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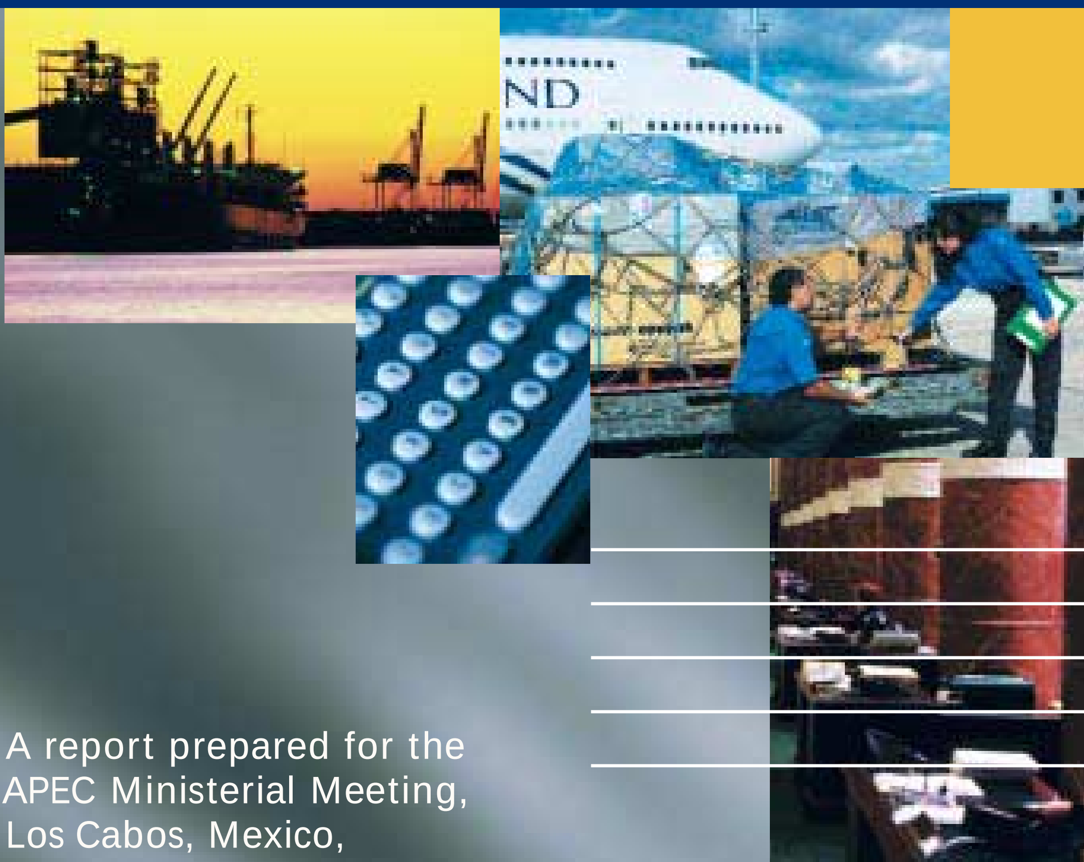
TRADE

APEC Economies

Realising the benefits of trade facilitation



A report prepared for the
APEC Ministerial Meeting,
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Preface

This report, *APEC Economies: Realising the Benefits of Trade Facilitation,* extends an earlier study, *APEC Economies: Breaking Down the Barriers*. That study examined 12 cases that demonstrated how APEC economies had implemented regulatory and administrative reforms to facilitate cross-border trade. The reforms dramatically simplified processes and increased the transparency and efficiency with which economies trade in goods and services. This has resulted in lower costs of goods and services and increased economic efficiency in those economies.

This report provides additional case studies of trade facilitation. It also presents quantified estimates of the gains from a selection of reforms undertaken in a number of APEC economies — Singapore, Thailand, the Philippines, Mexico, China and Australia. The case studies deal with two types of reform — 'at the border' and 'behind the border'. All of the at-the-border reforms involve improving the efficiency of customs procedures through the use of information technology. The behind-the-border reforms focus on physical and market infrastructure and cover road transport in Mexico, the insurance sector in China and port services in Australia.

Key findings

- Trade facilitation is an essential part of achieving APEC's Bogor goal of 'free and open trade and investment' and is a critical complement to trade liberalisation and good governance initiatives. These are all necessary to ensure that the benefits of open markets are maximised, sustained and shared by all APEC economies.
- APEC economies are continuing to implement a range of trade facilitation reforms, resulting in improved market access, lower costs to business, increased efficiency and reduced impediments to competition and innovation.
- The economywide gains from regulatory and administrative reforms can be significant and benefit traders, other businesses and consumers.
- The gains — in terms of annual increases in real incomes measured in 1997 prices — from at–the-border reforms of customs procedures are estimated to be:
  - US$2.3 billion for Singapore
  - US$1.2 billion for Thailand, and
  - US$0.4 billion for the Philippines.
- The estimated annual gains from behind-the-border infrastructure reforms analysed in this study include:
  - US$6.2 billion for China from reforming foreign investment regulation, which opened up the insurance sector
  - US$5.4 billion for Mexico from road transport reform, and
  - US$1.6 billion for Australia from reforming port services.
- Together these gains amount to an estimated US$17.1 billion increase in the real incomes of the reforming economies.
- These estimates confirm the conclusions of other recent studies that the benefits from trade facilitation are significant. One such study is the APEC Economic Committee report *Measuring the Impact of APEC Trade Facilitation on APEC Economies: A CGE Analysis*. This study shows that efforts to achieve APEC's commitment to reduce trade-related transaction costs by 5 per cent by 2006 could raise APEC's gross domestic product by 0.9 per cent (US$154 billion a year in 1997 prices) and lift real consumption to 5.5 per cent above what it would otherwise be.

Trade facilitation in context

Since its formation in 1989, APEC has shown leadership by identifying trade facilitation as a priority for action by member economies. It recognises that trade facilitation is a factor critical to achieving APEC's Bogor goal of 'free and open trade and investment'.

APEC's ongoing trade facilitation work

Trade facilitation work in APEC is often initiated and advanced through APEC expert working groups or subforums including the Sub-Committee on Customs Procedures, the Sub-Committee on Standards and Conformance, the Informal Experts Group on Business Mobility, and the Electronic Commerce Steering Group, which translates into significant work across the board.

APEC working groups and subforums have been encouraging member economies to initiate both individual and collective trade facilitation by, for example, exchanging information and experiences, and undertaking capacity building projects and peer review.

Some of the more notable trade facilitation initiatives resulting from these groups are:

- the APEC Business Travel Card
- E-commerce Best Practices
- Paperless Trading
- Harmonisation of Tariff Structure with the Harmonised System Convention
- Adoption and Support for the United Nations EDIFACT (Electronic Data Interchange for Administration, Commerce and Transport)
- Customs Risk Management Techniques
- Customs–Business Partnership
- APEC Mutual Recognition Arrangement on Conformity Assessment of Electrical and Electronic Equipment, and
- Good Regulatory Practice.

More recently, the *pathfinder* approach to trade facilitation has been used to simplify and harmonise customs procedures on the basis of the Kyoto convention, to implement electronic health and quarantine certificates (E-Cert) and electronic certificates of origin, and to streamline passenger clearance and enhance border and passenger security through an Advance Passenger Information System. This approach enables a group of economies to move quickly on trade facilitation initiatives but allows other economies to join at any time.

The benefits of trade facilitation reforms

As traditional trade barriers such as tariffs come down, trade facilitation reforms that address other impediments to trade in goods and services become even more important.

Economies around the world are recognising that international trade can be made more efficient (less costly and less time consuming) if countries remove complex and redundant administrative processes that affect, for example, customs, the mobility of business people, payments and insurance, and standards and conformance. The benefits of trade facilitation reforms accrue not only to traders, but to other businesses and consumers as well.

As a consequence, trade facilitation is now part of the work programs of a number of international forums, including the World Trade Organization (WTO), the United Nations Conference on Trade and Development (UNCTAD), the World Customs Organization (WCO) as well as APEC.

APEC member economies are pursuing trade facilitation and related administrative and regulatory reforms with the ultimate objective of increasing standards of living. They aim to ensure that their economic systems deliver the goods and services people need at the lowest possible cost. For business and the wider community the reform initiatives increase efficiency through the use of computerised systems and smarter management techniques, assist in cutting costs, increase trade volumes, and contribute to improving transparency, certainty and fairness.

As the recent report *APEC Economies: Breaking Down the Barriers* (APEC 2001) has shown, reforms in diverse areas have brought many common benefits by, for example:

- reducing prices and increasing quality and choices for consumers

- improving productive efficiency by reducing input and transaction costs for business
- promoting innovation and the adoption of new products, technologies and management methods
- increasing the adaptability of the domestic economy, in part to take best advantage of the gains from globalisation and economic integration
- establishing institutions and methods to enable economies to more cost-effectively achieve regulatory objectives, and
- safeguarding budgetary revenues and making more efficient and effective use of public resources.

The reforms are not just facilitating international trade and investment — they are also improving the overall domestic market environment and increasing the efficiency with which public resources are used.

APEC Economies: Breaking Down the Barriers summarised 12 case studies of reform. This report builds on the previous study by presenting additional examples of reform and the benefits arising from them. It also provides estimates of the quantifiable benefits of a subset of these reforms.

Quantifying the benefits

Because the reforms are diverse and generate benefits through a variety of mechanisms, it is not always easy to quantify the gains that have been achieved by implementing them. Nevertheless, these gains are significant. A recent study, *Measuring the Impact of APEC Trade Facilitation on APEC Economies: A CGE Analysis* (APEC Economic Committee 2002), estimated that reducing the costs of international trade transactions by just 5 per cent by 2006 could add US$154 billion (in 1997 prices) or 0.9 per cent to APEC's GDP each year. This annual increment is close to the size of Indonesia's economy in 2000.

The reforms that have been quantified are of two broad types:

- **at-the-border reforms** that involve information technology to improve customs procedures:
  - Singapore's TradeNet
  - Thailand's electronic data interchange (EDI) system
  - the Philippines' Super Green Lane (SGL)

- **behind-the-border reforms** that focus on improving physical and market infrastructure:
  - road transport in Mexico
  - the insurance sector in China
  - port services in Australia.

Both types of reform reduce transaction costs for traders and produce savings for government agencies — the direct benefits of such reform. In doing so, they generate significant further flow-on benefits — the indirect benefits. Because of the interdependencies between economies and sectors, measuring the benefits of these reforms requires a global economywide framework that incorporates both the links between sectors of production in each economy and the links between economies. In this study a leading global economic model that is widely used to examine the implications of trade reform — the Global Trade Analysis Project (GTAP) framework — has been used (for a brief description, see the appendix).

For each reform, the sectors affected have been identified and the reform simulated in GTAP. The results from these simulations indicate the magnitude of the benefits from the trade facilitation reforms.

GTAP, like all models, simplifies the real world to make its analysis manageable. It simplifies the behaviour of industries and consumers, as well as the markets in which they operate. Despite their limitations the results provide valuable information on the likely size of the economywide benefits from the reforms, and point to the rewards to be obtained from pursuing further trade facilitation.

Trade facilitation at the border: reforming customs procedures

Completing documentation required in cross-border trade has long been recognised as a costly, time consuming process. A survey commissioned by the APEC Business Advisory Council found that business people in the APEC region rank customs procedures as the area with impediments in most pressing need of reform, followed by administrative regulations (Asia Pacific Foundation of Canada 2000).

APEC and customs reform

In APEC the Sub-Committee on Customs Procedures is responsible for developing initiatives on customs and customs-related issues. The subcommittee has the objective of facilitating trade in the Asia-Pacific region by simplifying and harmonising customs procedures. It is also working to promote paperless trading in the region — that is, to reduce requirements for paper documentation in customs administration. To this end, it regularly meets with business people, an example being the forum with the theme 'More Competitive Economies through Cooperation between Customs and Business for the XXI Century', held in Acapulco, Mexico, in August 2002. This forum, intended to build on its predecessor held in Shanghai, China, in August 2001, included three discussion panels:

- Customs/Private Sector Cooperation
- Global Trade Facilitator: E-Customs, and
- Customs Role in Harmonization and Simplification of Trade Procedures.

The work program of the Sub-Committee on Customs Procedures will continue to focus on reducing transaction costs by, for example:

- enhancing the customs–business partnership
- publishing the *2002 Blueprint for APEC Customs Modernisation*, and
- continuing to build the capacity of APEC economies to implement WTO customs-related agreements such as Customs Valuation, Rules of Origin and TRIPS (Agreement on Trade-Related Aspects of Intellectual Property Rights).

The case studies

The three case studies on customs reform quantified in this report were summarised in the report *APEC Economies: Breaking Down the Barriers*. (That report and full details of the case studies are available on APEC's website <http://www.apecsec.org.sg>.) This reform took advantage of advances in information technology. Additional case studies from Australia, Canada and New Zealand identify other customs reform that involved re-engineering the way in which the movement of cargo is managed, self-assessment, and business partnerships.

Singapore's TradeNet

Prior to the introduction of Singapore's TradeNet, traders were required to submit up to 21 different forms and physically deliver them to 23 different government agencies for processing. This process could take between 15 and 20 days to complete and up to a further two days for approval.

With TradeNet, traders now prepare a single permit application for submission to the various regulatory authorities. Traders can file the application form in their own offices for electronic transfer to the relevant agencies for processing and approval — which now takes only a few minutes. When approved, the permits are returned electronically to the traders, who can print hard copies in their offices.

TradeNet has revolutionised Singapore's customs procedures and has been identified as one of the strategic national information systems that have enhanced the international competitiveness of businesses in Singapore. TradeNet brought about a major reduction in the costs to importers of complying with regulatory and customs requirements. The IBM Corporation has estimated TradeNet yields Singapore traders around US$1 billion a year in internal productivity gains.

Thailand's electronic data interchange (EDI) system

The EDI system in Thailand allows for customs documentation to be transferred via an online system. Traders can link to the system or use a licensed customs broker. Now traders are required to meet customs officers for only verification. Before the EDI system was implemented it could take up to three days to complete customs processing. It now takes less than a day.

The EDI system brings substantial savings and benefits to traders and the Thai Customs Department. Customs procedures are now much faster and simpler, making transactions more compatible with 'just in time' inventory practices. The EDI system also reduces the number of data entry mistakes because all information is prepared by traders and the system checks accuracy.

Although the EDI service currently can be accessed by only a limited number of traders with access to the EDI gateway, the Government of Thailand has made the provision of greater access a high priority.

The Philippines' Super Green Lane (SGL)

After automating customs procedures using an EDI system, the Philippines introduced the Super Green Lane. The SGL is a special customs clearance facility that allows advance processing and clearance of imports for traders that represent a low risk to customs control. Using EDI, qualified importers may lodge import entries from their own offices — 24 hours a day, seven days a week — using a computer connected to the Bureau of Customs' network. SGL shipments are effectively cleared before they even arrive at Philippine ports.

The SGL has benefited users through greater efficiency in customs processing — fast release of imports, speedier delivery of goods (particularly raw materials) and lower costs. Those shipments having undergone advance processing and clearance may be released from customs about three hours after their arrival compared with 6–8 days in the past. Traders' transaction costs are also significantly reduced because they no longer have to physically submit documents to the Bureau of Customs.

Australia's cargo management re-engineering

Cargo management re-engineering (CMR) is a project of the Australian Customs Service to improve the speed and efficiency of cargo clearance in Australia. It involves replacing the current mix of interactive and electronic data interchange systems with an integrated cargo system. The implementation of CMR began in July 2002 and will be progressively phased in over the next two years. The anticipated benefits of CMR include:

- more timely and accurate information for both the Australian Customs Service and the Australian Quarantine and Inspection Service, enabling both agencies to make earlier risk assessments

- greater accuracy of import and export data, which will improve the quality of trade information produced by the Australian Bureau of Statistics
- lower cost communication options for industry to meet customs requirements, and
- early provision of delivery status, which will provide greater certainty in the movement of cargo across the border.

Some key changes resulting from cargo management re-engineering

	Before CMR	After CMR
Communication	Exclusive access arrangement through Tradegate	An open gateway (known as Customs Connect Facility), which gives clients a variety of options for communicating with the Australian Customs Service, including internet-based communication
Computer systems	Several separate computer systems to declare and report cargo	A single computer system (known as the Integrated Cargo System), which provides the means to declare, report and risk-assess cargo and determine its status
Approach to cargo processes	'One size fits all' treatment of clients	Arrangements tailored for low risk importers and exporters to streamline reporting requirements under the Accredited Client Program
Airway bill screening	Each line of air cargo checked to determine whether the cargo met low revenue criterion	Industry self-assessed clearance of low revenue, low quarantine risk cargo
Reporting of cargo and commercial information	Commercial information submitted separately from cargo report	Options for combined presentation of cargo report and declaration information

Source: Australian Customs Service.

Canada's Customs Self-Assessment Scheme

The Customs Self-Assessment Scheme was implemented in December 2001 to enable a better alignment of Canada's Customs and Revenue Agency's resources with trade of higher or unknown risk, while streamlining and tailoring processes for low risk shipments. It offers streamlined clearance to low risk, high volume importers by using technology and risk management to eliminate paperwork and reduce examination at the border. The scheme allows carriers and importers who have passed through a rigorous assessment of criminality, customs compliance and indebtedness to the government to either use their own business systems to manage the transportation and discharge of imports (carriers) or self-assess reporting of trade data, revenue and duty payment (importers).

The benefits of the Customs Self-Assessment Scheme include:

- decreased paperwork requirements for reporting and accounting, the promise of expedited cross-border shipping for eligible goods, and extended accounting timeframes for all goods, which reduces compliance costs and enhances traders' ability to comply with customs requirements, resulting in increased competitiveness
- improved ability to interdict threats to health and safety and to identify and correct potential penalty structures, and
- improved traffic flows at the border with the United States of America.

New Zealand's Frontline program and use of the internet

Frontline is a business partnership program that aims to link the New Zealand Customs Service and the business sector in trade, economic development and enforcement. It also brings together government agencies that manage the risks to New Zealand's borders and provides a framework for sharing information at all levels.

Through Frontline the New Zealand Customs Service forms partnerships with individual businesses to facilitate the movement of legitimate goods, promote economic development through international trade, and detect prohibited goods and illegal activity. Frontline officers work with traders to explore opportunities and processes for reducing costs, adding value and complying with relevant laws and regulations. Frontline also offers free training for partners, which improves understanding of customs requirements.

To facilitate cross-border trade, the Customs Service has also moved to improve the use of the internet in providing information to traders and travellers, and in allowing exporters to lodge export entries. Online declaration of import entries will be in place soon.

The benefits of these initiatives include:

- effective exchange of information that expedites the cross-border movement of goods
- better identification of risk indicators
- improved voluntary compliance, with commensurate benefits in terms of more efficient entry and better safeguarding of revenues, and
- a reduction in trader uncertainty concerning customs procedures.

The benefits from improved customs procedures

Direct benefits

The direct benefits from improving customs procedures accrue to those participating in international trade — importers in the economies that have implemented the reforms and exporters that are selling their goods to those economies — and the government as a supplier of customs services. For example, the cost savings to the Bureau of Customs in the Philippines from the reform are around US$20 per transaction.

The savings accruing to traders from improving customs procedures by implementing information technology are estimated to be at least 1.5 per cent of the value of the items imported using the reformed system (Department of Foreign Affairs and Trade, Australia 2001).

Direct benefits from using information technology in customs procedures

Savings to government

- Reduced staff costs
- Reduced paper and printing costs
- Reduced storage costs
- More efficient use of resources, releasing resources to be used for inspections and other key customs activities
- Increased efficiency of customs procedures
- Reduced management and administration costs

Savings to traders

- Reduced time required for obtaining and completing customs documentation
- Greater certainty in customs procedures
- Faster delivery of goods
- Reduced handling and storage costs
- Increased efficiency due to the reduced need to prepare and deliver customs documentation
- Greater transparency and access to information

Economywide benefits

The direct savings from customs reform, which include lower costs, flow through to the economy resulting in further (indirect) benefits. For example, the savings that accrue to government can be used in other areas of public expenditure. Also, if imports are both more readily available and cheaper the costs of production for the domestic economy and for exports that rely on imported inputs will be lower and consumers will be better off. An estimate of the benefits from the reforms should therefore include the flow-on benefits as well as the direct benefits — and thus be economywide.

The potential economywide benefits from the customs reform in Singapore, the Philippines and Thailand have been estimated from information about the reduction in time and resources used in processing customs shipments, which has been used to estimate the reduction in the average cost of imports to domestic purchasers. GTAP has been used to analyse the impact of this reduction throughout the economy and to generate estimates of the resultant average changes in key variables such as GDP and real annual income after completion of the reform.

The large benefits to Singapore — an increase in real annual income of US$2.3 billion (measured in 1997 prices) — reflect both the extent of the changes introduced by TradeNet and the large role that trade plays in the economy. The benefits to Thailand — an increase in real annual income of US$1.2 billion — should increase as access to the EDI system expands. Similar increases may be realised in the Philippines if access to the SGL can be expanded.

Economywide benefits from customs reform

Case study	Expansion in GDP	Change in real annual income[a]
	%	US$ million
Singapore’s TradeNet	0.25	2 330
Thailand’s EDI	0.16	1 225
Philippines’ Super Green Lane	0.09	376
Total		3 931

[a] In 1997 prices.

Source: CIE estimates using GTAP.

Trade facilitation behind the border: reforming infrastructure

In the global marketplace, economies must have efficient infrastructure to facilitate industry competitiveness, maximise trade and investment, and maximise the welfare of their citizens.

Physical and market infrastructure such as utilities, roads and financial services is vital to trade. Poor quality infrastructure and inefficiencies in its provision harm importers and exporters by adding to their costs. Economies are assessing the effects of infrastructure regulation and are exploring avenues for reform that may lead to improvements in productivity.

Three examples of behind-the-border reform in APEC economies are reviewed here — road transport reform in Mexico, insurance reform in China and sea transport reform in Australia — and the benefits noted.

The case studies

Road transport in Mexico

APEC Economies: Breaking Down the Barriers reported that Mexico has realised many gains arising from reform in areas ranging from telecommunications to sea and land transport. One of the major reforms was deregulating the road freight industry.

Before the reform process began in 1989, freight transport on Mexico's federal highways was subject to rigid regulation, with a limited number of firms and little competition. Service was poor and prices were high.

Deregulation included free entry to the industry (requiring a simple permit rather than a concession) and no limit to the number of entrants, liberalisation of the rules regarding transporting third-party cargo, removal of restrictions on using international containers and the ending of exclusive rights. Routes are no longer controlled, freight centres no longer control cargoes, and shippers are free to use the truckers of their choice.

After more than 10 years of reform the industry is growing strongly, prices are declining, and service and innovation are improving. Between 1987 and 1994 trucking charges fell by 23 per cent in real terms and between 1989 and 1996 the number of registered road transport units increased by 92 per cent (OECD 1999).

Insurance reform in China

Prior to 1980 China had virtually no insurance sector. In 1982 insurance penetration — as measured by the ratio of insurance premiums to GDP — was a low 0.1 per cent.

The People's Insurance Company of China was the state monopoly and sole insurer until the Ping An Insurance Company was established in 1988 following an ordinance of the State Council in 1985 permitting the establishment of domestically owned insurance companies. In 1992 China's market was opened to foreign insurance companies (with some restrictions). In 1996 the People's Insurance Company of China was broken into three separately managed entities — life insurance, property insurance and reinsurance.

From 1995 to mid-2001 the number of insurance companies with foreign involvement (either through joint ventures or branch operations) grew from three to 17. Over the same period the number of domestic competitors rose from 10 to 20 (OECD 2002).

The steady liberalisation of the insurance sector in China, including breaking up the People's Insurance Company of China, allowing domestic and then foreign competition and allowing insurance companies to offer new types of insurance products, resulted in a dramatic increase in the size of the insurance industry.

Insurance premiums rose by almost 120 per cent to about 160 billion RMB between 1996 and 2000, when insurance penetration in China reached nearly 1.8 per cent — higher than the 1999 ratios of 1.4 per cent in the Philippines and Indonesia, but much lower than the 11.3 per cent in the Republic of Korea (OECD 2002).

Port services in Australia

During the 1990s state governments in Australia embarked on a range of reforms to improve the performance of government-owned port authorities.

- Many port authorities were corporatised, which included separating commercial and regulatory functions.
- Provision was made for identifying and costing community service obligations.

- Dividend and tax-equivalent regimes were introduced.
- In many instances non-core activities, such as stevedoring, pilotage, mooring, general maintenance and cleaning, were contracted out or privatised.
- Consumption-based charging was also progressively introduced, resulting in charges that relate more closely to individual service requirements than to the value of cargo.

The result of this liberalisation has been a significant reduction in charges for container and bulk ships. Between 1990–91 and 2000–01 port authority charges for container ships fell in real terms by 53 per cent in Sydney, 62 per cent in Melbourne and 24 per cent in Brisbane. Over the same period the charges for bulk ships fell by 28 per cent in Sydney, 52 per cent in Melbourne and 23 per cent in Fremantle (Productivity Commission 2002). The falls in charges translate into an estimated 20 per cent reduction in sea transport costs for goods entering and leaving Australia.

The benefits from reforming infrastructure

The direct benefits from reforming the regulations governing the provision of physical and market infrastructure accrue to the users of those services — typically through lower costs to consumers and business, a broader and more market-responsive menu of services, and greater service availability.

Costs can be reduced directly (as in the case of lower priced road services) or indirectly (as in the case of insurance services, where greater availability reduces the cost of managing risk). Suppliers of inputs and factors of production to service providers may also benefit from increased demand. Household consumers are often the ultimate beneficiaries, either through their direct purchases of better regulated infrastructure services or through purchases of items whose production and distribution have used these services. The reduction in costs can increase the competitiveness of exporters and importers, facilitating increases in international trade. This is most obvious in the case of port services, but is also true of services less directly linked to international trade, such as road transport.

The effects of each case of infrastructure reform have been estimated by using GTAP to determine a productivity change in the affected sector that would generate the observed change in service prices or levels of output. GTAP has been used to analyse the impact of these productivity ‘shocks’ throughout the

Economywide benefits from infrastructure reform

Case study	Expansion in GDP	Change in real annual income[a]
	%	US$ million
Mexico's road transport	1.4	5 360
China's insurance sector	0.6	6 219
Australia's port services	1.3	1 613
Total		13 192

[a] In 1997 prices.

Source: CIE estimates using GTAP.

economy and to again generate estimates of the resultant average changes in key variables such as GDP and real annual income after completion of the reform.

Modelling the effect of the productivity improvement resulting from Mexico's road transport reform reveals the country's economy is about 1.4 per cent larger than it would otherwise be. This has occurred because of the expansion of the road transport industry and the reduction in input costs of many other businesses arising from lower road transport costs. Overall, the reforms are estimated to have increased Mexico's real annual income by around US$5.4 billion (in 1997 prices).

China's economy is estimated to be 0.6 per cent larger than it would otherwise be as a result of it liberalising the insurance sector. This reform has led to an estimated increase in China's real annual income of US$6.2 billion (in 1997 prices). It should be noted, however, that the liberalisation of the insurance sector coincided with other more general reforms in China that also contributed to growth in the insurance sector.

The reduction in sea transport costs for goods entering and leaving Australia as a result of reform in its port services is estimated to have generated an increase in Australia's real annual income of around US$1.6 billion (in 1997 prices).

The continuing challenge for APEC

The importance of trade facilitation was highlighted with the adoption of the APEC Non-binding Principles on Trade Facilitation in May 2001, and the APEC Economic Leaders' instructions in October 2001 to identify concrete actions and measures to realise a 5 per cent reduction in transaction costs across APEC members by 2006.

APEC members have responded quickly by developing the APEC Trade Facilitation Action Plan and the Menu of Options of Trade Facilitation Actions and Measures. The action plan outlines a way forward, including timeframes for implementing initiatives and reporting achievements to APEC. Templates for trade facilitation have been prepared for working groups/subforums and individual APEC members to use when reporting. The menu of actions and measures lists potential trade facilitation initiatives that member economies and/or APEC working groups/subforums could undertake in order to apply APEC's trade facilitation principles and reduce trade-related transaction costs.

To advance deliberation on trade facilitation reform, a number of reports on trade facilitation have been sponsored and prepared by member economies in APEC, including the World Bank report *The Economic Impact of Trade Facilitation Measures: A Development Perspective in the Asia Pacific* (Wilson and Mann 2002), the APEC Economic Committee (2002) report *Measuring the Impact of APEC Trade Facilitation on APEC Economies: A CGE Analysis*, and this report.

Although their approaches differ, these reports provide complementary evidence of the positive impact of trade facilitation reforms to encourage member economies to continue with such reforms and identify areas for capacity building.

The case studies in this report and in *APEC Economies: Breaking Down the Barriers* indicate that trade facilitation reforms have some common themes. These may assist in ensuring that further reforms are effective and produce optimal outcomes.

Common themes in reforms

Monitoring	Continuously monitor and evaluate outcomes, particularly by quantitative means, to enable initiatives to be refined.
Consultation	Provide channels to consult with key stakeholders and interested parties — in both the design and ongoing implementation of new and improved arrangements.
Transparency	Ensure that all administrative arrangements and the processes behind them are transparent and facilitate public access to information.
Cooperation	Promote — and take advantage of — international and interagency cooperation.
Technology	Explore technology, particularly the internet, as a mechanism for reducing administrative and transaction costs and increasing the scope of services that can be provided.
Service culture	Promote a culture of efficient service within administrative agencies.
Competitive markets	Look for a competition dimension in administrative arrangements and ensure that regulations meet appropriate objectives with minimal impediments to competition.

This report has demonstrated that APEC member economies are willing and able to implement trade facilitation reforms despite inherent difficulties, and that these reforms have given rise to significant economywide benefits. APEC member economies should be encouraged by these achievements and continue such efforts to reduce trade-related transaction costs by 5 per cent or more by 2006.

Appendix

GTAP — the Global Trade Analysis Project framework

GTAP, which was developed from the Global Trade Analysis Project established in 1993, is a modelling framework designed to facilitate quantitative analysis of policy issues. It has been widely used to examine issues such as the impact of the Uruguay Round Agreement, APEC trade liberalisation, global climate change and future patterns of world trade.

GTAP captures links within economies and between them by modelling the economic behaviour and interactions of producers, consumers and governments. It is therefore possible to trace the implications of a policy change — for example, a tariff cut — to other parts of the economy concerned, as well as to other regions and economies in the model. Within GTAP:

- consumers are assumed to maximise utility and producers to maximise profits
- markets are assumed to be perfectly competitive
- returns to scale are constant, and
- different regions and economies are linked through trade.

The most recent version of the model has increased appreciably the number of economies and sectors covered. It now identifies 45 economies or regional groups, each producing 50 commodity categories. For practical reasons the model is normally solved for fewer regions and commodity groups.

More information about GTAP can be obtained from its website <www.gtap.agecon.purdue.edu/welcome/project.asp>.

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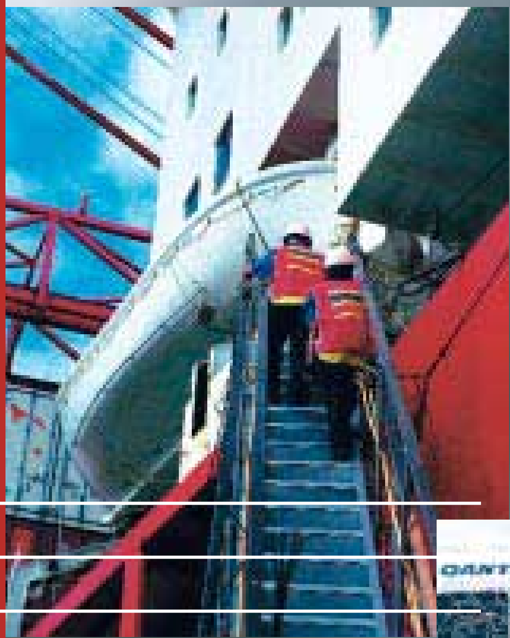

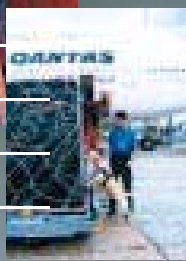
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