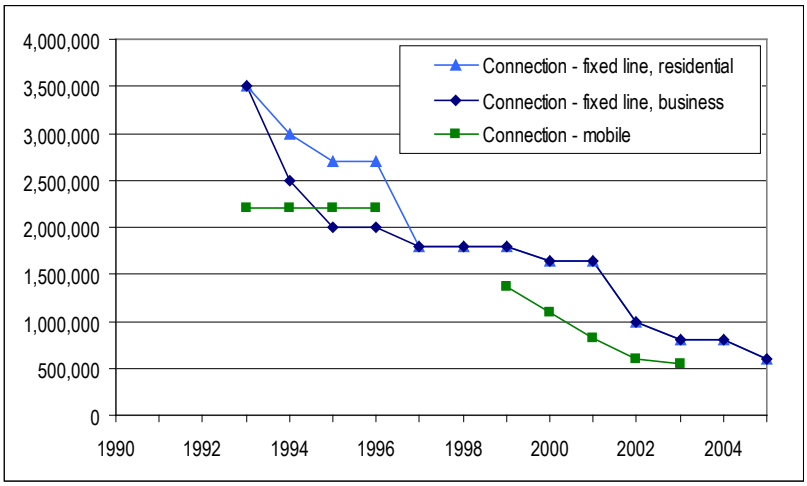
Source: International Telecommunication Union (2006)

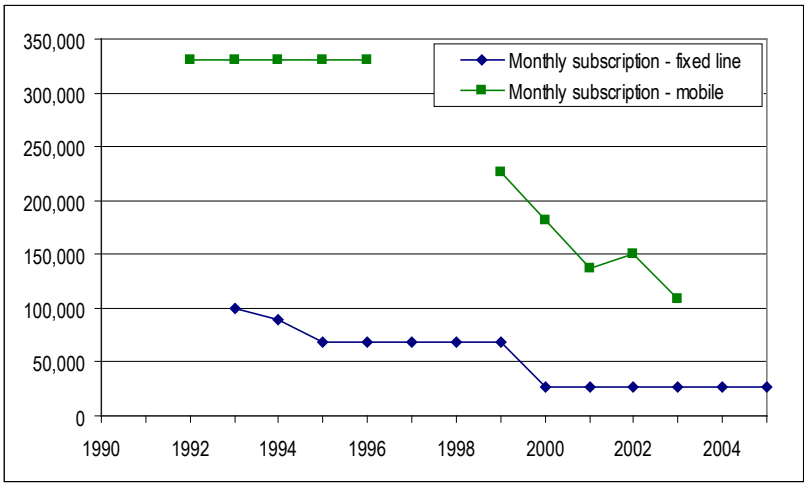
with the number of mobile subscribers exceeding fixed line subscribers from 2005 (Ernst and Young, 2007). In 2006, 61 per cent of total subscribers were for mobile services (US Commercial Service, 2007).

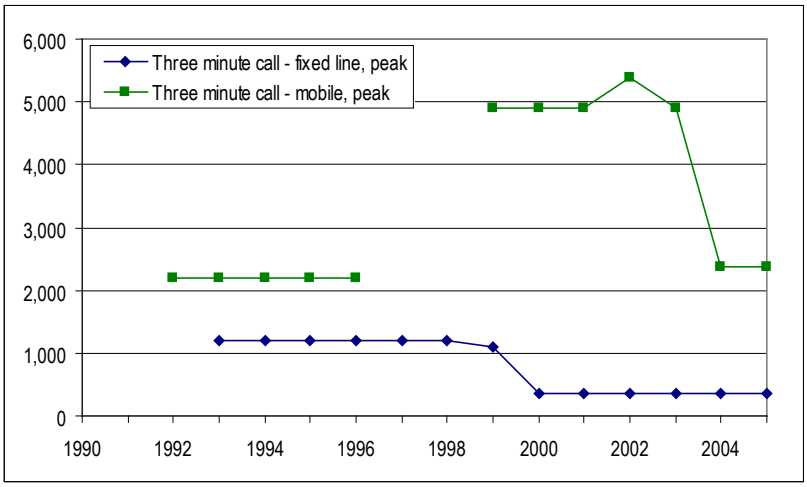
The limited data available suggest that service quality has improved over recent years, especially for mobile services over the past two years (US Commercial Service, 2007). In a survey of business users, however, most respondents reported reliability problems, especially wiring and cable problems which were reported by 91 per cent of respondents (David Butcher and Associates, 2006). Since 1990, prices have fallen for connection, subscription and calls as shown in Figure 13, more markedly for mobile services. These prices are shown in US dollars for cross-country comparisons in Table 7.

Since 1990, nominal prices on international calls have been reduced seven times by 10 to 15 per cent each time (Nguyen et al., 2004).

Figure 13: Vietnamese telephone services — prices
Vietnamese dong







Source: International Telecommunication Union (2006)
Note: Mobile monthly subscription — prepaid since 2003

Telecommunications services remain relatively costly, however. In a survey of business users, for 41 per cent of businesses, telecommunications costs were their first, second or third largest business cost, at two to six per cent of total business costs (David Butcher and Associates, 2006). The price elasticity of demand is low as most businesses cannot do without telecommunications. In the survey, 79 per cent reported that they would not reduce usage significantly if costs rose (David Butcher and Associates, 2006).

7.3 Cambodia

Cambodia has a largely state-owned fixed line infrastructure, most of which has been installed since 1990, and a privately owned mobile sector. Mobile phone companies have

Table 7: Vietnamese telephone services — prices (US dollars)

		2003	2004	2005
Connection	Fixed line	51.58	50.99	38.00
	Mobile	35.17		
Monthly subscription	Fixed line	1.74	1.72	1.71
	Mobile	7.03		
Three minute call	Fixed line, peak	0.02	0.02	0.02
	Mobile, peak	0.32	0.15	0.15

Source: International Telecommunication Union (2006)
Note: Mobile monthly subscription — prepaid since 2003

their own networks, but do share some facilities and lease some space on the state-controlled fibre optic network. The fixed line sector has limited penetration, high unit costs, too few connections to cover fixed network costs and poor reliability. In contrast, Cambodia's mobile sector is close to world class in quality, although access is limited in rural areas. The reasons for the contrast are that the fixed line sector, under state ownership, has suffered low investment and no autonomy, resulting in poor service and slow growth. The mobile sector, under private sector funding and light-handed regulation, with the government liberalising the market at an early stage and allowing private investment and competition, has achieved good service, fast growth and increasing competition (David Butcher and Associates, 2006).

As a consequence, although Cambodia has an average rate of telephone penetration for countries of its income level, its mobile sector market share is the highest in the world (David Butcher and Associates, 2006). The focus for increasing competition is therefore strengthening the previously incumbent fixed line sector to compete with the mobile services of strong new entrants — the opposite strategy to other countries.

Cambodia has an integrated policy, regulatory, operational and asset management agency for telecommunications, which has led to conflicts of interest, poor asset

management and political intervention in business decisions. It still has a confusing mix of government shareholdings and agreements and an 'interconnection maze' (World Investment News, 2005). A Telecommunications Law is in the process of being drafted.

Confounding the development of competition in the domestic market has been the presence of outlaw telephone companies, which set up antennae near the Thai border and pay Thai companies to illegally tap into the cheaper Thai networks. In 2005, 500 illegal antennae and relay stations operating across Cambodia's western provinces were reported to be costing the Cambodian government up to US$60,000 a month in lost revenue (iTnews, 2005).

7.3.1 Market concentration

There are currently three operators in the fixed line sector and four operators in the mobile sector (Ernst and Young, 2007). There is reported to be a risk of a dominant provider emerging in the latter (David Butcher and Associates, 2006).

7.3.2 Barriers to entry

Cambodia does not limit foreign direct investment in the telecommunications sector (Fink et al., 2001).

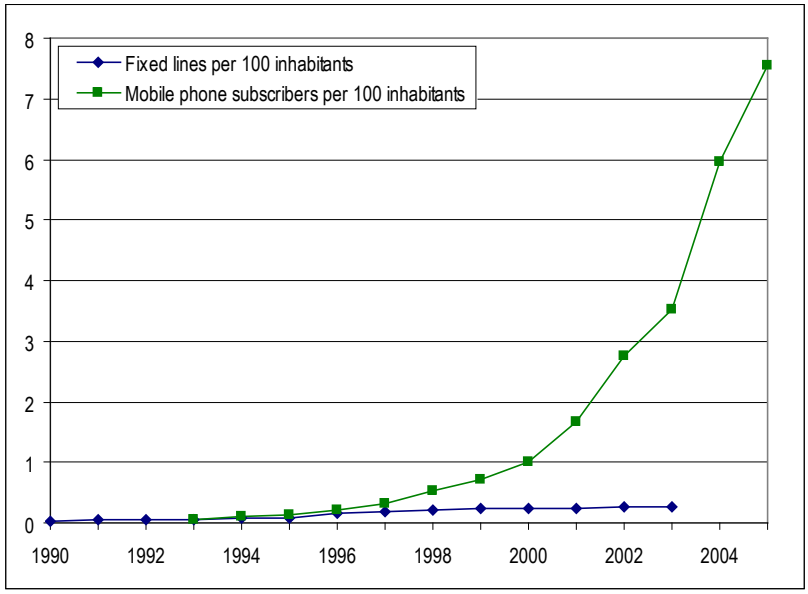
7.3.3 Output and prices

The number of fixed lines per 100 inhabitants rose steadily from 0.04 in 1990 to 0.3 in 2003. Mobile services were first introduced into Cambodia at the end of 1992 (World Investment News, 2005) and within a year the number of mobile subscribers exceeded fixed line subscribers, the earliest of Asian countries (Ernst and Young, 2007). The mobile market has continued to grow rapidly to 7.5 subscribers per 100 inhabitants in 2005, as shown in Figure 14. Although low compared with Thailand and Vietnam, this is high for a less developed country.

By 2000, more than four out of five subscribers were using wireless phones, the highest ratio in the world, most of which are mobile, but five per cent of all telephone subscribers use wireless fixed lines (World Investment News, 2005). Latest data report 40,000 fixed lines and 1.1 million mobile subscribers (Totel Pty Ltd, 2007), representing 0.3 fixed lines and 11 mobile subscribers per 100 inhabitants (Ernst and Young, 2007).

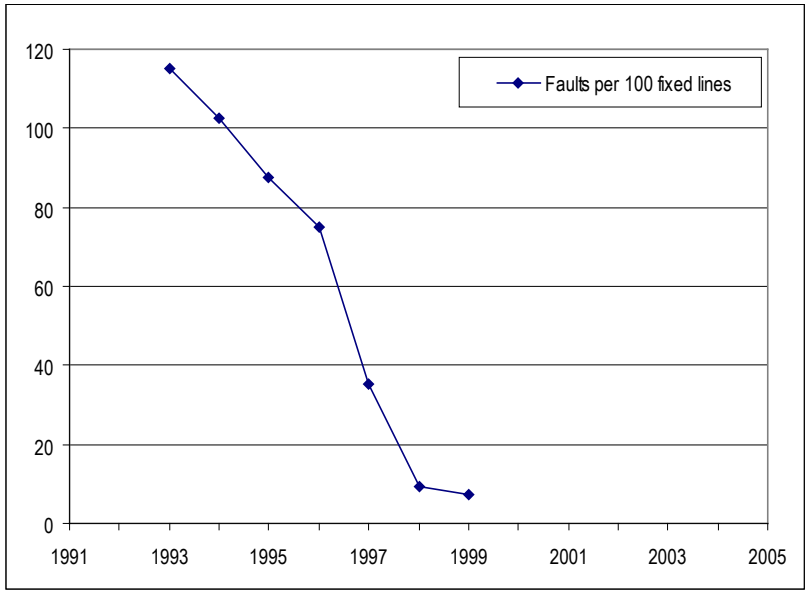
As for Vietnam, there are few official data on trends in service quality. Available data suggest a marked improvement over the 1990s, as shown Figure 15, with a 94 per cent reduction in faults per 100 fixed lines.

Figure 14: Cambodian telephone services — penetration



Source: International Telecommunication Union (2006)

Figure 15: Cambodian telephone services — quality



Source: International Telecommunication Union (2006)

Since 1990, prices have fallen for connection, subscription and calls as shown in Figure 16. Over 90 per cent of mobile subscribers have opted for prepaid. Also contributing to the growth of the mobile sector is billing in US dollars, which reduces the exchange rate risk to service providers and investors. These prices are shown in US dollars for cross-country comparisons, in Table 8.

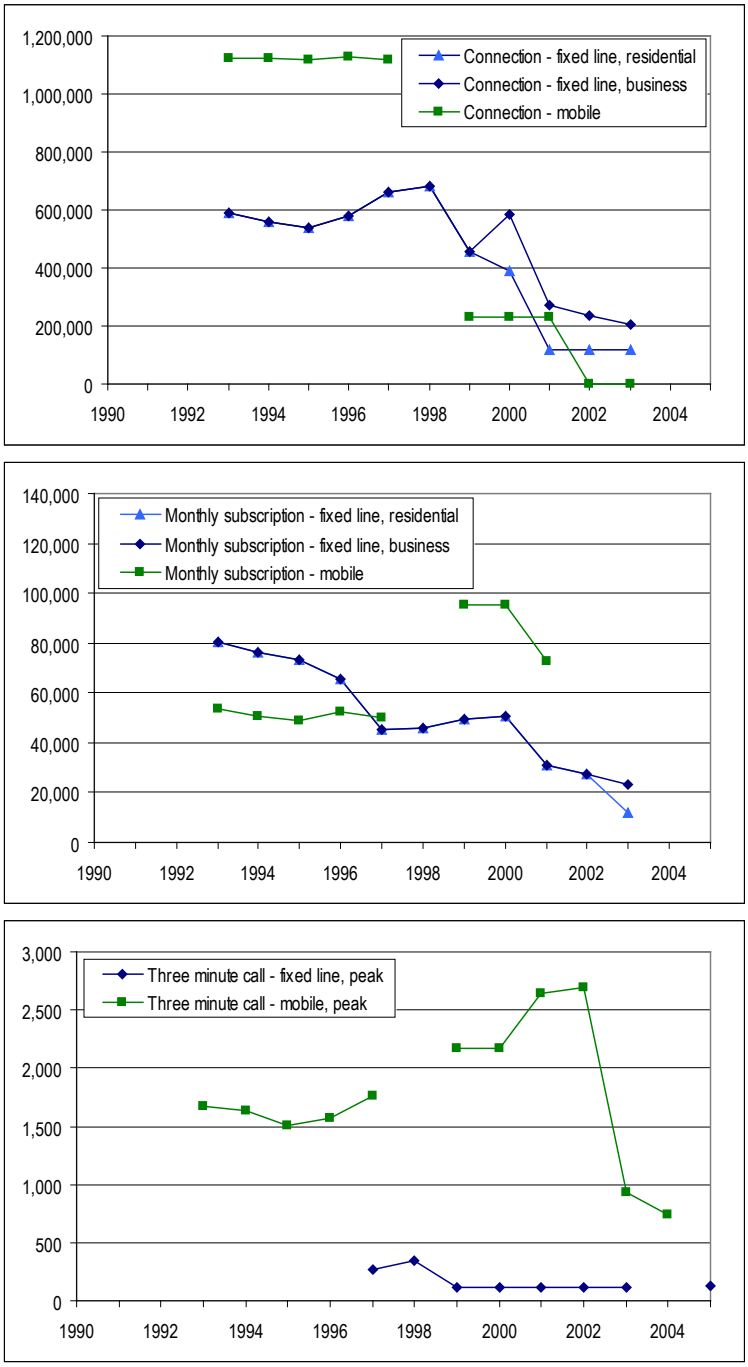
Charges are generally lower in Cambodia than in Thailand and Vietnam, as shown in Figure 16 to Figure 18.

Table 8: Cambodian telephone services — prices (US dollars)

		2003	2004	2005
Connection	Fixed line, business	51.59		
	Fixed line, residential	29.45		
	Mobile	0.59		
Monthly subscription	Fixed line, business	5.89		
	Fixed line, residential	2.94		
	Mobile			
Three minute call	Fixed line, peak	0.03		0.03
	Mobile, peak	0.24	0.18	

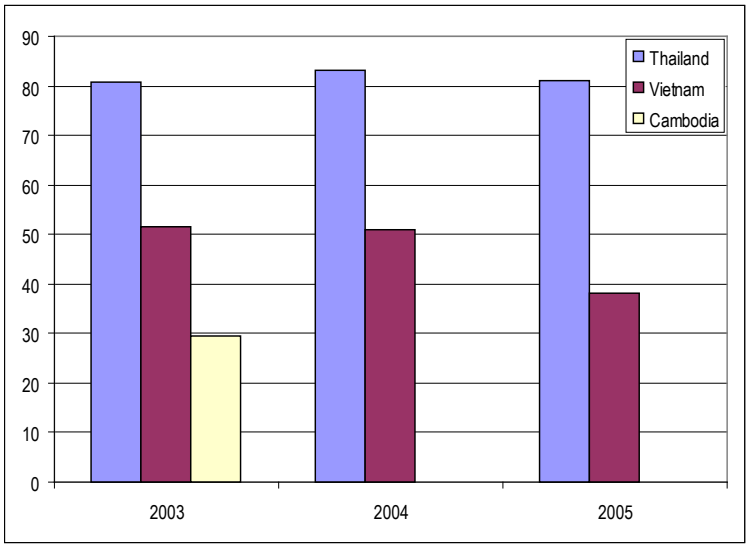
Source: International Telecommunication Union (2006)
Note: Mobile monthly subscription – prepaid since 2002

Figure 16: Cambodian telephone services — prices
Cambodian riel



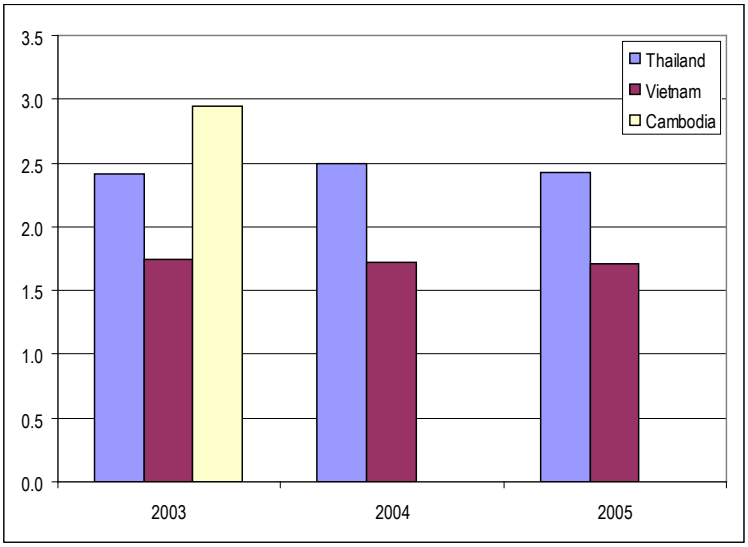
Source: International Telecommunication Union (2006)
Note: Mobile monthly subscription — prepaid since 2002

Figure 17: Telephone service prices — fixed line residential connection charges in three ASEAN states: US dollars



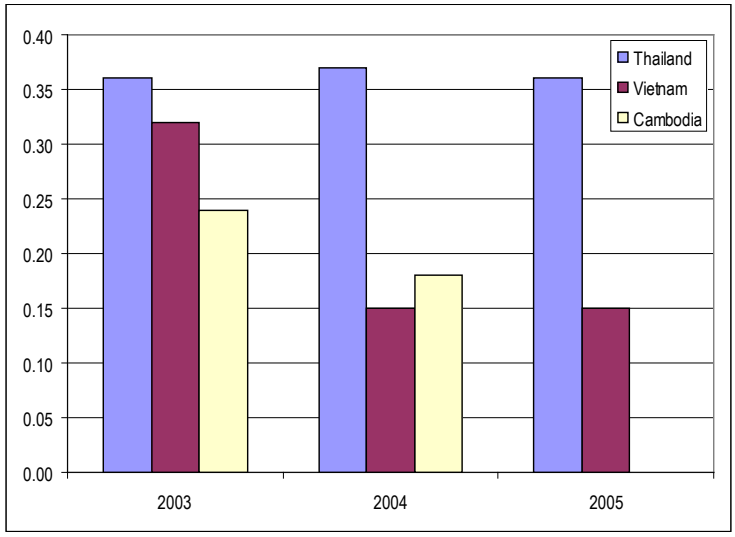
Source: International Telecommunication Union (2006)

Figure 18: Telephone service prices in three ASEAN states — fixed line residential monthly subscription US dollars



Source: International Telecommunication Union (2006)

Figure 19: Telephone service prices in three ASEAN states -three minute call, mobile, peak: US dollars



8. Transport and logistics

The third case study sector is transport and logistics. This is very broad area, of variable data availability and quality. For illustrative purposes, the case studies focus on:

- a broad indicator — trade freedom, in terms of the ease with which goods and services can move across borders and
- one specific sector — sea freight, with regard to competition in port services.

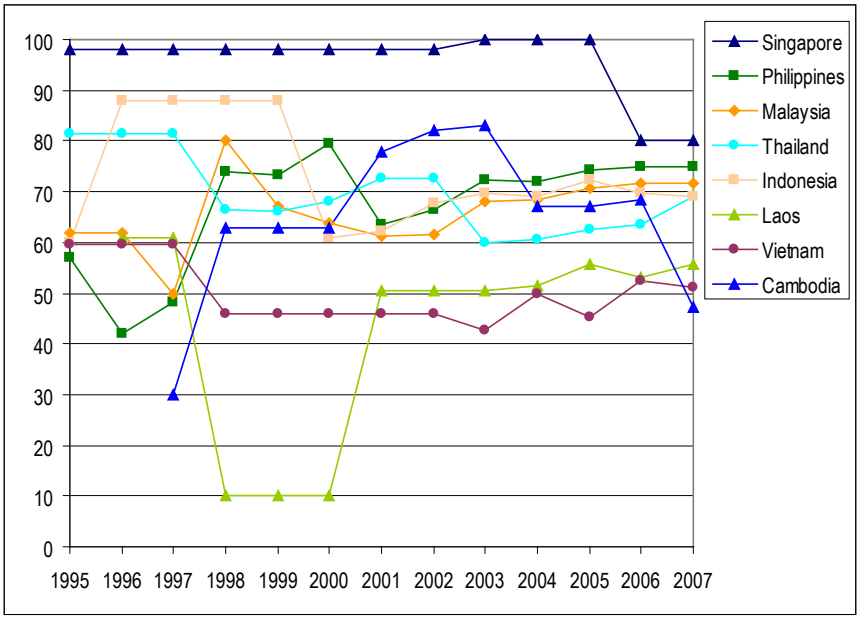
8.1 Trade freedom

In as broad an indicator as trade freedom, it is difficult to distinguish between the different causes of costs and delays in cross-border movements — whether insufficient competition in markets for transport services (e.g. monopoly suppliers, high market concentration, collusion by incumbents), which is the main interest of this study, or official barriers to entry (e.g. tariff and non-tariff barriers, border entry requirements, national flag carriers), poor transport infrastructure (e.g. insufficient port capacity, poor quality roads), administrative difficulties (e.g. complex or inefficient border procedures, unofficial charges) or cultural and social impediments (e.g. language, road signs and traffic rules). Additionally, in this study, we are interested in not only barriers to entry from outside each country, but also barriers to domestic new entrants. Measures of the ease of cross-border trading may be more a reflection of trade policy than of domestic competition policy and conditions.

Nevertheless, it may be informative to examine how trade freedom varies across countries that have different states of competition law.

The Trade Freedom component of the Index of Economic Freedom (Heritage Foundation and Wall Street Journal, 2007) is shown in Figure 20. This is a composite measure of the absence of tariff and non-tariff barriers that affect imports and exports of goods and services. A country with zero tariffs and zero non-tariff barriers would score 100, as Singapore did in 2003 to 2005. In contrast, Laos scored as low as 10 out of 100 in the late 1990s.

Figure 20: Index of Economic Freedom – Trade Freedom in eight ASEAN states



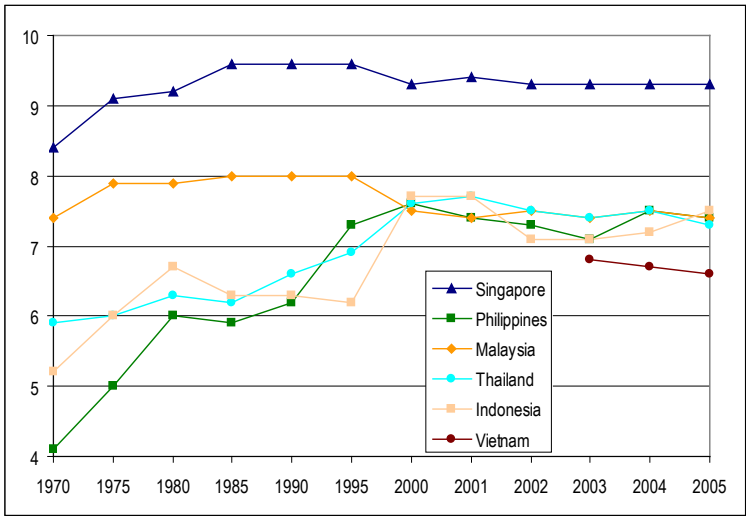
Source: Heritage Foundation and Wall Street Journal (2007)
Note: Score out of 100, higher score reflects greater freedom

Freedom to Trade Internationally is also measured as one component of the Economic Freedom of the World index (Fraser Institute, 2006). As shown in Figure 21, Singapore again rates highly. Freedom to Trade Internationally is indicated to have improved markedly in the Philippines, Indonesia and Thailand over the past 35 years. As above, these countries now rate about the same as Malaysia.

The World Bank's Ease of Doing Business rankings also include the component Ease of Trading Across Borders (World Bank, 2007). This reflects the number of documents, time and cost to import and export, with a higher ranking indicating greater ease. Singapore is ranked highest of 178 countries in both the Ease of Trading Across Borders component, as shown in Figure 22, and the composite Ease of Doing Business index.

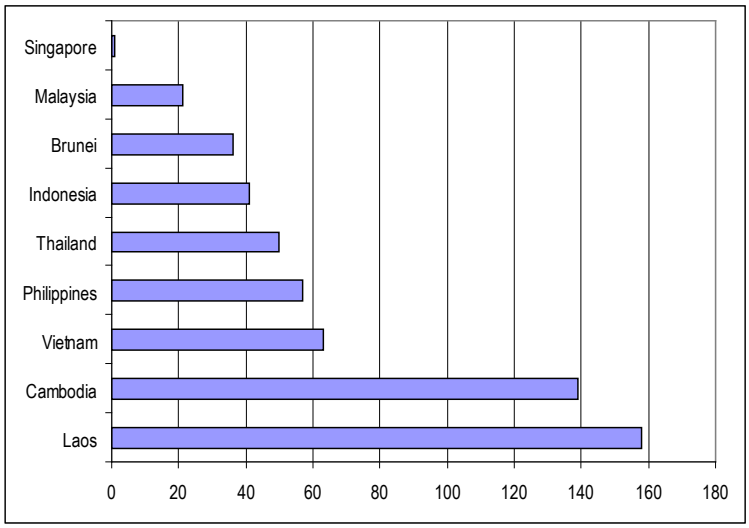
According to this measure, Malaysia is still performing significantly better than Indonesia, Thailand and the Philippines.

Figure 21: Economic Freedom of the World – Freedom to Trade Internationally in six ASEAN states



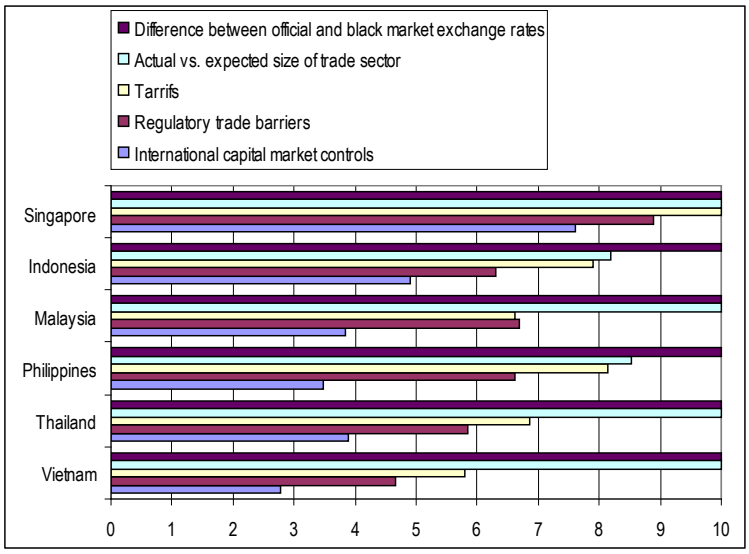
Source: Fraser Institute (2006)
Note: Score out of 10. higher score reflects greater freedom

Figure 22: Ease of Doing Business – Trading Across Borders in nine ASEAN states: Ranking in 2007



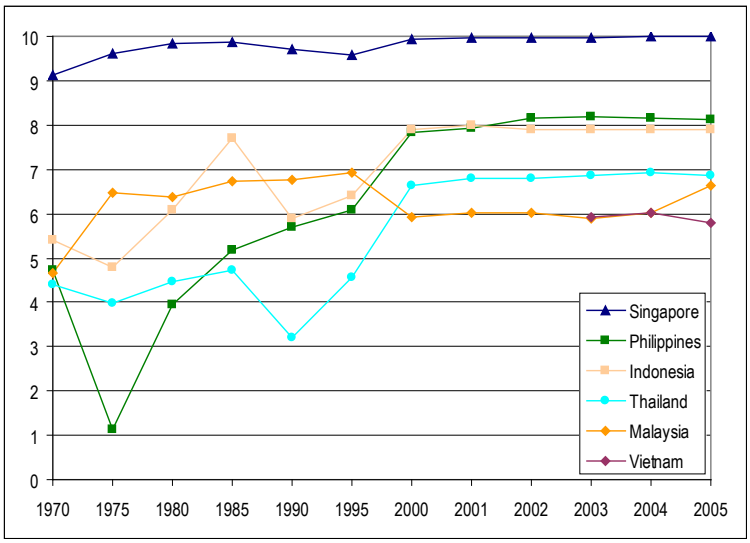
Source: World Bank (2007)

Figure 23: Subcomponents of Freedom to Trade Internationally in six ASEAN states



Source: Fraser Institute (2006)
Note: Score out of 10 in 2005, higher score reflects greater freedom

Figure 24: Tariffs in six ASEAN states



Source: Fraser Institute (2006)
Note: Score out of 10, higher score reflects greater freedom

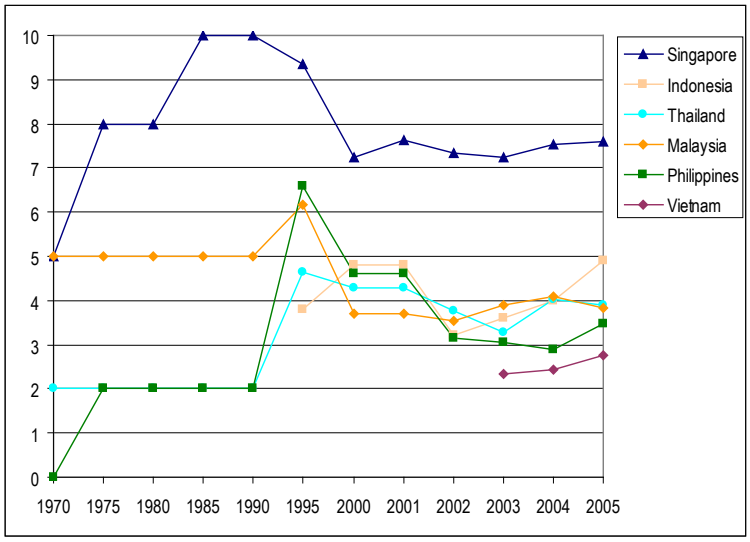
It is possible to examine the specific measures used in compiling the trade components of both the Economic Freedom of the World and Ease of Doing Business.

In terms of the subcomponents of the Economic Freedom of the World's Freedom to Trade Internationally component, Singapore scores best on tariffs, regulatory trade bar-

riers (comprising non-tariff trade barriers and compliance cost of importing and exporting) and international capital market controls, whilst Vietnam scores worst, as shown in Figure 22.

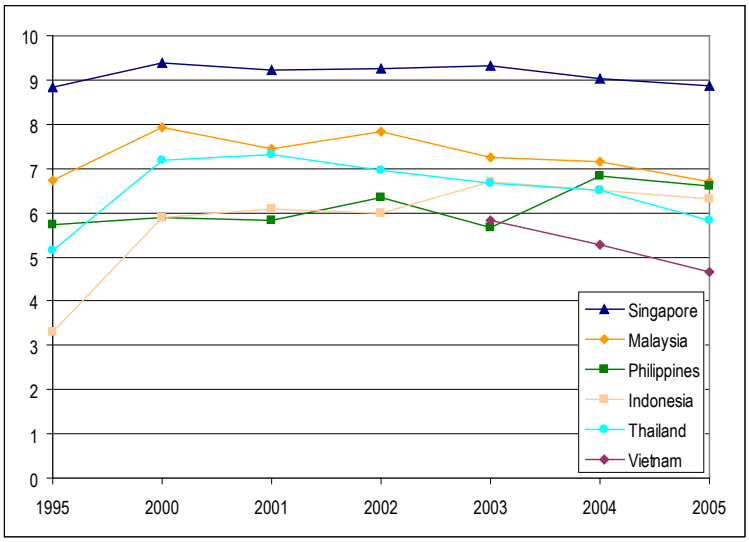
Of these subcomponents, there has been a general reduction in tariffs over the past few decades, particularly in the Philippines and Thailand, as shown in Figure 24. There has been less progress in reducing international capital market controls, as shown in Figure 25, with the maintenance of restrictions on foreign investment and ownership. Regulatory trade barriers, as shown in Figure 26, have not been measured for as long and do not yet show much downward trend.

Figure 25: International capital market controls in six ASEAN states:



Source: Fraser Institute (2006)
Note: Score out of 10, higher score reflects greater freedom

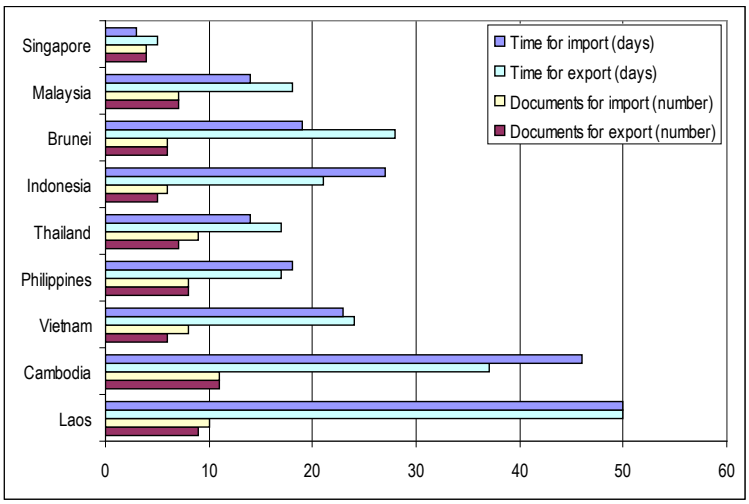
Figure 26: Regulatory trade barriers in six ASEAN states



Source: Fraser Institute (2006)
Note: Score out of 10, higher score reflects greater freedom

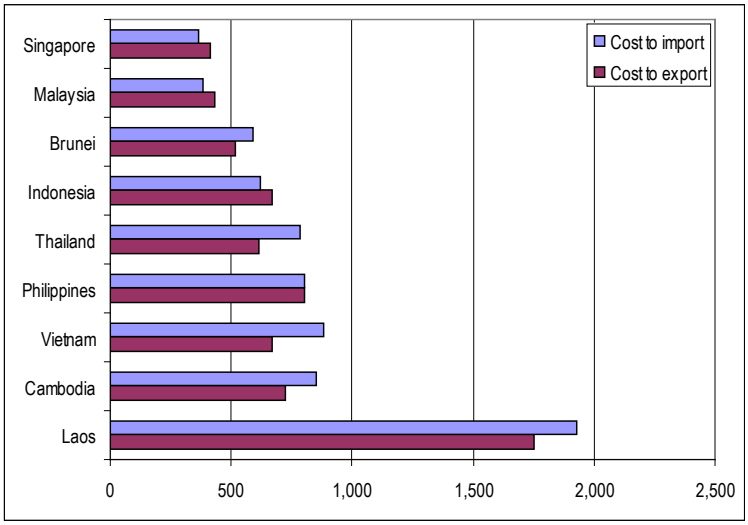
The Ease of Doing Business' Trading Across Borders shows significant correlation between the number of documents required for, the time taken by and the cost of import/export procedures (correlation coefficients ranging from 0.50 to 0.80), as shown in Figure 27 and Figure 28.

Figure 27: Time and documents required to import and export in nine ASEAN states: 2007



Source: World Bank (2007)

Figure 28: Cost to import and export in nine ASEAN states
US dollars per container in 2007

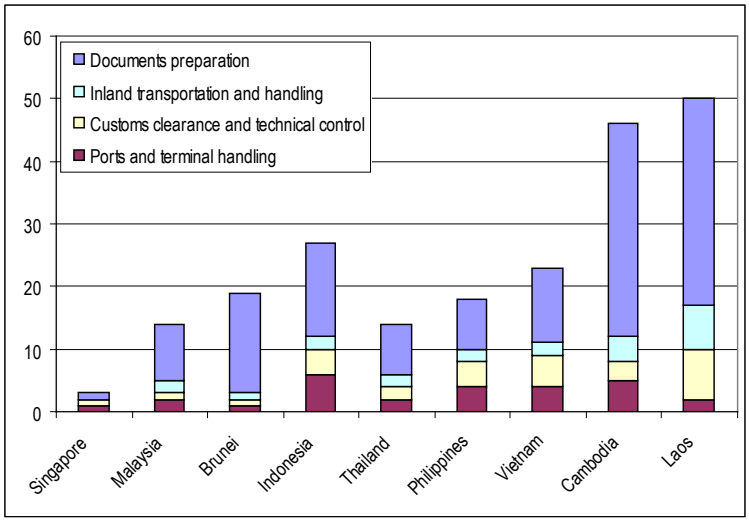


Source: World Bank (2007)

In all nine countries, importing requires at least as many documents as exporting. Import procedures take longer than export procedures in three countries and cost more in five countries. Most noticeable is the greater time and cost to import into and export from Laos. Import procedures take 50 days into Laos, compared with three days into Singapore, and cost over five times as much.

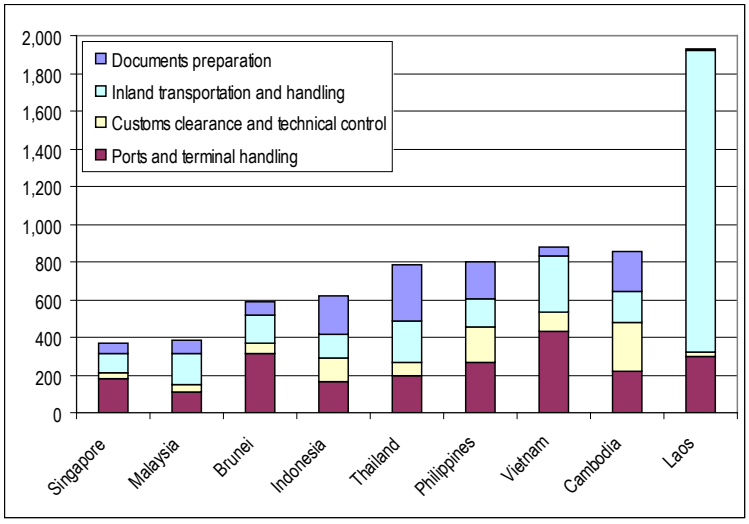
Of the import and export times and costs shown above, preparing the required documents is the most time-consuming step in all but Singapore. Document preparation times average 15 days and range from one day in Singapore to over 30 days in Cambodia and Laos. Port and terminal handling is generally the most expensive step, averaging US$212 per container and ranging from US$75 to export from Thailand to US$431 to import into Vietnam. In Indonesia and Thailand the most expensive step is documents preparation. In Cambodia it is customs clearance. In Malaysia and Laos it is inland transportation and handling. Most costly overall is inland transportation and handling in Laos, at US$1,600 per container for both import and export, which compares with US$100 in Singapore.

Figure 29: Import procedures – time in nine ASEAN states
Days in 2007



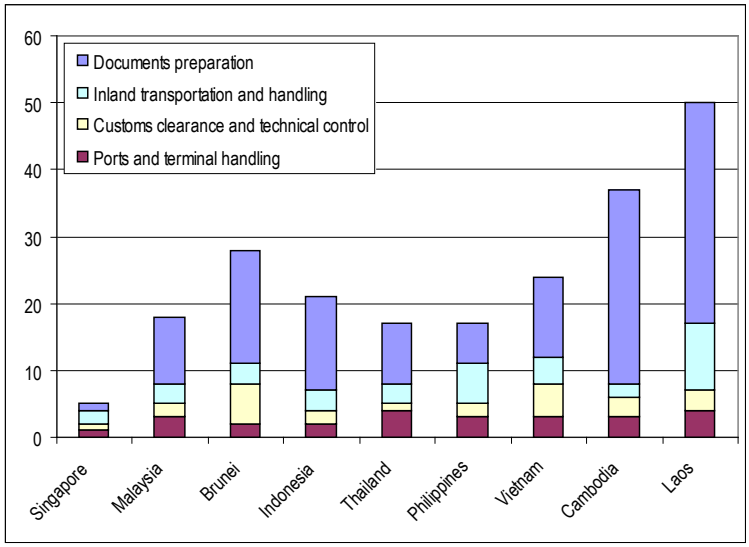
Source: World Bank (2007)

Figure 30: Import procedures – cost in nine ASEAN states
US dollars per container in 2007



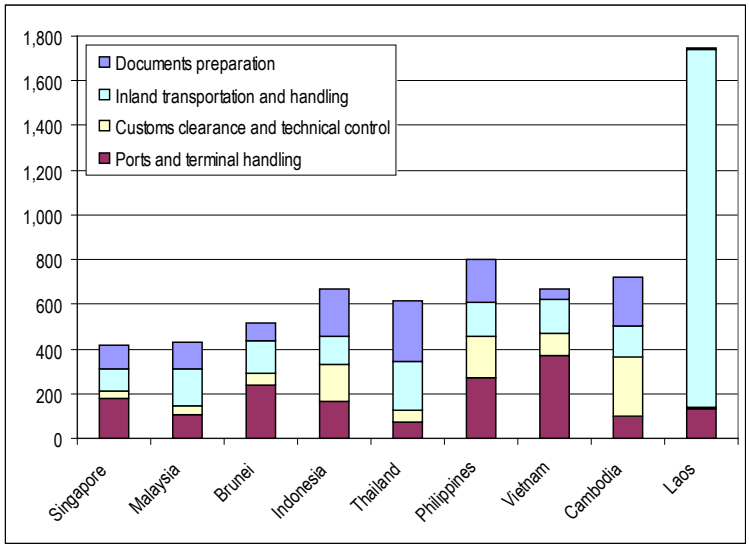
Source: World Bank (2007)

Figure 31: Export procedures – time in nine ASEAN state
Days in 2007



Source: World Bank (2007)

Figure 32: Export procedures – cost in nine ASEAN states
US dollars in 2007



Source: World Bank (2007)

8.2 Sea freight

Container ports in South East Asia accounted for an estimated 30 per cent of the world's transhipment traffic in 2004, forecast to increase to 32.5 per cent by 2015 (Lam and Yap, 2007). The three main ports are Singapore, Port Klang (Malaysia) and Tanjung Pelepas (Malaysia).

8.2.1 Singapore

Singapore's historical importance derives from its strategic position relative to the Straits of Malacca, one of the world's busiest sea lanes and the main route for goods shipped between Asia and Europe. Singapore's container port is run by the government-owned PSA corporation. It handles around one-fifth of the world's total container transhipments. In 2006, Singapore handled 24 million 20 foot equivalent units (TEUs) of containers (PSA, 2007). It is an efficiently operated port, but PSA is the only operator available (Asian Economic News, 2000).

Singapore has recently faced strong competition as an international transportation hub from neighbouring Malaysia. Between 1999 and 2004, competition from Port Klang and Tanjung Pelepas detracted from Singapore's transhipment performance. Singapore maintained its dominant position in the region in terms of market share by transhipment throughput and annualised slot capacity, but seemed to be gradually losing ground to the Malaysian ports (Lam and Yap, 2007).

8.2.2 Malaysia

Malaysia has 100 ports and cargo handling facilities throughout the country. Recent developments include privatisation of ports, development of the Port of Tanjung Pelepas, development of Port Klang as the national loading centre, expansion of capacities at various ports, and entry of foreign partners at Tanjung Pelepas and Westport (Yean et al., 2007).

In benchmarking the performance of Australian against selected other ports worldwide, Productivity Commission (2003) found container charges per TEU to be significantly lower at Singapore and Malaysia's Port Klang than Australian ports. Of the ports studied, Port Klang had the highest yard utilisation rate (over 32,000 TEUs per hectare) and second highest berth utilisation rate (over 1,200 TEUs per berth metre per year).

In competing with Singapore, Port Klang and Tanjung Pelepas have the advantages of lower costs and more room for expansion and their efficiency is improving, whilst shipping companies complain of rising costs and operational inflexibilities in Singapore. Tanjung Pelepas opened in 2000 and immediately secured two of Singapore's biggest

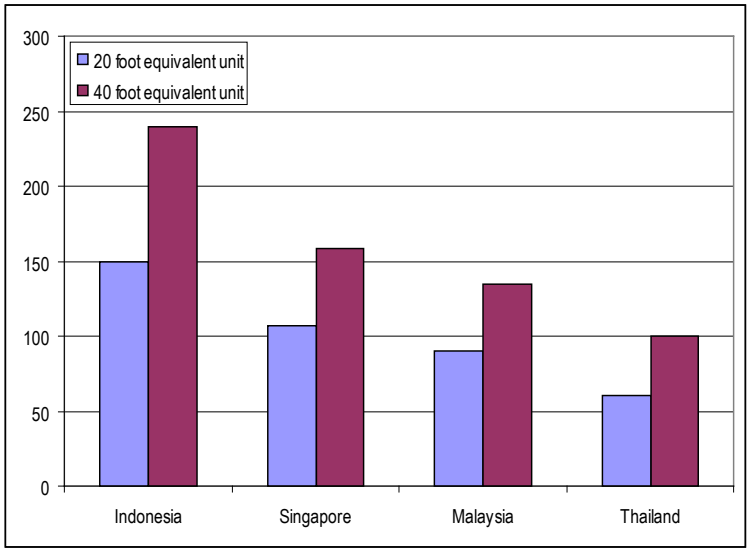
shipping clients (Nightly Business Report, 2006). It was reported to be around 30 per cent cheaper than Singapore at this time (Asian Economic News, 2000). Capacity utilisation at this port reached 93 per cent in 2005, but further expansion is planned to accommodate increasing container traffic (Lam and Yap, 2007).

8.2.3 Indonesia

Around 90 per cent of Indonesia's international trade occurs via sea ports (Patunru et al., 2007). There is little competition in port services, under the state-owned monopoly supplier. Under central co-ordination, ports are cross-subsidised. The centralisation of investment and development decisions is reported to be a major impediment to efficiency. Both shipping lines and shippers have called for improved efficiency, which would be enhanced by greater competition.

Indonesia's port logistics costs are relatively high at 14 per cent of sales price, compared with 8.5 per cent for an 'efficient' port and 7.9 per cent for a 'best practice' port such as Japan (Patunru et al., 2007). Terminal handling charges are high for the region, as shown in Figure 33.

Figure 33: Terminal handling charges in four ASEAN states
US dollars in 2005



Source: Patunru et al. (2007)

The main sources of inefficiency in output logistics costs are poor infrastructure (31 per cent), government policies such as export procedures (30 per cent) and unofficial payments on roads and at ports (22 per cent). Port users report the two greatest obstacles in vessel clearance to be additional payments whilst in port and the number of institutions

involved between vessel arrival and departure, followed by the volume of ship traffic in the port, port infrastructure and container unloading process. In cargo clearance, the two greatest obstacles reported are additional payments whilst in port and port congestion, followed by container loading to trucks, the number of institutions involved, additional payments outside the port, the quality of roads outside the port and inspection at the exit gate. Poor port infrastructure raises the likelihood of unofficial payments being requested to speed up clearance. Patunru et al. (2007) reports the reasons for unofficial payments to include packaging, Harmonised System code negotiation, late response to import notification, correction notes and avoidance of physical inspection.

9. Cross-country comparisons

In cross-country, and indeed cross-sector, comparisons, rigorous analysis is hampered by the limited availability of accurate and comparable data. The evidence available is also somewhat circumstantial, in exploring how market structure, conduct and performance differ between countries at different stages in developing competition laws without proving a causal link. The observed differences in market conditions and outcomes might reflect influences other than competition laws, such as the quality of institutions conducive to economic activity, the government's economic development or trade policies, or characteristics or policies specific to the case study sectors. It is difficult to discern to what extent the presence or absence of competition laws may have contributed to the observed differences.

A crude comparison does, however, suggest some correlations, if not necessarily causal relationships. In Table 9, we summarise the relative performance of each sector in each country investigated. These ratings do show some signs of better market conditions and outcomes in countries where competition laws are more advanced.

As shown in Table 2 earlier in this report, there is quite high correlation (0.68) between competition law status and ease of economic activity generally. In the sectors investigated in this study, the correlation between competition law status and market conditions and outcomes is most strongly positive for cement output and prices and trade freedom. There is, however, a negative correlation in some sectors, most noticeably for market concentration and barriers to entry in the telecommunications sector, excess capacity in the cement sector, and sea freight.

In cement, excess capacity is greater and barriers to entry lower, and therefore rated as more conducive to competition, in the Philippines than in Indonesia and Thailand, both of which have more established competition laws. Market performance in terms of output and prices rates lower, however, reflecting suspected price collusion. Market concentra-

Table 9: Cross-country comparisons

	Indonesia	Singapore	Thailand	Vietnam	Malaysia	Philippines	Brunei Darussalam	Cambodia	Laos	Myanmar
Status of competition laws	√√	√√	√√	√√	√	√	x	x	x	x
Ease of economic activity	√	√√√	√√	√	√√	√	√	x	x	x
Cement										
Market concentration	x		x			x				
Excess capacity	x		√			√√				
Barriers to entry	√		x			√				
Output and prices	√		√√			x				
Telecommunications										
Market concentration		√	√				√√			
Barriers to entry			x	x				√		
Output			√√	√√				√√		
Prices			x	√√				√√		
Transport and logistics										
Trade freedom	√√	√√√	√	√	√√	√√	√√	x	x	
Sea freight	√	√√			√√√					

Source: NZIER

tion is high in all three countries, reflecting the characteristics of cement production. In telecommunications, Cambodia, even without competition laws, rates better in terms of market concentration, barriers to entry and prices than Thailand and Vietnam, which both have competition laws, reflecting early liberalisation and competition in its mobile sector. All three countries have seen marked increases in output, as well as improvements in service quality. In transport and logistics, there is generally greater trade freedom in countries that have implemented or are developing competition laws. In contrast, in sea freight, Malaysia, which is considering whether to introduce competition legislation, rates better than Singapore and Indonesia, both of which have competition laws in force, reflecting its less concentrated market and more room to expand capacity.

The overall conclusion for the case study sectors is as signalled earlier for ease of economic activity more generally — that there is a high but not perfect correlation between competition laws and market conditions and outcomes. Competition laws generally make a significant positive contribution, but are not the sole determinant of how well markets behave and perform. Other influences can compensate for less developed competition

laws or detract from more developed competition laws. The implication for policy makers is that developing, implementing and enforcing competition laws may not be sufficient to achieve competitive market conditions and outcomes in all sectors, nor necessary for some sectors, but can generally be expected to be significantly conducive.

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