



Asia-Pacific
Economic Cooperation

Stocktake OF **Progress**
Toward THE **Key Elements**
OF A **Fully Liberalised**
Telecommunications Sector
IN THE **APEC Region**

Prepared and Printed by

The Australian APEC Study Centre
Monash University City Campus
Level 12 – 30 Collins Street, Melbourne 3000 Australia
Website: www.apec.org.au • Facsimile: (613) 9903 8813

For the APEC Secretariat
35 Heng Mui Keng Terrace Singapore 119616
Telephone: (65) 6775 6012 • Facsimile: (65) 6775 6013
Email: info@apec.org • Website: www.apec.org

Principal Authors:
John de Ridder; deridder@bigpond.com
Patrick Xavier; pxavier@swin.edu.au

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Acronyms

FTAA	– Free Trade Area of the Americas
SACU	– Southern African Trade Association
CAFTA	– Central American Free Trade Agreement
EFTA	– European Free Trade Agreement

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Executive Summary

APEC is now ready to review progress against the fundamental directive made by Leaders in the Bogor Declaration of November 15 1994. Leaders then pledged that free and open trade and investment should be achieved by 2010 for developed economies and 2020 by developing economies.

Telecommunications and Information Ministers at TELMIN 2 (1996) provided a *Reference List of Elements for a Fully Liberalised Telecommunications Services Sector*, which articulated a fully liberalised telecommunications services environment, within the framework of the Bogor Declaration timetable. Many changes in markets, technologies, regulatory frameworks and business models have occurred since then. The purpose of this Stocktake is to revisit these elements seven years on, in order to assess progress made toward the stated goals, to assess whether the scope of the list is wide enough to encompass the key issues facing the sector, whether each element is still appropriate as an identifier for a fully liberalised telecommunications market, and to recommend necessary adjustments or additional measures.

The stocktake of progress shows that competition has increased significantly across APEC and, more importantly, that this is producing real benefits in terms of network development, expanded choice, lower prices and increased investment.

Some economies are so small that they cannot expect the level of competition that others enjoy. The priorities and

policy focus of developing economies are not necessarily the same as those for developed economies, as discussed in this report.

The interpretation of policy and progress towards the shared vision must be sensitive to the different situations faced by the economies in APEC. For economies with mature networks, liberalisation is synonymous with 'more choice' but for those economies with low levels of teledensity a more important goal is to have 'any choice' where none exists today.

The Reference List still seems broadly appropriate despite the changes in the international environment, markets, technology and regulation since it was adopted in 1996. And, it is clear that considerable progress towards the vision articulated in the Reference List has been made by all economies.

In a discussion paper prepared and circulated in November 2003, the Consultant presented three options for comment. Most responses were inclined towards the 'no change' option on the basis that the Reference List is clear and has stood the test of time.

A strength of the Reference List is that it is not prescriptive about 'how' outcomes are to be achieved; there is a recognition that one size does not fit all APEC economies. Differences in how the long-distance market has been opened to competition and how universal service can be targeted to meet individual needs of economies are reported here.

1. Introduction

1.1 Background

The Reference List of Elements (Reference List, at Appendix 1) was adopted in 1996 by APEC Telecommunications and Information Ministers at TELMIN 2 in the context of the “Bogor Goals”¹ and provides a shared vision of a fully liberalised telecommunications market in the APEC region.

The Consultant² was asked to provide:

1. Assessment of whether the scope of the 1996 Reference List is wide enough to encompass the key issues facing the telecommunications sector today
2. Assessment of whether each element in the Reference List is still appropriate as an identifier for a fully liberalised telecommunications market
3. Assessment of progress made towards the stated goals as outlined by APEC Telecommunication and Information Ministers at TELMIN2 (1996)
4. A “reality check” on the expectations for liberalised markets
5. Recommendations for any necessary adjustments to the 1996 Reference List and
6. Suggestions to assist APEC Members’ participation in WTO, as well as other trade and services negotiations relating to the telecommunications sector.

There have been many changes in the international environment, markets, technology³ and regulation since it was adopted in 1996 and we are now about half way down the road to realizing the Bogor commitments so this report provides a timely review of the vision in the Reference List and the progress that has been made towards it.

1.2 Project Milestones

The consultancy was executed in three sequential components.

STAGE 1: Project Establishment and Analysis

In September 2003, the Consultant prepared and circulated a Discussion Paper that developed key issues and invited comments on preliminary findings. The Australian APEC Study Centre is very grateful to the authors, Mr John de Ridder, Dr Patrick Xavier and Ms Shya-Li Chou, Dr. Kung-Chung Liu, Dr. Xin-Wu Lin, Ms. Ching-Fen Yu and Ms. Chun-Hsin Yang all of whom contributed their expertise to this report.

STAGE 2: Review

A one-day project Workshop, organized by the Consultant, was conducted on 6 October 2003, as part of APEC TEL28 (held in Chinese Taipei). A number of speakers representing different stakeholders in the liberalisation process were assembled to address core issues, including key speakers from INTUG, Peru, Malaysia and Chinese Taipei. There was

a stimulating and informative exchange on a broad range of interests and issues⁴.

At this APEC-TEL 28 Workshop, delegates requested a second discussion paper focussing specifically on possible changes to the 1996 Reference List in order to have an opportunity to comment before the final consultancy report was prepared. This second discussion paper was completed and circulated to economies for comment in November 2003.

STAGE 3: Publication

The draft final report was circulated to the project oversight committee and TEL (Liberalisation Steering Group) in January 2004.

Consideration of this report including possible modifications to the 1996 Reference List resulting from recommendations from this study were discussed at APEC TEL 29 in Hong Kong in late March 2004 ahead of the APEC Ministers’ Meeting (TELMIN 6).

1.3 Structure of report and recommendations

This report is structured to satisfy the deliverables of the project. Section 2 examines whether the Reference List elements are still appropriate indicators of liberalisation (section 2.1) and whether the scope of the List is still relevant to key issues in the sector (section 2.2).

Section 3 performs a stocktake of progress made towards the vision of a fully liberalised telecommunications market characterised in the 1996 Reference List.

Section 4 conducts a “reality check” on the expectations for fully liberalised telecommunications markets in the light of the different needs and circumstances of “developed” and “developing” economies. It includes discussions on scale, universal service and tariff rebalancing.

The Consultants consider that while all economies have made significant progress, more can be done. They have made the following suggestions in relation to the implementation of the Reference List and to trade negotiations, including suggestions for future work.

R1: APEC economies could consider the use of ‘price cap’ regulation rather than direct government approval of price changes to moderate price rebalancing.

1 The Bogor Declaration of 15 November 1994 committed APEC economies to free and open trade and investment by 2010 for developed economies and by 2020 for developing economies.

2 The Australian APEC Study Centre assisted by the Taiwan Institute of Economic Research.

3 And some consider that change is likely to accelerate: “To date, change in telecommunications has occurred at a relatively slow pace compared to what might be expected in the future.” OECD Communications Outlook, 2003.

4 Papers from the workshop can be found at <http://www.apectelwg.org/apec/atwg/previous.html>

- R2: Developing APEC economies could consider mandating only terminating access on fixed networks (as is done for mobiles).
- R3: APEC economies could consider conducting inquiries into mobile roaming terms and conditions.
- R4: Specific quality of service targets could be required to be identified and reported on by individual carriers.
- R5: Tradeable wireless licences and spectrum sharing could be considered to facilitate market entry and ensure more efficient use of spectrum.
- R6: APEC-TEL could explore policy approaches to VoIP that allow the development of new services without compromising the incentives to build out networks.
- R7: APEC economies could consider monitoring and publishing leased line prices and provisioning, as was done by the EU.
- R8: APEC economies could adopt and implement the WTO Reference Paper and support work within APEC to further develop and clarify the principles it contains.
- R9: APEC could explore how convergence across sectors impacts regulatory design and processes; perhaps, as part of a broader review of regulatory capabilities
- R10: APEC economies could consider requiring the establishment of an industry Code of Conduct backed up by a Customer Service Guarantee scheme to help maintain standards by prescribing financial compensation for customers when operators fail to meet minimum service levels.
- R11: Regulators could actively encourage and assist the effective participation of users and user organisations in regulatory development and review of activities.
- R12: APEC economies could pursue telecommunications reforms within the Doha services committee and apply the results among themselves until the Doha round is completed.
- R13: APEC economies could continue to explore opportunities in bilateral and regional trade agreements while also engaging in the Doha round).

These recommendations will be the subject of further consideration by the APECTEL, and are presented in more detail in Sections 5 (realisation of the vision against each element of the Reference List) and Section 6 (the benefits of trade liberalisation and the options available to APEC Members post Cancun).

2. The 1996 APEC Reference List

The Reference List of Elements was presented as Annex 2 of the APEC Ministers' Declaration at the Gold Coast, Australia in 1996 (and is attached to this report as Appendix 1). As the preamble to the Reference List states, it is "a general description of a fully liberalised telecommunications services environment towards which each economy will plan its own path..."

Conceptually, the Reference List may be positioned at the peak of a telecommunications policy pyramid as illustrated in Figure 1 below. The Reference List provides an interpretation of the desired outcomes or features that would characterise a fully liberalised telecommunications market from the perspective of users, suppliers, investors and government.

The tiers of the pyramid support the peak vision of the desired features of a fully liberalised telecommunications sector. The second tier provides quantitative outcomes or targets associated with the achievement of the vision. These targets may differ from economy to economy and over time. But there are some outcomes that would be shared by all economies and these are monitored and reported on later in this report (Section 3). The third tier represents the policy

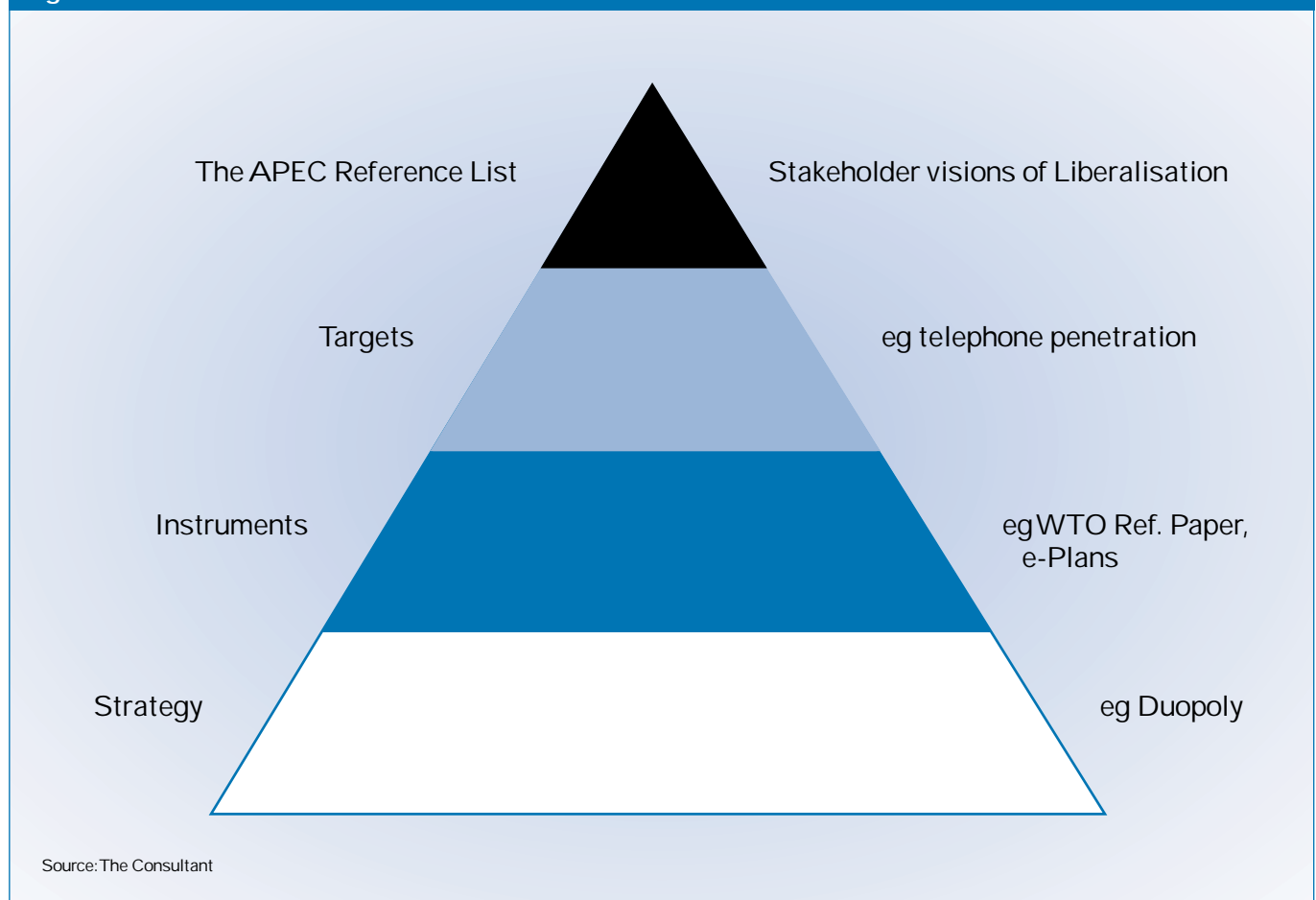
instruments available to achieve the desired goals or targets. Finally, as the Bogor Declaration recognised and as the preamble to the Reference List acknowledges, each economy is to pursue its own liberalisation path. Indeed, the different ways that economies implement, say, the WTO Reference Paper on Regulatory Principles or Universal Service policy can indicate 'best practice' policies for other economies to draw upon.

2.1 Is each element still appropriate as an indicator of market liberalisation?

The Reference List was perceived as a means to assist in judging progress towards the Bogor commitments in the context of the telecommunications sector. The wording of the Reference List is very general in order to create a shared vision for APEC economies in very different circumstances (discussed in section 4).

The fact that the Reference List is a very general statement of desired outcomes has conferred a robustness that ensures its continuing relevance despite significant change in the telecommunications sector. But this generality also makes it difficult to use in gauging and reporting

Figure 1 – The Reference List as a Vision



progress towards the goals embodied in the Reference List. Rather than change the Reference List, supplementary indicators can be used to monitor progress (see section 3).

2.2 Is the scope of the Reference List still relevant to the key issues facing the sector?

The APEC vision of a fully liberalised telecommunications market was conceived in 1996 and the primary purpose of this study is to examine how external factors like markets, technology and international events, illustrated in Figure 2, below have affected that vision.

There have been a number of developments in markets. Technological and market “convergence” have spawned new services and regulatory challenges. Notably, the explosive growth of the Internet has become a major policy focus in most economies e.g., broadband access and VoIP (see section 5.2.2). And, the investment climate has been clouded by the 1997 economic crises and the 2000 ‘dot com’ crash.

Technology has changed significantly too. The number of mobile phones overtook fixed phones in 2000 and broadband is now firmly on the policy agenda leading to greater focus on unbundling the local loop to stimulate

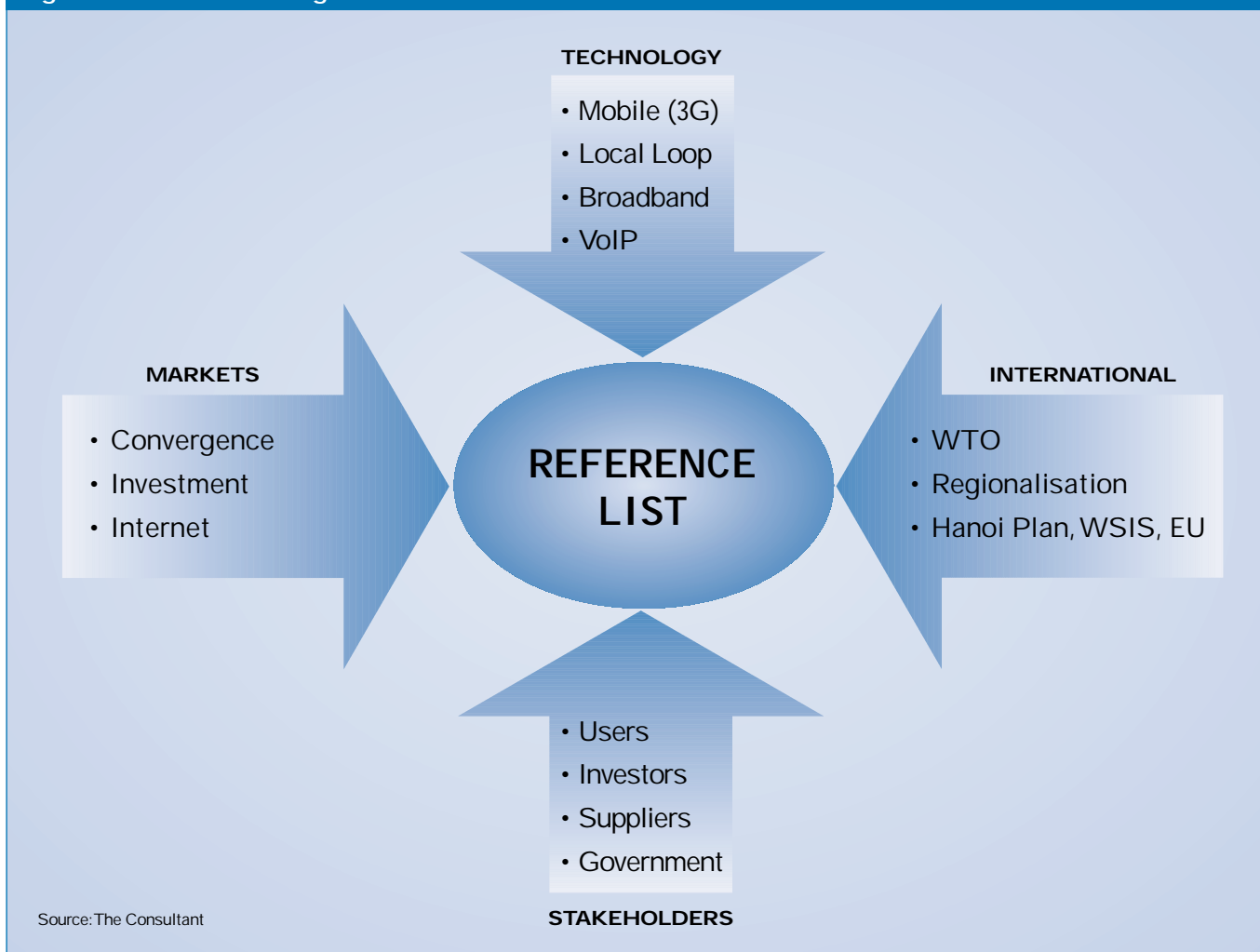
competition in the provision of broadband access. On the international front, a number of new international agreements have been concluded eg. the February 1997 WTO Agreement on basic telecommunications services, the 1997 WTO Reference Paper on Regulatory Principles, the Hanoi Plan⁵ and a range of free trade agreements.

Of particular relevance to APEC is the Cancun Declaration of May 2000 which committed APEC economies among other things to:

- (a) work to bridge the digital divide at the domestic, regional and global levels, and to cooperate and collaborate with the business/private sector in this effort;
- (b) foster the development of effective policies that support competitive markets in the domestic and international telecommunications and information industries;

5 The Hanoi Plan of Action is relevant because it aimed to develop a vision of ASEAN in 2020. Not only are seven of the APEC economies also members of ASEAN (Brunei Darussalam, Indonesia, Malaysia, the Philippines, Thailand, Singapore and Vietnam) but also some of the targets in the Hanoi Plan are relevant to consideration of the Reference List.

Figure 2 – Factors Affecting the Vision



(c) implement within voluntary time frames the APEC Interconnection Principles and consult on the need for further discussions on interconnection.

However, there is no need to update the Reference List for the Cancun Declaration so that, say, the universal service obligation (USO) is extended from standard telecommunications services to encompass closure of the 'digital divide'. This is because there is already a wide diversity in appropriate USO arrangements (see section 4.4).

The Reference List still seems broadly appropriate despite the changes in the international environment, markets, technology and regulation since it was adopted in 1996. Almost all responses to the second discussion paper seeking comments on the need for revision were inclined towards the "no change" option on the basis that the Reference List is clear and has stood the test of time. Achieving the sort of revisions indicated in the other options would need significant effort to obtain political endorsement, for relatively limited improvement on what exists now. And, as one respondent suggested, rather than "tinkering" with the elements of the Reference List, what matters is implementation of policy and regulatory guidelines to achieve the vision embedded in the List; e.g., implementation of APEC's Interconnection guidelines⁶. The Consultant concurs with this view.

2.3 Examination of each Element in the Reference List

In this section, we look more closely at each element in the Reference List to examine its continuing relevance and appropriateness as an indicator of a fully liberalised market.

ELEMENT 1

In a fully liberalised telecommunications sector, *users* would have:

- a) choice of suppliers of telecommunications services, offering a full range of services, including telephony, data, news and information, and fully interactive services;
- b) choice of suppliers of telecommunications services offering lower prices, greater convenience or specialist service offerings; and
- c) ready access to timely information about customer services and billing.

As repeatedly emphasised by governments and regulators, users are the most important stakeholder in telecommunications market liberalisation. All other stakeholders' interests are derived from the needs of end users.

Elements 1a and 1b "Choice" is certainly one of the major outcomes that users would expect in a fully liberalised telecommunications market. In this report, the number of providers and the market share of the largest provider are used as partial indicators of the choice available.

While liberalisation is synonymous with more choice for economies with mature networks, for those economies with

low levels of teledensity a more important goal is to have "any choice" where none exists today. A fully liberalised market with low levels of teledensity would not be a satisfactory end-state.

Other quantitative indicators of progress towards a fully liberalised sector discussed in the next section are price falls, affordable phone service, teledensity (fixed plus mobile services per head), the availability of number portability, carrier preselection, investment, globalisation and the 'digital divide'.

The amount of competition among suppliers that is required to deliver an effective degree of choice is open to debate, particularly with the reality of diminished investor sentiment towards the telecommunications sector in some economies. Moreover, there is currently considerable industry rationalisation (including mergers and consolidation) that may appear to result in reduced choice. This does not necessarily imply poor progress towards a fully liberalised sector. Market consolidation can improve the return on investment and the incentives to invest.

Element 1c "Timely" information could also encompass "clarity" and "accuracy" in billing. With choice may come some customer confusion and exploitation which may be addressed with consumer protection measures (Element 5e). Informed choices can also be improved with quality of service reports and other data (see section 5.2.1).

ELEMENT 2

In a fully liberalised telecommunications sector, *suppliers of telecommunications services* would be able to extend their business activity without restrictions on entering the market, including:

- a) restrictions on the number of network providers or installers of network infrastructure, except where limited by scarce physical resources;
- b) complex or time-consuming licensing arrangements;
- c) restrictions on foreign-owned carriers and service providers; or
- d) restricted access to the network infrastructure of other suppliers (i.e. interconnection).

The term 'suppliers of telecommunications services' could be understood to include not only new entrants but also incumbent operators and vendors who all have legitimate commercial aspirations.

Element 2a The term 'scarce physical resources' includes radio spectrum where spectrum sharing across a number of mobile carriers is technically limited. Tradeable licences and spectrum-sharing could make more effective use of such scarce resources (see section 5.2.2). Technology restrictions may also be imposed in license conditions to ensure interoperability.

⁶ Developed in 1999 and agreed by all members in May 2000 as Annex C to the Cancun Declaration of APEC Telecommunications Ministers.

Element 2b This seems uncontroversial but while there has been a shift towards the use of class licences, some economies are still using individual licensing with lengthy licensing processes and with demanding conditions attached to a licence. There is also continuing tension around the place of VoIP services (section 5.2.2).

Element 2c Most economies have some degree of restriction over foreign investment although in many economies these constraints are being relaxed (see section 3.1B). What is critically important is that non-discriminatory “national treatment”⁷ and “most favoured nation”⁸ (MFN) principles as prescribed by the WTO are applied.

Element 2d Access must allow ‘any-to-any’ connection between networks and this is what is addressed extensively in the WTO Reference Paper. With developments in the Internet, including broadband, some economies have extended the access obligation from interconnection to unbundling of the local loop to facilitate access to broadband (see section 5.2.2).

ELEMENT 3

In a fully liberalised telecommunications sector, suppliers of telecommunications services and users would both benefit from a full range of *competitive safeguards* that:

- a) prevent a dominant supplier from abusing market power;
- b) prevent domestic companies being favoured; and
- c) provide clear and accessible (i.e. ‘transparent’) laws, regulations and administrative procedures, which would ensure non-discriminatory treatment of service providers and users.

Both the “suppliers” and “users” perspectives of what a fully liberalised telecommunications sector would look like were dealt with in the first two elements of the Reference List. This third element deals with competitive safeguards that are also alluded to or dealt with in the later (1997) WTO Reference Paper on Regulatory Principles.

Element 3a The concept of “a dominant supplier” occurs in many jurisdictions but definitions vary. Similarly, definitions of “abusing market power” and “markets” vary across economies. It does not seem appropriate to give specific definition of these terms in a general and over-arching document like the Reference List.

Continued reliance on regulation to control abuse of market power in a fully liberalised market implies doubts about the ability of the market to be the ‘best regulator’. It is arguable that a fully liberalised telecommunications sector in an era of convergence should – in common with other sectors – be regulated primarily on the basis of general competition law.

Element 3b This element is similar to the “National Treatment” principle prescribed by the WTO and therefore applicable to all but two APEC economies that are not yet WTO members (Vietnam and the Russian Federation).

Element 3c This provision is still appropriate. Pro-competitive or asymmetric regulation should not be necessary in a fully liberalised market. Indeed, some would argue that departing from symmetric regulation risks distorting markets.

ELEMENT 4

In a fully liberalised telecommunications sector, *investors* would have confidence to invest in the telecommunications industry and in companies reliant on telecommunications services, on the basis of stable legal and administrative arrangements that remove the risk of arbitrary or unexpected changes in the commercial environment.

This is an important element for both developed and developing economies because investment is the key to the longer-term development of communications infrastructure and new services. The importance of ‘investor confidence’ is clearly still relevant in view of the reduction in investor confidence in the telecommunications sector since 1996 (accentuated by the 1997 Asian Crisis and the “dot.com crash” of 2000). The best indicator of investor confidence is the level of investment itself (see section 3.3.C).

‘National Treatment’ is already provided for in Element 3b so foreign investors will not be discriminated against relative to local companies. A further guarantee would be the application of most favoured nation (MFN) treatment such that a host economy treats investors from one foreign economy no less favourably than investors from any other foreign country.

Of course, there are wider considerations such as technological developments, tax laws, and labour markets etc that affect the investment climate. Thus the word ‘remove’ in Element 4 is more appropriately ‘reduce’.

ELEMENT 5

In a fully liberalised telecommunications sector, *Governments* would have clearly defined responsibility to:

- a) provide for transparent and non-discriminatory policy arrangements to meet the needs of their economies;
- b) ensure that the regulatory authority responsible for telecommunications is legally and structurally independent, with a legal responsibility to act impartially and expeditiously, and with adequate resources to fulfil its function;
- c) ensure transparent mechanisms to support universal access to standard telecommunications services as

7 The ‘national treatment’ obligation under Article XVII of the GATS is to accord to the services and service suppliers of any other member treatment no less favourable than is accorded to domestic services and service suppliers.

8 According to the MFN principle, an economy must accord to all Member countries the same treatment it offers to its most favoured trading partner. In general, MFN means that every time a country lowers a trade barrier or opens up a market, it has to do so for the same goods or services from all its trading partners.

- agreed within each individual economy;
- d) fairly allocate scarce resources, such as spectrum numbering and right of way; and
 - e) provide for a full range of consumer protection measures.

Element 5a This is an appropriate vision for a fully liberalised sector. Discriminatory policy arrangements or asymmetric regulation have been used to facilitate competition, but they do not have a place in a fully liberalised sector.

Some governments deliberately exclude a dominant incumbent from certain parts of the sector; e.g. from operating a mobile carrier or cable network (EU policy). This is intended to be pro-competitive but may be to the detriment of network development as the incumbent is usually best resourced to invest.

As well as transparent policy and regulatory rules, there is also need for adequate powers to enforce prompt compliance with these rules.

Element 5b An independent regulator remains important but is difficult to achieve. The regulator should be independent of telecommunications operators (as required also by the WTO Reference Paper) and maybe parts of government (see section 3.1D).

Element 5c Governments usually have some kind of social policy for the telecommunications sector, frequently reflected in arrangements concerning universal service obligations (USOs). The difference between economies in arrangements 'agreed within each individual economy' is warranted since USO objectives may differ according to circumstances. For example, the Maitland Report's objective

of having access to a telephone within 2 hours walking distance is appropriate for, say, Chile and Peru (see section 4.4) but would be unacceptable for developed economies.

As with the USO, economies should ensure transparent mechanisms to address the digital divide as agreed within each individual economy. APEC places considerable importance on policies to address the digital divide. It is the first objective in the Cancun Declaration of May 2000. Also, the 2003 Declaration at the 11th APEC Economic Leaders' Meeting in Bangkok agreed to step up efforts to build knowledge-based economies instructing Ministers to accelerate progress towards the Bogor Goals on expanding Internet access.

In a less developed economy with a fully liberalised market there may also be a need for government to articulate strategies, goals and policies for the telecommunications sector.

Element 5d Allocating scarce resources 'fairly' means in an 'objective, timely, transparent and non-discriminatory manner'⁹. Neither the Reference List nor the Reference Paper specifies whether efficient use of spectrum should involve transferable property rights, or not, to prevent inefficient hoarding.

Element 5e Consumer protection will continue to be an important element in a fully liberalised market. The 'full range' may include many matters, such as dispute settlement procedures, which have become an issue in some economies.

⁹ WTO Reference Paper, Item 6.

3. A stocktake of progress made towards the stated goals

In Section 3.1 we look first at how the Reference List has been implemented at the policy level (i.e., the 'instruments'). In Section 3.2, we consider market outcomes in terms of observed levels of liberalisation (i.e., were the instruments effective in realising more competition?). And then, more importantly, in Section 3.3 we look at the benefits derived from liberalisation in terms of increased access, lower prices and other measures of outcomes (i.e., the 'targets' in Figure 1).

3.1 Progress on Implementation at the Policy Level (the 'Instruments'):

The APEC Reference List sets out a number of features of a liberalised telecommunications sector that are policy matters, including:

A Market access arrangements (eg dismantling of monopolies, interconnection)

- B Removal of restrictions on foreign investment
- C Competitive safeguards to prevent abuse of dominant market position
- D Establishment of an independent regulator

3.1A Market access arrangements

Only two of the APEC members (Russian Federation and Vietnam) are not also members of the WTO; so no commitments are applicable to them.

With regard to market access arrangements, Table 1 below shows WTO commitments on market access¹⁰. As can be seen, APEC economies have made broad commitments to liberalise market access to the telecommunications sector.

It is notable that even where commitments are made,

¹⁰ Both Table 1 and Table 2 show only some telecommunications services for greater clarity.

Table 1 – Summary of Market Access Commitments to WTO

(Yes = commitment; No = no commitment)

APEC Economy	Voice telephone	Packet-switch data	Private leased circuit	Terrestrial Mobile
Australia	Yes	Yes	Yes	Yes
Brunei Darussalam	Yes	No	No	Yes
Canada	Yes	Yes	Yes	Yes
Chile	Yes	Yes	Yes	Yes
China	Yes	Yes	Yes	Yes
Hong Kong, China	Yes	Yes	Yes	Yes
Indonesia	Yes	Yes	No	Yes
Japan	Yes	Yes	Yes	Yes
Korea RP	Yes	Yes	Yes	Yes
Malaysia	Yes	Yes	Yes	Yes
Mexico	Yes	Yes	Yes	Yes
New Zealand	Yes	Yes	Yes	Yes
Papua New Guinea	Yes	Yes	Yes	Yes
Peru	Yes	Yes	Yes	Yes
Philippines	Yes	Yes	No	Yes
Russian Federation*	No	No	No	No
Singapore	Yes	Yes	Yes	Yes
Chinese Taipei	Yes	Yes	Yes	Yes
Thailand	Yes	No	Yes	No
USA	Yes	Yes	Yes	Yes
Viet Nam*	No	No	No	No

* Not a member of the WTO

Source: WTO, Telecommunications Services, Background Note by the Secretariat, 1998

Table 2 – Types of Limitations by Mode of Supply

Showing the number of WTO members where market access limitations apply.

Telecommunication services	Mode	Market access limitations					
		a	c	d	e	f	g
a. Voice Telephone Services	CB	5			4	1	11
	CA	1			4	1	8
	CP	38	1		22	23	38
b. Packet-Switched Data Transmission Services	CB	5			4	1	8
	CA	2			4	1	6
	CP	24	1		22	17	32
g. Private Leased Circuit Services	CB	2			4	2	28
	CA	1			4	1	6
	CP	20	1		18	16	31
o. Terrestrial-based Mobile	CB	4			4	2	11
	CA	1			4	1	8
	CP	30	1		20	21	33

Legend: CB – Cross border supply a) Number of suppliers e) Types of legal entity
 CA – Consumption abroad c) Number of operations f) Participation of foreign capital
 CP – Commercial presence d) Number of natural persons g) Other measures

Source: WTO

limitations may apply¹¹. Table 2 summarises the types of limitations WTO members have inscribed in regard to market access in the telecommunications sector.

Overall, three types of market access limitations are most commonly listed in telecommunications commitments. These are: limitations on the number of suppliers (see Table 4), restrictions on type of legal entity and, a related measure, limits on the participation of foreign capital (see Figure 3). INTUG argues that all economies should “commit to trade in telecommunications including all its sub-sectors and in all four modes. Commitments should be unrestricted and should be introduced expeditiously, rather than phased in. Member States should, wherever possible, eliminate their MFN exemptions. International accounting rates should be brought into the WTO commitments”¹².

Another aspect of market access arrangements is interconnection (Reference List Element 2d). Significant work has been undertaken to develop the APEC Principles of Interconnection which go further than the February 1997 WTO Reference Paper. Revising the Reference List to refer to either the APEC and/or WTO principles of interconnection would achieve little.

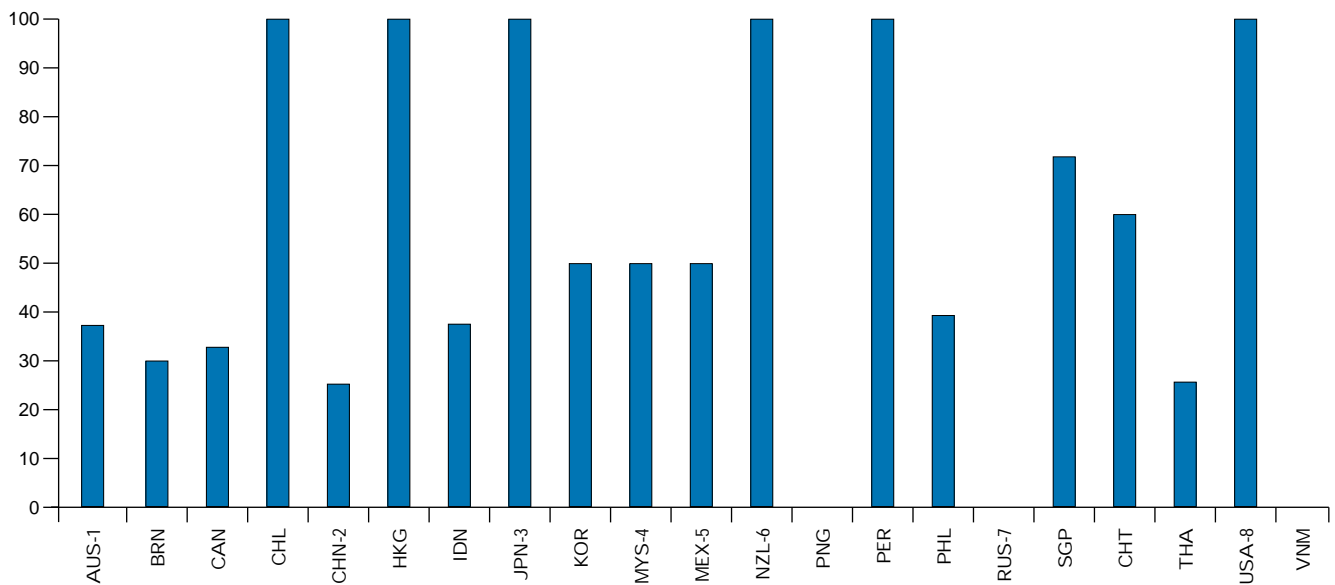
3.1B Removal of restrictions on foreign investment

On Reference List Element 2c (foreign investment restrictions), Figure 3 shows the limits on direct and total foreign ownership of carriers in each economy. This shows that Chile, Hong Kong, China and Peru appear to accept unconditional foreign investment. Both Japan and New Zealand allow 100 percent foreign ownership except in the incumbent operator and the USA allows 100 percent unless a radio licence is held by the carrier involved. Singapore and Chinese Taipei are the only other economies that allow more than 50 percent foreign investment. A proposal to increase the limit to 49% is being considered in Thailand and this level will be permitted in China within two years.

11 Detailed information about commitments and exemptions relating to telecommunication services is available in WTO, “Highlights of the basic telecommunication commitments and exemptions”. Available at http://www.wto.org/english/tratop_e/serv_e/telecom_e/telecom_highlights_commit_exempt_e.htm
http://www.wto.org/english/tratop_e/serv_e/telecom_e/telecom_commit_exempt_list_e.htm

12 INTUG (2001) at www.intug.net/views.gats.html

Figure 3 – Limits on Foreign Ownership



Notes:

- 1 Australia does not allow foreign investment in Telstra to exceed 35% overall or 5% for an individual investor.
- 2 China's market has been opened to foreign investors since 2002 with foreign ownership now limited to 25% in 3 cities for fixed operators (49% in all places by 2006), 35% in 17 cities for mobiles (49% in all places by 2005) and 50% for value added services anywhere.
- 3 Japan has no restrictions on foreign ownership in Type I (facilities-based) carriers except for NTT (33%) and the Government must always hold at least 33% of NTT.
- 4 Malaysia allows up to 61% of existing operators which must be reduced to 49% within 5 years.
- 5 But Mexico allows 100% foreign ownership in cellular mobile operators.
- 6 New Zealand allows up to 49.9% in Telecom NZ by one overseas investor unless authorised by Government.
- 7 Russia's ten-year plan foreshadows "restrictions on direct access by foreign entities to the Russian telecommunications services market and to restrict (their) direct and indirect majority ownership in Russian telecommunications companies."
- 8 In the USA, where a U.S. common carrier holds a radio licence, foreign investment is restricted to 25 percent unless the FCC determines that more ownership would serve the U.S. public interest. The FCC has streamlined requests to exceed the 25 percent benchmark.

Source: The Consultant

3.1C Competitive Safeguards to Prevent Abuse of Dominant Market Position

The third element in the Reference List concerns three competitive safeguards:

- a most economies implementing liberalisation of the sector have provisions in either sector-specific or general competition law to 'prevent a dominant supplier abusing market power'. There is also need for the regulatory rules to be applied independently, promptly and effectively.
- b compliance with the WTO's 'national treatment' principle should 'prevent domestic companies being favoured'.

c clear rules and procedures should 'ensure non-discriminatory treatment of service providers and users'.

The clearest measure of progress would be the acceptance and effective implementation of the WTO Reference Paper on Regulatory Principles of February 1997. Apart from Russia and Vietnam, which are not yet members of the WTO, the only APEC economies which have not yet committed to adopting the Reference Paper in full are Malaysia and the Philippines. Compiling 'best practice' methods regarding implementation would also help to monitor progress. In this context it is notable that work led by Singapore is being done currently in APEC to identify best practice in implementation of the WTO Reference Paper.

Table 3 - Independence of the Regulator

	Regulator	Reports to	Incumbent Operator	% Govt. Ownership
Australia	ACA ¹ and ACCC www.accc.gov.au	Minister	Telstra	51
Brunei Darussalam	AiTi	Minister	JabatanTB www.jtb.gov.bn	100
Canada	CRTC www.crtc.gc.ca	Ministry ²	Various (regional)	0 (except Sasktel)
Chile	In Ministry	SUBTEL www.subtel.cl	CTC	0
China	In Ministry	MII http://mii.gov.cn	China Telecom	11
Hongkong, China	OFTA www.ofta.gov.hk/	Minister	PCCW	0
Indonesia	BRTI ³ (starting in 2004)	Minister	Domestic: PT TELKOM International: PT INDOSAT ⁴	51 + golden share 15 + golden share
Japan	In Ministry	MPHPT www.soumu.go.jp	NTT	46
Korea	KCC (Korea Communications Commission) www.kcc.go.kr	No one	Korea Telecom	0
Malaysia	MCMC www.mcmc.gov.my	Minister	JabatanTM	67
Mexico	Cofetel www.cft.gob.mx	Ministry	Telmex	0
New Zealand	In Ministry	ComCom ⁵ www.comcom.govt.nz	Telecom NZ	0
Papua New Guinea	In Ministry	Ministry	Telikom PNG www.pangtel.gov.pg	100
Peru	OSIPTEL www.osiptel.gob.pe	President	Telefonica del Peru	0
Philippines	NTC www.ntc.gov.ph	Ministry	PLDT	0
Russia	In Ministry	Minister www.minsvyaz.ru	Rostelekom	51
Singapore	IDA ⁶ www.ida.gov.sg	Minister	SingTel	80 ⁷
Chinese Taipei	In Ministry	DGT ⁸ www.dgt.org.tw	Chunghwa Telecom	65
Thailand	NTC www.ptd.go.th/ www.ntc.or.th	The Council of Ministers, the House of Representatives and the Senate	TOT and CAT	100 ⁹
United States	FCC www.fcc.gov	Congress	Various	0
Viet Nam	In Ministry	Minister www.mpt.gov.vn	VNPT	100

(1) Technical regulation and administration of the USO is performed by the ACA.

(2) The CRTC reports to Industry Canada on policy matters (and entry into wireless sector) and has an operational relationship with the Minister of Canadian Heritage.

(3) Which consists of the Telecommunications Regulatory Committee and Directorate General of Post and Telecommunications.

(4) Which vertically merged with PT SATELINDO in Dec 2003.

(5) The Telecommunications Commissioner is located within the Commerce Commission.

(6) The IDA resulted from the merger of the TAS and the NCB in 1999.

(7) Government's share will be taken to nil under FTA signed with Unites Sates in May 2003.

(8) The NCC, a converged regulator replacing the DGT, is expected to begin in 2004. The FTC is an important regulator of general competition.

(9) An IPO is expected in 2005.

Source: The ITU and the Consultant

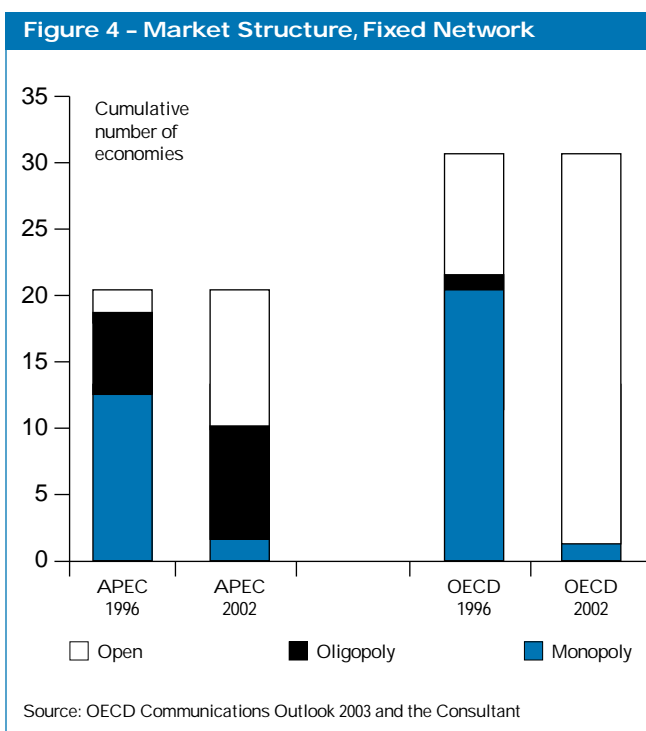
The earlier Discussion Papers (circulated as part of this project) noted that APEC’s 1996 Reference List is about policy and outcomes whilst the focus of the later 1997 WTO Reference Paper is on regulatory rules. Policy and outcomes are considered in Sections 4 and 3.3 below respectively.

3.1D Establishment of an independent regulator

Element 5b of the Reference List requires a regulatory agency that is ‘*Legally and structurally independent, with a legal responsibility to act impartially*’. To APEC (and the WTO) this means that the regulator is structurally separate from the main operator. However, as Table 3 (see page 19) shows, impartiality may be unclear when the government still retains some ownership in the incumbent operator in half the APEC economies. Government ownership is not an issue that is separate from liberalisation if it means that regulation is distorted in favour of the incumbent as a result of this ownership.

For example, privatisation may compromise the liberalisation framework in order to maximise the proceeds of the sale. This conflict of interest might be mitigated to some extent if the government’s role as owner was vested in, say, the Ministry of Finance with the policy/regulatory functions remaining with the current responsible ministry.

Table 3 also shows that some economies still run the regulatory function from within the ministry responsible for policy. Brunei Darussalam and Papua New Guinea still have monopolies and are small economies so that policy and



regulation effectively reside in the operator. However, Indonesia and Brunei Darussalam (the latter as a precursor to the possible privatisation of the incumbent in 2004) have recently established independent regulators.

3.2 Market Structure Outcomes

The previous section looked at the policy-settings for liberalisation. This section looks at the outcomes of liberalisation in terms of:

- A The number of operators in both fixed and mobile networks
- B The market shares in key market segments

3.2A The number of operators

As stated in the first element of the Reference List, 'choice of suppliers' is certainly a key desired outcome for all economies. In this respect, APEC has made considerable progress since 1996. Figure 4 shows that in fixed networks, over half the region had a monopoly in the fixed network compared with only two now (Brunei Darussalam and Papua New Guinea). In the OECD, which includes seven APEC economies¹³, only one OECD economy still had a fixed monopoly (Turkey).

This progress in choice of fixed network providers is also reflected in the increasing choice of mobile service providers. Figure 5 shows that the number of mobile monopolies has been reduced from 8 to 2 (Brunei Darussalam and Papua New Guinea) with over half the economies in APEC enjoying four or more mobile service providers. The OECD reports no monopolies amongst its members.

3.2B Market shares in key segments

While the number of suppliers has increased, this does not necessarily mean that competition is 'effective'. Market share is only a partial guide (we shall consider price trends too), but it is interesting to note, for example, that despite having over 400 infrastructure-base PSTN providers in Japan (and

Case Study 1:

The Philippines and Regulated Build-Out

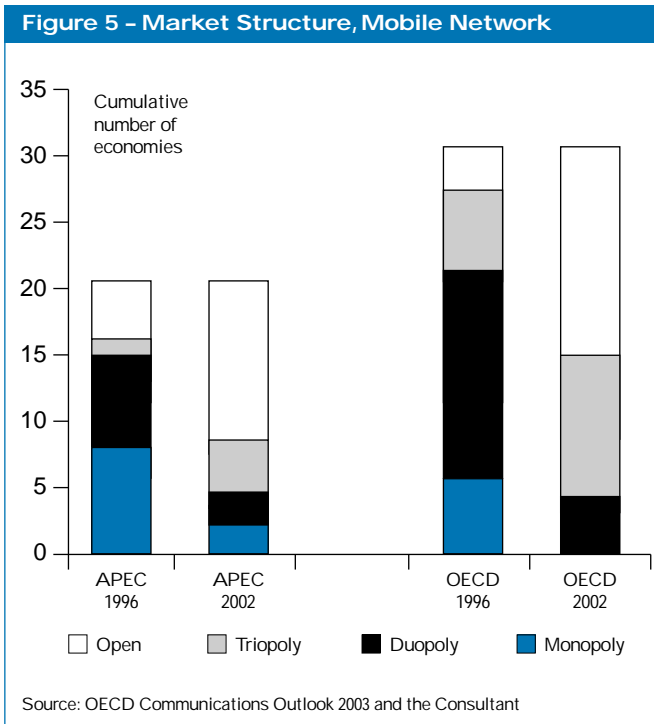
The incumbent (PLDT) has less market share of fixed lines than more developed economies which are trying to achieve something similar (eg through unbundling of the local loop). This result appears to be driven by the licensing regime¹⁴. Since 1993 all mobile and international operators must provide fixed or semi-fixed wireless lines¹⁵. At the end of 2000 only 29 percent of the non-PLDT capacity was utilized (65 percent for PLDT). This reflected depressed market conditions following the Asian economic crisis and the shift in demand to mobiles. From the technical side, under utilisation may be due to the network not being fully equipped to cover a big service area, limiting its market capability. Also, some operators' encountered financial difficulties during the implementation phase which delayed commercial roll-out of facilities.

This network development model relies on cross-subsidies that are reducing due to competition (see Section 4.5). This will affect future investment decisions.

over 10,000 "Type II" providers), the incumbent still retains about half the long distance market. The available information does not permit us to distinguish between facilities-based and service providers in Table 4 over the page. Indeed, such distinctions are difficult to make.

In developed markets that are now focusing on broadband, the lack of effective choice in the fixed local loop has become an issue. Table 4 shows that in most economies the incumbent operator controls more than 90 percent of local access lines. Of the two economies where the incumbent controls less than 80 percent of lines, one is the Philippines; a developing economy – see Case Study 1.

The level of competition in long-distance markets and mobiles has been encouraged by policies of number portability and pre-selection (also known in variations as



13 Australia, Canada, Japan, Korea, Mexico, New Zealand and the USA are also members of the OECD.

14 A similar approach has been adopted in South Africa where mobile operators must provide public payphones and in Morocco where the second GSM licence included build-out requirements in rural areas. V. Feldman (2003), "Mobiles Overtakes Fixed: Implications for Policy and Regulation", study for the ITU www.itu.int/osg/spu/ni/

15 Executive Order 109 (1993) led to international gateway facility providers being required to install 300,000 landlines in their service areas and cellular mobile telephone system providers, 400,000 landlines in their awarded franchise areas. The order also requires 1 rural line be installed for every 10 urban lines. See also NTC (2002) www.ntc.gov.ph/whatsnew-frame.html

Table 4 - Market Shares in Fixed and Mobile Markets

	Main PSTN operator's share of local access lines (%)	Number of PSTN long distance operators	Main PSTN operator's share of long distance (%)	Number of cellular mobile operators	Market share of largest mobile operator (%)
Australia	90	89	71 (Domestic) 64 (International)	4	52
Brunei Darussalam	100	1	100	1	100
Canada	96 ¹	75	82 (Domestic) ¹ 65 (International) ¹	8	35
Chile	92	19	33	5	
China	100	4	34	2	66
HongKong, China	82	7	35	6	30
Indonesia	95	2 ²	99 (Domestic) 70 (International)	9 ³	58
Japan	84	414 ⁴	50 (Domestic) 44 (International)	26	57
Korea	94	4	85	3	41
Malaysia	95	5 ⁵	90	3	41
Mexico	97	38	68	15	78
New Zealand	95	13	75	2	57
Papua New Guinea	100	1	100	1	100
Peru	99	25	82 (Domestic) 67 (International)	4	52
Philippines	63	11		5	44
Russia	93	1 ⁶	90 (Domestic) 85 (International)	8	37
Singapore	70	2 ⁷	78	3	45
Chinese Taipei	99	4	92 (Domestic) 64 (International)	5 ⁸	31
Thailand	52	1	100	7	65
United States	89	2222 ⁹	35	420 ¹⁰	23
Viet Nam	98	6	100	5	60

Notes:

- (1) This is an average across the incumbents in the former regional monopolies in Canada.
- (2) Duopoly in local and long-distance and a triopoly in international services.
- (3) Includes 3 regional analogue operators who will merge into one.
- (4) Type I (infrastructure) carriers; in addition there were 10,904 Type II carriers at the end of FY2002. The Type I and II classifications have been abolished.
- (5) The Government has signalled its desire for further consolidation of the industry. This is nothing new, as we began with eight licenced operators, reduced to the present five, and now contemplate a further pruning to three (Chairman's Report in Telkom Malaysia Annual Report, 2001).
- (6) There are 7 regional operators under one holding company. There is a monopoly of domestic traffic until 2010 except for corporate and closed user networks which can also originate and terminate international calls on their networks.
- (7) There are 2 operators of domestic long distance and 207 competitors in international services.
- (8) The TCC and the TAT have merged.
- (9) 93% of the US population has access to at least three competitors in their market and 33% has access to six or more.
- (10) 83% of the US population live in areas served by five or more mobile operators.

Source: OECD Communications Outlook 2003 and the Consultant.

Table 5 - Carrier number portability and carrier pre-selection

	Carrier number portability	Carrier pre-selection
Australia	Local number and non-geographic number portability available. Mobile number portability available.	Implemented for long distance calls and fixed to mobile calls.
Brunei Darussalam	Not available	Not available
Canada	Local number portability (LNP) implemented in major centres. Incumbent carriers required to implement LNP in smaller centres upon request by competitive local exchange carriers. Portability of toll free numbers implemented.	Implemented for long distance and international calls.
Chile	Not available	Not available
China	Not available	Not available
Hongkong, China	Portability of fixed numbers introduced in 1997 and mobile numbers in 1999.	
Indonesia	Not available	Not available
Japan	Number portability for PSTN and ISDN numbers to be provided from 2001. Geographic portability within the same numbering area is not an obligation but is provided by telecommunication carriers. Mobile number portability is being examined.	Implemented for all geographic calls in May 2001.
Korea	The policy on local calls number portability was established in 2001. Starting from 2003, number portability for local calls has been gradually implemented and by August 2004, full adoption will be made in metropolitan Seoul area. The policy on mobile number portability was established in February 2002. Mobile number portability will be gradually implemented for 2G services from 2004 and full adoption will be made in January 2005.	Implemented for national long distance in 1997.
Malaysia	Not available	Only call-by-call selection available for long distance.
Mexico	Not available	Implemented for national and international long distance services.
New Zealand	Number portability is a designated service which imposes an obligation on telecommunications carriers to provide the service.	Implemented for all geographic calls and for fixed to mobile calls.
PNG	Not available	Not available
Peru	Not available	Preselection implemented for long distance calls in late 1999 with call by call choice available in 2002.
Philippines	Not available	Not available
Russia	Not available	Not available
Singapore	Mobile number portability implemented in August 2003.	Call-by-call selection available.
Chinese Taipei	Local number portability not considered a success (only 1,000 changes) as it precedes unbundling of the local loop.	Implemented for all geographic calls including call-by-call selection for long distance and international calls.
Thailand	When technically feasible, the NTC will prescribe the guideline and criteria for number portability.	The NTC will prescribe any measure to promote carrier preselection scheme.
USA	Local number portability and non-geographic portability implemented. This includes wireless carriers in the largest regions providing mobile to mobile and fixed to mobile number portability.	Implemented for all geographic calls.
Viet Nam	Not available	Not available

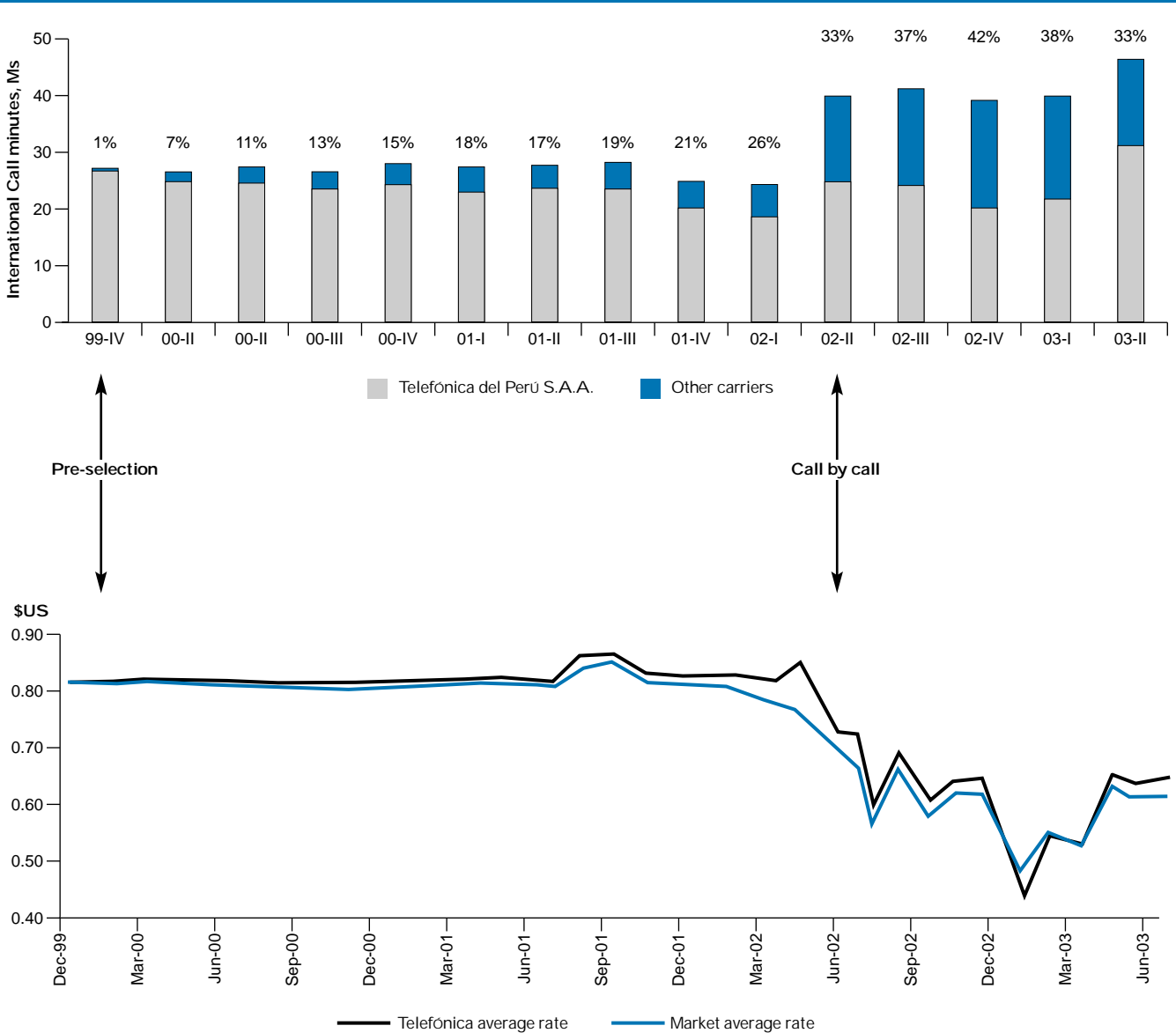
Source: OECD Communications Outlook 2003 and the Consultant

Case Study 2:

Peru and the Introduction of Equal Access

In developed economies, call selection was used to open-up the market for long-distance calls to provide more choice and drive down prices. The effects can be quite dramatic as the Peru experience shows. Over a period of two years from the introduction of preselection, new entrants gained about 20 percent of international call minutes while prices held-up. But, within a year of introducing call by call selection, new entrants' market share doubled to around 40 percent and prices fell by 40 percent¹⁶. This is because preselection was a tedious door-to-door signing-up activity (but see Mexican case next) whilst call selection is achieved by simply advertising the over-ride codes at attractive rates.

Figure 6 - Peru and Call Selection



Source: Osiptel (2003) slides presented to APEC-TEL28

16 This is a slightly dramatized statement measuring prices from peak to trough because they have since increased. The price trends in Figure 8 show a more steady decline based on averaged unit prices.

indirect access, equal access, over-ride or call by call selection) in some economies.

Table 5 (see page 23) summarises the situation and Case Study 2 shows the impact of introducing preselection and, later, call by call selection in Peru. This experience is compared with Mexico and Malaysia in Case Studies 3 and 4 respectively.

3.3 Market Performance Outcomes

There is no doubt that APEC economies are continuing to liberalise their telecommunications sectors. But, liberalisation is not a goal in itself but an instrument for achieving desired outcomes. The APEC Ministers' affirmed that *"wider access to telecommunications and information services, expanded and fair competition in the supply of goods and services, reductions in telecommunications prices and speedier development of telecommunications infrastructure will be important measures of the benefits to the region that flow from the development and liberalisation of the telecommunications and information infrastructure"* (Gold Coast Declaration, Australia, 1996). That is, the "bottom-line" for measuring the benefits of liberalisation is what it does for users. These benefits include:

- A Lower prices (also an indicator of effective competition and/or price regulation)
- B Increased levels of teledensity
- C Investment
- D Globalisation
- E Bridging the 'digital divide'

Since there are 21 APEC economies and this complicates graphical representation of outcomes, we have segmented APEC into four groups of economies as shown in Table 6 (see page 26). This is consistent with the Bogor Declaration¹⁹ which distinguishes between 'developed' and 'developing' economies. For the purpose of this report we distinguish between developed and developing on the basis of income per capita and teledensity (fixed plus mobile lines as a percent of total population). All the developed economies have over US\$10,000 annual per capita income and more fixed plus mobile phones than people (except for Brunei Darussalam). The developing economies all have less than US\$6,000 per capita income and less than 50% teledensity (except for Chile and Malaysia).

Case Study 3:

Mexico and the Introduction of Equal Access

Like Peru, Mexico introduced preselection but by ballot rather than door to door marketing. In 1997, nearly 4 million customers in sixty cities pre-selected one of seven long-distance carriers¹⁷. The immediate impact of the preselection was that Telmex lost 45 percent of its long-distance market, although it clawed back up to 70 percent share a year later which is where it is now (see Table 4).

Another important contributing factor to the drop in market share is probably the incumbent being "punished" for the rapid rate of rebalancing; in the year leading to the ballot residential and business line rentals increased over 50 percent on the previous year. In Peru, line rentals were unchanged through the introduction of preselection but increased by over 25 percent in the year before call by call selection was introduced; which again may demonstrate a "punishment" factor. In both cases, this is only a temporary phenomenon as the incumbent uses increased revenues from line rentals to provide more competitive long distance rates.

And, within the developed economy group we further distinguish between 'OECD' and 'non-OECD' economies (but note that this group excludes Korea and Mexico which are more recent members of the OECD). Finally, we segment developing economies into 'Asian' and 'non-Asian' economies. These classifications are used to facilitate presentation of data.

17 This case study comes from Mariscal (2002)

18 Equal Access was a policy formulated by the Minister and CMC's predecessor, JTM. Efforts to implement it were deferred from 1995 to 1999.

19 The Bogor Declaration of November 1994 commits APEC economies to free and open trade and investment for "developed" economies by 2010 and for "developing" economies by 2020.

Case Study 4:

Malaysia and the Introduction of Equal Access

Call-by-call selection using a 3-digit selection code was also implemented in Malaysia¹⁸ but it did not have the same impact on prices and market shares as in Peru. This was because an important aspect of its implementation in Malaysia was that operators were not allowed to offer discounts that resulted in prices falling below the incumbent's published rates by more than 20 per cent. This ruling was implemented to allow for a smooth transition to cost-based pricing and to avoid a price war; which was considered undesirable for the long-term viability of the industry.

Another factor limiting the impact is that it is harder and costlier for new entrants to gain market share by marketing code (call by call) access than by being awarded customers as part of a preselection ballot as undertaken in Mexico.

Table 6 – Classifications and Codes

Code	Developed Economies	Code	Developing Economies
	OECD		Asian
AUS	Australia	CHN	Peoples Republic of China
CAN	Canada	IDN	Indonesia
JPN	Japan	MYS	Malaysia
NZL	New Zealand	PHL	Philippines
USA	United States of America	THA	Thailand
		VNM	Viet Nam
	Non-OECD		Non Asian
BRN	Brunei Darussalam	CHL	Chile
HKG	Hong Kong, China	MEX	Mexico*
KOR	Korea*	PNG	Papua New Guinea
SGP	Singapore	PER	Peru
CHT	Chinese Taipei	RUS	Russia

* Also member in OECD

Source: The Consultant

3.3A Lower prices

Lower prices are a clear expectation of all users (Reference List Element 1b). Effective competition drives prices towards costs. Since cross-service subsidies tend to be large before competition²⁰, competition is associated with ‘rebalancing’ in which long distance prices fall while (to maintain rates of return) line rentals (and often also local call prices) increase.

As shown in Figure 7, domestic long distance revenues per minute in developed economies have fallen by 25 per cent (Australia) to 50 per cent (New Zealand and Chinese Taipei) since 1998²¹. Chile and Russia are the only two developing economies where domestic long distance prices are higher than they were in 1998²². In the Philippines, Peru and Mexico prices are 40 percent below 1998 levels and between 50 and 60 percent lower in Malaysia and China.

In the case of international prices shown in Figure 8 (see page 29), the story is more puzzling. The expectation is that international prices would fall more than domestic long distance prices because that is where profit margins are highest and competition is fiercest at the start of competition. Also, there is additional pressure on international prices from call-back operators, simple international resale (where this is permitted) and now VoIP or Internet based voice services. This expectation holds for the developed economies except Korea and Singapore. In the other

developed economies, international prices have fallen from 45 percent (USA) to 69 per cent (Hong Kong, China)²³.

In the case of developing economies international prices have hardly changed since 1998 in Chile, Vietnam, Indonesia and Russia²⁴. In the remaining developing economies, international prices have fallen between 40 percent (Mexico) and 70 percent (China and the Philippines).

The other side to rebalancing has been increases in line rentals. Figure 9 (see page 30) shows the trend in line rentals for residential customers. Australia has experienced the biggest increase since 1998 (47%) with no change before 2000. But

20 These include the calls to access, urban to rural and business to residential cross subsidies.

21 The ITU database does not have long distance call prices so a study by Pyramid Research for the World Bank/InfoDev and other data sources have been used; but data are available from 1998.

22 Domestic long distance and international prices are flat for Chile in Figures 7 and 8 because the big price changes occurred earlier than 1996. During 1994, the price of calls to the USA fell about 95 per cent and domestic rates collapsed similarly (Florissen et al. 2001).

23 We do not have international prices before 2000 for Canada, but since 2000 they have fallen over 30%.

24 Ignoring Indonesian and Russian changes between 1998 and 1999 which for Russia was due to a massive currency devaluation as the exchange rate went from 9.71 to 24.62 Roubles to the US\$.

the Australian residential line rental has not yet reached the level seen in other developed economies (see Figure 10 page 32).

Among the other developed economies, Hong Kong, China and Chinese Taipei have seen large increases since 1998. But, while Hong Kong, China's residential line rental is now at the same level as for other OECD economies (including Mexico but not Korea), the level of line rental in Chinese Taipei is still very low by developed economy standards (see Figure 10 page 32).

The developed economy benchmark seems to lie between US\$10-20, except for Korea, Singapore and Chinese Taipei which all lie below US\$5 per month. All the developing economies have line rentals below US\$5 per month except for the Philippines, Chile, Mexico and Peru (Figure 10).

3.3B Increased teledensity

The Reference List does not refer explicitly to the level of network development; only to choice. Mature markets can afford choice; many developing economies have no choice. That is, levels of teledensity are low and very often because the capacity to afford basic telephone service is low too. Here, we need to look at the mobiles network and the fixed network.

3.3B (i) Mobiles network

The good news is that the cost of providing network access and its affordability has significantly improved with mobiles networks relative to fixed networks. A big market change since 1996 is in the growth of mobiles relative to fixed services. In 1996, no economy had more mobile services

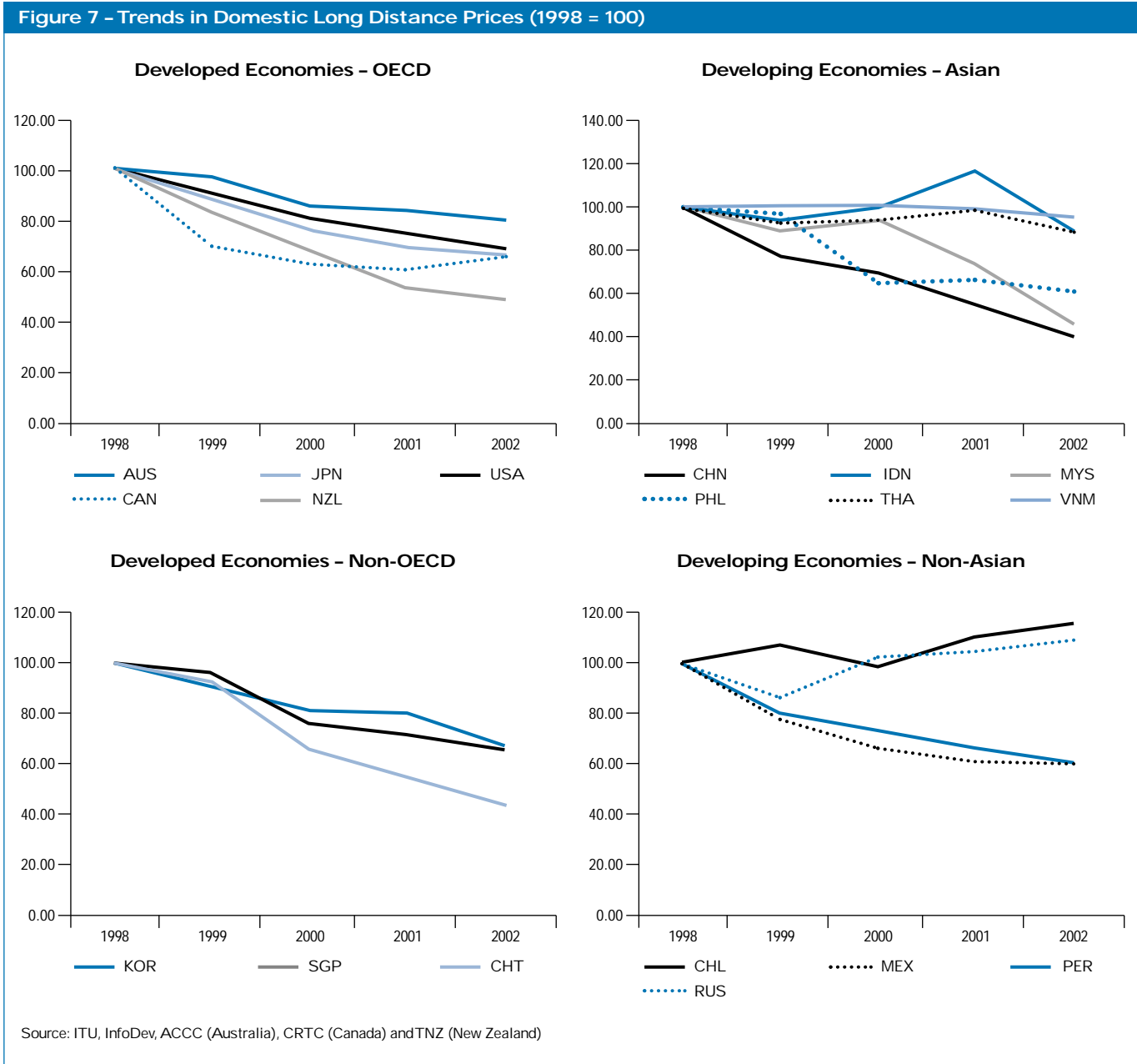


Table 7 – Fixed and Mobile Penetration Rates, % of Population

	1996		2002		Receiving Party Pays
	Fixed	Mobiles	Fixed	Mobiles	
Australia	50.1	21.8	53.9	64.0	
Brunei Darussalam	25.8	14.3	25.9	40.1	
Canada	62.3	12.1	63.5	37.7	RPP
Chile	14.9	2.2	23.0	42.8	
China	4.4	0.5	16.7	16.1	RPP
Hong Kong, China	53.6	21.2	56.7	93.0	RPP
Indonesia	2.1	0.3	3.7	5.5	
Japan	50.9	21.4	55.8	63.6	
Korea (Rep. of)	43.7	7.1	54.02	67.9	
Malaysia	17.8	7.2	19.2	37.9	
Mexico	9.3	1.1	14.7	25.5	
New Zealand	46.9	13.4	44.8	61.8	
Papua New Guinea	1.0	0.1	1.2	0.2	
Peru	6.0	0.8	7.6	8.7	
Philippines	2.6	1.4	4.2	17.8	
Russia	17.6	0.2	24.2	12.1	
Singapore	42.6	11.7	46.4	79.1	RPP
Chinese Taipei	46.5	4.5	58.2	106.2	
Thailand	7.2	3.2	10.5	26.0	
United States	61.6	16.4	65.9	48.8	RPP
Viet Nam	1.6	0.1	4.5	2.3	

Mobile teledensity is Total less Fixed teledensity. Latest data for Brunei and PNG is 2001

Source: ITU Telecommunications Indicators 2003

than fixed services. But, in 2002 all but six economies have more mobile subscribers²⁵. This is shown in Table 7 above.

Another important structural factor to take account in relation to the relative growth of the mobile and fixed markets is the payment system. The most common is “calling party pays” and the other type is “receiving party pays”. When Peru and Mexico switched from RPP to CPP in 1996 and 1999 respectively, they each experienced a surge in mobiles demand. In Table 7 above the mobile penetration rate in 2002 exceeded that for the fixed network in every CPP economy except Papua New Guinea, the Russian Federation and Vietnam. In the major RPP economies of Canada and the United States, mobile penetration rates continue to lag those of the fixed network. In the other RPP economies (including China soon), however, this system has not prevented mobile penetration rates overtaking those of the fixed network.

With mobiles playing an important role in network extension in developing economies, it might be thought that

mobile pricing constrains the pricing of the fixed network. But, this is not the case. Table 8 shows that mobile service is still a premium service in terms of call prices and monthly fixed charges. In all cases, the cost of a three minute peak local call is greater on the mobile network than the fixed network. In all but four economies (Australia, Brunei, Hong Kong, China and the Philippines), the monthly rental is higher for mobile service. The major market attractions of mobiles are low up-front connection fees (ie handset plus SIM card), instant access (ie no waiting list) and control of budget with pre-paid accounting for over 60 percent of mobile services in developing economies (except China). In Malaysia, even the poorest 40 percent of households can

25 The exceptions were Canada, China (but this has changed), Papua New Guinea, Russia, USA and Vietnam. At least two of these (Canada and the USA) operate “receiving party pays” (RPP) retail pricing which is known to be less favourable to mobiles growth than “calling party pays” (CPP).

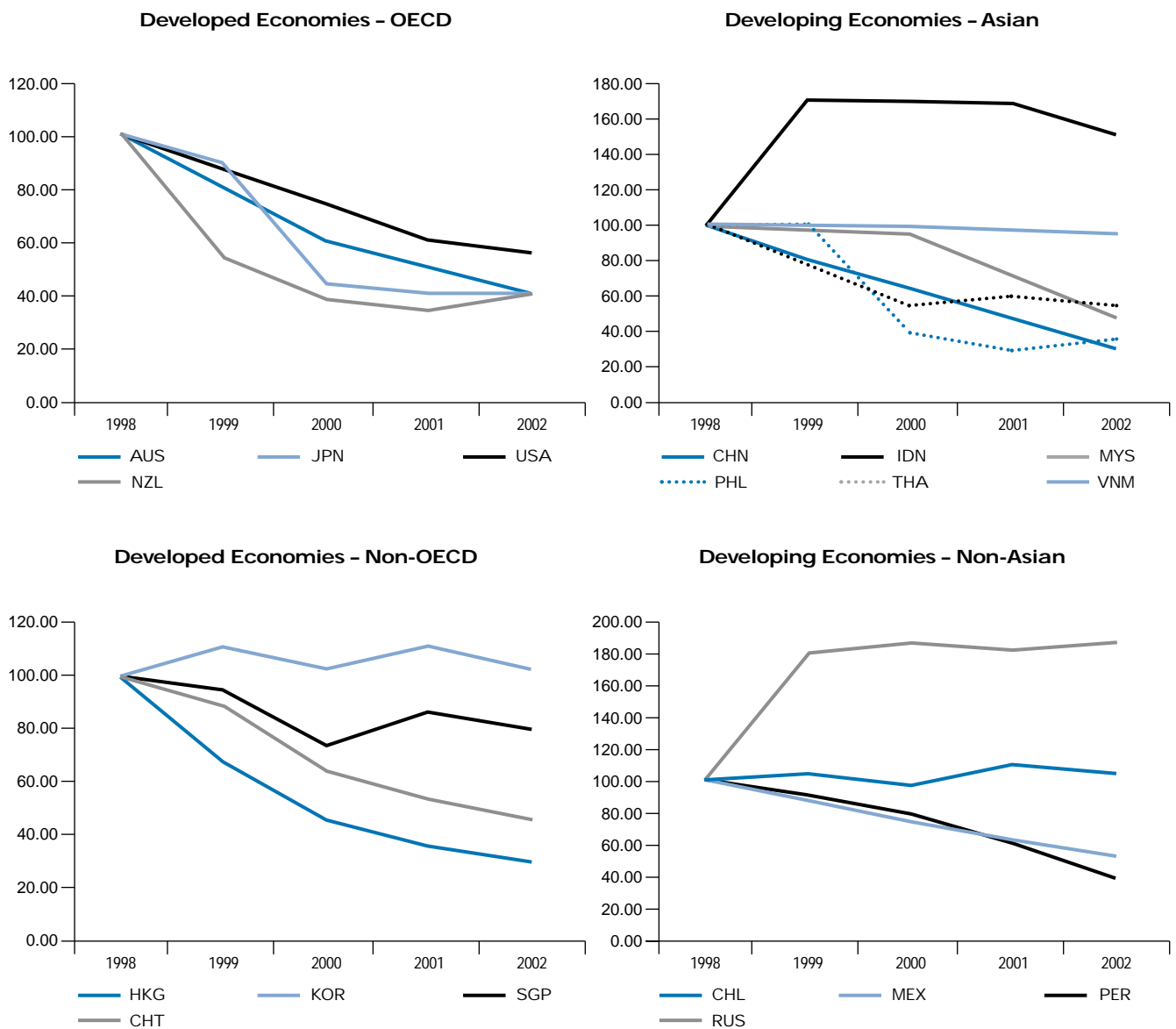
Case Study 5:

Chinese Taipei and Mobiles

Table 7 (previous page) shows mobile teledensity in Chinese Taipei to be higher than any other APEC economy. This is the major reason for its top overall performance (Figure 12). Why is this so and can others learn from this dramatic improvement in the most basic indicator of telecommunications development?

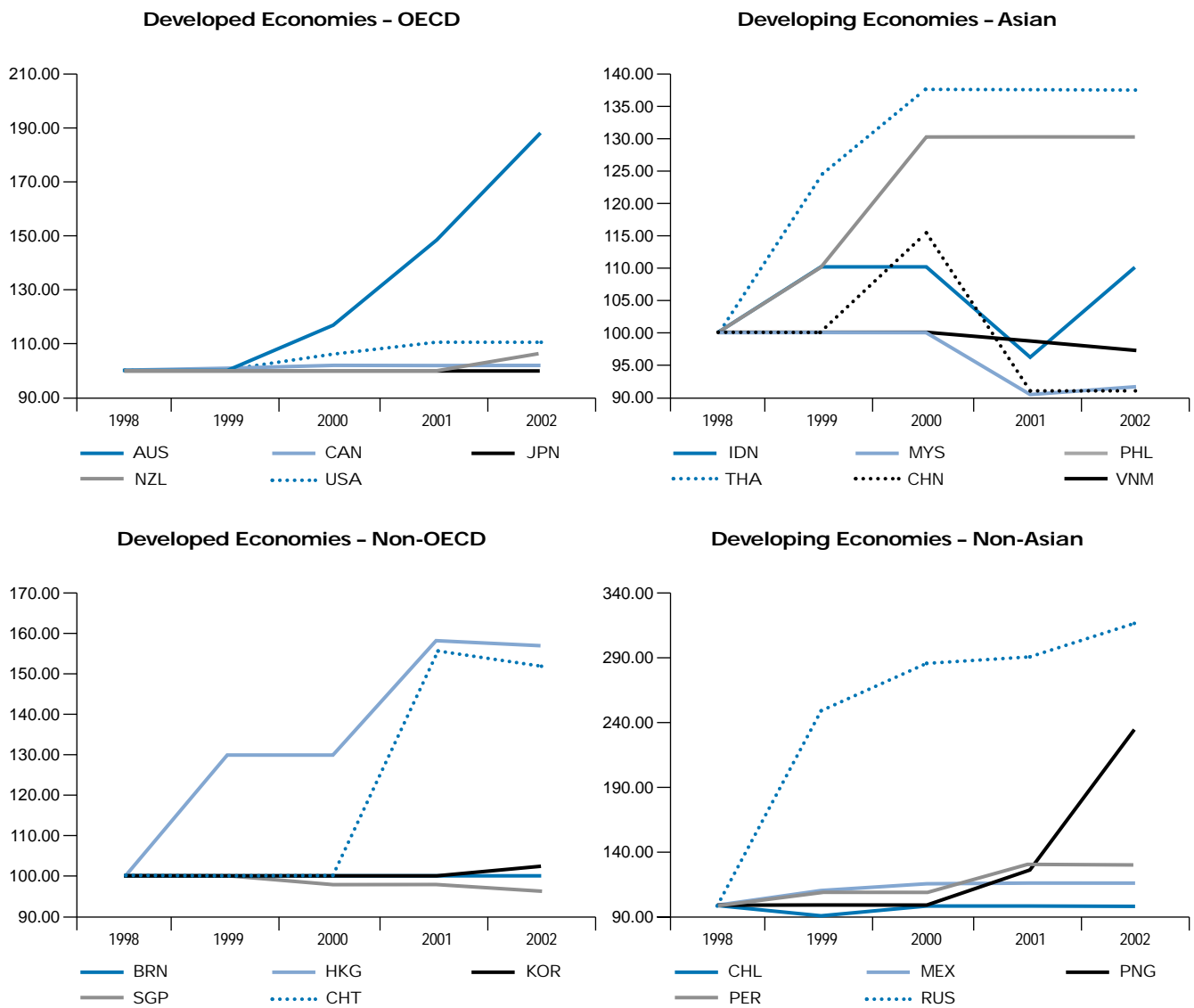
Liberalisation is part of the answer; there were seven (now five) mobile operators. In other economies, it is sometimes said that high fixed to mobile termination charges cross-subsidise the expansion of mobile networks from the fixed network. In Chinese Taipei they go another step beyond that and attribute all retail revenue to mobile network operators which can also set the retail rates.

Figure 8 - Trends in International Prices (1998=100)



Source: ITU, InfoDev, ACCC (Australia) and TNZ (New Zealand)

Figure 9 – Trends in Residential Line Rental (1998=100)



Source: ITU Telecommunications Indicators database, July 2003 and Pyramid for Russia and Vietnam

afford a mobile prepaid package including handset for 2.4 percent of yearly income²⁶.

3.3B (ii) Fixed network

In regard to the fixed network, the problem of unsatisfied demand seems to have been solved with only Russia and Thailand reporting over 10 percent on waiting lists – see Figure 11. Economies not shown have not reported waiting list data to the ITU.

Figure 12 (see page 33) shows how each economy has increased total teledensity, the most basic measure of telecommunications development.

All the OECD economies except Mexico and Korea have seen declines in fixed teledensity in the last year or 3 years; especially in Canada, Japan and New Zealand (Figure 13). This

cannot all be due to an emerging preference for mobile phones as overall density has also declined in both Canada²⁷ and NZ.

In Malaysia increases in fixed teledensity topped out around 1996 at about 20 percent. This could be due to exceptionally strong growth in mobiles which is pushing up overall teledensity (Figure 12). Peru's fixed line teledensity appears to have stalled from around 1997 without any compensating improvements in mobile penetration to drive up overall teledensity.

26 ITU (2002) Multimedia Malaysia

27 Another possible factor for Canada and some other economies may be the take-up of broadband reducing the demand for second lines.

Table 8 – Fixed versus Mobile Pricing, US\$ in 2001

	Prepaid	Connection fee		Monthly rental		Local call fee (1)	
	Mobiles, %	Fixed	Mobiles	Fixed	Mobiles	Fixed	Mobiles
Australia	31.8	108.29	0.00	9.07	5.18	0.11	2.05
Brunei Darussalam		27.93	16.76	9.50	5.59	0.00	0.17
Canada	11.9	35.48	22.58	12.52	16.13		0.48
Chile	77.8	37.57		9.37		0.10	
China	22.8		0.00	2.42	6.04	0.03	0.14
Hong Kong, China	34.4	60.90	12.82	14.10	12.56	0.00	0.38
Indonesia	65.0	24.36	19.49	1.97	6.33	0.02	0.10
Japan	3.0	599.03	24.69	14.40	36.21	0.07	0.58
Korea (Rep. of)	1.0	46.48	38.73	3.10	11.62	0.03	0.29
Malaysia	67.9	13.16	13.16	4.74	15.79	0.02	0.36
Mexico	92.3	120.99	0.00	16.76	25.70 (2)	0.16	0.83
New Zealand	67.9	26.00	8.40	15.27	6.28	0.00	1.63
Papua New Guinea		14.75	26.55	1.18	11.80	0.06	0.66
Peru	76.2	157.60	50.00	16.91	20.99	0.10	0.91
Philippines	85.5	19.61	32.36	11.94	11.77	0.00	0.47
Russia							
Singapore	27.0	16.76	5.59	4.65	22.35	0.02	0.34
Chinese Taipei	22.8	88.76	0.00	2.07	17.75	0.05	0.53
Thailand	79.0	75.40	22.51	2.25	11.25	0.07	0.20
United States	5.0	42.72		21.84		0.00	
Viet Nam	68.1	111.10	55.55	1.83	9.26	0.02	0.33

(1) Local call is three minute peak rate call, some fixed local calls are untimed.

(2) But this applies to less than 8% of customers. Average revenue per user (includes pre-paid users and all calls) is currently around \$16.50 per month for the largest mobile operator.

Source: ITU World Telecommunications Indicators Database, July 2003, Osiptel (Peru) ITU (2002)

3.3C Investment

Investment is the measure of success in relation to Reference List Element 4 and an important element for both developed and developing economies because investment is key to the longer term development of communications infrastructure and new services.

Figure 14 (see page 35) compares trends in telecommunications investment across the APEC economies. The developed economies except for Japan, New Zealand and Hong Kong, China show investment levels higher than 1996 with Chinese Taipei the best performer. The levels of investment in Japan and Hong Kong, China are disappointing.

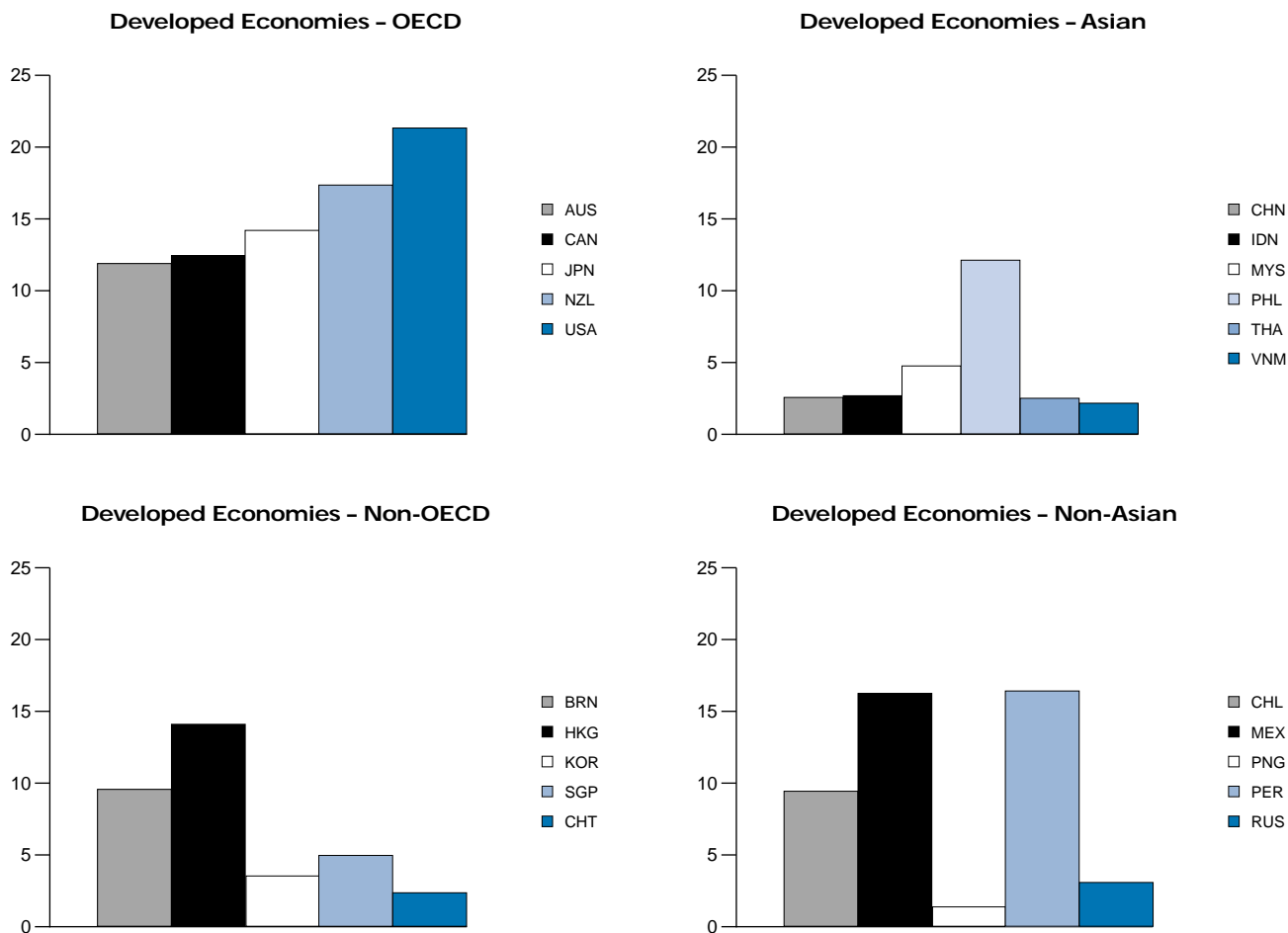
The developing economies generally have higher investment levels than 1996 too with China, Chile and

Mexico performing particularly well. However, investment levels in Indonesia²⁸ and Peru (despite unconditional foreign investment; section 3.1B) are lower than in 1996.

The 1997 Asian Crisis and the “dot.com crash” of 2000 changed investor sentiment towards the telecommunications sector. The ITU notes that: “Many policy experts had predicted that the Asian financial crisis would spark a wildfire of privatisations and create openings for foreign capital. It appears to have had nearly the opposite effect,

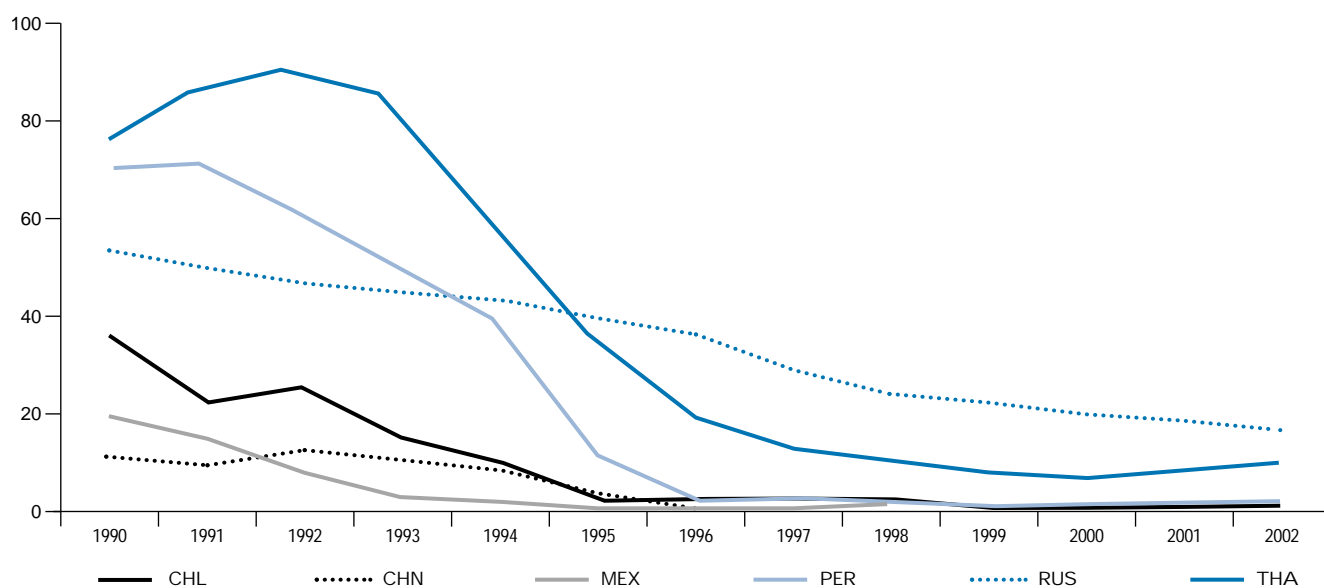
28 The ITU's reported investment figures for the United States do not agree with national sources and the reported figure for Indonesia in 2001 is omitted from Figure 14 as it seems open to question.

Figure 10 - Monthly Residential Rental, 2002 (US\$)



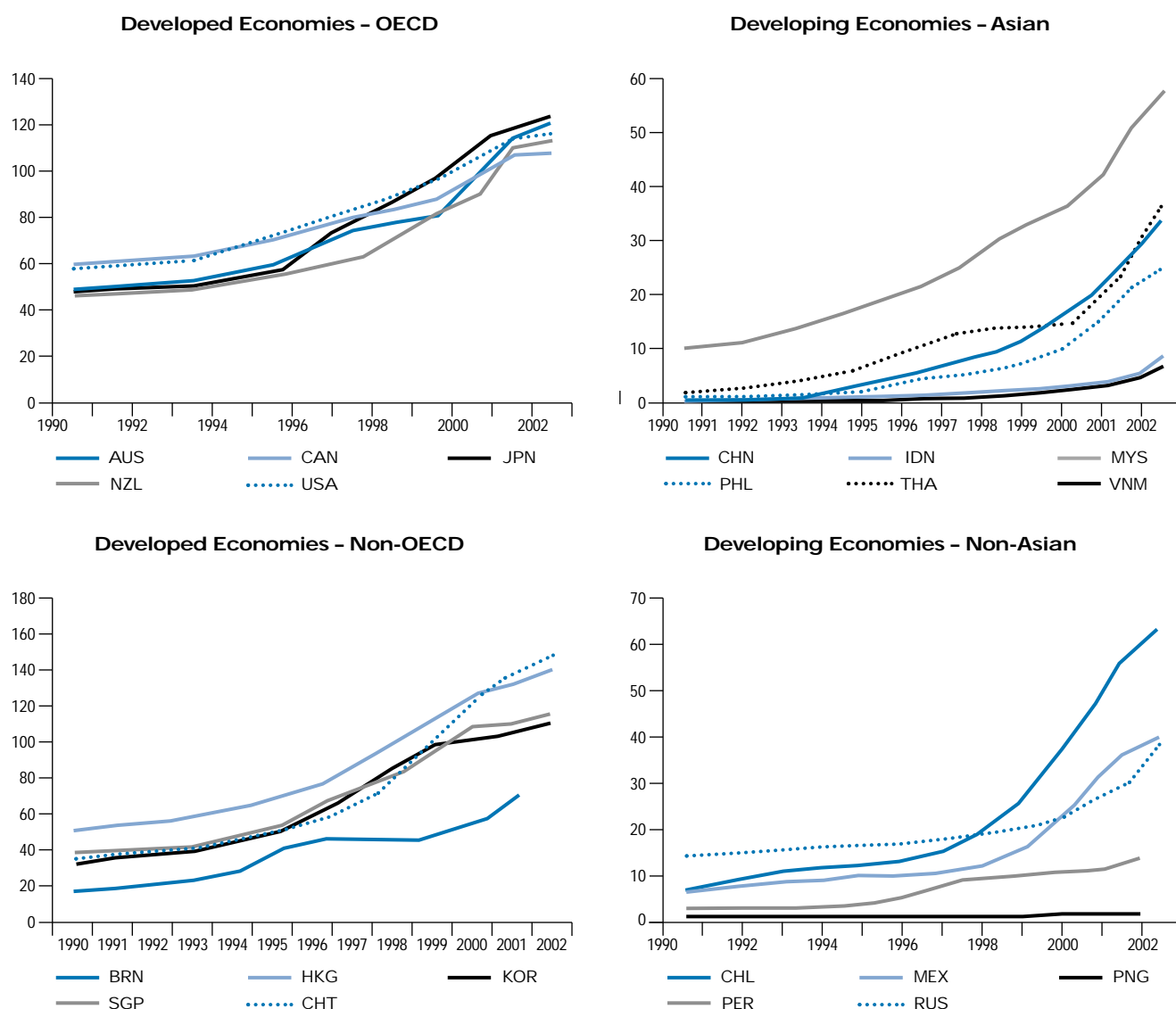
Source: ITU Telecommunications Indicators database, July 2003

Figure 11 - Waiting List per 100 Fixed Phones



Source: ITU World Telecommunication Indicators Database, July 2003

Figure 12 - Total Telephone Penetration (%)



Source: ITU World Telecommunications Indicators database, July 2003

however. The immediate impact of the financial crisis was a clamp-down on foreign investment by many countries – with Malaysia perhaps the best example²⁹.

3.3D Globalisation

Globalisation is not referred to explicitly in the Reference List but global integration to foster trade and investment is one of APEC's main underlying purposes. As expected, Hong Kong, China and Singapore are highly globalised in terms of both trade and investment in relation to GDP. Malaysia also stands out, mainly because of its high levels of trade in relation to GDP.

Between 1991 and 2000, the two ratios increased for all

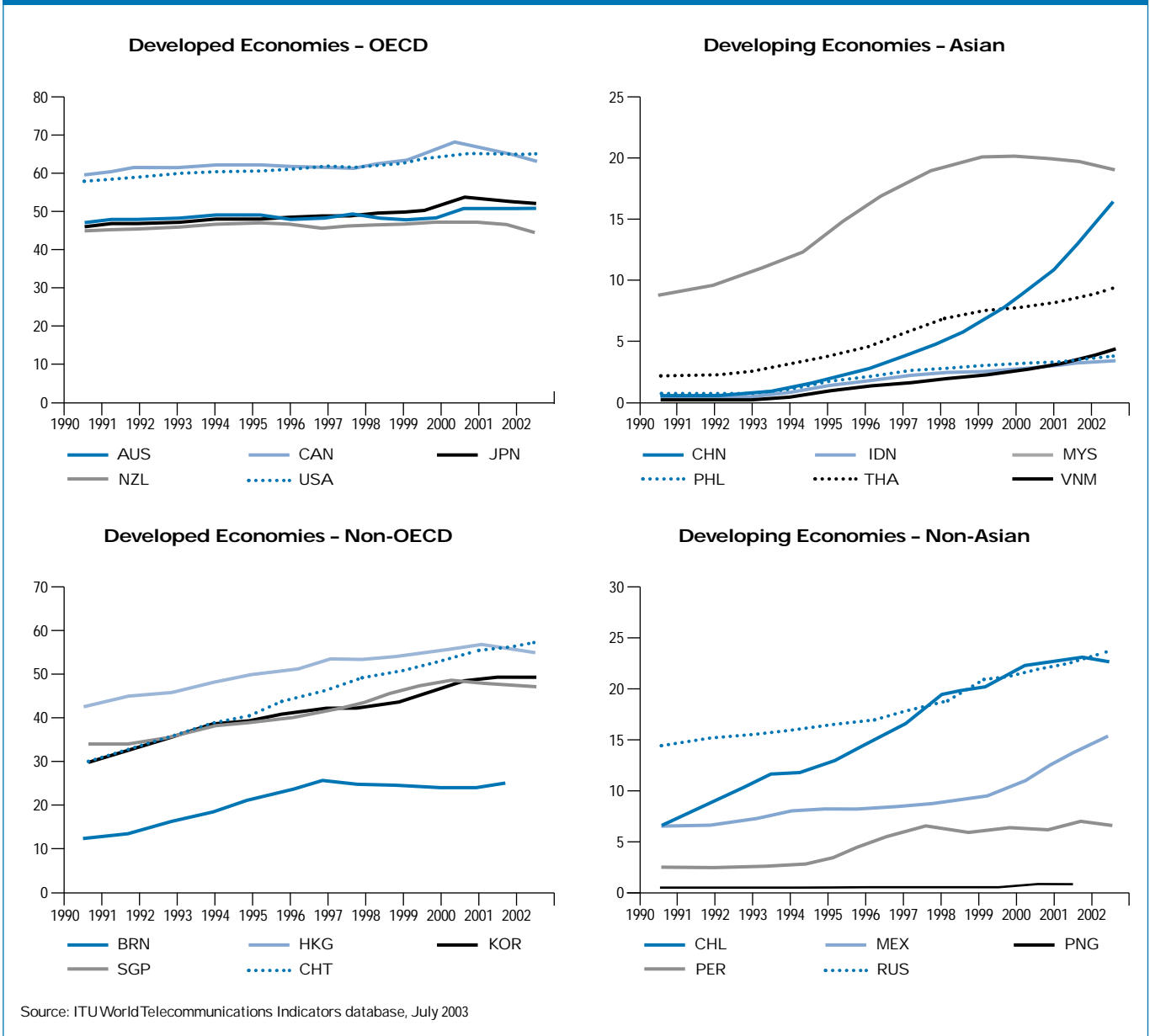
economies except for Japan, New Zealand and PNG where the foreign investment ratio fell slightly (see Table 9 on page 36).

3.3E Bridging the 'Digital Divide'

Bridging the 'digital divide' is an important item on the APEC agenda and is the first objective in the Cancun Declaration. The extent of the digital divide within APEC is shown in Figure 16 and Table 10 (see page 37). The 'Digital Access Index (DAI)' developed by the ITU combines eight measures assessing the availability of infrastructure, affordability of

29 ITU Trends in Regulatory reform 2000-01

Figure 13 - Fixed Telephone Penetration (%)



access, educational level, quality of ICT services and Internet usage³⁰. One of these variables is shown on the horizontal axis below to help illustrate the divide. Note that apart from Brunei (counted as a developed economy in our taxonomy) all the developed economies are grouped in the top right hand corner of the chart. All the developing economies are on the left of the chart apart from Chile and Malaysia.

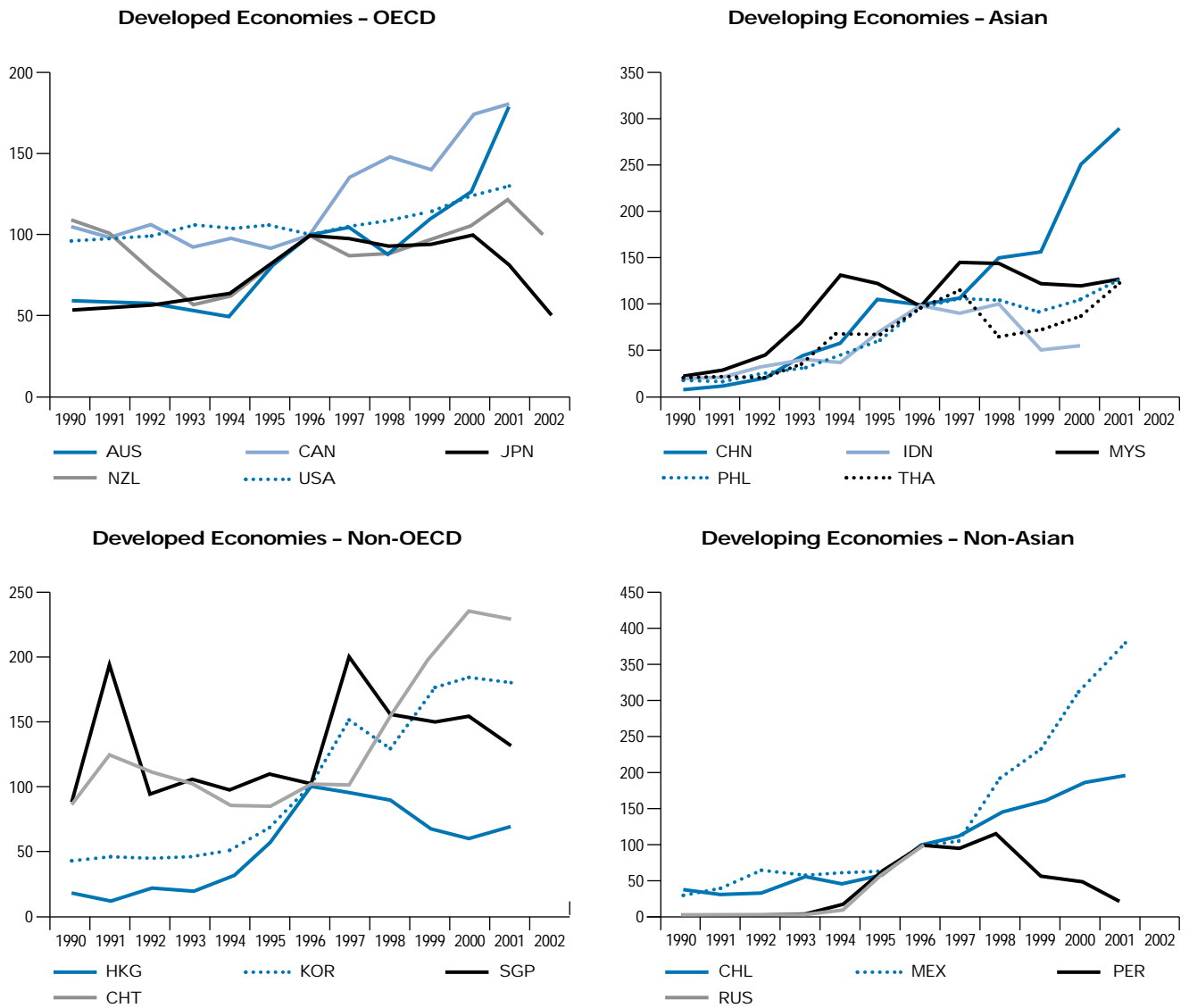
The ITU reports that similar data to compute the DAI for 1998 could be found for 40 economies. This shows that since 1998 Korea and Chinese Taipei have jumped 20 and 13 places respectively among the 40 economies. Korea is the leading APEC economy on the DAI index and fourth globally behind Sweden, Denmark and Iceland. Chinese Taipei and Hong Kong, China are also among the top ten globally on the DAI. The ITU attributes the significant improvement in

Korea to “strong government commitment to ICTs with the payoff noticeable in high levels of broadband connectivity and internet usage”³¹ but see Case Study 9 in Section 5.2 for an alternative perspective.

30 The 8 measures are: 1-fixed teledensity, 2-mobile teledensity, 3-cost of internet access relative to GDP per capita, 4-adult literacy, 5-school enrolment, 6-international bandwidth per capita, 7-broadband density and 8-internet density. ITU (2003): World telecommunications development report: Access indicators for the information society”.

31 Korea launched its first master plan for Informatization Promotion in 1996, the second Cyber Korea 21 plan in 1999 and the third master plan for informatization promotion: “e-Korea Vision 2006” in April 2002.

Figure 14 - Telecoms Investment (1996=100)



Source: ITU World Telecommunications Indicators Database, July 2003

Figure 15 – Globalisation Indices for APEC

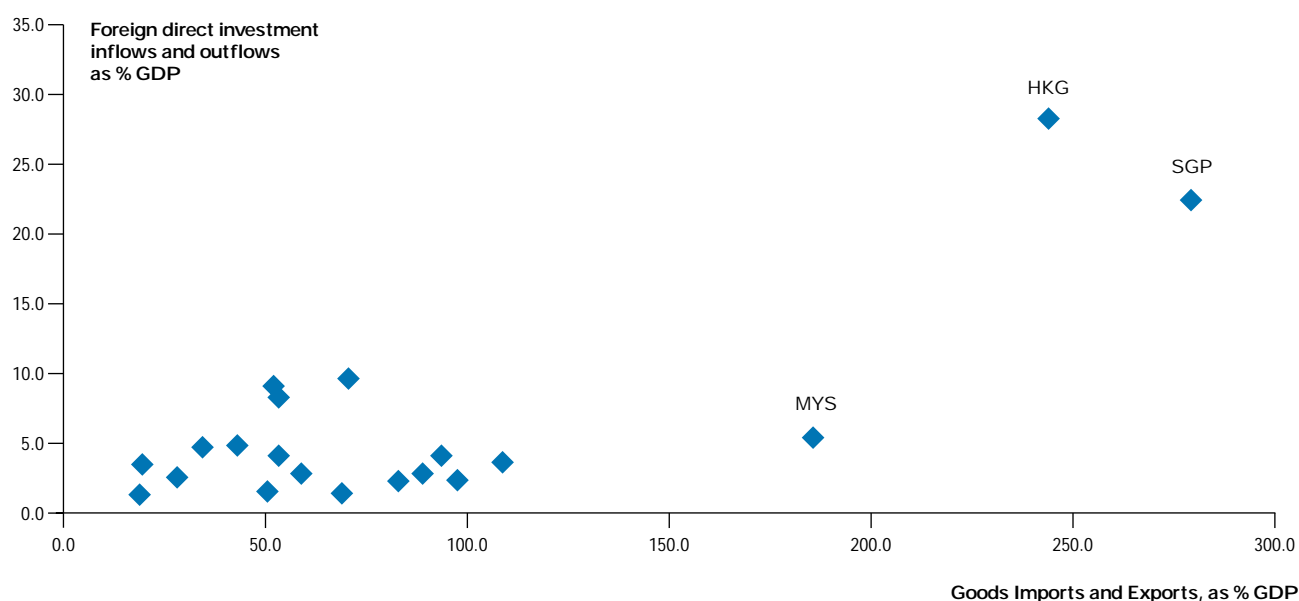


Table 9 - World Bank Globalisation Indicators

	1991 A	B	2000 A	B	A+B	rank in 2000
Australia	26.3	3.7	34.5	4.8	39.3	17
Brunei Darussalam						
Canada	43.7	2.7	70.1	9.6	79.7	9
Chile	53.1	2.2	52.2	9.2	61.4	13
China	32.5	1.2	44.0	4.9	48.9	16
Hong Kong, China	223.5		242.8	28.8	271.6	2
Indonesia	41.5	1.0	60.1	3.2	63.3	11
Japan	17.1	1.7	18.2	1.1	19.3	20
Korea (Rep. of)	53.4	0.7	69.1	1.5	70.6	10
Malaysia	133.4	5.3	184.0	5.7	189.7	3
Mexico	32.1	1.0	54.2	4.6	58.8	14
New Zealand	43.3	11.5	53.7	8.5	62.2	12
Papua New Guinea	73.6	4.8	97.3	2.2	99.5	5
Peru	25.5	0.2	29.1	2.2	31.3	18
Philippines	47.7	1.2	88.9	2.7	91.6	7
Russia			50.6	1.6	52.2	15
Singapore	309.5	20.7	277.6	22.0	299.6	1
Chinese Taipei	75.9	1.9	83.3	2.2	85.5	8
Thailand	65.7	3.0	110.9	3.5	114.4	4
United States	15.8	2.8	19.0	3.1	22.1	19
Viet Nam	79.7		93.6	4.0	97.6	6

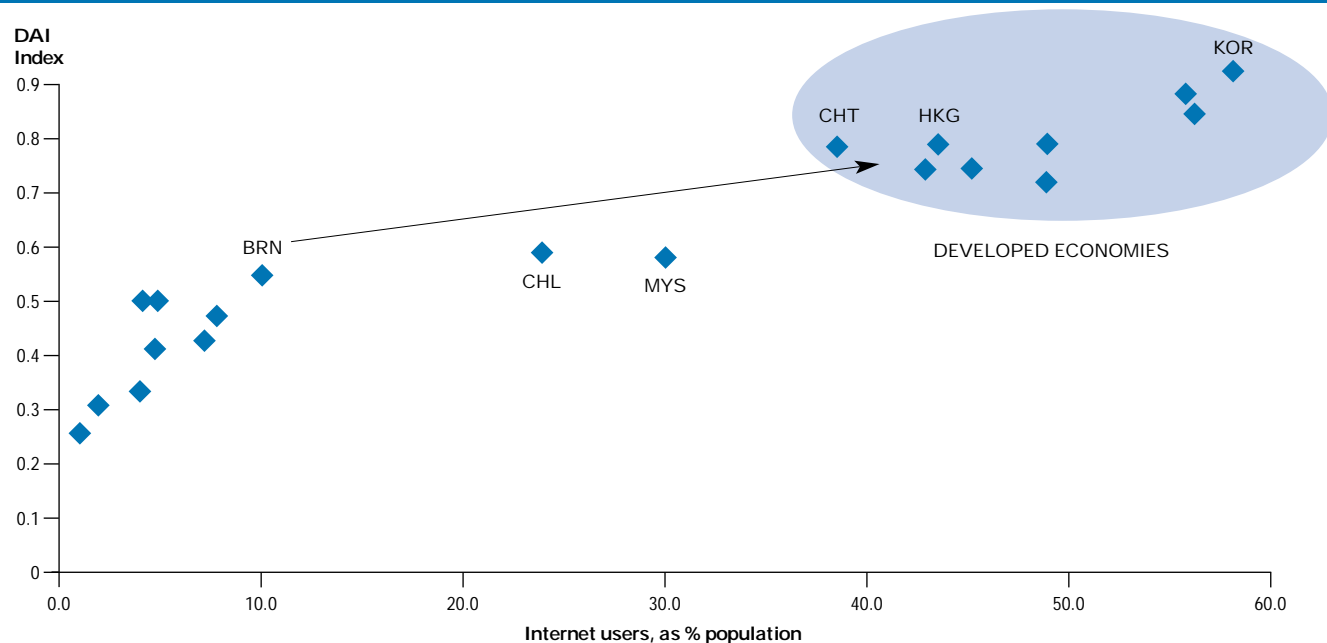
Notes:

A Goods imports plus exports as percent of GDP

B Foreign direct investment, inflows plus out flows, as percent of GDP

Source: World Bank Development Indicators, 2003 and www.dgbas.gov.tw

Figure 16 - The International Digital Divide



Source: Table 10

Table 10 - The International Digital Divide

		Internet Users%	ITU DAI	DAI rank
AUS	Australia	42.7	0.74	8
BRN	Brunei Darussalam	9.9	0.55	12
CAN	Canada	48.4	0.78	4
CHL	Chile	23.8	0.58	10
CHN	China	4.6	0.43	17
HKG	Hong Kong, China	43.1	0.79	2
IDN	Indonesia	3.8	0.34	19
JPN	Japan	44.9	0.75	7
KOR	Korea (Rep. of)	55.2	0.82	1
MYS	Malaysia	30.8	0.57	11
MEX	Mexico	9.8	0.5	14
NZL	New Zealand	48.4	0.72	9
PNG	Papua New Guinea	0.9	0.26	21
PER	Peru	7.5	0.44	16
PHL	Philippines	4.4	0.43	18
RUS	Russia	4.1	0.5	13
SGP	Singapore	54.0	0.75	6
CHT	Chinese Taipei	38.1	0.79	3
THA	Thailand	7.8	0.48	15
USA	United States	53.8	0.78	5
VNM	Viet Nam	1.8	0.31	20

Source: ITU World Telecommunications Development Report, 2003

4. A reality check on expectations

The need to allow economies to make their own choices and the fact that 'one size does not fit all' are usually understood. Certainly, there is a wide variety of circumstances across the APEC group as shown in Table 11.

4.1 Policy priorities

Universal service for standard telephone service has been largely achieved in developed economies that have high levels of teledensity and affordable telephone service. Their policy goals have shifted towards promoting competition in order to drive down prices and increase customer choice. But in developing economies, the level of economic and social development, as evidenced by very low teledensity rates, means that the over-riding aim of policy is to rapidly improve teledensity and increase investment in voice telecommunications. The different priorities of developed and developing economies are shown in Table 12 opposite.

4.2 Size limitations

Choice is a shared end-goal for all economies, but for users in economies with low teledensity the desirable outcome may be simply having access to a telephone. A fully liberalised market with low levels of teledensity is not a satisfactory end-state.

In terms of choice with respect to the number of suppliers, it is not clear whether more progress could be made. One of the two APEC economies with a monopoly in both fixed and mobile networks is Brunei Darussalam which is a rich but very small economy; in fact, the smallest APEC economy with less than half a million population. So, it may not be attractive to prospective new entrants. And, Papua New Guinea is poor and also quite small. These two economies are the smallest two circles in Figure 17 which shows only those economies with less than 100 percent teledensity. The size of the circles reflects size of the

Table 11 – Basic Indicators

	Population 2002	Pop. Density pop/km ² 2000	GDP/head US\$ 2000	Main lines % 2002	Mobiles % 2002	Total % 2002
Australia	19,662,780	2	19,897	54	64	118
Brunei Darussalam	352,000	50	13,029	26	40	66
Canada	31,414,000	3	24,009	64	38	101
Chile	15,050,341	20	4,965	23	43	66
China	1,284,530,048	133	833	17	16	33
Hong Kong, China	6,773,000	6,564	24,814	57	93	150
Indonesia	212,110,000	111	738	4	6	9
Japan	127,530,000	336	37,544	56	64	119
Korea (Rep. of)	47,600,000	472	10,036	54	68	122
Malaysia	24,370,000	70	3,869	19	38	57
Mexico	103,039,964	50	5,856	15	25	40
New Zealand	3,939,100	14	13,311	45	62	107
Papua New Guinea	5,464,000	10	777	1	0	1
Peru	26,748,972	20	2,085	8	9	14
Philippines	79,982,000	252	979	4	18	22
Russia	146,586,000	9	1,709	24	12	36
Singapore	4,163,700	6,502	23,137	46	79	125
Chinese Taipei	22,520,000	616	13,985	58	106	164
Thailand	61,887,000	122	2,018	11	26	37
United States	288,368,704	30	35,082	66	49	115
Viet Nam	81,248,496	236	390	5	2	7

Source: ITU World Telecommunications Indicators Database, July 2003 and (for population density) The Economist's Pocket World in Figures, 2003

economy in terms of GDP.

The same issue of scale applies only to a lesser extent for the other developing economies in APEC. Figure 18 extends Figure 17 to all APEC economies and clearly shows the much larger markets available in all the developed APEC economies.

4.3 Cost limitations

Not only is there an affordability issue for the developing economies in APEC, but there is also an issue in the cost of providing service³². With the exceptions of the Philippines and Vietnam, APEC's other developing economies³³ have to cope with population densities of less than 150 people per square kilometre. This is the geographically disadvantaged group in Figure 19 below. Of course, some developed economies have low population densities too, but they have more resources.

These are average national populations densities and the degree of urbanisation could mitigate the disadvantage significantly. For example, Korea's average population density is 472 but Seoul has the world's second highest city population density (23,908). Part of Korea's success in deploying broadband may be attributed to high levels of population density which reduce the cost per line.

4.4 Universal service

In all liberalizing markets, some consideration has been given to universal service policy³⁴. In developed markets this is born of the fear that some users may drop-off the network as rebalancing of tariffs occurs or as service providers focus

only the profitable users. Some developing economies have used this instrument of policy to actively enhance levels of access to the network (eg Chile and Peru). Table 13 provides an overview of what is being done.

Whilst Table 13 provides only a very broad overview of USO regimes, there are some interesting observations to be drawn from it. First, an important way of dealing with low levels of teledensity is to provide public access telephones (payphones). This brings the telephone to villages although it does not impact teledensity measures much. Case Study 6 provides some details of the Chilean approach. Second, this approach has been extended to include Internet access in several economies; eg Brunei Darussalam, Malaysia and Peru. Third, in all but one economy with a USO regime, subsidies are provided through government or industry levy arrangements. The exception is the Philippines which builds roll-out obligations into licence conditions, as discussed earlier in Case Study 1.

32 For example, in Australia the 5 percent of customers in service areas with less than 2 lines per square kilometer account for 25 percent of total costs (Productivity Commission, 2000 at www.pc.org.gov.au)

33 Chile, Malaysia, Mexico, PNG, Peru, and Russia have less than 100 people per square kilometer and China, Indonesia and Thailand have less than 150.

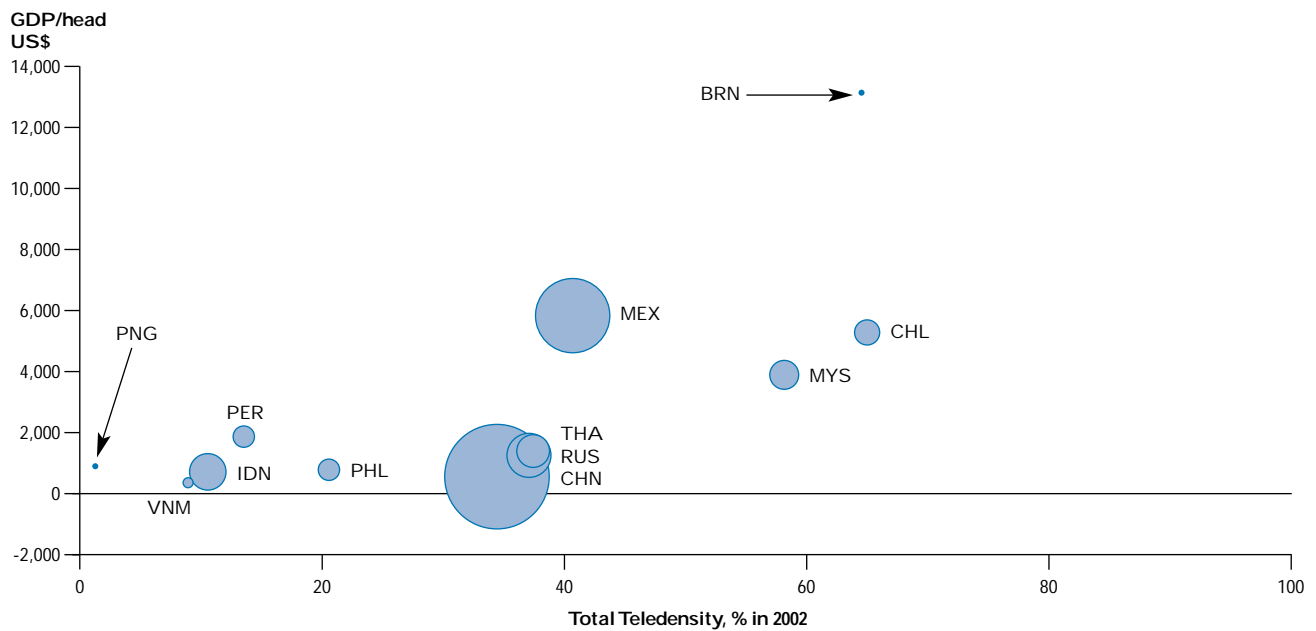
34 A useful definition is: "The principal aim of...universal service policy...is to ensure that a defined set of services is made available to all users, independently of their geographical location...at an affordable price..." Commission of the European Communities, 8th Report on the Implementation of the Telecommunications Regulatory Package, December, 2002.

Table 12 – Telecommunication Policy in Developed and Developing Economies

	Developed Economies	Developing Economies
GDP per capita (US\$)	Over \$10,000	Under \$6,000
Total teledensity	Over 100%	Under 50%
APEC economies	Australia, Brunei, Canada, Chinese Taipei, Hong Kong- China, Japan, Korea, New Zealand, Singapore and USA	Chile, China, Indonesia, Malaysia, Mexico, PNG, Peru, Philippines, Russia, Thailand and Vietnam
Policy focus	Choice and efficiency	Build out and WTO
Bandwidth focus	Broadband	Narrowband
Network status	Established network: entrants rely on existing customer access network	Entrants need to build customer access networks from scratch
Telephony focus	Fixed network	Mobiles: preferred option for build-out
Demand factors	Mass demand for communications	Affordability a major issue
Investment environment	Economies can afford some duplication and experimentation	Investment resources often inadequate

Source: de Ridder (2003)

Figure 17 - Potential Growth in Developing Economies



Source: Table 11

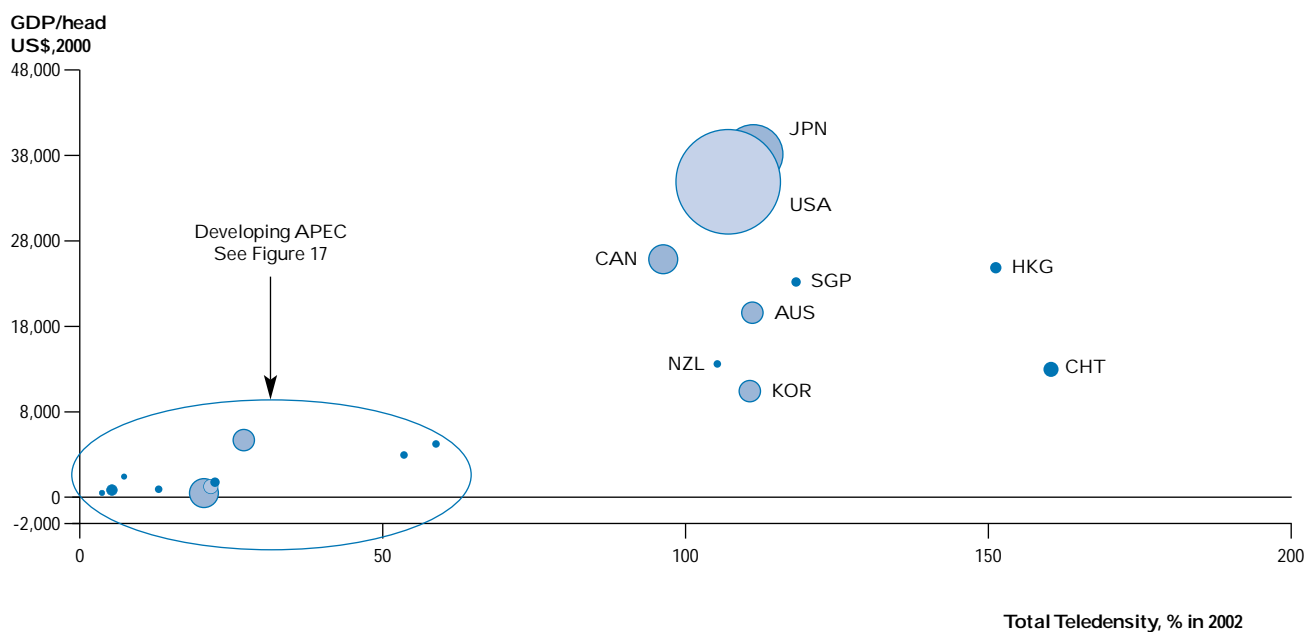
4.5 Tariff rebalancing

In developed economies, the extension of universal service has been promoted by the cross-subsidisation of line rentals from call revenues. But, competition drives prices towards costs so that cross-subsidies cannot continue to exist. Consequently, we see major 'rebalancing' with retail line

rentals increasing and call tariffs falling with competition. Rebalancing is illustrated in Case Study 7 on page 43.

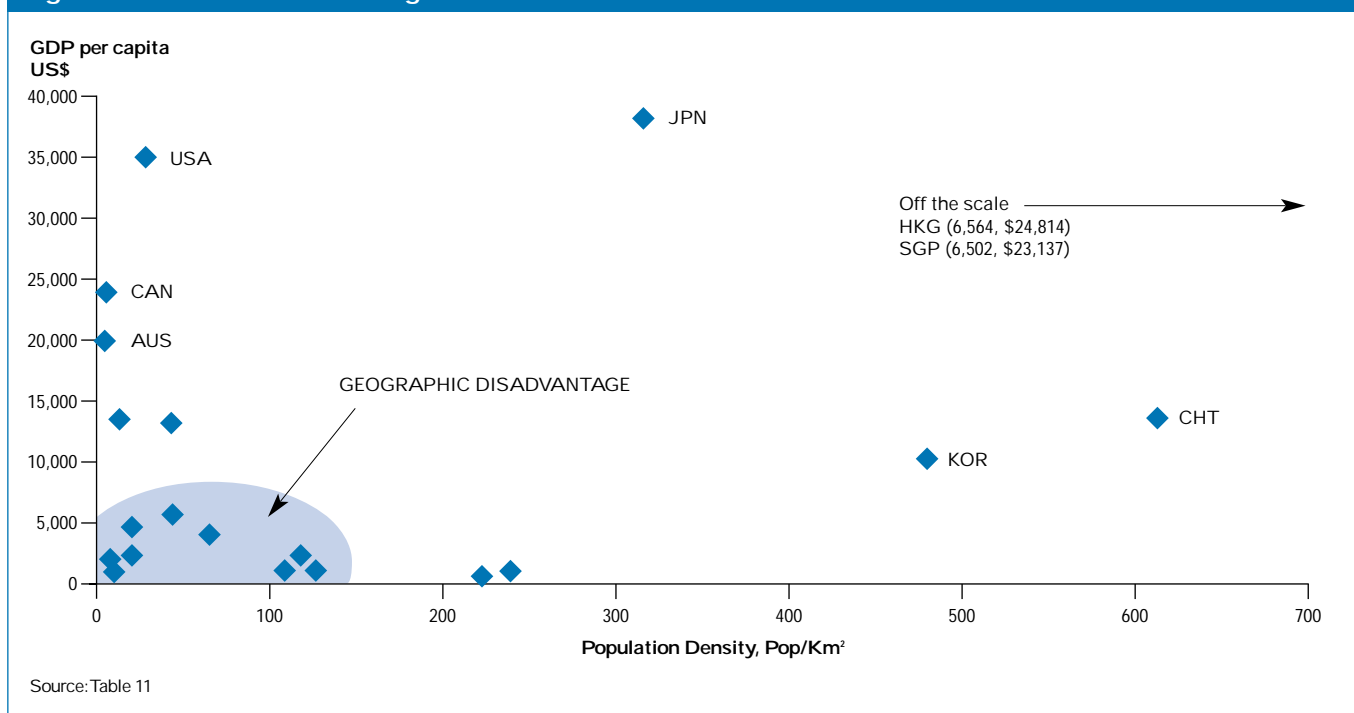
There are two problems with tariff rebalancing for developing economies. First, it threatens the affordability of universal service on the fixed network. Some might argue this may not be undesirable if mobiles is a cheaper technology to deploy and fixed tariff rebalancing makes the

Figure 18 - Potential Growth in all APEC



Source: Table 11

Figure 19 – The Dual Disadvantage



cheaper technology relatively more attractive. However, Internet connection, especially high-speed connection is still dependent largely on access to fixed line service. Each economy has to decide whether this affordability issue can be satisfactorily addressed by payphone and tele centre subsidy initiatives of the kind described in section 4.4.

Second, while tariff rebalancing progresses (and this will take time as observed in Case Study 7), the incumbent which is usually the main provider of new lines may be financially

distressed as the margins on long distance calls are appropriated by loss of market share and price competition. This also affects other builders of local access lines. It may help explain why the increase in fixed line teledensity (Figure 13) stalled with introduction of equal access in Malaysia and Peru (but not Mexico, see Case Studies 2, 3 and 4 above). In a monopoly context where lines and calls are joint in both supply and demand, the line provider can continue to cross-subsidise the cost of providing the line

Case Study 6:

Chile and Universal Access

The importance of payphones to Chile can be seen in Figure 20 which shows that payphone penetration increased more than four-fold; the biggest change of any APEC economy. By contrast, in all the developed OECD economies in APEC (except for Korea) payphone penetration has decreased.

From 1995 to 1999, the Chilean government paid subsidies of US\$21m into 183 projects providing public access telephones in 5,915 localities serving a population of about 2.2 million people³⁵. On average, each public access telephone served about 365 people for an average one-time subsidy of US\$3,600. The subsidy varied from less than US\$1,000 in the capital region to about US\$30,000 in three of the less populated of Chile's other 12 regions. The ITU estimates that each dollar of subsidy generated private investment of 1.4 dollars in public access telephones and 5 dollars in individual lines and other services.

Peru also uses a minimum subsidy tender to place public access telephones in selected localities to bring the phone within reach of millions of rural people. It differs from the Chilean scheme in also requiring Internet access cabins to be provided in district capitals within the same areas and because it is funded by operator levies rather than government³⁶.

35 ITU (2003) Trends in telecommunication reform: Promoting universal access to ICTs, Annex 1

36 See ITU (2003) Annex 1 and OSIPTEL (2003)

Table 13 – Universal service in a fully liberalised telecommunications sector

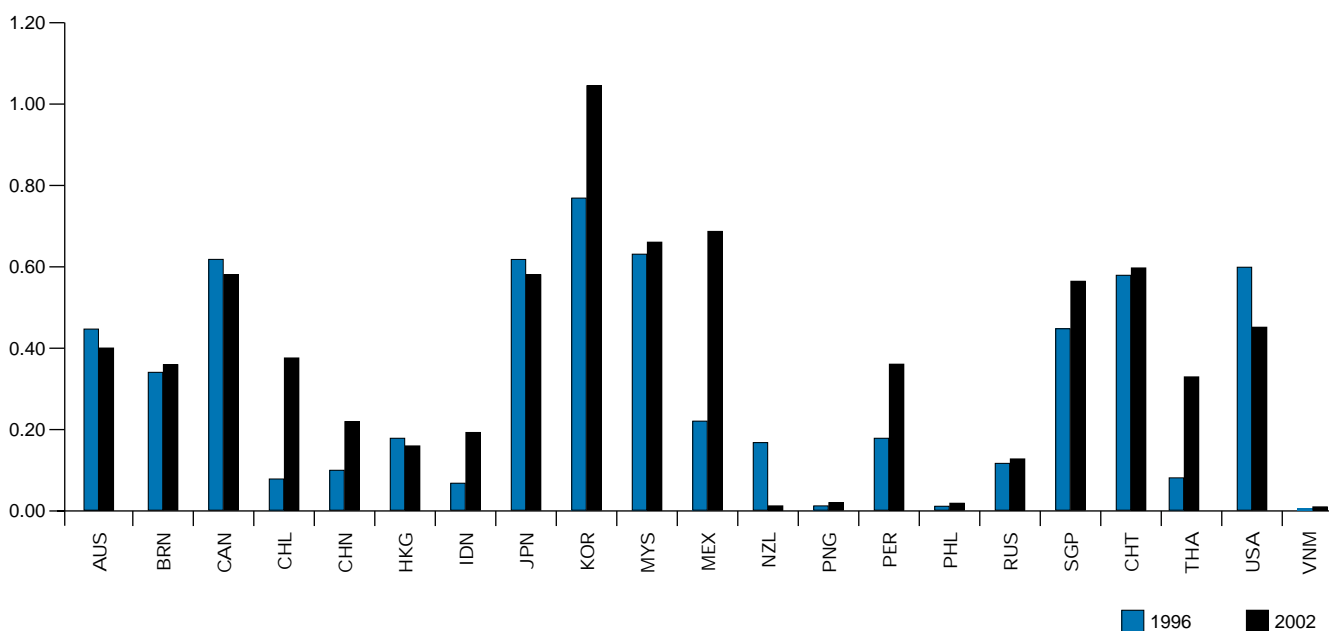
	Scope	Provider	Funding
Australia	Telephony, payphones and 64k/s access	Incumbent (2)	Operator levy administered by the ACA
Brunei Darussalam	Payphones, fax and internet	Incumbent	Indirect government subsidy
Canada	Telephony and dial-up internet	Incumbent (2)	National fund financed by operator levy
Chile	Payphones and tele centres auction	Contestable by minimum subsidy auction	Interconnection (1) and government fund (FDT) administered by SUBTEL. See Case Study 6
China	95% of villages to be connected by 2005	Six backbone operators	Operator levy when Universal Service Fund is set up
Hong Kong, China	Telephony	Incumbent	Universal Service Contribution paid by external service providers in proportion of their external traffic volume
Indonesia	Install Payphones in over 40,000 villages within 3-5 years	Incumbent or other operator selected by the Regulator.	From 2004, a 0.75% operator levy on revenue after bad debts and interconnect fees
Japan	Telephony	Incumbent (2)	Operator levy
Korea	Telephony	Appointed by Minister of Information and Communication following the deliberation of IT Policy Review Committee	Virtual Fund
Malaysia	Telephony and 128kbps internet access in selected areas	Designated providers	USP fund with operators contributing 6% of revenue from 2002. There is also a programme (CCDP) funded by the MCMC to set-up tele centres (branded KEDAI.COM)
Mexico	Telephony	Incumbent	Incumbent plus government subsidy for social coverage
New Zealand	Telephony	Incumbent for local residential service	Operator levy
Papua New Guinea	Emergency services	Incumbent	Government
Peru	Payphones and telecentres with internet access	Contestable by minimum subsidy auction	Interconnection (1) and fund (FITEL) financed by operator levy of 1% on revenues.
Philippines	Telephony	All operators	The licensing regime requires mobile and international operators to build fixed lines. See Case Study 1
Russia	Telephony	Contestable	Operator levy
Singapore			
Chinese Taipei	Telephony and data	Contestable	Operator levy
Thailand	Basic telecommunications service as prescribed by the NTC	To be prescribed by the NTC	Telecommunications Development for Public Benefit Fund
United States	Telephony and internet to schools	Various	Operator levy
Viet Nam	Local calls and Internet	Incumbent (2)	Interconnection and a fund financed from operator levy (3 – 6% revenue) and other government sources.

(1) Terminating access in rural areas is double that in urban areas in both Chile and Peru

(2) Universal Service Fund available to others but not taken up

Source: Compiled by the Consultant from various sources.

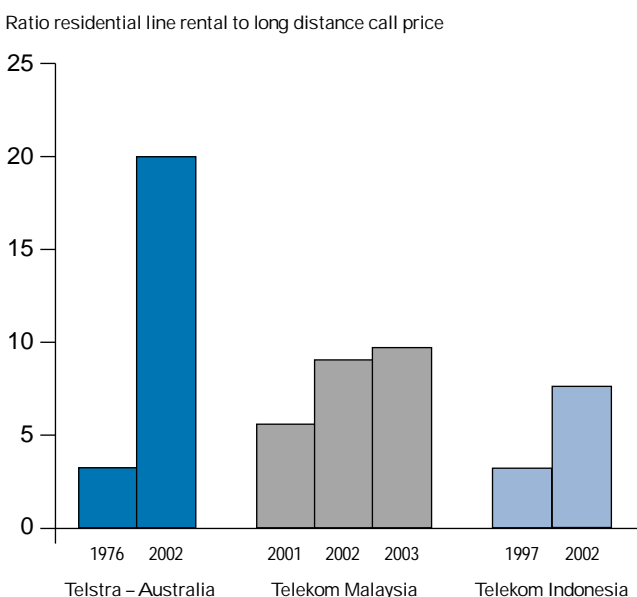
Figure 20 – Payphones per 100 Population



Source: ITU World Telecommunication Indicators Database, July 2003

from long distance call revenue. A simple modification of the equal access competitive model is to mandate only terminating access (which is still the model for mobiles). This is the model that Malaysia followed until it mandated originating access for fixed networks in 1999. It is a less extreme version of ‘pay to play’ than the licence obligation discussed in Case Study 1. It may be preferable where it is considered that incentives must be provided to encourage build-out of networks, whether fixed or mobile.

Figure 21 – Line rental to long distance price ratios



Source: The Consultant

Case Study 7:

Malaysia and tariff rebalancing

In March 2002 the Malaysian government implemented a major tariff rebalance reducing long distance and international call fees more than 20 percent while increasing maximum residential line rentals 10 percent and local call fees by 25 percent. Although rural line rentals did not increase, it is claimed that the changes will “provide incentives to industry players to invest in infrastructure roll-out particularly to the rural areas”.

While this is a significant rebalancing of tariffs for Malaysia, its tariffs are not yet as balanced as those in Australia where rebalancing has been occurring over more than twenty years. This is shown in Figure 21 which also shows the current state of rebalancing in Indonesia. It shows the number of long distance calls equivalent to one month’s line rental. This ratio increases as long distance call prices decrease and the monthly price of rentals increases. Further reductions in long distance charges and increases in residential line rentals can be expected in Malaysia and Indonesia.

5. Next Steps Towards the Vision of the Reference List

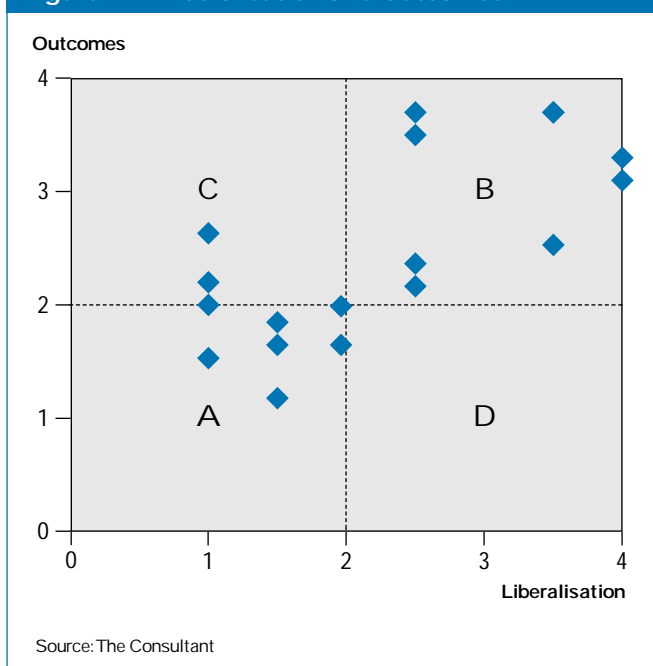
We have looked at the adequacy of the Reference List itself (Section 2), progress towards the 'vision' in that document (section 3) and provided a 'reality check' on expectations of progress (Section 4). In this section the focus is on how further progress towards that vision can be fostered.

5.1 Liberalisation leads to Good Outcomes

As reported in section 3, the outcomes of market opening have been positive. Using those findings, it is clear from Figure 22 that liberalisation leads to positive outcomes with the ten economies that have implemented measures closer to the reference list in quadrant A. However, in eight economies where liberalisation has not proceeded as quickly, the benefits have been less evident. This is very encouraging; in most cases there seems to be a positive correlation between liberalisation and outcomes.

The liberalisation indicator is constructed from the information on access commitments and foreign ownership restrictions reported in Table 1 and Figure 3 respectively. The outcomes indicator is aggregated from market shares (Table 4), long distance price trends (Figure 7), international price trends (Figure 8), investment trends (Figure 14), teledensities (Table 7), globalisation (Table 9) and the digital divide (Table 10). In the case of both the liberalisation and outcomes indicators, each economy is rated from 1 (for most liberalised and best outcomes respectively) to 4 and the scores are then averaged to obtain the liberalisation and outcomes indicators for each economy. The data points for some economies overlap so only 17 rather than 21 data points can be observed.

Figure 22 - Liberalisation and Outcomes



5.2 Recommendations on Further Progress by Element

As the previous section showed, liberalisation produces good outcomes. More progress can be expected as in many economies competition is recent and in all economies the policies needed to foster competition (eg number portability, carrier selection and local loop unbundling) have been implemented only recently. In this section we consider ways to foster further progress towards the vision of the Reference List.

5.2.A Element 1: User benefits

Section 3 discussed the expansion of consumer choice, price trends and network development (teledensity). Where price rebalancing is of concern, 'price cap' regulation could be used to influence changes rather than direct government approval of price changes. Price cap regulation is able to apply 'arm's length' controls while conferring flexibility for acceptable price rebalancing.

R1: APEC economies could consider the use of 'price cap' regulation rather than direct government approval of price changes to moderate price rebalancing.

Another strategy to encourage build out and manage price rebalancing is to set an appropriate interconnection regime (see Section 4.5).

R2: Developing APEC economies could consider mandating only terminating access on fixed networks (as is done for mobiles).

A couple of other areas that are not mentioned explicitly in the Reference List and that need attention are international roaming and quality of service.

Roaming. Wireless services have grown dramatically and the number of economies in which wireless subscribers exceed fixed line has increased steadily in all but six APEC economies (Table 7). High pricing for international mobile roaming is an area of concern. According to INTUG³⁷, some organisations have withdrawn mobile phones from employees or forbidden their use for international mobile roaming. A European Union inquiry into mobile roaming established serious competition concerns and seamless roaming is listed as a priority item in the Hanoi Plan of Action³⁸

37 INTUG, "Are the customers satisfied?" ITU Telecom 2003, Forum PL5, 14 October 2003.

38 Hanoi Plan of Action, Section 2.10.2 Telecommunications. Priorities include: (a) achieve the interoperability and interconnectivity of the National Information Infrastructures (NIIs) of Member States by the year 2010, (b) develop and implement an ASEAN Plan of Action on Regional Broadband Interconnectivity by the year 2000; and (c) intensify cooperation in ensuring seamless roaming of telecommunications services (i.e., wireless communications) within the region, as well as in facilitating intra-ASEAN trade in telecommunications equipment and services.

R3: APEC economies could consider conducting inquiries into mobile roaming terms and conditions.

Quality of service targets. In several economies with competitive markets, specific quality of service targets are set to assist performance assessment. Publication of quality of service information assists consumers in choosing effectively between operators and exposes operators to “benchmark competition”. Targets can be set also for wholesale markets around any obligations the incumbent has to competitors in these markets. Improved information is also crucial for assessing the nature and scope of any problems associated with efficient development of, and equitable access to, the developing information economy and for designing well-targeted and cost-effective strategies.

R4: Specific quality of service targets could be required to be identified and reported on by individual carriers.**5.2.B Element 2: Unrestricted market access by service suppliers**

Restrictions on the number of network providers have certainly eased (Sections 3.1 and 3.2). Ongoing market access issues pertain to improving access to wireless and new services such as VoIP.

Wireless services may provide scope for more competition in the Internet access market through alternative technologies such as VSATs and wireless local loops. These technologies could spur additional take-up particularly in areas where broadband wireline infrastructure is costly or not yet available. Also Mobile Virtual Network Operators (MVNOs) could be considered (as in Hong Kong). The essence of an MVNO is that it uses other operators’ frequencies, without actually owning or operating these frequencies. Thus, MVNOs can enhance competition by introducing additional players into a market where access is restricted because of scarce frequency resources.

Some regulators and the European Union have ruled that infrastructure sharing of wireless sites, masts, antennas, cables, combiners and cabinets is permissible – provided that full legal control of the networks and competitive independence remains intact.

R5: Tradeable wireless licences and spectrum sharing could be considered to facilitate market entry and ensure more efficient use of spectrum.

In regard to new services, VoIP³⁹ is expected to grow rapidly in use. At present, VoIP requires special phones and is considered of inferior quality to calls made over a normal telephone, but quality is improving steadily with technological developments. This could become an increasingly important policy issue. In some economies (Canada, Chile, Japan and the USA in Table 15 below), VoIP services are not classified as voice telephony and do not therefore require a licence with the regulator. The policy responses to VoIP have been mixed as shown in Table 14 (see page 46).

VoIP creates competition for current voice services but it

is also a way toward more innovative services. While fixed-line telephony has changed relatively little in decades, VoIP allows users more control over services, from call forwarding to conference calls. Over time, VoIP will encourage innovation such as video calls and blending of voice and data. Regulators do not wish to stifle the development of new services but neither do they wish to see VoIP undermine the profitability of the operators who provide the networks that make VoIP and existing services possible⁴⁰.

R6: APEC-TEL could explore policy approaches to VoIP that allow the development of new services without compromising the incentives to build out networks.

Complex or time-consuming licensing arrangements, once the norm, are now in less frequent use. APEC economies could consider further harmonisation of licensing regimes along the lines of the European Union licensing directive that requires transparency and more use of so-called ‘class licences’⁴¹ rather than individual licensing.

Restrictions on foreign-owned carriers and service providers have declined significantly (Figure 3). Indeed, governments are recognising the benefits that foreign operators introduce by way of transfer of modern technology and expertise. In an increasing number of economies, there is also a desire to attract foreign purchasers of the government’s remaining share of the incumbent fixed line operator or of struggling mobile operators.

Interconnection is a key policy and regulatory instrument and now equal access interconnection principles have been clearly articulated. Indeed, the APEC Principles of Interconnection were finalized back in May 1999⁴². The focus must now be to enforce compliance with interconnection principles.

In both developed and developing economies, regulators are taking a more active role in promoting and regulating *Internet* service. The European Union (EU) issued a directive that an operator with significant market power (SMP) must offer flat rate interconnection to new entrants on a non-discriminatory basis where it offers its own retail flat rate narrowband (dial-up) Internet access to its customers.

Leased Lines are an even more important dimension for Internet policy in all markets. Flat rate interconnection is about the end-user access to an ISP. Leased Lines are how ISPs connect to internet backbones and are usually provided

39 A VoIP customer can make phone calls as normal but the voice signal is then turned into packets of data and sent over a network before being reassembled into an analogue voice signal to complete the call.

40 For a detailed discussion on the regulatory implications of VoIP, see Analysys, Final Report for the European Commission, “IP Voice and Associated Convergent Services”, 28 January 2004.

41 See Patrick Xavier, “The licensing of telecommunications operators - Beyond the EU licensing directive,” Telecommunications Policy, May 1998.

42 APEC interconnection principles finalized on May 1999 and declared as part of a statement by APEC Ministers in 2000.

Table 14 – VoIP Policy Positions

Treatment of voice telephony provided over the Internet	
Australia	Voice over Internet Protocol service providers (who use managed, dedicated IP-based networks) treated the same as carriage service providers (eg subject to telecommunication consumer and industry codes). Voice over Internet telephony which uses the public Internet is not subject to any obligations.
Brunei Darussalam	Not available
Canada	The CRTC determined that most Internet Service Providers provide retail internet services which are not considered telecommunications services and are consequently not regulated.
Chile	Legal
China	Phone-to-phone and PC-to-phone internet telephony are not permitted.
Hong Kong, China	"Technology-neutral" regime adopted. VoIP is permitted over technology conforming to open and non-proprietary standards and for which there is a reasonable choice of consumer equipment. OFTA is preparing a consultation paper on the impact of VoIP on the regulatory framework.
Indonesia	An Internet Telephony licence is required. The DGPT has issued 7 such licences and does not believe there is sufficient demand to issue more.
Japan	Type II telecommunication carriers can provide national and international voice telephony services over the Internet.
Korea	Operators that wish to provide internet services are required to either register or obtain license. Facility-based service providers (FBSPs) that meet a certain QoS criteria of internet telephony are allocated with an identification number 070. Non Facility-based service providers, when providing VoIP service over the network of a FBSP, must be allocated with identification number from the given FBSP to resell the service.
Malaysia	18 licensed VoIP providers at Dec.2001. But PC-to-PC and PC-to-PSTN internet telephony does not require a licence.
Mexico	National or international voice telephony services over the Internet would require a concession as any other voice telephony service provider, and they would have to comply with the voice telephony regulatory framework which would have to be adapted to this new technology.
New Zealand	Under New Zealand law, national and international voice telephony services provided over the Internet by entities other than a PTO are defined and treated the same as such services provided by a PTO.
Papua New Guinea	Not available
Peru	Operators must be licensed to provide public services. VoIP is used by some operators to provide international calls.
Philippines	Companies authorized to provide international voice service are mandated to install at least 300,000 local exchange lines in unserved and underserved areas.
Russia	Not available
Singapore	Either an FBO or SBO licence is required that permits VoIP services. VoIP is used on cable services and international calls over the PSTN.
Chinese, Taipei	Four Type I operators (Chunghwa Telecom and three other fixed network operators) offer international telephony by VoIP. Type II operators have been allowed to provide internet telephony since July 2001 with 48 such operators by the end of year 2003.
Thailand	The NTC will prescribe the licence type of VoIP.
USA	Not subject to regulation (but position being reviewed by FCC currently).
Viet Nam	Outbound international VoIP calls have been permitted since 2001.

Notes:

PC Personal Computer PSTN Public Switched Telephone Network
PTO Public Telephone Operator VoIP Voice over Internet Protocol

Source: OECD Communications Outlook 2003, Minter Ellison and the Consultant

by the incumbent. Leased line pricing is also important for business users in every market.

R7: APEC economies could consider monitoring and publishing leased line prices and provisioning, as was done by the EU.

Since 1996, broadband connectivity through local loop unbundling (LLU) has emerged as an important policy issue, particularly in developed economies. Now, it has even been included in a Free Trade Agreement (Case Study 8 on page 48). It is a significant policy issue because LLU is considered important to facilitate provision of competitive broadband DSL (digital subscriber loop) services. Interestingly, if the LLU provision in the US-Singapore FTA is also adopted in the increasing number of FTAs that are being concluded, trade agreements could drive policy advances in some aspects of telecommunications policy. Moreover, the provisions in the FTAs could well provide leverage in regional and multilateral agreements.

Technology has not delivered competing local access infrastructure as fast as expected. Facilities-based competition was expected to break the incumbents' grasp on the fixed line local access bottleneck facility with technological developments providing new market entry possibilities by:

- lowering the costs of establishing alternative network infrastructure;
- offering a wider range of infrastructure possibilities, thereby enabling new entrant competitors to more effectively target particular markets than existing providers (who may be reluctant to scrap or upgrade outmoded infrastructure);
- providing new entrants with wireless technologies that are more easily scaleable thereby allowing the initial costs of entry to be lowered while retaining a capacity to expand with market growth; and
- increasing the options for bypassing existing networks, thereby reducing the dependence of new entrants on access to existing infrastructure.

But, expectations about infrastructure-based competition based on alternative technologies have so far proven to be optimistic in most economies. And, there is a growing impatience with the ability of "behavioural regulation" to make access available. A vertically integrated incumbent has powerful advantages⁴³ that enable it to leverage its dominance across retail services.

LLU is not a panacea for broadband development. The best performers in APEC in terms of the ITU's new digital access index are Hong Kong, China, Korea and Chinese Taipei (Table 10) and their success is not due to LLU. Korea leads the world with 21 broadband subscribers per 100 people at the end of 2002 but full unbundling and line sharing has only been available in Korea since December 2001 when prices were set⁴⁴. Case Study 9 (see page 49) discusses some of the reasons why Korea has performed so well without LLU⁴⁵.

5.2.C Element 3: Competitive safeguards

As mentioned in Section 3.1C, the clearest measure of progress would be the acceptance and effective implementation of the WTO Reference Paper. Aspects of this are vague but APEC has subsequently developed more detailed Principles of Interconnection⁴⁶ and is currently developing benchmarks of best practice.

R8: APEC economies could adopt and implement the WTO Reference Paper and support work within APEC to further develop and clarify the principles it contains

With technological and market convergence there is a need to look at vertical integration and leverage or abuse of market power across previously distinct sectors borders. Convergence is leading to a collision of traditional regulatory regimes and structures. But the central issue is not how to regulate convergence but how regulation needs to change to accommodate convergence. Changes in regulation required by convergence include:

- Streamlining regulation to the minimum necessary;
- Shifting from asymmetric regulation;
- Moving from sector specific to general competition law;
- Reviewing regulatory structures/institutions.

The Consultant's interpretation of the vision in the Reference List is that a fully liberalised market would regulate on the basis of general competition law rather than using sector-specific regulation and this would also make regulation more consistent with convergence across sectors. General rather than sector-specific laws uses scarce skills more effectively, lessens the likelihood of 'regulatory capture' (ie being influenced unduly by the largest operator in the sector) and is more likely to ensure consistent decisions.

R9: APEC could explore how convergence across sectors impacts regulatory design and processes; preferably, as part of a broader review of regulatory capabilities

Structural separation. Some think that the application of 'behavioural' regulation has failed to make an incumbent provide equal access to all operators (including its own downstream operations). This has led some of them to call for structural separation; separating the ownership of the

43 These advantages include: bottleneck control of the local loop; vertical integration allowing the leverage of monopoly in some areas to support other areas; opportunity for 'cross-market' leverage from strength in traditional markets into adjacent markets; network effects where customers benefit from being connected to larger networks; historical 'first mover' type advantages; economies of scale; high economies of density; sunk costs (which allows the incumbent scope to restrict entry by cutting prices to very low avoidable costs).

44 ITU World Telecommunication Development Report, 2003

45 This case study draws on Izumi (2002)

46 Annex C to the Cancun Declaration of APEC Telecommunications Ministers

retail and wholesale activities of the incumbent carrier in order to change the incumbent's incentives in favour of equal access⁴⁷. But others, including many regulators, are not convinced that structural separation is necessary. For instance, the FCC and Oftel, the US and UK telecommunications regulators, have expressed their reservations.⁴⁸

5.2.D Element 4: Investor confidence

APEC economies need more investment to further modernise the telecommunications (and ICT) sector. For developing economies network development is even more important than modernisation.

The assumption that capital would be available for

investment in the telecommunications sector as and when needed may no longer be correct, especially for developing APEC economies. Investors and prospective new entrant operators need assurance of strong pro-competitive regulation as well as good corporate governance. Reducing

47 Roy L. Morris, "A Proposal to Promote Telephone Competition: The LoopCo Plan," 2001 available at http://members.aol.com/_ht_a/RoyM11/LoopCo/Article.html; Gerd Eickers, Local Loop Unbundling in Germany: The Broadband Perspective, mimeo 2001.

48 RW Crandall and J G Sidak, "Is Structural Separation of Incumbent local Exchange Carriers Necessary for Competition?" Yale Journal on Regulation, Vol. 19:2, 2002.

Case Study 8:

US-Singapore FTA and LLU

"Unbundling of Network Elements"

3. (a) Recognizing that both Parties currently provide for access to unbundled network elements, each Party shall provide its telecommunications regulatory body the authority to require that major suppliers in its territory provide suppliers of public telecommunications services of the other Party access to network elements on an unbundled basis at terms, conditions, and cost-oriented rates, that are reasonable, non-discriminatory (including with respect to timeliness), and transparent for the supply of public telecommunications services.
- (b) Which network elements will be required to be made available in the territory of a Party, and which suppliers may obtain such elements, shall be determined in accordance with national law and regulation.
- (c) In determining the network elements to be made available, a Party's telecommunications regulatory body shall consider, at a minimum, in accordance with national law and regulation:
- (i) whether access to such network elements as are proprietary in nature are necessary; and whether the failure to provide access to such network elements would impair the ability of suppliers of public telecommunications services of the other Party to provide the services it seeks to offer; or
 - (ii) whether the network elements can be replicated or obtained from other sources at reasonable rates, such that the unavailability of these network elements from the major supplier will not impair the ability of other suppliers of public telecommunications services to provide a competing service; or
 - (iii) whether the network elements are technically or operationally required for the provision of a competing service; or
 - (iv) other factors as established in national law; as that body construes these factors.

Co-Location

4. (a) Each Party shall ensure that major suppliers in its territory provide to suppliers of public telecommunications services of the other Party physical co-location, at premises owned or controlled by the major supplier, of equipment necessary for interconnection or access to unbundled network elements on terms and conditions, and at cost-oriented rates, that are reasonable, non-discriminatory (including with respect to timeliness), and transparent.
- (b) Where physical co-location is not practical for technical reasons or because of space limitations, each Party shall ensure that major suppliers in its territory provide or facilitate virtual co-location on terms and conditions, and at cost oriented rates, that are reasonable, non-discriminatory (including with respect to timeliness), and transparent.
- (c) Each Party may determine, in accordance with national law and regulation, which premises in its territory shall be subject to subparagraphs (a) and (b)"

Source: ARTICLE 9.4: CONDUCT OF MAJOR SUPPLIERS of the US-Singapore Free Trade Agreement signed in May 2003

political, market and regulatory risk and uncertainty will help⁴⁹.

There can be a number of potential conflicts between maintaining investor incentives and the enforcement of effective competition. For instance, some industry observers believe that consolidation could substantially improve return on investment since economies of scale in the wireless industry are high. On the other hand, a reduced number of players will increase the concentration ratio and may work against “a fully liberalised telecommunications sector.”⁵⁰

5.2.E Element 5: Government and regulation

Transparent and non-discriminatory policy arrangements. Progress in this respect is evident but must be supported by prompt and effective enforcement of the installed policies and regulatory rules.

Independence of the regulator. An independent regulator is important to the task of fostering progress towards the vision of the *Reference List*. But an independent regulator must also be adequately empowered to do its job otherwise regulatory independence means little.⁵¹ The key characteristics that define an effectively empowered regulator include:

- a regulator that is *independent*;
- a regulator that has clear authority and jurisdiction;
- a regulator with strong *enforcement capabilities*; and
- a regulator that operates with *open* and *transparent processes*.

Government ownership. This not part of the Reference List but, as discussed in Section 3.1D, it can have an impact on the independence of the regulatory process. There has been considerable decline in the extent of government ownership of telecommunications operators. Further reductions in government ownership have been post-poned because of market conditions.

Transparent mechanisms to support universal access. Articulation of universal service/access obligations can become increasingly transparent. But any redefinition of the scope of universal service and universal access could also be conducted on the basis of a transparent systematic review of universal access objectives and targets⁵² pertinent to that economy.

Fair allocation of scarce resources, such as spectrum and rights of way. Spectrum allocation has already received attention. The ‘rights of way’ issue is important not only for fixed line but also wireless. All APEC economies could recognise that if the establishment of new transmission lines by an operator through the use of public rights of way is not feasible or technically possible or if the cost is disproportionately high, an operator of an existing transmission line using those public rights of way may be obligated to grant to the operator of those new transmission lines the joint use of its installations, such as ducts, for adequate compensation, provided no major construction work is required and such joint use is economically feasible.

Case Study 9:

Korea and Broadband

The proportion of households with a broadband connection has grown from 5 per cent in 1996 to 68 per cent in 2002. The reason that lack of LLU until recently has not been an impediment is that more than 40% of all Koreans live in high-rise flats where the telephone facilities are not owned or operated by Korea Telecom but by the real estate developers or the communities themselves. All the new entrant, Hanaro, had to do was to make a bulk contract with the community, bring in high-speed leased lines from competitive providers such as PowerCom and inter-connect with the DSLAM inside the housing complex.

Izumi argues that the first and real driver of the Korean Internet and its rapid transition to high-speed access was “PC Bang”, an Internet café exclusively designed for Internet game services. It was first introduced in 1997 during the Asian economic crisis by employees laid off from major electronic companies or by the owners of small software companies whose businesses went bankrupt due to the sudden recession.

Izumi also argues that (contrary to ITU conclusion reported in Section 3.3E) top-down government policies in Korea, Singapore and Japan have not been as important as grass-roots and cultural factors in broadband take-up.

Full range of consumer protection measures. Finally, market liberalisation is not without its costs on consumers. The vision of the Reference List is that such costs be minimised through a full range of measures. For instance, complaints received by regulators in many economies include: unsolicited direct marketing (especially by fax, touting for customers); bills (inaccurate bills, difficulty in understanding bills, bills not arriving); contracts; numbering (porting numbers, allocating numbers, barring options); and fees and charges.

Industry code of conduct. The government and regulator could ensure that consumers benefit from increased

49 For an extended discussion of this issue, see WDR 0301-March 2003, “Stimulating Investment in Network Development” at <http://www.regulateonline.org>.

50 For example, in Chinese Taipei the second largest mobile phone company has acquired the number six, the third is acquiring the number four.

51 This discussion draws on Marantis, D J, “The US-Vietnam Bilateral Trade Agreement: International Trade and Independent Telecom Regulation”, APEC TEL27, Kuala Lumpur, Malaysia 24 March 2003. The full text of the paper is available at <http://www.usvtc.org>

52 For details on such a systematic review see Patrick Xavier, “Universal service obligations and broadband,” Info May 2003.

competition, including the ability to switch inexpensively from one service provider to another (thereby possessing real choice), and from encouraging the issue of “charters’ of customer rights (as available e.g. in Britain, Australia, and other OECD countries), improved performance of operators, a formal and clearer mechanism to handle consumer complaints, etc. Concrete procedures with a standard time frame for handling consumer complaints could be established. The procedure could be speedy, simple, and inexpensive for ordinary consumers.

R10: APEC economies could consider requiring the establishment of an industry Code of Conduct backed up by a Customer Service Guarantee scheme to help maintain standards by prescribing financial compensation for customers when operators fail to meet minimum service levels.

Consumer representation. User groups can provide effective representation for the interests of residential and small business telecommunication consumers.

R11: Regulators could encourage and assist the effective participation of users and user organisations in regulatory development and review of activities.

Technological neutrality in policy is now widely accepted. More contentious is the preference for infrastructure competition over ‘resale’ or service competition maintained by some economies. In a fully liberalised market in an advanced economy, there should be no presumption that market entry should be facilities-based rather than based on resale. In fact, new entrants typically migrate from resale to building facilities as their customer base grows in order to improve their margins. But, in a developing economy, competition may be used as a tool to increase investment so resale (and unbundling and equal access) may be seen to be less appropriate. However, resale (under certain conditions including price) can be used to increase service-level competition while achieving economies of scale in network provision as with ‘mobile virtual network operators’ (MVNOs, as applied in Hong Kong).

6. Suggestions on APEC Members' Participation in the WTO

In this section we revisit the benefits of trade in services liberalisation (6.1) and then look at how APEC economies might position themselves post-Cancun (6.2).

6.1 Benefits of trade liberalisation

The goal of the WTO General Agreement on Trade in Services (GATS) is the progressive liberalisation of services trade (see Appendix 2 on the nature of the GATS). The benefits of services liberalisation include:

1. *Enhanced economic performance.* An efficient services infrastructure is important to economic success. Services such as telecommunications are strategically important inputs for all sectors. Without the spur of competition there are improvements in overall economic efficiency and growth. Market liberalisation in the telecommunications sector should not be viewed as a 'concession' to other economies, but a precondition for enhancing domestic economic performance.⁵³
2. *Development.* Access to world-class services helps exporters and producers in developing economies to

capitalize on their competitive strengths, whatever the goods and services they are selling. A number of developing economies have also been able, building on foreign investment and expertise, to advance in international services markets – from tourism and construction to software development and health care. Services liberalisation can be a key element of development strategy.

3. *Consumer savings.* Liberalisation generally leads to lower prices, better quality and wider choice for consumers. Such benefits, in turn, help to improve supply conditions for many other products. Thus, even if some prices rise during liberalisation, for example the cost of local calls, this tends to be outweighed by price reductions and quality gains elsewhere. Moreover, governments remain able under the GATS, even in a fully liberalised environment, to apply universal-service obligations and similar measures on social policy grounds.

53 OECD Policy Brief, "Open Services Markets Matter," OECD Observer 2001, p. 4.

Table 15 – Hub Economies in the Asia-Pacific with their Spokes, mid-2003

ACTUALS	UNDER NEGOTIATION
Singapore, in ASEAN with spokes to Japan, New Zealand, USA, Canada, Australia, EFTA States	Mexico, Chile, Pacific Three* (Singapore + NZ + Chile)
Thailand, in ASEAN with spokes to Bahrain, Australia	
USA, in NAFTA with spokes to Israel, Jordan, Singapore, Chile, CACM	Australia, Morocco, FTAA*, SACU*, CAFTA*
Canada, in NAFTA with spokes to Chile, Costa Rica, Israel, Singapore	CA-4*, EFTA*, FTAA*
Mexico, in NAFTA with spokes to Nicaragua, Costa Rica, Bolivia, Chile, Israel, EU*, EFTA*, CACM*, Group of Three*	Singapore, Peru, Ecuador, Japan, Panama, Trinidad and Tobago, FTAA*
Chile with spokes to Canada, Mexico, Colombia, Venezuela, Peru, Ecuador, Bolivia, USA, EU*, EFAT*	Singapore, FTAA*, Pacific Three*
Peru, in Andean Community with spokes to Chile	Mexico, FTAA*
Australia, in CER with New Zealand with spokes to Singapore, Thailand	USA (negotiations concluded in Feb 2004 subject to ratification)
New Zealand, in CER with Australia with spokes to Singapore Thailand	Hong Kong (China), Pacific Three*
Russia, in CIS with spokes to Kyrgyz Republic, Georgia	

Note: * denotes a plurilateral spoke.

Source: P.J. Lloyd and Donald MacLaren, "The Case for Free trade and the Role of RTAs". Paper presented to a WTO seminar on Regional Trade Agreements and the WTO, Geneva, 14 November 2003

4. *Faster innovation.* Economies with liberalised services markets have experienced greater product and process innovation. The explosive growth of the Internet in the US is in marked contrast to its slower take-off in Continental European economies which have been more hesitant to embrace telecommunications reform. Similar contrasts can be drawn in financial services and information technology.
5. *Greater transparency and predictability.* A country's commitments in its WTO services schedule amount to a legally binding guarantee that foreign firms will be allowed to supply their services under stable conditions. This gives those with a stake in the sector—producers, investors, workers and users—a clear idea of the rules of the game. They are able to plan for the future with greater certainty, which encourages long-term investment.
6. *Technology transfer.* Services commitments at the WTO help to encourage foreign direct investment (FDI). Such FDI typically brings with it new skills and technologies that spill over into the wider economy in various ways. Domestic employees learn the new skills (and spread them when they leave the firm). Domestic firms adopt the new techniques. And firms in other sectors that use services-sector inputs such as telecommunications and finance benefit too.

6.2 Options post Cancun

There is no reason why APEC economies could not proceed to negotiate on telecommunications which was not a source of contention in Cancun. Further progress can be made in this sector even if progress is effectively stalled in other areas of the negotiations. The 11th APEC Economic Leaders' Meeting in Bangkok affirmed the primacy of the multilateral trading system.

Since Doha negotiations can be expected to take at least

another year, APEC economies could secure economic benefits from liberalisation of telecommunications services earlier by agreeing to provisionally apply any results of such negotiations among themselves until the Doha negotiations are completed.

R12: APEC economies could pursue telecommunications reforms within the Doha services committee and apply the results among themselves until the Doha round is completed.

In parallel, bilateral and regional negotiations can be pursued since the benefits of increased competition from only one or two sources can still generate a degree of contestability. The cost of capital may be higher if the liberalisation is restricted to only a few foreign sources, but the contestability is still a strong benefit.

Against this, it has been argued that such negotiations favour the more powerful partners and/or increase costs due to what has been termed a 'spaghetti bowl of bilateral and regional preferential trade deals. The 'spaghetti bowl' complaint was applied to trade in goods where the costs of managing many agreements with different set of rules of origin and differing rules for imposition of anti-dumping duties were thought to be high. But, this may longer be true due to paperless trading and electronic modes of transaction. And, there is little empirical work on these costs and even less for trade in services.

R13: APEC economies could continue to explore opportunities in bilateral and regional trade agreements (while also engaging in the Doha round).

However, in pursuing both Doha and bi-lateral or regional agreements, APEC economies could seek to ensure that multilateral, regional and bilateral frameworks are complementary and mutually reinforcing.

Appendix 1 ⁵⁴

The APEC Reference List

The following elements are recognised as a general description of a fully liberalised telecommunications services environment towards which each economy will plan its own path, in line with the prevailing legal and regulatory environment and government structure of each economy, within the framework of the Bogor Declaration timetable for achieving free trade and investment in the APEC region.

1. In a fully liberalised telecommunications sector, *users* would have:
 - a) choice of suppliers of telecommunications services, offering a full range of services, including telephony, data, news and information, and fully interactive services;
 - b) choice of suppliers of telecommunications services offering lower prices, greater convenience or specialist service offerings;
 - c) ready access to timely information about customer services and billing.
2. In a fully liberalised telecommunications sector, *suppliers of telecommunications services* would be able to extend their business activity without restrictions on entering the market, including
 - a) restrictions on the number of network providers or installers of network infrastructure, except where limited by scarce physical resources;
 - b) complex or time-consuming licensing arrangements;
 - c) restrictions on foreign-owned carriers and service providers; or
 - d) restricted access to the network infrastructure of other suppliers (i.e. interconnection).
3. In a fully liberalised telecommunications sector, suppliers of telecommunications services and users would both benefit from a full range of *competitive safeguards* that:
 - a) prevent a dominant supplier from abusing market power;
 - b) prevent domestic companies being favoured; and
 - c) provide clear and accessible (i.e. 'transparent') laws, regulations and administrative procedures, which would ensure non-discriminatory treatment of service providers and users.
4. In a fully liberalised telecommunications sector, *investors* would have confidence to invest in the telecommunications industry and in companies reliant on telecommunications services, on the basis of stable legal and administrative arrangements that remove the risk of arbitrary or unexpected changes in the commercial environment.
5. In a fully liberalised telecommunications sector, *Governments* would have clearly defined responsibility to:
 - a) provide for transparent and non-discriminatory policy arrangements to meet the needs of their economies;
 - b) ensure that the regulatory authority responsible for telecommunications is legally and structurally independent, with a legal responsibility to act impartially and expeditiously, and with adequate resources to fulfil its function;
 - c) ensure transparent mechanisms to support universal access to standard telecommunications services as agreed within each individual economy;
 - d) fairly allocate scarce resources, such as spectrum, numbering and right of way;
 - e) provide for a full range of consumer protection measures.

Source: http://www.apecsec.org.sg/content/apec/ministerial_statements/sectoral_ministerial/telecommunications/1996.html

⁵⁴ This was Annex 2 of the APEC Ministers' Declaration at the Gold Coast, Australia in 1996

Appendix 2

On WTO Commitments and Exemptions

The WTO permits members to liberalise trade in services at their own pace in accordance with national priorities and objectives. Each WTO Member lists in its national schedule those services for which it wishes to guarantee access to foreign suppliers. There is complete freedom to choose which services to offer. Indeed, the GATS establishes means through which countries can limit, condition, or even suspend the commitments that they make. In short, under the GATS a WTO Member has the following options:

- It can simply decline to make any commitments
- It can elect to make commitments selectively in only some service sectors
- It can elect to make commitments for all or only some services in that sector
- It can qualify/inscribe exemptions to its commitments in any “mode of supply” in any given sector or sub-sector/service, including MFN and National Treatment
- It can apply horizontal limitations that would apply to all services
- It can invoke GATS Article XII (Restrictions to Safeguard the Balance of Payments)
- It can invoke the various general exceptions in GATS Article XIV
- It can ultimately withdraw from the GATS altogether.

Exemptions to GATS Commitments

The GATS defines four ways in which a service can be traded, known as “modes of supply”:

1. services supplied from one country to another (e.g. international telephone calls), officially known as “cross-border supply”;
2. consumers from one country making use of a service in another country (e.g. roaming), officially known as “consumption abroad”;
3. a company from one country setting up subsidiaries to provide services in another country, officially known as “commercial presence”; and
4. individuals travelling from their own country to supply services in another (e.g. a telephone engineer or consultant), officially known as “movement of natural persons”.

A country can inscribe exemptions in any of these “modes of supply”. Of course there could be constraints made in a package a country offers depending on how other negotiating parties regard them. Typical examples of limitations were listed in section 3.1A

Risks. There are some risks for a country making a WTO commitment and such risks must be recognised in the interests of more effective negotiations. Risks could include:

- limited or nonexistent benefits for consumers and service suppliers and limited investor interest due to a weak or heavily conditioned commitment;
- possible enforcement actions or trade sanctions by trading partners due to failure to implement a commitment according to its terms;
- short-run loss of government revenue (often foreign exchange revenue) from artificially-inflated prices for international calls, prior to rate-rebalancing; and
- uncertain investment climate arising from commitment that have excessive vagueness or generality in terms (confusing service providers and investors alike) or excessive specificity (creating gaps where technology or business practices change).

The risks can be mitigated by ensuring thorough and timely implementation. But this emphasises that although a WTO commitment can be a catalyst for change, it must be part of a broader determined national commitment to economic and regulatory reform and trade liberalisation.

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