

Research Outcomes

Summary of Research Projects
2008-2011



Asia-Pacific
Economic Cooperation

POLICY SUPPORT UNIT

Advancing Free Trade for Asia-Pacific Prosperity

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Interim Assessment 2009-2010

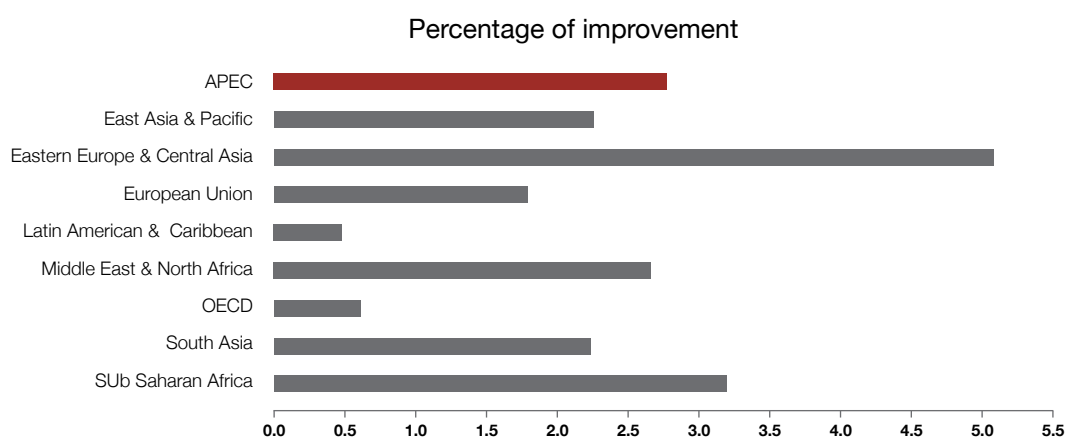
APEC's Ease of Doing Business Initiative

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APEC Leaders in 2009 endorsed an APEC-wide 25 percent improvement in five key areas of doing business by 2015 and an interim improvement of five percent by 2011. The five areas are: 1) Starting a Business; 2) Getting Credit; 3) Enforcing Contracts; 4) Trading Across Borders; and 5) Dealing with Permits. A quantitative assessment based on the World Bank's Doing Business indicators from 2009-2010, the latest data available, shows APEC is making good progress toward the five percent interim improvement target by the end of 2011.

In the absence of new data in early October 2011 when this report was completed, this interim assessment uses a pro rata benchmark of 2.5 percent to evaluate APEC's progress over the period 2009 to 2010. APEC's combined improvement across the five priority areas between this period is 2.8 percent, exceeding the pro rata benchmark of 2.5 percent. On a broader level and in comparison to nine key regional and economic blocks, APEC demonstrated the third best improvement as shown in the following table.

Ease of Doing Business - Overall Progress (2009 - 2010)



Source: World Bank - Doing Business

APEC showed the strongest improvements in the areas of Starting a Business and Getting Credit, with results above the pro rata benchmark. APEC's performance in the area of Trading Across Borders also improved, although the result was below the pro rata benchmark.

Performance held steady in terms of Enforcing Contracts. APEC's performance declined in one area, Dealing with Construction Permits. This decline was driven solely by the negative performance of a single sub-indicator – the cost of obtaining a construction permit.

APEC - Overall Progress of the Ease of Doing Business Initiative (2009-2010)

Pro Rata Benchmark = 2.5 percent

Region	Starting a Business	Dealing with Construction Permits	Getting Credit	Trading Across Borders	Enforcing Contracts	Overall Progress
APEC	7.5	-0.8	5.6	1.8	0.0	2.8
East Asia & Pacific	4.7	-6.6	12.1	0.9	0.4	2.3
Eastern Europe & Central Asia	8.9	3.9	11.3	1.6	-0.1	5.1
European Union	2.2	-0.5	5.6	1.8	0.0	1.8
Latin America & Caribbean	0.9	1.6	-1.2	1.2	0.0	0.5
Middle East & North Africa	4.0	1.8	4.2	3.2	0.1	2.7
OECD	1.4	-0.7	1.1	1.5	0.0	0.7
South Asia	8.6	3.9	3.4	-4.5	0.0	2.3
Sub Saharan Africa	3.2	4.5	8.7	-0.2	-0.1	3.2

Source: World Bank - Doing Business

Note: All components have been calculated by using simple averages. Improvements are shown with positive values.

Despite the good start, there remains room for improvement across the APEC region in all five EoDB priority areas. For example, in 2010, it took around 7 procedures and 25 days to start a business in APEC; while it took only 6 procedures and 15 days in the European Union. Similarly, obtaining a construction permit in APEC cost on average 316.1 percent of APEC's income per capita; while in Latin America & Caribbean, the cost was equivalent to only 191.1 percent of its income per capita.

APEC must intensify and accelerate its efforts, including through capacity-building programs, in order to meet the ambitious goal of a 25 percent improvement in the ease of doing business by 2015. The interim improvement rate of 2.8 percent achieved in 2010, although strong, is insufficient to ensure APEC's success in reaching its longer-term improvement goal.

APEC economies are already taking steps independently to create more favourable environments

for doing business in their markets and collectively implementing APEC capacity building activities in the five EoDB priority areas to move forward. For example, in 2010, APEC held successful overview seminars in each EoDB priority area and is currently implementing programs tailored to suit the needs of individual economies. These programs directly benefit participating economies and contribute to moving APEC collectively closer to its goal of making it 25 percent cheaper, faster and easier to do business in the Asia-Pacific region by 2015.

This report is a collaborative effort between the APEC Economic Committee and the Policy Support Unit. The 2012 APEC Economic Policy Report, to be published by the Economic Committee next year, will incorporate the World Bank's 2011 Doing Business indicators and updated qualitative information to assess APEC's progress in 2011 toward the five percent interim improvement target.

Structural Reforms in Transport, Energy & Telecommunications Sectors

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Structural reform in APEC economies refers to policy change related to 'institutional frameworks, regulations and government policy [designed] so that barriers to market-based incentives, competition, regional economic integration and improved economic performance are minimized'. Structural reform is a vital process to achieve growth and to provide greater flexibility, resilience and macroeconomic stability with which to deal with and withstand shocks, both domestic and external. This study as a whole seeks to catalogue many of the substantial, tangible benefits for consumers and for small and medium businesses arising from APEC members' structural reform efforts in recent years, focusing on the transport, energy and telecommunications sectors.

Infrastructure is a significant and quantitatively important determinant of growth and development. It also reduces transport costs and contributes to better health outcomes. However, market and competition failures may come about due to the natural monopoly characteristics of the infrastructure industries, the uncaptured externality in pricing for certain infrastructures, and the tendency to prioritize equity objectives over efficiency by governments. The ideal way to address this issue is not only to design better policy, but also to match the most effective and least distorting policy instruments to ensure competition and guard public interests. The APEC Leaders' Agenda to Implement Structural Reform is directed exactly at these issues.

In air transport the initial instances of competition often occur in domestic markets through the introduction of low cost carriers (LCCs). Reform of international markets, which involve sovereign treaties as well as operating airlines, moves more slowly, but there is a

shift towards liberalisation. Studies have found that economies gain substantial benefits when moving from the bottom quarter to the top quarter of the international ranking for air transport liberalization. Such a move would see traffic volumes of direct air services between economies increase by about 30 percent. In addition, the signing of Open Skies Agreements has lowered air cargo freight rates by eight percent. In APEC economies, barriers to the entry of new airlines are still maintained, particularly in international markets. Econometric analysis finds that conversion to full openness in air transport would lead to an average reduction in marginal costs for all APEC economies by 15 percent.

In rail transport the separation of track (below-the-rail) and train (above-the-rail) operations and the introduction of competition between train operators provide significant benefits. Free entry of new operators and the resulting dynamics of competition are critical for better performance. One study found that free entry adds over three times as much to productivity as the separation of train and track operations does. In APEC economies, the separation of track ownership and operations is increasingly common, along with the specification of regimes that provide access for new competitors. However, financing challenges remain in track investment. Case studies in Australia, New Zealand and Chile showed that competition, privatization and divestment brought significant benefits to the economy, such as reduced fares/prices, strengthened services, increased frequencies, greater punctuality, and improved customer satisfaction.

In the case of domestic road transport, there is a need to manage passenger and freight transport regulations well so as to balance the conflicting demands, the

costs of road use and damage, transportation network investment, achievement of safety targets and accessibility to services. The package of regulations created, however, may induce a market response that in turn illustrates the opportunities available from better policy. The experience of Bangkok, Thailand, demonstrates that new transport service providers presented customers with a wider variety and improved access to services. As tariffs are lower generally for international road freight, greater importance is placed on infrastructure and other regulatory constraints, such as customs clearance.

The study found that Maritime transport, i.e. the shipping services market is largely competitive although residual regulation of maritime services remains in some economies. One of the key emerging issues is access to port services – in particular, access to ancillary services required to berth, load and unload. Another common restriction is cabotage right which is a permit that foreign shipping service providers require in order to operate in the domestic market. A case study on Australia showed that flexible implementation of the permit system, technological improvements and rationalization of staffing scales have raised capacity utilisation and improved productivity in this sector. Econometric work undertaken in this study found that a movement from the current policy regime to full liberalisation for all APEC economies would reduce maritime freight rates by an average of 20 percent and provide savings for shippers and their customers.

Structural reforms that have taken place since 2004 in the energy sector in APEC economies have mostly been incremental due to the complexities involved. However, it is worthy to note that further structural reforms in APEC electricity markets would reduce prices and increase efficiency based on econometric analysis. In electricity markets, the introduction of competition through a third party access regime could lower electricity prices by almost five percent; the introduction of a wholesale electricity market could lower electricity prices by about 7 percent; and unbundling of generation from transmission could lower electricity prices by more than 11 percent. This study also estimates that the combined effect of all three initiatives could lower electricity prices by 23 percent.

In general, reforms in the natural gas sector have been less extensive than in the electricity sector. In part, this is because the scope for competition in natural gas production depends on the range of supply sources.

Econometric analysis identifies the effects that further structural reforms in APEC gas markets would have on prices and efficiency. The introduction of retail competition could lower gas prices by about 15 percent. The unbundling of gas production and import from distribution could lower gas prices by more than 23 percent.

Telecommunications reform, which embraces information and communications technology (ICT) as well as traditional telephony, leads to productivity improvements. Productivity improvements reduce costs in supply chains and enable goods to move to markets more quickly and more cheaply. As of 2009 the majority of APEC economies have adopted full market entry liberalisation. However, a common practice is to limit foreign investment from gaining dominant positions in fixed-line operators, which is a major issue in current telecommunications regulatory settings. In the case of mobile telecommunications, all APEC economies have liberalised this sector as of 2009. In most economies, new licences are granted based on market-oriented approaches unless limited by the availability of radio spectrum. APEC members have undertaken - under GATS commitments - to allocate spectrum in an objective, timely, transparent and non-discriminatory manner.

Greater benefits may be achieved across all sectors through the introduction of greater competition in the following ways:

- air transport - through reforms to air services agreements, to entry conditions for domestic and foreign carriers, and ownership;
- maritime transport - by dismantling remaining entry restrictions, quotas or cargo sharing arrangements and granting domestic-vessel treatment to foreign-owned carriers;
- rail transport - through free entry in freight operations ;
- electricity and gas - by providing third party access, unbundling, wholesale prices set through market arrangements and/or retail competition;and
- telecommunications - through the removal of remaining foreign equity limits.

Introducing a package of reforms based on the measures outlined above would have a significant effect. Across the APEC region, USD175 billion a year in additional real income (in 2004 dollars) could be generated relative to what would have accrued

had these reforms not occurred. This is a snapshot of the gains projected after a 10-year adjustment period. The reforms can be translated into productivity effects, and the estimated first round impacts of these reforms suggest that they could lead to weighted average productivity improvements in the range of 2-14 percent across the transport, energy and telecommunications sectors. These projected gains are almost twice as large as the gains from further liberalization of merchandise trade. These findings, therefore, vindicate APEC Leaders' decision to move beyond a 'border' focused trade reform agenda to one that focuses on 'behind the border' issues. Although the gains from joint reforms are considerable, an overwhelming proportion of these gains come from

domestic reform, thus economies that initiate reform sooner will yield benefits earlier.

Along with generating significant gains, structural reforms often require significant structural adjustments, such as changes in economic structures, innovation and the adoption of new technologies and market responses to shape effective regulation as well as transform APEC economies and their existing regulatory systems. These must be managed carefully and incorporate a considerable transition period during implementation. To ensure the success of structural reform, it is imperative to have a clear purpose and to put in place an effective reporting and monitoring mechanism for design and implementation.

The Links Between Trade, Investment and Structural Reform

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APEC's focus on regional prosperity and integration in an era of rapid globalization has led to an agenda of behind-the-border as well as at-the-border reforms. At-the-border reform focuses on measures that overtly discriminate against foreign goods, services and investments such as tariffs, national content requirements and restrictions on foreign equity. Behind-the-border reforms deal with barriers such as excessive regulation, poor legal infrastructure and unclear rights and the lack of effective laws to foster competition. Trade reforms such as liberalising tariffs and structural reform like competition policy are respectively examples of at-the-border and behind-the-border policy reforms. Well-developed sets of policies can provide greater benefits if pursued together. Openness to trade and foreign direct investment (FDI) leads to opportunities which may not be realised if behind-the-border policies do not support competition and efficiency. Gains from behind-the-border reforms increase significantly in an economy that can leverage global opportunities.

Since both sets of reform focus on economic efficiency, they would facilitate improvements in domestic growth and overall living standards, while enhancing an economy's ability to trade and invest with the rest of the world.

The need for coherence between at-the-border and behind-the-border reforms is growing as the spread of global supply networks, just-in-time production and the internationalisation of services changes the nature of global production, trade and investment. The reforms can be viewed as public policy inputs to global supply chains which aim to benefit both producers and consumers. However, tensions may arise between behind-the-border and at-the-border policies when they depart from their main purpose of economic efficiency and pursue other objectives, or when policymakers do not share the same view of economic efficiency.

In the last two decades, many economies have reformed both their at-the-border and behind-the-border policies, at various paces and to different degrees. This trend provides numerous case studies and broader empirical evidence that support the strong mutually reinforcing links between at-the-border and behind-the-border policies.

The Economic Impact

Enhanced Multimodal Connectivity in the APEC Region

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APEC has identified under-developed multimodal transport capabilities as one of the priority chokepoints to be addressed under the Supply Chain Connectivity Framework. To help economies understand further how multimodal links are vital to the connectivity of modern supply chains and trade, the APEC Committee on Trade and Investment (CTI) tasked the Policy Support Unit (PSU) to undertake a study to quantify how enhanced and efficient multimodal connectivity could contribute to economic integration and the competitiveness of the region.

This study examines the potential impact of enhanced multimodal connectivity on trade. Multimodal transport connectivity is a complex concept, involving the quality and quantity of infrastructure, as well as the private sector's ability to coordinate complex intermodal linkages. The data in this report capture three dimensions, land, air and sea transport; in addition to logistics competence as a proxy for an economy's ability to manage intermodal connections along the supply chain.

The results show that the performances of individual transport modes and logistics, as well as overall multimodal transport performance, have a robust and significant association with stronger trade relations. The closest relationship with trade is logistics competence: improving an economy's performance by one percentage point relative to the regional leader is associated with an export increase of over two percent. A weakly performing logistics sector represents the most important chokepoint in terms of supply chain performance and multimodal transport connectivity.

For individual transport mode, the linkages tend to be weaker but still are important. The effect of maritime transport is around half as strong as that of logistics competence. A one point increase in the maritime transport index is associated with a trade increase of just over 1 percent. Air transport sees a weaker effect than maritime transport, and land transport is the weakest. This result reflects the fact that land transport is most important for movement of goods within economies, rather than between economies.

Similar results are obtained using the overall multimodal transport connectivity indicator, an aggregate index developed by weighting averages of the air, land, maritime and logistics indicators. The impact of multimodal transport on trade flows is positive and highly statistically significant. A one percentage point improvement in performance is associated with a nearly three percent increase in exports as a unilateral impact, and before accounting for reallocation effects across economies. This effect is stronger than for any of the component indices on their own. When the possibility of a 'virtuous cycle' between multimodal performances is accounted for, the effect is weaker but remains statistically significant.

'What if' exercises based on gravity model estimates show that an improvement in overall multimodal performance would significantly boost exports. Taking into account the 'virtuous cycle' between multimodal transport performance and trade as well as the complex reallocations of exports that occur when economies reform simultaneously, the counterfactual simulations show that a five percent improvement in overall multimodal performance would increase exports to the world by nearly USD 500 billion annually

or an increase of four percent. The range for individual member economies is between two percent and six percent of baseline exports. In dollar terms, this equates to an impact gain of between USD 850 million and USD 115 billion per member economy.

High performers in multimodal transport have the most to gain – five percent improvements in these economies represent substantial performance upgrades. Economies with challenging multimodal transport environments see smaller, but still significant gains from reform: at a minimum, an increase in exports of nearly two percent follows concerted reforms that improve multimodal transport performance by five percent. Another feature of the simulation results is that relatively small and open economies stand to realize significant gains from reform.

The report finds that the impact of individual transport modes and overall multimodal performance varies across sectors. Trade in consumer goods is the most sensitive to improvements in overall multimodal transport connectivity. This is followed by capital goods, transport equipment, other goods, and industrial supplies. Weak multimodal transport connectivity therefore represents a significant chokepoint in these sectors. Maritime transport plays an important role as a potential chokepoint in exports of consumer goods, capital goods, and industrial supplies. Air transport is especially important for exports of food, and to a lesser extent consumer, other goods, and

industrial products. Land transport appears to be the most important chokepoint for exports of transport equipment. The most consistent results from any of the four indicators come from logistics competence. It is a significant determinant of trade performance in all sectors. This finding highlights the importance of making all transport modes work together through an efficient logistics sector. Logistics performance is most important for other goods, followed by food and beverages, capital goods, consumer goods, transport equipment, and industrial supplies.

There is considerable scope for policymakers to help reduce the incidence of supply chain bottlenecks, and boost trade. Investing in trade and transport-related infrastructure development and maintenance should remain a crucial priority for member economies. Working together on a regional or sub-regional basis may be appropriate in some cases, for example, transit corridors. A supportive regulatory environment can help promote better multimodal transport connectivity and supply chain performance. Regulatory reform based on cost-benefit analysis can help increase connectivity, as well as the quality of service provision in vital areas such as logistics. The private sector should be a key participant and partner in infrastructure development and regulatory reform. Development of private sector competence in areas such as logistics should also remain a key priority for member economies, as part of a more general program of private sector development.

Logistics

Connectivity for Goods & Services

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In an era of increasing global activity where tariff and other barriers to trade have fallen as a result of previous APEC achievements, logistics is best viewed broadly and strategically as an integral contribution to widening and deepening supply-chains and their complex management. Just as the corporate approach to managing logistics requirements has

evolved from a cost-cutting approach to a strategic value-adding approach, the consideration of logistics policy, research and capacity building issues needs to similarly evolve.

The common approach for most of the 20th century was for businesses to view and organise the trade

and transport aspects of moving their production to consumers in domestic or international markets within individual corporate structures. Currently there is fertile and aggressive competition between local and global corporations who specialize in individual areas or offer an entire range of logistical services to move goods from producers to businesses and intermediaries. More deliveries are now being made to consumers directly as the internet acts to break the intermediary role played by the traditional distribution processes. Current business models see workers transported within and between countries to deliver services in situ rather than goods being shipped to a service provider for repair.

The Global Financial Crisis has been adversely affecting economic growth and consumer confidence. While the private sector has been reviewing priorities and seeking greater efficiencies, the governments of

each economy should examine policy and regulatory settings to implement measures that reduce costs for business. This will encourage greater economic activity and better place economies to benefit as growth returns.

As incomes rise and technology improves to provide consumers with exposure to new goods and services and businesses with greater capability to do things differently and better, the demand for logistical services will increase. The challenge remains for APEC and its member economies is to embrace the wider paradigm of global connectivity and recognise that policy and regulatory approaches to the current “silos” of at-the border and behind-the-border will need to be considered more holistically to comprehend the matrix of interactions between economic, trade and logistical issues that underpin today’s trade and commerce.

A Results-Oriented Approach

APEC’s Supply Chain Connectivity Initiative

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At the Senior Officials Meeting (SOM) in July 2009, the Policy Support Unit (PSU) was requested to develop holistic measurement tools that are applicable to APEC’s Supply Chain Connectivity Initiative (SCI), particularly to measure achievements in areas such as enhancing multimodal connectivity, improving harmonization of cross-border standards and promoting competition. It was recognized that the World Bank’s Logistics Performance Index (LPI) was one possible tool that could be complemented with other measures. Thus the PSU proposed the use of a results framework to capture the performance measurement of the SCI in a holistic manner.

A Results Framework for Supply Chain Connectivity Initiative

A results framework is a performance measurement tool to assist with achieving and measuring specific objectives.

It lays out the logic of a strategy by linking high-level objectives to program-level outcomes (and ultimately individual activities) and sets out a means by which achievement at all levels of the hierarchy can be measured.

A review of the logistics performance of APEC economies reveals commonalities in the factors which explain performance but highlights differences in their significance to each economy. The chokepoints to supply chain connectivity (i.e. factors which contribute to higher cost, time delays, and/or greater uncertainty in moving goods and services along the supply chain) can be categorized under four general groups – physical or hard infrastructure, policies and regulations governing the logistics sector or logistics service providers, trade procedures, and institutions aimed at supporting market exchanges.

Infrastructure chokepoints could exist in terms of

availability, capacity or quality. Policy and regulation chokepoints could mean the presence of regulations that constrain service delivery and quality or the absence of policies that would promote efficient industry outcomes (e.g. competition policy). With respect to trade procedures, chokepoints include burdensome requirements and time-consuming procedures. Finally, chokepoints that emanate from ineffective institutions could arise from arbitrary decision making or non-transparent rule making. As the movement of goods and services along the supply chain involves many sectors, agencies, and jurisdictions, the lack of policy coordination or a weak mechanism for policy coordination also constitute a major chokepoint under ineffective institutions.

If the goal of the SCI is to be evaluated in terms of reducing cost, time, and uncertainty in moving goods and services along the entire supply chain, APEC must address the factors which contribute to driving up cost, time, and uncertainty on all four fronts although specific chokepoints will have varying degrees of relative importance among the economies.

The results framework seeks to link the high level objective (goal) and low level actions by identifying a range of key strategic objectives, which are supported by theory and empirical evidence. The four strategic objectives are:

- provide the necessary infrastructures to remove the physical chokepoints;
- improve policy and regulatory frameworks to enhance the performance of the logistics sector and/or logistics service providers;
- streamline trade procedures to make transactions easier, quicker and more economical; and
- establish effective institutional arrangements to support efficient market exchanges.

It is recognized that the complexity and dynamism of global supply chain management is such that external factors will continuously affect any results framework for APEC's Supply Chain Connectivity Initiative (these are typically built into the results framework under assumptions or risks). Given the very dynamic nature of global logistics, attribution of logistics performance to specific public sector actions would be very difficult to measure in precise terms. The desired impact of reduced cost, time, and uncertainty will result from a confluence of many factors, not all of which are within the control of policy-makers. However, the logic

behind the SCI is that further improvements in cost, time and uncertainty reductions can be achieved by addressing chokepoints that are within the purview of the public sector. If the achievement of the goal cannot be attributed solely to the SCI, at the minimum, it should be able to link successes in achieving the strategic objectives to APEC actions.

Implementation of Result Framework

Actions that will contribute to achieving the objective are identified along with corresponding performance indicators. These could be a range of projects/ programs each with its own objectives, outputs, activities and inputs.

An overall holistic approach to supply chain connectivity is extremely ambitious. Moreover, committing to an SCI-wide agenda would give rise to high expectations for a broad range of outcomes. It leads to many objectives which include many more actions for which there are no comprehensive direct data alignments or sources. APEC efforts could be partially successful even if it only realizes some of the four outcomes but partial success would then be viewed against the higher initial expectations of holistic outcomes. It is important that APEC members focus their efforts on addressing respective priority chokepoints. Facilitating progress in the other outcome areas, or at least monitoring that progress, will ensure more realistic and manageable expectations on what APEC can achieve. Alternatively, APEC could agree on a holistic approach to guide priority areas and objectives and publicly refer to these particular issues as the deliverables. This may better attune performance expectations to the publicized scope of the SCI.

Technical expertise is required to develop appropriate performance or success indicators. To increase the chances of successful implementation of the SCI, it is possible to assign one senior committee to champion each strategic objective. The champion would provide strategic direction in identifying related actions and activities and also implement some of these. The various relevant APEC sub-fora or sectoral working groups (e.g. services, transport, customs, etc.) should be involved in contributing to any one or more of the strategic objectives by focusing on the implementation of specific actions or activities which reflect their own areas of technical expertise.

An important issue that is not discussed in this paper is funding for the SCI. Once the action plan is developed,

the plan must be translated into a budget and the required resources mobilized. To ensure that the results framework is implemented, an adequate budget must also be allocated for monitoring and evaluation of the SCI.

As proposed in this paper, the framework captures how APEC could measure success at each level of the SCI.

The framework is meant to trigger strategic thinking, and would be further developed with stakeholders, and evolve over time. If agreement is reached on this approach, the framework could be carried forward at both the strategic level and implementation level, through rationalizing indicators, identifying performance indicators, establishing baseline figures and setting targets.

Assessment of the Second Trade Facilitation Action Plan

APEC's Achievements in Trade Facilitation 2007-2010

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Following the conclusion of APEC's Second Trade Facilitation Action Plan (TFAP II) in 2010, the APEC Policy Support Unit (PSU) conducted the Final Assessment of TFAP II. This report consolidates and summarizes the findings from six component assessment reports: an aggregate measurement of total trade transaction costs as well as the contributions made by the APEC sub-fora in four priority areas – Customs Procedures, Standards and Conformance, Business Mobility, and Electronic Commerce (data privacy and paperless trading).

The results of the TFAP II Final Assessment provide strong evidence that the Leaders' goal of a five percent reduction in trade transaction costs over the TFAP II period of 2007 through 2010 has been achieved, with substantial progress made through APEC's trade facilitation efforts at both the aggregate and sub-fora levels.

Data from the World Bank's Trading Across Borders indicators reveal that there has been a five percent reduction in total trade transaction costs across the APEC region over the period of TFAP II, which resulted in total savings of USD 58.7 billion. More specifically, the study found that between 2006 and 2010:

- total fees and charges rose in real terms by USD 6.3 billion, an increase of 4.8 percent;
- reduction in the amount of total time taken to complete trade-related procedures amounted to USD 65.0 billion, a decrease of 6.2 percent;
- average number of days taken to complete an export transaction for a single container declined from 17 to 15 days, but the cost incurred rose from USD 842 to USD 856; and
- average number of days taken to complete an import

transaction for a single container decreased from 17 to 15 days and the cost incurred also fell from USD 941 to USD 923.

Results from the Final Assessment reports also reveal that each of the four sub-fora have made significant progress to improve trade facilitation and reduce transaction costs through the measures implemented under TFAP II. In the area of customs procedures, the study found the following:

- 8.1 percent decline in the monetary value of the time taken in customs clearance and technical control between 2006 and 2010;
- the number of Approved Economic Operators (AEOs) in APEC increased by 26 percent between 2007 and 2009; and
- most APEC economies had either 100 percent electronic lodgement or increased (or at least kept constant) the proportion of merchandise trade-related documentation lodged electronically between 2007 and 2009, with a number of economies moving closer to fully paperless trading.

In the area of standards and conformance, there has been an increased degree of alignment of technical regulations and domestic standards with the international standards of the International Electrotechnical Commission (IEC) within APEC economies. The harmonized set of standards gives manufacturers greater certainty in standards compliance and allows for economies of scale in production. The study specifically found the following:

- the number of economies reporting alignment with IEC

- standards rose from 12 in 2006 to 16 in 2010; and
- the degree of alignment to a set of 168 IEC standards reported by APEC members rose to between 91 percent and 100 percent alignment in 2010 from a range of 55 percent to 100 percent in 2006.

The Final Assessment found that APEC's initiatives in business mobility have been very successful. There were 88,421 active APEC Business Travel Card (ABTC) holders at the end of 2010, an 11.4 percent increase from the end of 2009 and a 430 percent increase from the end of 2006. The study estimated the savings obtained by ABTC holders between March-July 2010 and March-July 2011 as a result of the ABTC scheme and found the following:

- 38 percent reduction in business travel transaction costs, which translates to total savings of USD 3.7 million; and
 - 43.3 percent reduction in time spent to complete visa applications
 - 27.8 percent reduction in fees spent on visa applications
 - 52.4 percent reduction in time spent to complete processing at immigration checkpoints
- 91 percent of ABTC holders rated their overall level of satisfaction with the ABTC scheme as satisfied.

In the area of electronic commerce, APEC has made significant progress towards developing a consistent approach to information privacy protection across the region and towards assisting member economies to build capacity in domestic legislation. The guidelines,

directories and templates to create the framework for the implementation of a Cross-Border Privacy Rules (CBPR) system in APEC have been completed. This system will support business needs, reduce compliance costs, provide consumers with effective remedies, allow regulators to operate efficiently, and minimize regulatory burdens, while also building a foundation of trust and confidence in data networks.

A case study on the application of an electronic Certificate of Origin (e-CO) between Chinese Taipei and Korea revealed the following:

- USD 274 savings per shipment and reduction of two days processing time for exporters;
- USD 397 savings per shipment and reduction of 3 days processing time for importers; and
- potential 6.8 percent reduction in transaction costs if there is APEC-wide adoption of the e-CO scheme and assuming a conservative ratio of shipments that require an e-CO.

Based on the results of the TFAP II Final Assessment, the CTI is recommended to focus its future efforts on the following:

- strive to systematically address how to better develop, design, implement, monitor, and review its initiatives to facilitate trade and reduce transaction costs; and
- continue trade facilitation efforts beyond TFAP II through greater focus on the APEC Supply-Chain Connectivity Framework.

Trade Transaction Costs Reduction in APEC 2007-2010

Aggregate Measurement

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The study involved preparing estimates of trade transaction costs in APEC for each year from 2006 to 2010. The estimates are to form part of the Final Assessment of TFAP II and are to be based on the methodology and approach developed for the Interim Assessment of TFAP II in 2009.

Over this period, merchandise trade by APEC economies grew strongly. Trade rose by a total of 21 percent in real value and 24 percent in volume - the latter measured by shipping container movements at major ports. On each measure, the change in exports slightly outstripped that for imports. Given the significant economic differences across the region, individual APEC economies have had vastly different experiences in terms of the evolution of trade.

Transaction costs are resource costs incurred in the trading process and should be distinguished from the production costs of what is exchanged - the latter are often referred to as 'transformation costs' to underline this distinction. The World Bank publishes global indicators of trade transaction costs, which cover the time taken and expenses incurred in the trading process.

According to the World Bank indicators, it took 17 days and USD 842 to complete an APEC export transaction in 2006, and 17 days and USD 941 for imports. Over the Assessment period, time spent had declined by two days for imports (11 percent) and two days for exports (10 percent), while fees and charges had risen by 7 percent for exports and three percent for imports.

The estimation process uses this information to calculate the economic cost incurred over all merchandise trade in a year. To allow an assessment of how policy change has affected such costs, the impact of any other parameters have to be removed. Hence all estimates are calculated based on constant trade volumes and trade values in real terms over the Assessment period.

Estimates indicate APEC transaction costs dropped by five percent over this period, implying that APEC has realised the five percent target set by its Leaders at the start of TFAP II. The progress by individual economies was, however, highly uneven. Many did not reach the five percent benchmark and some saw their transaction costs rise in real terms by a substantial margin.

Substantial savings in time costs were achieved across the APEC region with a few instances of regression. Fees and charges, on the other hand, rose strongly in real terms, particularly in ports and terminal handling. Net savings were achieved at most stages in the logistical chain but real transaction costs in ports and terminal handling rose across the region.

The most significant uncertainties relate to the data and the assumptions used to value transit time. The Trading across Borders data have limitations as noted by some APEC economies. However, these data represent the most comprehensive and comparable indicators of trade transaction costs that are publicly available. A practical replacement is simply not in sight at this stage.

The other significant uncertainty is the valuation of time. It is most pronounced for the time taken to prepare the documents for customs clearances and other regulatory approvals. It is clear that exporters and importers spend valuable employee time in preparing such documentation but it is unclear how much of this adds to delays in the delivery of the merchandise in question.

For the Final Assessment one half of the time in document preparation is assumed to flow through as a transit delay. This contrasts with the Interim Assessment, which made no such allowance. After reviewing the evidence and consulting with experts, the assumption used for the Final Assessment is considered to be more appropriate and, under the circumstances, a relatively conservative approach to

the estimation of trade transaction costs.

While the Leaders' five percent goal has been achieved, this report does not address the issue as to how much TFAP II has contributed to this outcome. This can only be established by a detailed examination of the policy changes made by each APEC economy, the contribution of TFAP II to the policy changes, and the impact of the policy changes on APEC trade transaction costs. Such analyses were outside the scope of this report but are being pursued in parallel work that is being conducted by the PSU.

Trade transaction costs are comparable to trade policy measures in terms of their impact in restricting trade. The combined estimated effect is equivalent to a tax of 18.9 percent on all APEC imports, and 18.7 percent on all APEC exports. As such imposts are serious impediments to economic performance, and provide clear and compelling reasons for all APEC economies to implement further cuts in trade transaction costs.

In the light of these conclusions, the following recommendations are proposed to APEC:

- continue monitoring of the evolution of trade transaction costs in APEC economies;
- regular reviews of the Supply Chain Connectivity Framework Action Plan to ensure appropriate prioritisation of its actions and measures;
- continue use of the Trading across Borders data to estimate trade transaction costs; and
- implementation of ways and means to improve the quality and transparency of the Trading across Borders database.

Consider undertaking complementary research into:

- i The contribution of policy changes to the reduction in trade transaction costs; and
- ii The economic valuation of the time taken as part of the international trading process.

Assessment of APEC's Progress

Trade Facilitation through Customs Procedure

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Since its creation in 1989, APEC has been at the forefront of efforts to facilitate trade and recently completed its Second Trade Facilitation Action Plan II (TFAP II), whose overall goal was to reduce trade transaction costs in APEC economies by five percent between 2006 and 2010.

For the Final Assessment of TFAP II, the PSU has commissioned a series of studies into different aspects of the Plan. This report addresses the outcomes that have been achieved by the Actions and Measures on Customs Procedures, one of four priority areas that made up TFAP II. The Actions and Measures in question address the following sub-areas of the Plan:

- Time Release Survey (TRS) of Goods;
- Implementation of an APEC Framework based on

the WCO SAFE Framework of Standards;

- Simplification and Harmonization of Customs Procedures on the Basis of the Revised Kyoto Convention on Customs Procedures; and
- Paperless and/or Automation of Trade-related Procedures.

For this report, the Actions and Measures on Customs Procedures were assessed from two different perspectives — the first is the specific objective set out in the sub-area of TFAP II and its contribution to the overall goal of a five percent cut in trade transaction costs under TFAP II.

The limitations of the nominated Key Performance Indicators and the data collected precluded precise conclusions about the consequences of the Actions

and Measures on Customs Procedures. In the case of trade transaction costs, these were compounded by the lack of understanding about how each of the actions and measures in question can be expected to affect the various trade transaction cost variables along the international logistics chain.

Accordingly the assessment had to call on a range of other information to permit the following broad conclusions to be drawn.

There have been significant gains made across APEC in reducing the time taken by exporters and importers in completing government 'red tape'. The time taken for Customs clearance and technical control across the APEC region is estimated to have dropped by around eight percent over the TFAP II period and it is reasonable to presume that many, if not most, of these changes were the direct consequence of TFAP II Actions and Measures.

The number of Authorised Economic Operators (AEO) in APEC rose from 8,322 in 2007 to 10,502 in 2009. This is a key indicator of progress in implementing an APEC Framework based on the WCO SAFE Framework of Standards. A survey of clearance times in Japan indicates that the savings in merchandise transit times from such a programme are substantial.

No APEC member reported that its customs agency had reduced the number of documents that the customs agency required to clear an import or an export transaction between 2007 and 2009. Nevertheless, the Trading across Borders survey of the World Bank has revealed substantial improvements over a longer time horizon, from 2006 to 2010, in terms of two key measures - the number of documents that an exporter or an importer has to submit to all border protection agencies and the time taken to prepare the documents. Between 2006 and 2010 the transaction costs associated with time taken for document preparation in APEC economies fell by 8.7 percent in real terms.

Most APEC economies report either full or near-full electronic lodgement of trade-related documentation with regard to both imports and exports. Consequently, most of the possible benefits in terms of reduced trade transaction costs have been achieved.

While it is difficult to draw precise conclusions about the outcomes of TFAP II actions, the findings of the

report make clear some gaps to be addressed. The policy recommendations are as follows:

i. APEC should address processes for developing, monitoring, and reviewing programmes

APEC needs to systematically address the limitations of the process that it has traditionally used to develop, design, implement, monitor, and review its efforts to facilitate trade and enhance supply chain efficiency. This is the overriding priority and one of the keys to the Leaders goal for the Supply Chain Connectivity Framework (SCCF) Action Plan. The other is to continue and expand monitoring and assessing the performance of the Plan, notwithstanding the practical difficulties in doing so.

ii. APEC should undertake case studies of effectiveness of customs procedures in the region

There is a dearth of understanding about the effectiveness of customs and related border procedures, which is essential for streamlining such procedures and minimizing transaction costs. A number of APEC economies have made wide-ranging changes that would be worthy of further study to distil the wider lessons from their experiences. It is recommended that APEC undertake a series of case studies on the effectiveness of customs procedures in the region, which could be used as benchmarks by others.

iii. APEC should identify and address capacity building implications

Human resources are major constraints on collective action by APEC on customs procedures. The issues are particularly acute for the less developed members of APEC. APEC should identify the capacity building implications of the SCCF actions and measures on customs procedures with a view to implementing appropriate programmes to improve customs procedures and reduce transaction costs in the less developed members of APEC.

iv. APEC should examine the interaction of customs procedures, as well as other transport related regulations, with infrastructure

Customs procedures could directly and indirectly affect infrastructure services at or near the border. They often regulate the loading and unloading of ships and aircraft and the movement of merchandise. As regulatory bottlenecks can cause congestion elsewhere in the transport system, it is recommended that APEC undertakes a review of the interaction of customs procedures and transport regulations with infrastructure

in APEC with a view to recommend actions to reduce transaction costs in member economies.

There are also several recommendations that are specific to each of the four priority sub-areas on Customs Procedures:

- Time Release Survey of Goods:
 - APEC should specify benchmarks to guide the implementation of TRS
 - APEC should specify the key outcomes to be sought from TRS

- APEC should measure time taken at each step in Customs clearance and technical control
- APEC Framework based on the WCO Framework of Standards:
 - APEC should specify additional KPIs on outcomes
- Simplification and Harmonization of Customs Procedures:
 - APEC needs better defined, measurable and targeted KPIs
- Paperless and/or Automation of Trade-related procedures:
 - Re-evaluation of the current set of objectives, actions and KPIs.

Reducing Trade Transaction Costs

Harmonization of Standards & Conformity Assessments in APEC

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This report provides information and findings from the evaluation of the Key Performance Indicators (KPIs) of the APEC Sub-Committee on Standards and Conformance (SCSC) for the period 2006-2010 (the period associated with the Second APEC Trade Facilitation Action Plan (TFAPII)).

It is noted that there are research difficulties with the evaluation of the SCSC KPIs. This has been highlighted in previous reports. These difficulties stem from the fact that the KPIs were set towards the end of the reporting period, and there has been no systematic collection of data in relation to the KPIs from the beginning of the period.

As such, a precise evaluation of the KPIs has not been possible. However, by combining existing datasets, it is possible to understand the trends associated with the KPIs.

The work of the SCSC contributes to trade facilitation and to the reduction of trade transaction costs in the

TFAP II. It achieves this in a number of ways, such as alignment of APEC member economies technical regulations and domestic standards with selected international standards for specific product categories.

One area of the SCSC's focus is on trade in electrical and electronic products, which has amounted to an excess of USD 1 trillion in intra-APEC exports per annum since 2006. In this period, the SCSC has had an active programme to align APEC member economy technical regulations and domestic standards with international standards set by the International Electrotechnical Commission (IEC). It has also developed the APEC Electrical and Electronic Products Mutual Recognition Agreement (MRA), and recognised conformity certificates established under the IECEE CB Scheme.

These activities reflect the WTO Technical Barriers to Trade (TBT) Agreement which seeks to use international standards and recognise international conformity assessment schemes to facilitate trade in goods where possible.

The SCSC KPIs that are the subject of evaluation in this study relate primarily to activities associated with trade facilitation for electrical and electronic products. For each KPI the following high level trends were identified.

The evaluation of KPI 1 shows that APEC member economies have increasingly aligned their technical regulations and domestic standards with selected IEC standards. In 2006, 10 APEC member economies reported 100 percent alignment with IEC 60065. In 2008, 14 APEC member economies reported 100 percent alignment with IEC 60065. In 2010, 15 APEC member economies reported 100 percent alignment with IEC 60065. Over the period 2006-2010, an increasing number of APEC member economies have aligned their technical regulations to international standards covering electrical safety requirements for televisions.

This has meant that a growing portion of the selected product for this KPI, i.e. televisions, has been imported on the basis of technical regulations and domestic standards aligned with IEC 60065.

For APEC member economies that have provided Voluntary Action Plan (VAP) responses, the share of television imports by value that have been covered by the relevant international standard has increased from 14.9 percent in 2006 to 94.5 percent in 2009.

The evaluation of KPI 2 based on APEC members' VAP responses, shows an increased degree of alignment of technical regulations and domestic standards with the standards of the IEC. The number of economies reporting alignment with IEC standards has risen from 12 to 16 economies during the period of 2006 to 2010. In addition, the extent of alignment over the full list of the selected 168 IEC standards has increased. The reported alignment ranged from 55 percent to 100 percent in 2006, but are now between 91 percent and 100 percent.

The direct evaluation of KPIs 3 and 4 has not been possible in this study. A proposed survey of exporters on changes to compliance costs (which are the

relevant trade transaction costs in the context of standards and conformance) was discouraged by APEC member economies due to data collection difficulties from electronic companies as well as the issue of data confidentiality.

Instead an analysis of trade values and the number of test certificates issued under the IECEE CB Scheme has been undertaken.

The analysis shows that exports from APEC member economies in electrical and electronic products, including specifically televisions, increased during the period 2005 to 2008, and then reduced by approximately 13.3 percent in 2009 due to the contraction in consumer spending brought on by the global financial crisis.

The growth experienced in exports by value of electrical and electronic products before 2009 was in line with global trends, with APEC economies contributing consistently to approximately 66 percent to 69 percent of world exports.

The number of IECEE CB test certificates issued for televisions over the same period has remained relatively unchanged at around 3,000 certificates per annum.

The IECEE CB test certificate issued for all electrical and electronic products has increased significantly over the period.

All these results point to the trend that APEC member economies are aligning their technical regulations and domestic standards with international standards for specific product classes.

Furthermore there has been an increase in the number of IECEE CB conformity certificates across the APEC region for electrical and electronic products. This demonstrates the growing use of an international conformity assessment system within APEC and aligns with the intent of the WTO Agreement on Technical Barriers to Trade.

The Contribution of APEC's Data Privacy Framework

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Following the conclusion of APEC's Second Trade Facilitation Action Plan (TFAP II) in 2010, the APEC Policy Support Unit (PSU) conducted the Final Assessment by analysing the contributions made by the working groups in the four priority areas – Customs Procedures, Standards and Conformance, Business Mobility, and Electronic Commerce.

This report has been prepared for the Data Privacy Sub-Group (DPS) of the Electronic Commerce Steering Group (ECSG) to evaluate the impact that the actions of the DPS have made towards improving trade facilitation in the APEC region. APEC's emphasis on trade facilitation has meant that the DPS has been at the forefront of international efforts to improve data privacy, developing the Blueprint for Action on Electronic Commerce, which was endorsed in 1998, and the APEC Privacy Framework, which was endorsed in 2004.

For the TFAP II Final Assessment, 11 APEC economies indicated to the PSU that they have actively considered the APEC Privacy Framework while developing or modifying their domestic data privacy legislation. The number of economies has risen from 2008 when six members reported that they had actively considered or developed domestic privacy frameworks that referred to the APEC Privacy Framework. The actions of the DPS to establish a common approach to data privacy as well as to build capacity in the APEC region are apparent and are producing results.

During the TFAP II period of 2007 through 2010, the DPS developed many valuable initiatives towards improving data privacy in the APEC region. The Data Privacy Pathfinder Initiative is designed to advance the implementation of the APEC Privacy Framework and lead to the development of an APEC Cross-Border Privacy Rules (CBPR) system. There are currently 16 APEC economies participating in the Pathfinder initiative. At the time of its endorsement in 2007, there

were 13 APEC members participating in this initiative.

In 2008, the DPS identified and endorsed nine interrelated projects necessary to implement the Pathfinder. The projects were developed to support business needs, reduce compliance costs, provide consumers with effective remedies, allow regulators to operate efficiently, and minimize regulatory burdens. Eight documents, including guidelines, directories and templates, to implement the Pathfinder projects have now been completed by the DPS, thereby creating the framework for the implementation of a CBPR system in the APEC region.

The APEC Cross-Border Privacy Enforcement Arrangement (CPEA), a multilateral arrangement that provides the first mechanism in the APEC region for privacy enforcement authorities to share information and provide assistance, commenced in July 2010. The CPEA signifies the ongoing commitment within APEC to increase the protection of cross-border flows of personal information and is a significant step in the effective implementation of the APEC Privacy Framework.

The DPS continues to make great progress building capacity in the APEC region and in implementing projects that establish a common approach to data privacy. By working to improve the privacy of cross-border data flows, the activities of the DPS clearly improve trade facilitation in the APEC region. Additionally, building a foundation of trust and confidence in data networks ensures the growth of electronic commerce in the region, thus allowing businesses and consumers to reap the benefits associated with electronic commerce, including reduced trade transaction costs.

The DPS should continue to work to ensure that all APEC members become active participants in the Cross-Border Privacy Rules (CBPR) system and in

the Cross-Border Privacy Enforcement Arrangement (CPEA). The DPS should also strive to monitor how its achievements improve trade facilitation and reduce trade transaction costs in the APEC region. This could

be done by developing quantifiable key performance indicators (KPIs) or through a case study approach that estimates the benefits to the business community as a result of the CBPR system.

Reducing Business Travel Costs

The Success of APEC's Business Mobility Initiatives

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Following the conclusion of APEC's Second Trade Facilitation Action Plan (TFAP II) in 2010, the APEC Policy Support Unit (PSU) is conducting the Final Assessment by analysing the contributions made by the working groups in the four priority areas – Customs Procedures, Standards and Conformance, Business Mobility, and Electronic Commerce. This report has been prepared for the Business Mobility Group (BMG).

The results of the Final Assessment indicate that the activities and efforts of the BMG have been very successful in reducing trade transaction costs related to cross-border business travel in the APEC region over the TFAP II period. To collect the data necessary to evaluate the seven key performance indicators (KPIs) agreed by the BMG towards the TFAP II goal as well as to estimate the impact that the APEC Business Travel Card (ABTC) scheme has made towards reducing trade transaction costs related to business travel in the APEC region, the PSU conducted three surveys from March through July 2011 – Client Satisfaction Survey, New Applicant Survey, and Economy Survey.

The study estimates that transaction costs for ABTC holders were reduced by 38.0 percent between March-July 2010 and March-July 2011 as a result of the ABTC scheme, representing a total savings of USD 3.7 million. ABTC holders engaged in cross-border business travel in the APEC region experienced the following reductions in transaction costs:

- 43.3 percent reduction in time spent to complete visa applications (savings of USD 272,214);
- 52.4 percent reduction in time spent to complete

immigration processing (savings of USD 1,905,202); and

- 27.8 percent reduction in fees spent on visa applications (savings of USD 1,520,380).

At the end of 2010, there were 88,421 active ABTC holders in the APEC region, an 11.4 percent increase over the number at the end of 2009 and a 430 percent increase over the number at the end of 2006, representing an additional 71,737 card holders over the TFAP II period. The study also found that approximately 27.6 percent of the total ABTC applicants in 2010 were repeat applicants, implying that while there is strong growth in the scheme, there are also a substantial number of card holders re-applying for the ABTC.

The Final Assessment also found that 14 out of 17 APEC economies that reported data are meeting the 30-day processing service standard for intra-company transfers of senior managers and executives, and specialists. Additionally, 15 out of 19 APEC economies that reported data process business visa applications within 15 days, with five economies having set up e-lodgement facilities to receive online visa applications.

The Client Satisfaction Survey revealed that 91 percent of ABTC holders rated their overall level of satisfaction with the ABTC scheme as satisfied, with 42 percent of all respondents expressing that they are extremely satisfied with the ABTC scheme. Fifty-eight percent of respondents indicated that not having to apply for a visa/s is the best feature of the ABTC, while 39 percent felt that the best feature is that it allows them to avoid long queues at immigration checkpoints.

However, 20 percent of ABTC holders indicated that they would most like the validity period of the ABTC to be extended. Comments received from respondents also highlighted several other areas for improvement, including the time it takes to obtain an ABTC, the process to renew an ABTC, the signage for APEC lanes at immigration checkpoints, and the knowledge of immigration officials about the rights of ABTC holders.

Based on the results of the TFAP II Final Assessment, the BMG is recommended to focus its future efforts on the following:

- continue to monitor and evaluate the KPIs as well as client satisfaction in the ABTC scheme every two to three years;
- continue to expand the ABTC scheme among new card holders in the APEC region and encourage the three transitional members to become full members of the scheme;
- target business people who engage in international business travel most frequently as well as small and medium enterprises to maximize the benefits that the ABTC scheme provides to the business community;
- strive to achieve the client service standards and endeavor to reduce the processing times for new ABTC applications and for renewals, including simplifying the procedures to re-issue ABTCs when new passports are required;
- consider extending the validity period of the ABTC to five years;
- consider centralizing the processing of ABTC applications in order to maximize operational efficiencies and to progress towards a more consistent client service, including standardizing the requirements to obtain an ABTC across the APEC member economies; and
- endeavor to use information and communications technology to reduce costs and improve client service by offering online processing of visa applications as well as Online Status Tracker to monitor the progress of ABTC applications.

A Case Study of the Electronic Certificate of Origin

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The aim of the study is to assess the contribution of the actions and measures of APEC's Electronic Commerce Steering Group (ECSG) towards reducing trade transaction costs in the region through a case study of an Electronic Certificate of Origin (e-CO) project. The study assesses the results of the e-CO Pathfinder Project between Chinese Taipei and Korea in reducing trade transaction costs since implementation began

in June 2010. These results are then extrapolated on the assumption that e-CO is adopted in other APEC economies, using several different assumptions and scenarios.

Based on the survey conducted in Korea and Chinese Taipei, the improvement in unit trade transaction costs per container (TEU) is shown in the tables below.

Korea - Export

USD / TEU	Documents preparation	Customs clearance and technical control	Ports and terminal handling	Inland transportation and handling	Totals
Before Global e-CO	\$210	\$175	\$284	\$584	\$1,253
After e-CO	\$27	\$84	\$284	\$584	\$979
Improvement	\$183	\$91	\$0	\$0	\$274
Improvement by percent	87 %	52 %	0 %	0 %	22 %

Chinese Taipei - Import

USD / TEU	Documents preparation	Customs clearance and technical control	Ports and terminal handling	Inland transportation and handling	Totals
Before Global e-CO	\$179	\$371	\$319	\$297	\$1,165
After e-CO	\$92	\$60	\$319	\$297	\$768
Improvement	\$87	\$310	\$0	\$0	\$397
Improvement by percent	49 %	88 %	0 %	0 %	34 %

The survey results were extrapolated to assess the potential impact assuming varying degrees of e-CO adoption in APEC economies. The projections are summarized as follows:

Scenario	Projection Description	Assumptions	Projected APEC Trade Transaction Costs Reduction (percent)
1	APEC wide e-CO adoption.	For most economies assume 25 percent of shipments require CO. Exceptions are Indonesia 60 percent, Thailand 20 percent, and Chinese Taipei 10 percent.	6.79 percent
2	Only Korea and Chinese Taipei adopt the e-CO.	For Korea assume 25 percent of shipments require CO, and for Chinese Taipei 10 percent.	0.18 percent
3	More “e-Advanced” Economies adopt e-CO.	Assume Australia; Brunei Darussalam; Canada; Hong Kong, China; Indonesia; Japan; Malaysia; New Zealand; Philippines; Singapore; Thailand; US are at the same ratios specified in Scenario 1 above.	2.80 percent
4	China + e-Advanced economies.	China + economies in Scenario 3 at the ratios specified in Scenario 1 above.	5.93 percent
5	Sensitivity 1 - Low APEC wide e-CO adoption.	Assume e-CO is required for five percent of shipments instead of the ratios specified in Scenario 1 above.	1.30 percent
6	Sensitivity 2 – High APEC wide e-CO adoption.	Assume e-CO is required for 40 percent of shipments instead of the ratios specified in Scenario 1 above.	10.40 percent

The limitations and assumptions of the extrapolation are as follows:

- i As the impact of e-CO adoption in each economy will vary due to structural differences between economies, industries, products and companies, the extrapolation of survey results from the case study is intended to provide an idea of possible benefits for the rest of APEC. This is especially so due to limited data availability for all APEC members, and the industry selected in the case study has relatively stringent regulatory requirements in comparison to other industries. For example, in the case of Korea and Chinese Taipei, users would have greater incentive to adopt the e-CO if the importing customs enforces the CO as a mandatory document, instead of requiring its submission currently only for selected controlled products - and subjected to the customs practices of different ports.
- ii Reliable statistics on the ratio of exports or imports in each economy where the CO is required were unavailable at the time of writing. Hence, the study uses a mix of expert assessments, and the assumption of a fixed estimate of 25 percent, based on information gathered through informal interviews held with government representatives in the APEC region. As indicated, sensitivity analysis on lower and higher ranges was also shown in scenario 5 and 6 above.
- iii As indicated in the final report “Aggregate Measurement of Trade Transaction Costs in APEC 2007-2010” (Reference 10), “a significant uncertainty relates to the quality of the Trading across Borders data panel”. In general, there are concerns about the reliability and representativeness of the data which is unavoidable due to the chosen survey method. The description of the limitations is provided in Appendix 6 of this report.

- iv The number of export and import shipments is estimated based on the value of exports and imports and related container statistics. Air cargo is not considered in the calculation of trade transaction costs, which is a shortcoming of both of this analysis and the Trading across Borders data.
- v This analysis disregards the value of time in the Trading across Borders database as well as indirect time improvements due to the e-CO. However, as the study focuses on percentage improvement and not about absolute numbers, the results should be viewed as indicative in general.

Based on the results of the study, it is recommended to focus future efforts on the following:

- expanding the scope of the e-CO Pathfinder Project between Chinese Taipei and Korea by including other electronic B2B and B2G documents such as e-Invoice, e-Packing List, e-AWB, e-SPS etc.
- expanding the e-CO Pathfinder Project to APEC member economies who have FTA (Free Trade Agreement) or EPA (Economic Partnership Agreement), as in most cases the CO is a mandatory document that is required to enjoy preferential tariff, hence the incentives for traders to adopt the e-CO will be strengthened.
- expanding the e-CO Pathfinder Project to a larger number of APEC economies by focusing on economies that may adopt the e-CO more rapidly – namely the ASEAN-6, Australia, New Zealand, Japan, China, US, Canada, Hong Kong, China.
- establishing a set of suitable KPIs for evaluation of the cross border paperless trading projects.
- It would be useful for APEC economies to consider collecting reliable statistics on the ratio of exports and imports in economies where the CO is required.

The Mutual Usefulness

APEC & the Trans-Pacific Partnership

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The Trans-Pacific Strategic Economic Partnership agreement (TPSEP) between Brunei Darussalam, Chile, New Zealand and Singapore came into force in 2006. Known as P4, this agreement was the first Free Trade Agreement (FTA) to comprise of more than two members from both sides of the Pacific Rim. Article 20.6 of the TPSEP allows, “any APEC Economy or other State,” to accede to the agreement, and within this context, Australia, Peru and the United States launched negotiations in 2008 with the P4 members, while Viet Nam and Malaysia joined fully in the negotiations in 2010. This process, referred to as the Trans-Pacific Partnership (TPP) negotiations, attempts to achieve a wider FTA in the Pacific Rim.

Presently, nine APEC member economies are taking part in the negotiations of the TPP, which if successful, will bring about a new FTA, likely with a greater scope in comparison with the TPSEP. This process is already fuelling debate in the public arena regarding a wide array of topics such as the feasibility to reach a high-quality FTA; the implications of any future TPP in the Doha Round; the effectiveness of the TPP as one of the stepping stones for a future Free Trade Area of the Asia-Pacific (FTAAP); and the mutual relevance of APEC and TPP, among others.

This paper focuses its attention on examining the relation between APEC and TPP. The analysis shows that although APEC and TPP were conceived with

different intentions, features and modus operandi, both processes share common elements that make them mutually useful. As opposed to the views of some experts, APEC and TPP do not compete with each other.

APEC is important for TPP as it serves as an incubator of ideas that can be taken into account in the ongoing negotiations. The work undertaken in APEC provides useful guidance and reference for the participants in the current TPP negotiations. Many ideas have matured after being discussed and analyzed by members before being implemented in APEC. APEC's role as an incubator of ideas, as reinforced by the APEC Leaders in 2010, is very clear.

Likewise, TPP serves as one of many avenues to strengthen regional integration and boosts the APEC agenda. Regardless that APEC is a non-binding and non-negotiating forum; current TPP negotiations

have the potential to generate a substantial outcome that allows APEC to achieve valuable progress in strengthening its work on regional economic integration, realizing the Bogor Goals of free and open trade and investment, and promoting convergence across the APEC region. If successful, an expanded TPP is a good opportunity to have a large number of APEC members under a single FTA.

The paper also recognizes that it is premature to say that the TPP will lead the process towards the FTAAP, since it remains unknown how APEC members may shape the FTAAP. It might involve an enlargement process by having the TPP, ASEAN or other initiatives as a starting point, or require a docking or merging mechanism among two or more integration schemes; or begin the process from ground zero. However, it is more likely that market forces will play a big role in influencing government decisions on the way forward.

Trade in Services in APEC Region

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International trade in services, and services sector growth more generally, is an important economic dynamic in the APEC region. Key features include:

- On average, services account for over 50 percent of GDP in APEC member economies.
- Backbone services such as transport and telecommunications are important inputs for the production and export of other goods and services.
- A more efficient services sector boosts economic performance both directly and through spillover effects, and can contribute to faster economic growth.
- Less than 20 percent of services value added is exported, on average, but the sector has been rapidly globalizing since the early 2000s.

Some policy measures can be a significant source of trade transaction costs in the services sectors. They can play an important role in determining the pattern and extent of international trade in services, including within the APEC region. Key findings on the links between policy and services trade include the following:

- Gravity model results show that policy-related factors may add at least as much to trade transaction costs as geographical factors such as distance.
- Recent World Bank data indicate that, on average, the services policy environment is relatively restrictive in the Asia-Pacific compared with other regions.

- There is major scope to boost services exports and imports by lowering the transaction costs of international trade in services, including those associated with certain policy measures.
- As a result, policymakers can play an important role in facilitating trade in services, just as they have for goods trade.
- Gravity model results confirm that the trade boost from efficient regulation is particularly strong in the transport, retail/distribution, and finance sectors.

Policy implications based on this report's findings include the following:

- Trade facilitation for services—i.e. reducing the transaction costs affecting international services trade—should be an important part of overall liberalization and economic integration efforts. Efficient and effective regulation of services sectors is an important step towards reducing trade transaction costs.
- Given the complexity of the regulatory arrangements affecting services trade, it is important for policymakers to take a holistic approach to reform. Economy-wide measures, as well as sector-specific ones, need to be considered and complement each other.
- Backbone services sectors should receive particular attention as part of a balanced reform package, since they have the greatest potential to generate economy-wide spillovers. These sectors include transport, retail/distribution, and telecommunications.

Goods & Services Necessary or Desirable for Climate Change Mitigation & Adaptation

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In recent times, climate change has been identified as a major global threat and one of the main factors to jeopardize the goal of achieving sustainable development worldwide. Discussions on this issue are becoming more frequent in several global and regional fora, including APEC. In 2007, APEC Leaders included climate change for the first time in their working agenda and issued the Sydney APEC's Leaders Declaration on Climate Change, Energy Security and Clean Development, in which they reaffirmed their commitment to work for an enduring global solution for climate change. Leaders stated that the pursuit of climate change policies must avoid introducing barriers to trade and investment.

Because climate change is a global issue, it necessarily requires coordinated global mitigation and adaptation responses. It also follows that the use and development of goods and services necessary or desirable for climate change mitigation and adaptation (CCGS) should not face barriers to their production, development and deployment. As part of a global response, APEC can contribute with initiatives on CCGS which will facilitate their use and maximize the effectiveness in tackling climate change challenges. Addressing border measures is necessary but not sufficient to facilitate the trade in CCGS. There should be concrete initiatives to address behind the border or regulatory barriers. A set of good regulatory practices could help meet this objective.

In general, the production and trade of any good is discouraged by rules that go beyond the protection of legitimate public interests, or are subject to over-regulation and weak enforcement systems. This project analyzes

whether current regulatory practices are able to embrace the concept of CCGS and identifies and suggests best practice regulation which will encourage the production and trade of CCGS to ensure they can play an effective role in global responses to climate change.

The report finds that regulatory practices have influence in promoting the use of certain CCGS. Governments in the selected case studies are adjusting their regulatory framework as new challenges associated to climate change emerge. Efforts to implement general sets of principles on GRP at the domestic level or even at the regional or global (multilateral) level also contribute to the development of clear and fair regulations for CCGS without setting unnecessary barriers to trade or high compliance costs to deter the development of CCGS.

However, despite these efforts, additional work needs to be done within the APEC region. Burdensome procedures that translate into unnecessary barriers to trade still affect CCGS. In fact, many of the current restrictive practices do apply not only to CCGS, but also to the rest of goods and services. Many of these barriers and impediments of general application have been found in customs procedures, technical regulations, intellectual property rights and movement of business persons. In the case of quantitative restrictions, subsidies and investment-related restrictions, most of them do apply to one of the particular goods or services chosen in this study.

Based on the analysis, the report highlights the importance of continuing discussion on trade and investment facilitation, implementing actions to improve the existing conditions, and conducting activities to

exchange experience and providing proper training to government officials. To improve the development and use of CCGS, institutions need to coordinate at both domestic and international levels. This includes efforts to implement best practices in customs, to reflect the principles on GRP in domestic standards and regulations, and to carry out technical cooperation on development and application of international standards and regulations. In addition, in order to make easier for CCGS to meet technical requirements in domestic markets, economies should give favorable consideration to accept as equivalent technical regulations from other member economies, provided that regulations in other economies produce outcomes equivalent to those produced by domestic regulation; economies should also work on establishment of agreements that facilitate the recognition of conformity assessment procedures conducted by authorized conformity assessment bodies located in other economies. On the use of quantitative restrictions and

subsidies, APEC economies should prevent their use in a way that constitute unnecessary barriers to trade and give an unfair advantage in terms of trade. These tools should only be used to the extent allowed by WTO.

To facilitate use and maximize the contribution and impact of CCGS in climate change responses, APEC economies need to continue their efforts in providing fair system with suitable deterrents to prevent breaches in intellectual property rights. In addition, to promote use of legal CCGS and allow the transfer of technology to the developing economies, efforts to provide licenses at reasonable prices would help on this purpose. Finally, efforts by APEC member economies at WTO to push for the conclusion of the Doha Round and improve their services commitments will also contribute to facilitate the development and deployment of production plants and services related to CCGS.

Measurement of the Magnitude & Changes in Intra-regional Trade since APEC's Inception

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Since its inception in 1989, APEC has striven to achieve the goals of “free and open trade and investment” in the region. However, concerns were expressed that given its voluntary non-binding nature, APEC trade and investment liberalization process is not fast enough and APEC has not contributed to greater intra-regional trade. Noting that the year 2009 marks the 20th anniversary of APEC and 2010 is the target year of the Bogor Goals for industrialized member economies, this report attempts to examine whether APEC member economies are enjoying an increased degree of de facto integration, whether APEC economies have enhanced their intra-regional trade linkage in goods, and also how trade is evolving since 1989.

The report finds that the share of intra-regional exports and imports in the APEC region is marginally larger than the comparable estimates for the European Union (EU) region and is much greater than that of intra-NAFTA trade or of intra-ASEAN-7 trade. It also finds that goods exports and imports of APEC economies accounted for 45 percent of world exports and imports in 2007 (increased by approximately 41 percent in 1989). APEC's total exports increased from USD 1.2 trillion to USD 6.2 trillion, which represents an annualized average growth rate of 9.5 percent, which is larger than the world average at 8.9 percent. During the same period, APEC's total imports grew at 9.4 percent per annum, outpacing the world average.

The report also assesses the effect of APEC membership on intra-regional trade. Controlling ‘natural’ and ‘institutional’ factors, the gravity modelling

shows that APEC member economies trade more with other APEC members than non-APEC economies. Specifically, an APEC member exports 2.8 times more to other APEC members than it does to non-APEC economies, and imports 1.9 times more. The effect of APEC membership is similar to the effect of a free trade agreement (FTA), which proves that APEC members are enjoying a high degree of de facto integration, even though APEC's trade liberalization process is non-binding.

The data analysis also shows that the effect of APEC membership is not uniform across economies. Nineteen member economies have experienced the rise of their exports to other APEC members, and 16 member economies have seen their imports from other APEC members increased.

When the effect of APEC membership is examined over the period 1989 – 2007, the gravity model finds that its impact has remained positive on both exports and imports. The positive impact on exports has been strengthening, but its impact on import has been weakening over time. This could possibly be explained by the fact that APEC's open form of regionalism and trade liberalization and facilitation lead to greater imports from non-members.

The degree of de facto integration within APEC has been increasing over time, which brings benefits to member economies and justifies APEC's common purpose, and the non-binding approach of trade liberalization in the context of open regionalism.

Cross-border Investment Linkages among APEC Economies

The Case of Portfolio Investment & Bank Lending

PUBLICATION NUMBER: APEC#209-SE-01.8 • PUBLISHED DATE: December 2009 • FULL REPORT: 81 pages

Since inception in 1989, APEC has striven to achieve the goals of “free and open trade and investment” in the APEC region. APEC’s investment liberalization and facilitation efforts have contributed to cross-border investment between APEC economies. However, the global share of the APEC region’s capital market is smaller than that of its goods trade. APEC accounts for 45 percent of world good exports, but its shares of bank claims, long-term debt, equity, and FDI in the world are only 33 percent, 29 percent, 36 percent and 40 percent respectively. Noting this difference, this report aims to establish an understanding of the degree and structure of portfolio investment and bank loans among APEC economies.

The report finds that both cross-border portfolio investment and bank lending are increasing at a rate higher than the income growth rate in the source and destination economy. Thus, the capital markets in the APEC region have been growing more rapidly and the investment linkages has been strengthening. APEC member economies purchase more equities and long-term bonds from other APEC member economies and sell more financial assets to other members. It also finds that APEC member economies make more bank loans to other member economies, but they borrow less from other member economies.

A large part of the regional financial market integration

in the APEC region is built on strong linkages of intra-regional trade. This also implies that the financial market in the APEC region is not as integrated as goods market, thus efforts should continue push for a greater financial integration in the region.

Data shows that APEC member economies tend to engage in more cross-border financial investment with economies located geographically closer and with those sharing a common language. Distance and language are proxies for information asymmetries; hence APEC should enhance efforts to share more information among members.

Financial liberalization contributes to the cross-border movement of capital. APEC members should gradually internationalize their financial markets through liberalization of capital account and loosening exchange controls. Reducing capital market control and lowering tax on dividend and interest income will also enhance investment integration in the region.

Country risk is clearly associated with cross-border flows of financial assets. In particular, political risk and economic risk of destination economies have a strong impact on inflow of equity investment, long-term bond investment, and bank loans. Thus, APEC members should strive to improve institutional quality and to lessen economic risk.

Cross-border Investment Linkages among APEC Economies

The Case of Foreign Direct Investment

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Since inception in 1989, APEC has striven to achieve the goals of “free and open trade and investment” in the APEC region. APEC’s investment liberalization and facilitation efforts have contributed to cross-border investment between APEC economies. However, between 2001 and 2007, the growth of inward FDI stocks in the APEC region was the slower than growth of financial assets and exports. Against this background, this report aims to establish an understanding of the degree and structure of bilateral FDI linkages among APEC economies for which suitable data is available for analysis.

The data for the decade 1998-2007 indicates that around 40 percent of FDI inflows to APEC members have come from economies within the region and this share was rising until 2004, then it declined. About 55 to 60 percent of APEC’s FDI outflows have been channeled to other member economies, and this share, although high, have been quite steady over the last decade. Clearly some of these flows are overstated as they involve recycling or round-tripping of funds (especially between China and Hong Kong, China). For this reason, trans-shipping from offshore financial centers is excluded from this study.

Apart from the flows between China and Hong Kong, China, the bilateral flows between Canada and the United States tend to dominate intra-APEC flows. These two sets of bilateral flows constitute above 40 percent of intra-APEC FDI flows. It is also worth to note that the United States; Canada; Japan; and Hong Kong, China together account for 85 percent of intra-APEC outflows, while the United States; Canada; China; and Mexico together constitute 75 percent of intra-APEC FDI inflows. The concentration of FDI flows within several APEC economies is relatively under-appreciated.

An augmented gravity model is constructed to analyze the data. The baseline regression captures over 70 percent of the variations in existing intra-APEC FDI flows. The result indicates that sharing a common official language and closer geographic location are positively associated with increased FDI inflows, since it reduces information asymmetry. Financial openness

in the source economy also promotes outward FDI, and this emphasizes the need for greater capital account deregulation, though this should be done with caution.

While it’s impossible to reduce geographic distance (beyond improving transportation channels), APEC policymakers can facilitate intra-regional investment flows by investing in superior telecommunications capabilities and adopting other trade and investment facilitations measures to boost cross-border informational flows so as to reduce transactions costs.

Evidences show that the APEC member economies engage more intensively with each other in terms of FDI flows than the FDI flows without APEC membership. However, this conclusion does not hold once the bilateral exports are incorporated, suggesting that the reason for the more intensive FDI engagement with APEC was largely due to significant trade links between the members. Exports tend to promote bilateral FDI flows, and this reflects the complementary nature of FDI and trade in the APEC region.

The study also finds that non-US APEC members tend to have a higher degree of FDI outflows to other APEC economies than non-APEC economies and receive a higher degree of FDI inflows from other APEC economies than non-APEC economies. This proves the de facto integration among APEC members. With that said, as noted above, since FDI within APEC is still heavily concentrated within certain economies, there is still large space to enhance intra-APEC flows.

Factoring in risk concerns, economies with a lower political risk attract more FDI inflows, thus improving institutional quality of member economies will yield significant benefits in increasing intra-regional FDI flows. Other aspects such as stability of political systems, improvements in socioeconomic conditions, reduction in corruption and enforcement of law and order also contribute to greater FDI flows. In this aspect, APEC’s Investment Facilitation Action Plan (IFAP) to create and sustain the most conducive climate to attract investment by maximizing the effectiveness and efficiency of administration is very important.

Establishing a Methodology & Selecting Key Performance Indicators

Measuring Progress in Implementing APEC's Investment Facilitation Action Plan

PUBLICATION NUMBER: APEC#209-SE-01.10 • PUBLISHED DATE: December 2009 • FULL REPORT: 76 pages

Foreign direct investment is an important contributor to economic growth in both developed and developing economies. Recognition of the economic benefits of foreign direct investment (FDI) has seen economies becoming increasingly competitive in their efforts to attract a larger share of the global FDI market.

The APEC Investment Facilitation Action Plan (IFAP) provides a working framework for a series of eight guiding principles that, if met, would constitute better practice in investment facilitation and improve the attractiveness of APEC member economies to FDI. The IFAP is not—nor tries to be—a comprehensive tool to improve the investment climate. It does incorporate many actions that directly contribute to lowering the cost and risk associated with investing in a particular location.

IFAP puts forward eight guiding principles for investment facilitation. Corresponding to each of these (non-exhaustive) principles is a menu of actions that an economy can choose to implement. The flexibility of implementation enables IFAP to be used in a different way for each economy, reflecting the innate differences between the APEC member economies. It also complements the consensus-based nature under which APEC operates.

As an action plan, it is critical that economies can accurately measure their progress in implementing the principles over time. Measuring achievements also contributes to the goal of improving transparency. It allows the benchmark APEC performers to be identified, which can in turn provide an avenue for other members to seek assistance from the leading members, and in so doing further enhance cooperation amongst APEC member economies.

The Centre for International Economics has been commissioned by the APEC Policy Support Unit to develop a methodology to measure APEC member economies' progress in terms of implementing IFAP, and to identify key performance indicators that can be used to provide a consistent basis for measurement

of IFAP progress over the period 2008 to 2010. In the report, the methodology was demonstrated with an illustrative example using actual data for a subset of KPIs relevant to IFAP over the period 2005 to 2009. In addition, a stakeholder survey for foreign investors was proposed to capture information to fill in the KPI data gaps.

Based on four sets of the World Bank Doing Business Indicators, starting a business, registering property, getting credit, and paying taxes, the progress on two of the priority areas—simplifying business regulation and reducing investor risk—was examined. Benchmarked to the world best practices, which captures the overall measure of potential improvement over the period, the KPIs were then standardized to account for different units and were aggregated by designated weights.

Across the measures used in this example, New Zealand had the least scope for improvement, which implies it had the best investment facilitation regime among APEC member economies.

Another aspect was to look at the actual improvement, which was measured as the difference between performance at the end of the period and performance in the base period. To obtain an overall measure of progress for each APEC member economy over the period, the actual change in each KPI must be standardized by dividing the standard deviation of the sample in the same way as for the potential improvement. The result showed that China has made the most progress in simplifying business regulations and reducing risk for investors over the period from 2005 to 2009, followed by Indonesia, Korea and Russia.

The final step is to compare actual progress with potential progress. Expressing actual implementation progress as a percentage of potential progress gives the Achieved Implementation Potential. On this measure, Korea made the most progress in simplifying business regulation and reducing investor risk.

Improving Food Markets in APEC Economies

Can the Cost of Food be Lowered?

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The report aims to make a policy contribution to the development of secure and sustainable food production systems in the APEC region through efficient regulatory arrangements, public infrastructure as well as efficient production, distribution logistics and marketing arrangements. While there are many elements to achieving an economy's food security objectives, the focus of the study is on identifying behind-the-border structural impediments in the agrifood system and examining how these impediments interfere with market systems, and identifying policy approaches to reduce structural impediments in the agrifood system.

Food security is about affordable and secure access to a diet that meets the nutritional demands of consumers. For the efficiency of the agrifood system, food security has four related elements, namely improved affordability, improved reliability, improved accessibility and improved food safety, which are not necessarily complementary and could be competing either directly or through the need to draw on public expenditure.

Food markets and systems within the APEC region are diverse. While there is no single road map for behind-the-border reform, there are common elements that reflect stages of economic development and the relative importance of food production to an economy as well as cultural choices about food. Some food security issues can be addressed directly through behind the border reforms. However, there are constraints that reflect an economy's natural endowments and development path, i.e. climate and urbanization, which often shape the priorities for reform.

With increasing incomes and urbanising populations, there are strong economic and policy incentives to modernise food processing and distribution. This

is being achieved largely through increased vertical coordination through the agrifood system. However, production systems are and will continue to be dominated by small scale enterprises in many APEC economies and the pace for them to increase the scale of their operations is slow. In the near to medium term, the primary driver of improved food marketing will be how the existing structure of agriculture can be integrated into a rapidly changing processing and distribution sector.

Another important and dominant theme concerns structural adjustment issues arising from the rapidly growing imbalance, particularly for developing economies, such as the pace of adjustment in primary food production and processing / distribution sector, the access to downstream marketing system of the producers, and the access to large scale specialized procurement systems and supermarkets of small processors and consumers. With a relative priority on competition policy, in developed economies with a large agrifood sector, concerns are continuously expressed about the level of concentration in processing and food distribution and the effects that this may have on farm level and consumer prices.

Research and development has underpinned the growth in food supplies over the past 50 years. With expanding populations and rising incomes and thus increasing food demand, the need for innovation throughout the agrifood system will also rise. However, with the exception of China, public agricultural research and development funding has not kept pace with growing populations and has declined in real terms in developed economies. Intellectual property rights strengthen private sector research but this research is narrowly directed and spill-over benefits are limited.

Global Food Prices and Food Security

Between January 2006 and mid-2008, world market prices for food commodities rose by more than 75 percent, wheat prices doubled and prices in the international rice market increased threefold. The sharp rise in food prices sent a strong signal to producers. Production increased and prices started to fall in the second half of 2008. But the largest welfare effects incurred in low income economies where food can account for a high percentage of household budgets. The proportion of income spent on food in developing economies is of the order of four to five times greater than in developed economies. Because a large fraction of this expenditure is on staples, there is little room to shift diets. As a consequence, the negative income effect of a price change in developing economies is roughly 10 times greater than in developed economies. On the opposite end, increasing incomes will increase demand for the level and diversity of food in developing economies, which again places upward pressure on prices.

Successful broad based economic reform will increase productivity along the food supply chain. This will reduce the cost of food to consumers while at the same time increasing the demand for domestically as well as internationally sourced food products.

Food Production

The ongoing need to increase productivity in food production systems is a major theme of this report. The importance of improving the efficiency of domestic food production is twofold. First, it effectively lowers the cost of inputs relative to outputs and therefore improves producer incomes. Second, products sourced domestically will move toward import parity, that is, the price received by domestic producers when they sell products overseas only accounting for transportation.

The development of and access to improved inputs are crucial if agricultural productivity is to be improved. Important issues related to inputs are the development and commercialization of genetically modified (GM) crops and agrichemicals and pharmaceuticals, plant and animal protection, and sustainability of agriculture and fisheries.

While APEC members would make independent decision to allow or disallow the commercial use of GM crops, greater coordination and transparency of regulatory arrangements for developing GM plant varieties offers a means to increase food security

in the region. With respect to agrichemicals and pharmaceuticals, the cost of regulatory compliance, excluding health and environmental risk assessment, is quite substantial, thus developing clearly targeted and transparent regulatory system is of high importance. The protection of agricultural and fisheries resources from endemic pests and diseases is generally an ongoing cost of food production, and government and cooperation should play a critical role in managing the threat of plant and animal diseases. The longer term sustainability of agriculture and fisheries is also a central issue. Agricultural land and water degradation occurs for a number of reasons, such as low incomes and lack of information. Government input and output subsidies usually lead to the exploitation of marginal land resources that are not suited for sustainable production, thus government should restrict land use, fund reserve program and public education to address this issue.

From a developing economy perspective, access to finance to purchase inputs is an equally important issue. Smallholder primary producers often do not have the financial reserves and have limited capacity to service debt, thus sometimes they have to agree on unfavourable terms to ensure the production could continue. In this regard, setting up the right institutional arrangements to increase access to credit markets is an important policy challenge especially in the context of limiting reliance on public funds.

Food Procurement, Processing and Distribution

Among APEC economies, there is a common emphasis on improved methods for sourcing food to lower transactions costs and better meet increasing consumer demand for food quality and food variety. Improvements in transport handling logistics allow firms to take advantage of improved infrastructure, to reduce direct costs as well as to reduce wastage and increase product quality. New market formats allow the exploitation of larger scale logistics and handling systems, and that provide a greater range of consumer choice.

The differences in distribution systems in the developing and developed economies are a reflection of the evolution pace and scale of the systems. Particularly to developing economies, the challenges emerge from the process are twofold, to facilitate the transition of food distribution system from traditional to modern primary production practices, and to keep pace with the rapid urbanization that are fundamental driver of food

distribution task. Vertical integration and coordination is central in addressing these challenges as it can reduce cost wedges, aid in the efficient allocation of risk, and improve the responsiveness of supply to shocks. Specialization is often a concurrent process with vertical integration, i.e. smallholders specialized in providing certain products for a supermarket chain or specialized wholesaler; it allows for economies of scale and reduces the logistical and transport costs.

The expansion of international food processors and retailers and processors in many developing economies has been heavily reliant on acceptance of foreign investment opportunities by these economies. Liberalizing this market to foreign capital brings several benefits, such as reducing price premium and encouraging domestic investment, enabling greater risk diversification and lowering cost premium of capital, as well as transferring of expertise in procurement and inventory management. Besides, quality has become an increasingly important aspect of the downstream marketing strategies of food processors. It requires highly specific investments for coordination among participants with respect to the definition of detailed quality standards, methods of production, and controls for guaranteeing conformity of products to what is demanded.

There are a number of areas in which improved food transport can increase food security, namely, improvements to road and other transport networks, centralizing transport hubs, setting up real time monitoring of truck performance and fuel consumption, and improving loading practices, bettering containers and improving refrigeration. Upgraded logistics also improve capacity utilisation. Different from developed economies, there are particular issues that only faced by APEC developing economies. In developing economies, food production is often geographically dispersed in remote areas with poor transport infrastructure, while population is densely concentrated in urban areas with highly congested transport infrastructure. In addition, though developing economies have been rapidly modernizing transport logistics, the investment in modern transport vehicles is still limited, such as on refrigerated trucks and specialized livestock carriers.

Food Safety and Reliability

While it is difficult to assess with accuracy, the human and economic costs of unsafe food are substantial. Food safety and quality considerations are an

essential part of meeting food security objectives. They are critical 'whole-of-chain' issues affecting the demand and supply of food products, market prices and volumes, and domestic and international market access, as they affect the health and welfare of food consumers.

Public food safety standards are important in the context of establishing minimum standards for and liabilities of market participants and to promote trade. The rapid increase in adoption of private standards in developing APEC economies is driven by large scale processor, retailers and international food preparation firms. In the context of vertical coordination, food quality management and safety systems are vulnerable to the 'weakest-link', thus it's imperative to establish process standards at critical points in the system.

Tracking and tracing systems facilitate the recall and destruction of potentially dangerous consumer products. The systems can be particularly important in food processing given that a range of products are often combined to produce a product. Monitoring the results of tracking systems will also help to identify local hazards and priorities for introducing process standards. Given the quality innovation is driven by consumer demand, the increase in food price must be less than the increase in value to the consumer from improved quality. The benefits of improved food safety and quality may not be as readily perceived as an increase in price, so in some instance this may require educating consumers on the benefits of higher quality food.

Food storage occurs at every level of the food marketing chain and is an integral part of both food safety and reliability. Storage is required to manage seasonality of fresh food supplies, to facilitate processing and distribution and manage shortfalls in production. Improved storage facilities can substantially reduce wastage and improve food quality and safety.

Public stockholdings of maize, rice and wheat has been declining over the past decade. Although private sector stockholding could offset the decline but overall reserves have fallen. The global food crisis raised the issue of considering the development of strategic reserves.

Policy Recommendations

Ultimately, food security depends on the ability of food producers to meet growing food demands on quality and composition as incomes and populations rise. It is important that the market can signal efficient

investments. Across food markets in APEC region, there is a common emphasis on improving economic efficiency at each stage of the agrifood system. With the backdrop of evolving technology development and economic growth, government will need to ensure that the institutional arrangements supporting markets along the agrifood chain are appropriate. Public regulation and investment will need to be well-targeted to address market failures.

Improving Food Production

- address the issue of declining public investment in research and development (R&D), including through regional cooperation
- improve governance frameworks to increase agricultural labour productivity and facilitate the accumulation of agricultural capital stock
- cooperate and share information on the management of plant and animal pests and diseases
- conduct technical cooperation and capacity building activities to develop regulatory frameworks in regards to agricultural biotechnology
- initiate policies that promote sustainability on use and management of land and water, and other resources relevant to regional food supply
- recognise the importance of producer incomes, and its linkage with issues of food prices and food security

Improving Procurement Systems

- facilitate the development of formal and informal institutional arrangements that will assist in restructuring the supply chain, particularly in regards to increasing farm size, or formation of farm cooperatives

Improving Food Processing

- afford sufficient legal protection to innovation in the supply chain so that firms are encouraged to invest, but not so much that competition is stifled
- develop systems for monitoring trends affecting small and medium businesses to provide them with market and finance information
- foster foreign direct investment

Improving Transport, Handling and Storage

- consider whether government regulation of transport infrastructure (with private ownership) is more suitable than government ownership; developing economies should consider invest in better packing and cold storage facilities
- consider whether government-run or private-run buffer stocks are more effective; strategic reserves should have transparent rules for acquisition and disposal of stocks and reflect transportation costs

Improving Wholesale and Retail Food Distribution

- consider whether governments should facilitate access to a rapidly changing food distribution system, perhaps by upgrading traditional wholesale and retail channels towards modern food procurement and distribution systems, and amalgamating small scale, low-income landholders

Improving Food Safety

- be mindful of the trade-off between high food safety and quality standards on the one hand, and higher production and consumer costs on the other; developing economies should make efforts to progressively align food safety regulation with international standards and assist small farmers in meeting private food standards
- consider whether it is appropriate to shift the focus of policy from one of reacting to food safety events to one of preventing food safety events through improving risk analysis, increasing coordination across agencies

Improving Economy-wide Influences on Food Security

- facilitate broad based economic reform and trade openness
- share experiences of reform, assisting developing economies on competition policies

APEC Bogor Goals

Perspectives of the APEC Policy Support Unit

Progressing Towards the APEC Bogor Goals

PUBLICATION NUMBER: APEC#210-SE-01.4 • PUBLISHED DATE: November 2010 • FULL REPORT: 116 pages

The 1994 Bogor Declaration provided “APEC’s best known and most important decision” – the adoption of “the long-term goal of free and open trade and investment in the Asia-Pacific.” This single commitment, which has entered the lexicon as the Bogor Goals, has provided a driving but cohesive force for APEC since the 1994 Leaders’ Declaration.

Much has been said and written about the (im)precise meaning of the Bogor Goals. They lack specificity about how they would be achieved within a group of economies who acted in a voluntary and consensual framework.

The report concentrates on progress made by the five economies regarded by APEC as industrialized and the eight economies which volunteered to be assessed in 2010. It does not go into a detailed theoretical or complex analysis – to do so would risk an outcome of false precision against latent ambiguity.

The report seeks to offer a simple yet persuasive analytical narrative, drawing from a number of data sources. It concludes that despite all the conundrums associated with the Bogor Goals, the economies being assessed in 2010 have indeed been “further reducing barriers to trade and investment since 1994”. So too has APEC as a whole. Encouragingly, the data also indicate that the group of developing economies has also made progress en-route to their assessment in 2020. Progress has also been made in achieving higher level goals of APEC in terms of sustainable growth and development.

While the outcomes achieved cannot be attributed solely to the Bogor Goals, it is clear that the Bogor Goals inspired and contributed to the achievements

and outcomes recorded through a combination of the following factors:

- APEC’s continuing focus on the Bogor Goals and measures to achieve them;
- the APEC agendas and action plans such as the Osaka Action Agenda and Busan Roadmap; and
- an operating framework for APEC that encourages collective, unilateral and pathfinder approaches to adopt measures.

In the context of the gravity model, the impetus provided by the Bogor Goals to APEC members has reduced the economic distance between economies while increasing the economic weight of each economy.

The report comprises two main sections. Using available data which provide outcomes that are observable, measurable and transparent, the first section provides a statistical picture of the progress made by the industrialized and volunteering APEC economies between the Bogor Declaration and the most recent year for which data is available. Because the Bogor Declaration is wider than the Bogor Goals, a wide range of economic, trade, investment and social measures are included. This section concentrates on outcomes and results and not on the modalities by which they were achieved.

The second section provides a synopsis of responses from the industrialized and volunteering APEC economies to a template questionnaire which focused on the Osaka Action Agenda, adopted by APEC in 1995 as the embodiment of political will to carry through the

commitments made in the Bogor Declaration. By its nature, this section is largely descriptive.

What is evident from both sections is that concerted action has occurred in each economy and progress has occurred across a wide array of economic, trade, investment and social measures. Within this overall progress, it is important to note that tariffs remain and in some areas, resistance to reform remains. APEC and WTO members should continue efforts to reduce tariffs and push ahead with reform. Importantly, progress has occurred not only in each of the industrialized and volunteering APEC economies which made 2010 their target date for achieving the Bogor Goals, but, as the aggregated data shows, APEC has benefited as a whole. This deserves recognition and provides encouragement for the 2020 group of developing economies.

This overall outcome was also foreseen by APEC Leaders who made the Bogor Declaration. They

recognized in 1994 the “growing interdependence of our economically diverse region, which comprises developed, newly industrializing and developing economies.” They also forecast that the Asia-Pacific industrialized economies would provide opportunities for developing economies to increase further their economic growth and their level of development. This “pull” factor, couched in terms similar to theoretical catch up or convergence propositions, was also joined by an exhortation for developing economies to “strive to maintain high growth rates with the aim of attaining the level of prosperity now enjoyed by the newly industrializing economies.”

In conclusion, Leaders noted that “The narrowing gap in the stages of development among the Asia-Pacific economies will benefit all members and promote the attainment of Asia-Pacific economic progress as a whole.” Evidence in this report indicates the prescience of this forecast.

The Global Economic Crisis

Effective Responses & Policy Strategies to Address the Human Impact

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The global economic crisis will continue to have significant adverse impacts on employment for some time. Falling incomes will also lead to lowering of individual well-being and fiscal sustainability issues for governments. Existing social safety nets and labour market institutions will come under intense pressure as unemployment climbs.

Governments will face large fiscal pressures in providing assistance to the unemployed through existing assistance schemes. However, existing assistance schemes that lack coherency and/or are not focused on activation measures will deliver poor returns to government and citizenry.

International experiences with the design of social safety nets and active labour market policies suggest that integrated activation systems that focus on

job-search assistance and job-matching processes as well as providing skills enhancement can lower unemployment. The fiscal costs of these schemes are significant, but can be broadly related to the tax/expenditure ratios of an economy. These expenditures would form a useful component of a stimulus package as faster employment turnaround times and increasing human capital levels would ease fiscal pressures and lead to a higher growth path for an economy.

Assessing both labour market reforms and social safety net design within the context of an APEC Jobs Framework would dovetail a complementary approach that would be consistent with a capabilities approach, efforts to maximise economic potential and growth in the APEC region and the emerging paradigm of Inclusive Growth. It would also complement the Bogor goals.

Small and Medium Enterprises

SME Market Access & Internationalization

Medium-term KPIs for the SMEWG Strategic Plan

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Definitions of SMEs vary across APEC economies and are based on several criteria. They include number of employees and maximum levels of capital, assets, or sales, which may vary according to sector.

SMEs account for over 90 percent of all enterprises in every APEC economy and employ more than half the workforce in most APEC economies. However, SMEs generally contribute less to GDP relative to large enterprises.

Sectors that have large proportions of SMEs, such as wholesale and retail trade, also tend to have the highest shares of total SMEs in an economy. In many APEC economies, sectors such as mining and quarrying often have the lowest proportions of SMEs and account for the lowest shares of total SMEs.

International activities of SMEs include all forms of transferring goods and services across borders such as export activity, joint ventures, non-equity strategic alliances, licensing, establishment of subsidiaries or branches, franchising, and importing. Exporting, either directly or indirectly, has been the most common and traditional form of internationalization.

Barriers to SME access to international markets can be characterized as being contingent and dynamic. Two firms in the same stage of export development will have different perceptions on the same barrier and thus different responses to it. Additionally, the same firm may perceive the same barrier in many ways across time and in relation to different export destinations.

Since barriers are not uniform and constant to all SMEs, it is important to understand the nature of the SME and its stage of international operations, and the corresponding barriers to internationalization for the SME.

The results from a joint OECD-APEC survey found that

both policy makers and SMEs identified the following four barriers among the six most serious impediments to SME access to international markets: shortage of working capital to finance exports; identifying foreign business opportunities; limited information to locate/analyze markets; and inability to contact potential overseas customers.

The same survey found that although the trading operations of international SMEs now tend to be far more diverse than only exporting, the predominant perception of internationalization is that it still consists mainly of exporting activities. Only a small number of support programs appeared to take a holistic approach by providing support for other forms of internationalization.

Data on SME exports of APEC economies are limited. Where available, data show that although the number of SMEs as a share of total exporters is usually high, SMEs typically contribute a small amount to total export value, with SMEs in most APEC economies contributing less than 30 percent. The share of exporting SMEs to total SMEs is also relatively low at less than 15 percent, indicating considerable scope to increase internationalization through direct exports.

SMEs tend to export more to economies with geographic proximity and socio-cultural similarities, but over time, firms do expand their export markets. Available data on SME export destination for APEC economies confirm this pattern.

Of the agreed Medium-term KPIs for the Market Access and Internationalization priority area of the SMEWG Strategic Plan, the most suitable outcome indicators include the number of SME exporters and real export value; SME exporters as a share of total SMEs; and SME exports/overseas sales as a share of total SME sales. These indicators are not yet widely

collected by APEC economies, which may impact the ability of the SMEWG to evaluate progress and outcomes of the Strategic Plan in the future.

Current measurement of the agreed KPIs focuses on direct exports in goods trade. Given the various forms of SME internationalization activities, the SMEWG may also wish to exchange knowledge and experience in developing key performance indicators to capture nontraditional, but increasingly important forms of internationalization.



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